

The MINOR PLANET CIRCULARS/MINOR PLANETS AND COMETS are published, on behalf of
Commission 20 of the International Astronomical Union, usually in batches
on the date of each full moon, by:

Minor Planet Center, Smithsonian Astrophysical Observatory, Cambridge, MA 02138, U.S.A.

Telephone 617-495-7244/7440/7444 (for emergency use only)

TWX 710-320-6842 ASTROGRAM CAM EASYLINK 62794505

MARSDEN@CFA.BITNET or .SPAN

BRIAN@CFAPS1.SPAN

GARETH@CFAPS1.SPAN

Brian G. Marsden, Director

Gareth V. Williams, Associate Director

EDITORIAL NOTICE

Those who wish to purchase the orbit catalogues issued by the Minor Planet Center (cf. *MPC* 22089 and 19347) should note that additional charges must now be made for postage and handling. For the printed *Catalogue of Cometary Orbits 1993* the delivery surcharge is \$4.00 by surface mail or \$10.00 by airmail. For the printed *Catalogue of High-Precision Orbits of Unnumbered Minor Planets 1993* the surcharge is \$4.00 by surface mail or \$14.00 by airmail. For the two-volume printed *Catalogue of Orbits of Unnumbered Minor Planets 1992* the surcharge is \$8.00 by surface mail or \$25.00 by airmail. The surcharge for diskettes is \$4.00 by surface mail or \$10.00 by airmail. The charges to those who receive information by e-mail are unchanged.

Those who wish to receive the St. Petersburg *Efemeridy Malykh Planet (EMP)* should note that, except for a few North American recipients who also subscribe to the *Minor Planet Circulars*, all subscriptions for the 1994 edition are being handled, either by the Institute of Theoretical Astronomy, Naberezhnaya Kutuzova 10, St. Petersburg, Russia, or by the White Nights Trading Company, 520 N.E. 83rd Street, Seattle, WA 98115, U.S.A. The White Nights price, including shipping and handling, is \$50.00. *STAMP 94*, the MS-DOS diskette version of the *EMP*, is available for \$75.00.

Beginning with the 1995 edition, the Minor Planet Center will not handle *any* *EMP* subscriptions. Any *EMP* credit remaining in the accounts after 1993 Sept. 30 has been transferred to the corresponding *MPC* accounts. Because of the increased mailing costs in Russia, all those who receive *EMP 1994* from the Minor Planet Center or from the Institute of Theoretical Astronomy are requested to send \$12.00 to the Institute of Theoretical Astronomy (*not* to the Minor Planet Center). This payment should be either in a check (sent by registered mail) in U.S. dollars and preferably drawn on the Chase Manhattan Bank or Bank of New York, or it can be by Eurocheque for the corresponding amount in any European currency.

ERRATA

| MPC | Line | |
|-------|------|--|
| 17481 | 12 | For originally given as (11) read originally given as (10) |
| 22434 | 33 | For Karlsruhe read Karlsruhe |
| 22434 | -50 | For Innsbrück read Innsbruck |
| 22434 | - 9 | For St. Polten read St. Pölten |
| 22505 | 19 | For Andréevna read Andreevna |
| 22559 | 39 | Add A. Woszczyk |
| 22559 | 40 | Add J. Dumoulin, G. Peeters |
| 22574 | 43 | For <i>H</i> 11.80 read <i>H</i> 11.8 |
| 22575 | -14 | For <i>H</i> 14.60 read <i>H</i> 14.6 |

| | | |
|-------|-----|---|
| 22575 | -10 | For <i>H</i> 18.10 read <i>H</i> 18.1 |
| 22591 | 44 | The orbit for 1989 SR ₂ should include <i>H</i> 13.5 <i>G</i> 0.15 |

CORRECTED OBSERVATIONS

The following observations correct those previously published.

| Object | Date | UT | α_{2000} | δ_{2000} | Reference | N Obs. |
|--------|---------|----------|-----------------|-----------------|------------------|--------|
| (2) | 1952 09 | 10.06393 | 00 23 49.15 | -03 07 43.8 | <i>MPC</i> 913 | 1 822 |
| (6) | 1982 03 | 22.95787 | 12 04 07.03 | +14 56 12.6 | <i>MPC</i> 16666 | 2 553 |
| (6) | 1982 03 | 23.93137 | 12 03 16.74 | +15 04 15.9 | <i>MPC</i> 16666 | 3 553 |
| (4055) | 1993 09 | 02.79427 | 03 46 18.00 | +00 17 27.0 | <i>MPC</i> 22539 | 413 |
| (4055) | 1993 09 | 02.79760 | 03 46 18.35 | +00 17 20.6 | <i>MPC</i> 22539 | 413 |

Note 1: date corrected by +1 month. 2: date corrected by -1 day. 3: date corrected by +1 day.

DELETED OBSERVATIONS

The following observations are to be deleted.

| Object | Date | UT | α_{2000} | δ_{2000} | Reference | Obs. |
|--------|---------|----------|-----------------|-----------------|------------------|------|
| (1) | 1977 06 | 30.87615 | 12 33 50.19 | +06 01 56.1 | <i>MPC</i> 4652 | 006 |
| (11) | 1988 05 | 17.86839 | 12 54 47.79 | +01 34 06.8 | <i>MPC</i> 17790 | 975 |
| (11) | 1988 05 | 17.87271 | 12 54 47.89 | +01 34 06.4 | <i>MPC</i> 17790 | 975 |

IDENTIFICATION CHANGES

Continuation to *MPC* 22519.

| Object | Date | UT | α_{2000} | δ_{2000} | Originally | Mag. | Obs. |
|----------------------|-----------|----------|-----------------|-----------------|----------------------|------|------|
| 1967 HB | * 1967 04 | 27.81617 | 12 38 34.08 | -05 46 47.7 | 1967 GF | | 095 |
| 1975 FA ₁ | * 1975 03 | 17.89182 | 11 59 48.85 | -02 49 06.4 | 1975 ET ₁ | 17.5 | 095 |
| 1987 PN | * 1987 08 | 01.05694 | 21 58 45.93 | -00 00 08.2 | 1987 OW | | 511 |
| 1991 FP ₆ | * 1991 03 | 20.05798 | 10 52 47.08 | +09 42 34.7 | 1991 FW ₁ | | 809 |
| 1991 FP ₆ | 1991 03 | 20.06841 | 10 52 46.71 | +09 42 39.1 | 1991 FW ₁ | | 809 |
| 1991 FP ₆ | 1991 03 | 20.07882 | 10 52 46.34 | +09 42 43.7 | 1991 FW ₁ | | 809 |

CRITICAL LIST OF MINOR PLANETS

The following list updates and is in the same form as that on *MPC* 21628:

- Object observed at only one opposition:
(719)

2. Objects observed at only two oppositions:
 (2608) (3360) (3671) (3688) (3757) (3908) (4503) (4544)
 (4581) (4688) (4769) (5189) (5335) (5370) (5381) (5496)
 (5620) (5645) (5660)
3. Objects accurately observed at only three oppositions:
 (2059) (2061) (2101) (2202) (2340) (2552) (2937) (3102)
 (3144) (3270) (3289) (3551) (3833) (3838) (3988) (4034)
 (4257) (4341) (4401) (4486) (4487) (4587) (4776) (4783)
 (4791) (4792) (4827) (4828) (4829) (4947) (5164) (5206)
 (5269) (5324) (5477) (5590) (5653)
4. Objects observed at four or more oppositions, last during 1979–1981:
 (1221) (1575) (1920) (2077) (2096) (2221) (2262) (2263)
 (2337)
5. Objects observed at four or more oppositions, last during 1982–1983:
 (132) (945) (1403) (1441) (1460) (1473) (1556) (1766)
 (1926) (1963) (2005) (2011) (2301) (2423) (2452) (2485)
 (2546) (2600) (2604) (2639) (2660) (2699) (2735) (2782)
 (2783) (2869) (2876) (2892) (2897) (2902) (2908) (2965)

OBSERVATIONS OF COMETS

Observations are published here for the following observatory codes:

- 046 Kletř. 0.63-m Maksutov telescope. Observer M. Tichý. Communicated by J. Tichá.
- 104 San Marcello Pistoiese. 0.4-m $f/5$ reflector. Observers L. Tesi and G. Cattani.
- 107 Cavezzo. 0.40-m $f/2.23$ reflector + CCD. Observers R. Calanca and R. Bonomi. Communicated by E. Colombini.
- 360 Kuma Kogen. 0.60-m $f/6.0$ Ritchey Chrétien + CCD. Observer A. Nakamura.
- 372 Geisei. 0.60-m $f/3.5$ reflector. Observer T. Seki.
- 376 Uenohara. 0.30-m reflector + CCD. Observer N. Kawasato.
- 410 Sengamine. 0.20-m $f/4.8$ reflector + CCD. Observer K. Ito.
- 411 Oizumi. 0.16-m $f/6.3$ reflector + CCD. Observer T. Kobayashi.
- 413 Siding Spring. 1.0-m reflector + CCD. Observers G. J. Garradd and D. I. Steel. Measured by G. J. Garradd and R. H. McNaught.
- 474 Mt. John Observatory. 0.6-m reflector. Observers A. C. Gilmore and P. M. Kilmartin.
- 540 Linz. 0.3-m $f/5.2$ Schmidt-Cassegrain + CCD. Observers E. Meyer, E. Obermair and H. Raab.
- 557 Ondřejov. 0.18-m $f/5.6$ Maksutov + CCD. Observers P. Pravec and M. Wolf. Measured by P. Pravec.
- 595 Farra d'Isonzo. 0.4-m $f/4.5$ reflector + CCD. Observers W. Boschin, G. Lombardi and E. Pettarin. Measured by E. Pettarin.
- 657 Climenhaga Observatory, Victoria. 0.5-m reflector + CCD and 0.25-m Schmidt. Observers J. B. Tatum and D. D. Balam.
- 658 Dominion Astrophysical Observatory, Victoria. 1.82-m Plaskett telescope + CCD. Observers D. D. Balam, J. B. Tatum and G. C. L. Aikman. Measured by D. D. Balam.
- 670 Camarillo. 0.25-m Schmidt-Cassegrain + CCD. Observer J. E. Rogers.

- 675 Palomar. 0.46-m and 1.2-m Schmidts. Observers J. Alu, E. F. Helin and K. Lawrence. Measured by K. Lawrence and B. A. Skiff.
- 691 Kitt Peak. 0.91-m Spacewatch telescope. Observers J. V. Scotti and R. Jedicke.
- 693 University of Arizona, Catalina Station. Observers C. Hergenrother and Y. Shirley.
- 801 Oak Ridge. 1.5-m reflector + CCD. Observers R. E. McCrosky and C.-Y. Shao.
- 871 Akou. 0.33-m $f/3.3$ reflector + CCD. Observer K. Kawanishi.
- 900 Kiryuu Observatory, Ohtsu. 0.26-m $f/2.9$ reflector. Observer Y. Ikari.

| Object | Date | UT | α_{2000} | δ_{2000} | Mag. | N Obs. |
|--|------------------|----|-----------------|-----------------|--------|--------|
| Periodic Comet Neujmin 3 | | | | | | |
| /1951 V | 1951 08 06.39444 | | 23 07 28.46 | -04 55 52.5 | | 675 |
| /1951 V | 1951 08 06.41875 | | 23 07 28.26 | -04 56 01.0 | | 675 |
| Periodic Comet Schwassmann-Wachmann 2 | | | | | | |
| /1987 XIX | 1993 09 20.13733 | | 06 57 25.20 | +20 03 31.8 | 15.5 T | 557 |
| /1987 XIX | 1993 09 20.14054 | | 06 57 25.47 | +20 03 31.4 | 15.5 T | 557 |
| /1987 XIX | 1993 09 20.14378 | | 06 57 25.80 | +20 03 31.4 | | 557 |
| /1987 XIX | 1993 09 20.14690 | | 06 57 26.09 | +20 03 31.2 | | 557 |
| /1987 XIX | 1993 09 26.77176 | | 07 09 16.43 | +19 45 58.0 | | 411 |
| /1987 XIX | 1993 09 26.77616 | | 07 09 16.92 | +19 45 57.2 | | 411 |
| /1987 XIX | 1993 09 26.77841 | | 07 09 17.15 | +19 45 57.2 | | 411 |
| /1987 XIX | 1993 09 26.79074 | | 07 09 18.52 | +19 45 55.1 | 14.9 T | 360 |
| /1987 XIX | 1993 09 26.79340 | | 07 09 18.80 | +19 45 54.6 | | 360 |
| /1987 XIX | 1993 09 29.99966 | | 07 14 55.04 | +19 36 29.5 | | 107 |
| /1987 XIX | 1993 09 30.00819 | | 07 14 56.35 | +19 36 24.9 | | 107 |
| /1987 XIX | 1993 10 11.76319 | | 07 34 42.28 | +18 57 58.0 | 14.9 T | 360 |
| /1987 XIX | 1993 10 11.76667 | | 07 34 42.60 | +18 57 57.4 | | 360 |
| /1987 XIX | 1993 10 16.04243 | | 07 41 31.81 | +18 42 48.6 | | 107 |
| Periodic Comet Schwassmann-Wachmann 1 | | | | | | |
| /1989 XV | 1993 10 11.77431 | | 07 45 05.13 | +25 51 03.9 | 16.9 T | 360 |
| /1989 XV | 1993 10 11.78125 | | 07 45 05.25 | +25 51 03.9 | | 360 |
| /1989 XV | 1993 10 13.38966 | | 07 45 36.25 | +25 50 03.8 | | 801 |
| /1989 XV | 1993 10 13.40589 | | 07 45 36.50 | +25 50 03.3 | | 801 |
| /1989 XV | 1993 10 19.13932 | | 07 47 13.20 | +25 47 04.6 | 15.6 T | 557 |
| /1989 XV | 1993 10 19.14168 | | 07 47 13.26 | +25 47 04.7 | 15.6 T | 557 |
| Periodic Comet Encke | | | | | | |
| /1990 XXI | 1993 09 14.73125 | | 01 11 12.38 | +20 10 15.3 | | 376 |
| /1990 XXI | 1993 09 14.74334 | | 01 11 11.56 | +20 10 15.4 | | 376 |
| /1990 XXI | 1993 09 20.96520 | | 01 02 02.85 | +20 09 33.2 | 17.1 T | 540 |
| /1990 XXI | 1993 09 20.98370 | | 01 02 00.97 | +20 09 32.2 | 17.3 T | 540 |
| /1990 XXI | 1993 09 25.73733 | | 00 53 40.85 | +20 00 46.5 | 17.7 T | 360 |
| /1990 XXI | 1993 09 25.75000 | | 00 53 39.43 | +20 00 44.3 | | 360 |
| /1990 XXI | 1993 09 26.73108 | | 00 51 47.74 | +19 57 55.4 | 17.8 T | 360 |
| /1990 XXI | 1993 09 26.73403 | | 00 51 47.39 | +19 57 54.8 | | 360 |
| /1990 XXI | 1993 10 09.59653 | | 00 23 25.86 | +18 44 53.8 | | 360 |
| /1990 XXI | 1993 10 09.60556 | | 00 23 24.53 | +18 44 49.3 | | 360 |
| /1990 XXI | 1993 10 11.61748 | | 00 18 25.99 | +18 26 55.7 | 17.1 T | 360 |
| /1990 XXI | 1993 10 11.62060 | | 00 18 25.49 | +18 26 53.9 | | 360 |
| /1990 XXI | 1993 10 24.12680 | | 23 46 22.06 | +15 59 18.3 | 17.1 T | 691 |

| | | | | | | | | | | | |
|---|------------------|-------------|-------------|--------|-----|--------|------------------|-------------|-------------|--------|-----|
| /1990 XXI | 1993 10 24.13503 | 23 46 20.78 | +15 59 11.6 | 17.1 T | 691 | /1992j | 1993 08 13.01368 | 01 30 34.63 | +09 00 49.5 | 12.7 T | 557 |
| /1990 XXI | 1993 10 24.14255 | 23 46 19.57 | +15 59 05.5 | 17.1 T | 691 | /1992j | 1993 08 13.01486 | 01 30 34.64 | +09 00 49.3 | 12.7 T | 557 |
| Comet McNaught-Russell (1990 XXII) | | | | | | /1992j | 1993 08 27.75706 | 01 33 10.68 | +10 53 35.4 | | 411 |
| /1990 XXII | 1993 09 23.50186 | 22 11 18.14 | -47 23 02.0 | 20 T | 413 | /1992j | 1993 08 27.76042 | 01 33 10.61 | +10 53 36.6 | | 411 |
| /1990 XXII | 1993 09 23.50866 | 22 11 17.94 | -47 23 02.8 | | 413 | /1992j | 1993 08 27.76204 | 01 33 10.64 | +10 53 37.5 | | 411 |
| /1990 XXII | 1993 09 23.51619 | 22 11 17.77 | -47 23 03.4 | | 413 | /1992j | 1993 09 09.55781 | 01 30 26.18 | +12 13 28.0 | | 411 |
| Periodic Comet Van Biesbroeck | | | | | | /1992j | 1993 09 09.56002 | 01 30 26.15 | +12 13 28.7 | | 411 |
| /1991 VI | 1993 10 21.40023 | 04 07 29.25 | +13 05 54.4 | 20.7 T | 691 | /1992j | 1993 09 09.56117 | 01 30 26.10 | +12 13 28.9 | | 411 |
| /1991 VI | 1993 10 21.44935 | 04 07 27.93 | +13 05 48.1 | 22.0 T | 691 | /1992j | 1993 09 10.94323 | 01 29 51.57 | +12 20 57.5 | | 107 |
| /1991 VI | 1993 10 21.46110 | 04 07 27.74 | +13 05 45.8 | 23.1 N | 691 | /1992j | 1993 09 12.31765 | 01 29 13.96 | +12 28 08.9 | | 801 |
| Periodic Comet Howell | | | | | | /1992j | 1993 09 12.34267 | 01 29 13.21 | +12 28 16.5 | | 801 |
| /1992c | 1993 08 11.70509 | 03 10 56.74 | +14 43 43.4 | | 411 | /1992j | 1993 09 14.50685 | 01 28 08.52 | +12 39 06.6 | | 411 |
| /1992c | 1993 08 11.70757 | 03 10 56.98 | +14 43 44.2 | | 411 | /1992j | 1993 09 14.52670 | 01 28 07.95 | +12 39 12.6 | | 411 |
| /1992c | 1993 08 11.70988 | 03 10 57.15 | +14 43 44.1 | | 411 | /1992j | 1993 09 14.52781 | 01 28 07.94 | +12 39 12.7 | | 411 |
| /1992c | 1993 08 27.76615 | 03 21 18.23 | +15 29 01.9 | | 411 | /1992j | 1993 09 15.22738 | 01 27 45.15 | +12 42 35.0 | | 801 |
| /1992c | 1993 08 27.76858 | 03 21 18.27 | +15 29 02.4 | | 411 | /1992j | 1993 09 15.25373 | 01 27 44.21 | +12 42 42.5 | | 801 |
| /1992c | 1993 09 25.79340 | 03 20 07.08 | +15 40 01.4 | 16.1 T | 360 | /1992j | 1993 09 15.88983 | 01 27 23.14 | +12 45 41.2 | | 107 |
| /1992c | 1993 09 25.79670 | 03 20 06.96 | +15 40 00.9 | | 360 | /1992j | 1993 09 16.85625 | 01 26 50.13 | +12 50 06.5 | | 107 |
| /1992c | 1993 09 26.73981 | 03 19 37.60 | +15 38 53.1 | 16.0 T | 360 | /1992j | 1993 09 18.99874 | 01 25 30.86 | +12 59 38.7 | | 557 |
| /1992c | 1993 09 26.74329 | 03 19 37.49 | +15 38 52.8 | | 360 | /1992j | 1993 09 19.00091 | 01 25 30.76 | +12 59 39.1 | | 557 |
| /1992c | 1993 09 26.74427 | 03 19 37.41 | +15 38 53.0 | | 411 | /1992j | 1993 09 19.00229 | 01 25 30.72 | +12 59 39.4 | | 557 |
| /1992c | 1993 09 26.74870 | 03 19 37.21 | +15 38 51.9 | | 411 | /1992j | 1993 09 20.82885 | 01 24 19.20 | +13 07 15.4 | | 107 |
| /1992c | 1993 09 26.75093 | 03 19 37.12 | +15 38 52.3 | | 411 | /1992j | 1993 09 22.84035 | 01 22 54.74 | +13 15 06.4 | | 107 |
| /1992c | 1993 10 11.67066 | 03 08 33.06 | +15 09 43.5 | 16.2 T | 360 | /1992j | 1993 09 23.70674 | 01 22 16.76 | +13 18 26.9 | | 413 |
| /1992c | 1993 10 11.67361 | 03 08 32.91 | +15 09 42.8 | | 360 | /1992j | 1993 09 23.70956 | 01 22 16.63 | +13 18 27.4 | | 413 |
| /1992c | 1993 10 19.10786 | 03 01 10.34 | +14 48 25.4 | | 557 | /1992j | 1993 09 25.73003 | 01 20 45.54 | +13 25 28.2 | 13.3 T | 360 |
| /1992c | 1993 10 19.11350 | 03 01 10.08 | +14 48 24.0 | | 557 | /1992j | 1993 09 25.73299 | 01 20 45.40 | +13 25 28.8 | | 360 |
| /1992c | 1993 10 19.11963 | 03 01 09.59 | +14 48 23.0 | 16.0 T | 557 | /1992j | 1993 09 26.71100 | 01 19 59.77 | +13 28 44.3 | | 411 |
| /1992c | 1993 10 19.12806 | 03 01 09.24 | +14 48 20.4 | | 557 | /1992j | 1993 09 26.71811 | 01 19 59.43 | +13 28 45.8 | | 411 |
| /1992c | 1993 10 20.43938 | 02 59 46.04 | +14 44 19.9 | 20.2 N | 691 | /1992j | 1993 09 26.71968 | 01 19 59.36 | +13 28 46.1 | | 411 |
| Comet Spacewatch (1992h) | | | | | | /1992j | 1993 09 29.86626 | 01 17 27.30 | +13 38 21.7 | | 107 |
| /1992h | 1993 09 26.80127 | 11 12 18.76 | +58 32 46.0 | | 411 | /1992j | 1993 10 04.85863 | 01 13 11.56 | +13 51 06.8 | | 107 |
| /1992h | 1993 09 26.80590 | 11 12 19.09 | +58 32 49.5 | | 411 | /1992j | 1993 10 04.98288 | 01 13 04.99 | +13 51 23.1 | | 595 |
| Periodic Comet Ashbrook-Jackson | | | | | | /1992j | 1993 10 04.99770 | 01 13 04.19 | +13 51 24.9 | | 595 |
| /1992j | 1993 07 31.75597 | 01 24 07.16 | +07 13 05.6 | | 413 | /1992j | 1993 10 08.65819 | 01 09 49.64 | +13 58 46.6 | 13.2 T | 871 |
| /1992j | 1993 07 31.75972 | 01 24 07.30 | +07 13 07.6 | | 413 | /1992j | 1993 10 08.66096 | 01 09 49.61 | +13 58 50.1 | | 871 |
| /1992j | 1993 08 11.69532 | 01 30 03.56 | +08 49 46.9 | | 411 | /1992j | 1993 10 10.27153 | 01 08 23.77 | +14 01 33.9 | | 657 |
| /1992j | 1993 08 11.69763 | 01 30 03.60 | +08 49 48.1 | | 411 | /1992j | 1993 10 11.62789 | 01 07 10.95 | +14 03 44.4 | 12.9 T | 360 |
| /1992j | 1993 08 11.69986 | 01 30 03.64 | +08 49 48.8 | | 411 | /1992j | 1993 10 11.62806 | 01 07 10.82 | +14 03 44.9 | 12 T | 900 |
| /1992j | 1993 08 12.66875 | 01 30 26.90 | +08 57 56.6 | | 411 | /1992j | 1993 10 11.63090 | 01 07 10.78 | +14 03 44.7 | | 360 |
| /1992j | 1993 08 12.67205 | 01 30 26.93 | +08 57 59.1 | | 411 | /1992j | 1993 10 11.63557 | 01 07 10.51 | +14 03 45.4 | | 900 |
| /1992j | 1993 08 12.68438 | 01 30 27.18 | +08 58 04.1 | | 411 | /1992j | 1993 10 12.20999 | 01 06 39.81 | +14 04 34.9 | | 801 |
| /1992j | 1993 08 12.98376 | 01 30 33.96 | +09 00 35.0 | | 557 | /1992j | 1993 10 12.22472 | 01 06 38.90 | +14 04 35.7 | | 801 |
| /1992j | 1993 08 12.99319 | 01 30 34.14 | +09 00 39.6 | | 557 | /1992j | 1993 10 15.78099 | 01 03 31.02 | +14 09 11.0 | | 107 |
| /1992j | 1993 08 12.99677 | 01 30 34.22 | +09 00 41.0 | | 557 | /1992j | 1993 10 19.08319 | 01 00 40.69 | +14 12 31.5 | | 557 |
| /1992j | 1993 08 13.00079 | 01 30 34.31 | +09 00 43.4 | | 557 | /1992j | 1993 10 19.08438 | 01 00 40.64 | +14 12 31.6 | 12.7 T | 557 |
| /1992j | 1993 08 13.00197 | 01 30 34.32 | +09 00 43.5 | | 557 | /1992j | 1993 10 19.08556 | 01 00 40.53 | +14 12 31.3 | | 557 |
| /1992j | 1993 08 13.00315 | 01 30 34.40 | +09 00 44.6 | | 557 | /1992j | 1993 10 19.22839 | 01 00 33.56 | +14 12 40.3 | | 801 |
| /1992j | 1993 08 13.01132 | 01 30 34.57 | +09 00 47.9 | 12.7 T | 557 | /1992j | 1993 10 19.24292 | 01 00 32.79 | +14 12 41.1 | | 801 |
| /1992j | 1993 08 13.01250 | 01 30 34.55 | +09 00 49.2 | | 557 | /1992j | 1993 10 24.18018 | 00 56 34.23 | +14 16 27.9 | 17.0 N | 691 |
| | | | | | | /1992j | 1993 10 24.19983 | 00 56 33.29 | +14 16 28.6 | 11.0 T | 691 |
| | | | | | | /1992j | 1993 10 24.21811 | 00 56 32.42 | +14 16 29.5 | | 691 |

| Comet Helin-Lawrence (1992q) | | | | | | | | | | | |
|------------------------------|------------------|-------------|-------------|--------|-----|--------------------------------|------------------|-------------|-------------|--------|-----|
| /1992q | 1993 06 26.33044 | 10 13 00.03 | -40 48 21.0 | 17.2 N | 474 | /1993a | 1993 10 09.89377 | 11 31 21.37 | +80 47 31.0 | 11.4 T | 540 |
| /1992q | 1993 06 26.34002 | 10 13 01.39 | -40 48 04.9 | | 474 | /1993a | 1993 10 15.73995 | 13 31 21.89 | +82 44 03.6 | | 107 |
| Comet Mueller (1993a) | | | | | | | | | | | |
| /1993a | 1993 08 27.78403 | 08 21 54.85 | +63 32 55.2 | | 411 | /1993a | 1993 10 19.05388 | 15 02 36.83 | +82 44 10.8 | 10.2 T | 557 |
| /1993a | 1993 08 27.78530 | 08 21 54.94 | +63 32 56.3 | | 411 | /1993a | 1993 10 19.06060 | 15 02 48.03 | +82 44 07.2 | 10.2 T | 557 |
| /1993a | 1993 08 27.78652 | 08 21 55.15 | +63 32 57.4 | | 411 | /1993a | 1993 10 19.06814 | 15 03 00.66 | +82 44 02.9 | | 557 |
| /1993a | 1993 08 29.85694 | 08 25 28.69 | +64 05 04.2 | | 595 | /1993a | 1993 10 19.06932 | 15 03 02.55 | +82 44 02.4 | | 557 |
| /1993a | 1993 08 29.87693 | 08 25 30.85 | +64 05 23.2 | | 595 | /1993a | 1993 10 19.07050 | 15 03 04.73 | +82 44 01.4 | | 557 |
| /1993a | 1993 09 06.82287 | 08 40 39.59 | +66 24 00.6 | 11.5 T | 540 | /1993a | 1993 10 19.07169 | 15 03 06.67 | +82 44 00.6 | | 557 |
| /1993a | 1993 09 06.82402 | 08 40 39.62 | +66 24 03.8 | 11.6 T | 540 | Periodic Comet Forbes | | | | | |
| /1993a | 1993 09 06.82506 | 08 40 39.87 | +66 24 03.8 | 11.5 T | 540 | /1993f | 1993 07 31.76343 | 01 54 22.43 | +16 08 07.8 | | 413 |
| /1993a | 1993 09 06.82610 | 08 40 39.90 | +66 24 06.6 | 11.5 T | 540 | /1993f | 1993 07 31.76708 | 01 54 22.58 | +16 08 09.6 | | 413 |
| /1993a | 1993 09 16.82801 | 09 04 53.53 | +69 57 30.5 | | 107 | /1993f | 1993 08 11.68810 | 02 00 13.78 | +17 32 45.1 | | 411 |
| /1993a | 1993 09 18.81231 | 09 10 47.48 | +70 45 36.6 | 11.3 T | 540 | /1993f | 1993 08 11.69072 | 02 00 13.84 | +17 32 47.2 | | 411 |
| /1993a | 1993 09 18.81400 | 09 10 47.61 | +70 45 39.8 | 11.3 T | 540 | /1993f | 1993 09 14.53634 | 01 53 23.19 | +19 45 13.8 | | 411 |
| /1993a | 1993 09 18.81539 | 09 10 47.69 | +70 45 40.4 | 11.4 T | 540 | /1993f | 1993 09 25.75521 | 01 43 24.34 | +19 37 34.7 | 16.6 T | 360 |
| /1993a | 1993 09 18.81678 | 09 10 47.95 | +70 45 42.5 | 11.3 T | 540 | /1993f | 1993 09 25.75833 | 01 43 24.13 | +19 37 34.2 | | 360 |
| /1993a | 1993 09 19.01139 | 09 11 25.11 | +70 50 33.4 | | 557 | /1993f | 1993 09 26.73139 | 01 42 25.02 | +19 35 38.2 | | 411 |
| /1993a | 1993 09 19.01377 | 09 11 25.61 | +70 50 36.9 | 10.5 T | 557 | /1993f | 1993 09 26.73738 | 01 42 24.64 | +19 35 37.6 | | 411 |
| /1993a | 1993 09 19.01514 | 09 11 25.81 | +70 50 38.9 | | 557 | /1993f | 1993 09 26.74039 | 01 42 24.44 | +19 35 37.4 | | 411 |
| /1993a | 1993 09 19.01652 | 09 11 26.09 | +70 50 41.1 | | 557 | /1993f | 1993 10 11.63802 | 01 26 13.68 | +18 44 39.8 | 16.5 T | 360 |
| /1993a | 1993 09 19.01789 | 09 11 26.41 | +70 50 42.9 | | 557 | /1993f | 1993 10 11.64097 | 01 26 13.47 | +18 44 38.8 | | 360 |
| /1993a | 1993 09 19.01926 | 09 11 26.62 | +70 50 45.4 | | 557 | /1993f | 1993 10 11.65643 | 01 26 12.58 | +18 44 32.3 | 15.5 T | 900 |
| /1993a | 1993 09 19.02064 | 09 11 26.93 | +70 50 47.4 | | 557 | /1993f | 1993 10 11.67254 | 01 26 11.18 | +18 44 27.4 | | 900 |
| /1993a | 1993 09 19.02201 | 09 11 27.15 | +70 50 49.3 | | 557 | /1993f | 1993 10 24.18912 | 01 13 08.38 | +17 40 14.2 | 19.5 N | 691 |
| /1993a | 1993 09 19.02532 | 09 11 27.74 | +70 50 54.3 | | 557 | /1993f | 1993 10 24.20804 | 01 13 07.25 | +17 40 08.1 | 16.7 T | 691 |
| /1993a | 1993 09 19.02664 | 09 11 28.00 | +70 50 56.7 | | 557 | /1993f | 1993 10 24.22626 | 01 13 06.20 | +17 40 02.2 | 16.9 T | 691 |
| /1993a | 1993 09 19.50387 | 09 12 59.39 | +71 02 51.8 | 11 T | 693 | Comet Shoemaker-Levy (1993h) | | | | | |
| /1993a | 1993 09 20.01475 | 09 14 37.53 | +71 15 42.9 | | 557 | /1993h | 1993 07 20.41980 | 13 02 52.93 | -35 03 48.5 | 17.8 N | 474 |
| /1993a | 1993 09 20.01601 | 09 14 37.74 | +71 15 44.8 | | 557 | /1993h | 1993 07 20.45437 | 13 02 52.99 | -35 03 53.4 | | 474 |
| /1993a | 1993 09 20.01727 | 09 14 38.02 | +71 15 46.8 | 10.7 T | 557 | /1993h | 1993 08 10.39528 | 13 07 27.70 | -36 10 12.8 | | 474 |
| /1993a | 1993 09 20.01853 | 09 14 38.24 | +71 15 48.8 | 10.7 T | 557 | /1993h | 1993 08 10.41750 | 13 07 28.21 | -36 10 18.2 | | 474 |
| /1993a | 1993 09 20.01978 | 09 14 38.52 | +71 15 50.6 | | 557 | /1993h | 1993 08 15.39153 | 13 09 20.71 | -36 31 00.8 | 17.1 N | 474 |
| /1993a | 1993 09 20.02104 | 09 14 38.76 | +71 15 52.5 | | 557 | /1993h | 1993 08 15.42029 | 13 09 21.44 | -36 31 07.7 | | 474 |
| /1993a | 1993 09 22.26146 | 09 22 21.50 | +72 13 49.5 | | 657 | Periodic Comet Holmes | | | | | |
| /1993a | 1993 09 22.29167 | 09 22 27.91 | +72 14 38.3 | | 657 | /1993i | 1993 09 15.46223 | 04 04 47.02 | +44 04 40.6 | | 658 |
| /1993a | 1993 09 22.81580 | 09 24 23.32 | +72 28 37.5 | | 107 | /1993i | 1993 09 15.46801 | 04 04 47.23 | +44 04 43.8 | | 658 |
| /1993a | 1993 09 26.42014 | 09 39 19.92 | +74 08 02.5 | | 657 | /1993i | 1993 09 15.47257 | 04 04 47.41 | +44 04 47.2 | | 658 |
| /1993a | 1993 09 26.78565 | 09 41 02.13 | +74 18 29.9 | | 411 | /1993i | 1993 09 26.76806 | 04 10 01.26 | +46 00 19.6 | 17.7 T | 360 |
| /1993a | 1993 09 26.79404 | 09 41 04.52 | +74 18 44.6 | | 411 | /1993i | 1993 09 26.77083 | 04 10 01.34 | +46 00 21.0 | | 360 |
| /1993a | 1993 09 26.79693 | 09 41 05.30 | +74 18 49.6 | | 411 | /1993i | 1993 10 11.68073 | 04 09 44.15 | +48 10 25.3 | 18.1 T | 360 |
| /1993a | 1993 09 28.76035 | 09 50 55.91 | +75 15 40.3 | | 107 | /1993i | 1993 10 11.68403 | 04 09 44.22 | +48 10 26.8 | | 360 |
| /1993a | 1993 09 29.79273 | 09 56 41.59 | +75 46 13.8 | | 107 | Periodic Comet Shajn-Schaldach | | | | | |
| /1993a | 1993 10 04.86692 | 10 33 03.12 | +78 19 59.5 | | 107 | /1993k | 1993 09 19.97834 | 00 45 01.48 | +01 17 49.4 | | 557 |
| /1993a | 1993 10 06.79124 | 10 51 51.64 | +79 18 13.9 | 11.9 T | 540 | /1993k | 1993 09 19.98372 | 00 45 01.39 | +01 17 47.9 | 16.4 T | 557 |
| /1993a | 1993 10 06.79258 | 10 51 52.20 | +79 18 14.5 | 11.9 T | 540 | /1993k | 1993 09 19.98576 | 00 45 01.32 | +01 17 48.7 | 16.4 T | 557 |
| /1993a | 1993 10 06.79353 | 10 51 52.99 | +79 18 17.8 | 11.9 T | 540 | /1993k | 1993 09 19.98782 | 00 45 01.29 | +01 17 48.4 | | 557 |
| /1993a | 1993 10 06.79578 | 10 51 54.57 | +79 18 21.1 | 11.9 T | 540 | /1993k | 1993 09 19.99725 | 00 45 00.84 | +01 17 45.4 | | 557 |
| /1993a | 1993 10 09.89079 | 11 31 18.33 | +80 47 26.6 | 11.3 T | 540 | /1993k | 1993 09 25.70289 | 00 42 11.93 | +00 37 32.4 | 16.4 T | 360 |
| /1993a | 1993 10 09.89175 | 11 31 19.72 | +80 47 27.5 | 11.4 T | 540 | /1993k | 1993 09 25.70625 | 00 42 11.80 | +00 37 31.0 | | 360 |
| /1993a | 1993 10 09.89274 | 11 31 20.24 | +80 47 29.9 | 11.4 T | 540 | /1993k | 1993 09 26.71736 | 00 41 39.98 | +00 30 17.7 | 16.3 T | 360 |

| Object | Date | UT | α_{2000} | δ_{2000} | Mag. | N Obs. | | | | | |
|-----------------------|--------------------------------------|----|-----------------|-----------------|------|----------------------|----------------------|--------------------|-------------|-------------|----------|
| R | right ascension uncertain | | | | | | 1993 PL ₆ | 1993 08 19.04931 | 22 46 57.76 | -04 07 45.3 | 010 |
| r | poor distribution of reference stars | | | | | | 1993 PP ₆ | 1993 08 17.98229 | 22 48 33.18 | -02 44 47.4 | 010 |
| S | poor sky | | | | | | 1993 PP ₆ | 1993 08 19.02812 | 22 47 34.45 | -02 47 15.7 | 18.3 010 |
| s | streaked image | | | | | | 1993 PP ₆ | 1993 08 19.03889 | 22 47 33.82 | -02 47 17.1 | 010 |
| T | time uncertain | | | | | | 1993 PP ₆ | 1993 08 19.04931 | 22 47 33.14 | -02 47 19.0 | 010 |
| t | trailed image | | | | | | 1993 PS ₆ | 1993 08 17.98229 | 22 50 08.65 | -04 22 23.6 | 010 |
| U | uncertain image | | | | | | 1993 PS ₆ | 1993 08 19.02812 | 22 49 27.62 | -04 30 11.9 | 18.4 010 |
| u | unconfirmed image | | | | | | 1993 PS ₆ | 1993 08 19.03889 | 22 49 27.20 | -04 30 16.9 | 010 |
| V | very faint image | | | | | | 1993 PS ₆ | 1993 08 19.04931 | 22 49 26.74 | -04 30 22.1 | 010 |
| W | weak image | | | | | | 1993 PX ₆ | 1993 08 17.98229 | 22 54 07.15 | -02 50 34.3 | 010 |
| w | weak solution | | | | | | 1993 PX ₆ | 1993 08 19.02812 | 22 53 18.47 | -02 48 20.1 | 18.2 010 |
| | | | | | | 1993 PX ₆ | 1993 08 19.03889 | 22 53 17.98 | -02 48 18.1 | 010 | |
| | | | | | | 1993 PX ₆ | 1993 08 19.04931 | 22 53 17.49 | -02 48 17.0 | 010 | |
| | | | | | | 1993 PY ₆ | 1993 08 17.98229 | 22 54 26.38 | -03 52 22.9 | 010 | |
| | | | | | | 1993 PY ₆ | 1993 08 19.02812 | 22 53 45.22 | -03 58 00.2 | 18.2 010 | |
| | | | | | | 1993 PY ₆ | 1993 08 19.03889 | 22 53 44.79 | -03 58 03.2 | 010 | |
| | | | | | | 1993 PY ₆ | 1993 08 19.04931 | 22 53 44.35 | -03 58 06.4 | 010 | |
| | | | | | | 1993 PZ ₆ | 1993 08 17.98229 | 22 55 18.48 | -03 04 26.6 | 010 | |
| | | | | | | 1993 PZ ₆ | 1993 08 19.02812 | 22 54 32.94 | -03 07 12.1 | 18.2 010 | |
| | | | | | | 1993 PZ ₆ | 1993 08 19.03889 | 22 54 32.42 | -03 07 13.4 | 010 | |
| | | | | | | 1993 PZ ₆ | 1993 08 19.04931 | 22 54 31.95 | -03 07 15.7 | 010 | |
| 1978 UK ₇ | 1993 08 17.98229 | | 22 56 15.17 | -04 26 35.4 | | 010 | 1993 PE ₇ | 1993 08 17.98229 | 22 56 46.47 | -04 43 36.3 | 010 |
| 1978 UK ₇ | 1993 08 19.02812 | | 22 55 30.41 | -04 31 26.2 | 18.5 | 010 | 1993 PE ₇ | 1993 08 19.02812 | 22 56 10.51 | -04 49 34.2 | 18.6 010 |
| 1978 UK ₇ | 1993 08 19.03889 | | 22 55 29.92 | -04 31 29.9 | | 010 | 1993 PE ₇ | 1993 08 19.03889 | 22 56 10.11 | -04 49 36.6 | 010 |
| 1978 UK ₇ | 1993 08 19.04931 | | 22 55 29.55 | -04 31 31.1 | | 010 | 1993 PE ₇ | 1993 08 19.04931 | 22 56 09.80 | -04 49 41.0 | 010 |
| 1978 VD ₇ | 1992 11 03.02014 | | 02 02 28.88 | +09 04 09.0 | | 010 | 1993 PH ₇ | 1993 08 19.02812 | 22 57 58.68 | -04 09 32.6 | 18.3 010 |
| 1978 VD ₇ | 1992 11 03.03056 | | 02 02 28.24 | +09 04 04.0 | | 010 | 1993 PH ₇ | 1993 08 19.03889 | 22 57 58.22 | -04 09 36.4 | 010 |
| 1979 MP ₃ | 1993 08 17.98229 | | 22 53 32.68 | -01 31 58.5 | | 010 | 1993 PH ₇ | 1993 08 19.04931 | 22 57 57.74 | -04 09 40.4 | 010 |
| 1981 EF ₃₀ | 1993 08 17.98229 | | 22 59 39.54 | -05 15 43.5 | | 010 | 1993 PL ₇ | 1993 08 17.98229 | 23 00 08.63 | -04 12 17.9 | 010 |
| 1981 EF ₃₀ | 1993 08 19.02812 | | 22 58 52.54 | -05 23 15.0 | 18.5 | 010 | 1993 PL ₇ | 1993 08 19.02812 | 22 59 29.16 | -04 23 37.6 | 18.5 010 |
| 1981 EF ₃₀ | 1993 08 19.03889 | | 22 58 51.83 | -05 23 19.4 | | 010 | 1993 PL ₇ | 1993 08 19.03889 | 22 59 28.77 | -04 23 46.2 | 010 |
| 1981 EF ₃₀ | 1993 08 19.04931 | | 22 58 51.39 | -05 23 23.0 | | 010 | 1993 PL ₇ | 1993 08 19.04931 | 22 59 28.27 | -04 23 52.6 | 010 |
| 1989 EJ ₁ | 1993 08 17.98229 | | 23 00 43.61 | -04 40 20.7 | | 010 | 1993 PM ₇ | 1993 08 17.98229 | 23 00 21.54 | -05 19 04.3 | 010 |
| 1989 EJ ₁ | 1993 08 19.02812 | | 22 59 52.09 | -04 48 12.9 | 18.3 | 010 | 1993 PM ₇ | 1993 08 19.02812 | 22 59 41.59 | -05 22 59.9 | 18.6 010 |
| 1989 EJ ₁ | 1993 08 19.03889 | | 22 59 51.48 | -04 48 17.9 | | 010 | 1993 PM ₇ | 1993 08 19.03889 | 22 59 41.23 | -05 23 01.9 | 010 |
| 1989 EJ ₁ | 1993 08 19.04931 | | 22 59 51.05 | -04 48 21.0 | | 010 | 1993 PM ₇ | 1993 08 19.04931 | 22 59 40.81 | -05 23 03.9 | 010 |
| 1989 GT ₄ | 1993 08 17.98229 | | 22 47 53.58 | -03 24 34.2 | | 010 | 1993 PN ₇ | 1993 08 17.98229 | 23 00 14.86 | -02 50 26.7 | 010 |
| 1989 GT ₄ | 1993 08 19.02812 | | 22 47 09.43 | -03 31 10.3 | 17.9 | 010 | 1993 PO ₇ | 1993 08 17.98229 | 23 00 09.53 | -03 53 29.9 | 010 |
| 1989 GT ₄ | 1993 08 19.03889 | | 22 47 08.90 | -03 31 14.0 | | 010 | 1993 PO ₇ | 1993 08 19.02812 | 22 59 18.66 | -03 55 09.3 | 18.3 010 |
| 1989 GT ₄ | 1993 08 19.04931 | | 22 47 08.40 | -03 31 17.6 | | 010 | 1993 PO ₇ | 1993 08 19.03889 | 22 59 18.05 | -03 55 10.7 | 010 |
| 1989 VK | 1993 08 17.98229 | | 22 56 07.08 | -00 55 58.1 | | 010 | 1993 PO ₇ | 1993 08 19.04931 | 22 59 17.54 | -03 55 11.6 | 010 |
| 1989 VK | 1993 08 19.02812 | | 22 55 26.40 | -00 57 41.2 | 18.4 | 010 | 1993 PP ₇ | 1993 08 17.98229 | 23 00 38.47 | -05 05 51.8 | 010 |
| 1989 VK | 1993 08 19.03889 | | 22 55 25.90 | -00 57 42.0 | | 010 | 1993 PP ₇ | 1993 08 19.02812 | 22 59 50.08 | -05 09 02.1 | 18.4 010 |
| 1989 VK | 1993 08 19.04931 | | 22 55 25.37 | -00 57 44.0 | | 010 | 1993 PP ₇ | 1993 08 19.03889 | 22 59 49.45 | -05 09 04.6 | 010 |
| 1993 NK | * 1993 07 15.99722 | | 20 03 01.72 | -13 49 31.7 | 19.0 | 010 | 1993 PP ₇ | 1993 08 19.04931 | 22 59 48.96 | -05 09 06.7 | 010 |
| 1993 NK | 1993 07 16.00764 | | 20 03 01.51 | -13 49 32.0 | | 010 | 1993 PT ₇ | 1993 08 17.98229 | 23 02 11.09 | -05 42 50.7 | 010 |
| 1993 NK | 1993 07 16.01806 | | 20 03 01.13 | -13 49 33.8 | | 010 | 1993 PW ₇ | 1993 08 17.98229 | 23 02 22.41 | -05 37 00.6 | 010 |
| 1993 NK | 1993 07 23.00208 | | 19 58 20.60 | -14 05 51.6 | 18.5 | 010 | 1993 PW ₇ | 1993 08 19.02812 | 23 01 37.27 | -05 39 56.9 | 18.1 010 |
| 1993 NK | 1993 07 23.01285 | | 19 58 20.10 | -14 05 54.5 | | 010 | 1993 PW ₇ | 1993 08 19.03889 | 23 01 36.75 | -05 39 59.2 | 010 |
| 1993 NK | 1993 07 23.02332 | | 19 58 19.62 | -14 05 55.2 | | 010 | 1993 PW ₇ | 1993 08 19.04931 | 23 01 36.25 | -05 40 00.2 | 010 |
| 1993 PL ₆ | 1993 08 17.98229 | | 22 47 42.07 | -04 02 51.1 | | 010 | 1993 PZ ₇ | * 1993 08 15.00069 | 22 17 03.50 | -05 55 57.2 | 18.7 010 |
| 1993 PL ₆ | 1993 08 19.02812 | | 22 46 58.62 | -04 07 40.4 | 18.5 | 010 | 1993 PZ ₇ | 1993 08 15.01146 | 22 17 02.88 | -05 56 01.2 | 010 |
| 1993 PL ₆ | 1993 08 19.03889 | | 22 46 58.18 | -04 07 43.0 | | 010 | | | | | |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 PZ ₇ | 1993 08 16.02986 | 22 16 07.17 | -06 01 10.0 | | 010 | 1993 QK ₅ | 1993 08 19.03889 | 22 52 30.77 | -02 06 06.6 | | 010 |
| 1993 PZ ₇ | 1993 08 16.04097 | 22 16 06.46 | -06 01 13.7 | | 010 | 1993 QK ₅ | 1993 08 19.04931 | 22 52 30.37 | -02 06 12.1 | | 010 |
| 1993 PZ ₇ | 1993 08 16.05174 | 22 16 05.86 | -06 01 17.3 | | 010 | 1993 QL ₅ | * 1993 08 17.98229 | 22 53 30.48 | -02 53 19.3 | | 010 |
| 1993 PA ₈ | * 1993 08 15.00069 | 22 32 53.82 | -03 01 48.7 | 18.3 | 010 | 1993 QL ₅ | 1993 08 19.02812 | 22 52 29.96 | -02 46 00.2 | 18.6 | 010 |
| 1993 PA ₈ | 1993 08 15.01146 | 22 32 53.30 | -03 01 48.2 | | 010 | 1993 QL ₅ | 1993 08 19.03889 | 22 52 29.24 | -02 45 54.9 | | 010 |
| 1993 PA ₈ | 1993 08 16.02986 | 22 32 12.27 | -03 01 35.2 | | 010 | 1993 QL ₅ | 1993 08 19.04931 | 22 52 28.55 | -02 45 52.2 | | 010 |
| 1993 PA ₈ | 1993 08 16.04097 | 22 32 11.84 | -03 01 35.2 | | 010 | 1993 QM ₅ | * 1993 08 17.98229 | 22 56 16.21 | -02 12 54.2 | | 010 |
| 1993 PA ₈ | 1993 08 16.05174 | 22 32 11.37 | -03 01 35.3 | | 010 | 1993 QM ₅ | 1993 08 19.02812 | 22 55 32.25 | -02 37 29.7 | 18.5 | 010 |
| 1993 QF ₁ | 1993 08 17.98229 | 23 03 11.95 | -02 00 23.1 | | 010 | 1993 QM ₅ | 1993 08 19.03889 | 22 55 31.76 | -02 37 44.2 | | 010 |
| 1993 QF ₁ | 1993 08 19.02812 | 23 02 19.39 | -01 58 59.1 | 18.5 | 010 | 1993 QM ₅ | 1993 08 19.04931 | 22 55 31.24 | -02 38 00.4 | | 010 |
| 1993 QF ₁ | 1993 08 19.03889 | 23 02 18.95 | -01 58 57.2 | | 010 | 1993 QN ₅ | * 1993 08 17.98229 | 22 56 20.94 | -00 45 27.8 | | 010 |
| 1993 QF ₁ | 1993 08 19.04931 | 23 02 18.39 | -01 58 56.5 | | 010 | 1993 QN ₅ | 1993 08 19.02812 | 22 55 44.29 | -00 48 02.0 | 18.3 | 010 |
| 1993 QJ ₁ | 1993 08 17.98229 | 23 05 55.92 | -03 06 18.9 | | 010 | 1993 QN ₅ | 1993 08 19.03889 | 22 55 43.87 | -00 48 03.2 | | 010 |
| 1993 QJ ₁ | 1993 08 19.02812 | 23 05 14.75 | -03 14 41.2 | 18.3 | 010 | 1993 QN ₅ | 1993 08 19.04931 | 22 55 43.41 | -00 48 04.5 | | 010 |
| 1993 QJ ₁ | 1993 08 19.03889 | 23 05 14.31 | -03 14 45.2 | | 010 | 1993 QO ₅ | * 1993 08 17.98229 | 22 56 54.80 | -04 02 11.4 | | 010 |
| 1993 QJ ₁ | 1993 08 19.04931 | 23 05 13.90 | -03 14 50.3 | | 010 | 1993 QO ₅ | 1993 08 19.02812 | 22 56 12.33 | -04 04 33.4 | 18.5 | 010 |
| 1993 QK ₁ | 1993 08 17.98229 | 23 06 56.63 | -01 36 49.9 | | 010 | 1993 QO ₅ | 1993 08 19.03889 | 22 56 11.85 | -04 04 34.9 | | 010 |
| 1993 QK ₁ | 1993 08 19.02812 | 23 06 06.37 | -01 40 44.5 | 18.3 | 010 | 1993 QO ₅ | 1993 08 19.04931 | 22 56 11.40 | -04 04 37.2 | | 010 |
| 1993 QK ₁ | 1993 08 19.03889 | 23 06 05.73 | -01 40 47.0 | | 010 | 1993 QP ₅ | * 1993 08 17.98229 | 22 57 10.71 | -04 41 42.6 | | 010 |
| 1993 QK ₁ | 1993 08 19.04931 | 23 06 05.20 | -01 40 49.7 | | 010 | 1993 QP ₅ | 1993 08 19.02812 | 22 56 14.12 | -04 41 17.0 | 18.3 | 010 |
| 1993 QM ₁ | 1993 08 19.02812 | 23 07 14.26 | -03 06 43.6 | 18.2 | 010 | 1993 QP ₅ | 1993 08 19.03889 | 22 56 13.42 | -04 41 16.0 | | 010 |
| 1993 QM ₁ | 1993 08 19.03889 | 23 07 13.74 | -03 06 45.3 | | 010 | 1993 QP ₅ | 1993 08 19.04931 | 22 56 12.80 | -04 41 16.1 | | 010 |
| 1993 QM ₁ | 1993 08 19.04931 | 23 07 13.22 | -03 06 46.9 | | 010 | 1993 QQ ₅ | * 1993 08 17.98229 | 22 57 11.72 | -01 42 42.5 | | 010 |
| 1993 QX ₄ | 1993 08 16.07431 | 23 05 26.62 | -04 25 11.3 | 17.8 | 010 | 1993 QQ ₅ | 1993 08 19.02812 | 22 56 31.77 | -01 48 08.3 | 18.4 | 010 |
| 1993 QX ₄ | 1993 08 16.08472 | 23 05 26.22 | -04 25 17.8 | | 010 | 1993 QQ ₅ | 1993 08 19.03889 | 22 56 31.32 | -01 48 11.6 | | 010 |
| 1993 QX ₄ | 1993 08 16.09514 | 23 05 25.92 | -04 25 23.5 | | 010 | 1993 QQ ₅ | 1993 08 19.04931 | 22 56 30.89 | -01 48 15.0 | | 010 |
| 1993 QX ₄ | 1993 08 17.98229 | 23 04 16.72 | -04 43 31.5 | | 010 | 1993 QR ₅ | * 1993 08 17.98229 | 22 57 13.69 | -04 04 03.5 | | 010 |
| 1993 QX ₄ | 1993 08 19.02812 | 23 03 36.72 | -04 53 45.3 | 18.1 | 010 | 1993 QR ₅ | 1993 08 19.02812 | 22 56 24.07 | -04 04 43.2 | 18.7 | 010 |
| 1993 QX ₄ | 1993 08 19.03889 | 23 03 36.28 | -04 53 52.1 | | 010 | 1993 QR ₅ | 1993 08 19.03889 | 22 56 23.59 | -04 04 42.6 | | 010 |
| 1993 QX ₄ | 1993 08 19.04931 | 23 03 35.86 | -04 53 58.7 | | 010 | 1993 QR ₅ | 1993 08 19.04931 | 22 56 23.14 | -04 04 42.9 | | 010 |
| 1993 QC ₅ | * 1993 08 16.07431 | 23 16 35.54 | -02 33 23.5 | 18.6 | 010 | 1993 QS ₅ | * 1993 08 17.98229 | 22 57 30.70 | -01 26 43.7 | | 010 |
| 1993 QC ₅ | 1993 08 16.08472 | 23 16 35.08 | -02 33 23.4 | | 010 | 1993 QS ₅ | 1993 08 19.02812 | 22 56 37.94 | -01 30 33.1 | 18.4 | 010 |
| 1993 QC ₅ | 1993 08 16.09514 | 23 16 34.67 | -02 33 23.9 | | 010 | 1993 QS ₅ | 1993 08 19.03889 | 22 56 37.29 | -01 30 36.0 | | 010 |
| 1993 QC ₅ | 1993 08 17.05417 | 23 15 53.04 | -02 33 11.0 | | 010 | 1993 QS ₅ | 1993 08 19.04931 | 22 56 36.71 | -01 30 37.9 | | 010 |
| 1993 QD ₅ | * 1993 08 18.05729 | 23 24 54.78 | -03 12 26.4 | | 010 | 1993 QT ₅ | * 1993 08 17.98229 | 22 58 05.92 | -00 43 17.0 | | 010 |
| 1993 QD ₅ | 1993 08 19.08403 | 23 24 03.60 | -03 10 44.2 | 18.6 | 010 | 1993 QT ₅ | 1993 08 19.02812 | 22 57 31.76 | -00 49 18.9 | 18.5 | 010 |
| 1993 QD ₅ | 1993 08 19.09479 | 23 24 03.03 | -03 10 43.0 | | 010 | 1993 QT ₅ | 1993 08 19.03889 | 22 57 31.48 | -00 49 21.7 | | 010 |
| 1993 QD ₅ | 1993 08 19.10556 | 23 24 02.42 | -03 10 43.4 | | 010 | 1993 QT ₅ | 1993 08 19.04931 | 22 57 31.04 | -00 49 26.8 | | 010 |
| 1993 QG ₅ | * 1993 08 17.98229 | 22 50 05.52 | -03 01 38.8 | | 010 | 1993 QU ₅ | * 1993 08 17.98229 | 22 58 48.96 | -02 17 38.2 | | 010 |
| 1993 QG ₅ | 1993 08 19.02812 | 22 49 19.34 | -03 05 29.9 | 19.0 | 010 | 1993 QU ₅ | 1993 08 19.02812 | 22 58 19.91 | -02 27 23.8 | 18.4 | 010 |
| 1993 QG ₅ | 1993 08 19.03889 | 22 49 18.67 | -03 05 33.9 | | 010 | 1993 QU ₅ | 1993 08 19.03889 | 22 58 19.59 | -02 27 30.3 | | 010 |
| 1993 QG ₅ | 1993 08 19.04931 | 22 49 18.20 | -03 05 36.6 | | 010 | 1993 QU ₅ | 1993 08 19.04931 | 22 58 19.26 | -02 27 37.4 | | 010 |
| 1993 QH ₅ | * 1993 08 17.98229 | 22 50 16.29 | -01 58 12.2 | | 010 | 1993 QV ₅ | * 1993 08 17.98229 | 22 59 28.08 | -02 05 39.3 | | 010 |
| 1993 QH ₅ | 1993 08 19.02812 | 22 49 36.16 | -02 07 45.8 | 18.4 | 010 | 1993 QV ₅ | 1993 08 19.02812 | 22 58 09.72 | -02 03 26.7 | 18.0 | 010 |
| 1993 QH ₅ | 1993 08 19.03889 | 22 49 35.69 | -02 07 52.2 | | 010 | 1993 QV ₅ | 1993 08 19.03889 | 22 58 08.85 | -02 03 25.4 | | 010 |
| 1993 QH ₅ | 1993 08 19.04931 | 22 49 35.30 | -02 07 57.1 | | 010 | 1993 QV ₅ | 1993 08 19.04931 | 22 58 08.04 | -02 03 24.3 | | 010 |
| 1993 QJ ₅ | * 1993 08 17.98229 | 22 51 58.27 | -02 45 43.1 | | 010 | 1993 QW ₅ | * 1993 08 17.98229 | 23 02 00.12 | -01 30 50.7 | | 010 |
| 1993 QJ ₅ | 1993 08 19.02812 | 22 51 02.85 | -02 48 01.9 | 18.6 | 010 | 1993 QW ₅ | 1993 08 19.02812 | 23 01 16.94 | -01 36 24.1 | 18.7 | 010 |
| 1993 QJ ₅ | 1993 08 19.03889 | 22 51 02.28 | -02 48 03.4 | | 010 | 1993 QW ₅ | 1993 08 19.03889 | 23 01 16.37 | -01 36 27.5 | | 010 |
| 1993 QJ ₅ | 1993 08 19.04931 | 22 51 01.69 | -02 48 04.2 | | 010 | 1993 QW ₅ | 1993 08 19.04931 | 23 01 15.88 | -01 36 30.3 | | 010 |
| 1993 QK ₅ | * 1993 08 17.98229 | 22 53 08.76 | -01 56 33.2 | | 010 | 1993 QX ₅ | * 1993 08 17.98229 | 23 02 23.08 | -02 37 00.3 | | 010 |
| 1993 QK ₅ | 1993 08 19.02812 | 22 52 31.18 | -02 06 00.8 | 18.1 | 010 | 1993 QX ₅ | 1993 08 19.02812 | 23 01 43.30 | -02 43 33.1 | 18.6 | 010 |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|--|---|------------------|-------------|-------------|------------|--|
| 1993 QX ₅ | 1993 08 19.03889 | 23 01 42.85 | -02 43 37.8 | 010 | (4796) | 1993 08 19.02812 | 22 49 01.18 | -04 29 40.2 | 18.0 | 010 | |
| 1993 QX ₅ | 1993 08 19.04931 | 23 01 42.49 | -02 43 42.8 | 010 | (4796) | 1993 08 19.03889 | 22 49 00.63 | -04 29 41.8 | | 010 | |
| 1993 QY ₅ | * 1993 08 17.98229 | 23 02 49.97 | -03 55 01.0 | 010 | (4796) | 1993 08 19.04931 | 22 49 00.11 | -04 29 42.9 | | 010 | |
| 1993 QY ₅ | 1993 08 19.02812 | 23 01 57.28 | -03 54 38.3 | 18.6 | 010 | 026 Zimmerwald | | | | | |
| 1993 QY ₅ | 1993 08 19.03889 | 23 01 56.76 | -03 54 37.8 | 010 | P. Wild, Astronomisches Institut der Universitaet, Sidlerstrasse 5, CH-3012 Berne, | | | | | | |
| 1993 QY ₅ | 1993 08 19.04931 | 23 01 56.21 | -03 54 38.7 | 010 | Switzerland | | | | | | |
| 1993 QZ ₅ | * 1993 08 17.98229 | 23 03 34.66 | -05 16 20.5 | 010 | Observer P. Wild | | | | | | |
| 1993 QZ ₅ | 1993 08 19.02812 | 23 02 53.11 | -05 21 15.3 | 18.7 | 010 | Measurer P. Wild | | | | | |
| 1993 QZ ₅ | 1993 08 19.03889 | 23 02 52.59 | -05 21 18.6 | 010 | 0.4-m Schmidt telescope | | | | | | |
| 1993 QZ ₅ | 1993 08 19.04931 | 23 02 52.21 | -05 21 21.2 | 010 | PPM | | | | | | |
| 1993 QA ₆ | * 1993 08 17.98229 | 23 04 22.21 | -01 44 35.1 | 010 | 1993 RH | 1993 09 19.90563 | 23 59 03.02 | -00 43 47.4 | 15 | M 026 | |
| 1993 QA ₆ | 1993 08 19.02812 | 23 03 32.99 | -01 47 26.2 | 18.6 | 010 | 1993 RH | 1993 09 21.06458 | 23 57 42.05 | -00 38 52.4 | 026 | |
| 1993 QA ₆ | 1993 08 19.03889 | 23 03 32.34 | -01 47 28.9 | 010 | 1993 RH | 1993 10 09.91806 | 23 37 49.48 | +00 42 52.8 | | 026 | |
| 1993 QA ₆ | 1993 08 19.04931 | 23 03 31.87 | -01 47 31.0 | 010 | 1993 RH | 1993 10 10.94583 | 23 36 56.70 | +00 47 35.2 | | 026 | |
| 1993 QB ₆ | * 1993 08 17.98229 | 23 04 28.07 | -03 48 41.2 | 010 | 1993 RH | 1993 10 11.88576 | 23 36 10.16 | +00 51 54.0 | | 026 | |
| 1993 QB ₆ | 1993 08 19.02812 | 23 03 54.52 | -03 54 34.3 | 18.7 | 010 | 1993 RK | 1993 09 19.88819 | 23 50 05.23 | +06 09 44.8 | 15.5 M 026 | |
| 1993 QB ₆ | 1993 08 19.03889 | 23 03 54.06 | -03 54 37.9 | 010 | 1993 RK | 1993 09 20.95972 | 23 48 54.72 | +06 15 06.7 | | 026 | |
| 1993 QB ₆ | 1993 08 19.04931 | 23 03 53.78 | -03 54 43.0 | 010 | 1993 RK | 1993 10 09.93333 | 23 30 27.42 | +07 30 25.4 | | 026 | |
| 1993 SO | 1993 08 15.00069 | 22 29 49.38 | -04 21 02.6 | 18.4 | 010 | 1993 RK | 1993 10 11.86597 | 23 29 03.28 | +07 36 36.4 | 026 | |
| 1993 SO | 1993 08 15.01146 | 22 29 48.84 | -04 21 08.1 | 010 | 1993 RK | 1993 09 19.88819 | 23 45 57.46 | +03 02 47.0 | 15 | M 026 | |
| 1993 SO | 1993 08 16.02986 | 22 29 05.69 | -04 30 07.5 | 010 | 1993 RU ₂ | 1993 09 20.95972 | 23 45 13.28 | +02 51 35.5 | | 026 | |
| 1993 SO | 1993 08 16.04097 | 22 29 05.14 | -04 30 14.1 | 010 | 1993 RU ₂ | 1993 10 09.91806 | 23 34 48.55 | -00 16 37.4 | 16 | 026 | |
| 1993 SO | 1993 08 16.05174 | 22 29 04.70 | -04 30 19.5 | 010 | 1993 RU ₂ | 1993 10 11.88576 | 23 34 11.30 | -00 33 02.9 | | 026 | |
| 1001 T-2 | 1993 08 17.98229 | 22 55 42.26 | -05 28 08.9 | 010 | 033 Tautenburg | | | | | | |
| 1001 T-2 | 1993 08 19.02812 | 22 55 00.32 | -05 32 56.1 | 18.5 | 010 | F. Börngen, Thüringer Landessternwarte, Sternwarte 5, D-07778 Tautenburg, | | | | | |
| 1001 T-2 | 1993 08 19.03889 | 22 54 59.81 | -05 33 00.0 | 010 | Germany | | | | | | |
| 1001 T-2 | 1993 08 19.04931 | 22 54 59.37 | -05 33 03.4 | 010 | L. D. Schmadel, Astronomisches Rechen-Institut, Mönchhofstrasse 12-14, D-69120 | | | | | | |
| (76) | 1993 08 17.98229 | 22 54 50.31 | -04 40 08.1 | 010 | Heidelberg, Germany | | | | | | |
| (76) | 1993 08 19.02812 | 22 54 12.66 | -04 44 02.9 | 14.0 | 010 | 1.3-m Schmidt telescope | | | | | |
| (76) | 1993 08 19.03889 | 22 54 12.18 | -04 44 05.4 | 010 | PPM | | | | | | |
| (76) | 1993 08 19.04931 | 22 54 11.76 | -04 44 07.7 | 010 | 1989 AO ₆ | 1992 09 07.00764 | 23 39 39.25 | +06 08 59.1 | 17.8 | 033 | |
| (310) | 1993 08 17.98229 | 23 04 01.97 | -01 14 26.2 | 010 | 1989 AO ₆ | 1992 09 07.04861 | 23 39 37.28 | +06 08 54.8 | | 033 | |
| (310) | 1993 08 19.02812 | 23 03 18.19 | -01 18 41.4 | 17.8 | 010 | 1989 AO ₆ | 1992 09 21.86528 | 23 27 32.97 | +05 31 33.2 | 16.9 033 | |
| (310) | 1993 08 19.03889 | 23 03 17.61 | -01 18 44.3 | 010 | 1989 AO ₆ | 1992 09 21.91111 | 23 27 30.70 | +05 31 24.8 | | 033 | |
| (310) | 1993 08 19.04931 | 23 03 17.17 | -01 18 46.9 | 010 | 1989 AO ₆ | 1992 09 22.93403 | 23 26 41.10 | +05 28 12.1 | | 033 | |
| (358) | 1993 08 17.98229 | 22 51 12.77 | -05 36 43.3 | 010 | 1989 AO ₆ | 1992 09 25.01389 | 23 25 01.43 | +05 21 31.3 | | 033 | |
| (358) | 1993 08 19.02812 | 22 50 30.25 | -05 42 08.9 | 14.0 | 010 | 1989 AO ₆ | 1992 09 26.88264 | 23 23 33.88 | +05 15 22.9 | 033 | |
| (358) | 1993 08 19.03889 | 22 50 29.71 | -05 42 12.3 | 010 | 1989 AO ₆ | 1992 09 27.88056 | 23 22 47.81 | +05 12 03.6 | | 033 | |
| (358) | 1993 08 19.04931 | 22 50 29.27 | -05 42 15.1 | 010 | 1989 AO ₆ | 1992 09 28.87153 | 23 22 02.73 | +05 08 44.5 | | 033 | |
| (709) | 1993 08 17.98229 | 22 48 00.59 | -02 01 05.5 | 010 | 1991 AO ₃ | 1993 08 24.04722 | 00 44 26.10 | -08 50 42.6 | 17.9 | 033 | |
| (709) | 1993 08 19.02812 | 22 47 03.22 | -01 58 37.1 | 15.0 | 010 | 1991 AO ₃ | 1993 09 18.93889 | 00 29 06.98 | -11 47 07.4 | 17.0 033 | |
| (709) | 1993 08 19.03889 | 22 47 02.52 | -01 58 35.2 | 010 | 1991 AO ₃ | 1993 09 18.98403 | 00 29 04.47 | -11 47 24.3 | | 033 | |
| (709) | 1993 08 19.04931 | 22 47 01.89 | -01 58 33.5 | 010 | 1991 AO ₃ | 1993 09 21.98333 | 00 26 26.26 | -12 05 09.1 | | 033 | |
| (3113) | 1993 08 17.98229 | 23 01 31.03 | -01 39 39.7 | 010 | 1992 SN ₂₄ | * 1992 09 21.86528 | 23 23 49.75 | +06 53 07.9 | 18.5 | I 033 | |
| (3113) | 1993 08 19.02812 | 23 00 48.53 | -01 45 46.5 | 18.0 | 010 | 1992 SN ₂₄ | 1992 09 21.91111 | 23 23 47.55 | +06 52 46.7 | 033 | |
| (3113) | 1993 08 19.03889 | 23 00 48.02 | -01 45 50.2 | 010 | 1992 SN ₂₄ | 1992 09 22.93403 | 23 23 00.31 | +06 44 21.3 | | 033 | |
| (4109) | 1993 08 19.04931 | 23 00 47.57 | -01 45 54.1 | 010 | 1992 SN ₂₄ | 1992 09 25.01389 | 23 21 26.62 | +06 26 56.6 | | 033 | |
| (4109) | 1993 08 17.98229 | 22 56 44.14 | -05 28 13.2 | 010 | 1992 SN ₂₄ | 1992 09 26.88264 | 23 20 06.01 | +06 11 07.1 | | 033 | |
| (4109) | 1993 08 19.02812 | 22 55 55.97 | -05 34 11.8 | 17.8 | 010 | 1992 SN ₂₄ | 1992 09 27.88056 | 23 19 24.29 | +06 02 35.3 | 033 | |
| (4109) | 1993 08 19.03889 | 22 55 55.41 | -05 34 15.4 | 010 | 1992 SN ₂₄ | 1992 09 28.87153 | 23 18 43.87 | +05 54 07.0 | | 033 | |
| (4109) | 1993 08 19.04931 | 22 55 54.95 | -05 34 18.4 | 010 | 1992 SO ₂₄ | 1992 09 07.00764 | 23 37 42.08 | +06 35 12.3 | 18.9 | 033 | |
| (4796) | 1993 08 17.98229 | 22 49 48.41 | -04 27 03.7 | 010 | | | | | | | |

| | | | | | | | | | | | |
|-----------------------|--------------------|-------------|-------------|------|-------|----------------------|--------------------|-------------|-------------|------|-----|
| 1992 SO ₂₄ | 1992 09 07.04861 | 23 37 40.03 | +06 34 56.0 | | 033 | 1993 RD | 1993 09 20.88472 | 23 54 35.72 | +04 14 06.7 | | 033 |
| 1992 SO ₂₄ | * 1992 09 21.86528 | 23 25 17.89 | +04 46 42.0 | 19.1 | 033 | 1993 RD | 1993 09 22.00486 | 23 53 29.39 | +04 10 56.9 | | 033 |
| 1992 SO ₂₄ | 1992 09 21.91111 | 23 25 15.62 | +04 46 20.7 | | 033 | 1993 RE | 1993 09 18.91458 | 23 58 10.58 | +03 18 38.9 | 17.1 | 033 |
| 1992 SO ₂₄ | 1992 09 22.93403 | 23 24 25.08 | +04 38 10.6 | | 033 | 1993 RE | 1993 09 18.96250 | 23 58 08.17 | +03 18 22.4 | | 033 |
| 1992 SO ₂₄ | 1992 09 25.01389 | 23 22 43.92 | +04 21 27.3 | | 033 | 1993 RE | 1993 09 20.88472 | 23 56 28.91 | +03 07 27.3 | | 033 |
| 1992 SO ₂₄ | 1992 09 26.88264 | 23 21 15.51 | +04 06 19.7 | | 033 | 1993 RE | 1993 09 22.00486 | 23 55 30.34 | +03 00 57.9 | | 033 |
| 1992 SO ₂₄ | 1992 09 27.88056 | 23 20 29.12 | +03 58 14.1 | | 033 | 1993 RY ₁ | 1993 09 18.91458 | 23 56 46.42 | +02 10 34.4 | 17.2 | 033 |
| 1992 SO ₂₄ | 1992 09 28.87153 | 23 19 43.85 | +03 50 11.9 | | 033 | 1993 RY ₁ | 1993 09 18.96250 | 23 56 44.44 | +02 10 11.1 | | 033 |
| 1992 SP ₂₄ | 1992 09 07.00764 | 23 36 41.14 | +05 20 51.0 | 19.0 | 033 | 1993 RY ₁ | 1993 09 20.88472 | 23 55 28.34 | +01 54 44.4 | | 033 |
| 1992 SP ₂₄ | 1992 09 07.04861 | 23 36 39.37 | +05 20 40.5 | | 033 | 1993 RY ₁ | 1993 09 22.00486 | 23 54 43.70 | +01 45 42.6 | | 033 |
| 1992 SP ₂₄ | * 1992 09 21.86528 | 23 25 58.84 | +04 10 55.2 | 18.3 | 033 | 1993 RU ₂ | 1993 09 18.91458 | 23 46 37.47 | +03 12 52.7 | 15.7 | 033 |
| 1992 SP ₂₄ | 1992 09 21.91111 | 23 25 56.86 | +04 10 40.2 | | 033 | 1993 RU ₂ | 1993 09 18.96250 | 23 46 35.37 | +03 12 22.7 | | 033 |
| 1992 SP ₂₄ | 1992 09 22.93403 | 23 25 12.96 | +04 05 21.1 | | 033 | 1993 RU ₂ | 1993 09 20.88472 | 23 45 16.49 | +02 52 20.2 | | 033 |
| 1992 SP ₂₄ | 1992 09 25.01389 | 23 23 44.64 | +03 54 26.2 | | 033 | 1993 RU ₂ | 1993 09 22.00486 | 23 44 30.52 | +02 40 35.4 | | 033 |
| 1992 SP ₂₄ | 1992 09 26.88264 | 23 22 26.98 | +03 44 31.7 | | 033 | 1993 SG ₂ | 1993 09 18.91458 | 23 56 14.88 | +01 32 01.3 | 17.9 | 033 |
| 1992 SP ₂₄ | 1992 09 27.88056 | 23 21 46.06 | +03 39 15.0 | | 033 | 1993 SG ₂ | 1993 09 18.96250 | 23 56 11.91 | +01 31 55.3 | | 033 |
| 1992 SP ₂₄ | 1992 09 28.87153 | 23 21 06.01 | +03 33 58.9 | | 033 | 1993 SG ₂ | 1993 09 20.88472 | 23 54 19.05 | +01 27 39.7 | | 033 |
| 1992 SQ ₂₄ | 1992 09 07.00764 | 23 39 14.57 | +06 04 51.3 | 18.5 | 033 | 1993 SG ₂ | 1993 09 22.00486 | 23 53 12.73 | +01 25 07.3 | | 033 |
| 1992 SQ ₂₄ | 1992 09 07.04861 | 23 39 12.87 | +06 04 35.5 | | 033 | 1993 ST ₂ | 1993 09 18.91458 | 23 55 07.64 | +02 24 22.9 | 18.0 | 033 |
| 1992 SQ ₂₄ | * 1992 09 21.86528 | 23 28 53.55 | +04 22 32.2 | 18.1 | 033 | 1993 ST ₂ | 1993 09 18.96250 | 23 55 05.61 | +02 23 53.3 | | 033 |
| 1992 SQ ₂₄ | 1992 09 21.91111 | 23 28 51.66 | +04 22 10.5 | | 033 | 1993 ST ₂ | 1993 09 20.88472 | 23 53 47.89 | +02 04 01.2 | | 033 |
| 1992 SQ ₂₄ | 1992 09 22.93403 | 23 28 09.36 | +04 14 39.2 | | 033 | 1993 ST ₂ | 1993 09 22.00486 | 23 53 02.07 | +01 52 22.3 | | 033 |
| 1992 SQ ₂₄ | 1992 09 25.01389 | 23 26 44.62 | +03 59 13.9 | | 033 | 1993 SY ₂ | * 1993 09 18.91458 | 23 50 51.48 | +04 07 46.6 | 18.8 | 033 |
| 1992 SQ ₂₄ | 1992 09 26.88264 | 23 25 30.16 | +03 45 20.6 | | 033 | 1993 SY ₂ | 1993 09 18.96250 | 23 50 49.00 | +04 07 35.2 | | 033 |
| 1992 SQ ₂₄ | 1992 09 27.88056 | 23 24 51.03 | +03 37 55.9 | | 033 | 1993 SY ₂ | 1993 09 20.88472 | 23 49 11.87 | +03 59 43.7 | | 033 |
| 1992 SQ ₂₄ | 1992 09 28.87153 | 23 24 12.67 | +03 30 36.2 | | E 033 | 1993 SY ₂ | 1993 09 22.00486 | 23 48 14.88 | +03 55 01.0 | | 033 |
| 1992 SR ₂₄ | 1992 09 07.00764 | 23 42 48.46 | +06 56 32.4 | 17.4 | 033 | 1993 SZ ₂ | * 1993 09 18.91458 | 23 51 45.68 | +01 57 49.7 | 18.6 | 033 |
| 1992 SR ₂₄ | 1992 09 07.04861 | 23 42 46.50 | +06 56 24.2 | | 033 | 1993 SZ ₂ | 1993 09 18.96250 | 23 51 43.38 | +01 57 41.3 | | 033 |
| 1992 SR ₂₄ | * 1992 09 21.86528 | 23 30 54.67 | +05 48 31.5 | 15.9 | 033 | 1993 SZ ₂ | 1993 09 20.88472 | 23 50 16.39 | +01 51 51.8 | | 033 |
| 1992 SR ₂₄ | 1992 09 21.91111 | 23 30 52.42 | +05 48 16.6 | | 033 | 1993 SZ ₂ | 1993 09 22.00486 | 23 49 26.07 | +01 48 15.7 | | 033 |
| 1992 SR ₂₄ | 1992 09 22.93403 | 23 30 04.67 | +05 42 37.1 | | 033 | 1993 SA ₃ | * 1993 09 18.91458 | 23 51 54.90 | +03 45 20.2 | 18.4 | 033 |
| 1992 SR ₂₄ | 1992 09 25.01389 | 23 28 29.88 | +05 30 53.9 | | 033 | 1993 SA ₃ | 1993 09 18.96250 | 23 51 52.96 | +03 44 45.6 | | 033 |
| 1992 SR ₂₄ | 1992 09 26.88264 | 23 27 08.10 | +05 20 13.9 | | 033 | 1993 SA ₃ | 1993 09 20.88472 | 23 50 39.33 | +03 21 15.1 | | 033 |
| 1992 SR ₂₄ | 1992 09 27.88056 | 23 26 25.69 | +05 14 29.5 | | 033 | 1993 SB ₃ | * 1993 09 18.91458 | 23 52 14.32 | +01 30 11.1 | 18.5 | 033 |
| 1992 SR ₂₄ | 1992 09 28.87153 | 23 25 44.66 | +05 08 47.6 | | 033 | 1993 SB ₃ | 1993 09 18.96250 | 23 52 12.13 | +01 29 51.9 | | 033 |
| 1992 SS ₂₄ | 1992 09 07.00764 | 23 43 23.00 | +07 08 23.8 | 18.8 | 033 | 1993 SB ₃ | 1993 09 20.88472 | 23 50 44.26 | +01 16 48.8 | | 033 |
| 1992 SS ₂₄ | 1992 09 07.04861 | 23 43 21.05 | +07 08 16.1 | | 033 | 1993 SB ₃ | 1993 09 22.00486 | 23 49 52.74 | +01 09 09.9 | | 033 |
| 1992 SS ₂₄ | * 1992 09 21.86528 | 23 31 28.64 | +06 09 12.2 | 18.0 | 033 | 1993 SC ₃ | * 1993 09 18.91458 | 23 54 42.43 | +03 34 24.1 | 18.7 | 033 |
| 1992 SS ₂₄ | 1992 09 21.91111 | 23 31 26.35 | +06 08 58.8 | | 033 | 1993 SC ₃ | 1993 09 18.96250 | 23 54 40.27 | +03 33 54.7 | | 033 |
| 1992 SS ₂₄ | 1992 09 22.93403 | 23 30 37.08 | +06 04 04.1 | | 033 | 1993 SC ₃ | 1993 09 20.88472 | 23 53 11.61 | +03 14 57.7 | | 033 |
| 1992 SS ₂₄ | 1992 09 25.01389 | 23 28 58.21 | +05 53 52.3 | | 033 | 1993 SC ₃ | 1993 09 22.00486 | 23 52 19.82 | +03 03 49.8 | | 033 |
| 1992 SS ₂₄ | 1992 09 26.88264 | 23 27 31.36 | +05 44 32.0 | | 033 | 1993 SD ₃ | * 1993 09 18.91458 | 23 56 40.48 | +01 52 28.6 | 18.4 | 033 |
| 1992 SS ₂₄ | 1992 09 27.88056 | 23 26 45.71 | +05 39 29.5 | | 033 | 1993 SD ₃ | 1993 09 18.96250 | 23 56 38.18 | +01 32 10.5 | | 033 |
| 1992 SS ₂₄ | 1992 09 28.87153 | 23 26 01.04 | +05 34 27.4 | | 033 | 1993 SD ₃ | 1993 09 20.88472 | 23 55 14.27 | +01 19 38.9 | | 033 |
| 1992 ST ₂₄ | * 1992 09 21.86528 | 23 32 33.96 | +05 22 51.2 | 18.2 | 033 | 1993 SD ₃ | 1993 09 22.00486 | 23 54 24.80 | +01 12 17.6 | | 033 |
| 1992 ST ₂₄ | 1992 09 21.91111 | 23 32 31.93 | +05 22 31.0 | | 033 | 1993 SE ₃ | * 1993 09 18.91458 | 23 57 59.74 | +03 33 05.4 | 18.3 | 033 |
| 1992 ST ₂₄ | 1992 09 22.93403 | 23 31 49.28 | +05 13 36.2 | | 033 | 1993 SE ₃ | 1993 09 18.96250 | 23 57 57.36 | +03 32 43.9 | | 033 |
| 1992 ST ₂₄ | 1992 09 25.01389 | 23 30 24.53 | +04 55 26.0 | | 033 | 1993 SE ₃ | 1993 09 20.88472 | 23 56 20.46 | +03 18 04.0 | | 033 |
| 1992 ST ₂₄ | 1992 09 27.88056 | 23 28 33.08 | +04 30 23.9 | | 033 | 1993 SE ₃ | 1993 09 22.00486 | 23 55 23.18 | +03 09 23.2 | | 033 |
| 1992 ST ₂₄ | 1992 09 28.87153 | 23 27 56.08 | +04 21 47.0 | | 033 | 1993 SH ₃ | * 1993 09 19.00972 | 00 43 01.20 | +11 54 55.5 | 17.8 | 033 |
| 1993 RD | 1993 09 18.91458 | 23 56 32.00 | +04 19 33.5 | 17.3 | 033 | 1993 SH ₃ | 1993 09 22.04861 | 00 40 46.52 | +11 38 25.3 | | 033 |
| 1993 RD | 1993 09 18.96250 | 23 56 29.28 | +04 19 25.5 | | 033 | 1993 SH ₃ | 1993 09 22.09167 | 00 40 44.45 | +11 38 10.3 | | 033 |

| | | | | | |
|----------------------|--------------------|-------------|-------------|------|-------|
| 1993 SJ ₃ | * 1993 09 20.91111 | 00 16 16.37 | +05 27 53.9 | 17.8 | 033 |
| 1993 SJ ₃ | 1993 09 22.02639 | 00 15 18.40 | +05 18 43.7 | | 033 |
| 1993 SJ ₃ | 1993 09 22.06944 | 00 15 16.18 | +05 18 21.5 | | 033 |
| 1993 SK ₃ | * 1993 09 20.91111 | 00 21 31.90 | +05 22 35.4 | 17.3 | 033 |
| 1993 SK ₃ | 1993 09 22.02639 | 00 20 41.55 | +05 18 04.6 | | 033 |
| 1993 SK ₃ | 1993 09 22.06944 | 00 20 39.59 | +05 17 54.1 | | 033 |
| 2572 P-L | 1992 04 03.90660 | 11 07 32.22 | +06 36 58.6 | 18.9 | 033 |
| 2572 P-L | 1992 04 03.95139 | 11 07 30.53 | +06 37 03.4 | | 033 |
| 2158 T-3 | 1993 09 20.91111 | 00 20 51.31 | +05 49 53.4 | 17.6 | 033 |
| 2158 T-3 | 1993 09 22.02639 | 00 19 44.55 | +05 43 11.1 | | 033 |
| 2158 T-3 | 1993 09 22.06944 | 00 19 41.86 | +05 42 54.3 | | 033 |
| (189) | 1993 09 20.91111 | 00 19 27.66 | +05 35 04.3 | 13.3 | 033 |
| (189) | 1993 09 22.02639 | 00 18 32.62 | +05 26 28.0 | | 033 |
| (189) | 1993 09 22.06944 | 00 18 30.43 | +05 26 07.8 | | 033 |
| (396) | 1993 09 18.91458 | 23 58 06.92 | +03 59 46.7 | 14.5 | 033 |
| (396) | 1993 09 18.96250 | 23 58 04.68 | +03 59 30.0 | | 033 |
| (396) | 1993 09 20.88472 | 23 56 29.69 | +03 48 29.0 | | 033 |
| (396) | 1993 09 22.00486 | 23 55 33.68 | +03 42 01.3 | | 033 |
| (673) | 1993 09 18.91458 | 23 52 42.90 | +02 52 25.4 | 14.7 | 033 |
| (673) | 1993 09 18.96250 | 23 52 40.62 | +02 52 08.9 | | 033 |
| (673) | 1993 09 20.88472 | 23 51 10.43 | +02 41 05.8 | | 033 |
| (673) | 1993 09 22.00486 | 23 50 17.63 | +02 34 35.8 | | 033 |
| (2483) | 1992 09 07.00764 | 23 41 20.39 | +04 37 14.5 | 17.0 | E 033 |
| (2483) | 1992 09 07.04861 | 23 41 18.88 | +04 37 06.4 | | 033 |
| (2834) | 1992 09 07.04861 | 23 43 09.31 | +04 32 50.3 | 16.9 | E 033 |
| (3662) | 1993 09 19.00972 | 00 46 37.32 | +12 11 14.3 | 15.9 | 033 |
| (3662) | 1993 09 22.04861 | 00 43 31.89 | +12 18 36.6 | | 033 |
| (3662) | 1993 09 22.09167 | 00 43 29.07 | +12 18 42.7 | | 033 |
| (4292) | 1993 09 18.91458 | 23 53 30.53 | +02 52 59.9 | 16.7 | 033 |
| (4292) | 1993 09 18.96250 | 23 53 28.06 | +02 52 47.7 | | 033 |
| (4292) | 1993 09 20.88472 | 23 51 51.04 | +02 44 26.0 | | 033 |
| (4292) | 1993 09 22.00486 | 23 50 54.09 | +02 39 29.7 | | 033 |
| (4513) | 1992 09 07.00764 | 23 33 34.15 | +07 07 31.3 | 16.8 | 033 |
| (4513) | 1992 09 07.04861 | 23 33 32.47 | +07 07 15.0 | | 033 |
| (4513) | 1992 09 21.86528 | 23 23 16.78 | +05 20 54.9 | 16.2 | 033 |
| (4513) | 1992 09 21.91111 | 23 23 14.89 | +05 20 33.4 | | 033 |
| (4513) | 1992 09 22.93403 | 23 22 33.29 | +05 12 34.4 | | 033 |
| (4513) | 1992 09 25.01389 | 23 21 10.06 | +04 56 14.0 | | 033 |
| (4513) | 1992 09 26.88264 | 23 19 57.39 | +04 41 26.5 | | 033 |
| (4513) | 1992 09 27.88056 | 23 19 19.39 | +04 33 31.8 | | 033 |
| (4513) | 1992 09 28.87153 | 23 18 42.20 | +04 25 40.7 | | 033 |
| (4693) | 1993 09 19.00972 | 00 48 48.24 | +13 06 03.7 | 17.2 | 033 |
| (4693) | 1993 09 22.04861 | 00 46 19.02 | +12 50 21.1 | | 033 |
| (4693) | 1993 09 22.09167 | 00 46 16.74 | +12 50 06.5 | | 033 |
| (5089) | 1993 09 18.91458 | 23 47 12.99 | +03 14 59.7 | 17.7 | 033 |
| (5089) | 1993 09 18.96250 | 23 47 10.21 | +03 14 55.6 | | 033 |
| (5089) | 1993 09 20.88472 | 23 45 21.70 | +03 11 43.5 | | 033 |
| (5089) | 1993 09 22.00486 | 23 44 18.32 | +03 09 46.3 | | 033 |

046 Kleť

J. Tichá, Hvězdárna Kleť, CS-37001 České Budějovice, Czech Republic
 Observers J. Tichá, Z. Vávrová, Z. Moravec, M. Tichý
 Measurers Z. Vávrová, M. Tichý

0.63-m Maksutov reflector, 0.57-m reflector
 PPM

| | | | | |
|---------|------------------|-------------|-------------|-----|
| 1993 MF | 1993 08 12.89115 | 23 16 25.93 | +40 50 45.4 | 046 |
| 1993 MF | 1993 08 12.89497 | 23 16 26.69 | +40 50 47.5 | 046 |
| 1993 MF | 1993 08 21.87076 | 23 41 32.75 | +41 24 42.8 | 046 |
| 1993 MF | 1993 08 21.87806 | 23 41 33.72 | +41 24 41.3 | 046 |

098 Cima Ekar

G. Forti, Osservatorio Astrofisico di Arcetri, Largo E. Fermi 5, I-50125 Florence,
 Italy

Observers A. Boattini, S. Mistero, V. Goretti, S. Bartolini, M. Tombelli
 0.67-m $f/3.2$ Schmidt

| | | | | | |
|----------------------|--------------------|-------------|-------------|--------|-----|
| 1987 DH ₆ | 1993 09 15.98700 | 23 42 55.16 | +00 32 32.6 | 17.0 V | 098 |
| 1990 UF ₂ | 1993 09 14.98424 | 23 56 52.69 | +05 25 16.3 | 17.5 V | 098 |
| 1990 UF ₂ | 1993 09 15.00235 | 23 56 51.48 | +05 25 06.5 | | 098 |
| 1993 RK | 1993 09 14.98424 | 23 55 25.35 | +05 43 03.8 | 14.5 V | 098 |
| 1993 RK | 1993 09 15.00235 | 23 55 24.17 | +05 43 14.7 | | 098 |
| 1993 RN ₁ | 1993 09 15.98353 | 23 40 03.00 | -00 35 40.9 | 17.5 V | 098 |
| 1993 RN ₁ | 1993 09 15.99137 | 23 40 02.60 | -00 35 41.5 | | 098 |
| 1993 RO ₂ | * 1993 09 14.98424 | 23 54 32.46 | +07 12 38.4 | 17.5 V | 098 |
| 1993 RO ₂ | 1993 09 15.00235 | 23 54 31.29 | +07 12 34.9 | | 098 |
| 1993 RO ₂ | 1993 09 15.94580 | 23 53 37.36 | +07 08 17.4 | | 098 |
| 1993 RP ₂ | * 1993 09 14.98424 | 23 56 34.14 | +06 22 40.3 | 16.5 V | 098 |
| 1993 RP ₂ | 1993 09 15.00235 | 23 56 33.10 | +06 22 37.4 | | 098 |
| 1993 RP ₂ | 1993 09 15.94580 | 23 55 43.04 | +06 20 26.7 | | 098 |
| 1993 RV ₂ | * 1993 09 14.89251 | 00 19 55.97 | +14 51 21.8 | 17.0 V | 098 |
| 1993 RV ₂ | 1993 09 14.93094 | 00 19 53.53 | +14 51 36.5 | | 098 |
| 1993 RV ₂ | 1993 09 15.96424 | 00 18 51.11 | +14 57 47.3 | | 098 |
| 1993 RD ₃ | 1993 09 14.98424 | 23 54 07.44 | +07 32 33.4 | 16 V | 098 |
| 1993 RD ₃ | 1993 09 15.00235 | 23 54 06.94 | +07 32 13.5 | | 098 |
| 1993 RG ₃ | * 1993 09 14.89251 | 00 17 51.50 | +15 53 02.8 | 17.5 V | 098 |
| 1993 RG ₃ | 1993 09 14.93094 | 00 17 49.30 | +15 53 02.1 | | 098 |
| 1993 RG ₃ | 1993 09 15.96424 | 00 16 53.78 | +15 52 50.9 | 17.5 V | 098 |
| 1993 RH ₃ | * 1993 09 14.89251 | 00 24 13.70 | +15 19 35.0 | 16.5 V | 098 |
| 1993 RH ₃ | 1993 09 14.93094 | 00 24 11.78 | +15 19 34.8 | | 098 |
| 1993 RH ₃ | 1993 09 15.96424 | 00 23 20.93 | +15 19 00.6 | | 098 |
| 1993 RJ ₃ | 1993 09 14.89251 | 00 19 21.37 | +14 58 10.1 | 17.0 V | 098 |
| 1993 RJ ₃ | 1993 09 14.93094 | 00 19 19.69 | +14 58 00.3 | | 098 |
| 1993 RJ ₃ | * 1993 09 15.96424 | 00 18 34.94 | +14 52 46.5 | 17.0 V | 098 |

104 San Marcello Pistoiese

L. Tesi, Osservatorio di Pian dei Termini, Viale Panoramico 45, I-51028 San
 Marcello Pistoiese (PT), Italy

Observers L. Tesi, P. Gigli

Measurers L. Tesi, G. Cattani

GSC

| | | | | |
|---------|------------------|-------------|-------------|-----|
| 1993 MF | 1993 08 12.86181 | 23 16 20.85 | +40 50 27.7 | 104 |
| 1993 MF | 1993 08 12.87222 | 23 16 22.83 | +40 50 35.3 | 104 |
| 1993 MF | 1993 08 18.83611 | 23 33 46.70 | +41 24 56.1 | 104 |
| 1993 MF | 1993 08 18.84653 | 23 33 48.27 | +41 24 57.9 | 104 |
| 1993 MF | 1993 08 22.88819 | 23 43 59.29 | +41 22 12.1 | 104 |
| 1993 MF | 1993 08 22.90486 | 23 44 01.55 | +41 22 10.0 | 104 |
| 1993 MF | 1993 08 22.92014 | 23 44 03.61 | +41 22 08.2 | 104 |

| | | | | | | | | | | | |
|--|------------------|-------------|-------------|--------|-----|----------------------|--------------------|-------------|-------------|----|-----|
| 1993 RP ₂ | 1993 09 21.85556 | 23 50 23.22 | +06 03 40.9 | 16.5 V | 104 | 1988 TP ₁ | 1993 09 23.31389 | 01 48 00.47 | +08 12 07.6 | 16 | 303 |
| 1993 RP ₂ | 1993 09 21.87014 | 23 50 22.52 | +06 03 37.6 | | 104 | 1989 AQ | 1993 09 22.26111 | 01 47 14.25 | +08 13 55.0 | 16 | 303 |
| (5641) | 1993 08 12.89792 | 21 08 46.01 | -05 13 18.1 | | 104 | 1989 AQ | 1993 09 22.27500 | 01 47 13.93 | +08 13 52.5 | 16 | 303 |
| (5641) | 1993 08 12.91007 | 21 08 45.31 | -05 13 34.2 | | 104 | 1989 AQ | 1993 09 22.28889 | 01 47 13.52 | +08 13 50.7 | 16 | 303 |
| (5641) | 1993 08 18.86944 | 21 02 54.56 | -07 40 13.0 | | 104 | 1989 AQ | 1993 09 23.31389 | 01 46 42.95 | +08 10 43.5 | 15 | 303 |
| (5641) | 1993 08 18.88194 | 21 02 53.84 | -07 40 30.7 | | 104 | 1993 SL ₃ | 1993 09 22.26111 | 01 40 28.92 | +07 33 52.0 | 15 | 303 |
| (5656) | 1993 08 22.94792 | 20 42 49.60 | -09 36 40.5 | | 104 | 1993 SL ₃ | 1993 09 22.27500 | 01 40 27.85 | +07 33 59.6 | 15 | 303 |
| (5656) | 1993 08 22.95972 | 20 42 49.14 | -09 36 42.8 | | 104 | 1993 SL ₃ | 1993 09 22.28889 | 01 40 26.55 | +07 34 07.9 | 15 | 303 |
| | | | | | | 1993 SL ₃ | 1993 09 23.31389 | 01 39 02.23 | +07 43 21.4 | 15 | 303 |
| | | | | | | 1993 SM ₃ | * 1993 09 22.26111 | 01 34 17.86 | +07 16 01.3 | 17 | 303 |
| | | | | | | 1993 SM ₃ | 1993 09 22.27500 | 01 34 17.47 | +07 15 59.1 | 17 | 303 |
| | | | | | | 1993 SM ₃ | 1993 09 22.28889 | 01 34 17.06 | +07 15 55.2 | 17 | 303 |
| | | | | | | 1993 SM ₃ | 1993 09 23.31389 | 01 33 44.83 | +07 11 49.1 | 17 | 303 |
| | | | | | | 1993 SN ₃ | * 1993 09 22.26111 | 01 36 35.85 | +09 30 25.7 | 16 | 303 |
| | | | | | | 1993 SN ₃ | 1993 09 22.27500 | 01 36 35.42 | +09 30 22.9 | 16 | 303 |
| | | | | | | 1993 SN ₃ | 1993 09 22.28889 | 01 36 34.75 | +09 30 20.3 | 16 | 303 |
| | | | | | | 1993 SN ₃ | 1993 09 23.31389 | 01 36 02.46 | +09 26 44.7 | 16 | 303 |
| | | | | | | 1993 SO ₃ | * 1993 09 22.26111 | 01 39 53.66 | +06 44 31.7 | 16 | 303 |
| | | | | | | 1993 SO ₃ | 1993 09 22.27500 | 01 39 53.06 | +06 44 32.2 | 16 | 303 |
| | | | | | | 1993 SO ₃ | 1993 09 22.28889 | 01 39 52.46 | +06 44 31.7 | 16 | 303 |
| | | | | | | 1993 SO ₃ | 1993 09 23.31389 | 01 39 09.69 | +06 44 12.9 | 16 | 303 |
| | | | | | | 1993 SP ₃ | * 1993 09 22.26111 | 01 48 02.07 | +09 08 34.6 | 15 | 303 |
| | | | | | | 1993 SP ₃ | 1993 09 22.27500 | 01 48 01.85 | +09 08 31.5 | 15 | 303 |
| | | | | | | 1993 SP ₃ | 1993 09 22.28889 | 01 48 01.41 | +09 08 27.3 | 15 | 303 |
| | | | | | | 1993 SP ₃ | 1993 09 23.31389 | 01 47 40.52 | +09 02 23.9 | 15 | 303 |
| | | | | | | 1993 SQ ₃ | * 1993 09 22.26111 | 01 48 47.80 | +08 22 14.4 | 17 | 303 |
| | | | | | | 1993 SQ ₃ | 1993 09 22.27500 | 01 48 47.36 | +08 22 14.0 | 17 | 303 |
| | | | | | | 1993 SQ ₃ | 1993 09 22.28889 | 01 48 46.88 | +08 22 12.5 | 17 | 303 |
| | | | | | | 1993 SQ ₃ | 1993 09 23.31389 | 01 48 17.35 | +08 19 33.9 | 17 | 303 |
| | | | | | | (146) | 1993 09 22.34861 | 03 36 42.36 | +06 07 44.8 | 13 | 303 |
| | | | | | | (146) | 1993 09 23.36840 | 03 36 35.85 | +06 05 50.3 | 13 | 303 |
| | | | | | | (1093) | 1993 09 22.34861 | 03 43 53.96 | +09 25 06.2 | 14 | 303 |
| | | | | | | (1093) | 1993 09 23.36840 | 03 43 38.81 | +09 27 48.1 | 14 | 303 |
| | | | | | | (1965) | 1993 09 22.26111 | 01 37 09.99 | +06 19 15.9 | 15 | 303 |
| | | | | | | (1965) | 1993 09 22.27500 | 01 37 09.44 | +06 19 12.3 | 15 | 303 |
| | | | | | | (1965) | 1993 09 22.28889 | 01 37 08.90 | +06 19 09.0 | 15 | 303 |
| | | | | | | (1965) | 1993 09 23.31389 | 01 36 30.92 | +06 14 57.1 | 15 | 303 |
| | | | | | | (3016) | 1993 09 22.26111 | 01 44 01.21 | +06 27 23.2 | 16 | 303 |
| | | | | | | (3016) | 1993 09 22.27500 | 01 44 00.75 | +06 27 20.4 | 16 | 303 |
| | | | | | | (3016) | 1993 09 22.28889 | 01 44 00.29 | +06 27 17.2 | 16 | 303 |
| | | | | | | (3016) | 1993 09 23.31389 | 01 43 25.15 | +06 22 40.9 | 16 | 303 |
| | | | | | | (3941) | 1993 09 22.26111 | 01 40 17.83 | +09 52 16.5 | 17 | 303 |
| | | | | | | (3941) | 1993 09 22.27500 | 01 40 17.37 | +09 52 13.6 | 17 | 303 |
| | | | | | | (3941) | 1993 09 22.28889 | 01 40 16.84 | +09 52 10.7 | 17 | 303 |
| | | | | | | (3941) | 1993 09 23.31389 | 01 39 41.32 | +09 48 07.8 | 17 | 303 |
| | | | | | | (4474) | 1993 09 22.26111 | 01 38 13.78 | +07 21 09.6 | 17 | 303 |
| | | | | | | (4474) | 1993 09 22.27500 | 01 38 13.25 | +07 21 07.1 | 17 | 303 |
| | | | | | | (4474) | 1993 09 22.28889 | 01 38 12.72 | +07 21 04.5 | 17 | 303 |
| | | | | | | (4474) | 1993 09 23.31389 | 01 37 36.45 | +07 16 52.2 | 17 | 303 |
| | | | | | | (4839) | 1993 09 22.26111 | 01 37 02.91 | +06 08 49.4 | 15 | 303 |
| | | | | | | (4839) | 1993 09 22.27500 | 01 37 02.43 | +06 08 43.4 | 15 | 303 |
| 107 Cavezzo | | | | | | | | | | | |
| E. Colombini, Via S. Vittore 44, I-40136 Bologna, Italy | | | | | | | | | | | |
| Observers R. Calanca, R. Bonomi | | | | | | | | | | | |
| 0.40-m $f/2.23$ reflector + CCD | | | | | | | | | | | |
| GSC | | | | | | | | | | | |
| 1993 MF | 1993 09 10.95995 | 00 14 56.70 | +37 19 51.6 | | 107 | | | | | | |
| 1993 MF | 1993 09 10.96792 | 00 14 57.07 | +37 19 41.8 | | 107 | | | | | | |
| 1993 MF | 1993 09 10.97264 | 00 14 57.29 | +37 19 35.8 | | 107 | | | | | | |
| 1993 MF | 1993 09 15.88611 | 00 19 01.37 | +35 28 44.4 | | 107 | | | | | | |
| 1993 MF | 1993 09 15.92126 | 00 19 02.52 | +35 27 55.3 | | 107 | | | | | | |
| 1993 MF | 1993 09 16.81764 | 00 19 39.92 | +35 06 00.3 | | 107 | | | | | | |
| 1993 MF | 1993 09 16.87110 | 00 19 41.71 | +35 04 44.0 | | 107 | | | | | | |
| 1993 MF | 1993 09 17.81382 | 00 20 18.37 | +34 41 13.9 | | 107 | | | | | | |
| 1993 MF | 1993 09 20.80648 | 00 22 00.13 | +33 23 57.8 | | 107 | | | | | | |
| 1993 MF | 1993 09 20.83672 | 00 22 00.88 | +33 23 13.5 | | 107 | | | | | | |
| 1993 MF | 1993 09 22.80055 | 00 22 58.40 | +32 30 33.0 | | 107 | | | | | | |
| 1993 MF | 1993 09 22.85207 | 00 22 59.54 | +32 29 10.6 | | 107 | | | | | | |
| 1993 MF | 1993 09 28.78092 | 00 25 20.23 | +29 43 57.9 | | 107 | | | | | | |
| 1993 MF | 1993 09 29.82621 | 00 25 41.37 | +29 14 17.8 | | 107 | | | | | | |
| 1993 MF | 1993 09 29.88750 | 00 25 42.12 | +29 12 35.3 | | 107 | | | | | | |
| 1993 MF | 1993 09 29.97379 | 00 25 43.22 | +29 10 08.8 | | 107 | | | | | | |
| 1993 MF | 1993 10 04.84633 | 00 27 14.77 | +26 51 48.6 | | 107 | | | | | | |
| 1993 MF | 1993 10 04.87912 | 00 27 15.12 | +26 50 53.8 | | 107 | | | | | | |
| 1993 MF | 1993 10 15.78983 | 00 30 39.62 | +21 56 52.8 | | 107 | | | | | | |
| 1993 MF | 1993 10 15.80198 | 00 30 39.79 | +21 56 36.4 | | 107 | | | | | | |
| (433) | 1993 09 29.84946 | 19 43 43.22 | -14 20 51.0 | | 107 | | | | | | |
| (4420) | 1993 09 29.84273 | 23 52 17.04 | +11 56 09.9 | | 107 | | | | | | |
| (4420) | 1993 09 29.93314 | 23 52 12.19 | +11 55 43.3 | | 107 | | | | | | |
| (4420) | 1993 10 04.86302 | 23 48 14.23 | +11 31 03.4 | | 107 | | | | | | |
| (4420) | 1993 10 04.89002 | 23 48 13.00 | +11 30 54.7 | | 107 | | | | | | |
| (4420) | 1993 10 16.00435 | 23 41 15.35 | +10 32 28.6 | | 107 | | | | | | |
| (4420) | 1993 10 16.03559 | 23 41 14.43 | +10 32 20.4 | | 107 | | | | | | |
| 303 Mérida | | | | | | | | | | | |
| O. A. Naranjo, Dept. de Física, Universidad de los Andes, Mérida 5101, Venezuela | | | | | | | | | | | |
| Observer O. A. Naranjo | | | | | | | | | | | |
| 1.0-m Schmidt | | | | | | | | | | | |
| 1985 CS ₁ | 1993 09 22.26111 | 01 46 07.27 | +07 36 36.2 | 17 | 303 | | | | | | |
| 1985 CS ₁ | 1993 09 22.27500 | 01 46 06.63 | +07 36 30.6 | 17 | 303 | | | | | | |
| 1985 CS ₁ | 1993 09 22.28889 | 01 46 06.06 | +07 36 27.4 | 17 | 303 | | | | | | |
| 1985 CS ₁ | 1993 09 23.31389 | 01 45 20.79 | +07 29 32.6 | 17 | 303 | | | | | | |
| 1988 TP ₁ | 1993 09 22.26111 | 01 48 35.00 | +08 15 43.8 | 16 | 303 | | | | | | |
| 1988 TP ₁ | 1993 09 22.27500 | 01 48 34.52 | +08 15 42.3 | 16 | 303 | | | | | | |
| 1988 TP ₁ | 1993 09 22.28889 | 01 48 34.17 | +08 15 40.9 | 16 | 303 | | | | | | |

| | | | | | | | | | | | |
|--|--------------------|-------------|-------------|--------|-----|---|--------------------|-------------|-------------|--------|-----|
| (4839) | 1993 09 22.28889 | 01 37 01.92 | +06 08 36.1 | 15 | 303 | 1993 TX | * 1993 10 11.57609 | 01 50 25.72 | +02 01 57.9 | 14 | 367 |
| (4839) | 1993 09 23.31389 | 01 36 26.73 | +06 00 03.2 | 15 | 303 | 1993 TX | 1993 10 11.59956 | 01 50 24.09 | +02 02 06.9 | | 367 |
| 360 Kuma Kogen Astronomical Observatory | | | | | | 1993 TX | 1993 10 14.72311 | 01 47 10.35 | +02 18 58.8 | | 367 |
| A. Nakamura, Shimo-Hatanokawa, Kuma-cho, Ehime-Ken, 791-12 Japan | | | | | | 1993 TX | 1993 10 14.74821 | 01 47 08.64 | +02 19 07.7 | | 367 |
| Observer A. Nakamura | | | | | | 1993 TX | 1993 10 16.54710 | 01 45 15.36 | +02 29 18.6 | | 367 |
| 0.60-m <i>f</i> /6.0 Ritchey-Chrétien + CCD | | | | | | 1993 TX | 1993 10 16.56342 | 01 45 14.40 | +02 29 24.6 | | 367 |
| GSC | | | | | | 1993 TU ₁ | 1993 10 16.58045 | 02 08 26.05 | +07 59 04.8 | 17.0 | 367 |
| 1993 TO ₁ | 1993 10 19.57234 | 02 21 14.53 | +07 48 47.4 | 16.4 V | 360 | 1993 TU ₁ | 1993 10 16.59630 | 02 08 25.09 | +07 58 59.9 | | 367 |
| 1993 TO ₁ | 1993 10 19.57569 | 02 21 14.20 | +07 48 50.1 | | 360 | 1993 TU ₁ | 1993 10 17.56256 | 02 07 31.95 | +07 55 10.4 | | 367 |
| 1993 TO ₁ | 1993 10 19.57847 | 02 21 13.94 | +07 48 52.6 | | 360 | 1993 TU ₁ | 1993 10 17.57790 | 02 07 31.09 | +07 55 06.2 | | 367 |
| 364 JCPM Kagoshima Station | | | | | | 1993 TV ₁ | 1993 10 16.58045 | 02 12 29.21 | +08 03 10.9 | 16.5 | 367 |
| M. Takeishi, Odori 4, Hamatonbetsu Esashigun, Hokkaido 098-57, Japan | | | | | | 1993 TV ₁ | 1993 10 16.59630 | 02 12 28.18 | +08 03 14.0 | | 367 |
| Observer M. Mukai | | | | | | 1993 TV ₁ | 1993 10 17.56256 | 02 11 23.27 | +08 06 08.2 | | 367 |
| Measurer M. Takeishi | | | | | | (609) | 1993 10 11.55059 | 01 43 51.42 | +06 40 30.0 | | 367 |
| 0.25-m <i>f</i> /4.2 Wright-Schmidt telescope | | | | | | (609) | 1993 10 11.60809 | 01 43 48.78 | +06 40 13.6 | | 367 |
| GSC | | | | | | (609) | 1993 10 14.73979 | 01 41 30.16 | +06 23 29.8 | | 367 |
| 1993 TC | * 1993 10 08.54132 | 01 48 58.66 | +08 59 12.2 | 16.5 | 364 | (609) | 1993 10 14.76497 | 01 41 29.03 | +06 23 21.1 | | 367 |
| 1993 TC | 1993 10 08.55521 | 01 48 57.27 | +08 59 21.3 | | 364 | (1212) | 1993 10 11.57609 | 01 48 55.21 | +02 31 55.3 | | 367 |
| 1993 TC | 1993 10 09.54271 | 01 47 15.71 | +09 11 16.0 | | 364 | (1212) | 1993 10 11.59956 | 01 48 54.31 | +02 31 49.3 | | 367 |
| 1993 TC | 1993 10 09.55660 | 01 47 14.22 | +09 11 25.3 | | 364 | (1212) | 1993 10 14.72311 | 01 47 03.41 | +02 18 05.5 | | 367 |
| 1993 TV ₁ | 1993 10 10.63021 | 02 18 47.05 | +07 45 30.5 | 17 | 364 | (1212) | 1993 10 14.74821 | 01 47 02.51 | +02 17 58.9 | | 367 |
| 1993 TV ₁ | 1993 10 10.64410 | 02 18 46.20 | +07 45 32.4 | | 364 | (1212) | 1993 10 16.54710 | 01 45 57.82 | +02 10 11.3 | | 367 |
| (4189) | 1993 10 08.54132 | 01 52 22.41 | +09 56 52.7 | 17.0 | 364 | (1623) | 1993 10 11.55059 | 01 46 38.49 | +06 49 29.2 | | 367 |
| (4189) | 1993 10 08.55521 | 01 52 21.71 | +09 56 48.6 | | 364 | (1623) | 1993 10 11.60809 | 01 46 35.80 | +06 49 15.3 | | 367 |
| (4189) | 1993 10 09.54271 | 01 51 31.11 | +09 48 23.8 | | 364 | (1623) | 1993 10 14.73979 | 01 44 14.42 | +06 34 55.4 | | 367 |
| (4189) | 1993 10 09.55660 | 01 51 30.40 | +09 48 14.4 | | 364 | (1623) | 1993 10 14.76497 | 01 44 13.17 | +06 34 48.3 | | 367 |
| 367 Yatsuka | | | | | | 372 Geisei | | | | | |
| S. Miyasaka, 3-8-501, 4 Chome, Nagayama, Tama, Tokyo 206, Japan | | | | | | T. Seki, Kamimachi 2-9-35, Kochi, Japan | | | | | |
| Observer H. Abe | | | | | | 0.60-m <i>f</i> /3.5 reflector | | | | | |
| Measurer S. Miyasaka | | | | | | ACRS | | | | | |
| 0.26-m reflector | | | | | | 1993 TO ₁ | 1993 10 19.56666 | 02 21 15.11 | +07 48 44.4 | 16 | 372 |
| PPM | | | | | | 1993 TO ₁ | 1993 10 19.63542 | 02 21 08.43 | +07 49 40.5 | | 372 |
| 1993 RS | 1993 09 25.67782 | 00 03 48.46 | +12 55 56.9 | | 367 | 374 Minami-Oda | | | | | |
| 1993 RS | 1993 09 25.68611 | 00 03 47.38 | +12 56 02.4 | | 367 | T. Nomura, 1-1-8, Yamate, Tarumi-Ku, Kobe 655, Japan | | | | | |
| 1993 RS | 1993 09 26.72604 | 00 01 48.48 | +13 06 49.6 | | 367 | Observer M. Sugano | | | | | |
| 1993 RS | 1993 09 26.73344 | 00 01 47.64 | +13 06 52.6 | | 367 | Measurer T. Nomura | | | | | |
| 1993 TE | * 1993 10 08.53781 | 01 33 23.96 | +07 17 47.1 | 16.0 | 367 | 0.25-m <i>f</i> /3.4 Schmidt camera | | | | | |
| 1993 TE | 1993 10 08.56279 | 01 33 22.85 | +07 17 27.8 | | 367 | GSC | | | | | |
| 1993 TE | 1993 10 09.55054 | 01 32 46.19 | +07 05 16.3 | | 367 | 1993 SL ₃ | 1993 10 09.64340 | 01 13 39.30 | +09 57 23.0 | 15.5 V | 374 |
| 1993 TE | 1993 10 09.57496 | 01 32 45.43 | +07 04 59.0 | | 367 | 1993 SL ₃ | 1993 10 09.66354 | 01 13 37.19 | +09 57 31.0 | | 374 |
| 1993 TE | 1993 10 14.73142 | 01 29 27.93 | +06 01 33.0 | | 367 | 1993 TC | 1993 10 09.55382 | 01 47 14.54 | +09 11 23.2 | 15.5 V | 374 |
| 1993 TE | 1993 10 14.75653 | 01 29 26.85 | +06 01 15.0 | | 367 | 376 Uenohara | | | | | |
| 1993 TF | * 1993 10 08.55418 | 01 47 21.79 | +07 36 56.0 | 16.5 | 367 | N. Kawasato, 3-11-10, Hana-Koganei, Kodaira, Tokyo 187, Japan | | | | | |
| 1993 TF | 1993 10 08.57981 | 01 47 20.43 | +07 36 51.0 | | 367 | 0.30-m reflector + CCD | | | | | |
| 1993 TF | 1993 10 09.56688 | 01 46 32.60 | +07 32 27.0 | | 367 | GSC | | | | | |
| 1993 TF | 1993 10 09.59127 | 01 46 31.30 | +07 32 20.5 | | 367 | 1988 XJ ₁ | 1993 09 14.66725 | 01 32 01.27 | -09 41 32.7 | | 376 |
| 1993 TF | 1993 10 11.55059 | 01 44 53.65 | +07 23 29.0 | | 367 | 1988 XJ ₁ | 1993 09 14.67587 | 01 32 01.09 | -09 41 35.0 | | 376 |
| 1993 TF | 1993 10 11.60809 | 01 44 50.43 | +07 23 14.7 | | 367 | 1988 XJ ₁ | 1993 10 09.47095 | 01 14 18.95 | -11 15 42.6 | | 376 |
| 1993 TF | 1993 10 14.73979 | 01 42 07.18 | +07 08 51.3 | | 367 | 1988 XJ ₁ | 1993 10 09.49352 | 01 14 17.88 | -11 15 45.5 | | 376 |
| 1993 TF | 1993 10 14.76497 | 01 42 05.74 | +07 08 43.7 | | 367 | 1988 YB | 1993 10 09.73889 | 02 28 17.68 | +12 52 49.5 | | 376 |

| | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|
| 1988 YB | 1993 10 09.75168 | 02 28 17.24 | +12 52 48.4 | | 376 |
| 1992 CJ | 1993 09 14.58663 | 23 41 13.52 | +03 09 45.1 | | 376 |
| 1992 CJ | 1993 09 14.60000 | 23 41 12.90 | +03 09 34.5 | | 376 |
| 1993 SD ₁ | 1993 10 09.58484 | 00 15 10.37 | -02 50 13.7 | 17.0 | 376 |
| 1993 SD ₁ | 1993 10 10.59155 | 00 14 21.25 | -02 51 22.2 | | 376 |
| 1993 SD ₁ | 1993 10 10.59983 | 00 14 20.82 | -02 51 25.1 | | 376 |
| 1993 SF ₁ | 1993 10 09.60035 | 00 22 20.99 | -02 21 34.7 | 16.5 | 376 |
| 1993 SF ₁ | 1993 10 09.62813 | 00 22 19.49 | -02 21 29.9 | | 376 |
| 1993 SF ₁ | 1993 10 10.64433 | 00 21 29.19 | -02 18 32.9 | | 376 |
| 1993 SF ₁ | 1993 10 10.65394 | 00 21 28.68 | -02 18 32.4 | | 376 |
| 1993 TB | * 1993 10 09.58484 | 00 11 23.91 | -03 30 56.4 | 17.5 | 376 |
| 1993 TB | 1993 10 09.61354 | 00 11 22.76 | -03 31 03.5 | | 376 |
| 1993 TB | 1993 10 10.61186 | 00 10 43.31 | -03 34 45.4 | | 376 |
| 1993 TB | 1993 10 10.62025 | 00 10 42.94 | -03 34 45.8 | | 376 |
| 1993 TG | * 1993 10 09.64618 | 01 59 41.94 | +10 08 22.1 | 18.0 | 376 |
| 1993 TG | 1993 10 09.66325 | 01 59 41.05 | +10 08 15.9 | | 376 |
| 1993 TG | 1993 10 10.76568 | 01 58 55.66 | +10 01 50.6 | | 376 |
| 1993 TG | 1993 10 10.77882 | 01 58 55.36 | +10 01 46.3 | | 376 |
| 1993 TP | 1993 10 09.50174 | 00 18 24.99 | -04 46 24.0 | | 376 |
| 1993 TP | 1993 10 09.51481 | 00 18 24.39 | -04 46 25.9 | | 376 |

385 Nihondaira Observatory Oohira station

T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
0.31-m $f/4.7$ reflector + CCD
GSC

| | | | | | |
|---------|------------------|-------------|-------------|--------|-----|
| 1986 WE | 1993 10 12.48172 | 23 50 48.14 | -11 22 59.3 | | 385 |
| 1986 WE | 1993 10 12.49045 | 23 50 47.69 | -11 23 00.3 | | 385 |
| 1986 WE | 1993 10 12.49573 | 23 50 47.51 | -11 23 02.0 | | 385 |
| 1989 XC | 1993 10 09.46484 | 22 32 56.65 | -14 14 06.9 | | 385 |
| 1989 XC | 1993 10 09.47339 | 22 32 56.51 | -14 14 07.1 | | 385 |
| 1989 XC | 1993 10 09.48536 | 22 32 56.35 | -14 14 07.4 | | 385 |
| 1990 XP | 1993 09 25.71642 | 02 08 41.26 | +11 23 00.0 | | 385 |
| 1990 XP | 1993 09 25.72163 | 02 08 41.12 | +11 22 58.1 | | 385 |
| 1990 XP | 1993 09 25.72686 | 02 08 40.99 | +11 22 56.0 | | 385 |
| 1990 XP | 1993 10 12.53839 | 01 58 45.68 | +09 12 42.2 | 15.8 V | 385 |
| 1990 XP | 1993 10 12.54203 | 01 58 45.48 | +09 12 40.3 | | 385 |
| 1990 XP | 1993 10 12.54935 | 01 58 45.14 | +09 12 36.5 | | 385 |
| 1991 CY | 1993 09 25.63575 | 00 01 44.10 | +15 18 23.4 | | 385 |
| 1991 CY | 1993 09 25.64368 | 00 01 43.61 | +15 18 20.7 | | 385 |
| 1991 CY | 1993 09 25.64733 | 00 01 43.40 | +15 18 18.6 | | 385 |
| 1991 CY | 1993 10 09.50009 | 23 49 58.11 | +14 04 28.4 | 17.9 V | 385 |
| 1991 CY | 1993 10 09.50691 | 23 49 57.81 | +14 04 26.1 | | 385 |
| 1991 CY | 1993 10 10.57058 | 23 49 07.98 | +13 58 05.9 | 17.7 V | 385 |
| 1991 CY | 1993 10 10.58431 | 23 49 07.32 | +13 58 00.9 | | 385 |
| 1991 CY | 1993 10 10.59175 | 23 49 06.97 | +13 57 57.9 | | 385 |
| 1991 DO | 1993 09 25.65417 | 00 48 28.46 | +13 16 03.8 | | 385 |
| 1991 DO | 1993 09 25.65811 | 00 48 28.28 | +13 16 02.7 | | 385 |
| 1991 DO | 1993 09 25.66197 | 00 48 28.12 | +13 16 01.2 | | 385 |
| 1991 DO | 1993 10 12.52414 | 00 33 34.44 | +12 20 05.7 | 18.0 V | 385 |
| 1991 DO | 1993 10 12.52784 | 00 33 34.21 | +12 20 05.1 | | 385 |
| 1991 DO | 1993 10 12.53145 | 00 33 34.04 | +12 20 04.5 | | 385 |
| 1993 RR | 1993 09 25.73843 | 01 55 15.19 | +15 19 03.7 | 17.4 V | 385 |
| 1993 RR | 1993 09 25.74413 | 01 55 15.05 | +15 19 07.5 | | 385 |

| | | | | | |
|----------------------|--------------------|-------------|-------------|--------|-----|
| 1993 RR | 1993 09 25.74941 | 01 55 14.93 | +15 19 09.3 | | 385 |
| 1993 SX ₃ | * 1993 09 25.67532 | 00 37 30.28 | +15 34 03.6 | 16 V | 385 |
| 1993 SX ₃ | 1993 09 25.68087 | 00 37 30.00 | +15 34 02.2 | | 385 |
| 1993 SX ₃ | 1993 09 25.68639 | 00 37 29.67 | +15 34 01.3 | | 385 |
| 1993 SX ₃ | 1993 10 12.50539 | 00 22 00.07 | +13 59 59.7 | 17.5 V | 385 |
| 1993 SX ₃ | 1993 10 12.51407 | 00 21 59.57 | +13 59 56.2 | | 385 |
| 1993 SX ₃ | 1993 10 12.51810 | 00 21 59.41 | +13 59 55.0 | | 385 |
| 1993 TO ₁ | 1993 10 19.59306 | 02 21 12.48 | +07 49 04.5 | 16.2 V | 385 |
| 1993 TO ₁ | 1993 10 19.59618 | 02 21 12.15 | +07 49 06.9 | | 385 |
| 1993 TO ₁ | 1993 10 19.60382 | 02 21 11.40 | +07 49 13.5 | | 385 |

399 Kushiro

H. Kaneda, Taiyo MS 2-H, 2 chome 2-15, Kawazoe 8 jo, Minami-ku, Sapporo 005,
Japan

Observer S. Ueda

Measurer H. Kaneda

0.16-m $f/3.8$ Wright-Schmidt camera

SAO

| | | | | | |
|--------|------------------|-------------|-------------|------|-----|
| (5666) | 1990 11 12.58206 | 03 39 00.24 | +20 20 32.2 | 15.5 | 399 |
| (5666) | 1990 11 12.59792 | 03 38 59.31 | +20 20 27.7 | | 399 |

400 Kitami

K. Watanabe, 3-8 Mason Hashimoto B-203, atsubetsu cyuo 3 jo 4 chome,
Atsubetsu-ku, Sapporo 004, Japan

Observer K. Endate

Measurer K. Watanabe

0.25-m $f/2.6$ Schmidt camera

GSC

| | | | | | |
|----------------------|------------------|-------------|-------------|------|-----|
| 1977 TC ₁ | 1993 09 19.50972 | 23 45 24.33 | +04 31 58.7 | 16.0 | 400 |
| 1977 TC ₁ | 1993 09 19.52361 | 23 45 23.74 | +04 31 53.1 | | 400 |
| 1982 SM ₆ | 1993 09 19.54097 | 23 48 29.59 | -03 49 49.8 | 16.0 | 400 |
| 1982 SM ₆ | 1993 09 19.55486 | 23 48 28.57 | -03 49 53.7 | | 400 |
| 1989 UL ₁ | 1993 10 15.62361 | 02 11 27.10 | +08 03 07.7 | 16.0 | 400 |
| 1989 UL ₁ | 1993 10 15.63819 | 02 11 26.27 | +08 03 07.5 | | 400 |
| 1989 UL ₁ | 1993 10 16.53403 | 02 10 31.95 | +08 02 44.7 | 16.0 | 400 |
| 1989 UL ₁ | 1993 10 16.54861 | 02 10 31.23 | +08 02 43.2 | | 400 |
| 1989 WG ₇ | 1993 10 15.59028 | 02 36 48.25 | +16 28 40.2 | 17 | 400 |
| 1989 WG ₇ | 1993 10 15.60694 | 02 36 47.47 | +16 28 36.8 | | 400 |
| 1989 WG ₇ | 1993 10 16.56528 | 02 36 04.18 | +16 24 40.4 | 17 | 400 |
| 1989 WG ₇ | 1993 10 16.58194 | 02 36 03.44 | +16 24 37.9 | | 400 |
| 1990 BG ₁ | 1993 10 16.59931 | 02 33 26.20 | +08 46 21.4 | 17 | 400 |
| 1990 BG ₁ | 1993 10 16.61667 | 02 33 25.35 | +08 46 14.7 | | 400 |
| 1991 GG ₁ | 1993 09 19.50972 | 23 57 46.67 | +07 05 19.3 | 16.5 | 400 |
| 1991 GG ₁ | 1993 09 19.52361 | 23 57 45.92 | +07 05 16.2 | | 400 |
| 1992 EM | 1993 10 08.61875 | 00 48 37.98 | +17 44 30.9 | 16.5 | 400 |
| 1992 EM | 1993 10 08.63264 | 00 48 36.73 | +17 44 26.7 | | 400 |
| 1993 RD | 1993 09 19.50972 | 23 55 56.99 | +04 17 56.2 | 17 | 400 |
| 1993 RD | 1993 09 19.52361 | 23 55 56.01 | +04 17 54.7 | | 400 |
| 1993 RD | 1993 09 21.55556 | 23 53 55.74 | +04 12 16.0 | 16.5 | 400 |
| 1993 RD | 1993 09 21.56875 | 23 53 55.15 | +04 12 13.6 | | 400 |
| 1993 RD | 1993 10 06.42847 | 23 40 18.95 | +03 27 44.2 | 17 | 400 |
| 1993 RD | 1993 10 06.44514 | 23 40 18.04 | +03 27 39.6 | | 400 |
| 1993 RE | 1993 09 19.50972 | 23 57 40.05 | +03 15 19.1 | 16.5 | 400 |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 RE | 1993 09 19.52361 | 23 57 39.29 | +03 15 14.1 | | 400 | 1993 RB ₂ | 1993 09 16.48264 | 00 25 11.23 | +10 54 52.3 | 16.5 | 400 |
| 1993 RE | 1993 10 06.46076 | 23 43 32.92 | +01 35 00.7 | 16.0 | 400 | 1993 RB ₂ | 1993 09 16.49861 | 00 25 10.49 | +10 54 46.0 | | 400 |
| 1993 RE | 1993 10 06.47431 | 23 43 32.13 | +01 34 55.5 | | 400 | 1993 RC ₂ | * 1993 09 15.55208 | 00 20 09.36 | -00 52 53.8 | 16.5 | 400 |
| 1993 RF | 1993 09 19.50972 | 23 53 38.06 | +06 01 02.5 | 16.5 | 400 | 1993 RC ₂ | 1993 09 15.56875 | 00 20 08.38 | -00 52 47.8 | | 400 |
| 1993 RF | 1993 09 19.52361 | 23 53 37.10 | +06 00 56.1 | | 400 | 1993 RC ₂ | 1993 09 16.58264 | 00 19 03.17 | -00 47 47.3 | 16.5 | 400 |
| 1993 RF | 1993 09 21.55556 | 23 51 45.81 | +05 45 29.0 | 17 | 400 | 1993 RC ₂ | 1993 09 16.59861 | 00 19 01.91 | -00 47 44.9 | | 400 |
| 1993 RF | 1993 09 21.56875 | 23 51 44.94 | +05 45 23.8 | | 400 | 1993 RC ₂ | 1993 09 19.60764 | 00 15 42.34 | -00 32 49.7 | 16.5 | 400 |
| 1993 RF | 1993 10 06.42847 | 23 38 55.30 | +03 47 01.4 | 16.5 | 400 | 1993 RC ₂ | 1993 09 19.62222 | 00 15 41.25 | -00 32 48.7 | | 400 |
| 1993 RF | 1993 10 06.44514 | 23 38 54.64 | +03 46 55.5 | | 400 | 1993 RC ₂ | 1993 10 11.46389 | 23 50 40.02 | +01 25 19.4 | 16.5 | 400 |
| 1993 RG | 1993 09 19.54097 | 23 55 44.77 | -01 02 38.5 | 16.0 | 400 | 1993 RC ₂ | 1993 10 11.47917 | 23 50 38.97 | +01 25 24.9 | | 400 |
| 1993 RG | 1993 09 19.55486 | 23 55 43.85 | -01 02 39.6 | | 400 | 1993 RD ₂ | * 1993 09 15.55208 | 00 22 18.45 | -00 09 01.1 | 16.5 | 400 |
| 1993 RH | 1993 09 19.54097 | 23 59 28.40 | -00 45 21.5 | 15.0 | 400 | 1993 RD ₂ | 1993 09 15.56875 | 00 22 17.69 | -00 09 12.9 | | 400 |
| 1993 RH | 1993 09 19.55486 | 23 59 27.43 | -00 45 19.0 | | 400 | 1993 RD ₂ | 1993 09 16.58264 | 00 21 38.44 | -00 22 36.9 | 16.5 | 400 |
| 1993 RH | 1993 10 06.46076 | 23 40 59.00 | +00 27 23.4 | 15.5 | 400 | 1993 RD ₂ | 1993 09 16.59861 | 00 21 37.64 | -00 22 49.6 | | 400 |
| 1993 RH | 1993 10 06.47431 | 23 40 58.23 | +00 27 26.6 | | 400 | 1993 RD ₂ | 1993 09 19.60764 | 00 19 37.32 | -01 02 52.3 | 16.0 | 400 |
| 1993 RK | 1993 09 19.50972 | 23 50 30.09 | +06 07 48.6 | 15.8 | 400 | 1993 RD ₂ | 1993 09 19.62222 | 00 19 36.64 | -01 03 04.7 | | 400 |
| 1993 RK | 1993 09 19.52361 | 23 50 29.16 | +06 07 53.3 | | 400 | 1993 RD ₂ | 1993 10 08.58750 | 00 06 47.92 | -05 03 46.7 | 17 | 400 |
| 1993 RK | 1993 09 21.55556 | 23 48 15.44 | +06 18 04.9 | 16.0 | 400 | 1993 RD ₂ | 1993 10 08.60208 | 00 06 47.26 | -05 03 58.4 | | 400 |
| 1993 RK | 1993 09 21.56875 | 23 48 14.64 | +06 18 07.5 | | 400 | 1993 RE ₂ | * 1993 09 15.55208 | 00 23 11.00 | -00 50 49.1 | 16.5 | 400 |
| 1993 RK | 1993 10 06.42847 | 23 33 18.07 | +07 18 46.2 | 16.0 | 400 | 1993 RE ₂ | 1993 09 15.56875 | 00 23 10.02 | -00 50 48.7 | | 400 |
| 1993 RK | 1993 10 06.44514 | 23 33 17.11 | +07 18 49.6 | | 400 | 1993 RE ₂ | 1993 09 16.58264 | 00 22 03.86 | -00 51 12.9 | 16.5 | 400 |
| 1993 RS | 1993 09 12.54028 | 00 27 41.08 | +10 17 33.1 | 16.0 | 400 | 1993 RE ₂ | 1993 09 16.59861 | 00 22 02.79 | -00 51 13.3 | | 400 |
| 1993 RS | * 1993 09 15.52014 | 00 22 36.94 | +10 56 35.3 | 16.5 | 400 | 1993 RE ₂ | 1993 09 19.60764 | 00 18 42.29 | -00 52 34.5 | 16.0 | 400 |
| 1993 RS | 1993 09 15.53611 | 00 22 34.99 | +10 56 50.1 | | 400 | 1993 RE ₂ | 1993 09 19.62222 | 00 18 41.44 | -00 52 35.7 | | 400 |
| 1993 RS | 1993 09 16.48264 | 00 20 55.01 | +11 08 51.6 | 16.5 | 400 | 1993 RF ₂ | * 1993 09 15.55208 | 00 24 36.08 | +03 44 31.5 | 16.0 | 400 |
| 1993 RS | 1993 09 16.49861 | 00 20 53.09 | +11 09 09.1 | | 400 | 1993 RF ₂ | 1993 09 15.56875 | 00 24 35.11 | +03 44 30.2 | | 400 |
| 1993 RY ₁ | * 1993 09 12.47639 | 00 00 57.13 | +03 01 05.0 | 17 | 400 | 1993 RF ₂ | 1993 09 16.58264 | 00 23 36.12 | +03 42 49.4 | 16.0 | 400 |
| 1993 RY ₁ | 1993 09 12.49097 | 00 00 56.79 | +03 01 00.8 | | 400 | 1993 RF ₂ | 1993 09 16.59861 | 00 23 35.20 | +03 42 48.2 | | 400 |
| 1993 RY ₁ | 1993 09 13.55139 | 00 00 16.10 | +02 52 50.3 | 17 | 400 | 1993 RF ₂ | 1993 10 11.46389 | 23 59 34.21 | +02 48 21.9 | 16.5 | 400 |
| 1993 RY ₁ | 1993 09 13.56528 | 00 00 15.61 | +02 52 44.8 | | 400 | 1993 RF ₂ | 1993 10 11.47917 | 23 59 33.13 | +02 48 19.5 | | 400 |
| 1993 RY ₁ | 1993 09 19.54097 | 23 56 21.67 | +02 05 33.4 | 16.0 | 400 | 1993 RG ₂ | * 1993 09 15.55208 | 00 30 03.74 | +01 31 21.9 | 16.5 | 400 |
| 1993 RY ₁ | 1993 09 19.55486 | 23 56 21.12 | +02 05 27.7 | | 400 | 1993 RG ₂ | 1993 09 15.56875 | 00 30 03.12 | +01 31 16.5 | | 400 |
| 1993 RY ₁ | 1993 09 21.58333 | 23 55 00.45 | +01 49 05.6 | 16.5 | 400 | 1993 RG ₂ | 1993 09 16.58264 | 00 29 30.30 | +01 25 47.0 | 16.5 | 400 |
| 1993 RY ₁ | 1993 09 21.59861 | 23 54 59.57 | +01 49 00.7 | | 400 | 1993 RG ₂ | 1993 09 16.59861 | 00 29 29.80 | +01 25 38.1 | | 400 |
| 1993 RZ ₁ | * 1993 09 12.47639 | 23 58 04.08 | +01 46 41.2 | 17 | 400 | 1993 RH ₂ | * 1993 09 15.55208 | 00 36 06.16 | +02 42 16.2 | 16.5 | 400 |
| 1993 RZ ₁ | 1993 09 12.49097 | 23 58 03.22 | +01 46 34.9 | | 400 | 1993 RH ₂ | 1993 09 15.56875 | 00 36 05.08 | +02 42 19.2 | | 400 |
| 1993 RZ ₁ | 1993 09 13.55139 | 23 57 09.17 | +01 40 38.7 | 17 | 400 | 1993 RH ₂ | 1993 09 16.58264 | 00 35 00.59 | +02 47 01.6 | 16.5 | 400 |
| 1993 RZ ₁ | 1993 09 13.56528 | 23 57 08.38 | +01 40 34.3 | | 400 | 1993 RH ₂ | 1993 09 16.59861 | 00 34 59.52 | +02 47 05.3 | | 400 |
| 1993 RZ ₁ | 1993 09 19.54097 | 23 51 56.64 | +01 05 35.5 | 16.5 | 400 | 1993 RH ₂ | 1993 10 11.49792 | 00 06 46.24 | +04 29 53.5 | 16.5 | 400 |
| 1993 RZ ₁ | 1993 09 19.55486 | 23 51 55.95 | +01 05 34.4 | | 400 | 1993 RH ₂ | 1993 10 11.51319 | 00 06 45.50 | +04 29 54.7 | | 400 |
| 1993 RZ ₁ | 1993 09 21.58333 | 23 50 09.75 | +00 53 24.7 | 16.5 | 400 | 1993 RJ ₂ | * 1993 09 15.62049 | 00 47 41.42 | +08 26 22.0 | 17 | 400 |
| 1993 RZ ₁ | 1993 09 21.59861 | 23 50 08.93 | +00 53 20.9 | | 400 | 1993 RJ ₂ | 1993 09 15.64097 | 00 47 40.24 | +08 26 16.9 | | 400 |
| 1993 RA ₂ | * 1993 09 12.50625 | 23 53 55.54 | -01 59 04.6 | 16.5 | 400 | 1993 RJ ₂ | 1993 09 16.54861 | 00 46 56.29 | +08 23 04.9 | 16.5 | 400 |
| 1993 RA ₂ | 1993 09 12.52431 | 23 53 55.00 | -01 59 16.6 | | 400 | 1993 RJ ₂ | 1993 09 16.56597 | 00 46 55.40 | +08 23 00.8 | | 400 |
| 1993 RA ₂ | 1993 09 13.58056 | 23 53 21.26 | -02 08 26.2 | 16.5 | 400 | 1993 RJ ₂ | 1993 09 18.61528 | 00 45 12.71 | +08 15 18.9 | 16.5 | 400 |
| 1993 RA ₂ | 1993 09 13.59444 | 23 53 20.67 | -02 08 33.2 | | 400 | 1993 RJ ₂ | 1993 09 18.63125 | 00 45 11.64 | +08 15 14.9 | | 400 |
| 1993 RA ₂ | 1993 09 19.54097 | 23 50 04.65 | -03 00 10.4 | 16.0 | 400 | 1993 RS ₂ | * 1993 09 15.58403 | 01 01 25.46 | +18 48 25.9 | 16.5 | 400 |
| 1993 RA ₂ | 1993 09 19.55486 | 23 50 04.16 | -03 00 19.0 | | 400 | 1993 RS ₂ | 1993 09 15.60208 | 01 01 24.85 | +18 48 22.2 | | 400 |
| 1993 RA ₂ | 1993 09 21.58333 | 23 48 56.86 | -03 17 30.4 | 16.5 | 400 | 1993 RS ₂ | 1993 09 16.51458 | 01 00 52.38 | +18 43 36.1 | 16.0 | 400 |
| 1993 RA ₂ | 1993 09 21.59861 | 23 48 56.41 | -03 17 37.3 | | 400 | 1993 RS ₂ | 1993 09 16.53194 | 01 00 51.66 | +18 43 31.0 | | 400 |
| 1993 RB ₂ | * 1993 09 15.52014 | 00 25 57.40 | +10 57 42.4 | 16.5 | 400 | 1993 RT ₂ | * 1993 09 15.58403 | 01 04 01.94 | +17 32 29.5 | 16.5 | 400 |
| 1993 RB ₂ | 1993 09 15.53611 | 00 25 56.82 | +10 57 37.0 | | 400 | 1993 RT ₂ | 1993 09 15.60208 | 01 04 01.32 | +17 32 34.4 | | 400 |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 RT ₂ | 1993 09 16.51458 | 01 03 23.80 | +17 33 59.3 | 16.5 | 400 | 1993 SK ₁ | 1993 09 19.60764 | 00 24 04.23 | -01 45 06.5 | 16.0 | 400 |
| 1993 RT ₂ | 1993 09 16.53194 | 01 03 22.89 | +17 33 58.5 | | 400 | 1993 SK ₁ | 1993 09 19.62222 | 00 24 03.29 | -01 45 11.7 | | 400 |
| 1993 SZ | * 1993 09 16.54861 | 00 53 08.65 | +09 12 49.3 | 16.5 | 400 | 1993 SK ₁ | 1993 10 08.58750 | 00 06 19.02 | -03 14 42.9 | 16.5 | 400 |
| 1993 SZ | 1993 09 16.56597 | 00 53 07.78 | +09 12 45.9 | | 400 | 1993 SK ₁ | 1993 10 08.60208 | 00 06 18.34 | -03 14 47.7 | | 400 |
| 1993 SZ | 1993 09 18.61528 | 00 51 50.93 | +09 01 32.8 | 16.5 | 400 | 1993 SL ₁ | * 1993 09 16.58264 | 00 31 22.10 | +00 07 55.4 | 16.5 | 400 |
| 1993 SZ | 1993 09 18.63125 | 00 51 50.13 | +09 01 28.5 | | 400 | 1993 SL ₁ | 1993 09 16.59861 | 00 31 21.47 | +00 07 51.9 | | 400 |
| 1993 SZ | 1993 10 11.53056 | 00 33 50.12 | +06 13 58.2 | 16.5 | 400 | 1993 SL ₁ | 1993 09 19.60764 | 00 29 17.70 | -00 06 16.4 | 16.5 | 400 |
| 1993 SZ | 1993 10 11.54444 | 00 33 49.44 | +06 13 52.2 | | 400 | 1993 SL ₁ | 1993 09 19.62222 | 00 29 16.99 | -00 06 21.2 | | 400 |
| 1993 SA ₁ | * 1993 09 16.54861 | 00 55 26.23 | +11 04 22.5 | 17 | 400 | 1993 SL ₁ | 1993 10 12.54375 | 00 12 36.71 | -01 50 35.5 | 16.5 | 400 |
| 1993 SA ₁ | 1993 09 16.56597 | 00 55 25.72 | +11 04 09.8 | | 400 | 1993 SL ₁ | 1993 10 12.55903 | 00 12 36.13 | -01 50 42.6 | | 400 |
| 1993 SA ₁ | 1993 09 18.61528 | 00 54 08.27 | +10 41 16.9 | 16.5 | 400 | 1993 SM ₁ | * 1993 09 16.61458 | 00 49 02.29 | +00 05 14.9 | 16.5 | 400 |
| 1993 SA ₁ | 1993 09 18.63125 | 00 54 07.53 | +10 41 07.4 | | 400 | 1993 SM ₁ | 1993 09 16.63125 | 00 49 01.51 | +00 05 05.1 | | 400 |
| 1993 SA ₁ | 1993 10 11.53056 | 00 37 34.27 | +05 55 35.9 | 16.5 | 400 | 1993 SM ₁ | 1993 09 18.64722 | 00 47 38.89 | -00 11 17.8 | 16.5 | 400 |
| 1993 SA ₁ | 1993 10 11.54444 | 00 37 33.74 | +05 55 25.8 | | 400 | 1993 SM ₁ | 1993 09 18.66319 | 00 47 38.24 | -00 11 26.9 | | 400 |
| 1993 SB ₁ | * 1993 09 16.54861 | 01 06 18.07 | +10 10 53.6 | 16.5 | 400 | 1993 SN ₁ | * 1993 09 16.61458 | 00 52 51.75 | +00 42 30.2 | 16.5 | 400 |
| 1993 SB ₁ | 1993 09 16.56597 | 01 06 17.34 | +10 10 52.4 | | 400 | 1993 SN ₁ | 1993 09 16.63125 | 00 52 51.07 | +00 42 14.6 | | 400 |
| 1993 SB ₁ | 1993 09 18.61528 | 01 04 35.30 | +10 08 08.0 | 16.5 | 400 | 1993 SN ₁ | 1993 09 18.64722 | 00 51 43.65 | +00 21 44.8 | 16.5 | 400 |
| 1993 SB ₁ | 1993 09 18.63125 | 01 04 34.19 | +10 08 07.3 | | 400 | 1993 SN ₁ | 1993 09 18.66319 | 00 51 43.04 | +00 21 35.2 | | 400 |
| 1993 SB ₁ | 1993 10 11.53056 | 00 42 00.29 | +09 03 34.9 | 16.5 | 400 | 1993 SN ₁ | 1993 10 11.56042 | 00 35 43.68 | -03 24 38.1 | 17 | 400 |
| 1993 SB ₁ | 1993 10 11.54444 | 00 41 59.43 | +09 03 32.4 | | 400 | 1993 SN ₁ | 1993 10 11.57569 | 00 35 43.23 | -03 24 45.2 | | 400 |
| 1993 SC ₁ | * 1993 09 16.54861 | 01 10 34.97 | +07 14 42.0 | 16.5 | 400 | 1993 SO ₁ | * 1993 09 16.61458 | 00 54 03.21 | -02 21 52.1 | 17 | 400 |
| 1993 SC ₁ | 1993 09 16.56597 | 01 10 34.17 | +07 14 41.9 | | 400 | 1993 SO ₁ | 1993 09 16.63125 | 00 54 02.17 | -02 21 53.0 | | 400 |
| 1993 SC ₁ | 1993 09 18.61528 | 01 09 05.72 | +07 12 29.8 | 16.5 | 400 | 1993 SO ₁ | 1993 09 18.64722 | 00 52 07.42 | -02 22 53.3 | 17 | 400 |
| 1993 SC ₁ | 1993 09 18.63125 | 01 09 04.81 | +07 12 26.4 | | 400 | 1993 SO ₁ | 1993 09 18.66319 | 00 52 06.45 | -02 22 59.0 | | 400 |
| 1993 SC ₁ | 1993 10 11.53056 | 00 49 56.28 | +06 31 23.6 | 16.5 | 400 | 1993 SP ₁ | * 1993 09 16.61458 | 00 56 40.69 | -01 52 15.8 | 16.5 | 400 |
| 1993 SC ₁ | 1993 10 11.54444 | 00 49 55.61 | +06 31 21.2 | | 400 | 1993 SP ₁ | 1993 09 16.63125 | 00 56 39.94 | -01 52 28.6 | | 400 |
| 1993 SD ₁ | * 1993 09 16.58264 | 00 35 15.93 | -01 54 52.0 | 16.5 | 400 | 1993 SP ₁ | 1993 09 18.64722 | 00 55 34.30 | -02 15 57.0 | 16.5 | 400 |
| 1993 SD ₁ | 1993 09 16.59861 | 00 35 15.36 | -01 54 54.5 | | 400 | 1993 SP ₁ | 1993 09 18.66319 | 00 55 33.73 | -02 16 06.0 | | 400 |
| 1993 SD ₁ | 1993 09 19.60764 | 00 32 48.95 | -02 03 43.8 | 16.5 | 400 | 1993 SQ ₁ | * 1993 09 16.61458 | 00 59 34.23 | -01 48 05.5 | 16.5 | 400 |
| 1993 SD ₁ | 1993 09 19.62222 | 00 32 48.02 | -02 03 46.1 | | 400 | 1993 SQ ₁ | 1993 09 16.63125 | 00 59 33.34 | -01 48 07.1 | | 400 |
| 1993 SE ₁ | * 1993 09 16.58264 | 00 40 23.12 | -01 59 28.3 | 16.5 | 400 | 1993 SQ ₁ | 1993 09 18.64722 | 00 57 57.06 | -01 49 05.9 | 16.5 | 400 |
| 1993 SE ₁ | 1993 09 16.59861 | 00 40 22.28 | -01 59 37.4 | | 400 | 1993 SQ ₁ | 1993 09 18.66319 | 00 57 56.37 | -01 49 06.2 | | 400 |
| 1993 SE ₁ | 1993 09 19.60764 | 00 37 53.19 | -02 23 22.1 | 16.5 | 400 | 1993 SQ ₁ | 1993 10 11.56042 | 00 36 31.87 | -01 49 25.4 | 16.5 | 400 |
| 1993 SE ₁ | 1993 09 19.62222 | 00 37 52.24 | -02 23 24.1 | | 400 | 1993 SQ ₁ | 1993 10 11.57569 | 00 36 30.89 | -01 49 25.0 | | 400 |
| 1993 SF ₁ | * 1993 09 16.58264 | 00 41 40.65 | -02 56 59.5 | 16.0 | 400 | 1993 SR ₁ | * 1993 09 16.61458 | 01 00 04.32 | +01 08 58.6 | 16.5 | 400 |
| 1993 SF ₁ | 1993 09 16.59861 | 00 41 40.00 | -02 56 59.6 | | 400 | 1993 SR ₁ | 1993 09 16.63125 | 01 00 03.67 | +01 08 57.1 | | 400 |
| 1993 SF ₁ | 1993 09 19.60764 | 00 39 27.75 | -02 54 36.8 | 16.5 | 400 | 1993 SR ₁ | 1993 09 18.64722 | 00 58 43.60 | +01 05 36.3 | 16.5 | 400 |
| 1993 SF ₁ | 1993 09 19.62222 | 00 39 27.07 | -02 54 33.7 | | 400 | 1993 SR ₁ | 1993 09 18.66319 | 00 58 42.91 | +01 05 32.7 | | 400 |
| 1993 SH ₁ | * 1993 09 16.61458 | 00 49 50.01 | +03 15 03.5 | 16.5 | 400 | 1993 SR ₁ | 1993 10 11.56042 | 00 39 13.39 | +00 26 43.7 | 16.5 | 400 |
| 1993 SH ₁ | 1993 09 16.63125 | 00 49 49.39 | +03 14 52.2 | | 400 | 1993 SR ₁ | 1993 10 11.57569 | 00 39 12.69 | +00 26 42.4 | | 400 |
| 1993 SH ₁ | 1993 09 18.64722 | 00 48 31.18 | +02 54 43.7 | 16.5 | 400 | 1993 SS ₁ | * 1993 09 16.61458 | 01 00 53.60 | +01 52 17.1 | 17 | 400 |
| 1993 SH ₁ | 1993 09 18.66319 | 00 48 30.27 | +02 54 31.9 | | 400 | 1993 SS ₁ | 1993 09 16.63125 | 01 00 52.90 | +01 52 12.7 | | 400 |
| 1993 SH ₁ | 1993 10 11.56042 | 00 31 13.49 | -00 59 28.3 | 16.5 | 400 | 1993 SS ₁ | 1993 09 18.64722 | 00 59 36.15 | +01 39 02.6 | 17 | 400 |
| 1993 SH ₁ | 1993 10 11.57569 | 00 31 12.84 | -00 59 37.2 | | 400 | 1993 SS ₁ | 1993 09 18.66319 | 00 59 35.20 | +01 38 56.0 | | 400 |
| 1993 SJ ₁ | * 1993 09 16.61458 | 00 57 54.33 | +03 37 29.7 | 16.5 | 400 | 1993 SS ₁ | 1993 10 11.56042 | 00 41 36.69 | -00 58 51.0 | 17 | 400 |
| 1993 SJ ₁ | 1993 09 16.63125 | 00 57 53.84 | +03 37 24.7 | | 400 | 1993 SS ₁ | 1993 10 11.57569 | 00 41 35.82 | -00 58 53.9 | | 400 |
| 1993 SJ ₁ | 1993 09 18.64722 | 00 56 31.14 | +03 17 46.7 | 16.5 | 400 | 1993 ST ₁ | * 1993 09 16.61458 | 01 01 20.39 | +01 58 16.4 | 17 | 400 |
| 1993 SJ ₁ | 1993 09 18.66319 | 00 56 30.49 | +03 17 39.6 | | 400 | 1993 ST ₁ | 1993 09 16.63125 | 01 01 19.94 | +01 58 09.3 | | 400 |
| 1993 SJ ₁ | 1993 10 11.56042 | 00 38 05.93 | -00 26 37.9 | 17 | 400 | 1993 ST ₁ | 1993 09 18.64722 | 01 00 14.73 | +01 42 01.2 | 17 | 400 |
| 1993 SJ ₁ | 1993 10 11.57569 | 00 38 05.42 | -00 26 45.3 | | 400 | 1993 ST ₁ | 1993 09 18.66319 | 01 00 14.29 | +01 41 54.6 | | 400 |
| 1993 SK ₁ | * 1993 09 16.58264 | 00 26 50.40 | -01 29 11.5 | 16.0 | 400 | 1993 ST ₁ | 1993 10 11.56042 | 00 45 32.27 | -01 26 20.4 | 16.5 | 400 |
| 1993 SK ₁ | 1993 09 16.59861 | 00 26 49.34 | -01 29 15.7 | | 400 | 1993 ST ₁ | 1993 10 11.57569 | 00 45 31.47 | -01 26 29.3 | | 400 |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 SU ₁ | * 1993 09 16.61458 | 01 01 33.34 | -02 48 55.4 | 17 | 400 | 1993 SE ₂ | 1993 09 21.58333 | 23 42 17.23 | -02 51 26.2 | 16.5 | 400 |
| 1993 SU ₁ | 1993 09 16.63125 | 01 01 32.44 | -02 48 56.5 | | 400 | 1993 SE ₂ | 1993 09 21.59861 | 23 42 16.58 | -02 51 27.7 | | 400 |
| 1993 SU ₁ | 1993 09 18.64722 | 00 59 48.12 | -02 56 45.4 | 17 | 400 | 1993 SF ₂ | * 1993 09 19.54097 | 23 48 31.90 | -03 44 00.3 | 16.5 | 400 |
| 1993 SU ₁ | 1993 09 18.66319 | 00 59 47.30 | -02 56 46.7 | | 400 | 1993 SF ₂ | 1993 09 19.55486 | 23 48 31.31 | -03 44 10.5 | | 400 |
| 1993 SV ₁ | * 1993 09 16.61458 | 01 04 39.76 | +01 25 20.8 | 16.5 | 400 | 1993 SF ₂ | 1993 09 21.58333 | 23 47 14.16 | -04 05 58.3 | 16.5 | 400 |
| 1993 SV ₁ | 1993 09 16.63125 | 01 04 39.07 | +01 25 17.4 | | 400 | 1993 SF ₂ | 1993 09 21.59861 | 23 47 13.51 | -04 06 08.3 | | 400 |
| 1993 SV ₁ | 1993 09 18.64722 | 01 03 18.74 | +01 15 25.3 | 16.5 | 400 | 1993 SG ₂ | * 1993 09 19.54097 | 23 55 38.06 | +01 30 39.9 | 16.5 | 400 |
| 1993 SV ₁ | 1993 09 18.66319 | 01 03 18.13 | +01 15 18.6 | | 400 | 1993 SG ₂ | 1993 09 19.55486 | 23 55 37.34 | +01 30 38.1 | | 400 |
| 1993 SV ₁ | 1993 10 11.56042 | 00 45 33.82 | -00 38 53.6 | 16.5 | 400 | 1993 SG ₂ | 1993 09 21.58333 | 23 53 37.64 | +01 26 06.0 | 16.0 | 400 |
| 1993 SV ₁ | 1993 10 11.57569 | 00 45 33.06 | -00 38 58.0 | | 400 | 1993 SG ₂ | 1993 09 21.59861 | 23 53 36.73 | +01 26 01.7 | | 400 |
| 1993 SW ₁ | * 1993 09 16.61458 | 01 06 24.95 | +00 43 26.0 | 16.5 | 400 | 1993 SG ₂ | 1993 10 06.46076 | 23 40 01.42 | +00 53 06.6 | 16.5 | 400 |
| 1993 SW ₁ | 1993 09 16.63125 | 01 06 24.64 | +00 43 16.1 | | 400 | 1993 SG ₂ | 1993 10 06.47431 | 23 40 00.74 | +00 53 03.2 | | 400 |
| 1993 SW ₁ | 1993 09 18.64722 | 01 05 14.99 | +00 18 25.2 | 16.5 | 400 | 1993 SH ₂ | * 1993 09 19.54097 | 23 55 49.09 | -00 15 59.4 | 16.5 | 400 |
| 1993 SW ₁ | 1993 09 18.66319 | 01 05 14.17 | +00 18 14.2 | | 400 | 1993 SH ₂ | 1993 09 19.55486 | 23 55 48.24 | -00 15 59.5 | | 400 |
| 1993 SW ₁ | 1993 10 11.56042 | 00 48 26.75 | -04 05 28.2 | 16.5 | 400 | 1993 SH ₂ | 1993 09 21.58333 | 23 53 54.67 | -00 22 57.0 | 16.0 | 400 |
| 1993 SW ₁ | 1993 10 11.57569 | 00 48 25.86 | -04 05 32.4 | | 400 | 1993 SH ₂ | 1993 09 21.59861 | 23 53 53.92 | -00 22 59.6 | | 400 |
| 1993 SX ₁ | * 1993 09 16.61458 | 01 06 43.49 | -02 39 56.5 | 16.5 | 400 | 1993 SH ₂ | 1993 10 06.46076 | 23 40 38.45 | -01 10 53.9 | 17 | 400 |
| 1993 SX ₁ | 1993 09 16.63125 | 01 06 42.55 | -02 40 04.7 | | 400 | 1993 SH ₂ | 1993 10 06.47431 | 23 40 37.56 | -01 10 56.5 | | 400 |
| 1993 SX ₁ | 1993 09 18.64722 | 01 05 08.46 | -02 53 10.1 | 16.5 | 400 | 1993 SJ ₂ | 1993 09 16.48264 | 00 30 22.78 | +08 34 57.6 | 17 | 400 |
| 1993 SX ₁ | 1993 09 18.66319 | 01 05 07.66 | -02 53 15.5 | | 400 | 1993 SJ ₂ | 1993 09 16.49861 | 00 30 21.76 | +08 34 53.6 | | 400 |
| 1993 SY ₁ | * 1993 09 19.50972 | 23 39 28.81 | +05 17 55.7 | 17 | 400 | 1993 SJ ₂ | * 1993 09 19.57361 | 00 28 23.95 | +08 20 33.1 | 17 | 400 |
| 1993 SY ₁ | 1993 09 19.52361 | 23 39 28.16 | +05 17 51.6 | | 400 | 1993 SJ ₂ | 1993 09 19.58819 | 00 28 23.34 | +08 20 29.2 | | 400 |
| 1993 SY ₁ | 1993 09 21.55556 | 23 38 03.44 | +05 02 18.4 | 17 | 400 | 1993 SK ₂ | 1993 09 16.48264 | 00 32 30.17 | +04 53 14.0 | 17 | 400 |
| 1993 SY ₁ | 1993 09 21.56875 | 23 38 02.70 | +05 02 14.6 | | 400 | 1993 SK ₂ | 1993 09 16.49861 | 00 32 29.14 | +04 53 23.0 | | 400 |
| 1993 SZ ₁ | * 1993 09 19.50972 | 23 40 57.30 | +04 22 20.8 | 17 | 400 | 1993 SK ₂ | * 1993 09 19.57361 | 00 29 01.34 | +05 03 15.8 | 16.5 | 400 |
| 1993 SZ ₁ | 1993 09 19.52361 | 23 40 56.54 | +04 22 16.5 | | 400 | 1993 SK ₂ | 1993 09 19.58819 | 00 29 00.20 | +05 03 20.0 | | 400 |
| 1993 SZ ₁ | 1993 09 21.55556 | 23 39 17.72 | +04 04 59.0 | 17 | 400 | 1993 SK ₂ | 1993 10 11.49792 | 00 04 30.30 | +05 54 13.2 | 16.5 | 400 |
| 1993 SZ ₁ | 1993 09 21.56875 | 23 39 17.05 | +04 04 54.1 | | 400 | 1993 SK ₂ | 1993 10 11.51319 | 00 04 29.25 | +05 54 13.6 | | 400 |
| 1993 SA ₂ | * 1993 09 19.50972 | 23 43 09.11 | +07 25 55.3 | 16.5 | 400 | 1993 SL ₂ | 1993 09 16.48264 | 00 38 43.55 | +09 22 09.7 | 17 | 400 |
| 1993 SA ₂ | 1993 09 19.52361 | 23 43 08.13 | +07 25 55.1 | | 400 | 1993 SL ₂ | 1993 09 16.49861 | 00 38 42.55 | +09 21 58.7 | | 400 |
| 1993 SA ₂ | 1993 09 21.55556 | 23 41 01.58 | +07 28 55.2 | 16.5 | 400 | 1993 SL ₂ | * 1993 09 19.57361 | 00 36 35.79 | +08 57 19.5 | 17 | 400 |
| 1993 SA ₂ | 1993 09 21.56875 | 23 41 00.78 | +07 28 55.3 | | 400 | 1993 SL ₂ | 1993 09 19.58819 | 00 36 35.28 | +08 57 10.9 | | 400 |
| 1993 SA ₂ | 1993 10 06.42847 | 23 27 15.76 | +07 36 42.1 | 16.0 | 400 | 1993 SP ₂ | * 1993 09 19.54097 | 23 48 48.62 | -04 00 02.1 | 17 | 400 |
| 1993 SA ₂ | 1993 10 06.44514 | 23 27 15.25 | +07 36 41.3 | | 400 | 1993 SP ₂ | 1993 09 19.55486 | 23 48 47.85 | -04 00 08.4 | | 400 |
| 1993 SB ₂ | * 1993 09 19.50972 | 23 44 18.76 | +03 11 18.7 | 16.5 | 400 | 1993 SP ₂ | 1993 09 21.58333 | 23 47 10.26 | -04 15 08.4 | 17 | 400 |
| 1993 SB ₂ | 1993 09 19.52361 | 23 44 17.86 | +03 11 15.9 | | 400 | 1993 SP ₂ | 1993 09 21.59861 | 23 47 09.28 | -04 15 16.9 | | 400 |
| 1993 SB ₂ | 1993 09 21.55556 | 23 42 13.82 | +03 04 16.7 | 16.5 | 400 | 1993 SQ ₂ | * 1993 09 19.54097 | 23 55 07.19 | -00 19 28.1 | 16.5 | 400 |
| 1993 SB ₂ | 1993 09 21.56875 | 23 42 13.28 | +03 04 15.0 | | 400 | 1993 SQ ₂ | 1993 09 19.55486 | 23 55 06.50 | -00 19 39.3 | | 400 |
| 1993 SB ₂ | 1993 10 06.42847 | 23 28 50.12 | +02 12 00.0 | 16.5 | 400 | 1993 SQ ₂ | 1993 09 21.58333 | 23 53 45.26 | -00 47 36.6 | 16.0 | 400 |
| 1993 SB ₂ | 1993 10 06.44514 | 23 28 49.46 | +02 11 56.1 | | 400 | 1993 SQ ₂ | 1993 09 21.59861 | 23 53 44.52 | -00 47 50.7 | | 400 |
| 1993 SC ₂ | * 1993 09 19.50972 | 23 44 22.78 | +01 38 36.1 | 16.5 | 400 | 1993 SR ₂ | 1993 09 16.59861 | 00 18 48.41 | +02 18 39.8 | 16.5 | 400 |
| 1993 SC ₂ | 1993 09 19.52361 | 23 44 21.98 | +01 38 30.9 | | 400 | 1993 SR ₂ | * 1993 09 19.60764 | 00 16 33.22 | +02 01 21.7 | 16.5 | 400 |
| 1993 SC ₂ | 1993 09 21.58333 | 23 42 44.91 | +01 24 03.3 | 16.5 | 400 | 1993 SR ₂ | 1993 09 19.62222 | 00 16 32.59 | +02 01 17.3 | | 400 |
| 1993 SC ₂ | 1993 09 21.59861 | 23 42 44.13 | +01 23 57.5 | | 400 | 1993 ST ₂ | 1993 09 13.55139 | 23 58 39.72 | +03 17 55.7 | 17 | 400 |
| 1993 SD ₂ | * 1993 09 19.50972 | 23 45 43.56 | +07 35 47.7 | 16.5 | 400 | 1993 ST ₂ | 1993 09 13.56528 | 23 58 39.25 | +03 17 45.3 | | 400 |
| 1993 SD ₂ | 1993 09 19.52361 | 23 45 42.95 | +07 35 39.9 | | 400 | 1993 ST ₂ | * 1993 09 19.50972 | 23 54 43.80 | +02 18 16.1 | 17 | 400 |
| 1993 SD ₂ | 1993 09 21.55556 | 23 44 14.30 | +07 23 39.6 | 16.5 | 400 | 1993 ST ₂ | 1993 09 19.52361 | 23 54 43.04 | +02 18 06.3 | | 400 |
| 1993 SD ₂ | 1993 09 21.56875 | 23 44 13.64 | +07 23 34.0 | | 400 | 1993 ST ₂ | 1993 09 21.58333 | 23 53 19.21 | +01 56 44.9 | 17 | 400 |
| 1993 SD ₂ | 1993 10 06.42847 | 23 33 55.48 | +05 49 08.0 | 17 | 400 | 1993 ST ₂ | 1993 09 21.59861 | 23 53 18.50 | +01 56 36.8 | | 400 |
| 1993 SD ₂ | 1993 10 06.44514 | 23 33 54.69 | +05 48 58.7 | | 400 | 1993 SV ₂ | * 1993 09 19.50972 | 23 45 00.20 | +04 21 06.9 | 16.5 | 400 |
| 1993 SE ₂ | * 1993 09 19.54097 | 23 43 59.60 | -02 47 29.7 | 16.5 | 400 | 1993 SV ₂ | 1993 09 19.52361 | 23 44 59.34 | +04 20 59.2 | | 400 |
| 1993 SE ₂ | 1993 09 19.55486 | 23 43 59.04 | -02 47 29.9 | | 400 | 1993 SV ₂ | 1993 09 21.55556 | 23 42 56.83 | +04 07 10.3 | 16.5 | 400 |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 SV ₂ | 1993 09 21.56875 | 23 42 55.89 | +04 07 03.4 | | 400 | 1993 TU | * 1993 10 11.65556 | 01 37 56.54 | +16 48 44.3 | 16.5 | 400 |
| 1993 SW ₂ | * 1993 09 19.54097 | 23 48 13.37 | -03 14 34.2 | 16.0 | 400 | 1993 TU | 1993 10 11.66944 | 01 37 55.68 | +16 48 42.4 | | 400 |
| 1993 SW ₂ | 1993 09 19.55486 | 23 48 13.00 | -03 14 47.8 | | 400 | 1993 TU | 1993 10 12.57639 | 01 36 56.46 | +16 45 15.6 | 17 | 400 |
| 1993 SW ₂ | 1993 09 21.58333 | 23 47 07.60 | -03 53 32.6 | 16.5 | 400 | 1993 TU | 1993 10 12.59028 | 01 36 55.68 | +16 45 11.7 | | 400 |
| 1993 SW ₂ | 1993 09 21.59861 | 23 47 07.03 | -03 53 48.2 | | 400 | 1993 TV | * 1993 10 11.65556 | 01 39 15.03 | +11 12 42.4 | 17 | 400 |
| 1993 SX ₂ | * 1993 09 19.54097 | 23 52 27.17 | -03 16 50.7 | 16.5 | 400 | 1993 TV | 1993 10 11.66944 | 01 39 14.42 | +11 12 39.6 | | 400 |
| 1993 SX ₂ | 1993 09 21.58333 | 23 50 37.28 | -03 19 33.4 | 17 | 400 | 1993 TV | 1993 10 12.57639 | 01 38 30.51 | +11 08 10.6 | 17 | 400 |
| 1993 SX ₂ | 1993 09 21.59861 | 23 50 36.70 | -03 19 33.9 | | 400 | 1993 TV | 1993 10 12.59028 | 01 38 29.84 | +11 08 02.2 | | 400 |
| 1993 SE ₃ | 1993 09 19.50972 | 23 57 30.01 | +03 28 36.8 | 17 | 400 | 1993 TW | * 1993 10 11.65556 | 01 43 29.55 | +12 24 49.2 | 16.5 | 400 |
| 1993 SE ₃ | 1993 09 19.52361 | 23 57 29.38 | +03 28 29.1 | | 400 | 1993 TW | 1993 10 11.66944 | 01 43 28.85 | +12 24 44.9 | | 400 |
| 1993 SY ₃ | * 1993 09 16.54861 | 00 51 48.08 | +09 55 29.6 | 17 | 400 | 1993 TW | 1993 10 12.57639 | 01 42 43.47 | +12 19 49.1 | 16.5 | 400 |
| 1993 SY ₃ | 1993 09 16.56597 | 00 51 47.36 | +09 55 23.4 | | 400 | 1993 TW | 1993 10 12.59028 | 01 42 42.79 | +12 19 45.8 | | 400 |
| 1993 SY ₃ | 1993 09 18.61528 | 00 50 34.85 | +09 42 11.4 | 16.5 | 400 | 1993 TY | * 1993 10 11.65556 | 01 36 41.03 | +12 20 15.1 | 16.5 | 400 |
| 1993 SY ₃ | 1993 09 18.63125 | 00 50 34.21 | +09 42 03.1 | | 400 | 1993 TY | 1993 10 11.66944 | 01 36 40.31 | +12 20 06.2 | | 400 |
| 1993 SY ₃ | 1993 10 11.53056 | 00 33 56.20 | +06 33 03.0 | 16.5 | 400 | 1993 TY | 1993 10 12.57639 | 01 36 07.48 | +12 12 28.2 | 16.5 | 400 |
| 1993 SY ₃ | 1993 10 11.54444 | 00 33 55.66 | +06 32 55.4 | | 400 | 1993 TY | 1993 10 12.59028 | 01 36 06.71 | +12 12 21.2 | | 400 |
| 1993 SZ ₃ | * 1993 09 16.54861 | 01 06 42.49 | +08 16 04.6 | 16.5 | 400 | 1993 TA ₁ | * 1993 10 11.62569 | 01 28 59.16 | +06 46 47.2 | 16.5 | 400 |
| 1993 SZ ₃ | 1993 09 16.56597 | 01 06 41.92 | +08 15 55.9 | | 400 | 1993 TA ₁ | 1993 10 11.64028 | 01 28 58.66 | +06 46 45.2 | | 400 |
| 1993 SZ ₃ | 1993 09 18.61528 | 01 05 51.45 | +07 57 31.2 | 16.5 | 400 | 1993 TA ₁ | 1993 10 15.52778 | 01 26 21.98 | +06 34 07.5 | 16.5 | 400 |
| 1993 SZ ₃ | 1993 09 18.63125 | 01 05 50.81 | +07 57 23.9 | | 400 | 1993 TA ₁ | 1993 10 15.54167 | 01 26 21.37 | +06 34 05.6 | | 400 |
| 1993 TL | * 1993 10 08.64722 | 01 03 49.24 | +06 29 24.3 | 16.5 | 400 | 1993 TB ₁ | * 1993 10 11.62569 | 01 34 02.78 | +09 13 21.4 | 16.5 | 400 |
| 1993 TL | 1993 10 08.66042 | 01 03 48.60 | +06 29 25.6 | | 400 | 1993 TB ₁ | 1993 10 11.64028 | 01 34 02.18 | +09 13 16.2 | | 400 |
| 1993 TL | 1993 10 11.59444 | 01 01 07.77 | +06 26 14.8 | 16.5 | 400 | 1993 TB ₁ | 1993 10 15.52778 | 01 30 39.66 | +08 46 09.0 | 16.0 | 400 |
| 1993 TL | 1993 10 11.60903 | 01 01 07.38 | +06 26 14.2 | | 400 | 1993 TB ₁ | 1993 10 15.54167 | 01 30 38.74 | +08 46 04.8 | | 400 |
| 1993 TM | * 1993 10 08.64722 | 01 10 44.33 | +05 05 27.6 | 17 | 400 | 1993 TC ₁ | * 1993 10 11.62569 | 01 38 18.49 | +06 13 50.1 | 15.0 | 400 |
| 1993 TM | 1993 10 08.66042 | 01 10 43.77 | +05 05 27.1 | | 400 | 1993 TC ₁ | 1993 10 11.64028 | 01 38 17.55 | +06 13 49.4 | | 400 |
| 1993 TM | 1993 10 11.59444 | 01 07 38.27 | +05 02 22.3 | 16.5 | 400 | 1993 TC ₁ | 1993 10 15.52778 | 01 34 19.81 | +06 09 29.6 | 15.0 | 400 |
| 1993 TM | 1993 10 11.60903 | 01 07 37.55 | +05 02 19.7 | | 400 | 1993 TC ₁ | 1993 10 15.54167 | 01 34 18.95 | +06 09 28.8 | | 400 |
| 1993 TN | * 1993 10 08.64722 | 01 21 44.99 | +01 38 05.0 | 16.5 | 400 | 1993 TD ₁ | * 1993 10 11.62569 | 01 40 59.79 | +08 20 39.9 | 16.5 | 400 |
| 1993 TN | 1993 10 08.66042 | 01 21 43.97 | +01 37 59.8 | | 400 | 1993 TD ₁ | 1993 10 11.64028 | 01 40 58.84 | +08 20 43.5 | | 400 |
| 1993 TN | 1993 10 11.59444 | 01 18 58.65 | +01 24 00.9 | 16.5 | 400 | 1993 TD ₁ | 1993 10 15.52778 | 01 35 55.34 | +08 40 04.2 | 16.5 | 400 |
| 1993 TN | 1993 10 11.60903 | 01 18 58.00 | +01 23 57.7 | | 400 | 1993 TD ₁ | 1993 10 15.54167 | 01 35 54.38 | +08 40 07.9 | | 400 |
| 1993 TO | * 1993 10 08.64722 | 01 23 58.58 | +06 33 48.7 | 16.5 | 400 | 1993 TE ₁ | * 1993 10 11.62569 | 01 44 01.63 | +07 59 37.6 | 17 | 400 |
| 1993 TO | 1993 10 08.66042 | 01 23 57.97 | +06 33 54.3 | | 400 | 1993 TE ₁ | 1993 10 11.64028 | 01 44 00.85 | +07 59 35.3 | | 400 |
| 1993 TO | 1993 10 11.59444 | 01 20 37.08 | +06 47 52.8 | 16.5 | 400 | 1993 TE ₁ | 1993 10 15.52778 | 01 40 29.98 | +07 51 40.1 | 17 | 400 |
| 1993 TO | 1993 10 11.60903 | 01 20 36.30 | +06 47 55.1 | | 400 | 1993 TE ₁ | 1993 10 15.54167 | 01 40 29.09 | +07 51 37.7 | | 400 |
| 1993 TP | * 1993 10 08.58750 | 00 19 06.42 | -04 45 28.7 | 16.5 | 400 | 1993 TF ₁ | * 1993 10 15.55903 | 01 54 19.26 | +17 54 24.2 | 16.5 | 400 |
| 1993 TP | 1993 10 08.60208 | 00 19 05.71 | -04 45 30.4 | | 400 | 1993 TF ₁ | 1993 10 15.57361 | 01 54 18.44 | +17 54 18.2 | | 400 |
| 1993 TP | 1993 10 12.54375 | 00 16 09.91 | -04 48 58.9 | 16.5 | 400 | 1993 TF ₁ | 1993 10 16.50417 | 01 53 31.31 | +17 47 07.2 | 16.5 | 400 |
| 1993 TP | 1993 10 12.55903 | 00 16 09.19 | -04 48 58.8 | | 400 | 1993 TF ₁ | 1993 10 16.51875 | 01 53 30.54 | +17 47 00.9 | | 400 |
| 1993 TR | * 1993 10 11.65556 | 01 31 18.74 | +12 16 04.7 | 17 | 400 | 1993 TG ₁ | * 1993 10 15.55903 | 01 54 58.64 | +18 37 31.5 | 16.5 | 400 |
| 1993 TR | 1993 10 11.66944 | 01 31 18.00 | +12 16 02.4 | | 400 | 1993 TG ₁ | 1993 10 15.57361 | 01 54 57.78 | +18 37 32.2 | | 400 |
| 1993 TR | 1993 10 12.57639 | 01 30 34.57 | +12 13 03.7 | 17 | 400 | 1993 TG ₁ | 1993 10 16.50417 | 01 54 07.89 | +18 36 36.6 | 16.5 | 400 |
| 1993 TR | 1993 10 12.59028 | 01 30 33.83 | +12 12 57.3 | | 400 | 1993 TG ₁ | 1993 10 16.51875 | 01 54 07.14 | +18 36 36.4 | | 400 |
| 1993 TS | * 1993 10 11.65556 | 01 33 27.23 | +14 10 51.1 | 16.5 | 400 | 1993 TH ₁ | * 1993 10 15.55903 | 02 04 29.52 | +14 02 59.4 | 16.5 | 400 |
| 1993 TS | 1993 10 11.66944 | 01 33 26.55 | +14 10 54.3 | | 400 | 1993 TH ₁ | 1993 10 15.57361 | 02 04 28.69 | +14 03 02.1 | | 400 |
| 1993 TS | 1993 10 12.57639 | 01 32 29.42 | +14 13 33.5 | 17 | 400 | 1993 TH ₁ | 1993 10 16.50417 | 02 03 38.26 | +14 03 03.9 | 16.5 | 400 |
| 1993 TS | 1993 10 12.59028 | 01 32 28.51 | +14 13 36.8 | | 400 | 1993 TH ₁ | 1993 10 16.51875 | 02 03 37.35 | +14 03 02.3 | | 400 |
| 1993 TT | * 1993 10 11.65556 | 01 37 19.84 | +14 58 50.0 | 16.5 | 400 | 1993 TJ ₁ | * 1993 10 15.55903 | 02 09 30.19 | +14 14 26.6 | 16.5 | 400 |
| 1993 TT | 1993 10 11.66944 | 01 37 18.93 | +14 58 47.3 | | 400 | 1993 TJ ₁ | 1993 10 15.57361 | 02 09 29.12 | +14 14 25.4 | | 400 |
| 1993 TT | 1993 10 12.57639 | 01 36 37.09 | +14 54 28.6 | 16.5 | 400 | 1993 TJ ₁ | 1993 10 16.50417 | 02 08 28.73 | +14 14 07.3 | 16.5 | 400 |
| 1993 TT | 1993 10 12.59028 | 01 36 36.37 | +14 54 22.2 | | 400 | 1993 TJ ₁ | 1993 10 16.51875 | 02 08 27.94 | +14 14 06.6 | | 400 |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 TK ₁ | * 1993 10 15.55903 | 02 15 38.25 | +13 34 11.0 | 16.0 | 400 | 1993 TX ₁ | 1993 10 15.67153 | 02 38 05.77 | +07 14 20.4 | | 400 |
| 1993 TK ₁ | 1993 10 15.57361 | 02 15 37.39 | +13 34 10.6 | | 400 | 1993 TX ₁ | 1993 10 16.59931 | 02 37 21.91 | +07 05 06.7 | 16.5 | 400 |
| 1993 TK ₁ | 1993 10 16.50417 | 02 14 42.71 | +13 32 45.5 | 16.0 | 400 | 1993 TX ₁ | 1993 10 16.61667 | 02 37 21.06 | +07 04 58.2 | | 400 |
| 1993 TK ₁ | 1993 10 16.51875 | 02 14 41.77 | +13 32 45.6 | | 400 | 1993 TY ₁ | * 1993 10 15.59028 | 02 28 19.96 | +19 12 18.2 | 16.0 | 400 |
| 1993 TL ₁ | * 1993 10 15.62361 | 01 56 38.28 | +07 01 01.3 | 16.5 | 400 | 1993 TY ₁ | 1993 10 15.60694 | 02 28 18.59 | +19 12 18.9 | | 400 |
| 1993 TL ₁ | 1993 10 15.63819 | 01 56 37.34 | +07 00 52.5 | | 400 | 1993 TY ₁ | 1993 10 16.56528 | 02 27 19.73 | +19 13 05.6 | 16.0 | 400 |
| 1993 TL ₁ | 1993 10 16.53403 | 01 56 09.66 | +06 52 19.2 | 16.5 | 400 | 1993 TY ₁ | 1993 10 16.58194 | 02 27 18.57 | +19 13 07.1 | | 400 |
| 1993 TL ₁ | 1993 10 16.54861 | 01 56 09.17 | +06 52 11.6 | | 400 | 1993 TZ ₁ | * 1993 10 15.59028 | 02 31 03.74 | +15 48 01.7 | 16.5 | 400 |
| 1993 TM ₁ | * 1993 10 15.62361 | 02 04 22.52 | +07 00 00.5 | 16.5 | 400 | 1993 TZ ₁ | 1993 10 15.60694 | 02 31 02.70 | +15 47 54.1 | | 400 |
| 1993 TM ₁ | 1993 10 15.63819 | 02 04 21.68 | +06 59 58.9 | | 400 | 1993 TZ ₁ | 1993 10 16.56528 | 02 30 19.64 | +15 39 54.6 | 16.5 | 400 |
| 1993 TM ₁ | 1993 10 16.53403 | 02 03 35.21 | +06 56 54.8 | 16.5 | 400 | 1993 TZ ₁ | 1993 10 16.58194 | 02 30 18.72 | +15 39 46.9 | | 400 |
| 1993 TM ₁ | 1993 10 16.54861 | 02 03 34.41 | +06 56 48.5 | | 400 | 1993 TA ₂ | * 1993 10 15.59028 | 02 32 22.31 | +19 17 08.7 | 16.0 | 400 |
| 1993 TN ₁ | * 1993 10 15.62361 | 02 07 58.13 | +05 35 32.7 | 16.5 | 400 | 1993 TA ₂ | 1993 10 15.60694 | 02 32 21.62 | +19 17 00.4 | | 400 |
| 1993 TN ₁ | 1993 10 15.63819 | 02 07 57.40 | +05 35 27.3 | | 400 | 1993 TA ₂ | 1993 10 16.56528 | 02 31 44.62 | +19 10 21.2 | 16.0 | 400 |
| 1993 TN ₁ | 1993 10 16.53403 | 02 07 09.64 | +05 30 54.7 | 16.5 | 400 | 1993 TA ₂ | 1993 10 16.58194 | 02 31 43.98 | +19 10 15.7 | | 400 |
| 1993 TN ₁ | 1993 10 16.54861 | 02 07 08.90 | +05 30 47.6 | | 400 | 1993 TB ₂ | * 1993 10 15.59028 | 02 32 44.46 | +18 51 13.0 | 16.5 | 400 |
| 1993 TO ₁ | * 1993 10 15.64792 | 02 27 14.26 | +06 55 18.2 | 16 | 400 | 1993 TB ₂ | 1993 10 15.60694 | 02 32 43.81 | +18 51 07.9 | | 400 |
| 1993 TO ₁ | 1993 10 15.66181 | 02 27 13.01 | +06 55 24.2 | | 400 | 1993 TB ₂ | 1993 10 16.56528 | 02 32 13.76 | +18 46 33.0 | 16.5 | 400 |
| 1993 TO ₁ | 1993 10 15.66458 | 02 27 12.26 | +06 55 31.8 | | 400 | 1993 TB ₂ | 1993 10 16.58194 | 02 32 13.12 | +18 46 28.8 | | 400 |
| 1993 TO ₁ | 1993 10 15.67847 | 02 27 10.97 | +06 55 41.2 | | 400 | 1993 TC ₂ | * 1993 10 15.59028 | 02 34 41.04 | +16 34 47.5 | 16.5 | 400 |
| 1993 TO ₁ | 1993 10 16.59236 | 02 25 49.40 | +07 08 00.1 | 16 | 400 | 1993 TC ₂ | 1993 10 15.60694 | 02 34 40.22 | +16 34 46.8 | | 400 |
| 1993 TO ₁ | 1993 10 16.60625 | 02 25 48.63 | +07 08 10.2 | | 400 | 1993 TC ₂ | 1993 10 16.56528 | 02 33 53.02 | +16 34 24.5 | 16.5 | 400 |
| 1993 TO ₁ | 1993 10 16.60972 | 02 25 47.61 | +07 08 17.2 | | 400 | 1993 TC ₂ | 1993 10 16.58194 | 02 33 52.10 | +16 34 23.7 | | 400 |
| 1993 TO ₁ | 1993 10 16.62361 | 02 25 46.48 | +07 08 26.9 | | 400 | 1993 TD ₂ | * 1993 10 15.59028 | 02 34 48.36 | +16 18 45.8 | 16.5 | 400 |
| 1993 TQ ₁ | * 1993 10 15.62361 | 01 57 02.26 | +08 54 34.1 | 16.5 | 400 | 1993 TD ₂ | 1993 10 15.60694 | 02 34 47.46 | +16 18 41.9 | | 400 |
| 1993 TQ ₁ | 1993 10 15.63819 | 01 57 01.41 | +08 54 28.4 | | 400 | 1993 TD ₂ | 1993 10 16.56528 | 02 34 03.10 | +16 15 02.6 | 16.5 | 400 |
| 1993 TQ ₁ | 1993 10 16.53403 | 01 56 17.41 | +08 48 26.3 | 16.5 | 400 | 1993 TD ₂ | 1993 10 16.58194 | 02 34 02.21 | +16 14 58.6 | | 400 |
| 1993 TQ ₁ | 1993 10 16.54861 | 01 56 16.74 | +08 48 21.7 | | 400 | 1993 TE ₂ | * 1993 10 15.59028 | 02 39 36.84 | +20 13 12.2 | 16.5 | 400 |
| 1993 TR ₁ | * 1993 10 15.62361 | 01 57 49.64 | +09 46 15.3 | 16.5 | 400 | 1993 TE ₂ | 1993 10 15.60694 | 02 39 35.93 | +20 13 12.7 | | 400 |
| 1993 TR ₁ | 1993 10 15.63819 | 01 57 48.94 | +09 46 13.2 | | 400 | 1993 TE ₂ | 1993 10 16.56528 | 02 38 43.00 | +20 14 07.8 | 16.5 | 400 |
| 1993 TR ₁ | 1993 10 16.54861 | 01 57 00.78 | +09 45 49.1 | 16.0 | 400 | 1993 TE ₂ | 1993 10 16.58194 | 02 38 41.99 | +20 14 10.3 | | 400 |
| 1993 TS ₁ | * 1993 10 15.62361 | 02 02 32.24 | +07 55 52.1 | 17 | 400 | 1993 TF ₂ | * 1993 10 15.65486 | 02 30 35.43 | +12 21 18.9 | 17 | 400 |
| 1993 TS ₁ | 1993 10 15.63819 | 02 02 31.37 | +07 55 46.6 | | 400 | 1993 TF ₂ | 1993 10 15.67153 | 02 30 34.69 | +12 21 15.9 | | 400 |
| 1993 TS ₁ | 1993 10 16.53403 | 02 01 54.89 | +07 47 38.9 | 17 | 400 | 1993 TF ₂ | 1993 10 16.59931 | 02 29 55.52 | +12 18 15.9 | 17 | 400 |
| 1993 TS ₁ | 1993 10 16.54861 | 02 01 54.34 | +07 47 33.5 | | 400 | 1993 TF ₂ | 1993 10 16.61667 | 02 29 54.66 | +12 18 08.5 | | 400 |
| 1993 TT ₁ | * 1993 10 15.62361 | 02 07 22.28 | +09 40 48.1 | 16.5 | 400 | 1993 TG ₂ | * 1993 10 15.65486 | 02 33 02.40 | +10 52 46.9 | 16.5 | 400 |
| 1993 TT ₁ | 1993 10 15.63819 | 02 07 21.69 | +09 40 38.9 | | 400 | 1993 TG ₂ | 1993 10 15.67153 | 02 33 01.67 | +10 52 37.8 | | 400 |
| 1993 TT ₁ | 1993 10 16.53403 | 02 06 42.62 | +09 30 44.5 | 16.5 | 400 | 1993 TG ₂ | 1993 10 16.59931 | 02 32 24.90 | +10 44 35.7 | 16.5 | 400 |
| 1993 TT ₁ | 1993 10 16.54861 | 02 06 41.77 | +09 30 34.8 | | 400 | 1993 TG ₂ | 1993 10 16.61667 | 02 32 24.11 | +10 44 28.2 | | 400 |
| 1993 TU ₁ | * 1993 10 15.62361 | 02 09 17.86 | +08 02 52.5 | 16.0 | 400 | 1993 TH ₂ | * 1993 10 15.65486 | 02 40 26.82 | +10 49 04.5 | 17 | 400 |
| 1993 TU ₁ | 1993 10 15.63819 | 02 09 16.94 | +08 02 46.5 | | 400 | 1993 TH ₂ | 1993 10 15.67153 | 02 40 25.95 | +10 49 00.9 | | 400 |
| 1993 TU ₁ | 1993 10 16.53403 | 02 08 28.60 | +07 59 14.1 | 16.0 | 400 | 1993 TH ₂ | 1993 10 16.59931 | 02 39 44.43 | +10 46 26.6 | 17 | 400 |
| 1993 TU ₁ | 1993 10 16.54861 | 02 08 27.84 | +07 59 11.3 | | 400 | 1993 TH ₂ | 1993 10 16.61667 | 02 39 43.68 | +10 46 22.9 | | 400 |
| 1993 TV ₁ | * 1993 10 15.62361 | 02 13 32.78 | +08 00 18.9 | 15.8 | 400 | 1993 TL ₂ | * 1993 10 15.55903 | 01 58 00.97 | +15 26 39.2 | 16.5 | 400 |
| 1993 TV ₁ | 1993 10 15.63819 | 02 13 31.67 | +08 00 21.8 | | 400 | 1993 TL ₂ | 1993 10 15.57361 | 01 57 59.97 | +15 26 36.9 | | 400 |
| 1993 TV ₁ | 1993 10 16.53403 | 02 12 32.48 | +08 03 01.8 | 15.8 | 400 | 1993 TL ₂ | 1993 10 16.50417 | 01 57 01.86 | +15 24 32.4 | 16.5 | 400 |
| 1993 TV ₁ | 1993 10 16.54861 | 02 12 31.56 | +08 03 05.0 | | 400 | 1993 TL ₂ | 1993 10 16.51875 | 01 57 00.94 | +15 24 31.0 | | 400 |
| 1993 TW ₁ | * 1993 10 15.65486 | 02 27 15.89 | +08 51 16.5 | 16.0 | 400 | 1993 TM ₂ | * 1993 10 15.62361 | 02 06 02.76 | +08 29 48.9 | 17 | 400 |
| 1993 TW ₁ | 1993 10 15.67153 | 02 27 15.05 | +08 51 18.5 | | 400 | 1993 TM ₂ | 1993 10 15.63819 | 02 06 01.88 | +08 29 49.4 | | 400 |
| 1993 TW ₁ | 1993 10 16.59931 | 02 26 22.23 | +08 51 07.5 | 16.0 | 400 | 1993 TM ₂ | 1993 10 16.53403 | 02 05 09.41 | +08 26 59.6 | 17 | 400 |
| 1993 TW ₁ | 1993 10 16.61667 | 02 26 21.31 | +08 51 08.3 | | 400 | 1993 TM ₂ | 1993 10 16.54861 | 02 05 08.38 | +08 26 57.6 | | 400 |
| 1993 TX ₁ | * 1993 10 15.65486 | 02 38 06.76 | +07 14 33.6 | 16.5 | 400 | 1993 TN ₂ | * 1993 10 15.62361 | 02 10 51.65 | +09 22 55.0 | 16.5 | 400 |

| | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 TN ₂ | 1993 10 15.63819 | 02 10 50.70 | +09 22 55.4 | | 400 |
| 1993 TN ₂ | 1993 10 16.53403 | 02 09 55.69 | +09 22 20.3 | 16.5 | 400 |
| 1993 TN ₂ | 1993 10 16.54861 | 02 09 54.59 | +09 22 18.2 | | 400 |
| 1993 TO ₂ | * 1993 10 15.65486 | 02 23 30.62 | +11 02 14.6 | 17 | 400 |
| 1993 TO ₂ | 1993 10 15.67153 | 02 23 29.94 | +11 02 07.6 | | 400 |
| 1993 TO ₂ | 1993 10 16.59931 | 02 22 53.32 | +10 55 00.7 | 17 | 400 |
| 1993 TO ₂ | 1993 10 16.61667 | 02 22 52.65 | +10 54 51.4 | | 400 |
| (316) | 1993 09 15.55208 | 00 20 11.90 | -00 58 35.6 | 14.5 | 400 |
| (316) | 1993 09 15.56875 | 00 20 11.16 | -00 58 40.2 | | 400 |
| (496) | 1993 10 11.46389 | 23 50 29.25 | +01 33 11.9 | 15.0 | 400 |
| (496) | 1993 10 11.47917 | 23 50 28.52 | +01 33 04.1 | | 400 |
| (1137) | 1993 09 18.64722 | 00 54 56.48 | -02 17 40.8 | 13.5 | 400 |
| (1137) | 1993 09 18.66319 | 00 54 55.69 | -02 17 45.6 | | 400 |
| (2315) | 1993 10 11.56042 | 00 48 54.27 | -00 07 51.4 | 15.0 | 400 |
| (2315) | 1993 10 11.57569 | 00 48 53.42 | -00 07 52.3 | | 400 |
| (2526) | 1993 10 08.64722 | 01 02 57.17 | +06 38 03.3 | 16.5 | 400 |
| (2526) | 1993 10 08.66042 | 01 02 56.30 | +06 37 58.6 | | 400 |
| (2526) | 1993 10 11.59444 | 01 00 34.71 | +06 27 07.5 | 16.5 | 400 |
| (2526) | 1993 10 11.60903 | 01 00 33.94 | +06 27 04.0 | | 400 |
| (3264) | 1993 09 16.58264 | 00 35 24.64 | +02 48 21.8 | 16.8 | 400 |
| (3264) | 1993 09 16.59861 | 00 35 23.87 | +02 48 14.5 | | 400 |
| (4211) | 1993 10 08.64722 | 01 03 11.73 | +06 35 07.6 | 16.0 | 400 |
| (4211) | 1993 10 08.66042 | 01 03 10.96 | +06 35 03.5 | | 400 |
| (4211) | 1993 10 11.59444 | 01 00 57.42 | +06 22 03.6 | 16.0 | 400 |
| (4211) | 1993 10 11.60903 | 01 00 57.05 | +06 22 00.9 | | 400 |

402 Dync Astronomical Observatory

A. Sugie, Dync Astronomical Observatory, Taga 270, Taga-Cho, Inukami-Gun,
Shiga-Ken, 522-03, Japan

0.25-m $f/3.4$ Schmidt

GSC

| | | | | | |
|--------|------------------|-------------|-------------|------|-----|
| (5387) | 1991 04 09.62292 | 12 34 14.15 | -05 53 27.0 | 16.5 | 402 |
| (5387) | 1991 04 09.63681 | 12 34 13.30 | -05 53 22.9 | | 402 |

403 Kani

T. Furuta, Mitsuike 17-2, Kakiya-Cho, Tokai, Aichi-Ken 477, Japan

Observer Y. Mizuno

Measurer T. Furuta

0.20-m $f/4.0$ hyperboloid astrocamera

GSC

| | | | | | |
|----------------------|------------------|-------------|-------------|------|-----|
| 1993 TC ₁ | 1993 10 14.63125 | 01 35 14.95 | +06 10 29.3 | 15.5 | 403 |
| 1993 TC ₁ | 1993 10 14.64259 | 01 35 14.09 | +06 10 27.4 | | 403 |
| 1993 TC ₁ | 1993 10 19.52974 | 01 30 10.85 | +06 05 37.9 | | 403 |
| 1993 TC ₁ | 1993 10 19.54080 | 01 30 10.23 | +06 05 37.1 | | 403 |

410 Sengamine

K. Ito, 4-13-7, Sakuragaoka Higashi Mati, Nishi-ku, Kobe 651-22, Japan

0.20-m $f/6.0$ reflector + CCD

GSC

| | | | | | |
|---------|------------------|-------------|-------------|--------|-----|
| 1989 SK | 1993 09 18.63420 | 01 54 45.22 | +20 19 20.1 | 16.4 V | 410 |
| 1989 SK | 1993 09 25.71685 | 01 51 40.47 | +20 39 53.9 | 16.2 V | 410 |
| 1989 SK | 1993 09 25.73560 | 01 51 39.88 | +20 39 56.7 | | 410 |
| 1989 SK | 1993 09 25.74657 | 01 51 39.51 | +20 39 57.3 | | 410 |

| | | | | | |
|---------|------------------|-------------|-------------|--------|-----|
| 1989 SK | 1993 10 08.60558 | 01 42 27.85 | +20 50 01.8 | 16.2 V | 410 |
| 1989 SK | 1993 10 08.61134 | 01 42 27.57 | +20 50 01.4 | | 410 |
| 1989 SK | 1993 10 08.62957 | 01 42 26.65 | +20 50 0.95 | | 410 |
| 1989 SK | 1993 10 11.52962 | 01 39 52.40 | +20 47 09.4 | 16.1 V | 410 |
| 1989 SK | 1993 10 11.54108 | 01 39 51.77 | +20 47 07.5 | | 410 |

411 Oizumi

T. Kobayashi, 1717-2 Shimo-Koizumi, Oizumi-machi, Ora-gun, Gunma-ken, 370-05
Japan

0.16-m $f/6.3$ reflector + CCD

GSC

| | | | | | |
|--------|------------------|-------------|-------------|--|-----|
| (4580) | 1993 03 02.52891 | 10 29 06.20 | +04 39 52.6 | | 411 |
| (4580) | 1993 03 02.53033 | 10 29 06.12 | +04 39 53.6 | | 411 |

413 Siding Spring

R. H. McNaught, Siding Spring Observatory, Coonabarabran, N.S.W. 2357,
Australia

Observers C. P. Cass, M. J. Drinkwater, G. J. Garradd, R. H. McNaught,
Q. A. Parker, A. Savage, D. I. Steel

Measurers R. H. McNaught, G. J. Garradd

Uppsala Southern Schmidt, U.K. Schmidt, 1.0-m reflector + CCD

| | | | | | |
|-----------------------|------------------|-------------|-------------|------|-----|
| 1931 FC | 1993 08 24.67396 | 21 17 07.22 | -20 49 05.1 | | 413 |
| 1931 FC | 1993 08 24.67919 | 21 17 06.91 | -20 49 05.3 | | 413 |
| 1952 SW ₁ | 1993 07 31.68222 | 23 53 45.67 | -20 27 57.9 | | 413 |
| 1952 SW ₁ | 1993 07 31.69571 | 23 53 45.42 | -20 28 02.1 | | 413 |
| 1952 SW ₁ | 1993 09 03.62896 | 23 29 33.56 | -23 06 09.8 | | 413 |
| 1952 SW ₁ | 1993 09 03.63088 | 23 29 33.45 | -23 06 09.8 | | 413 |
| 1967 JN | 1993 09 03.61429 | 00 39 11.25 | -11 30 30.4 | | 413 |
| 1967 JN | 1993 09 03.61579 | 00 39 11.19 | -11 30 30.6 | | 413 |
| 1967 JN | 1993 09 03.61725 | 00 39 11.13 | -11 30 30.5 | | 413 |
| 1978 SO ₄ | 1993 08 25.79270 | 22 30 33.79 | -15 55 54.3 | | 413 |
| 1978 SO ₄ | 1993 08 25.79459 | 22 30 33.71 | -15 55 54.4 | | 413 |
| 1978 SO ₄ | 1993 08 25.79674 | 22 30 33.62 | -15 55 54.8 | | 413 |
| 1981 EK ₃₅ | 1993 07 31.72475 | 20 33 45.96 | -18 10 54.1 | | 413 |
| 1981 EK ₃₅ | 1993 07 31.72697 | 20 33 45.83 | -18 10 54.6 | | 413 |
| 1983 PB | 1993 07 31.73683 | 00 42 15.18 | -07 16 42.8 | | 413 |
| 1983 PB | 1993 07 31.73976 | 00 42 15.32 | -07 16 42.9 | | 413 |
| 1983 RB | 1993 09 23.71303 | 01 22 35.55 | -08 14 23.8 | | 413 |
| 1983 RB | 1993 09 23.71466 | 01 22 35.44 | -08 14 26.8 | | 413 |
| 1983 VQ ₁ | 1993 08 24.44944 | 16 33 10.73 | -44 30 21.6 | | 413 |
| 1984 DA | 1993 08 25.82008 | 00 18 52.37 | -05 29 00.1 | | 413 |
| 1984 DA | 1993 08 25.82205 | 00 18 52.33 | -05 29 02.5 | | 413 |
| 1984 KB | 1993 09 23.63425 | 00 31 46.32 | +01 03 44.7 | | 413 |
| 1984 KB | 1993 09 23.63686 | 00 31 46.08 | +01 03 42.8 | | 413 |
| 1984 KB | 1993 09 24.59243 | 00 30 20.95 | +00 52 26.1 | | 413 |
| 1984 KB | 1993 09 24.59455 | 00 30 20.76 | +00 52 24.6 | | 413 |
| 1988 BN ₂ | 1993 09 03.65536 | 01 42 29.79 | -29 24 17.9 | | 413 |
| 1988 BN ₂ | 1993 09 03.65822 | 01 42 29.69 | -29 24 19.3 | | 413 |
| 1988 BN ₂ | 1993 10 08.57495 | 01 06 32.34 | -31 50 52.0 | 17 V | 413 |
| 1988 BN ₂ | 1993 10 08.60273 | 01 06 30.19 | -31 50 49.0 | | 413 |
| 1988 CX ₁ | 1993 09 23.69346 | 01 15 11.14 | +12 28 36.0 | | 413 |
| 1988 CX ₁ | 1993 09 23.69611 | 01 15 10.99 | +12 28 35.3 | | 413 |
| 1988 CX ₁ | 1993 09 23.69947 | 01 15 10.82 | +12 28 34.4 | | 413 |

| | | | | | | | | | |
|----------------------|------------------|-------------|-------------|-------|----------------------|------------------|-------------|-------------|------------|
| 1988 GL | 1993 09 03.63609 | 00 55 56.48 | -17 52 50.1 | 413 | 1990 WE | 1993 09 23.43612 | 17 04 59.18 | -23 23 33.9 | 413 |
| 1988 GL | 1993 09 03.66815 | 00 55 55.06 | -17 53 03.0 | 413 | 1991 AO ₃ | 1993 09 03.61891 | 00 40 15.67 | -10 02 12.5 | 413 |
| 1988 JP | 1993 08 25.82438 | 01 05 03.64 | -61 56 16.8 | 413 | 1991 AO ₃ | 1993 09 03.62328 | 00 40 15.53 | -10 02 14.4 | 413 |
| 1988 JP | 1993 08 25.82604 | 01 05 03.64 | -61 56 17.6 | 413 | 1991 AO ₃ | 1993 09 03.62491 | 00 40 15.46 | -10 02 14.9 | 413 |
| 1988 JP | 1993 08 25.82752 | 01 05 03.66 | -61 56 18.4 | 413 | 1991 AO ₃ | 1993 09 03.62634 | 00 40 15.41 | -10 02 15.4 | 413 |
| 1988 JP | 1993 09 03.67730 | 01 03 05.43 | -62 55 20.0 | 413 | 1991 FF | 1993 08 25.79940 | 22 52 39.00 | -06 49 19.4 | 413 |
| 1988 JP | 1993 09 03.67887 | 01 03 05.37 | -62 55 20.4 | 413 | 1991 FF | 1993 08 25.80192 | 22 52 38.87 | -06 49 19.3 | 413 |
| 1988 JP | 1993 09 03.68294 | 01 03 05.20 | -62 55 21.4 | 413 | 1991 FG | 1993 07 31.75174 | 00 28 58.95 | +11 25 50.0 | U 413 |
| 1988 RE | 1980 01 22.67186 | 10 29 11.36 | -35 29 28.6 | 413 | 1991 FG | 1993 09 23.67091 | 00 02 54.72 | +08 00 10.9 | 413 |
| 1988 RE | 1980 01 22.71909 | 10 29 09.45 | -35 29 43.6 | 413 | 1991 FG | 1993 09 23.67373 | 00 02 54.59 | +08 00 10.8 | 413 |
| 1988 VP ₄ | 1993 08 24.55475 | 19 13 03.49 | -17 57 06.8 | V 413 | 1991 VK | 1993 08 24.60399 | 19 55 11.41 | -18 38 42.6 | p 413 |
| 1988 VP ₄ | 1993 08 24.55959 | 19 13 03.36 | -17 57 07.0 | V 413 | 1991 VK | 1993 08 24.60872 | 19 55 11.11 | -18 38 42.4 | 413 |
| 1988 VP ₄ | 1993 08 24.56444 | 19 13 03.18 | -17 57 07.2 | V 413 | 1991 VK | 1993 08 25.66844 | 19 54 08.99 | -18 40 36.2 | 413 |
| 1988 WC | 1993 07 31.62422 | 17 38 37.86 | -03 13 45.0 | 413 | 1991 VK | 1993 08 25.67344 | 19 54 08.68 | -18 40 36.7 | 413 |
| 1988 WC | 1993 08 24.51529 | 17 35 23.95 | -04 15 48.2 | 413 | 1992 AC | 1993 07 31.65799 | 22 18 36.81 | -19 40 19.4 | 413 |
| 1988 WC | 1993 08 24.51892 | 17 35 23.98 | -04 15 48.7 | 413 | 1992 AC | 1993 07 31.66148 | 22 18 36.64 | -19 40 21.5 | 413 |
| 1989 AM | 1993 08 25.80831 | 23 08 57.31 | -61 37 23.1 | 413 | 1992 AC | 1993 08 24.68924 | 21 54 44.78 | -23 20 44.0 | 413 |
| 1989 AM | 1993 08 25.81039 | 23 08 57.13 | -61 37 23.8 | 413 | 1992 AC | 1993 08 24.69234 | 21 54 44.57 | -23 20 45.6 | 413 |
| 1989 AM | 1993 08 25.81190 | 23 08 57.00 | -61 37 24.4 | 413 | 1992 AC | 1993 09 23.59728 | 21 29 03.59 | -26 00 00.4 | 413 |
| 1989 CV | 1993 08 25.81425 | 23 51 07.32 | -05 32 06.3 | 413 | 1992 AC | 1993 09 23.59995 | 21 29 03.49 | -26 00 00.7 | 413 |
| 1989 CV | 1993 08 25.81619 | 23 51 07.26 | -05 32 06.6 | 413 | 1992 BB | 1993 09 23.56486 | 23 45 29.46 | +19 58 29.0 | 413 |
| 1989 CV | 1993 08 25.81809 | 23 51 07.21 | -05 32 07.1 | 413 | 1992 BB | 1993 09 23.56757 | 23 45 29.29 | +19 58 25.1 | 413 |
| 1989 KB | 1993 09 03.64037 | 01 14 55.51 | -43 42 43.1 | 413 | 1992 BB | 1993 09 23.57035 | 23 45 29.09 | +19 58 21.3 | 413 |
| 1989 KB | 1993 09 03.64344 | 01 14 55.40 | -43 42 44.8 | 413 | 1992 BB | 1993 09 23.57434 | 23 45 28.67 | +19 58 15.7 | 413 |
| 1989 NE ₁ | 1993 09 23.52675 | 18 17 04.41 | -38 48 29.9 | 413 | 1992 BB | 1993 09 23.57988 | 23 45 28.39 | +19 58 06.8 | 413 |
| 1989 NE ₁ | 1993 09 23.52889 | 18 17 04.70 | -38 48 29.2 | 413 | 1992 BB | 1993 09 24.58572 | 23 44 18.50 | +19 33 10.1 | 413 |
| 1989 OL | 1977 09 04.50260 | 21 39 23.64 | -37 24 10.5 | 413 | 1992 BB | 1993 09 24.58821 | 23 44 18.28 | +19 33 06.1 | 413 |
| 1989 OL | 1977 09 04.55122 | 21 39 21.32 | -37 24 01.1 | b 413 | 1992 CA | 1993 08 25.77876 | 22 08 00.52 | -19 42 32.7 | 413 |
| 1989 OL | 1993 07 31.72966 | 19 00 44.43 | -43 52 23.8 | 413 | 1992 CA | 1993 08 25.78061 | 22 08 00.42 | -19 42 35.8 | 413 |
| 1989 OL | 1993 07 31.73376 | 19 00 44.25 | -43 52 23.5 | 413 | 1992 CH ₁ | 1993 09 24.67566 | 04 37 43.70 | -12 07 54.8 | 20 V 413 |
| 1989 RC ₁ | 1993 07 31.77074 | 03 40 33.84 | +04 46 43.9 | 413 | 1992 CH ₁ | 1993 09 24.67985 | 04 37 44.06 | -12 08 00.4 | 413 |
| 1989 RC ₁ | 1993 07 31.77321 | 03 40 34.14 | +04 46 44.4 | 413 | 1992 CH ₁ | 1993 09 25.70399 | 04 39 10.65 | -12 29 26.1 | 413 |
| 1989 UL ₃ | 1993 09 03.60747 | 00 06 02.34 | -25 15 07.8 | 413 | 1992 CH ₁ | 1993 09 25.70875 | 04 39 10.99 | -12 29 32.4 | 413 |
| 1989 UL ₃ | 1993 09 03.61088 | 00 06 02.19 | -25 15 09.9 | 413 | 1992 CH ₁ | 1993 09 25.71606 | 04 39 11.59 | -12 29 41.4 | 413 |
| 1989 WK ₂ | 1993 07 31.67448 | 22 28 29.14 | -11 02 50.6 | 413 | 1992 FM ₁ | 1993 07 31.74326 | 00 28 56.88 | +05 01 48.0 | 413 |
| 1989 WK ₂ | 1993 07 31.67806 | 22 28 29.02 | -11 02 53.0 | 413 | 1992 FM ₁ | 1993 07 31.74756 | 00 28 56.82 | +05 01 50.1 | 413 |
| 1989 WK ₂ | 1993 08 25.78299 | 22 10 22.71 | -16 07 23.1 | 413 | 1992 FR ₂ | 1993 09 23.60969 | 01 12 50.85 | -03 58 54.2 | 15.5 V 413 |
| 1989 WK ₂ | 1993 08 25.78560 | 22 10 22.59 | -16 07 25.1 | 413 | 1992 FR ₂ | 1993 09 23.67219 | 01 12 47.54 | -03 59 20.2 | 413 |
| 1989 WK ₂ | 1993 09 23.61177 | 21 49 00.56 | -21 24 49.6 | 413 | 1992 FR ₂ | 1993 09 24.59865 | 01 12 03.18 | -04 05 42.2 | p 413 |
| 1989 WK ₂ | 1993 09 23.61406 | 21 49 00.50 | -21 24 50.8 | 413 | 1992 FR ₂ | 1993 09 24.68198 | 01 11 58.75 | -04 06 16.7 | 413 |
| 1990 KK | 1993 08 25.74282 | 21 09 04.99 | -55 21 18.1 | 413 | 1993 MF | 1993 07 31.66493 | 22 33 35.84 | +36 58 07.8 | 413 |
| 1990 KK | 1993 08 25.74505 | 21 09 04.82 | -55 21 18.2 | 413 | 1993 MF | 1993 07 31.66640 | 22 33 36.15 | +36 58 10.4 | 413 |
| 1990 SK | 1993 09 23.42304 | 16 11 31.84 | -40 11 24.0 | 413 | 1993 MF | 1993 07 31.66847 | 22 33 36.58 | +36 58 14.0 | 413 |
| 1990 SK | 1993 09 23.42561 | 16 11 32.16 | -40 11 24.9 | 413 | 1993 MF | 1993 07 31.67115 | 22 33 37.13 | +36 58 18.7 | 413 |
| 1990 TN | 1993 07 31.64236 | 20 35 33.18 | -34 34 43.4 | 413 | 1993 ME ₁ | 1993 08 24.54064 | 17 48 53.16 | +10 18 47.0 | 413 |
| 1990 TN | 1993 07 31.64471 | 20 35 33.01 | -34 34 43.9 | 413 | 1993 ME ₁ | 1993 08 24.54300 | 17 48 53.40 | +10 18 46.1 | 413 |
| 1990 TN ₄ | 1993 09 23.37785 | 14 48 04.62 | -11 37 00.5 | 413 | 1993 OV ₁ | 1993 09 23.58619 | 21 16 47.56 | -01 38 55.3 | 413 |
| 1990 TN ₄ | 1993 09 23.37992 | 14 48 04.77 | -11 37 01.7 | 413 | 1993 OV ₁ | 1993 09 23.58898 | 21 16 47.64 | -01 38 54.5 | 413 |
| 1990 TN ₄ | 1993 09 23.38200 | 14 48 04.94 | -11 37 02.7 | 413 | 1993 OV ₁ | 1993 09 23.59250 | 21 16 47.74 | -01 38 53.3 | 413 |
| 1990 VX ₂ | 1993 08 24.71612 | 20 55 05.26 | -53 06 38.4 | 413 | 1993 OW ₁ | 1993 10 05.44605 | 21 18 20.36 | -42 20 50.4 | 17.5 V 413 |
| 1990 VX ₂ | 1993 08 24.71863 | 20 55 05.04 | -53 06 38.3 | 413 | 1993 OW ₁ | 1993 10 05.48772 | 21 18 22.22 | -42 20 51.0 | 413 |
| 1990 WE | 1993 09 23.43352 | 17 04 59.04 | -23 23 33.8 | 413 | 1993 OW ₁ | 1993 10 06.40523 | 21 19 07.98 | -42 21 43.2 | 413 |

| | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|--------|-------|----------|------------------|-------------|-------------|------------|
| 1993 OW ₁ | 1993 10 06.47468 | 21 19 11.16 | -42 21 44.9 | | 413 | 1993 UC | 1993 10 20.63264 | 00 51 54.11 | -25 09 05.8 | I 413 |
| 1993 OW ₁ | 1993 10 07.49733 | 21 20 04.34 | -42 22 15.8 | 17 V | 413 | 1993 UC | 1993 10 23.63787 | 00 47 19.87 | -26 26 48.4 | 413 |
| 1993 OW ₁ | 1993 10 07.55983 | 21 20 07.34 | -42 22 16.3 | | 413 | 1993 UC | 1993 10 25.52944 | 00 44 27.97 | -27 13 24.6 | F 413 |
| 1993 OZ ₂ | 1993 09 02.79098 | 23 24 56.15 | -39 44 55.5 | | 413 | 1993 UC | 1993 10 25.54122 | 00 44 26.87 | -27 13 40.5 | F 413 |
| 1993 OZ ₂ | 1993 09 23.68294 | 23 22 30.62 | -44 31 29.5 | | 413 | 4129 T-2 | 1993 03 29.59987 | 13 40 00.15 | -08 05 10.1 | 413 |
| 1993 OZ ₂ | 1993 09 23.68481 | 23 22 30.61 | -44 31 30.4 | | 413 | 4129 T-2 | 1993 03 29.64501 | 13 39 57.77 | -08 05 06.5 | 413 |
| 1993 RQ | 1993 09 23.64600 | 23 06 11.23 | +05 13 34.1 | | 413 | (301) | 1993 09 21.60891 | 00 25 43.35 | -02 36 46.8 | 413 |
| 1993 RQ | 1993 09 23.64836 | 23 06 11.12 | +05 13 35.6 | | 413 | (301) | 1993 09 21.65058 | 00 25 41.39 | -02 37 02.5 | 413 |
| 1993 RR ₂ | 1993 09 10.59255 | 00 52 52.26 | -07 10 06.4 | 15.5 V | 413 | (312) | 1993 09 23.53420 | 23 44 51.02 | -04 20 53.8 | 413 |
| 1993 RR ₂ | 1993 09 10.63074 | 00 52 52.38 | -07 10 56.4 | | 413 | (312) | 1993 09 23.59670 | 23 44 47.52 | -04 21 01.1 | 413 |
| 1993 SA | 1993 09 24.62667 | 00 50 57.54 | +02 54 30.7 | | 413 | (316) | 1993 09 14.60172 | 00 20 50.33 | -00 53 38.5 | 413 |
| 1993 SA | 1993 09 24.62971 | 00 50 57.46 | +02 54 28.5 | | 413 | (869) | 1993 09 21.60891 | 00 21 50.81 | -03 42 35.7 | 413 |
| 1993 SA | 1993 09 25.61255 | 00 50 22.08 | +02 42 42.1 | | 413 | (869) | 1993 09 21.65058 | 00 21 48.75 | -03 42 55.0 | 413 |
| 1993 SA | 1993 09 25.62206 | 00 50 21.66 | +02 42 36.0 | | 413 | (1010) | 1993 09 10.59255 | 00 45 44.14 | -01 43 15.9 | 413 |
| 1993 SA | 1993 09 25.62479 | 00 50 21.57 | +02 42 33.8 | | 413 | (1010) | 1993 09 10.63074 | 00 45 42.88 | -01 43 26.4 | 413 |
| 1993 SA | 1993 09 25.62839 | 00 50 21.47 | +02 42 30.4 | | 413 | (1676) | 1993 09 10.59255 | 00 46 41.05 | -04 39 04.8 | 413 |
| 1993 SA | 1993 09 26.68194 | 00 49 42.35 | +02 29 48.4 | | 413 | (1676) | 1993 09 10.63074 | 00 46 38.99 | -04 39 15.6 | 413 |
| 1993 SA | 1993 09 26.68576 | 00 49 42.21 | +02 29 45.9 | | 413 | (1680) | 1993 09 10.59255 | 00 35 09.82 | -03 07 14.5 | 413 |
| 1993 SA | 1993 09 26.68924 | 00 49 42.10 | +02 29 43.1 | | 413 | (1680) | 1993 09 10.63074 | 00 35 08.17 | -03 07 26.2 | 413 |
| 1993 SC | 1993 09 23.55521 | 23 54 47.55 | -00 08 34.4 | | 413 | (1849) | 1993 09 25.55713 | 01 15 05.30 | -02 53 01.5 | 413 |
| 1993 SC | 1993 09 23.62404 | 23 54 47.16 | -00 08 37.1 | | 413 | (2168) | 1993 07 31.69949 | 19 26 39.09 | -24 23 11.4 | 413 |
| 1993 SF ₁ | 1993 09 10.59255 | 00 45 22.04 | -03 01 22.1 | | 413 | (2168) | 1993 07 31.70103 | 19 26 39.01 | -24 23 11.4 | 413 |
| 1993 SF ₁ | 1993 09 10.63074 | 00 45 20.79 | -03 01 20.2 | | 413 | (2168) | 1993 07 31.70236 | 19 26 38.94 | -24 23 11.2 | 413 |
| 1993 SG ₁ | 1993 09 14.59478 | 00 21 49.01 | +00 30 57.8 | | 413 | (2201) | 1993 08 24.68228 | 21 28 28.56 | -18 39 18.4 | 413 |
| 1993 SG ₁ | 1993 09 14.60867 | 00 21 48.69 | +00 30 46.4 | | 413 | (2201) | 1993 08 24.68584 | 21 28 28.25 | -18 39 19.8 | 413 |
| 1993 SG ₁ | * 1993 09 21.60891 | 00 19 07.11 | -01 35 47.0 | 15.5 V | 413 | (2611) | 1993 09 21.60891 | 00 20 19.52 | -02 47 24.4 | 413 |
| 1993 SG ₁ | 1993 09 21.65058 | 00 19 05.97 | -01 36 29.5 | | 413 | (2611) | 1993 09 21.65058 | 00 20 17.69 | -02 47 35.1 | 413 |
| 1993 SS ₂ | * 1993 09 23.60969 | 01 14 49.00 | -03 06 16.4 | 15 V | 413 | (3125) | 1993 09 23.72414 | 03 31 57.99 | +00 50 46.6 | 413 |
| 1993 SS ₂ | 1993 09 23.67219 | 01 14 45.41 | -03 06 43.0 | | 413 | (3125) | 1993 09 23.72792 | 03 31 57.99 | +00 50 45.0 | 413 |
| 1993 SS ₂ | 1993 09 24.59865 | 01 13 55.00 | -03 13 21.4 | | p 413 | (3343) | 1993 07 31.71323 | 21 32 13.86 | -72 32 05.0 | 413 |
| 1993 SS ₂ | 1993 09 24.68198 | 01 13 50.13 | -03 13 57.0 | | 413 | (3343) | 1993 07 31.71716 | 21 32 13.40 | -72 32 04.5 | 413 |
| 1993 SS ₂ | 1993 09 25.55713 | 01 13 01.87 | -03 20 11.5 | 15.5 V | 413 | (3343) | 1993 09 03.72473 | 20 54 55.65 | -65 17 58.7 | 413 |
| 1993 SS ₂ | 1993 09 25.61963 | 01 12 58.15 | -03 20 37.8 | | b 413 | (3343) | 1993 09 03.72663 | 20 54 55.65 | -65 17 56.3 | 413 |
| 1993 SW ₂ | 1993 09 12.56697 | 23 51 50.17 | -01 03 09.7 | | 413 | (3343) | 1993 09 03.72847 | 20 54 55.65 | -65 17 53.9 | 413 |
| 1993 SW ₂ | 1993 09 12.60516 | 23 51 48.87 | -01 03 50.5 | | 413 | (3362) | 1993 09 23.72414 | 03 32 07.23 | +00 51 32.0 | 413 |
| 1993 SW ₂ | 1993 09 23.53420 | 23 46 05.28 | -04 30 28.9 | | F 413 | (3362) | 1993 09 23.72792 | 03 32 06.99 | +00 51 26.4 | 413 |
| 1993 SW ₂ | 1993 09 23.59670 | 23 46 03.05 | -04 31 37.8 | | F 413 | (3753) | 1993 08 25.75412 | 03 33 24.39 | -11 31 16.3 | 413 |
| 1993 SW ₃ | * 1993 09 24.59865 | 01 08 10.07 | -03 37 38.6 | 16 V | 413 | (3753) | 1993 08 25.75601 | 03 33 24.58 | -11 31 18.7 | 413 |
| 1993 SW ₃ | 1993 09 24.68198 | 01 08 05.21 | -03 37 49.9 | | 413 | (4183) | 1993 08 24.65902 | 22 08 14.85 | -05 00 27.7 | 17.5 V 413 |
| 1993 SW ₃ | 1993 09 25.55713 | 01 07 16.96 | -03 39 45.6 | 15.5 V | 413 | (4183) | 1993 08 24.66299 | 22 08 14.56 | -05 00 29.1 | 413 |
| 1993 SW ₃ | 1993 09 25.61963 | 01 07 13.18 | -03 39 55.4 | | b 413 | (4183) | 1993 09 23.60448 | 21 38 14.28 | -07 43 49.4 | 413 |
| 1993 TA | * 1993 10 08.57495 | 01 22 26.23 | -29 06 52.2 | 15 V | 413 | (4217) | 1993 07 31.70426 | 19 40 51.23 | -59 58 33.9 | 413 |
| 1993 TA | 1993 10 08.60273 | 01 22 25.41 | -29 07 34.0 | | 413 | (4217) | 1993 07 31.70634 | 19 40 51.00 | -59 58 32.4 | 413 |
| 1993 TA | 1993 10 09.49890 | 01 22 02.40 | -29 30 34.8 | | 413 | (4285) | 1993 09 10.59255 | 00 48 37.09 | -04 32 15.7 | 413 |
| 1993 UB | * 1993 10 23.48686 | 00 51 22.34 | -07 53 46.8 | | 413 | (4285) | 1993 09 10.63074 | 00 48 35.72 | -04 32 35.1 | 413 |
| 1993 UB | 1993 10 23.54936 | 00 51 10.23 | -07 49 02.1 | | V 413 | (4341) | 1993 07 31.64903 | 21 00 13.21 | -23 57 46.4 | 413 |
| 1993 UB | 1993 10 25.51733 | 00 45 23.07 | -05 18 57.7 | 15.5 V | 413 | (4341) | 1993 07 31.65377 | 21 00 12.89 | -23 57 48.0 | p 413 |
| 1993 UB | 1993 10 25.52020 | 00 45 22.53 | -05 18 44.2 | 15.5 V | 413 | (4464) | 1993 08 25.80438 | 22 18 23.57 | -44 03 21.8 | 413 |
| 1993 UB | 1993 10 25.52389 | 00 45 21.84 | -05 18 27.2 | | p 413 | (4464) | 1993 08 25.80625 | 22 18 23.36 | -44 03 20.7 | 413 |
| 1993 UB | 1993 10 25.72157 | 00 44 45.45 | -05 03 02.3 | | 413 | (4484) | 1993 08 25.74701 | 21 52 22.17 | -52 35 13.2 | 413 |
| 1993 UB | 1993 10 25.72431 | 00 44 45.01 | -05 02 48.9 | | 413 | (4484) | 1993 08 25.74877 | 21 52 22.05 | -52 35 13.6 | 413 |
| 1993 UC | * 1993 10 20.59444 | 00 51 57.37 | -25 08 12.9 | 17.5 V | b 413 | (4484) | 1993 08 25.75037 | 21 52 21.93 | -52 35 14.1 | 413 |

| | | | | | | | | | | |
|--------|------------------|-------------|-------------|-------|----------------------|------------------|-------------|-------------|------|-----|
| (4484) | 1993 09 03.67089 | 21 42 32.97 | -53 02 24.8 | 413 | 1983 PB | 1993 08 15.72885 | 00 50 04.54 | -07 46 40.3 | 17.2 | 474 |
| (4484) | 1993 09 03.67287 | 21 42 32.83 | -53 02 25.0 | 413 | 1983 PB | 1993 08 15.75484 | 00 50 04.80 | -07 46 45.1 | | 474 |
| (4484) | 1993 09 03.67490 | 21 42 32.70 | -53 02 25.0 | 413 | 1983 PB | 1993 09 16.52731 | 00 37 42.48 | -10 19 29.2 | 17.0 | 474 |
| (4531) | 1993 09 23.48312 | 18 14 24.41 | -50 33 44.7 | 413 | 1983 PB | 1993 09 16.56991 | 00 37 40.09 | -10 19 40.4 | | 474 |
| (4531) | 1993 09 23.48573 | 18 14 24.78 | -50 33 42.6 | 413 | 1989 NE ₁ | 1993 06 26.46354 | 17 17 26.80 | -42 59 00.6 | 17.2 | 474 |
| (4953) | 1993 07 31.68831 | 01 58 50.58 | -21 05 27.7 | 413 | 1989 NE ₁ | 1993 06 26.48316 | 17 17 25.34 | -42 59 05.2 | | 474 |
| (4953) | 1993 07 31.69198 | 01 58 50.70 | -21 05 29.4 | 413 | 1989 NE ₁ | 1993 08 10.49574 | 17 08 32.46 | -42 11 52.7 | 17.6 | 474 |
| (4953) | 1993 08 24.73111 | 02 03 44.69 | -26 02 51.6 | 413 | 1989 NE ₁ | 1993 08 10.50870 | 17 08 33.10 | -42 11 49.7 | | 474 |
| (4953) | 1993 08 24.73404 | 02 03 44.64 | -26 02 54.4 | 413 | 1989 NE ₁ | 1993 08 15.52127 | 17 13 14.65 | -41 53 18.6 | 17.4 | 474 |
| (5407) | 1993 09 03.71593 | 04 04 04.10 | +06 44 45.1 | 413 | 1989 NE ₁ | 1993 08 15.55171 | 17 13 16.51 | -41 53 11.1 | | 474 |
| (5407) | 1993 09 03.71832 | 04 04 04.18 | +06 44 44.8 | 413 | 1993 MO | 1993 08 10.52670 | 17 17 01.32 | -36 59 09.4 | 17.0 | 474 |
| (5407) | 1993 09 03.72072 | 04 04 04.29 | +06 44 44.2 | 413 | 1993 MO | 1993 08 10.53382 | 17 17 01.96 | -36 59 26.9 | | 474 |
| (5642) | 1993 08 24.39086 | 14 17 54.36 | -36 01 30.0 | 413 | 1993 MO | 1993 08 19.41064 | 17 34 45.30 | -42 25 50.1 | 17.9 | 474 |
| (5642) | 1993 08 24.39377 | 14 17 54.72 | -36 01 29.5 | 413 | 1993 MO | 1993 08 19.42892 | 17 34 47.59 | -42 26 24.1 | | 474 |
| (5646) | 1993 08 24.44316 | 16 33 06.30 | -36 15 01.7 | 413 | 1993 MO | 1993 09 16.45810 | 18 57 34.57 | -50 28 22.0 | 18.6 | 474 |
| (5646) | 1993 08 24.44596 | 16 33 06.65 | -36 15 01.1 | 413 | 1993 MO | 1993 09 16.48206 | 18 57 39.29 | -50 28 29.9 | | 474 |
| (5646) | 1993 09 02.48269 | 16 53 49.67 | -35 41 33.8 | 413 | 1993 OV ₁ | 1993 08 10.66704 | 21 30 02.68 | -09 04 59.7 | 16.5 | 474 |
| (5646) | 1993 09 02.48775 | 16 53 50.42 | -35 41 32.6 | 413 | 1993 OV ₁ | 1993 08 10.67329 | 21 30 02.27 | -09 04 52.8 | | 474 |
| (5649) | 1993 08 24.59424 | 19 46 10.66 | -49 39 01.8 | 413 | 1993 OV ₁ | 1993 08 15.68539 | 21 25 05.44 | -07 35 35.8 | 16.9 | 474 |
| (5649) | 1993 08 24.59721 | 19 46 10.47 | -49 39 00.0 | 413 | 1993 OV ₁ | 1993 08 15.69645 | 21 25 04.78 | -07 35 24.8 | | 474 |
| (5649) | 1993 08 24.59983 | 19 46 10.30 | -49 38 58.5 | 413 | 1993 UC | 1993 10 24.52043 | 00 45 59.47 | -26 48 45.7 | | 474 |
| (5658) | 1993 08 25.76938 | 21 24 01.69 | -12 21 32.8 | 413 | 1993 UC | 1993 10 24.56759 | 00 45 54.98 | -26 49 54.7 | | 474 |
| (5658) | 1993 08 25.77101 | 21 24 01.61 | -12 21 33.1 | 413 | 1993 UC | 1993 10 24.61453 | 00 45 50.59 | -26 51 03.0 | 17.6 | 474 |
| (5658) | 1993 08 25.77249 | 21 24 01.54 | -12 21 33.4 | 413 | (5645) | 1993 08 10.60280 | 20 03 53.39 | -51 08 11.5 | | 474 |
| (5659) | 1993 08 25.77471 | 21 35 36.51 | -02 58 16.6 | 413 | (5645) | 1993 08 10.62838 | 20 03 49.29 | -51 08 12.3 | | 474 |
| (5659) | 1993 08 25.77670 | 21 35 36.39 | -02 58 17.1 | 413 | (5645) | 1993 08 15.62394 | 19 51 05.65 | -51 05 19.3 | 18.9 | 474 |
| (5678) | 1993 08 24.50554 | 17 15 54.41 | -67 30 49.2 | 413 | (5645) | 1993 08 15.65258 | 19 51 01.67 | -51 05 14.1 | | 474 |
| (5678) | 1993 08 24.50824 | 17 15 54.58 | -67 30 48.0 | I 413 | | | | | | |
| (5678) | 1993 09 23.48818 | 18 15 04.01 | -63 21 24.4 | 413 | | | | | | |
| (5678) | 1993 09 23.49038 | 18 15 04.35 | -63 21 23.2 | 413 | | | | | | |
| (5678) | 1993 09 23.52141 | 18 15 09.12 | -63 21 04.1 | 413 | | | | | | |
| (5678) | 1993 09 23.52355 | 18 15 09.46 | -63 21 02.6 | 413 | | | | | | |
| (5680) | 1993 08 25.76345 | 21 20 43.48 | -18 01 31.4 | 413 | | | | | | |
| (5680) | 1993 08 25.76549 | 21 20 43.41 | -18 01 31.8 | 413 | | | | | | |
| (5680) | 1993 08 25.76760 | 21 20 43.32 | -18 01 32.2 | 413 | | | | | | |
| (5682) | 1993 08 24.42779 | 15 20 46.41 | -12 15 52.0 | 413 | | | | | | |
| (5682) | 1993 08 24.43060 | 15 20 46.60 | -12 15 52.8 | 413 | | | | | | |
| (5682) | 1993 09 23.41642 | 16 08 05.77 | -14 57 42.8 | 413 | | | | | | |
| (5687) | 1993 08 24.43409 | 16 30 42.72 | -12 15 34.8 | 413 | | | | | | |
| (5687) | 1993 08 24.43669 | 16 30 42.80 | -12 15 35.5 | 413 | | | | | | |
| (5687) | 1993 08 24.43999 | 16 30 42.89 | -12 15 36.8 | 413 | | | | | | |
| (5690) | 1993 08 24.41221 | 14 48 45.60 | -45 16 38.8 | 413 | | | | | | |
| (5690) | 1993 08 24.41611 | 14 48 45.80 | -45 16 38.3 | 413 | | | | | | |
| (5692) | 1993 08 25.78834 | 22 26 13.05 | -00 47 10.4 | 413 | | | | | | |
| (5692) | 1993 08 25.79066 | 22 26 12.95 | -00 47 11.6 | 413 | | | | | | |

474 Mount John

A. C. Gilmore, P.O. Box 57, Lake Tekapo, New Zealand

Observer A. C. Gilmore

Measurer P. M. Kilmartin

0.6-m *f*/14 Cassegrain reflector

AGK3, SAOC, CPZ, field plates from Carter Observatory

494 Stakenbridge

B. G. W. Manning, Moonrakers, Stakenbridge, Churchill, Kidderminster, Worcs.

DY10 3LS, England

0.2-m reflector + CCD

PPM

| | | | | |
|--------|------------------|-------------|-------------|-----|
| (4751) | 1993 10 10.87477 | 21 22 00.97 | -16 21 57.3 | 494 |
| (4751) | 1993 10 14.88514 | 21 22 54.15 | -16 19 17.2 | 494 |
| (4751) | 1993 10 15.81095 | 21 23 09.38 | -16 18 22.5 | 494 |
| (4751) | 1993 10 15.83271 | 21 23 09.82 | -16 18 20.3 | 494 |

557 Ondřejov

P. Pravec, Astronomical Institute, Czech Academy of Sciences, CS-25165 Ondřejov, Czech Republic

0.18-m *f*/5.6 Maksutov + CCD

| | | | | |
|---------|------------------|-------------|-------------|-----|
| 1993 MF | 1993 09 18.96546 | 00 20 58.40 | +34 12 03.7 | 557 |
| 1993 MF | 1993 09 18.96738 | 00 20 58.46 | +34 12 00.9 | 557 |
| 1993 MF | 1993 09 18.96976 | 00 20 58.52 | +34 11 57.2 | 557 |
| 1993 MF | 1993 09 18.97236 | 00 20 58.59 | +34 11 53.2 | 557 |
| 1993 MF | 1993 09 18.97780 | 00 20 58.73 | +34 11 44.9 | 557 |
| 1993 MF | 1993 09 18.98186 | 00 20 58.80 | +34 11 38.2 | 557 |
| 1993 MF | 1993 09 18.98323 | 00 20 58.83 | +34 11 36.3 | 557 |
| (27) | 1993 10 07.82569 | 00 25 02.57 | -00 24 06.3 | 557 |
| (27) | 1993 10 07.82773 | 00 25 02.44 | -00 24 08.7 | 557 |
| (27) | 1993 10 07.82833 | 00 25 02.39 | -00 24 08.3 | 557 |
| (27) | 1993 10 07.82894 | 00 25 02.36 | -00 24 08.7 | 557 |

| | | | | | | | | | | | |
|------|------------------|-------------|-------------|--|-----|---------|--------------------|-------------|-------------|--------|-----|
| (27) | 1993 10 07.82954 | 00 25 02.33 | -00 24 09.3 | | 557 | 1993 RC | 1993 09 13.83052 | 23 57 55.46 | +04 42 57.7 | | 589 |
| (27) | 1993 10 07.83014 | 00 25 02.28 | -00 24 08.4 | | 557 | 1993 RC | 1993 09 13.85881 | 23 57 54.39 | +04 42 39.1 | | 589 |
| (27) | 1993 10 07.83074 | 00 25 02.27 | -00 24 09.2 | | 557 | 1993 RC | 1993 09 15.85594 | 23 56 40.11 | +04 22 27.8 | | 589 |
| (27) | 1993 10 07.83196 | 00 25 02.17 | -00 24 09.7 | | 557 | 1993 RC | 1993 09 15.88803 | 23 56 38.87 | +04 22 07.7 | | 589 |
| (27) | 1993 10 07.83256 | 00 25 02.12 | -00 24 09.9 | | 557 | 1993 RC | 1993 09 15.90275 | 23 56 38.36 | +04 21 58.7 | | 589 |
| | | | | | | 1993 RC | 1993 09 17.90604 | 23 55 22.88 | +04 01 22.5 | | 589 |
| | | | | | | 1993 RC | 1993 09 17.92060 | 23 55 22.35 | +04 01 14.0 | | 589 |
| | | | | | | 1993 RC | 1993 09 21.83493 | 23 52 54.28 | +03 20 25.2 | 17.5 V | 589 |
| | | | | | | 1993 RC | 1993 09 21.84663 | 23 52 53.86 | +03 20 18.3 | | 589 |
| | | | | | | 1993 RC | 1993 09 21.85821 | 23 52 53.32 | +03 20 11.3 | | 589 |
| | | | | | | 1993 RC | 1993 09 21.87509 | 23 52 52.68 | +03 19 58.5 | | 589 |
| | | | | | | 1993 RC | 1993 09 22.91139 | 23 52 13.57 | +03 09 05.7 | | 589 |
| | | | | | | 1993 RC | 1993 10 09.82872 | 23 42 33.36 | +00 15 31.6 | | 589 |
| | | | | | | 1993 RC | 1993 10 09.84278 | 23 42 32.84 | +00 15 22.8 | | 589 |
| | | | | | | 1993 RC | 1993 10 09.85611 | 23 42 32.44 | +00 15 14.7 | | 589 |
| | | | | | | 1993 RH | 1993 10 19.83459 | 23 30 41.22 | +01 30 05.2 | 16.0 V | 589 |
| | | | | | | 1993 RH | 1993 10 19.85088 | 23 30 40.64 | +01 30 10.0 | | 589 |
| | | | | | | 1993 RH | 1993 10 19.87605 | 23 30 39.74 | +01 30 17.5 | | 589 |
| | | | | | | 1993 RH | 1993 10 20.84372 | 23 30 08.34 | +01 35 09.4 | | 589 |
| | | | | | | 1993 RH | 1993 10 20.85806 | 23 30 07.85 | +01 35 13.9 | | 589 |
| | | | | | | 1993 RH | 1993 10 20.87617 | 23 30 07.25 | +01 35 19.4 | | 589 |
| | | | | | | 1993 SD | * 1993 09 16.79685 | 23 53 53.19 | +04 45 14.3 | | 589 |
| | | | | | | 1993 SD | 1993 09 16.83037 | 23 53 51.85 | +04 44 56.5 | | 589 |
| | | | | | | 1993 SD | 1993 09 16.83917 | 23 53 51.43 | +04 44 53.2 | | 589 |
| | | | | | | 1993 SD | 1993 09 16.86575 | 23 53 50.29 | +04 44 39.8 | | 589 |
| | | | | | | 1993 SD | 1993 09 16.87809 | 23 53 49.79 | +04 44 34.0 | | 589 |
| | | | | | | 1993 SD | 1993 09 18.95500 | 23 52 24.25 | +04 27 17.9 | | 589 |
| | | | | | | 1993 SD | 1993 09 18.96648 | 23 52 23.78 | +04 27 12.0 | | 589 |
| | | | | | | 1993 SD | 1993 09 18.98212 | 23 52 23.14 | +04 27 04.7 | | 589 |
| | | | | | | 1993 SD | 1993 09 20.82690 | 23 51 07.22 | +04 11 30.0 | | 589 |
| | | | | | | 1993 SD | 1993 09 20.84104 | 23 51 06.61 | +04 11 22.8 | | 589 |
| | | | | | | 1993 SD | 1993 09 21.80790 | 23 50 26.77 | +04 03 09.5 | | 589 |
| | | | | | | 1993 SD | 1993 09 21.81906 | 23 50 26.32 | +04 03 03.2 | | 589 |
| | | | | | | 1993 SD | 1993 10 09.87267 | 23 39 06.59 | +01 29 51.6 | | 589 |
| | | | | | | 1993 SD | 1993 10 09.88424 | 23 39 06.20 | +01 29 46.1 | | 589 |
| | | | | | | 1993 SD | 1993 10 09.92229 | 23 39 04.96 | +01 29 27.8 | | 589 |
| | | | | | | 1993 SE | * 1993 09 17.81976 | 23 52 26.66 | +04 51 43.8 | | 589 |
| | | | | | | 1993 SE | 1993 09 17.83134 | 23 52 25.95 | +04 51 40.1 | | 589 |
| | | | | | | 1993 SE | 1993 09 17.84693 | 23 52 25.01 | +04 51 35.6 | | 589 |
| | | | | | | 1993 SE | 1993 09 17.85826 | 23 52 24.30 | +04 51 32.6 | | 589 |
| | | | | | | 1993 SE | 1993 09 17.87280 | 23 52 23.41 | +04 51 28.3 | | 589 |
| | | | | | | 1993 SE | 1993 09 17.88271 | 23 52 22.83 | +04 51 25.4 | | 589 |
| | | | | | | 1993 SE | 1993 09 19.87789 | 23 50 23.85 | +04 41 46.7 | 17.0 V | 589 |
| | | | | | | 1993 SE | 1993 09 19.88783 | 23 50 23.20 | +04 41 42.8 | | 589 |
| | | | | | | 1993 SE | 1993 09 19.89945 | 23 50 22.55 | +04 41 40.2 | | 589 |
| | | | | | | 1993 SE | 1993 09 20.87012 | 23 49 24.74 | +04 36 52.4 | | 589 |
| | | | | | | 1993 SE | 1993 09 20.88108 | 23 49 24.06 | +04 36 49.1 | | 589 |
| | | | | | | 1993 SE | 1993 09 20.89869 | 23 49 23.01 | +04 36 43.2 | | 589 |
| | | | | | | 1993 SE | 1993 09 22.83278 | 23 47 28.30 | +04 27 03.2 | | 589 |
| | | | | | | 1993 SE | 1993 09 22.84545 | 23 47 27.54 | +04 26 59.5 | | 589 |
| | | | | | | 1993 SE | 1993 09 22.85792 | 23 47 26.75 | +04 26 55.7 | | 589 |
| | | | | | | 1993 SE | 1993 09 23.83244 | 23 46 29.35 | +04 21 59.8 | | 589 |

565 Bassano Bresciano

U. Quadri, Osservatorio di Bassano Bresciano, Via S. Michele 4, I-25020 Bassano
Bresciano (Brescia), Italy

Observers U. Quadri, L. Strabla
0.3-0.4-m $f/3.3$ Schmidt
AGK3, SAOC

| | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 TJ ₂ | * 1993 10 15.90001 | 01 48 19.96 | +10 26 59.0 | 16.5 | 565 |
| 1993 TJ ₂ | 1993 10 15.92256 | 01 48 18.88 | +10 26 55.6 | | 565 |
| 1993 TK ₂ | * 1993 10 15.90001 | 01 50 25.96 | +13 26 50.1 | 15.5 | 565 |
| 1993 TK ₂ | 1993 10 15.92256 | 01 50 24.52 | +13 26 49.4 | | 565 |

568 Mauna Kea Observatory

D. J. Tholen, Institute for Astronomy, 2680 Woodlawn Drive, Honolulu, HI 96822,
U.S.A.

Observer D. J. Tholen
2.2-m reflector + CCD
GSC

| | | | | | |
|--------|------------------|-------------|-------------|--|-----|
| (1620) | 1993 09 11.61390 | 06 36 08.34 | +36 25 26.4 | | 568 |
|--------|------------------|-------------|-------------|--|-----|

589 Santa Lucia Stroncone

A. Vagnozzi, Via Santa Lucia 68, I-05039 Stroncone (Terni), Italy

Observers A. Vagnozzi, V. Risoldi, G. Bernabei, E. Gregori, F. Lombardi
0.50-m $f/2.8$ Ritchey-Chrétien + CCD
GSC

| | | | | | |
|---------|------------------|-------------|-------------|--------|-----|
| 1993 RB | 1993 09 13.78347 | 23 57 10.82 | +04 57 00.9 | | 589 |
| 1993 RB | 1993 09 13.79721 | 23 57 09.99 | +04 56 59.2 | | 589 |
| 1993 RB | 1993 09 13.81094 | 23 57 09.10 | +04 56 58.2 | | 589 |
| 1993 RB | 1993 09 16.79685 | 23 53 56.34 | +04 50 10.0 | | 589 |
| 1993 RB | 1993 09 16.83917 | 23 53 53.50 | +04 50 03.6 | | 589 |
| 1993 RB | 1993 09 16.87809 | 23 53 50.92 | +04 49 58.1 | | 589 |
| 1993 RB | 1993 09 17.81976 | 23 52 49.58 | +04 47 36.5 | | 589 |
| 1993 RB | 1993 09 17.84693 | 23 52 47.70 | +04 47 33.4 | | 589 |
| 1993 RB | 1993 09 17.87280 | 23 52 45.95 | +04 47 29.5 | | 589 |
| 1993 RB | 1993 09 17.88271 | 23 52 45.28 | +04 47 28.0 | | 589 |
| 1993 RB | 1993 09 19.87789 | 23 50 34.31 | +04 42 13.2 | 17.3 V | 589 |
| 1993 RB | 1993 09 19.88783 | 23 50 33.56 | +04 42 10.8 | | 589 |
| 1993 RB | 1993 09 19.89945 | 23 50 32.79 | +04 42 08.7 | | 589 |
| 1993 RB | 1993 09 20.87012 | 23 49 29.00 | +04 39 29.6 | | 589 |
| 1993 RB | 1993 09 20.88108 | 23 49 28.28 | +04 39 26.4 | | 589 |
| 1993 RB | 1993 09 20.89869 | 23 49 27.06 | +04 39 24.5 | | 589 |
| 1993 RB | 1993 09 22.83278 | 23 47 20.05 | +04 33 52.3 | | 589 |
| 1993 RB | 1993 09 22.84545 | 23 47 19.21 | +04 33 49.8 | | 589 |
| 1993 RB | 1993 09 22.85792 | 23 47 18.39 | +04 33 47.8 | | 589 |
| 1993 RB | 1993 10 04.76167 | 23 34 54.51 | +03 56 36.2 | | 589 |
| 1993 RB | 1993 10 04.77133 | 23 34 53.94 | +03 56 34.6 | | 589 |
| 1993 RB | 1993 10 04.78066 | 23 34 53.37 | +03 56 33.4 | | 589 |
| 1993 RB | 1993 10 04.79111 | 23 34 52.75 | +03 56 30.8 | | 589 |

| | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|-----|---------|--------------------|-------------|-------------|--------|-------|
| 1993 SG ₃ | * 1993 09 19.87766 | 00 00 48.19 | -01 05 32.8 | 595 | 1993 SG | * 1993 09 20.88387 | 01 15 43.71 | +11 57 16.5 | 15.7 V | 596 |
| 1993 SG ₃ | 1993 09 19.94233 | 00 00 44.61 | -01 06 01.8 | 595 | 1993 SG | 1993 09 20.93854 | 01 15 41.09 | +11 57 20.2 | | 596 |
| 1993 SG ₃ | 1993 09 20.92488 | 23 59 51.38 | -01 13 26.8 | 595 | 1993 SG | 1993 09 21.91641 | 01 15 01.04 | +11 58 31.5 | | 596 |
| 1993 SG ₃ | 1993 09 20.97288 | 23 59 48.62 | -01 13 47.9 | 595 | 1993 SG | 1993 09 21.93958 | 01 15 00.08 | +11 58 33.0 | | 596 |
| 1993 SG ₃ | 1993 10 04.78760 | 23 47 34.31 | -02 54 19.6 | 595 | 1993 SG | 1993 09 22.88224 | 01 14 19.97 | +11 59 32.2 | | 596 |
| 1993 SG ₃ | 1993 10 04.81619 | 23 47 32.97 | -02 54 31.7 | 595 | 1993 SG | 1993 09 22.93462 | 01 14 17.88 | +11 59 34.4 | | 596 |
| 1993 SG ₃ | 1993 10 04.83216 | 23 47 32.13 | -02 54 39.2 | 595 | 1993 SG | 1993 09 23.89115 | 01 13 35.47 | +12 00 23.5 | | 596 |
| 1993 SG ₃ | 1993 10 15.90035 | 23 39 18.91 | -04 01 42.4 | 595 | 1993 SG | 1993 09 23.92828 | 01 13 33.86 | +12 00 25.5 | | 596 |
| 1993 SG ₃ | 1993 10 15.91424 | 23 39 18.21 | -04 01 46.5 | 595 | 1993 SG | 1993 09 25.87304 | 01 12 03.89 | +12 01 30.9 | | 596 |
| 1993 SG ₃ | 1993 10 15.92800 | 23 39 17.73 | -04 01 52.0 | 595 | 1993 SG | 1993 09 25.91296 | 01 12 01.61 | +12 01 31.9 | | 596 |
| (4431) | 1993 09 21.90347 | 21 16 18.79 | -01 00 55.1 | 595 | 1993 SG | 1993 09 26.86863 | 01 11 15.68 | +12 01 51.6 | | 596 |
| (4431) | 1993 09 21.94046 | 21 16 18.02 | -01 01 08.6 | 595 | 1993 SG | 1993 09 26.91049 | 01 11 13.52 | +12 01 52.4 | | 596 |
| | | | | | 1993 SG | 1993 10 04.76282 | 01 04 18.51 | +11 58 29.5 | | 596 |
| | | | | | 1993 SG | 1993 10 04.79701 | 01 04 16.40 | +11 58 28.4 | | 596 |
| | | | | | 1993 SG | 1993 10 04.83597 | 01 04 14.23 | +11 58 27.4 | | 596 |
| | | | | | 1993 SG | 1993 10 04.88709 | 01 04 11.47 | +11 58 25.0 | | 596 |
| | | | | | 1993 SG | 1993 10 07.78783 | 01 01 27.52 | +11 54 45.6 | | M 596 |
| | | | | | 1993 SG | 1993 10 07.82576 | 01 01 25.38 | +11 54 44.4 | | 596 |
| | | | | | 1993 SG | 1993 10 09.84844 | 00 59 30.12 | +11 51 38.3 | | M 596 |
| | | | | | 1993 SG | 1993 10 09.87245 | 00 59 28.85 | +11 51 37.6 | | 596 |
| | | | | | 1993 SG | 1993 10 10.76376 | 00 58 38.58 | +11 50 05.5 | | 596 |
| | | | | | 1993 SG | 1993 10 10.79362 | 00 58 36.79 | +11 50 00.5 | | 596 |
| | | | | | 1993 SG | 1993 10 10.82332 | 00 58 34.71 | +11 49 56.2 | | 596 |
| | | | | | 1993 SG | 1993 10 10.85080 | 00 58 33.04 | +11 49 53.4 | | 596 |
| | | | | | 1993 SG | 1993 10 10.86957 | 00 58 31.96 | +11 49 52.3 | | 596 |
| | | | | | 1993 SG | 1993 10 11.80525 | 00 57 39.01 | +11 48 10.1 | | 596 |
| | | | | | 1993 SG | 1993 10 11.85125 | 00 57 36.21 | +11 48 05.5 | | 596 |
| | | | | | 1993 SG | 1993 10 11.86514 | 00 57 35.44 | +11 48 05.4 | | 596 |
| | | | | | 1993 SG | 1993 10 13.83230 | 00 55 44.81 | +11 44 18.4 | | 596 |
| | | | | | 1993 SG | 1993 10 13.85552 | 00 55 43.39 | +11 44 16.0 | | 596 |
| | | | | | 1993 SG | 1993 10 13.86441 | 00 55 42.88 | +11 44 13.3 | | 596 |
| | | | | | 1993 SG | 1993 10 16.82185 | 00 53 00.50 | +11 38 02.1 | | 596 |
| | | | | | 1993 SG | 1993 10 16.83094 | 00 52 59.96 | +11 38 01.4 | | 596 |
| | | | | | 1993 SG | 1993 10 16.84617 | 00 52 59.18 | +11 37 59.6 | | 596 |
| | | | | | 1993 SG | 1993 10 16.85608 | 00 52 58.51 | +11 37 57.2 | | 596 |
| | | | | | 1993 SG | 1993 10 17.80113 | 00 52 08.18 | +11 35 53.2 | | 596 |
| | | | | | 1993 SG | 1993 10 17.82105 | 00 52 07.06 | +11 35 53.3 | | 596 |
| | | | | | 1993 SG | 1993 10 17.83630 | 00 52 06.19 | +11 35 47.4 | | 596 |
| | | | | | 1993 TD | 1993 10 10.82332 | 00 59 07.73 | +11 43 13.3 | 16.0 V | 596 |
| | | | | | 1993 TD | 1993 10 10.85080 | 00 59 05.93 | +11 43 17.8 | | 596 |
| | | | | | 1993 TD | 1993 10 10.86957 | 00 59 04.50 | +11 43 19.7 | | 596 |
| | | | | | 1993 TD | * 1993 10 11.80525 | 00 58 02.10 | +11 44 53.3 | 16.0 V | 596 |
| | | | | | 1993 TD | 1993 10 11.86514 | 00 57 57.71 | +11 44 59.9 | | 596 |
| | | | | | 1993 TD | 1993 10 12.78569 | 00 56 56.39 | +11 46 32.8 | | 596 |
| | | | | | 1993 TD | 1993 10 12.81569 | 00 56 53.96 | +11 46 36.2 | | 596 |
| | | | | | 1993 TD | 1993 10 12.86812 | 00 56 50.34 | +11 46 43.4 | | 596 |
| | | | | | 1993 TD | 1993 10 16.82185 | 00 52 28.38 | +11 52 33.0 | | 596 |
| | | | | | 1993 TD | 1993 10 16.83094 | 00 52 28.03 | +11 52 36.1 | | 596 |
| | | | | | 1993 TD | 1993 10 16.84617 | 00 52 26.87 | +11 52 34.9 | | 596 |
| | | | | | 1993 TD | 1993 10 16.85608 | 00 52 26.17 | +11 52 34.7 | | 596 |
| | | | | | 1993 TD | 1993 10 19.74926 | 00 49 20.92 | +11 56 17.9 | | 596 |
| | | | | | 1993 TD | 1993 10 19.78933 | 00 49 18.44 | +11 56 20.8 | | 596 |

596 Colleverde di Guidonia

V. S. Casulli, Via M. Rosa 1, I-00010 Colleverde di Guidonia (RM), Italy

0.31-m $f/2.8$ Baker-Schmidt + CCD

GSC

| | | | | | | | | | | |
|----------------------|------------------|-------------|-------------|-----|--|--|--|--|--|--|
| 1929 VS | 1993 10 10.90391 | 03 01 38.49 | +17 03 43.6 | 596 | | | | | | |
| 1929 VS | 1993 10 10.94150 | 03 01 37.09 | +17 03 46.8 | 596 | | | | | | |
| 1929 VS | 1993 10 10.95648 | 03 01 36.55 | +17 03 46.5 | 596 | | | | | | |
| 1976 GY ₃ | 1993 09 10.83967 | 22 38 17.93 | -04 48 35.9 | 596 | | | | | | |
| 1976 GY ₃ | 1993 09 10.85714 | 22 38 16.90 | -04 48 46.0 | 596 | | | | | | |
| 1976 GY ₃ | 1993 09 10.87264 | 22 38 16.22 | -04 48 50.6 | 596 | | | | | | |
| 1977 TC ₁ | 1993 09 15.87424 | 23 48 06.49 | +04 59 54.1 | 596 | | | | | | |
| 1977 TC ₁ | 1993 09 15.89785 | 23 48 05.37 | +04 59 43.7 | 596 | | | | | | |
| 1979 SR | 1993 09 20.88387 | 01 16 08.21 | +11 56 46.9 | 596 | | | | | | |
| 1979 SR | 1993 09 20.91181 | 01 16 07.19 | +11 56 37.2 | 596 | | | | | | |
| 1979 SR | 1993 09 20.93854 | 01 16 06.26 | +11 56 26.9 | 596 | | | | | | |
| 1983 RX | 1993 09 23.82495 | 00 22 52.73 | +09 07 40.7 | 596 | | | | | | |
| 1983 RX | 1993 09 23.85208 | 00 22 50.97 | +09 07 34.8 | 596 | | | | | | |
| 1983 RX | 1993 09 23.86677 | 00 22 50.05 | +09 07 32.3 | 596 | | | | | | |
| 1985 TM ₁ | 1993 10 16.92680 | 03 24 27.17 | +25 40 19.7 | 596 | | | | | | |
| 1985 TM ₁ | 1993 10 16.94502 | 03 24 26.45 | +25 40 32.1 | 596 | | | | | | |
| 1985 TM ₁ | 1993 10 16.94883 | 03 24 26.10 | +25 40 35.7 | 596 | | | | | | |
| 1986 RB ₅ | 1993 10 11.91847 | 02 56 35.35 | +05 29 04.6 | 596 | | | | | | |
| 1986 RB ₅ | 1993 10 11.94466 | 02 56 34.09 | +05 28 56.4 | 596 | | | | | | |
| 1986 RB ₅ | 1993 10 11.95669 | 02 56 33.56 | +05 28 50.5 | 596 | | | | | | |
| 1986 XF ₁ | 1993 09 15.82347 | 22 49 39.71 | -02 36 30.3 | 596 | | | | | | |
| 1986 XF ₁ | 1993 09 15.83626 | 22 49 38.91 | -02 36 32.3 | 596 | | | | | | |
| 1986 XF ₁ | 1993 09 15.85289 | 22 49 38.19 | -02 36 37.2 | 596 | | | | | | |
| 1989 UA | 1993 10 07.91205 | 02 24 21.28 | +08 06 01.4 | 596 | | | | | | |
| 1989 UA | 1993 10 07.93597 | 02 24 20.11 | +08 06 02.6 | 596 | | | | | | |
| 1990 XP | 1993 10 16.87267 | 01 55 12.66 | +08 33 46.5 | 596 | | | | | | |
| 1990 XP | 1993 10 16.88651 | 01 55 11.92 | +08 33 38.9 | 596 | | | | | | |
| 1990 XP | 1993 10 16.90052 | 01 55 11.15 | +08 33 31.2 | 596 | | | | | | |
| 1991 FV | 1993 09 20.82591 | 23 31 16.77 | +12 55 33.4 | 596 | | | | | | |
| 1991 FV | 1993 09 20.85113 | 23 31 15.72 | +12 55 26.7 | 596 | | | | | | |
| 1991 FV | 1993 09 20.86465 | 23 31 15.07 | +12 55 22.6 | 596 | | | | | | |
| 1991 GG ₁ | 1993 09 19.84382 | 23 57 29.88 | +07 04 29.9 | 596 | | | | | | |
| 1991 GG ₁ | 1993 09 19.86660 | 23 57 28.64 | +07 04 25.0 | 596 | | | | | | |
| 1991 GG ₁ | 1993 09 19.89187 | 23 57 27.36 | +07 04 22.1 | 596 | | | | | | |
| 1993 RB | 1993 09 11.89854 | 23 59 09.55 | +05 00 48.8 | 596 | | | | | | |
| 1993 RB | 1993 09 11.90817 | 23 59 09.05 | +05 00 47.5 | 596 | | | | | | |

| | | | | | | | | | | |
|--|--------------------|-------------|-------------|--------|-----|-----------------------|------------------|-------------|-------------|-----|
| 1993 TD | 1993 10 19.82389 | 00 49 15.94 | +11 56 22.4 | | 596 | 1981 EK ₈ | 1993 09 16.41299 | 00 50 34.47 | +15 16 14.3 | 658 |
| 1993 TH | * 1993 10 10.76376 | 00 58 20.29 | +11 49 18.7 | 16.5 V | 596 | 1981 EK ₈ | 1993 09 16.41638 | 00 50 34.29 | +15 16 13.8 | 658 |
| 1993 TH | 1993 10 10.79362 | 00 58 19.06 | +11 49 03.1 | | 596 | 1981 EK ₈ | 1993 09 16.41985 | 00 50 34.11 | +15 16 13.0 | 658 |
| 1993 TH | 1993 10 10.82332 | 00 58 17.08 | +11 48 43.3 | | 596 | 1981 EK ₈ | 1993 09 16.42303 | 00 50 33.94 | +15 16 12.5 | 658 |
| 1993 TH | 1993 10 10.85080 | 00 58 15.86 | +11 48 27.2 | | 596 | 1981 EC ₁₃ | 1993 09 16.38962 | 00 47 19.06 | +14 02 14.5 | 658 |
| 1993 TH | 1993 10 10.86957 | 00 58 14.99 | +11 48 16.2 | | 596 | 1981 EC ₁₃ | 1993 09 16.39238 | 00 47 18.96 | +14 02 14.5 | 658 |
| 1993 TQ ₁ | 1993 10 16.87267 | 01 56 00.68 | +08 46 05.6 | 16.4 V | 596 | 1981 EC ₁₃ | 1993 09 16.39565 | 00 47 18.80 | +14 02 14.1 | 658 |
| 1993 TQ ₁ | 1993 10 16.88651 | 01 55 59.91 | +08 46 01.6 | | 596 | 1981 EC ₁₃ | 1993 09 20.42245 | 00 44 19.54 | +13 52 55.3 | 658 |
| 1993 TQ ₁ | 1993 10 16.90052 | 01 55 59.10 | +08 45 57.3 | | 596 | 1981 EC ₁₃ | 1993 09 20.42786 | 00 44 19.29 | +13 52 54.4 | 658 |
| 1993 TQ ₁ | 1993 10 17.89273 | 01 55 09.33 | +08 39 10.7 | | 596 | 1981 EC ₁₃ | 1993 09 20.43244 | 00 44 19.06 | +13 52 53.7 | 658 |
| 1993 TQ ₁ | 1993 10 18.87315 | 01 54 19.67 | +08 32 31.8 | | 596 | 1983 RB | 1993 09 16.47303 | 01 29 33.12 | -04 09 51.0 | 658 |
| 1993 TQ ₁ | 1993 10 18.89340 | 01 54 18.40 | +08 32 26.8 | | 596 | 1983 RB | 1993 09 16.47569 | 01 29 32.96 | -04 09 56.5 | 658 |
| 1993 TQ ₁ | 1993 10 19.84120 | 01 53 30.06 | +08 25 57.0 | | 596 | 1983 RB | 1993 09 20.40972 | 01 25 54.48 | -06 27 27.6 | 658 |
| 1993 TQ ₁ | 1993 10 19.89155 | 01 53 27.37 | +08 25 39.9 | | 596 | 1983 RB | 1993 09 20.41363 | 01 25 54.24 | -06 27 35.5 | 658 |
| 597 Springe | | | | | | 1983 RB | 1993 09 20.41707 | 01 25 54.02 | -06 27 42.6 | 658 |
| N. Ehring, Detmoldstrasse 8, D-30171 Hannover, Germany | | | | | | 1989 UY ₃ | 1993 09 16.34757 | 22 44 08.63 | +23 54 01.2 | 658 |
| (96) | 1993 08 23.90677 | 23 07 41.58 | +03 31 05.1 | | 597 | 1989 UY ₃ | 1993 09 16.35102 | 22 44 08.47 | +23 53 59.8 | 658 |
| (96) | 1993 08 23.92403 | 23 07 40.78 | +03 31 04.6 | | 597 | 1989 UY ₃ | 1993 09 16.35455 | 22 44 08.27 | +23 53 58.1 | 658 |
| (174) | 1993 08 23.93766 | 22 39 22.03 | -05 31 19.9 | | 597 | 1991 GZ ₉ | 1993 09 16.36993 | 23 39 31.84 | +09 09 19.5 | 658 |
| (174) | 1993 08 23.94583 | 22 39 21.60 | -05 31 20.4 | | 597 | 1991 GZ ₉ | 1993 09 16.37264 | 23 39 31.71 | +09 09 18.8 | 658 |
| (335) | 1993 08 23.96515 | 22 55 16.93 | -08 21 07.0 | | 597 | 1991 GZ ₉ | 1993 09 16.37546 | 23 39 31.56 | +09 09 18.1 | 658 |
| (335) | 1993 08 23.96876 | 22 55 16.77 | -08 21 08.9 | | 597 | 1991 RC | 1993 09 16.16536 | 17 16 34.40 | -07 08 51.2 | 658 |
| (568) | 1993 08 19.86910 | 20 52 26.68 | +09 56 12.9 | | 597 | 1991 RC | 1993 09 16.16919 | 17 16 35.74 | -07 08 59.2 | 658 |
| (568) | 1993 08 19.87802 | 20 52 26.26 | +09 56 10.9 | | 597 | 1993 KC | 1993 09 16.18970 | 17 36 43.46 | +10 39 22.8 | 658 |
| (709) | 1993 08 19.89677 | 22 46 14.84 | -01 56 40.8 | | 597 | 1993 KC | 1993 09 16.19153 | 17 36 43.74 | +10 39 21.9 | 658 |
| (709) | 1993 08 19.90734 | 22 46 14.23 | -01 56 39.5 | | 597 | 1993 KC | 1993 09 16.19344 | 17 36 44.03 | +10 39 20.7 | 658 |
| 657 Victoria, Climenhaga Observatory | | | | | | 1993 KC | 1993 09 20.18300 | 17 46 55.20 | +10 04 54.0 | 658 |
| J. B. Tatum, Dept. of Physics, University of Victoria, P.O. Box 1700, Victoria, BC V8W 2Y2, Canada | | | | | | 1993 KC | 1993 09 20.18677 | 17 46 55.84 | +10 04 51.7 | 658 |
| Observers J. B. Tatum, D. D. Balam | | | | | | 1993 KC | 1993 09 20.19110 | 17 46 56.42 | +10 04 49.1 | 658 |
| Measurer D. D. Balam | | | | | | 1993 ME ₁ | 1993 09 16.20050 | 18 30 57.78 | +08 33 49.7 | 658 |
| 0.5-m reflector + CCD | | | | | | 1993 ME ₁ | 1993 09 16.20464 | 18 30 58.32 | +08 33 48.4 | 658 |
| 1990 SM ₂₈ | 1993 09 09.35775 | 00 20 28.64 | +07 37 17.6 | | 657 | 1993 ME ₁ | 1993 09 16.20774 | 18 30 58.70 | +08 33 47.0 | 658 |
| 1990 SM ₂₈ | 1993 09 09.36069 | 00 20 28.48 | +07 37 16.6 | | 657 | 1993 OV ₁ | 1993 09 16.22596 | 21 13 58.23 | -02 16 01.5 | 658 |
| 1990 SM ₂₈ | 1993 09 09.36406 | 00 20 28.32 | +07 37 16.0 | | 657 | 1993 OV ₁ | 1993 09 16.22946 | 21 13 58.28 | -02 16 00.5 | 658 |
| 1991 CY | 1993 09 09.34169 | 00 15 34.84 | +16 10 25.9 | | 657 | 1993 OV ₁ | 1993 09 16.23581 | 21 13 58.36 | -02 15 58.3 | 658 |
| 1991 CY | 1993 09 09.34498 | 00 15 34.69 | +16 10 26.0 | | 657 | 1993 OV ₁ | 1993 09 21.20957 | 21 15 41.13 | -01 50 19.4 | 658 |
| 1991 CY | 1993 09 09.34853 | 00 15 34.48 | +16 10 24.9 | | 657 | 1993 OV ₁ | 1993 09 21.21319 | 21 15 41.23 | -01 50 18.4 | 658 |
| 1993 OV ₁ | 1993 09 09.20062 | 21 13 05.92 | -02 59 45.1 | | 657 | 1993 OV ₁ | 1993 09 21.21664 | 21 15 41.30 | -01 50 17.6 | 658 |
| 1993 OV ₁ | 1993 09 09.20392 | 21 13 05.90 | -02 59 42.0 | | 657 | 1993 PB | 1993 09 20.23127 | 20 07 44.39 | -07 00 03.4 | 658 |
| 1993 OV ₁ | 1993 09 09.20709 | 21 13 05.90 | -02 59 41.1 | | 657 | 1993 PB | 1993 09 20.23642 | 20 07 44.17 | -07 00 02.3 | 658 |
| 1993 OV ₁ | 1993 09 09.21200 | 21 13 05.95 | -02 59 40.3 | | 657 | 1993 PB | 1993 09 20.24144 | 20 07 44.05 | -07 00 01.1 | 658 |
| 1993 RR | 1993 09 24.39936 | 01 55 38.23 | +15 07 10.5 | | 657 | 1993 PB | 1993 09 21.17709 | 20 07 12.80 | -06 56 44.9 | 658 |
| 1993 RR | 1993 09 24.40897 | 01 55 38.18 | +15 07 15.3 | | 657 | 1993 PB | 1993 09 21.18147 | 20 07 12.69 | -06 56 44.1 | 658 |
| 658 Dominion Astrophysical Observatory, Victoria | | | | | | 1993 PB | 1993 09 21.18564 | 20 07 12.50 | -06 56 42.9 | 658 |
| J. B. Tatum, Dept. of Physics, University of Victoria, P.O. Box 1700, Victoria, BC V8W 2Y2, Canada | | | | | | 1993 PE | 1993 09 16.24161 | 21 04 01.76 | -10 27 25.7 | 658 |
| Observers D. D. Balam, J. B. Tatum, G. C. L. Aikman | | | | | | 1993 PE | 1993 09 16.24513 | 21 04 01.70 | -10 27 26.2 | 658 |
| Measurer D. D. Balam | | | | | | 1993 PE | 1993 09 16.24907 | 21 04 01.62 | -10 27 26.7 | 658 |
| 1.82-m Plaskett telescope + CCD | | | | | | 1993 PE | 1993 09 20.24604 | 21 03 14.51 | -10 35 46.6 | 658 |
| GSC | | | | | | 1993 PE | 1993 09 20.27389 | 21 03 14.24 | -10 35 49.7 | 658 |
| | | | | | | 1993 PE | 1993 09 20.27855 | 21 03 14.20 | -10 35 50.3 | 658 |
| | | | | | | 1993 PE | 1993 09 21.19382 | 21 03 08.03 | -10 37 30.4 | 658 |
| | | | | | | 1993 PE | 1993 09 21.19792 | 21 03 08.00 | -10 37 30.8 | 658 |

| | | | | | | | | | | | |
|---------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|--------|-----|
| 1993 PE | 1993 09 21.20166 | 21 03 07.97 | -10 37 31.3 | | 658 | 1993 OY ₂ | 1993 09 09.31925 | 00 20 28.99 | +05 28 19.9 | 17.1 R | 664 |
| 1993 QP | 1993 09 16.36006 | 23 29 05.21 | +30 11 02.6 | | 658 | 1993 OY ₂ | 1993 09 09.32493 | 00 20 28.51 | +05 28 22.1 | 17.1 R | 664 |
| 1993 QP | 1993 09 16.36277 | 23 29 05.34 | +30 11 05.2 | | 658 | 1993 OY ₂ | 1993 09 09.32860 | 00 20 28.25 | +05 28 22.9 | 17.1 R | 664 |
| 1993 QP | 1993 09 16.36551 | 23 29 05.46 | +30 11 07.9 | | 658 | 1993 OY ₂ | 1993 09 09.33241 | 00 20 28.03 | +05 28 23.9 | 17.1 R | 664 |
| 1993 QP | 1993 09 20.30277 | 23 32 49.00 | +31 06 33.9 | | 658 | 1993 OY ₂ | 1993 09 09.33611 | 00 20 27.77 | +05 28 24.9 | 17.1 R | 664 |
| 1993 QP | 1993 09 20.30626 | 23 32 49.16 | +31 06 36.5 | | 658 | 1993 OY ₂ | 1993 09 09.33973 | 00 20 27.50 | +05 28 25.9 | 17.1 R | 664 |
| 1993 QP | 1993 09 20.30997 | 23 32 49.33 | +31 06 39.2 | | 658 | 1993 OY ₂ | 1993 09 09.34341 | 00 20 27.10 | +05 28 25.6 | 17.1 R | 664 |
| 1993 QP | 1993 09 21.22383 | 23 33 42.14 | +31 16 57.2 | | 658 | 1993 OY ₂ | 1993 09 09.34711 | 00 20 26.84 | +05 28 26.6 | 17.1 R | 664 |
| 1993 QP | 1993 09 21.22773 | 23 33 42.32 | +31 16 59.9 | | 658 | 1993 OY ₂ | 1993 09 09.35080 | 00 20 26.59 | +05 28 27.6 | 17.1 R | 664 |
| 1993 QP | 1993 09 21.23116 | 23 33 42.47 | +31 17 02.1 | | 658 | 1993 OY ₂ | 1993 09 09.38667 | 00 20 24.31 | +05 28 38.5 | 17.2 R | 664 |
| 1993 RA | 1993 09 16.29322 | 22 10 54.72 | -09 19 57.5 | 20.1 | 658 | 1993 OY ₂ | 1993 09 09.39034 | 00 20 24.06 | +05 28 39.5 | 17.2 R | 664 |
| 1993 RA | 1993 09 16.29742 | 22 10 54.38 | -09 20 01.7 | | 658 | 1993 OY ₂ | 1993 09 09.39395 | 00 20 23.83 | +05 28 40.4 | 17.2 R | 664 |
| 1993 RA | 1993 09 16.30116 | 22 10 54.10 | -09 20 05.4 | | 658 | 1993 OY ₂ | 1993 09 09.39778 | 00 20 23.55 | +05 28 41.4 | 17.2 R | 664 |
| 1993 SA | * 1993 09 16.42810 | 00 55 13.08 | +04 27 40.1 | 19.8 | 658 | 1993 OY ₂ | 1993 09 09.40148 | 00 20 23.32 | +05 28 42.4 | 17.2 R | 664 |
| 1993 SA | 1993 09 16.43142 | 00 55 12.99 | +04 27 37.4 | | 658 | 1993 OY ₂ | 1993 09 09.40510 | 00 20 23.07 | +05 28 43.3 | 17.3 R | 664 |
| 1993 SA | 1993 09 16.43537 | 00 55 12.90 | +04 27 35.4 | | 658 | 1993 OY ₂ | 1993 09 09.40872 | 00 20 22.80 | +05 28 44.3 | 17.3 R | 664 |
| 1993 SA | 1993 09 18.35848 | 00 54 20.75 | +04 06 39.2 | | 658 | 1993 OY ₂ | 1993 09 09.41854 | 00 20 22.16 | +05 28 47.0 | 17.3 R | 664 |
| 1993 SA | 1993 09 18.36215 | 00 54 20.58 | +04 06 37.1 | | 658 | 1993 OY ₂ | 1993 09 09.42223 | 00 20 21.89 | +05 28 48.0 | 17.3 R | 664 |
| 1993 SA | 1993 09 18.36553 | 00 54 20.46 | +04 06 34.7 | | 658 | 1993 OY ₂ | 1993 09 09.42591 | 00 20 21.66 | +05 28 49.0 | 17.3 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.42992 | 00 20 21.39 | +05 28 50.0 | 17.3 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.43374 | 00 20 21.13 | +05 28 51.1 | 17.4 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.43742 | 00 20 20.90 | +05 28 52.0 | 17.3 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.44112 | 00 20 20.64 | +05 28 53.0 | 17.3 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.44481 | 00 20 20.39 | +05 28 54.0 | 17.4 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.48569 | 00 20 17.60 | +05 29 04.9 | 17.1 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.49163 | 00 20 17.20 | +05 29 06.5 | 17.2 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.49531 | 00 20 16.96 | +05 29 07.5 | 17.1 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.49920 | 00 20 16.70 | +05 29 08.6 | 17.1 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.50288 | 00 20 16.46 | +05 29 09.5 | 17.1 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.50677 | 00 20 16.20 | +05 29 10.5 | 17.1 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.51046 | 00 20 15.94 | +05 29 11.6 | 17.0 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.51431 | 00 20 15.69 | +05 29 12.5 | 17.0 R | 664 |
| | | | | | | 1993 OY ₂ | 1993 09 09.51797 | 00 20 15.45 | +05 29 13.6 | 17.2 R | 664 |
| | | | | | | 1993 RZ ₂ | * 1993 09 07.44807 | 00 30 31.33 | -00 41 27.1 | 19.7 V | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 07.45648 | 00 30 31.22 | -00 41 27.4 | 19.4 V | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 07.46441 | 00 30 30.83 | -00 41 28.0 | 18.9 R | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 07.47218 | 00 30 30.50 | -00 41 28.3 | 18.4 I | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 07.51204 | 00 30 28.86 | -00 41 29.4 | 18.8 R | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 08.35084 | 00 29 53.51 | -00 42 01.3 | 18.8 R | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 08.35502 | 00 29 53.37 | -00 42 01.4 | 18.9 R | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 08.36046 | 00 29 53.13 | -00 42 01.7 | 19.3 R | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 08.43491 | 00 29 49.87 | -00 42 04.7 | 18.9 R | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 09.25200 | 00 29 14.84 | -00 42 38.9 | 18.9 R | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 09.25610 | 00 29 14.65 | -00 42 39.2 | 18.8 R | 664 |
| | | | | | | 1993 RZ ₂ | 1993 09 09.26277 | 00 29 14.32 | -00 42 39.3 | 18.4 R | 664 |
| | | | | | | (4216) | 1993 09 09.34341 | 00 20 00.59 | +05 31 51.1 | 17.2 R | 664 |
| | | | | | | (4216) | 1993 09 09.34711 | 00 20 00.38 | +05 31 49.7 | 17.2 R | 664 |
| | | | | | | (4216) | 1993 09 09.35080 | 00 20 00.21 | +05 31 48.2 | 17.2 R | 664 |
| | | | | | | (4216) | 1993 09 09.38667 | 00 19 58.59 | +05 31 32.5 | 17.2 R | 664 |
| | | | | | | (4216) | 1993 09 09.39034 | 00 19 58.41 | +05 31 31.0 | 17.2 R | 664 |
| | | | | | | (4216) | 1993 09 09.39395 | 00 19 58.24 | +05 31 29.5 | 17.1 R | 664 |
| | | | | | | (4216) | 1993 09 09.39778 | 00 19 58.03 | +05 31 28.0 | 17.1 R | 664 |

664 Manastash Ridge Observatory

M. Hammegren, Dept. of Astronomy FM-20, Univ. of Washington, Seattle,
WA 98195, U.S.A.

0.76-m *f*/5.7 reflector + CCD

| | | | | | |
|--------|------------------|-------------|-------------|--------|-------|
| (4216) | 1993 09 09.40148 | 00 19 57.86 | +05 31 26.5 | 17.2 R | 664 |
| (4216) | 1993 09 09.40510 | 00 19 57.68 | +05 31 25.0 | 17.1 R | 664 |
| (4216) | 1993 09 09.40872 | 00 19 57.47 | +05 31 23.5 | 17.2 R | 664 |
| (4216) | 1993 09 09.41854 | 00 19 57.00 | +05 31 19.7 | 17.1 R | 664 |
| (4216) | 1993 09 09.42223 | 00 19 56.79 | +05 31 18.1 | 17.2 R | 664 |
| (4216) | 1993 09 09.42591 | 00 19 56.62 | +05 31 16.6 | 17.2 R | 664 |
| (4216) | 1993 09 09.42992 | 00 19 56.42 | +05 31 15.0 | 17.2 R | 664 |
| (4216) | 1993 09 09.43374 | 00 19 56.23 | +05 31 13.4 | 17.2 R | 664 |
| (4216) | 1993 09 09.43742 | 00 19 56.06 | +05 31 11.9 | 17.2 R | 664 |
| (4216) | 1993 09 09.44112 | 00 19 55.85 | +05 31 11.2 | 17.0 R | I 664 |
| (4216) | 1993 09 09.44481 | 00 19 55.68 | +05 31 08.6 | 17.0 R | I 664 |
| (4216) | 1993 09 09.48569 | 00 19 53.64 | +05 30 52.3 | 17.2 R | 664 |
| (4216) | 1993 09 09.49163 | 00 19 53.34 | +05 30 49.8 | 17.2 R | 664 |
| (4216) | 1993 09 09.49531 | 00 19 53.16 | +05 30 48.3 | 17.2 R | 664 |
| (4216) | 1993 09 09.49920 | 00 19 52.96 | +05 30 46.7 | 17.2 R | I 664 |
| (4216) | 1993 09 09.50288 | 00 19 52.78 | +05 30 45.1 | 17.1 R | I 664 |
| (4216) | 1993 09 09.50677 | 00 19 52.60 | +05 30 43.5 | 17.1 R | I 664 |
| (4216) | 1993 09 09.51046 | 00 19 52.42 | +05 30 42.1 | 17.1 R | I 664 |
| (4216) | 1993 09 09.51431 | 00 19 52.22 | +05 30 40.5 | 17.1 R | I 664 |
| (4216) | 1993 09 09.51797 | 00 19 52.03 | +05 30 39.2 | 17.0 R | I 664 |

670 Camarillo

J. E. Rogers, 441 Rowland Avenue, Camarillo, CA 93010, U.S.A.
0.25-m Schmidt-Cassegrain + CCD
GSC

| | | | | | |
|----------------------|------------------|-------------|-------------|--------|-----|
| 1993 RR ₂ | 1993 10 06.20625 | 00 48 33.62 | -14 12 55.0 | | 670 |
| 1993 RR ₂ | 1993 10 06.21736 | 00 48 33.36 | -14 12 59.9 | | 670 |
| 1993 RR ₂ | 1993 10 06.24138 | 00 48 32.87 | -14 13 15.7 | | 670 |
| 1993 RR ₂ | 1993 10 06.26424 | 00 48 32.44 | -14 13 28.6 | | 670 |
| (27) | 1993 10 03.16467 | 00 29 27.20 | +00 03 33.8 | 10.1 V | 670 |
| (27) | 1993 10 03.18064 | 00 29 26.27 | +00 03 27.7 | | 670 |
| (27) | 1993 10 03.19800 | 00 29 25.26 | +00 03 21.3 | | 670 |
| (27) | 1993 10 03.22231 | 00 29 23.78 | +00 03 12.4 | | 670 |

674 Ford Observatory, Wrightwood

J. B. Child, World Space Foundation, P.O. Box Y, South Pasadena, CA 91031,
U.S.A.

Observers J. B. Child, G. Fisch

| | | | | | |
|---------|------------------|-------------|-------------|------|-----|
| 1993 MF | 1993 09 19.36838 | 00 21 11.90 | +34 01 48.5 | 13.7 | 674 |
| 1993 MF | 1993 09 19.37787 | 00 21 12.11 | +34 01 33.8 | 13.9 | 674 |
| 1993 MF | 1993 09 19.38229 | 00 21 12.25 | +34 01 26.6 | 13.7 | 674 |
| 1993 MF | 1993 09 19.38981 | 00 21 12.44 | +34 01 14.7 | 13.7 | 674 |
| 1993 MF | 1993 09 19.39668 | 00 21 12.54 | +34 01 03.8 | 13.9 | 674 |
| 1993 MF | 1993 09 19.40355 | 00 21 12.68 | +34 00 53.5 | 14.1 | 674 |
| 1993 MF | 1993 09 19.40833 | 00 21 12.84 | +34 00 45.6 | 13.9 | 674 |
| 1993 MF | 1993 09 19.44884 | 00 21 13.72 | +33 59 42.3 | 13.7 | 674 |
| 1993 MF | 1993 09 19.46528 | 00 21 14.13 | +33 59 15.1 | 13.8 | 674 |

675 Palomar

E. F. Helin, MS 183-501, Jet Propulsion Laboratory, Pasadena, CA 91109,
U.S.A. (2)

C. S. Shoemaker, P.O. Box 984, Flagstaff, AZ 86002, U.S.A. (3)

C. J. van Houten, Sterrewacht Leiden, Postbus 9513, NL-2300 RA Leiden, The
Netherlands (4)

E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, AZ 86001,
U.S.A. (6)

9 = 3 + 6

Observers J. Alu (2, S), T. Gehrels (4, L), E. F. Helin (2, S), H. E. Holt (3, S),
K. Lawrence (2, S), C. M. Olmstead (3, S), D. Williams (3, S)

Measurers J. Alu (2), B. M. Cudnik (3), K. Lawrence (2), B. A. Skiff (9), C. J. van
Houten (4), I. van Houten-Groeneveld (4), A. Wisse (4)

1.2-m (L) and 0.46-m (S) Schmidt telescopes

| | | | | | |
|----------------------|--------------------|-------------|-------------|------|-------|
| 1951 PS | * 1951 08 06.39444 | 23 22 45.74 | -06 59 42.8 | 17.5 | 6 675 |
| 1951 PS | 1951 08 06.41875 | 23 22 45.29 | -06 59 52.1 | | 6 675 |
| 1954 GQ | * 1954 04 02.29132 | 12 06 55.07 | -04 38 16.9 | 18.0 | 6 675 |
| 1954 GQ | 1954 04 02.31458 | 12 06 53.72 | -04 38 04.4 | | 6 675 |
| 1978 VV ₉ | 1993 09 12.23125 | 21 37 49.49 | -10 50 16.4 | 17.0 | 2 675 |
| 1978 VV ₉ | 1993 09 12.26649 | 21 37 48.60 | -10 50 19.0 | | 2 675 |
| 1978 VV ₉ | 1993 09 14.18403 | 21 36 47.56 | -10 56 00.5 | | 2 675 |
| 1978 VV ₉ | 1993 09 14.21128 | 21 36 46.54 | -10 56 06.0 | | 2 675 |
| 1979 MB ₂ | 1951 08 06.39444 | 23 27 40.82 | -05 52 30.6 | | 6 675 |
| 1979 MB ₂ | 1951 08 06.41875 | 23 27 40.39 | -05 52 36.9 | | 6 675 |
| 1980 LY | 1993 09 13.16493 | 21 37 28.09 | -21 31 51.2 | 16.5 | 2 675 |
| 1980 LY | 1993 09 13.19601 | 21 37 27.09 | -21 31 54.0 | | 2 675 |
| 1980 LY | 1993 09 15.19861 | 21 36 40.15 | -21 34 20.8 | | 2 675 |
| 1980 LY | 1993 09 15.22222 | 21 36 39.51 | -21 34 20.6 | | 2 675 |
| 1981 SJ | 1951 08 06.39444 | 23 20 27.03 | -03 42 19.0 | | 6 675 |
| 1981 SJ | 1951 08 06.41875 | 23 20 26.70 | -03 42 19.9 | | 6 675 |
| 1985 RM ₆ | 1951 08 06.39444 | 23 19 02.08 | -04 09 45.8 | | 6 675 |
| 1985 RM ₆ | 1951 08 06.41875 | 23 19 01.62 | -04 09 51.2 | | 6 675 |
| 1985 UC | 1993 09 14.24288 | 22 15 53.63 | -29 24 39.5 | 16.0 | 2 675 |
| 1985 UC | 1993 09 14.26840 | 22 15 52.10 | -29 24 22.3 | | 2 675 |
| 1985 UC | 1993 09 16.21146 | 22 14 07.62 | -29 02 11.6 | | 2 675 |
| 1985 UC | 1993 09 16.24497 | 22 14 05.79 | -29 01 46.8 | | 2 675 |
| 1986 JS | 1993 08 20.31615 | 21 17 56.09 | -18 48 40.9 | 15.0 | 2 675 |
| 1986 JS | 1993 08 22.34444 | 21 16 18.80 | -19 05 01.3 | | 2 675 |
| 1986 PD ₁ | 1992 01 09.40313 | 07 12 38.57 | +07 47 44.4 | 17.0 | 2 675 |
| 1986 PD ₁ | 1992 01 09.42535 | 07 12 37.18 | +07 47 58.2 | | 2 675 |
| 1986 RQ | 1993 09 12.35694 | 23 47 43.12 | +10 57 00.6 | 15.0 | 2 675 |
| 1986 RQ | 1993 09 12.37969 | 23 47 42.18 | +10 56 46.1 | | 2 675 |
| 1986 RQ | 1993 09 13.36563 | 23 47 00.40 | +10 46 06.4 | 15.0 | 2 675 |
| 1986 RQ | 1993 09 13.39948 | 23 46 58.77 | +10 45 44.3 | | 2 675 |
| 1986 RQ | 1993 09 14.33941 | 23 46 18.88 | +10 35 24.9 | | 2 675 |
| 1986 RQ | 1993 09 14.36302 | 23 46 17.73 | +10 35 09.7 | | 2 675 |
| 1986 RQ | 1993 09 16.27847 | 23 44 55.24 | +10 13 20.3 | | 2 675 |
| 1986 RQ | 1993 09 16.30052 | 23 44 54.23 | +10 13 08.5 | | 2 675 |
| 1988 CX ₁ | 1954 04 02.29132 | 12 14 13.30 | -06 37 45.9 | | 6 675 |
| 1988 CX ₁ | 1954 04 02.31458 | 12 14 12.17 | -06 37 36.4 | | 6 675 |
| 1989 GH ₄ | 1951 08 06.39444 | 23 22 12.73 | -06 48 05.8 | | 6 675 |
| 1989 GH ₄ | 1951 08 06.41875 | 23 22 11.85 | -06 48 07.2 | | 6 675 |
| 1989 LN ₁ | * 1989 06 03.21771 | 13 02 12.07 | -09 53 51.6 | 16.5 | 2 675 |
| 1989 LN ₁ | 1989 06 03.24514 | 13 02 12.31 | -09 53 58.3 | | 2 675 |
| 1989 LN ₁ | 1989 06 05.19288 | 13 02 43.90 | -10 00 16.4 | | 2 675 |
| 1989 LN ₁ | 1989 06 05.21562 | 13 02 44.27 | -10 00 21.1 | | 2 675 |

| | | | | | | | | | | | |
|----------------------|------------------|-------------|-------------|------|-------|----------------------|--------------------|-------------|-------------|------|-------|
| 1989 PK | 1993 09 15.15608 | 20 44 12.38 | -15 06 59.6 | 16.0 | 2 675 | 1993 QN | 1993 09 15.42569 | 23 29 43.89 | +49 29 22.7 | | 2 675 |
| 1989 PK | 1993 09 15.17969 | 20 44 11.95 | -15 06 34.3 | | 2 675 | 1993 QO | 1993 09 12.18819 | 21 17 06.29 | +04 36 32.5 | 15.5 | 2 675 |
| 1989 PK | 1993 09 16.13872 | 20 44 00.51 | -14 49 16.7 | | 2 675 | 1993 QO | 1993 09 12.21545 | 21 17 04.31 | +04 36 46.6 | | 2 675 |
| 1989 TJ ₁ | 1951 08 06.39444 | 23 14 03.33 | -03 55 49.4 | | 6 675 | 1993 QO | 1993 09 14.16563 | 21 14 52.32 | +04 54 31.7 | | 2 675 |
| 1989 TJ ₁ | 1951 08 06.41875 | 23 14 02.71 | -03 55 51.3 | | 6 675 | 1993 QO | 1993 09 14.20017 | 21 14 49.95 | +04 54 50.7 | | 2 675 |
| 1989 TJ ₁ | 1954 04 02.31458 | 12 18 25.47 | -04 11 58.6 | | 6 675 | 1993 QP | 1993 09 12.39323 | 23 25 18.76 | +28 56 48.6 | 16.5 | 2 675 |
| 1990 XF | 1993 09 14.29809 | 22 43 11.48 | +06 14 34.9 | 15.5 | 2 675 | 1993 QP | 1993 09 12.41632 | 23 25 19.82 | +28 57 20.2 | | 2 675 |
| 1990 XF | 1993 09 14.32066 | 22 43 10.41 | +06 14 28.0 | | 2 675 | 1993 QP | 1993 09 15.35573 | 23 28 08.15 | +29 54 07.4 | | 2 675 |
| 1990 XF | 1993 09 16.23767 | 22 41 30.94 | +06 06 00.3 | | 2 675 | 1993 QP | 1993 09 15.38021 | 23 28 09.19 | +29 54 33.2 | | 2 675 |
| 1991 CM ₃ | 1951 08 06.39444 | 23 19 55.90 | -07 49 08.1 | | 6 675 | 1993 QS | 1993 09 12.23125 | 21 56 54.97 | -10 04 44.5 | 15.5 | 2 675 |
| 1991 CM ₃ | 1951 08 06.41875 | 23 19 55.19 | -07 49 14.9 | | 6 675 | 1993 QS | 1993 09 12.26649 | 21 56 54.42 | -10 05 16.0 | | 2 675 |
| 1991 DX | 1993 08 19.40747 | 22 50 41.63 | +00 15 32.8 | 16.5 | 2 675 | 1993 QS | 1993 09 14.18403 | 21 56 28.95 | -10 35 20.1 | | 2 675 |
| 1991 DX | 1993 08 19.43212 | 22 50 40.54 | +00 15 20.5 | | 2 675 | 1993 QS | 1993 09 14.21128 | 21 56 28.48 | -10 35 44.6 | | 2 675 |
| 1991 DX | 1993 08 21.36302 | 22 49 20.02 | -00 00 42.6 | | 2 675 | 1993 QT | 1993 09 12.25052 | 22 21 44.90 | -10 07 01.3 | 15.5 | 2 675 |
| 1991 DX | 1993 08 21.38542 | 22 49 19.05 | -00 00 54.0 | | 2 675 | 1993 QT | 1993 09 12.28160 | 22 21 42.11 | -10 06 41.7 | | 2 675 |
| 1991 FV | 1993 09 13.36563 | 23 37 01.39 | +13 31 18.1 | 15.0 | 2 675 | 1993 QT | 1993 09 15.20486 | 22 17 34.74 | -09 37 13.4 | | 2 675 |
| 1991 FV | 1993 09 13.39948 | 23 36 59.81 | +13 31 10.0 | | 2 675 | 1993 QT | 1993 09 15.22847 | 22 17 32.84 | -09 36 59.0 | | 2 675 |
| 1991 FV | 1993 09 16.27847 | 23 34 46.73 | +13 18 21.3 | | 2 675 | 1993 QW | 1993 09 13.35938 | 23 38 02.96 | -16 40 34.1 | 16.5 | 2 675 |
| 1991 FV | 1993 09 16.30052 | 23 34 45.58 | +13 18 15.7 | | 2 675 | 1993 QW | 1993 09 13.38594 | 23 38 02.00 | -16 41 21.3 | | 2 675 |
| 1991 UB ₂ | 1954 04 02.29132 | 11 57 38.50 | -08 41 21.3 | | 6 675 | 1993 QW | 1993 09 15.39774 | 23 36 58.98 | -17 38 41.1 | | 2 675 |
| 1991 UB ₂ | 1954 04 02.31458 | 11 57 37.26 | -08 41 10.3 | | 6 675 | 1993 QW | 1993 09 15.41979 | 23 36 58.16 | -17 39 19.0 | | 2 675 |
| 1992 BW | 1993 09 13.15330 | 19 59 02.78 | -14 57 17.2 | 16.5 | 2 675 | 1993 QY | 1993 09 12.30660 | 22 57 05.68 | -16 49 53.9 | 15.5 | 2 675 |
| 1992 BW | 1993 09 13.18368 | 19 59 02.22 | -14 56 56.5 | | 2 675 | 1993 QY | 1993 09 12.32899 | 22 57 04.84 | -16 50 33.1 | | 2 675 |
| 1992 BW | 1993 09 15.13646 | 19 58 41.51 | -14 34 24.7 | | 2 675 | 1993 QY | 1993 09 15.31163 | 22 55 27.73 | -18 17 14.3 | | 2 675 |
| 1993 FR ₂ | 1951 08 06.39444 | 23 10 13.94 | -03 41 54.4 | | 6 675 | 1993 QY | 1993 09 15.33646 | 22 55 26.80 | -18 17 56.2 | | 2 675 |
| 1993 FR ₂ | 1951 08 06.41875 | 23 10 13.07 | -03 42 01.4 | | 6 675 | 1993 QZ | 1993 09 14.23576 | 21 58 29.74 | -08 53 04.4 | 16.0 | 2 675 |
| 1993 MF | 1989 05 02.24583 | 13 25 03.55 | -17 14 39.7 | 16.5 | 2 675 | 1993 QZ | 1993 09 14.26146 | 21 58 29.03 | -08 53 32.2 | | 2 675 |
| 1993 MF | 1989 05 02.27431 | 13 25 01.41 | -17 14 20.4 | | 2 675 | 1993 QZ | 1993 09 16.18056 | 21 57 46.36 | -09 32 02.8 | | 2 675 |
| 1993 MF | 1989 05 04.18108 | 13 22 39.12 | -16 50 16.5 | | 2 675 | 1993 QZ | 1993 09 16.20434 | 21 57 45.80 | -09 32 29.1 | | 2 675 |
| 1993 MF | 1989 05 04.20521 | 13 22 37.13 | -16 49 56.7 | | 2 675 | 1993 QA ₁ | 1993 09 13.16493 | 21 40 05.22 | -23 42 13.6 | 16.5 | 2 675 |
| 1993 MF | 1989 06 03.21771 | 12 58 57.11 | -10 43 26.3 | 16.5 | 2 675 | 1993 QA ₁ | 1993 09 13.19601 | 21 40 04.28 | -23 42 23.6 | | 2 675 |
| 1993 MF | 1989 06 03.24479 | 12 58 56.70 | -10 43 09.8 | | 2 675 | 1993 QA ₁ | 1993 09 15.19861 | 21 39 14.81 | -23 54 01.3 | | 2 675 |
| 1993 MF | 1989 06 05.19288 | 12 58 39.20 | -10 24 45.7 | | 2 675 | 1993 QA ₁ | 1993 09 15.22222 | 21 39 14.28 | -23 54 09.3 | | 2 675 |
| 1993 MF | 1989 06 05.21562 | 12 58 39.07 | -10 24 35.2 | | 2 675 | 1993 QB ₁ | 1993 09 13.16493 | 21 40 03.17 | -20 56 58.8 | 16.5 | 2 675 |
| 1993 OC | 1993 08 19.31007 | 20 06 41.08 | -07 32 53.6 | 16.0 | 2 675 | 1993 QB ₁ | 1993 09 13.19601 | 21 40 02.26 | -20 56 59.4 | | 2 675 |
| 1993 OC | 1993 08 19.33438 | 20 06 39.49 | -07 32 37.2 | | 2 675 | 1993 QB ₁ | 1993 09 15.19861 | 21 39 18.48 | -20 58 38.2 | | 2 675 |
| 1993 OC | 1993 08 21.26406 | 20 04 48.77 | -07 11 32.0 | | 2 675 | 1993 QB ₁ | 1993 09 15.22222 | 21 39 17.84 | -20 58 37.5 | | 2 675 |
| 1993 OD | 1993 08 19.31007 | 20 05 37.96 | -09 28 55.6 | 15.5 | 2 675 | 1993 QD ₁ | 1993 09 14.17830 | 21 36 48.56 | -16 15 12.4 | 16.5 | 2 675 |
| 1993 OD | 1993 08 19.33438 | 20 05 35.90 | -09 28 39.5 | | 2 675 | 1993 QD ₁ | 1993 09 14.20573 | 21 36 47.38 | -16 14 57.8 | | 2 675 |
| 1993 OD | 1993 08 21.26406 | 20 03 03.08 | -09 06 45.1 | | 2 675 | 1993 QE ₁ | 1993 09 14.24288 | 22 00 19.13 | -26 14 39.8 | 16.0 | 2 675 |
| 1993 OD | 1993 08 21.28628 | 20 03 01.41 | -09 06 28.6 | | 2 675 | 1993 QE ₁ | 1993 09 14.26840 | 22 00 18.22 | -26 14 49.8 | | 2 675 |
| 1993 OC ₂ | 1993 09 12.23125 | 21 45 24.98 | -12 10 22.7 | 16.5 | 2 675 | 1993 QE ₁ | 1993 09 16.21146 | 21 59 26.45 | -26 25 52.9 | | 2 675 |
| 1993 OC ₂ | 1993 09 12.26649 | 21 45 22.80 | -12 10 06.4 | | 2 675 | 1993 QE ₁ | 1993 09 16.24497 | 21 59 25.60 | -26 26 04.6 | | 2 675 |
| 1993 OC ₂ | 1993 09 14.18403 | 21 43 13.15 | -11 57 21.7 | | 2 675 | 1993 QB ₃ | 1993 09 13.16493 | 21 27 03.44 | -21 55 51.5 | 15.5 | 2 675 |
| 1993 OC ₂ | 1993 09 14.21128 | 21 43 11.26 | -11 57 12.3 | | 2 675 | 1993 QB ₃ | 1993 09 13.19601 | 21 27 02.25 | -21 56 29.4 | | 2 675 |
| 1993 PC ₆ | 1993 09 12.24132 | 22 00 20.20 | -14 54 22.3 | 16.0 | 2 675 | 1993 QB ₃ | 1993 09 15.19306 | 21 26 18.31 | -22 35 39.3 | 16.0 | 2 675 |
| 1993 PC ₆ | 1993 09 12.27413 | 22 00 19.28 | -14 55 08.5 | | 2 675 | 1993 QB ₃ | 1993 09 15.19861 | 21 26 17.97 | -22 35 45.6 | | 2 675 |
| 1993 PC ₆ | 1993 09 14.24931 | 21 59 38.39 | -15 40 55.4 | | 2 675 | 1993 QB ₃ | 1993 09 15.21615 | 21 26 17.74 | -22 36 05.9 | | 2 675 |
| 1993 PC ₆ | 1993 09 14.27448 | 21 59 37.72 | -15 41 30.8 | | 2 675 | 1993 QB ₃ | 1993 09 15.22222 | 21 26 17.71 | -22 36 10.3 | | 2 675 |
| 1993 QN | 1993 09 12.39931 | 23 35 19.40 | +48 41 20.4 | 16.0 | 2 675 | 1993 QB ₃ | 1993 09 16.15573 | 21 26 00.29 | -22 53 56.3 | | 2 675 |
| 1993 QN | 1993 09 12.42205 | 23 35 16.93 | +48 41 44.5 | | 2 675 | 1993 QE ₅ | * 1993 08 19.31007 | 20 03 33.24 | -07 03 12.8 | 16.5 | 2 675 |
| 1993 QN | 1993 09 15.40347 | 23 29 46.54 | +49 29 04.0 | | 2 675 | 1993 QE ₅ | 1993 08 19.33438 | 20 03 31.38 | -07 02 58.3 | | 2 675 |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-------|----------------------|--------------------|-------------|-------------|------|-------|
| 1993 QE ₅ | 1993 08 21.26406 | 20 01 20.63 | -06 45 41.5 | | 2 675 | 1993 RY ₂ | 1993 09 15.20486 | 22 18 35.68 | -12 32 28.1 | | 2 675 |
| 1993 QE ₅ | 1993 08 21.28628 | 20 01 19.02 | -06 45 30.6 | | 2 675 | 1993 RY ₂ | 1993 09 15.22847 | 22 18 35.01 | -12 32 49.7 | | 2 675 |
| 1993 QF ₅ | * 1993 08 20.23559 | 21 11 02.09 | +02 40 42.9 | 16.5 | 2 675 | 1993 RA ₃ | * 1993 09 14.29809 | 22 40 47.52 | +05 29 10.9 | 16.0 | 2 675 |
| 1993 QF ₅ | 1993 08 20.26146 | 21 11 01.05 | +02 40 16.8 | | 2 675 | 1993 RA ₃ | 1993 09 14.32066 | 22 40 46.61 | +05 28 55.7 | | 2 675 |
| 1993 QF ₅ | 1993 08 22.27535 | 21 09 52.12 | +02 05 46.1 | | 2 675 | 1993 RA ₃ | 1993 09 16.23767 | 22 39 35.13 | +05 07 33.7 | | 2 675 |
| 1993 QF ₅ | 1993 08 22.30382 | 21 09 51.19 | +02 05 17.1 | | 2 675 | 1993 RB ₃ | * 1993 09 14.29809 | 22 45 54.60 | +04 14 08.1 | 16.0 | 2 675 |
| 1993 RT | * 1993 09 14.34531 | 00 06 00.67 | -11 23 17.7 | 16.0 | 2 675 | 1993 RB ₃ | 1993 09 14.32066 | 22 45 53.28 | +04 14 01.5 | | 2 675 |
| 1993 RT | 1993 09 14.36892 | 00 05 59.42 | -11 23 37.1 | | 2 675 | 1993 RB ₃ | 1993 09 16.23767 | 22 44 19.79 | +04 05 06.9 | | 2 675 |
| 1993 RT | 1993 09 16.31997 | 00 04 36.68 | -11 48 01.7 | | 2 675 | 1993 RC ₃ | * 1993 09 14.41406 | 00 40 50.92 | -02 24 51.0 | 16.5 | 2 675 |
| 1993 RT | 1993 09 16.34878 | 00 04 35.36 | -11 48 23.0 | | 2 675 | 1993 RC ₃ | 1993 09 14.43559 | 00 40 50.51 | -02 25 09.8 | | 2 675 |
| 1993 RU | * 1993 09 14.34531 | 00 07 54.58 | -11 24 34.4 | 16.0 | 2 675 | 1993 RC ₃ | 1993 09 16.38941 | 00 40 14.66 | -02 56 31.4 | | 2 675 |
| 1993 RU | 1993 09 14.36892 | 00 07 53.67 | -11 25 09.3 | | 2 675 | 1993 RC ₃ | 1993 09 16.41892 | 00 40 13.98 | -02 57 01.0 | | 2 675 |
| 1993 RU | 1993 09 16.31997 | 00 06 41.01 | -12 10 36.7 | | 2 675 | 1993 RD ₃ | * 1993 09 12.35694 | 23 55 09.87 | +08 17 47.6 | 16.0 | 2 675 |
| 1993 RU | 1993 09 16.34878 | 00 06 39.83 | -12 11 15.9 | | 2 675 | 1993 RD ₃ | 1993 09 12.37969 | 23 55 09.31 | +08 17 24.1 | | 2 675 |
| 1993 RV | * 1993 09 14.34531 | 23 45 25.41 | -13 36 54.5 | 16.0 | 2 675 | 1993 RD ₃ | 1993 09 14.33941 | 23 54 23.02 | +07 43 51.0 | | 2 675 |
| 1993 RV | 1993 09 14.36892 | 23 45 24.25 | -13 37 13.7 | | 2 675 | 1993 RD ₃ | 1993 09 14.36302 | 23 54 22.56 | +07 43 26.3 | | 2 675 |
| 1993 RV | 1993 09 16.31997 | 23 44 02.26 | -14 04 16.7 | | 2 675 | 1993 RE ₃ | * 1993 09 14.32795 | 23 00 58.63 | +11 17 32.7 | 16.0 | 2 675 |
| 1993 RV | 1993 09 16.34878 | 23 44 00.92 | -14 04 39.6 | | 2 675 | 1993 RE ₃ | 1993 09 14.35104 | 23 00 57.87 | +11 17 17.4 | | 2 675 |
| 1993 RK ₂ | * 1993 09 13.36563 | 23 29 37.37 | +09 34 26.2 | 16.5 | 2 675 | 1993 RE ₃ | 1993 09 16.29340 | 22 59 58.60 | +10 54 13.2 | | 2 675 |
| 1993 RK ₂ | 1993 09 13.39948 | 23 29 35.12 | +09 34 38.2 | | 2 675 | 1993 RF ₃ | * 1993 09 14.32795 | 23 07 38.92 | +12 15 33.1 | 16.0 | 2 675 |
| 1993 RK ₂ | 1993 09 16.27847 | 23 26 43.61 | +09 47 16.1 | | 2 675 | 1993 RF ₃ | 1993 09 14.35104 | 23 07 38.03 | +12 15 16.3 | | 2 675 |
| 1993 RK ₂ | 1993 09 16.30052 | 23 26 42.27 | +09 47 17.9 | | 2 675 | 1993 RF ₃ | 1993 09 16.29340 | 23 06 33.79 | +11 50 28.7 | | 2 675 |
| 1993 RL ₂ | * 1993 09 14.29219 | 22 38 43.30 | -17 25 36.0 | 16.5 | 2 675 | 1993 RK ₃ | * 1993 09 12.23125 | 21 41 23.72 | -10 43 38.5 | 16.5 | 2 675 |
| 1993 RL ₂ | 1993 09 14.31493 | 22 38 41.06 | -17 25 16.3 | | 2 675 | 1993 RK ₃ | 1993 09 12.26649 | 21 41 22.27 | -10 43 50.8 | | 2 675 |
| 1993 RL ₂ | 1993 09 16.21892 | 22 35 45.87 | -17 01 03.3 | | 2 675 | 1993 RK ₃ | 1993 09 14.18403 | 21 40 10.46 | -10 54 18.4 | | 2 675 |
| 1993 RL ₂ | 1993 09 16.25087 | 22 35 42.79 | -17 00 40.3 | | 2 675 | 1993 RK ₃ | 1993 09 14.21182 | 21 40 09.42 | -10 54 28.3 | | 2 675 |
| 1993 RM ₂ | * 1993 09 14.37535 | 00 01 01.10 | +15 34 37.7 | 16.0 | 2 675 | 1993 RL ₃ | * 1993 09 13.20608 | 21 32 30.39 | -03 33 32.6 | 16.5 | 2 675 |
| 1993 RM ₂ | 1993 09 14.39358 | 00 01 00.38 | +15 34 14.8 | | 2 675 | 1993 RL ₃ | 1993 09 14.14774 | 21 32 01.74 | -03 34 25.0 | | 2 675 |
| 1993 RM ₂ | 1993 09 16.32535 | 23 59 53.95 | +14 56 01.7 | | 2 675 | 1993 RL ₃ | 1993 09 14.17170 | 21 32 00.87 | -03 34 25.5 | | 2 675 |
| 1993 RM ₂ | 1993 09 16.35434 | 23 59 52.83 | +14 55 26.0 | | 2 675 | 1993 RM ₃ | * 1993 09 14.46372 | 01 56 02.65 | -13 00 43.9 | 16.0 | 2 675 |
| 1993 RN ₂ | * 1993 09 15.30556 | 22 56 47.68 | +12 40 22.2 | 16.5 | 2 675 | 1993 RM ₃ | 1993 09 14.48837 | 01 56 02.60 | -13 01 00.1 | | 2 675 |
| 1993 RN ₂ | 1993 09 15.33021 | 22 56 46.39 | +12 39 53.4 | | 2 675 | 1993 RM ₃ | 1993 09 15.48351 | 01 56 03.53 | -13 11 44.6 | | 2 675 |
| 1993 RN ₂ | 1993 09 16.23125 | 22 56 00.00 | +12 22 05.7 | | 2 675 | 1993 RN ₃ | * 1993 09 14.46372 | 02 03 30.13 | -13 02 19.9 | 16.5 | 2 675 |
| 1993 RQ ₂ | * 1993 09 12.25868 | 22 39 01.03 | -23 00 47.0 | 16.5 | 2 675 | 1993 RN ₃ | 1993 09 14.48837 | 02 03 29.28 | -13 02 26.1 | | 2 675 |
| 1993 RQ ₂ | 1993 09 12.28941 | 22 38 58.45 | -23 00 25.0 | | 2 675 | 1993 RN ₃ | 1993 09 15.48351 | 02 02 53.33 | -13 07 10.0 | | 2 675 |
| 1993 RQ ₂ | 1993 09 15.31840 | 22 34 56.85 | -22 24 31.7 | | 2 675 | 1993 RO ₃ | * 1993 09 14.28073 | 22 32 12.86 | -03 32 57.1 | | 2 675 |
| 1993 RR ₂ | * 1993 09 14.38733 | 00 53 09.59 | -08 32 26.3 | 16.0 | 2 675 | 1993 RO ₃ | 1993 09 14.30347 | 22 32 11.88 | -03 33 11.1 | | 2 675 |
| 1993 RR ₂ | 1993 09 14.40590 | 00 53 09.63 | -08 32 50.1 | | 2 675 | 1993 RO ₃ | 1993 09 16.17448 | 22 31 05.62 | -03 51 30.5 | | 2 675 |
| 1993 RR ₂ | 1993 09 16.38368 | 00 53 06.84 | -09 13 40.3 | | 2 675 | 1993 RO ₃ | 1993 09 16.19774 | 22 31 04.80 | -03 51 41.2 | | 2 675 |
| 1993 RR ₂ | 1993 09 16.41285 | 00 53 06.62 | -09 14 15.7 | | 2 675 | 1993 SL ₃ | * 1993 09 19.39184 | 01 44 14.12 | +07 07 38.8 | 16.0 | 3 675 |
| 1993 RR ₂ | 1993 09 18.32934 | 00 52 57.11 | -09 52 20.6 | 17.0 | 3 675 | 1993 SL ₃ | 1993 09 23.45990 | 01 38 50.08 | +07 44 36.9 | | 3 675 |
| 1993 RR ₂ | 1993 09 22.33854 | 00 52 18.91 | -11 06 26.4 | | 3 675 | 1993 SR ₃ | * 1993 09 18.34513 | 01 31 13.90 | +08 44 14.8 | 16.2 | 3 675 |
| 1993 RW ₂ | * 1993 09 12.25052 | 22 24 36.91 | -08 41 08.6 | 15.5 | 2 675 | 1993 SR ₃ | 1993 09 22.40902 | 01 29 42.11 | +07 47 51.1 | | 3 675 |
| 1993 RW ₂ | 1993 09 12.28160 | 22 24 35.88 | -08 41 25.5 | | 2 675 | 1993 SS ₃ | * 1993 09 18.34513 | 01 32 26.02 | +05 36 22.5 | 17.2 | 3 675 |
| 1993 RW ₂ | 1993 09 15.20486 | 22 22 54.61 | -09 07 29.1 | | 2 675 | 1993 SS ₃ | 1993 09 22.41597 | 01 30 36.79 | +03 59 55.9 | | 3 675 |
| 1993 RW ₂ | 1993 09 15.22847 | 22 22 53.72 | -09 07 41.3 | | 2 675 | 1993 ST ₃ | * 1993 09 18.32934 | 00 37 34.38 | -07 04 37.1 | 16.2 | 3 675 |
| 1993 RX ₂ | * 1993 09 12.25052 | 22 19 51.71 | -13 47 54.6 | 16.5 | 2 675 | 1993 ST ₃ | 1993 09 22.33854 | 00 34 10.99 | -07 11 15.6 | | 3 675 |
| 1993 RX ₂ | 1993 09 12.28160 | 22 19 50.17 | -13 48 16.9 | | 2 675 | 1993 SU ₃ | * 1993 09 18.32934 | 00 55 02.48 | -09 25 51.1 | 16.5 | 3 675 |
| 1993 RX ₂ | 1993 09 15.20486 | 22 17 40.41 | -14 22 50.9 | | 2 675 | 1993 SU ₃ | 1993 09 22.33854 | 00 52 38.89 | -10 14 40.0 | | 3 675 |
| 1993 RX ₂ | 1993 09 15.22847 | 22 17 39.26 | -14 23 09.6 | | 2 675 | 1993 SV ₃ | * 1993 09 18.32934 | 01 01 15.66 | -05 43 27.5 | 16.8 | 3 675 |
| 1993 RY ₂ | * 1993 09 12.25052 | 22 20 02.93 | -11 54 23.9 | 16.0 | 2 675 | 1993 SV ₃ | 1993 09 22.33854 | 00 54 57.34 | -04 59 58.7 | | 3 675 |
| 1993 RY ₂ | 1993 09 12.28160 | 22 20 01.88 | -11 54 48.1 | | 2 675 | 1993 TC | 1993 10 13.37135 | 01 40 37.23 | +09 56 15.0 | 15.5 | 9 675 |

| | | | | | | | | | | | |
|----------|--------------------|-------------|-------------|------|-------|----------|--------------------|-------------|-------------|------|-------|
| 1993 TC | 1993 10 13.41493 | 01 40 32.54 | +09 56 44.7 | | 9 675 | 1279 T-2 | 1973 09 19.19948 | 00 25 49.40 | +02 22 55.9 | | 4 675 |
| 1993 TC | 1993 10 15.28611 | 01 37 17.73 | +10 18 02.8 | | 9 675 | 1279 T-2 | 1973 09 19.23785 | 00 25 47.45 | +02 22 42.0 | | 4 675 |
| 3526 P-L | * 1960 10 17.23681 | 00 29 39.11 | +15 34 50.7 | 17.0 | 4 675 | 1279 T-2 | 1973 09 19.25006 | 00 25 46.94 | +02 22 37.1 | | 4 675 |
| 3526 P-L | 1960 10 22.12083 | 00 25 54.11 | +15 20 02.0 | | 4 675 | 1279 T-2 | 1973 09 20.22847 | 00 25 00.39 | +02 16 19.1 | | 4 675 |
| 3526 P-L | 1960 10 22.17778 | 00 25 51.58 | +15 19 51.8 | | 4 675 | 1279 T-2 | 1973 09 20.30278 | 00 24 56.61 | +02 15 51.7 | | 4 675 |
| 3526 P-L | 1960 10 22.29097 | 00 25 46.33 | +15 19 31.5 | | 4 675 | 1279 T-2 | 1973 09 24.34688 | 00 21 37.25 | +01 48 55.3 | | 4 675 |
| 3526 P-L | 1960 10 24.30972 | 00 24 20.21 | +15 13 12.1 | | 4 675 | 1279 T-2 | 1973 09 24.38750 | 00 21 35.08 | +01 48 40.5 | | 4 675 |
| 3526 P-L | 1960 10 25.20486 | 00 23 43.48 | +15 10 22.5 | | 4 675 | 1279 T-2 | 1973 09 24.41597 | 00 21 33.57 | +01 48 28.7 | | 4 675 |
| 3526 P-L | 1960 10 25.32778 | 00 23 38.31 | +15 09 59.6 | | 4 675 | 1279 T-2 | 1973 09 24.45434 | 00 21 31.49 | +01 48 13.9 | | 4 675 |
| 3526 P-L | 1960 10 26.28264 | 00 23 00.31 | +15 06 58.5 | | 4 675 | 1279 T-2 | 1973 09 25.24375 | 00 20 52.08 | +01 42 49.3 | | 4 675 |
| 3526 P-L | 1960 10 26.37951 | 00 22 56.27 | +15 06 39.1 | | 4 675 | 1279 T-2 | 1973 09 25.28125 | 00 20 50.15 | +01 42 38.5 | | 4 675 |
| 4040 P-L | * 1960 09 24.37573 | 00 29 23.06 | +09 40 20.8 | 18.1 | 4 675 | 1279 T-2 | 1973 09 25.30729 | 00 20 48.89 | +01 42 25.9 | | 4 675 |
| 4040 P-L | 1960 09 25.42780 | 00 28 34.97 | +09 31 44.1 | | 4 675 | 1279 T-2 | 1973 09 25.34601 | 00 20 46.66 | +01 42 12.1 | | 4 675 |
| 4040 P-L | 1960 09 26.30558 | 00 27 55.17 | +09 24 28.4 | | 4 675 | 1279 T-2 | * 1973 09 29.25330 | 00 17 27.21 | +01 15 30.2 | 17.9 | 4 675 |
| 4040 P-L | 1960 09 28.36808 | 00 26 20.61 | +09 07 07.9 | | 4 675 | 1279 T-2 | 1973 09 29.31806 | 00 17 23.72 | +01 15 03.4 | | 4 675 |
| 4040 P-L | 1960 10 17.27085 | 00 13 23.42 | +06 25 14.8 | | 4 675 | 1279 T-2 | 1973 09 30.21007 | 00 16 38.40 | +01 09 01.2 | | 4 675 |
| 4040 P-L | 1960 10 22.22293 | 00 10 55.46 | +05 46 45.9 | | 4 675 | 1279 T-2 | 1973 09 30.27431 | 00 16 34.90 | +01 08 33.8 | | 4 675 |
| 4040 P-L | 1960 10 24.35836 | 00 10 01.57 | +05 31 12.3 | | 4 675 | 1279 T-2 | 1973 10 04.28958 | 00 13 12.68 | +00 41 42.7 | | 4 675 |
| 4040 P-L | 1960 10 26.32573 | 00 09 17.97 | +05 17 30.7 | | 4 675 | 1279 T-2 | 1973 10 04.35208 | 00 13 09.41 | +00 41 19.2 | | 4 675 |
| 4121 P-L | * 1960 09 24.37573 | 00 35 31.86 | +07 07 10.1 | 17.8 | 4 675 | 1279 T-2 | 1973 10 05.31684 | 00 12 22.31 | +00 35 02.3 | | 4 675 |
| 4121 P-L | 1960 09 25.42780 | 00 34 50.41 | +06 58 51.9 | | 4 675 | 1279 T-2 | 1973 10 05.37917 | 00 12 19.04 | +00 34 37.6 | | 4 675 |
| 4121 P-L | 1960 09 26.30558 | 00 34 15.83 | +06 51 52.2 | | 4 675 | 2144 T-2 | 1973 09 19.19948 | 00 42 01.63 | +05 36 34.3 | | 4 675 |
| 4121 P-L | 1960 09 28.36808 | 00 32 53.26 | +06 35 12.4 | | 4 675 | 2144 T-2 | 1973 09 19.25006 | 00 41 58.88 | +05 36 23.7 | | 4 675 |
| 4121 P-L | 1960 10 17.30420 | 00 20 50.03 | +03 59 46.4 | | 4 675 | 2144 T-2 | 1973 09 20.26458 | 00 41 04.31 | +05 32 49.8 | | 4 675 |
| 4121 P-L | 1960 10 17.31529 | 00 20 49.63 | +03 59 41.5 | | 4 675 | 2144 T-2 | 1973 09 24.36181 | 00 37 17.92 | +05 17 47.2 | | 4 675 |
| 4121 P-L | 1960 10 22.26809 | 00 18 17.73 | +03 22 23.8 | | 4 675 | 2144 T-2 | 1973 09 24.42847 | 00 37 14.05 | +05 17 31.3 | | 4 675 |
| 4121 P-L | 1960 10 24.35836 | 00 17 21.03 | +03 07 37.5 | | 4 675 | 2144 T-2 | 1973 09 25.25642 | 00 36 27.93 | +05 14 18.8 | | 4 675 |
| 4121 P-L | 1960 10 25.30351 | 00 16 57.31 | +03 01 06.0 | | 4 675 | 2144 T-2 | 1973 09 25.32031 | 00 36 24.28 | +05 14 04.2 | | 4 675 |
| 4121 P-L | 1960 10 26.32573 | 00 16 32.62 | +02 54 12.6 | | 4 675 | 2144 T-2 | 1973 09 29.26632 | 00 32 40.12 | +04 58 30.7 | | 4 675 |
| 4121 P-L | 1960 10 26.35766 | 00 16 31.83 | +02 53 58.6 | | 4 675 | 2144 T-2 | * 1973 09 29.33073 | 00 32 36.25 | +04 58 14.7 | 18.4 | 4 675 |
| 1047 T-1 | 1971 03 24.38924 | 12 00 11.76 | -06 42 50.5 | | 4 675 | 2144 T-2 | 1973 09 30.22257 | 00 31 45.68 | +04 54 37.1 | | 4 675 |
| 1047 T-1 | 1971 03 25.27326 | 11 59 24.32 | -06 35 27.8 | | 4 675 | 2144 T-2 | 1973 09 30.28785 | 00 31 41.85 | +04 54 20.2 | | 4 675 |
| 1047 T-1 | * 1971 03 25.31562 | 11 59 21.98 | -06 35 05.6 | 16.6 | 4 675 | 2144 T-2 | 1973 10 04.30208 | 00 27 54.35 | +04 38 01.1 | | 4 675 |
| 1047 T-1 | 1971 03 26.26771 | 11 58 31.29 | -06 27 09.5 | | 4 675 | 2144 T-2 | 1973 10 04.36476 | 00 27 50.76 | +04 37 45.9 | | 4 675 |
| 1047 T-1 | 1971 03 27.32500 | 11 57 34.92 | -06 18 11.7 | | 4 675 | 2144 T-2 | 1973 10 05.32917 | 00 26 56.75 | +04 33 50.2 | | 4 675 |
| 3344 T-1 | 1971 03 26.29653 | 12 44 16.68 | -02 35 04.0 | | 4 675 | 2144 T-2 | 1973 10 05.39132 | 00 26 53.30 | +04 33 35.5 | | 4 675 |
| 3344 T-1 | * 1971 03 26.33611 | 12 44 14.39 | -02 34 44.7 | 19.3 | 4 675 | 5211 T-2 | 1973 09 19.29705 | 00 17 07.64 | +13 16 40.4 | | 4 675 |
| 3344 T-1 | 1971 03 27.33854 | 12 43 18.81 | -02 26 45.1 | | 4 675 | 5211 T-2 | 1973 09 20.21458 | 00 16 27.56 | +13 10 57.4 | | 4 675 |
| 3344 T-1 | 1971 04 02.43993 | 12 37 38.05 | -01 38 10.7 | | 4 675 | 5211 T-2 | 1973 09 20.29253 | 00 16 24.15 | +13 10 28.6 | | 4 675 |
| 1265 T-2 | 1973 09 20.22847 | 00 24 09.60 | +03 34 39.1 | | 4 675 | 5211 T-2 | 1973 09 24.40035 | 00 13 20.63 | +12 43 09.4 | | 4 675 |
| 1265 T-2 | 1973 09 24.34688 | 00 20 40.32 | +03 10 19.7 | | 4 675 | 5211 T-2 | 1973 09 24.47986 | 00 13 16.91 | +12 42 35.8 | | 4 675 |
| 1265 T-2 | 1973 09 24.41597 | 00 20 36.76 | +03 09 54.4 | | 4 675 | 5211 T-2 | * 1973 09 25.29375 | 00 12 40.35 | +12 36 49.7 | 17.3 | 4 675 |
| 1265 T-2 | 1973 09 25.24375 | 00 19 54.09 | +03 04 54.4 | | 4 675 | 5211 T-2 | 1973 09 25.35903 | 00 12 37.28 | +12 36 22.0 | | 4 675 |
| 1265 T-2 | 1973 09 25.30729 | 00 19 50.81 | +03 04 33.1 | | 4 675 | 5211 T-2 | 1973 09 29.24062 | 00 09 40.36 | +12 07 28.7 | | 4 675 |
| 1265 T-2 | * 1973 09 29.25330 | 00 16 26.05 | +02 40 27.8 | 19.2 | 4 675 | 5211 T-2 | 1973 09 29.30486 | 00 09 37.29 | +12 06 59.1 | | 4 675 |
| 1265 T-2 | 1973 09 29.31806 | 00 16 22.55 | +02 40 03.8 | | 4 675 | 5211 T-2 | 1973 09 30.19722 | 00 08 56.73 | +12 00 03.7 | | 4 675 |
| 1265 T-2 | 1973 09 30.21007 | 00 15 36.34 | +02 34 37.6 | | 4 675 | 5211 T-2 | 1973 09 30.35295 | 00 08 49.33 | +11 58 50.7 | | 4 675 |
| 1265 T-2 | 1973 09 30.27431 | 00 15 32.83 | +02 34 13.6 | | 4 675 | 3137 T-3 | 1977 10 07.27031 | 01 31 27.02 | +07 56 33.8 | | 4 675 |
| 1265 T-2 | 1973 10 04.28958 | 00 12 06.01 | +02 09 39.7 | | 4 675 | 3137 T-3 | 1977 10 11.28819 | 01 27 51.43 | +07 53 39.0 | | 4 675 |
| 1265 T-2 | 1973 10 04.35208 | 00 12 02.74 | +02 09 14.9 | | 4 675 | 3137 T-3 | 1977 10 11.35642 | 01 27 47.59 | +07 53 36.1 | | 4 675 |
| 1265 T-2 | 1973 10 05.31684 | 00 11 13.87 | +02 03 27.2 | | 4 675 | 3137 T-3 | 1977 10 12.28681 | 01 26 57.09 | +07 52 51.0 | | 4 675 |
| 1279 T-2 | 1973 09 19.18611 | 00 25 49.96 | +02 23 00.7 | | 4 675 | 3137 T-3 | 1977 10 12.35347 | 01 26 53.29 | +07 52 48.1 | | 4 675 |

| | | | | | | | | | | |
|----------|--------------------|-------------|-------------|------|-------|--------|------------------|-------------|-------------|------------|
| 3137 T-3 | * 1977 10 16.27309 | 01 23 18.14 | +07 49 39.2 | 17.1 | 4 675 | (3791) | 1951 08 06.39444 | 23 11 42.82 | -05 03 40.9 | 6 675 |
| 3137 T-3 | 1977 10 16.33872 | 01 23 14.35 | +07 49 35.3 | | 4 675 | (3791) | 1951 08 06.41875 | 23 11 42.08 | -05 03 44.3 | 6 675 |
| 3137 T-3 | 1977 10 17.27552 | 01 22 22.87 | +07 48 51.7 | | 4 675 | (4204) | 1954 04 02.29132 | 11 58 28.03 | -04 33 53.8 | 6 675 |
| 3137 T-3 | 1977 10 17.34236 | 01 22 19.03 | +07 48 48.0 | | 4 675 | (4204) | 1954 04 02.31458 | 11 58 26.83 | -04 33 42.7 | 6 675 |
| 3137 T-3 | 1977 10 21.39792 | 01 18 37.92 | +07 45 42.6 | | 4 675 | (4243) | 1993 09 15.21615 | 21 04 35.72 | -21 15 14.7 | 16.0 2 675 |
| 3137 T-3 | 1977 10 21.45799 | 01 18 34.62 | +07 45 39.5 | | 4 675 | (4243) | 1993 09 16.15573 | 21 04 14.48 | -21 12 34.1 | 2 675 |
| 3137 T-3 | 1977 10 22.39844 | 01 17 44.15 | +07 44 57.3 | | 4 675 | (4265) | 1951 08 06.39444 | 23 24 08.86 | -07 26 12.9 | 6 675 |
| 3137 T-3 | 1977 10 22.45920 | 01 17 40.80 | +07 44 54.8 | | 4 675 | (4265) | 1951 08 06.41875 | 23 24 08.64 | -07 26 19.8 | 6 675 |
| (101) | 1951 08 06.39444 | 23 32 01.68 | -06 02 37.7 | | 6 675 | (4380) | 1954 04 02.29132 | 11 54 54.25 | -04 02 50.8 | 6 675 |
| (101) | 1951 08 06.41875 | 23 32 01.02 | -06 02 35.7 | | 6 675 | (4380) | 1954 04 02.31458 | 11 54 52.99 | -04 02 47.7 | 6 675 |
| (168) | 1954 04 02.29132 | 12 11 36.69 | -03 51 26.2 | | 6 675 | (4492) | 1951 08 06.39444 | 23 22 02.70 | -07 58 39.4 | 6 675 |
| (168) | 1954 04 02.31458 | 12 11 35.82 | -03 51 20.4 | | 6 675 | (4492) | 1951 08 06.41875 | 23 22 01.90 | -07 58 38.6 | 6 675 |
| (549) | 1954 04 02.29132 | 12 02 26.16 | -06 55 47.0 | | 6 675 | (4683) | 1951 08 06.39444 | 23 19 17.07 | -04 10 00.4 | 6 675 |
| (1120) | 1951 08 06.39444 | 23 15 44.71 | -03 36 33.3 | | 6 675 | (4752) | 1951 08 06.39444 | 23 24 29.23 | -06 59 05.5 | 6 675 |
| (1120) | 1951 08 06.41875 | 23 15 44.37 | -03 36 40.0 | | 6 675 | (4752) | 1951 08 06.41875 | 23 24 28.65 | -06 59 09.5 | 6 675 |
| (1230) | 1954 04 02.31458 | 12 20 14.47 | -05 58 28.0 | | 6 675 | (4782) | 1951 08 06.39444 | 23 18 31.12 | -04 39 56.7 | 6 675 |
| (1233) | 1954 04 02.29132 | 11 57 48.61 | -09 27 15.0 | | 6 675 | (4782) | 1951 08 06.41875 | 23 18 30.44 | -04 40 01.9 | 6 675 |
| (1233) | 1954 04 02.31458 | 11 57 47.34 | -09 27 07.9 | | 6 675 | (5408) | 1954 04 02.29132 | 12 13 18.33 | -04 24 07.9 | 6 675 |
| (1299) | 1993 09 12.23125 | 21 44 48.58 | -10 49 36.4 | 15.0 | 2 675 | (5408) | 1954 04 02.31458 | 12 13 17.16 | -04 23 55.0 | 6 675 |
| (1299) | 1993 09 12.26649 | 21 44 47.24 | -10 49 50.6 | | 2 675 | (5688) | 1993 09 13.15885 | 20 20 53.17 | -19 25 04.0 | 16.0 2 675 |
| (1299) | 1993 09 14.18403 | 21 43 38.35 | -11 02 08.3 | | 2 675 | (5688) | 1993 09 15.16806 | 20 20 42.96 | -19 29 15.2 | 2 675 |
| (1299) | 1993 09 14.21182 | 21 43 37.30 | -11 02 21.2 | | 2 675 | | | | | |
| (1535) | 1954 04 02.29132 | 11 55 55.25 | -09 03 44.7 | | 6 675 | | | | | |
| (1535) | 1954 04 02.31458 | 11 55 54.18 | -09 03 37.0 | | 6 675 | | | | | |
| (1581) | 1951 08 06.39444 | 23 29 24.17 | -06 16 53.8 | | 6 675 | | | | | |
| (1581) | 1951 08 06.41875 | 23 29 23.57 | -06 16 58.3 | | 6 675 | | | | | |
| (1608) | 1951 08 06.39444 | 23 27 31.95 | -07 21 06.7 | | 6 675 | | | | | |
| (1608) | 1951 08 06.41875 | 23 27 31.40 | -07 21 06.1 | | 6 675 | | | | | |
| (1641) | 1951 08 06.39444 | 23 21 13.66 | -03 03 22.2 | | 6 675 | | | | | |
| (1641) | 1951 08 06.41875 | 23 21 12.90 | -03 03 22.2 | | 6 675 | | | | | |
| (1986) | 1951 08 06.39444 | 23 22 09.96 | -04 37 02.2 | | 6 675 | | | | | |
| (1986) | 1951 08 06.41875 | 23 22 09.53 | -04 37 07.0 | | 6 675 | | | | | |
| (2011) | 1954 04 02.29132 | 11 59 22.04 | -04 41 51.1 | | 6 675 | | | | | |
| (2011) | 1954 04 02.31458 | 11 59 20.72 | -04 41 45.1 | | 6 675 | | | | | |
| (2142) | 1951 08 06.39444 | 23 23 14.76 | -04 03 13.8 | | 6 675 | | | | | |
| (2142) | 1951 08 06.41875 | 23 23 14.10 | -04 03 19.0 | | 6 675 | | | | | |
| (2354) | 1951 08 06.39444 | 23 08 36.89 | -03 19 38.4 | | 6 675 | | | | | |
| (2354) | 1951 08 06.41875 | 23 08 36.26 | -03 19 43.2 | | 6 675 | | | | | |
| (2388) | 1951 08 06.39444 | 23 21 45.95 | -03 25 53.9 | | 6 675 | | | | | |
| (2388) | 1951 08 06.41875 | 23 21 45.12 | -03 25 58.9 | | 6 675 | | | | | |
| (2405) | 1951 08 06.39444 | 23 31 36.57 | -04 44 40.2 | | 6 675 | | | | | |
| (2405) | 1951 08 06.41875 | 23 31 35.99 | -04 44 44.1 | | 6 675 | | | | | |
| (2836) | 1951 08 06.39444 | 23 20 32.93 | -07 59 11.4 | | 6 675 | | | | | |
| (2836) | 1951 08 06.41875 | 23 20 32.02 | -07 59 10.6 | | 6 675 | | | | | |
| (2859) | 1951 08 06.39444 | 23 13 30.19 | -03 49 17.0 | | 6 675 | | | | | |
| (2859) | 1951 08 06.41875 | 23 13 29.37 | -03 49 23.8 | | 6 675 | | | | | |
| (3100) | 1951 08 06.39444 | 23 25 32.52 | -07 37 01.3 | | 6 675 | | | | | |
| (3100) | 1951 08 06.41875 | 23 25 31.75 | -07 37 05.7 | | 6 675 | | | | | |
| (3334) | 1951 08 06.39444 | 23 30 58.34 | -08 00 18.4 | | 6 675 | | | | | |
| (3334) | 1951 08 06.41875 | 23 30 57.74 | -08 00 23.6 | | 6 675 | | | | | |
| (3580) | 1951 08 06.39444 | 23 23 12.83 | -04 47 24.1 | | 6 675 | | | | | |
| (3580) | 1951 08 06.41875 | 23 23 12.08 | -04 47 28.1 | | 6 675 | | | | | |

689 U.S. Naval Observatory, Flagstaff Station

J. A. DeYoung, U.S. Naval Observatory, Washington, DC 20392-5420, U.S.A.

Observers: J. R. Rohde, D. Pascu, J. A. DeYoung

Measurer: J. A. DeYoung

1.55-m astrometric reflector + CCD

GSC

| | | | | |
|----------------------|------------------|-------------|-------------|-----|
| 1992 QB ₁ | 1993 09 15.36115 | 00 05 20.18 | +00 39 26.6 | 689 |
| 1992 QB ₁ | 1993 09 15.37501 | 00 05 20.12 | +00 39 26.2 | 689 |
| 1992 QB ₁ | 1993 09 15.38814 | 00 05 20.04 | +00 39 26.2 | 689 |
| 1992 QB ₁ | 1993 09 16.42959 | 00 05 15.32 | +00 38 54.3 | 689 |

691 Kitt Peak, Steward Observatory

T. Gehrels, Space Sciences Building, University of Arizona, Tucson, AZ 85721, U.S.A.

Observers T. Gehrels, R. Jedicke, J. V. Scotti

0.91-m Spacewatch telescope

GSC

| | | | | | |
|-----------------------|------------------|-------------|-------------|--------|-----|
| 1976 DJ ₁ | 1992 01 27.28209 | 09 30 55.11 | +17 51 27.2 | 18.1 V | 691 |
| 1976 DJ ₁ | 1992 01 27.33212 | 09 30 53.12 | +17 51 40.5 | | 691 |
| 1978 SE ₃ | 1992 04 07.15389 | 11 27 09.60 | +01 03 34.9 | 18.6 V | 691 |
| 1978 SE ₃ | 1992 04 07.17869 | 11 27 08.49 | +01 03 44.0 | | 691 |
| 1978 SE ₃ | 1992 04 07.20636 | 11 27 07.29 | +01 03 53.8 | | 691 |
| 1979 MP ₃ | 1993 09 16.20989 | 22 28 13.54 | -04 27 30.3 | 17.4 V | 691 |
| 1979 MP ₃ | 1993 09 16.24177 | 22 28 11.90 | -04 27 43.4 | | 691 |
| 1979 MP ₃ | 1993 09 16.27790 | 22 28 10.08 | -04 27 57.7 | | 691 |
| 1981 EO ₄ | 1993 08 15.33514 | 21 06 45.24 | -09 46 08.4 | 17.6 V | 691 |
| 1981 EO ₄ | 1993 08 15.35579 | 21 06 44.22 | -09 46 07.4 | | 691 |
| 1981 EH ₉ | 1993 09 16.20436 | 22 20 14.17 | -04 46 11.2 | | 691 |
| 1981 EH ₉ | 1993 09 16.23624 | 22 20 12.53 | -04 46 21.7 | 19.5 V | 691 |
| 1981 EH ₉ | 1993 09 16.27236 | 22 20 10.71 | -04 46 33.1 | | 691 |
| 1981 EH ₂₄ | 1993 09 18.39024 | 00 53 53.55 | +04 20 42.6 | | 691 |

| | | | | | | | | | | | |
|-----------------------|------------------|-------------|-------------|--------|-----|-----------------------|--------------------|-------------|-------------|--------|-----|
| 1981 EH ₂₄ | 1993 09 18.42383 | 00 53 52.09 | +04 20 35.2 | 18.8 V | 691 | 1989 TA ₁₆ | 1993 09 14.32016 | 22 47 37.59 | -03 34 04.8 | | 691 |
| 1981 EH ₂₄ | 1993 09 18.45777 | 00 53 50.58 | +04 20 27.4 | | 691 | 1990 SA ₂ | 1992 02 27.44207 | 11 46 45.41 | +01 52 13.8 | 19.1 V | 691 |
| 1981 EL ₂₄ | 1993 09 15.27616 | 23 42 54.59 | -00 35 42.1 | | 691 | 1990 SA ₂ | 1992 02 27.46620 | 11 46 44.07 | +01 52 20.8 | | 691 |
| 1981 EL ₂₄ | 1993 09 15.30856 | 23 42 52.98 | -00 35 50.9 | 17.0 V | 691 | 1990 SA ₂ | 1992 02 27.52008 | 11 46 41.23 | +01 52 37.5 | | 691 |
| 1981 EL ₂₄ | 1993 09 15.34065 | 23 42 51.42 | -00 36 00.2 | | 691 | 1990 TT ₁₂ | 1992 02 26.12740 | 09 26 43.08 | +16 27 59.7 | 18.1 V | 691 |
| 1981 EL ₂₄ | 1993 09 20.16216 | 23 39 03.73 | -00 58 59.5 | 17.2 V | 691 | 1990 TT ₁₂ | 1992 02 26.14922 | 09 26 42.01 | +16 28 03.9 | | 691 |
| 1981 EL ₂₄ | 1993 09 20.19519 | 23 39 02.13 | -00 59 08.8 | | 691 | 1990 TT ₁₂ | 1992 02 26.17057 | 09 26 41.03 | +16 28 07.7 | | 691 |
| 1981 EL ₂₄ | 1993 09 20.22748 | 23 39 00.57 | -00 59 18.1 | | 691 | 1991 AP ₁ | 1993 09 14.16074 | 21 17 58.48 | -15 45 14.5 | | 691 |
| 1981 ET ₂₇ | 1993 09 20.17337 | 23 55 14.93 | -01 09 30.5 | 18.6 V | 691 | 1991 AP ₁ | 1993 09 14.17077 | 21 17 58.10 | -15 45 15.8 | 18.0 V | 691 |
| 1981 ET ₂₇ | 1993 09 20.20641 | 23 55 13.41 | -01 09 42.3 | | 691 | 1991 AP ₁ | 1993 09 14.19001 | 21 17 57.36 | -15 45 18.3 | | 691 |
| 1981 ET ₂₇ | 1993 09 20.23869 | 23 55 11.90 | -01 09 53.0 | | 691 | 1991 DX | 1993 09 16.21090 | 22 29 40.65 | -04 15 40.8 | | 691 |
| 1981 EG ₂₈ | 1993 09 19.37280 | 01 28 05.20 | +09 26 00.7 | 16.6 V | 691 | 1991 DX | 1993 09 16.24278 | 22 29 39.24 | -04 16 00.6 | 17.0 V | 691 |
| 1981 EG ₂₈ | 1993 09 19.40618 | 01 28 04.01 | +09 25 47.7 | | 691 | 1991 DX | 1993 09 16.27891 | 22 29 37.65 | -04 16 22.8 | | 691 |
| 1981 EG ₂₈ | 1993 09 19.43927 | 01 28 02.87 | +09 25 34.4 | | 691 | 1991 GQ ₂ | 1993 09 14.27631 | 23 24 43.75 | -03 18 20.6 | 17.7 V | 691 |
| 1981 EQ ₃₃ | 1992 02 27.20945 | 11 23 40.44 | -03 16 36.3 | 20.6 V | 691 | 1991 GQ ₂ | 1993 09 14.31096 | 23 24 42.16 | -03 18 32.0 | | 691 |
| 1981 EQ ₃₃ | 1992 02 27.21699 | 11 23 40.05 | -03 16 34.2 | | 691 | 1991 GQ ₂ | 1993 09 14.34583 | 23 24 40.63 | -03 18 42.3 | | 691 |
| 1981 EQ ₃₃ | 1992 02 27.22408 | 11 23 39.68 | -03 16 33.0 | | 691 | 1991 WH | 1991 11 11.43233 | 03 50 19.08 | +20 02 00.6 | | 691 |
| 1981 EK ₃₅ | 1993 06 22.41219 | 20 58 50.62 | -16 45 52.9 | 18.3 V | 691 | 1991 WH | 1991 11 11.45396 | 03 50 17.94 | +20 01 57.0 | 17.5 V | 691 |
| 1981 EK ₃₅ | 1993 06 22.43461 | 20 58 50.21 | -16 45 53.7 | | 691 | 1991 WH | 1991 11 11.47584 | 03 50 16.81 | +20 01 53.5 | | 691 |
| 1981 EK ₃₅ | 1993 06 22.45709 | 20 58 49.78 | -16 45 54.6 | | 691 | 1992 FN | 1993 09 14.27204 | 23 18 33.68 | -03 37 01.2 | | 691 |
| 1981 FL | 1993 09 14.25217 | 22 49 52.66 | -03 13 28.2 | | 691 | 1992 FN | 1993 09 14.30668 | 23 18 31.58 | -03 37 16.3 | 17.4 V | 691 |
| 1981 FL | 1993 09 14.28682 | 22 49 50.82 | -03 13 44.6 | | 691 | 1992 FN | 1993 09 14.34154 | 23 18 29.52 | -03 37 30.2 | | 691 |
| 1981 FL | 1993 09 14.32168 | 22 49 49.06 | -03 14 01.3 | 18.4 V | 691 | 1992 FH ₃ | * 1992 03 25.25586 | 12 31 40.74 | -04 48 11.5 | 18.7 V | 691 |
| 1982 SE ₁ | 1993 09 18.15410 | 21 33 39.09 | -09 44 20.6 | 17.0 V | 691 | 1992 FH ₃ | 1992 03 25.27539 | 12 31 39.60 | -04 48 07.0 | | 691 |
| 1982 SE ₁ | 1993 09 18.18968 | 21 33 38.09 | -09 44 26.3 | | 691 | 1992 GA | 1993 09 16.12962 | 21 28 55.90 | -07 50 43.7 | 18.3 V | 691 |
| 1982 SE ₁ | 1993 09 18.22347 | 21 33 37.15 | -09 44 31.0 | | 691 | 1992 GA | 1993 09 16.14965 | 21 28 55.16 | -07 50 45.1 | | 691 |
| 1982 SM ₆ | 1993 09 14.37407 | 23 53 43.50 | -03 41 29.2 | 16.3 V | 691 | 1992 GA | 1993 09 16.17050 | 21 28 54.33 | -07 50 47.6 | | 691 |
| 1982 SM ₆ | 1993 09 14.40873 | 23 53 41.35 | -03 41 32.4 | | 691 | 1992 SY ₅ | 1992 09 28.27397 | 22 49 56.25 | -09 33 48.3 | | 691 |
| 1982 SM ₆ | 1993 09 14.44305 | 23 53 39.20 | -03 41 36.2 | | 691 | 1992 SY ₅ | 1992 09 28.30656 | 22 49 55.09 | -09 33 55.4 | 18.8 V | 691 |
| 1982 XQ ₁ | 1993 09 19.38810 | 01 50 10.17 | +09 25 36.4 | | 691 | 1992 SD ₆ | 1992 09 28.27482 | 22 51 29.25 | -09 43 31.3 | | 691 |
| 1982 XQ ₁ | 1993 09 19.42147 | 01 50 09.18 | +09 25 29.8 | 18.1 V | 691 | 1992 SD ₆ | 1992 09 28.29666 | 22 51 28.26 | -09 43 37.2 | 20.5 V | 691 |
| 1982 XQ ₁ | 1993 09 19.45456 | 01 50 08.16 | +09 25 22.9 | | 691 | 1992 SM ₆ | 1992 09 29.30803 | 23 00 17.45 | -09 32 06.7 | | 691 |
| 1984 YY ₁ | 1992 02 09.39746 | 09 17 52.98 | +19 40 13.8 | 18.9 V | 691 | 1992 SM ₆ | 1992 09 29.31578 | 23 00 17.04 | -09 32 06.9 | 19.8 V | 691 |
| 1984 YY ₁ | 1992 02 09.42368 | 09 17 51.05 | +19 40 20.3 | | 691 | 1992 SM ₂₀ | 1992 09 29.13384 | 23 30 36.05 | -07 29 33.0 | 18.6 V | 691 |
| 1984 YY ₁ | 1992 02 09.45395 | 09 17 48.96 | +19 40 27.1 | | 691 | 1992 SM ₂₀ | 1992 09 29.15220 | 23 30 35.22 | -07 29 37.7 | | 691 |
| 1987 RY | 1993 09 14.35991 | 23 33 17.53 | -03 31 00.6 | | 691 | 1992 SM ₂₀ | 1992 09 29.17076 | 23 30 34.31 | -07 29 43.9 | | 691 |
| 1987 RY | 1993 09 14.39459 | 23 33 15.97 | -03 31 10.4 | 16.4 V | 691 | 1992 SU ₂₁ | 1992 09 29.13103 | 23 26 32.27 | -07 41 02.2 | | 691 |
| 1987 RY | 1993 09 14.42891 | 23 33 14.42 | -03 31 20.6 | | 691 | 1992 SU ₂₁ | 1992 09 29.14939 | 23 26 31.58 | -07 41 05.1 | 16.8 V | 691 |
| 1987 RC ₁ | 1993 09 20.17852 | 00 02 40.65 | -00 56 56.4 | | 691 | 1992 SU ₂₁ | 1992 09 29.16795 | 23 26 30.92 | -07 41 07.6 | | 691 |
| 1987 RC ₁ | 1993 09 20.21155 | 00 02 39.14 | -00 57 05.5 | | 691 | 1992 SW ₂₁ | 1992 09 29.12986 | 23 24 51.11 | -07 22 22.0 | | 691 |
| 1987 RC ₁ | 1993 09 20.24384 | 00 02 37.66 | -00 57 14.2 | 16.2 V | 691 | 1992 SW ₂₁ | 1992 09 29.14822 | 23 24 50.09 | -07 22 22.9 | | 691 |
| 1988 XC | 1993 09 15.35917 | 00 19 42.44 | +00 41 19.3 | | 691 | 1992 SW ₂₁ | 1992 09 29.16677 | 23 24 49.10 | -07 22 24.8 | 19.1 V | 691 |
| 1988 XC | 1993 09 15.39137 | 00 19 40.91 | +00 41 12.5 | 17.3 V | 691 | 1992 SX ₂₁ | 1992 09 28.13110 | 23 27 08.35 | -08 11 16.9 | 18.9 V | 691 |
| 1988 XC | 1993 09 15.42400 | 00 19 39.38 | +00 41 05.9 | | 691 | 1992 SX ₂₁ | 1992 09 28.17148 | 23 27 06.53 | -08 11 25.7 | | 691 |
| 1989 EJ ₁ | 1993 09 09.28777 | 22 40 22.45 | -07 43 29.8 | 16.7 V | 691 | 1992 SZ ₂₁ | 1992 09 29.13125 | 23 26 51.48 | -07 22 29.7 | | 691 |
| 1989 EJ ₁ | 1993 09 09.32095 | 22 40 20.56 | -07 43 45.8 | | 691 | 1992 SZ ₂₁ | 1992 09 29.14961 | 23 26 50.64 | -07 22 31.3 | 18.2 V | 691 |
| 1989 EJ ₁ | 1993 09 09.35589 | 22 40 18.59 | -07 44 03.2 | | 691 | 1992 SZ ₂₁ | 1992 09 29.16817 | 23 26 49.79 | -07 22 32.6 | | 691 |
| 1989 TA ₁₆ | 1992 04 07.23740 | 12 30 58.84 | -05 55 27.6 | 19.7 V | 691 | 1992 SA ₂₂ | 1992 09 29.13133 | 23 26 58.70 | -07 46 51.8 | | 691 |
| 1989 TA ₁₆ | 1992 04 07.26181 | 12 30 57.58 | -05 55 18.5 | | 691 | 1992 SA ₂₂ | 1992 09 29.14969 | 23 26 57.86 | -07 46 55.5 | 17.7 V | 691 |
| 1989 TA ₁₆ | 1992 04 07.28618 | 12 30 56.28 | -05 55 09.5 | | 691 | 1992 SA ₂₂ | 1992 09 29.16825 | 23 26 57.04 | -07 46 58.6 | | 691 |
| 1989 TA ₁₆ | 1993 09 14.25065 | 22 47 40.95 | -03 33 42.2 | 17.4 V | 691 | 1992 SB ₂₂ | 1992 09 29.13196 | 23 27 52.80 | -07 36 00.5 | 18.4 V | 691 |
| 1989 TA ₁₆ | 1993 09 14.28530 | 22 47 39.28 | -03 33 52.9 | | 691 | 1992 SB ₂₂ | 1992 09 29.15032 | 23 27 52.07 | -07 36 05.8 | | 691 |

| | | | | | | | | | | | |
|-----------------------|------------------|-------------|-------------|--------|-----|----------------------|------------------|-------------|-------------|--------|-----|
| 1992 SB ₂₂ | 1992 09 29.16888 | 23 27 51.35 | -07 36 10.6 | | 691 | 1993 OU ₁ | 1993 06 12.45283 | 21 45 18.70 | -09 47 42.6 | | 691 |
| 1992 WS ₈ | 1992 11 28.29221 | 04 22 56.06 | +22 33 52.3 | 17.1 V | 691 | 1993 OU ₁ | 1993 07 24.26083 | 21 38 57.46 | -10 44 24.5 | | 691 |
| 1992 WS ₈ | 1992 11 28.32111 | 04 22 54.27 | +22 33 48.4 | | 691 | 1993 OU ₁ | 1993 07 24.32546 | 21 38 55.29 | -10 44 41.3 | 18.4 V | 691 |
| 1992 WS ₈ | 1992 11 28.35252 | 04 22 52.35 | +22 33 44.1 | | 691 | 1993 OL ₃ | 1993 07 19.30118 | 19 56 27.97 | -20 11 18.8 | 17.4 V | 691 |
| 1993 AM | 1993 01 26.22742 | 08 07 13.84 | +20 49 20.6 | 17.2 V | 691 | 1993 OL ₃ | 1993 07 19.32735 | 19 56 26.25 | -20 11 20.1 | | 691 |
| 1993 AM | 1993 01 26.26187 | 08 07 11.51 | +20 49 14.9 | | 691 | 1993 OL ₃ | 1993 07 19.37543 | 19 56 23.21 | -20 11 22.3 | | 691 |
| 1993 AM | 1993 01 26.29612 | 08 07 09.20 | +20 49 09.4 | | 691 | 1993 OA ₄ | 1993 07 19.30380 | 20 00 14.34 | -20 09 26.8 | 17.2 V | 691 |
| 1993 BS ₂ | 1993 01 21.34852 | 08 50 47.91 | +19 58 25.7 | | 691 | 1993 OA ₄ | 1993 07 19.32997 | 20 00 12.94 | -20 09 32.4 | | 691 |
| 1993 BS ₂ | 1993 01 21.38224 | 08 50 45.69 | +19 58 41.2 | 16.0 V | 691 | 1993 OA ₄ | 1993 07 19.37806 | 20 00 10.38 | -20 09 42.6 | | 691 |
| 1993 BS ₂ | 1993 01 21.41605 | 08 50 43.44 | +19 58 56.8 | | 691 | 1993 OD ₄ | 1993 07 19.30421 | 20 00 50.23 | -20 04 47.9 | | 691 |
| 1993 BT ₄ | 1993 01 29.21180 | 09 26 16.13 | +17 47 24.3 | | 691 | 1993 OD ₄ | 1993 07 19.33038 | 20 00 48.83 | -20 04 56.1 | 18.8 V | 691 |
| 1993 BT ₄ | 1993 01 29.22370 | 09 26 15.54 | +17 47 27.6 | 18.0 V | 691 | 1993 OD ₄ | 1993 07 19.37847 | 20 00 46.26 | -20 05 11.3 | | 691 |
| 1993 BT ₄ | 1993 01 29.23509 | 09 26 14.99 | +17 47 30.8 | | 691 | 1993 OK ₄ | 1993 07 19.30483 | 20 01 43.39 | -20 08 48.0 | | 691 |
| 1993 BT ₄ | 1993 01 29.28563 | 09 26 12.56 | +17 47 45.1 | | 691 | 1993 OK ₄ | 1993 07 19.33100 | 20 01 42.04 | -20 08 51.7 | 18.7 V | 691 |
| 1993 BT ₄ | 1993 01 29.29701 | 09 26 11.99 | +17 47 48.1 | 18.2 V | 691 | 1993 OK ₄ | 1993 07 19.37909 | 20 01 39.56 | -20 08 58.0 | | 691 |
| 1993 BT ₄ | 1993 01 29.30901 | 09 26 11.40 | +17 47 51.6 | | 691 | 1993 OM ₄ | 1993 07 19.30509 | 20 02 06.06 | -20 12 27.0 | | 691 |
| 1993 BZ ₄ | 1993 01 29.40837 | 09 27 24.61 | +16 22 57.8 | | 691 | 1993 OM ₄ | 1993 07 19.33126 | 20 02 04.51 | -20 12 33.5 | 18.2 V | 691 |
| 1993 BZ ₄ | 1993 01 29.42019 | 09 27 23.95 | +16 23 02.4 | 18.4 V | 691 | 1993 OM ₄ | 1993 07 19.37934 | 20 02 01.71 | -20 12 44.9 | | 691 |
| 1993 BZ ₄ | 1993 01 29.43216 | 09 27 23.36 | +16 23 07.3 | | 691 | 1993 OC ₅ | 1993 07 19.33324 | 20 04 55.82 | -20 08 24.5 | 18.4 V | 691 |
| 1993 BJ ₁₄ | 1993 02 26.25394 | 09 08 16.45 | +10 56 25.5 | | 691 | 1993 OC ₅ | 1993 07 19.38132 | 20 04 52.81 | -20 08 26.1 | | 691 |
| 1993 BJ ₁₄ | 1993 02 26.27228 | 09 08 15.69 | +10 56 29.4 | 20.1 V | 691 | 1993 OH ₅ | 1993 07 19.30730 | 20 05 17.25 | -19 45 16.8 | 17.9 V | 691 |
| 1993 BJ ₁₄ | 1993 02 26.29070 | 09 08 14.93 | +10 56 33.0 | | 691 | 1993 OH ₅ | 1993 07 19.33347 | 20 05 15.92 | -19 45 21.1 | | 691 |
| 1993 BF ₁₅ | 1993 01 22.37622 | 09 08 47.89 | +20 23 47.7 | 17.2 V | 691 | 1993 OH ₅ | 1993 07 19.38156 | 20 05 13.47 | -19 45 28.7 | | 691 |
| 1993 BF ₁₅ | 1993 01 22.41015 | 09 08 45.74 | +20 23 53.9 | | 691 | 1993 OD ₆ | 1993 07 19.30953 | 20 08 30.82 | -20 11 17.2 | | 691 |
| 1993 BF ₁₅ | 1993 01 22.44395 | 09 08 43.65 | +20 24 00.4 | | 691 | 1993 OD ₆ | 1993 07 19.33570 | 20 08 29.11 | -20 11 19.1 | 17.4 V | 691 |
| 1993 DR ₂ | 1993 01 29.28351 | 09 23 09.56 | +18 12 32.3 | | 691 | 1993 OD ₆ | 1993 07 19.38378 | 20 08 26.04 | -20 11 21.4 | | 691 |
| 1993 DR ₂ | 1993 01 29.29489 | 09 23 08.93 | +18 12 33.4 | 18.0 V | 691 | 1993 OG ₆ | 1993 07 19.31008 | 20 09 18.51 | -19 43 38.3 | 17.5 V | 691 |
| 1993 DR ₂ | 1993 01 29.30690 | 09 23 08.29 | +18 12 34.8 | | 691 | 1993 OG ₆ | 1993 07 19.33625 | 20 09 16.94 | -19 43 41.2 | | 691 |
| 1993 FA ₂ | 1993 02 26.40397 | 12 47 37.88 | +04 30 00.7 | | 691 | 1993 OG ₆ | 1993 07 19.38433 | 20 09 14.07 | -19 43 46.3 | | 691 |
| 1993 FA ₂ | 1993 02 26.41727 | 12 47 37.56 | +04 30 04.5 | 17.7 V | 691 | 1993 PC | 1993 09 19.18222 | 21 12 01.79 | -15 58 56.9 | 20.5 V | 691 |
| 1993 FA ₂ | 1993 02 26.43009 | 12 47 37.25 | +04 30 08.3 | | 691 | 1993 PC | 1993 09 19.19106 | 21 12 01.09 | -15 58 58.4 | | 691 |
| 1993 GA ₁ | 1993 03 28.24761 | 12 33 22.21 | -03 48 33.3 | 18.3 V | 691 | 1993 PC | 1993 09 19.20033 | 21 12 00.22 | -15 58 59.6 | | 691 |
| 1993 GA ₁ | 1993 03 28.27477 | 12 33 20.41 | -03 48 28.3 | | 691 | 1993 PC ₅ | 1993 09 09.26609 | 22 09 04.45 | -07 50 31.2 | 16.7 V | 691 |
| 1993 GA ₁ | 1993 03 28.30182 | 12 33 18.72 | -03 48 19.7 | | 691 | 1993 PC ₅ | 1993 09 09.29927 | 22 09 03.20 | -07 50 47.5 | | 691 |
| 1993 HM ₄ | 1993 04 20.30810 | 13 10 20.14 | +00 54 18.2 | | 691 | 1993 PC ₅ | 1993 09 09.33423 | 22 09 01.90 | -07 51 04.2 | | 691 |
| 1993 HM ₄ | 1993 04 20.33970 | 13 10 18.36 | +00 54 21.5 | | 691 | 1993 PM ₅ | 1993 09 18.17232 | 21 59 57.75 | -10 10 48.9 | | 691 |
| 1993 HM ₄ | 1993 04 21.18700 | 13 09 31.81 | +00 55 30.0 | | 691 | 1993 PM ₅ | 1993 09 18.24169 | 21 59 54.98 | -10 11 17.0 | 18.3 V | 691 |
| 1993 HM ₄ | 1993 04 21.19899 | 13 09 31.13 | +00 55 30.8 | 20.6 V | 691 | 1993 PO ₅ | 1993 09 16.19493 | 22 06 37.22 | -04 40 55.5 | 18.9 V | 691 |
| 1993 HN ₄ | 1993 04 20.30859 | 13 11 02.41 | +00 30 03.2 | 20.7 V | 691 | 1993 PO ₅ | 1993 09 16.22681 | 22 06 36.01 | -04 41 01.1 | | 691 |
| 1993 HN ₄ | 1993 04 20.34019 | 13 11 00.54 | +00 30 06.9 | | 691 | 1993 PO ₅ | 1993 09 16.26294 | 22 06 34.72 | -04 41 07.9 | | 691 |
| 1993 HV ₄ | 1993 04 20.30881 | 13 11 21.93 | +00 26 12.5 | 20.4 V | 691 | 1993 PB ₆ | 1993 09 10.32413 | 22 14 30.75 | -08 02 26.9 | 18.4 V | 691 |
| 1993 HV ₄ | 1993 04 20.34042 | 13 11 20.40 | +00 26 14.9 | | 691 | 1993 PB ₆ | 1993 09 10.33220 | 22 14 30.39 | -08 02 29.7 | | 691 |
| 1993 HK ₅ | 1993 04 28.19099 | 14 09 32.51 | -14 09 35.4 | 20.5 V | 691 | 1993 PB ₆ | 1993 09 10.34115 | 22 14 30.01 | -08 02 33.2 | | 691 |
| 1993 HK ₅ | 1993 04 28.20252 | 14 09 31.73 | -14 09 33.1 | | 691 | 1993 PJ ₇ | 1993 09 09.28875 | 22 41 46.75 | -07 44 13.1 | 17.1 V | 691 |
| 1993 KY | 1993 05 25.30314 | 14 52 08.27 | -10 37 14.7 | | 691 | 1993 PJ ₇ | 1993 09 09.32192 | 22 41 45.15 | -07 44 20.5 | | 691 |
| 1993 KY | 1993 05 25.34193 | 14 52 06.17 | -10 37 07.7 | 19.5 V | 691 | 1993 PJ ₇ | 1993 09 09.35687 | 22 41 43.53 | -07 44 29.0 | | 691 |
| 1993 KY | 1993 05 25.37385 | 14 52 04.53 | -10 37 02.3 | | 691 | 1993 QU ₁ | 1993 09 09.37568 | 23 00 40.52 | -07 39 33.3 | 16.4 V | 691 |
| 1993 OM ₁ | 1993 08 13.19875 | 21 22 09.91 | -10 02 38.3 | | 691 | 1993 QU ₁ | 1993 09 09.41121 | 23 00 39.22 | -07 39 56.7 | | 691 |
| 1993 OM ₁ | 1993 08 13.23118 | 21 22 07.87 | -10 02 35.1 | 20.7 V | 691 | 1993 QU ₁ | 1993 09 09.44394 | 23 00 38.05 | -07 40 17.9 | | 691 |
| 1993 OM ₁ | 1993 08 13.26479 | 21 22 05.73 | -10 02 31.8 | | 691 | 1993 QN ₂ | 1993 09 14.25521 | 22 54 16.13 | -03 33 44.4 | 17.9 V | 691 |
| 1993 OU ₁ | 1993 06 12.40422 | 21 45 17.93 | -09 47 46.9 | | 691 | 1993 QN ₂ | 1993 09 14.28986 | 22 54 14.37 | -03 33 53.4 | | 691 |
| 1993 OU ₁ | 1993 06 12.42937 | 21 45 18.32 | -09 47 44.9 | 20.0 V | 691 | 1993 QW ₃ | 1993 09 14.26502 | 23 08 25.57 | -03 35 58.3 | | 691 |

| | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|--------|-----|----------------------|--------------------|-------------|-------------|------------|
| 1993 QW ₃ | 1993 09 14.29966 | 23 08 23.50 | -03 35 59.8 | 18.3 V | 691 | 1993 RY | 1993 09 14.23092 | 22 13 39.18 | -08 38 27.3 | 691 |
| 1993 QW ₃ | 1993 09 14.33452 | 23 08 21.43 | -03 36 01.7 | | 691 | 1993 RZ | * 1993 09 09.27238 | 22 18 09.35 | -07 50 41.1 | 691 |
| 1993 QY ₃ | 1993 09 10.24008 | 23 19 04.92 | -07 03 45.2 | | 691 | 1993 RZ | 1993 09 09.30556 | 22 18 07.50 | -07 50 48.7 | 691 |
| 1993 QY ₃ | 1993 09 10.27394 | 23 19 03.46 | -07 04 02.8 | | 691 | 1993 RZ | 1993 09 09.34050 | 22 18 05.58 | -07 50 56.6 | 20.2 V 691 |
| 1993 QY ₃ | 1993 09 10.31079 | 23 19 01.86 | -07 04 23.0 | 18.6 V | 691 | 1993 RZ | 1993 09 10.32563 | 22 17 14.02 | -07 54 53.8 | 20.0 V 691 |
| 1993 RA | 1993 09 18.17834 | 22 08 39.06 | -09 47 07.2 | 20.5 V | 691 | 1993 RZ | 1993 09 10.33371 | 22 17 13.66 | -07 54 55.3 | 691 |
| 1993 RA | 1993 09 18.21391 | 22 08 36.42 | -09 47 36.9 | 20.5 V | 691 | 1993 RZ | 1993 09 10.34265 | 22 17 13.07 | -07 54 58.0 | 691 |
| 1993 RA | 1993 09 18.24768 | 22 08 33.85 | -09 48 06.8 | 20.1 V | 691 | 1993 RA ₁ | * 1993 09 09.27244 | 22 18 14.29 | -07 47 40.0 | 19.9 V 691 |
| 1993 RA | 1993 09 19.21210 | 22 07 26.62 | -10 01 53.7 | 20.1 V | 691 | 1993 RA ₁ | 1993 09 09.30561 | 22 18 12.68 | -07 47 51.6 | 691 |
| 1993 RA | 1993 09 19.22198 | 22 07 25.86 | -10 02 01.9 | 19.7 V | 691 | 1993 RA ₁ | 1993 09 09.34057 | 22 18 10.99 | -07 48 03.2 | 691 |
| 1993 RA | 1993 09 19.23149 | 22 07 25.19 | -10 02 09.8 | 20.0 V | 691 | 1993 RA ₁ | 1993 09 10.32578 | 22 17 26.94 | -07 53 45.2 | 19.8 V 691 |
| 1993 RH | 1993 09 20.17579 | 23 58 44.31 | -00 42 37.5 | 14.1 V | 691 | 1993 RA ₁ | 1993 09 10.33386 | 22 17 26.56 | -07 53 47.3 | 691 |
| 1993 RH | 1993 09 20.20881 | 23 58 41.94 | -00 42 29.2 | | 691 | 1993 RA ₁ | 1993 09 10.34280 | 22 17 26.18 | -07 53 50.8 | 691 |
| 1993 RH | 1993 09 20.24109 | 23 58 39.63 | -00 42 21.0 | | 691 | 1993 RB ₁ | * 1993 09 09.27248 | 22 18 17.51 | -07 46 50.4 | 16.2 V 691 |
| 1993 RQ | * 1993 09 16.30206 | 23 12 33.61 | +03 54 17.6 | 17.8 V | 691 | 1993 RB ₁ | 1993 09 09.30565 | 22 18 16.04 | -07 47 07.0 | 691 |
| 1993 RQ | 1993 09 16.33513 | 23 12 31.60 | +03 54 39.9 | 18.0 V | 691 | 1993 RB ₁ | 1993 09 09.34061 | 22 18 14.48 | -07 47 24.6 | 691 |
| 1993 RQ | 1993 09 16.36777 | 23 12 29.57 | +03 55 02.8 | 18.1 V | 691 | 1993 RB ₁ | 1993 09 10.32588 | 22 17 35.11 | -07 55 38.5 | 16.3 V 691 |
| 1993 RQ | 1993 09 18.12444 | 23 10 52.66 | +04 15 06.9 | 18.1 V | 691 | 1993 RB ₁ | 1993 09 10.33395 | 22 17 34.77 | -07 55 42.4 | 691 |
| 1993 RQ | 1993 09 18.13335 | 23 10 52.13 | +04 15 13.1 | 18.2 V | 691 | 1993 RB ₁ | 1993 09 10.34290 | 22 17 34.40 | -07 55 46.9 | 691 |
| 1993 RQ | 1993 09 18.14210 | 23 10 51.62 | +04 15 19.1 | 18.2 V | 691 | 1993 RC ₁ | * 1993 09 09.27297 | 22 19 00.31 | -07 51 16.4 | 18.4 V 691 |
| 1993 RQ | 1993 09 20.12776 | 23 09 05.39 | +04 37 05.0 | 18.4 V | 691 | 1993 RC ₁ | 1993 09 09.30615 | 22 18 58.65 | -07 51 26.4 | 691 |
| 1993 RQ | 1993 09 20.13685 | 23 09 04.91 | +04 37 10.8 | 18.4 V | 691 | 1993 RC ₁ | 1993 09 09.34110 | 22 18 56.88 | -07 51 37.1 | 691 |
| 1993 RQ | 1993 09 20.14601 | 23 09 04.41 | +04 37 16.6 | 18.3 V | 691 | 1993 RC ₁ | 1993 09 10.18660 | 22 18 17.03 | -07 55 58.4 | 19.3 V 691 |
| 1993 RR | * 1993 09 16.43815 | 01 56 32.01 | +13 52 59.6 | 17.9 V | 691 | 1993 RC ₁ | 1993 09 10.19566 | 22 18 16.57 | -07 56 01.6 | 691 |
| 1993 RR | 1993 09 16.46625 | 01 56 31.95 | +13 53 15.8 | 17.9 V | 691 | 1993 RC ₁ | 1993 09 10.20456 | 22 18 16.14 | -07 56 04.3 | 691 |
| 1993 RR | 1993 09 16.49390 | 01 56 31.90 | +13 53 31.6 | 17.8 V | 691 | 1993 RD ₁ | * 1993 09 09.27362 | 22 19 56.42 | -07 42 41.9 | 20.2 V 691 |
| 1993 RR | 1993 09 17.46713 | 01 56 33.07 | +14 02 52.5 | 17.8 V | 691 | 1993 RD ₁ | 1993 09 09.30679 | 22 19 54.57 | -07 42 51.3 | 691 |
| 1993 RR | 1993 09 17.47639 | 01 56 33.03 | +14 02 57.8 | 17.8 V | 691 | 1993 RD ₁ | 1993 09 09.34174 | 22 19 52.57 | -07 43 02.4 | 691 |
| 1993 RR | 1993 09 17.48650 | 01 56 33.00 | +14 03 03.4 | 17.8 V | 691 | 1993 RD ₁ | 1993 09 10.32686 | 22 19 00.03 | -07 48 03.8 | 19.6 V 691 |
| 1993 RR | 1993 09 19.30087 | 01 56 29.78 | +14 20 17.0 | 17.7 V | 691 | 1993 RD ₁ | 1993 09 10.33493 | 22 18 59.58 | -07 48 06.5 | 691 |
| 1993 RR | 1993 09 19.30945 | 01 56 29.72 | +14 20 21.8 | 17.7 V | 691 | 1993 RD ₁ | 1993 09 10.34387 | 22 18 58.84 | -07 48 12.7 | 691 |
| 1993 RR | 1993 09 19.31852 | 01 56 29.64 | +14 20 27.0 | 17.7 V | 691 | 1993 RE ₁ | * 1993 09 09.27365 | 22 19 58.83 | -07 36 59.6 | 19.9 V 691 |
| 1993 RR | 1993 09 20.28878 | 01 56 24.54 | +14 29 32.7 | 17.7 V | 691 | 1993 RE ₁ | 1993 09 09.30682 | 22 19 57.25 | -07 37 07.5 | 691 |
| 1993 RR | 1993 09 20.29745 | 01 56 24.45 | +14 29 37.7 | 17.7 V | 691 | 1993 RE ₁ | 1993 09 09.34177 | 22 19 55.63 | -07 37 13.5 | 691 |
| 1993 RR | 1993 09 20.30639 | 01 56 24.34 | +14 29 42.7 | 17.7 V | 691 | 1993 RE ₁ | 1993 09 10.32702 | 22 19 14.19 | -07 40 40.6 | 19.8 V 691 |
| 1993 RW | * 1993 09 09.26484 | 22 07 16.06 | -07 44 56.9 | 19.6 V | 691 | 1993 RE ₁ | 1993 09 10.33510 | 22 19 13.84 | -07 40 42.3 | 691 |
| 1993 RW | 1993 09 09.29802 | 22 07 15.07 | -07 45 27.8 | | 691 | 1993 RE ₁ | 1993 09 10.34404 | 22 19 13.41 | -07 40 44.7 | 691 |
| 1993 RW | 1993 09 09.33298 | 22 07 13.94 | -07 46 02.9 | | 691 | 1993 RF ₁ | * 1993 09 09.27560 | 22 22 47.98 | -07 51 08.4 | 691 |
| 1993 RW | 1993 09 18.17502 | 22 03 51.64 | -09 59 55.4 | 20.5 V | 691 | 1993 RF ₁ | 1993 09 09.30878 | 22 22 46.46 | -07 51 24.7 | 19.8 V 691 |
| 1993 RW | 1993 09 18.21062 | 22 03 50.94 | -10 00 25.4 | | 691 | 1993 RF ₁ | 1993 09 09.34373 | 22 22 44.92 | -07 51 43.2 | 691 |
| 1993 RW | 1993 09 18.24440 | 22 03 50.29 | -10 00 53.6 | | 691 | 1993 RF ₁ | 1993 09 10.32898 | 22 22 03.74 | -08 00 07.4 | 20.2 V 691 |
| 1993 RX | * 1993 09 09.27047 | 22 15 23.52 | -07 58 51.1 | 17.4 V | 691 | 1993 RF ₁ | 1993 09 10.33706 | 22 22 03.41 | -08 00 12.0 | 691 |
| 1993 RX | 1993 09 09.30365 | 22 15 22.08 | -07 59 03.1 | | 691 | 1993 RF ₁ | 1993 09 10.34600 | 22 22 02.99 | -08 00 16.3 | 691 |
| 1993 RX | 1993 09 09.33860 | 22 15 20.61 | -07 59 16.0 | | 691 | 1993 RG ₁ | * 1993 09 09.27561 | 22 22 48.44 | -07 56 49.0 | 691 |
| 1993 RX | 1993 09 10.32419 | 22 14 42.33 | -08 05 12.9 | 17.9 V | 691 | 1993 RG ₁ | 1993 09 09.30878 | 22 22 46.72 | -07 56 58.5 | 19.0 V 691 |
| 1993 RX | 1993 09 10.33227 | 22 14 41.97 | -08 05 15.4 | | 691 | 1993 RG ₁ | 1993 09 09.34373 | 22 22 45.08 | -07 57 06.1 | 691 |
| 1993 RX | 1993 09 10.34121 | 22 14 41.63 | -08 05 18.4 | | 691 | 1993 RG ₁ | 1993 09 10.18925 | 22 22 06.27 | -08 00 39.5 | 20.3 V 691 |
| 1993 RY | * 1993 09 09.27216 | 22 17 49.91 | -07 57 51.0 | | 691 | 1993 RG ₁ | 1993 09 10.19830 | 22 22 05.78 | -08 00 41.5 | 691 |
| 1993 RY | 1993 09 09.30533 | 22 17 48.08 | -07 58 07.7 | | 691 | 1993 RG ₁ | 1993 09 10.20721 | 22 22 05.37 | -08 00 43.4 | 691 |
| 1993 RY | 1993 09 09.34028 | 22 17 46.13 | -07 58 25.8 | 20.0 V | 691 | 1993 RH ₁ | * 1993 09 14.15993 | 21 16 42.87 | -15 50 58.3 | 17.3 V 691 |
| 1993 RY | 1993 09 14.20528 | 22 13 40.47 | -08 38 15.5 | | 691 | 1993 RH ₁ | 1993 09 14.16996 | 21 16 42.40 | -15 50 58.0 | 691 |
| 1993 RY | 1993 09 14.21562 | 22 13 39.94 | -08 38 20.3 | 20.7 V | 691 | 1993 RH ₁ | 1993 09 14.18921 | 21 16 41.60 | -15 50 55.8 | 691 |

| | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|--------|-----|----------------------|--------------------|-------------|-------------|------------|
| 1993 RH ₁ | 1993 09 19.18338 | 21 13 42.34 | -15 41 42.1 | 17.3 V | 691 | 1993 RR ₁ | 1993 09 15.34199 | 23 44 47.72 | -00 52 57.3 | 691 |
| 1993 RH ₁ | 1993 09 19.19223 | 21 13 42.04 | -15 41 40.8 | | 691 | 1993 RR ₁ | 1993 09 20.16215 | 23 39 02.58 | -00 44 39.3 | 19.4 V 691 |
| 1993 RH ₁ | 1993 09 19.20150 | 21 13 41.75 | -15 41 39.6 | | 691 | 1993 RR ₁ | 1993 09 20.19517 | 23 39 00.18 | -00 44 36.1 | 691 |
| 1993 RJ ₁ | * 1993 09 15.27064 | 23 34 56.69 | -00 28 36.5 | | 691 | 1993 RR ₁ | 1993 09 20.22745 | 23 38 57.84 | -00 44 32.1 | 691 |
| 1993 RJ ₁ | 1993 09 15.30304 | 23 34 54.84 | -00 28 49.7 | | 691 | 1993 RS ₁ | * 1993 09 15.27838 | 23 46 06.97 | -00 35 33.8 | 20.6 V 691 |
| 1993 RJ ₁ | 1993 09 15.33513 | 23 34 53.01 | -00 29 03.8 | 19.8 V | 691 | 1993 RS ₁ | 1993 09 15.31078 | 23 46 05.30 | -00 35 41.0 | 691 |
| 1993 RJ ₁ | 1993 09 20.15624 | 23 30 30.88 | -01 03 50.1 | 19.9 V | 691 | 1993 RS ₁ | 1993 09 15.34287 | 23 46 03.60 | -00 35 47.8 | 691 |
| 1993 RJ ₁ | 1993 09 20.18927 | 23 30 29.10 | -01 04 03.8 | | 691 | 1993 RS ₁ | 1993 09 20.16414 | 23 41 54.84 | -00 53 40.4 | 691 |
| 1993 RJ ₁ | 1993 09 20.22155 | 23 30 27.28 | -01 04 17.6 | | 691 | 1993 RS ₁ | 1993 09 20.19717 | 23 41 53.09 | -00 53 47.9 | 20.6 V 691 |
| 1993 RK ₁ | * 1993 09 15.27335 | 23 38 50.82 | -00 31 37.4 | 20.0 V | 691 | 1993 RS ₁ | 1993 09 20.22945 | 23 41 51.39 | -00 53 54.2 | 691 |
| 1993 RK ₁ | 1993 09 15.30575 | 23 38 49.13 | -00 31 43.0 | | 691 | 1993 RT ₁ | * 1993 09 15.27896 | 23 46 57.30 | -00 36 52.5 | 691 |
| 1993 RK ₁ | 1993 09 15.33784 | 23 38 47.55 | -00 31 48.2 | | 691 | 1993 RT ₁ | 1993 09 15.31136 | 23 46 55.74 | -00 36 57.3 | 20.0 V 691 |
| 1993 RK ₁ | 1993 09 20.15925 | 23 34 51.06 | -00 44 50.7 | | 691 | 1993 RT ₁ | 1993 09 15.34345 | 23 46 54.12 | -00 37 01.9 | 691 |
| 1993 RK ₁ | 1993 09 20.19228 | 23 34 49.45 | -00 44 55.1 | | 691 | 1993 RT ₁ | 1993 09 20.16485 | 23 42 56.75 | -00 48 03.6 | 691 |
| 1993 RK ₁ | 1993 09 20.22456 | 23 34 47.84 | -00 45 00.0 | 19.9 V | 691 | 1993 RT ₁ | 1993 09 20.19788 | 23 42 55.08 | -00 48 07.8 | 691 |
| 1993 RL ₁ | * 1993 09 15.27399 | 23 39 46.38 | -00 46 46.0 | 18.5 V | 691 | 1993 RT ₁ | 1993 09 20.23017 | 23 42 53.48 | -00 48 12.4 | 20.5 V 691 |
| 1993 RL ₁ | 1993 09 15.30638 | 23 39 44.26 | -00 46 47.0 | | 691 | 1993 RU ₁ | * 1993 09 15.27917 | 23 47 15.40 | -00 26 47.1 | 691 |
| 1993 RL ₁ | 1993 09 15.33847 | 23 39 42.16 | -00 46 48.1 | | 691 | 1993 RU ₁ | 1993 09 15.31157 | 23 47 13.78 | -00 26 57.9 | 20.2 V 691 |
| 1993 RL ₁ | 1993 09 20.15921 | 23 34 48.15 | -00 49 33.0 | 18.5 V | 691 | 1993 RU ₁ | 1993 09 15.34366 | 23 47 12.02 | -00 27 08.8 | 691 |
| 1993 RL ₁ | 1993 09 20.19224 | 23 34 46.07 | -00 49 33.8 | | 691 | 1993 RU ₁ | 1993 09 20.16511 | 23 43 18.84 | -00 51 53.6 | 691 |
| 1993 RL ₁ | 1993 09 20.22452 | 23 34 44.04 | -00 49 34.9 | | 691 | 1993 RU ₁ | 1993 09 20.19814 | 23 43 17.21 | -00 52 04.1 | 20.7 V 691 |
| 1993 RM ₁ | * 1993 09 15.27442 | 23 40 24.00 | -00 36 42.4 | | 691 | 1993 RU ₁ | 1993 09 20.23042 | 23 43 15.65 | -00 52 14.9 | 691 |
| 1993 RM ₁ | 1993 09 15.30682 | 23 40 22.43 | -00 36 51.2 | 18.7 V | 691 | 1993 RV ₁ | * 1993 09 15.27993 | 23 48 20.96 | -00 31 59.0 | 691 |
| 1993 RM ₁ | 1993 09 15.33891 | 23 40 20.84 | -00 37 00.0 | | 691 | 1993 RV ₁ | 1993 09 15.31233 | 23 48 19.65 | -00 32 13.2 | 691 |
| 1993 RM ₁ | 1993 09 20.16044 | 23 36 34.91 | -00 59 17.0 | 18.8 V | 691 | 1993 RV ₁ | 1993 09 15.34442 | 23 48 18.29 | -00 32 28.0 | 20.4 V 691 |
| 1993 RM ₁ | 1993 09 20.19348 | 23 36 33.26 | -00 59 26.0 | | 691 | 1993 RV ₁ | 1993 09 20.16628 | 23 45 00.35 | -01 09 06.8 | 691 |
| 1993 RM ₁ | 1993 09 20.22576 | 23 36 31.77 | -00 59 35.1 | | 691 | 1993 RV ₁ | 1993 09 20.19931 | 23 44 58.97 | -01 09 22.2 | 20.3 V 691 |
| 1993 RN ₁ | * 1993 09 15.27458 | 23 40 37.87 | -00 33 47.7 | | 691 | 1993 RV ₁ | 1993 09 20.23160 | 23 44 57.60 | -01 09 37.1 | 691 |
| 1993 RN ₁ | 1993 09 15.30698 | 23 40 36.22 | -00 33 52.8 | | 691 | 1993 RW ₁ | * 1993 09 15.28028 | 23 48 51.36 | -00 35 04.9 | 20.6 V 691 |
| 1993 RN ₁ | 1993 09 15.33907 | 23 40 34.59 | -00 33 57.9 | 16.7 V | 691 | 1993 RW ₁ | 1993 09 15.31268 | 23 48 49.86 | -00 35 17.6 | 691 |
| 1993 RN ₁ | 1993 09 20.16048 | 23 36 37.62 | -00 46 52.9 | 16.6 V | 691 | 1993 RW ₁ | 1993 09 15.34477 | 23 48 48.29 | -00 35 30.3 | 691 |
| 1993 RN ₁ | 1993 09 20.19351 | 23 36 35.97 | -00 46 57.8 | | 691 | 1993 RW ₁ | 1993 09 20.16628 | 23 45 00.07 | -01 07 50.5 | 691 |
| 1993 RN ₁ | 1993 09 20.22579 | 23 36 34.37 | -00 47 03.1 | | 691 | 1993 RW ₁ | 1993 09 20.19931 | 23 44 58.33 | -01 08 02.8 | 691 |
| 1993 RO ₁ | * 1993 09 15.27544 | 23 41 52.57 | -00 43 01.6 | | 691 | 1993 RW ₁ | 1993 09 20.23159 | 23 44 56.72 | -01 08 16.6 | 20.3 V 691 |
| 1993 RO ₁ | 1993 09 15.30784 | 23 41 50.43 | -00 43 07.8 | 19.4 V | 691 | 1993 RX ₁ | * 1993 09 15.28041 | 23 49 03.13 | -00 25 55.7 | 691 |
| 1993 RO ₁ | 1993 09 15.33992 | 23 41 48.32 | -00 43 14.4 | | 691 | 1993 RX ₁ | 1993 09 15.31282 | 23 49 01.58 | -00 26 06.2 | 691 |
| 1993 RO ₁ | 1993 09 20.16060 | 23 36 48.02 | -00 59 31.2 | | 691 | 1993 RX ₁ | 1993 09 15.34491 | 23 48 59.91 | -00 26 18.3 | 20.7 V 691 |
| 1993 RO ₁ | 1993 09 20.19362 | 23 36 45.92 | -00 59 37.5 | 19.6 V | 691 | 1993 RX ₁ | 1993 09 20.16633 | 23 45 04.52 | -00 54 57.6 | 20.4 V 691 |
| 1993 RO ₁ | 1993 09 20.22590 | 23 36 43.85 | -00 59 44.1 | | 691 | 1993 RX ₁ | 1993 09 20.19936 | 23 45 02.86 | -00 55 09.1 | 691 |
| 1993 RP ₁ | * 1993 09 15.27650 | 23 43 23.73 | -00 45 21.6 | 19.6 V | 691 | 1993 RX ₁ | 1993 09 20.23164 | 23 45 01.25 | -00 55 21.0 | 691 |
| 1993 RP ₁ | 1993 09 15.30890 | 23 43 22.11 | -00 45 31.0 | | 691 | 1993 SH | * 1993 09 16.30124 | 23 11 21.91 | +04 15 20.7 | 19.7 V 691 |
| 1993 RP ₁ | 1993 09 15.34099 | 23 43 20.54 | -00 45 41.2 | | 691 | 1993 SH | 1993 09 16.33431 | 23 11 20.43 | +04 15 11.9 | 691 |
| 1993 RP ₁ | 1993 09 20.16249 | 23 39 32.07 | -01 10 24.4 | 19.7 V | 691 | 1993 SH | 1993 09 16.36696 | 23 11 18.99 | +04 15 04.2 | 691 |
| 1993 RP ₁ | 1993 09 20.19552 | 23 39 30.45 | -01 10 34.5 | | 691 | 1993 SH | 1993 09 18.12386 | 23 10 02.69 | +04 07 54.9 | 691 |
| 1993 RP ₁ | 1993 09 20.22780 | 23 39 28.89 | -01 10 45.0 | | 691 | 1993 SH | 1993 09 18.13277 | 23 10 02.26 | +04 07 52.9 | 20.1 V 691 |
| 1993 RQ ₁ | * 1993 09 15.27734 | 23 44 36.86 | -00 31 54.6 | 20.5 V | 691 | 1993 SH | 1993 09 18.14152 | 23 10 01.90 | +04 07 50.9 | 691 |
| 1993 RQ ₁ | 1993 09 15.30974 | 23 44 34.98 | -00 32 07.2 | | 691 | 1993 SJ | * 1993 09 16.43598 | 01 53 24.53 | +14 03 20.7 | 19.8 V 691 |
| 1993 RQ ₁ | 1993 09 20.16291 | 23 40 08.55 | -01 06 03.5 | 20.5 V | 691 | 1993 SJ | 1993 09 16.46408 | 01 53 23.59 | +14 03 26.0 | 691 |
| 1993 RQ ₁ | 1993 09 20.19594 | 23 40 06.69 | -01 06 17.4 | | 691 | 1993 SJ | 1993 09 16.49171 | 01 53 22.60 | +14 03 30.9 | 691 |
| 1993 RQ ₁ | 1993 09 20.22822 | 23 40 04.84 | -01 06 31.5 | | 691 | 1993 SJ | 1993 09 17.46468 | 01 52 50.42 | +14 06 41.2 | 19.6 V 691 |
| 1993 RR ₁ | * 1993 09 15.27752 | 23 44 52.52 | -00 53 04.2 | | 691 | 1993 SJ | 1993 09 17.47393 | 01 52 50.05 | +14 06 42.5 | 691 |
| 1993 RR ₁ | 1993 09 15.30991 | 23 44 50.09 | -00 53 00.6 | 19.4 V | 691 | 1993 SJ | 1993 09 17.48405 | 01 52 49.69 | +14 06 43.9 | 691 |

| | | | | | | | | | | |
|---------|--------------------|-------------|-------------|--------|-----|----------------------|--------------------|-------------|-------------|------------|
| 1993 SK | * 1993 09 16.43745 | 01 55 31.68 | +13 53 48.0 | 20.0 V | 691 | 1993 SS | 1993 09 19.22152 | 22 06 46.25 | -10 08 24.9 | 691 |
| 1993 SK | 1993 09 16.46554 | 01 55 30.56 | +13 53 54.7 | | 691 | 1993 SS | 1993 09 19.23103 | 22 06 45.89 | -10 08 27.1 | 691 |
| 1993 SK | 1993 09 16.49318 | 01 55 29.49 | +13 54 01.4 | | 691 | 1993 ST | * 1993 09 18.17799 | 22 08 08.64 | -09 49 33.7 | 691 |
| 1993 SK | 1993 09 17.46597 | 01 54 52.98 | +13 57 53.3 | 20.0 V | 691 | 1993 ST | 1993 09 18.21357 | 22 08 07.17 | -09 49 42.2 | 691 |
| 1993 SK | 1993 09 17.47523 | 01 54 52.61 | +13 57 55.5 | | 691 | 1993 ST | 1993 09 18.24735 | 22 08 05.70 | -09 49 51.2 | 19.6 V 691 |
| 1993 SK | 1993 09 17.48534 | 01 54 52.17 | +13 57 58.3 | | 691 | 1993 ST | 1993 09 19.21210 | 22 07 26.97 | -09 54 02.8 | 691 |
| 1993 SL | * 1993 09 16.43986 | 01 59 00.54 | +13 50 50.7 | 19.6 V | 691 | 1993 ST | 1993 09 19.22198 | 22 07 26.55 | -09 54 05.4 | 691 |
| 1993 SL | 1993 09 16.46795 | 01 58 59.41 | +13 50 55.7 | | 691 | 1993 ST | 1993 09 19.23150 | 22 07 26.16 | -09 54 07.9 | 19.0 V 691 |
| 1993 SL | 1993 09 16.49559 | 01 58 58.31 | +13 51 00.7 | | 691 | 1993 SU | * 1993 09 18.17802 | 22 08 10.89 | -09 44 39.9 | 691 |
| 1993 SL | 1993 09 17.46837 | 01 58 20.59 | +13 53 55.9 | | 691 | 1993 SU | 1993 09 18.21360 | 22 08 09.44 | -09 44 40.4 | 691 |
| 1993 SL | 1993 09 17.47762 | 01 58 20.20 | +13 53 57.6 | 19.5 V | 691 | 1993 SU | 1993 09 18.24738 | 22 08 08.05 | -09 44 42.0 | 20.5 V 691 |
| 1993 SL | 1993 09 17.48773 | 01 58 19.79 | +13 53 59.2 | | 691 | 1993 SU | 1993 09 19.21214 | 22 07 30.25 | -09 45 17.3 | 691 |
| 1993 SM | * 1993 09 18.17471 | 22 03 24.77 | -09 50 13.1 | 19.0 V | 691 | 1993 SU | 1993 09 19.22202 | 22 07 29.85 | -09 45 16.0 | 20.2 V 691 |
| 1993 SM | 1993 09 18.21030 | 22 03 23.51 | -09 50 24.3 | | 691 | 1993 SU | 1993 09 19.23154 | 22 07 29.39 | -09 45 17.4 | 691 |
| 1993 SM | 1993 09 18.24408 | 22 03 22.39 | -09 50 35.2 | | 691 | 1993 SV | * 1993 09 18.17894 | 22 09 31.26 | -09 47 35.7 | 18.6 V 691 |
| 1993 SM | 1993 09 19.20920 | 22 02 52.54 | -09 55 47.8 | | 691 | 1993 SV | 1993 09 18.21453 | 22 09 30.21 | -09 47 56.5 | 691 |
| 1993 SM | 1993 09 19.21909 | 22 02 52.20 | -09 55 51.1 | 19.0 V | 691 | 1993 SV | 1993 09 18.24832 | 22 09 29.17 | -09 48 17.2 | 691 |
| 1993 SM | 1993 09 19.22860 | 22 02 51.84 | -09 55 54.2 | | 691 | 1993 SV | 1993 09 19.21321 | 22 09 03.05 | -09 57 56.1 | 18.3 V 691 |
| 1993 SN | * 1993 09 18.17554 | 22 04 36.46 | -09 52 08.1 | | 691 | 1993 SV | 1993 09 19.22310 | 22 09 02.76 | -09 58 01.8 | 691 |
| 1993 SN | 1993 09 18.21112 | 22 04 35.05 | -09 52 20.2 | | 691 | 1993 SV | 1993 09 19.23261 | 22 09 02.50 | -09 58 07.4 | 691 |
| 1993 SN | 1993 09 18.24491 | 22 04 33.74 | -09 52 31.6 | 19.7 V | 691 | 1993 SW | * 1993 09 19.29945 | 01 54 27.33 | +14 33 26.9 | 18.9 V 691 |
| 1993 SN | 1993 09 19.20969 | 22 03 58.41 | -09 57 57.1 | 19.4 V | 691 | 1993 SW | 1993 09 19.30803 | 01 54 27.03 | +14 33 29.9 | 691 |
| 1993 SN | 1993 09 19.21958 | 22 03 58.06 | -09 58 00.6 | | 691 | 1993 SW | 1993 09 19.31710 | 01 54 26.70 | +14 33 33.1 | 691 |
| 1993 SN | 1993 09 19.22909 | 22 03 57.67 | -09 58 04.1 | | 691 | 1993 SW | 1993 09 20.28703 | 01 53 53.06 | +14 39 08.7 | 19.0 V 691 |
| 1993 SO | * 1993 09 18.17605 | 22 05 20.56 | -09 52 21.6 | 17.5 V | 691 | 1993 SW | 1993 09 20.29569 | 01 53 52.72 | +14 39 11.8 | 691 |
| 1993 SO | 1993 09 18.21164 | 22 05 19.39 | -09 52 39.7 | | 691 | 1993 SW | 1993 09 20.30464 | 01 53 52.39 | +14 39 14.8 | 691 |
| 1993 SO | 1993 09 18.24542 | 22 05 18.32 | -09 52 57.3 | | 691 | 1993 SX | * 1993 09 19.30013 | 01 55 25.58 | +14 25 54.1 | 691 |
| 1993 SO | 1993 09 19.21029 | 22 04 50.50 | -10 01 09.3 | 17.2 V | 691 | 1993 SX | 1993 09 19.30871 | 01 55 25.29 | +14 25 52.9 | 20.2 V 691 |
| 1993 SO | 1993 09 19.22018 | 22 04 50.21 | -10 01 14.3 | | 691 | 1993 SX | 1993 09 19.31777 | 01 55 24.95 | +14 25 51.8 | 691 |
| 1993 SO | 1993 09 19.22969 | 22 04 49.90 | -10 01 19.1 | | 691 | 1993 SX | 1993 09 20.28772 | 01 54 52.37 | +14 23 29.7 | 691 |
| 1993 SP | * 1993 09 18.17655 | 22 06 03.96 | -10 02 54.1 | | 691 | 1993 SX | 1993 09 20.29638 | 01 54 52.04 | +14 23 28.8 | 20.9 V 691 |
| 1993 SP | 1993 09 18.21213 | 22 06 02.31 | -10 03 07.7 | 20.1 V | 691 | 1993 SX | 1993 09 20.30532 | 01 54 51.72 | +14 23 27.0 | 691 |
| 1993 SP | 1993 09 18.24591 | 22 06 00.73 | -10 03 22.3 | | 691 | 1993 SY | * 1993 09 19.30327 | 01 59 58.00 | +14 11 51.5 | 691 |
| 1993 SP | 1993 09 19.21063 | 22 05 19.64 | -10 10 01.0 | | 691 | 1993 SY | 1993 09 19.31185 | 01 59 57.69 | +14 11 54.2 | 691 |
| 1993 SP | 1993 09 19.22051 | 22 05 19.20 | -10 10 05.4 | 19.9 V | 691 | 1993 SY | 1993 09 19.32092 | 01 59 57.41 | +14 11 58.1 | 20.5 V 691 |
| 1993 SP | 1993 09 19.23003 | 22 05 18.80 | -10 10 08.8 | | 691 | 1993 SY | 1993 09 20.29087 | 01 59 25.31 | +14 17 54.6 | 691 |
| 1993 SQ | * 1993 09 18.17656 | 22 06 04.64 | -09 43 51.0 | | 691 | 1993 SY | 1993 09 20.29953 | 01 59 24.97 | +14 17 57.3 | 20.6 V 691 |
| 1993 SQ | 1993 09 18.21214 | 22 06 03.13 | -09 43 54.7 | | 691 | 1993 SY | 1993 09 20.30847 | 01 59 24.48 | +14 17 59.6 | 691 |
| 1993 SQ | 1993 09 18.24592 | 22 06 01.68 | -09 43 59.0 | 20.8 V | 691 | 1993 SG ₃ | 1993 09 20.17703 | 00 00 31.97 | -01 07 46.0 | 18.5 V 691 |
| 1993 SQ | 1993 09 19.21068 | 22 05 24.00 | -09 45 56.1 | | 691 | 1993 SG ₃ | 1993 09 20.21006 | 00 00 30.12 | -01 08 01.2 | 691 |
| 1993 SQ | 1993 09 19.22056 | 22 05 23.60 | -09 45 57.2 | 20.8 V | 691 | 1993 SG ₃ | 1993 09 20.24234 | 00 00 28.32 | -01 08 15.7 | 691 |
| 1993 SQ | 1993 09 19.23008 | 22 05 23.20 | -09 45 58.4 | | 691 | 1993 TZ | * 1993 10 15.23721 | 01 47 12.51 | +14 49 42.1 | 18.7 V 691 |
| 1993 SR | * 1993 09 18.17668 | 22 06 15.50 | -10 06 54.6 | 20.4 V | 691 | 1993 TZ | 1993 10 15.28048 | 01 48 13.10 | +14 50 25.7 | 19.2 V 691 |
| 1993 SR | 1993 09 18.21227 | 22 06 14.20 | -10 07 01.2 | | 691 | 1993 TZ | 1993 10 15.32107 | 01 49 10.92 | +14 51 00.7 | 19.3 V 691 |
| 1993 SR | 1993 09 18.24605 | 22 06 13.00 | -10 07 07.4 | | 691 | 1993 TZ | 1993 10 15.35686 | 01 50 02.66 | +14 51 29.4 | 19.4 V 691 |
| 1993 SR | 1993 09 19.21087 | 22 05 40.13 | -10 10 04.6 | 19.9 V | 691 | 1993 TZ | 1993 10 15.36724 | 01 50 17.58 | +14 51 37.1 | 19.1 V 691 |
| 1993 SR | 1993 09 19.22075 | 22 05 39.84 | -10 10 06.1 | | 691 | 1993 TZ | 1993 10 15.37781 | 01 50 33.23 | +14 51 44.3 | 19.3 V 691 |
| 1993 SR | 1993 09 19.23027 | 22 05 39.47 | -10 10 08.2 | | 691 | 1993 TZ | 1993 10 16.20920 | 02 16 32.32 | +14 59 28.5 | 18.9 V 691 |
| 1993 SS | * 1993 09 18.17749 | 22 07 25.23 | -10 04 08.7 | | 691 | 1993 TZ | 1993 10 16.22278 | 02 17 01.07 | +14 59 34.4 | 20.5 V 691 |
| 1993 SS | 1993 09 18.21307 | 22 07 23.81 | -10 04 17.0 | 17.8 V | 691 | 1993 TZ | 1993 10 16.47842 | 02 26 24.86 | +14 59 31.6 | 18.8 V 691 |
| 1993 SS | 1993 09 18.24685 | 22 07 22.43 | -10 04 25.7 | | 691 | 1993 TZ | 1993 10 16.48714 | 02 26 45.59 | +14 59 26.4 | 19.1 V 691 |
| 1993 SS | 1993 09 19.21164 | 22 06 46.63 | -10 08 22.5 | 17.6 V | 691 | 1993 TZ | 1993 10 16.49577 | 02 27 05.74 | +14 59 22.0 | 18.8 V 691 |

| | | | | | | | | | | |
|---|--------------------|-------------|-------------|--------|-----|---|------------------|-------------|-------------|-----|
| (1552) | 1993 09 16.43640 | 01 54 00.95 | +13 47 59.0 | | 691 | 1993 SU ₂ | 1993 09 19.21728 | 00 27 13.59 | +27 07 38.9 | 693 |
| (1552) | 1993 09 16.46450 | 01 54 00.11 | +13 48 01.7 | 15.9 V | 691 | 1993 SU ₂ | 1993 09 19.25794 | 00 27 11.35 | +27 07 41.0 | 693 |
| (1552) | 1993 09 16.49214 | 01 53 59.27 | +13 48 04.2 | | 691 | 801 Oak Ridge | | | | |
| (1783) | 1993 09 18.28911 | 21 59 58.47 | -03 01 05.6 | | 691 | R. E. McCrosky, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A. | | | | |
| (1783) | 1993 09 18.32263 | 21 59 57.23 | -03 01 21.1 | 16.8 V | 691 | Observers R. E. McCrosky, C.-Y. Shao | | | | |
| (1783) | 1993 09 18.35616 | 21 59 56.07 | -03 01 35.9 | | 691 | 1.5-m reflector + CCD | | | | |
| (1977) | 1993 09 15.25745 | 23 15 54.19 | -00 33 45.6 | | 691 | GSC | | | | |
| (1977) | 1993 09 15.28985 | 23 15 52.42 | -00 33 51.3 | 14.9 V | 691 | 1929 VS | 1993 09 14.32201 | 03 06 10.44 | +15 57 37.8 | 801 |
| (1977) | 1993 09 15.32194 | 23 15 50.67 | -00 33 56.4 | | 691 | 1929 VS | 1993 09 14.35868 | 03 06 10.92 | +15 57 45.4 | 801 |
| (2749) | 1993 09 14.16425 | 21 23 02.36 | -15 33 29.1 | 17.8 V | 691 | 1929 VS | 1993 09 19.34241 | 03 07 03.69 | +16 15 00.7 | 801 |
| (2749) | 1993 09 14.17428 | 21 23 02.05 | -15 33 30.6 | | 691 | 1929 VS | 1993 09 19.38848 | 03 07 03.87 | +16 15 09.7 | 801 |
| (2749) | 1993 09 14.19353 | 21 23 01.45 | -15 33 33.2 | | 691 | 1929 VS | 1993 10 13.27437 | 03 00 09.38 | +17 06 24.8 | 801 |
| (3045) | 1993 09 18.39888 | 01 06 22.29 | +04 31 52.0 | 15.6 V | 691 | 1929 VS | 1993 10 13.29954 | 03 00 08.32 | +17 06 26.3 | 801 |
| (3045) | 1993 09 18.43247 | 01 06 20.95 | +04 31 45.8 | | 691 | 1930 UX | 1993 10 12.30064 | 05 06 59.38 | +30 26 52.7 | 801 |
| (3045) | 1993 09 18.46642 | 01 06 19.61 | +04 31 39.5 | | 691 | 1930 UX | 1993 10 12.31921 | 05 07 00.07 | +30 26 58.1 | 801 |
| (3046) | 1993 09 16.30316 | 23 14 09.00 | +03 57 15.9 | 17.0 V | 691 | 1931 VS | 1993 09 12.33169 | 02 02 08.20 | +01 34 22.0 | 801 |
| (3046) | 1993 09 16.33624 | 23 14 07.64 | +03 56 57.1 | | 691 | 1931 VS | 1993 09 12.36501 | 02 02 07.45 | +01 34 25.9 | 801 |
| (3046) | 1993 09 16.36889 | 23 14 06.28 | +03 56 39.0 | | 691 | 1931 VS | 1993 09 19.31552 | 01 58 56.42 | +01 47 41.0 | 801 |
| (3207) | 1993 09 19.38830 | 01 50 28.00 | +09 37 57.6 | | 691 | 1931 VS | 1993 09 19.33603 | 01 58 55.66 | +01 47 43.0 | 801 |
| (3207) | 1993 09 19.42168 | 01 50 27.00 | +09 37 50.0 | 16.8 V | 691 | 1931 VS | 1993 10 12.24231 | 01 38 42.40 | +02 32 45.0 | 801 |
| (3207) | 1993 09 19.45477 | 01 50 26.00 | +09 37 42.3 | | 691 | 1931 VS | 1993 10 12.25664 | 01 38 41.41 | +02 32 47.0 | 801 |
| (3653) | 1993 09 14.26438 | 23 07 30.17 | -03 14 03.4 | 16.0 V | 691 | 1931 VS | 1993 10 19.27354 | 01 30 45.06 | +02 51 48.4 | 801 |
| (3653) | 1993 09 14.29902 | 23 07 28.21 | -03 14 20.8 | | 691 | 1931 VS | 1993 10 19.28464 | 01 30 44.29 | +02 51 50.8 | 801 |
| (3653) | 1993 09 14.33389 | 23 07 26.36 | -03 14 39.9 | | 691 | 1934 GA | 1993 10 12.30272 | 05 34 59.78 | +19 41 38.9 | 801 |
| (3861) | 1993 09 16.20600 | 22 22 36.51 | -04 44 21.1 | 17.0 V | 691 | 1934 GA | 1993 10 12.32356 | 05 35 00.15 | +19 41 47.6 | 801 |
| (3861) | 1993 09 16.23788 | 22 22 35.12 | -04 44 34.3 | | 691 | 1934 GA | 1993 10 14.37855 | 05 35 35.06 | +19 56 38.4 | 801 |
| (3861) | 1993 09 16.27401 | 22 22 33.48 | -04 44 47.6 | | 691 | 1950 DE | 1993 09 19.30412 | 01 30 54.08 | -01 46 53.3 | 801 |
| (4030) | 1993 09 15.26995 | 23 33 56.98 | -00 31 20.7 | 15.7 V | 691 | 1950 DE | 1993 09 19.32722 | 01 30 53.42 | -01 47 02.8 | 801 |
| (4030) | 1993 09 15.30235 | 23 33 55.00 | -00 31 26.5 | | 691 | 1950 DE | 1993 09 20.25378 | 01 30 24.58 | -01 52 59.9 | 801 |
| (4030) | 1993 09 15.33444 | 23 33 53.02 | -00 31 32.0 | | 691 | 1950 DE | 1993 10 14.20616 | 01 15 21.35 | -04 22 38.3 | 801 |
| (4030) | 1993 09 20.15545 | 23 29 10.09 | -00 45 39.9 | | 691 | 1950 DE | 1993 10 14.22157 | 01 15 20.68 | -04 22 43.0 | 801 |
| (4030) | 1993 09 20.18848 | 23 29 08.11 | -00 45 45.1 | 16.1 V | 691 | 1950 DE | 1993 10 19.24090 | 01 11 57.28 | -04 49 33.9 | 801 |
| (4030) | 1993 09 20.22077 | 23 29 06.14 | -00 45 50.8 | | 691 | 1950 DE | 1993 10 19.25517 | 01 11 56.64 | -04 49 38.4 | 801 |
| (4109) | 1993 09 09.28592 | 22 37 41.86 | -07 50 50.2 | | 691 | 1965 UA | 1993 09 12.14468 | 22 45 15.55 | -11 24 24.6 | 801 |
| (4109) | 1993 09 09.31909 | 22 37 40.10 | -07 51 02.6 | 15.2 V | 691 | 1965 UA | 1993 09 12.16795 | 22 45 14.25 | -11 24 23.9 | 801 |
| (4109) | 1993 09 09.35404 | 22 37 38.26 | -07 51 16.0 | | 691 | 1965 UA | 1993 09 14.15458 | 22 43 32.98 | -11 23 18.0 | 801 |
| (4876) | 1993 09 19.37099 | 01 25 24.46 | +09 43 26.2 | 17.0 V | 691 | 1965 UA | 1993 09 14.17021 | 22 43 32.14 | -11 23 17.5 | 801 |
| (4876) | 1993 09 19.43747 | 01 25 21.98 | +09 43 11.6 | | 691 | 1971 SS ₁ | 1993 09 19.28602 | 01 19 29.03 | +06 10 32.6 | 801 |
| 693 University of Arizona, Catalina Station | | | | | | 1971 SS ₁ | 1993 09 19.30676 | 01 19 28.33 | +06 10 28.4 | 801 |
| C. Hergenrother, Lunar and Planetary Laboratory, University of Arizona, Tucson, AZ 85721, U.S.A. | | | | | | 1971 SS ₁ | 1993 09 20.22462 | 01 18 57.35 | +06 07 18.4 | 801 |
| Observers C. Hergenrother, Y. Shirley | | | | | | 1971 SS ₁ | 1993 09 20.24638 | 01 18 56.58 | +06 07 13.2 | 801 |
| Measurer C. Hergenrother | | | | | | 1971 SS ₁ | 1993 10 12.20725 | 01 03 19.23 | +04 36 12.2 | 801 |
| 0.4-m <i>f</i> /3 Schmidt | | | | | | 1971 SS ₁ | 1993 10 12.22240 | 01 03 18.49 | +04 36 08.3 | 801 |
| 1989 LW | 1993 09 19.23954 | 00 53 09.77 | +32 19 29.0 | 16.5 | 693 | 1971 SS ₁ | 1993 10 19.20340 | 00 57 55.27 | +04 06 28.8 | 801 |
| 1989 LW | 1993 09 19.28166 | 00 53 08.08 | +32 18 54.2 | | 693 | 1971 SS ₁ | 1993 10 19.22628 | 00 57 54.18 | +04 06 23.5 | 801 |
| 1993 MC | 1993 08 12.27292 | 18 59 00.72 | +00 03 18.2 | 16.5 | 693 | 1971 UN ₁ | 1993 09 12.12196 | 22 30 33.68 | -08 20 24.3 | 801 |
| 1993 MC | 1993 08 12.30191 | 18 59 00.12 | +00 03 04.6 | | 693 | 1971 UN ₁ | 1993 09 12.14071 | 22 30 32.89 | -08 20 30.3 | 801 |
| 1993 MF | 1993 09 19.22953 | 00 21 08.51 | +34 05 24.3 | 13.0 | 693 | 1971 UN ₁ | 1993 09 20.09470 | 22 25 18.77 | -08 56 10.5 | 801 |
| 1993 MF | 1993 09 19.27163 | 00 21 09.47 | +34 04 18.1 | | 693 | 1971 UN ₁ | 1993 09 20.11500 | 22 25 18.01 | -08 56 16.9 | 801 |
| 1993 SU ₂ | * 1993 09 18.39211 | 00 27 58.14 | +27 06 56.7 | 16.5 | 693 | 1971 UT ₁ | 1993 09 12.08968 | 21 56 47.78 | -11 24 56.8 | 801 |
| | | | | | | 1971 UT ₁ | 1993 09 12.10875 | 21 56 47.10 | -11 25 01.7 | 801 |

| | | | | | | | | | |
|----------------------|------------------|-------------|-------------|-------|-----------------------|------------------|-------------|-------------|-------|
| 1971 UT ₁ | 1993 09 20.05208 | 21 53 00.62 | -11 55 33.0 | 801 | 1978 PX ₂ | 1993 10 14.20244 | 01 15 44.20 | +10 55 38.5 | 801 |
| 1971 UT ₁ | 1993 09 20.07848 | 21 52 59.96 | -11 55 38.1 | 801 | 1978 PX ₂ | 1993 10 19.23817 | 01 11 12.41 | +10 35 14.9 | 801 |
| 1974 SJ ₃ | 1993 10 12.36351 | 04 28 07.29 | +39 36 50.6 | 801 | 1978 PX ₂ | 1993 10 19.25286 | 01 11 11.58 | +10 35 11.4 | 801 |
| 1974 SJ ₃ | 1993 10 12.38558 | 04 28 06.99 | +39 37 02.1 | 801 | 1978 SO ₄ | 1993 09 12.11090 | 22 18 56.17 | -16 30 57.0 | 801 |
| 1976 GY ₃ | 1993 09 12.13583 | 22 37 07.87 | -04 58 45.7 | 801 | 1978 SO ₄ | 1993 09 12.13074 | 22 18 55.42 | -16 30 58.6 | 801 |
| 1976 GY ₃ | 1993 09 12.14925 | 22 37 07.12 | -04 58 51.9 | 801 | 1979 SR | 1993 09 15.22461 | 01 19 04.02 | +12 34 39.6 | 801 |
| 1976 GY ₃ | 1993 09 14.12051 | 22 35 22.93 | -05 14 12.4 | I 801 | 1979 SR | 1993 09 15.25083 | 01 19 03.26 | +12 34 30.1 | 801 |
| 1976 GY ₃ | 1993 09 14.13792 | 22 35 22.01 | -05 14 19.9 | 801 | 1979 SR | 1993 09 19.28094 | 01 17 01.74 | +12 08 10.0 | 801 |
| 1976 QZ ₁ | 1993 10 12.08065 | 23 00 23.40 | -17 39 29.6 | 801 | 1979 SR | 1993 09 19.30144 | 01 17 01.03 | +12 08 01.1 | 801 |
| 1976 QZ ₁ | 1993 10 12.10553 | 23 00 22.72 | -17 39 24.0 | 801 | 1980 BJ ₄ | 1993 10 14.38218 | 04 38 10.52 | +21 57 39.9 | 801 |
| 1976 QZ ₁ | 1993 10 14.06801 | 22 59 39.01 | -17 32 21.1 | 801 | 1980 BJ ₄ | 1993 10 19.33223 | 04 36 50.01 | +21 59 01.9 | 801 |
| 1976 QZ ₁ | 1993 10 14.12138 | 22 59 37.81 | -17 32 08.1 | 801 | 1980 BJ ₄ | 1993 10 19.36817 | 04 36 49.13 | +21 58 59.9 | 801 |
| 1976 SW ₃ | 1993 10 13.30968 | 04 18 06.14 | +14 58 17.4 | 801 | 1980 UL ₁ | 1993 09 12.01431 | 18 22 34.33 | -14 04 47.5 | 801 |
| 1976 SW ₃ | 1993 10 13.36308 | 04 18 05.60 | +14 58 05.5 | 801 | 1981 DF ₂ | 1993 09 13.29619 | 00 55 32.68 | +20 58 47.0 | b 801 |
| 1976 SZ ₉ | 1993 09 12.15792 | 23 10 49.43 | -08 03 04.7 | 801 | 1981 DF ₂ | 1993 09 13.34159 | 00 55 31.34 | +20 58 46.3 | b 801 |
| 1976 SZ ₉ | 1993 09 12.17453 | 23 10 48.65 | -08 03 08.1 | 801 | 1981 DF ₂ | 1993 09 19.26659 | 00 52 31.97 | +20 51 58.1 | 801 |
| 1976 SZ ₉ | 1993 09 14.16687 | 23 09 15.07 | -08 09 43.4 | 801 | 1981 EA ₉ | 1993 09 20.08177 | 22 04 32.93 | -08 32 57.1 | 801 |
| 1976 SZ ₉ | 1993 09 14.18110 | 23 09 14.34 | -08 09 46.2 | 801 | 1981 EA ₉ | 1993 09 20.10071 | 22 04 32.28 | -08 32 53.3 | 801 |
| 1977 TC ₁ | 1993 09 14.23613 | 23 49 18.36 | +05 11 51.3 | 801 | 1981 EA ₉ | 1993 10 19.98025 | 22 05 47.33 | -06 06 37.3 | 801 |
| 1977 TC ₁ | 1993 09 14.25185 | 23 49 17.61 | +05 11 44.6 | 801 | 1981 EX ₁₃ | 1993 09 12.22876 | 23 42 32.71 | +07 34 51.3 | 801 |
| 1977 TC ₁ | 1993 09 19.20102 | 23 45 37.81 | +04 34 26.4 | 801 | 1981 EX ₁₃ | 1993 09 12.24331 | 23 42 32.06 | +07 34 44.7 | 801 |
| 1977 TC ₁ | 1993 09 19.21543 | 23 45 37.11 | +04 34 19.6 | 801 | 1981 EX ₁₃ | 1993 09 14.20426 | 23 41 09.43 | +07 20 30.1 | I 801 |
| 1977 TS ₃ | 1993 09 14.19257 | 23 28 51.35 | -10 00 09.4 | 801 | 1981 EX ₁₃ | 1993 09 14.23145 | 23 41 08.31 | +07 20 19.8 | 801 |
| 1977 TS ₃ | 1993 09 14.20847 | 23 28 50.63 | -10 00 14.9 | 801 | 1981 ED ₂₁ | 1993 09 12.33495 | 02 08 15.51 | +20 57 09.6 | 801 |
| 1977 TS ₃ | 1993 09 20.16647 | 23 24 38.84 | -10 33 21.3 | 801 | 1981 ED ₂₁ | 1993 09 12.35546 | 02 08 15.54 | +20 57 20.6 | 801 |
| 1977 TS ₃ | 1993 09 20.18431 | 23 24 38.08 | -10 33 26.7 | 801 | 1981 ED ₂₁ | 1993 09 14.30920 | 02 08 18.08 | +21 14 19.9 | 801 |
| 1977 TS ₃ | 1993 10 12.08378 | 23 12 42.64 | -11 47 14.5 | 801 | 1981 ED ₂₁ | 1993 09 14.32990 | 02 08 17.99 | +21 14 30.9 | 801 |
| 1977 TS ₃ | 1993 10 12.12493 | 23 12 41.74 | -11 47 18.0 | 801 | 1981 KJ | 1993 09 14.26478 | 00 20 27.61 | -14 23 20.4 | I 801 |
| 1977 UP | 1993 09 13.29885 | 00 59 35.48 | +06 55 34.2 | b 801 | 1981 KJ | 1993 09 20.17914 | 00 15 10.55 | -14 32 38.5 | 801 |
| 1977 UP | 1993 09 13.31683 | 00 59 34.73 | +06 55 33.2 | b 801 | 1981 KJ | 1993 09 20.19345 | 00 15 09.73 | -14 32 39.4 | 801 |
| 1977 UP | 1993 09 15.19685 | 00 58 18.58 | +06 54 14.2 | 801 | 1981 RQ ₂ | 1993 09 12.00890 | 18 01 11.59 | -11 41 49.8 | 801 |
| 1977 UP | 1993 09 15.21889 | 00 58 17.58 | +06 54 13.1 | 801 | 1981 RQ ₂ | 1993 09 12.02470 | 18 01 12.56 | -11 41 51.2 | 801 |
| 1977 UP | 1993 10 14.15667 | 00 31 38.56 | +05 44 21.3 | 801 | 1981 SN | 1993 10 13.31289 | 04 20 12.36 | +19 53 53.0 | 801 |
| 1977 UP | 1993 10 14.17152 | 00 31 37.71 | +05 44 18.8 | 801 | 1981 SN | 1993 10 13.36574 | 04 20 12.00 | +19 53 40.6 | 801 |
| 1977 UP | 1993 10 19.16065 | 00 27 25.55 | +05 30 56.2 | 801 | 1981 SN | 1993 10 19.33013 | 04 19 03.45 | +19 29 53.4 | 801 |
| 1977 UP | 1993 10 19.17868 | 00 27 24.65 | +05 30 53.6 | 801 | 1981 SN | 1993 10 19.36019 | 04 19 02.79 | +19 29 45.7 | 801 |
| 1977 UO ₅ | 1993 09 12.14277 | 22 43 06.96 | -12 02 42.3 | 801 | 1982 BS | 1993 09 15.35898 | 03 39 54.26 | +37 10 25.3 | I 801 |
| 1977 UO ₅ | 1993 09 12.16047 | 22 43 06.14 | -12 02 47.0 | 801 | 1982 BS | 1993 09 15.37390 | 03 39 54.74 | +37 10 32.3 | I 801 |
| 1977 UO ₅ | 1993 09 20.09767 | 22 37 20.53 | -12 33 10.2 | 801 | 1982 BS | 1993 09 20.31793 | 03 43 20.69 | +37 49 20.6 | 801 |
| 1977 UO ₅ | 1993 09 20.11821 | 22 37 19.68 | -12 33 16.1 | 801 | 1982 BS | 1993 09 20.35280 | 03 43 21.92 | +37 49 36.4 | 801 |
| 1978 NN ₁ | 1993 09 15.31037 | 02 46 25.09 | +05 15 18.9 | 801 | 1982 FF ₃ | 1993 09 15.03450 | 20 43 42.92 | -16 02 24.8 | W 801 |
| 1978 NN ₁ | 1993 09 15.33422 | 02 46 24.91 | +05 15 10.8 | 801 | 1982 FF ₃ | 1993 09 15.08521 | 20 43 41.90 | -16 02 29.0 | 801 |
| 1978 NN ₁ | 1993 09 20.30897 | 02 45 38.82 | +04 45 54.5 | 801 | 1982 PR | 1993 09 14.07698 | 21 41 24.43 | -15 21 07.1 | 801 |
| 1978 NN ₁ | 1993 09 20.35690 | 02 45 38.08 | +04 45 36.7 | 801 | 1982 PR | 1993 09 14.10581 | 21 41 23.52 | -15 21 10.9 | 801 |
| 1978 NN ₁ | 1993 10 14.26100 | 02 32 43.78 | +02 07 09.2 | 801 | 1982 PR | 1993 09 20.04572 | 21 38 41.14 | -15 31 04.7 | 801 |
| 1978 NN ₁ | 1993 10 14.27704 | 02 32 43.00 | +02 07 03.1 | 801 | 1982 PR | 1993 09 20.07594 | 21 38 40.36 | -15 31 06.3 | 801 |
| 1978 NN ₁ | 1993 10 19.29490 | 02 28 36.53 | +01 35 24.9 | 801 | 1982 ST | 1993 10 13.35031 | 07 06 14.44 | +49 33 45.6 | 801 |
| 1978 PX ₂ | 1993 09 12.32348 | 01 37 52.18 | +11 59 18.7 | 801 | 1982 ST | 1993 10 13.35632 | 07 06 15.22 | +49 33 48.8 | 801 |
| 1978 PX ₂ | 1993 09 12.37333 | 01 37 51.27 | +11 59 21.1 | 801 | 1982 SE ₁ | 1993 09 12.08007 | 21 36 42.35 | -09 28 58.3 | 801 |
| 1978 PX ₂ | 1993 09 15.22962 | 01 36 56.58 | +12 00 44.0 | 801 | 1982 SE ₁ | 1993 09 15.06253 | 21 35 06.94 | -09 36 49.8 | 801 |
| 1978 PX ₂ | 1993 09 15.26125 | 01 36 55.76 | +12 00 44.0 | 801 | 1982 SE ₁ | 1993 09 15.08105 | 21 35 06.34 | -09 36 52.8 | 801 |
| 1978 PX ₂ | 1993 10 14.18588 | 01 15 45.16 | +10 55 42.5 | 801 | 1982 SO ₄ | 1993 09 12.28151 | 00 32 52.64 | -01 00 25.0 | 801 |

| | | | | | | | | | |
|----------------------|------------------|-------------|-------------|-------|----------------------|------------------|-------------|-------------|-----|
| 1982 SO ₄ | 1993 09 12.30326 | 00 32 51.50 | -01 00 25.4 | 801 | 1984 SO ₅ | 1993 09 14.27709 | 01 13 20.69 | +01 51 13.3 | 801 |
| 1982 SO ₄ | 1993 09 19.23723 | 00 26 33.78 | -01 05 10.9 | 801 | 1984 SO ₅ | 1993 09 14.29470 | 01 13 20.11 | +01 51 06.9 | 801 |
| 1982 SO ₄ | 1993 09 19.25409 | 00 26 32.74 | -01 05 12.5 | 801 | 1984 SO ₅ | 1993 09 20.21028 | 01 10 01.90 | +01 13 19.0 | 801 |
| 1982 SO ₄ | 1993 10 12.16021 | 00 02 05.40 | -01 11 56.7 | 801 | 1984 SO ₅ | 1993 09 20.22696 | 01 10 01.26 | +01 13 12.6 | 801 |
| 1982 SO ₄ | 1993 10 12.18325 | 00 02 03.94 | -01 11 55.6 | 801 | 1984 SO ₅ | 1993 10 14.16626 | 00 52 05.70 | -01 25 20.8 | 801 |
| 1982 SO ₄ | 1993 10 19.13362 | 23 55 41.58 | -01 02 57.4 | 801 | 1984 SO ₅ | 1993 10 14.18118 | 00 52 04.98 | -01 25 25.8 | 801 |
| 1982 SO ₄ | 1993 10 19.14611 | 23 55 40.92 | -01 02 56.1 | 801 | 1984 SO ₅ | 1993 10 19.19178 | 00 48 18.66 | -01 52 47.3 | 801 |
| 1982 UH | 1993 09 14.28441 | 01 37 13.67 | +14 17 12.8 | 801 | 1984 SO ₅ | 1993 10 19.22404 | 00 48 17.18 | -01 52 56.6 | 801 |
| 1982 UH | 1993 09 14.33765 | 01 37 12.82 | +14 17 11.2 | 801 | 1984 UT | 1993 09 12.23201 | 23 45 37.46 | +21 49 44.7 | 801 |
| 1982 UH | 1993 09 20.23744 | 01 35 18.74 | +14 10 21.5 | 801 | 1984 UT | 1993 09 12.24617 | 23 45 36.78 | +21 49 39.9 | 801 |
| 1982 UH | 1993 09 20.26358 | 01 35 18.01 | +14 10 19.0 | 801 | 1984 UT | 1993 09 15.10273 | 23 43 27.98 | +21 32 15.5 | 801 |
| 1982 UH | 1993 10 12.23639 | 01 20 21.43 | +12 40 38.1 | 801 | 1984 UT | 1993 09 15.11743 | 23 43 27.29 | +21 32 09.8 | 801 |
| 1982 UH | 1993 10 12.25035 | 01 20 20.68 | +12 40 33.0 | 801 | 1984 UT | 1993 10 12.10190 | 23 24 20.40 | +17 05 13.3 | 801 |
| 1982 UH | 1993 10 19.24595 | 01 14 22.46 | +11 56 52.0 | 801 | 1984 UT | 1993 10 12.12167 | 23 24 19.74 | +17 04 58.7 | 801 |
| 1982 UH | 1993 10 19.25999 | 01 14 21.71 | +11 56 46.1 | 801 | 1984 UX ₂ | 1993 10 12.35106 | 04 15 09.13 | +31 17 51.2 | 801 |
| 1982 UV ₁ | 1993 10 14.27022 | 03 15 51.88 | +13 32 28.9 | 801 | 1984 UX ₂ | 1993 10 12.37123 | 04 15 08.67 | +31 17 59.3 | 801 |
| 1982 UV ₁ | 1993 10 14.29273 | 03 15 51.10 | +13 32 25.1 | 801 | 1984 UX ₂ | 1993 10 14.30916 | 04 14 24.44 | +31 30 32.8 | 801 |
| 1982 UM ₆ | 1993 09 12.32572 | 01 43 21.86 | +11 45 45.1 | 801 | 1984 UX ₂ | 1993 10 14.33255 | 04 14 23.81 | +31 30 41.7 | 801 |
| 1982 UM ₆ | 1993 09 12.36264 | 01 43 21.04 | +11 45 45.3 | 801 | 1985 RQ | 1993 10 12.08701 | 23 20 45.00 | -07 42 51.3 | 801 |
| 1982 UM ₆ | 1993 09 15.23569 | 01 42 13.84 | +11 45 29.6 | 801 | 1985 RQ | 1993 10 12.10851 | 23 20 44.51 | -07 42 43.0 | 801 |
| 1982 UM ₆ | 1993 09 15.26480 | 01 42 13.01 | +11 45 28.8 | 801 | 1985 TM ₁ | 1993 09 12.35201 | 03 22 56.18 | +19 59 20.0 | 801 |
| 1982 UM ₆ | 1993 10 14.24296 | 01 19 10.91 | +10 28 29.7 | w 801 | 1985 TM ₁ | 1993 09 12.37012 | 03 22 56.85 | +19 59 31.0 | 801 |
| 1982 UM ₆ | 1993 10 19.24826 | 01 14 26.35 | +10 07 26.1 | 801 | 1985 TM ₁ | 1993 09 15.35341 | 03 24 46.05 | +20 30 02.9 | 801 |
| 1982 UM ₆ | 1993 10 19.26275 | 01 14 25.52 | +10 07 22.3 | 801 | 1985 TM ₁ | 1993 09 15.37116 | 03 24 46.62 | +20 30 13.5 | 801 |
| 1983 RB | 1993 09 12.32088 | 01 32 53.82 | -01 35 25.4 | r 801 | 1985 TM ₁ | 1993 10 14.28426 | 03 25 59.46 | +25 16 30.1 | 801 |
| 1983 RB | 1993 09 12.32859 | 01 32 53.44 | -01 35 43.0 | r 801 | 1985 TM ₁ | 1993 10 14.30022 | 03 25 58.91 | +25 16 38.7 | 801 |
| 1983 RB | 1993 09 14.28187 | 01 31 23.81 | -02 49 21.9 | 801 | 1985 UF ₃ | 1993 09 12.04142 | 20 42 57.45 | -02 39 22.0 | 801 |
| 1983 RB | 1993 09 14.28961 | 01 31 23.37 | -02 49 39.1 | 801 | 1985 UF ₃ | 1993 09 12.06531 | 20 42 57.13 | -02 39 36.0 | 801 |
| 1983 RB | 1993 10 12.21936 | 01 03 48.91 | -15 25 17.6 | 801 | 1985 UF ₃ | 1993 09 14.04644 | 20 42 35.10 | -02 58 57.7 | 801 |
| 1983 RB | 1993 10 12.22786 | 01 03 48.39 | -15 25 25.3 | 801 | 1985 UF ₃ | 1993 10 12.00662 | 20 50 01.02 | -06 44 58.2 | 801 |
| 1983 RB | 1993 10 14.17851 | 01 02 06.53 | -15 53 21.3 | 801 | 1985 YH | 1993 10 13.28992 | 03 48 09.18 | +33 06 03.9 | 801 |
| 1983 RB | 1993 10 14.18860 | 01 02 05.90 | -15 53 30.2 | 801 | 1985 YH | 1993 10 13.32920 | 03 48 08.05 | +33 06 03.7 | 801 |
| 1983 RX | 1993 09 12.28341 | 00 34 12.71 | +09 43 20.0 | 801 | 1985 YH | 1993 10 19.31656 | 03 44 53.94 | +33 02 26.5 | 801 |
| 1983 RX | 1993 09 12.30561 | 00 34 11.46 | +09 43 17.6 | 801 | 1985 YH | 1993 10 19.34064 | 03 44 53.00 | +33 02 24.7 | 801 |
| 1983 RX | 1993 09 19.24189 | 00 27 33.94 | +09 24 41.3 | 801 | 1986 AJ | 1993 09 19.36484 | 02 54 50.11 | +46 52 29.0 | 801 |
| 1983 RX | 1993 09 19.25991 | 00 27 32.82 | +09 24 37.9 | 801 | 1986 AJ | 1993 09 19.38314 | 02 54 50.53 | +46 52 43.7 | 801 |
| 1983 RM ₃ | 1993 09 12.14752 | 22 45 47.84 | -01 31 53.5 | 801 | 1986 AJ | 1993 09 20.37385 | 02 55 15.18 | +47 05 40.3 | 801 |
| 1983 RM ₃ | 1993 09 12.16575 | 22 45 46.65 | -01 31 57.0 | 801 | 1986 GU | 1993 10 19.38936 | 06 24 56.38 | +15 03 58.5 | 801 |
| 1983 RM ₃ | 1993 09 14.13131 | 22 43 42.72 | -01 38 32.6 | 801 | 1986 GU | 1993 10 19.40439 | 06 24 56.90 | +15 04 06.0 | 801 |
| 1983 RM ₃ | 1993 09 14.14632 | 22 43 41.73 | -01 38 34.9 | 801 | 1986 PK ₆ | 1993 09 15.13551 | 00 30 38.98 | +10 50 55.7 | 801 |
| 1983 RX ₃ | 1993 09 14.27398 | 01 08 57.23 | +00 28 03.0 | 801 | 1986 PK ₆ | 1993 09 15.15148 | 00 30 38.10 | +10 50 50.7 | 801 |
| 1983 RX ₃ | 1993 09 14.28660 | 01 08 56.84 | +00 27 53.5 | 801 | 1986 PK ₆ | 1993 09 19.23933 | 00 26 48.99 | +10 27 38.2 | 801 |
| 1983 RX ₃ | 1993 09 20.20634 | 01 05 43.14 | -00 49 16.5 | 801 | 1986 PK ₆ | 1993 09 19.25581 | 00 26 48.00 | +10 27 32.2 | 801 |
| 1983 RX ₃ | 1993 09 20.22229 | 01 05 42.53 | -00 49 29.1 | 801 | 1986 QQ | 1993 09 12.18233 | 23 23 51.16 | -05 19 22.6 | 801 |
| 1983 RX ₃ | 1993 10 12.19701 | 00 50 44.03 | -05 16 22.5 | 801 | 1986 QQ | 1993 09 12.19715 | 23 23 50.21 | -05 19 26.0 | 801 |
| 1983 RX ₃ | 1993 10 12.21279 | 00 50 43.36 | -05 16 32.1 | 801 | 1986 QQ | 1993 09 20.14433 | 23 15 38.88 | -05 50 57.6 | 801 |
| 1983 RX ₃ | 1993 10 14.17572 | 00 49 25.43 | -05 36 08.9 | 801 | 1986 QQ | 1993 09 20.15955 | 23 15 37.90 | -05 51 01.3 | 801 |
| 1983 RX ₃ | 1993 10 14.19311 | 00 49 24.71 | -05 36 19.2 | 801 | 1986 RQ | 1993 09 14.23860 | 23 46 23.14 | +10 36 31.3 | 801 |
| 1984 FN | 1993 10 12.29131 | 03 52 30.37 | +14 50 51.1 | 801 | 1986 RQ | 1993 09 14.25457 | 23 46 22.42 | +10 36 20.6 | 801 |
| 1984 FN | 1993 10 12.30773 | 03 52 29.82 | +14 51 00.6 | 801 | 1986 RQ | 1993 09 19.19869 | 23 42 48.85 | +09 38 45.6 | 801 |
| 1984 SG ₁ | 1993 09 12.05431 | 21 32 48.32 | -10 47 21.5 | 801 | 1986 RQ | 1993 09 19.21005 | 23 42 48.33 | +09 38 37.5 | 801 |
| 1984 SG ₁ | 1993 09 12.07561 | 21 32 47.56 | -10 47 25.3 | 801 | 1986 RQ | 1993 10 12.12786 | 23 29 51.47 | +04 49 47.1 | 801 |

| | | | | | | | | | |
|----------------------|------------------|-------------|-------------|-----|----------------------|------------------|-------------|-------------|-------|
| 1986 RQ | 1993 10 12.14447 | 23 29 51.11 | +04 49 35.1 | 801 | 1988 RE | 1993 09 12.38932 | 03 39 53.88 | +20 21 01.0 | 801 |
| 1986 RR ₂ | 1993 09 12.34947 | 03 13 58.26 | +12 03 43.1 | 801 | 1988 RE | 1993 09 14.34639 | 03 41 08.79 | +19 23 36.3 | 801 |
| 1986 RR ₂ | 1993 09 12.36767 | 03 13 59.13 | +12 03 39.3 | 801 | 1988 RE | 1993 09 14.35414 | 03 41 09.11 | +19 23 23.5 | 801 |
| 1986 RR ₂ | 1993 09 14.32703 | 03 15 30.58 | +11 56 51.1 | 801 | 1988 TA ₁ | 1993 09 12.17225 | 22 55 40.25 | +03 17 31.9 | 801 |
| 1986 RR ₂ | 1993 09 14.34403 | 03 15 31.27 | +11 56 47.6 | 801 | 1988 TA ₁ | 1993 09 20.13679 | 22 50 23.61 | +02 16 39.4 | 801 |
| 1986 RR ₂ | 1993 10 13.28388 | 03 19 56.31 | +09 02 27.1 | 801 | 1988 TA ₁ | 1993 09 20.15144 | 22 50 23.03 | +02 16 32.6 | 801 |
| 1986 RR ₂ | 1993 10 13.30733 | 03 19 55.62 | +09 02 16.1 | 801 | 1988 TA ₁ | 1993 10 12.04234 | 22 40 11.31 | -00 24 50.4 | 801 |
| 1986 RV ₂ | 1993 10 12.27965 | 01 55 35.03 | +09 19 43.0 | 801 | 1988 TA ₁ | 1993 10 12.06933 | 22 40 10.89 | -00 25 00.8 | 801 |
| 1986 TN ₁ | 1993 09 12.18462 | 23 19 29.22 | +14 35 25.9 | 801 | 1988 TA ₁ | 1993 10 14.06103 | 22 39 42.07 | -00 37 46.4 | 801 |
| 1986 TN ₁ | 1993 09 12.19958 | 23 19 28.40 | +14 35 20.0 | 801 | 1988 TA ₁ | 1993 10 14.08921 | 22 39 41.74 | -00 37 57.0 | 801 |
| 1986 TN ₁ | 1993 09 19.19586 | 23 13 21.55 | +13 40 16.6 | 801 | 1988 TP ₁ | 1993 09 19.31221 | 01 50 04.46 | +08 25 17.9 | 801 |
| 1986 TN ₁ | 1993 09 19.20699 | 23 13 20.95 | +13 40 10.8 | 801 | 1988 TP ₁ | 1993 09 19.33354 | 01 50 03.76 | +08 25 12.6 | 801 |
| 1986 TN ₁ | 1993 10 12.07727 | 22 57 35.47 | +10 00 59.1 | 801 | 1988 TP ₁ | 1993 09 20.25670 | 01 49 37.06 | +08 22 18.4 | 801 |
| 1986 TN ₁ | 1993 10 12.09442 | 22 57 34.97 | +10 00 48.9 | 801 | 1988 TP ₁ | 1993 09 20.28045 | 01 49 36.30 | +08 22 14.3 | 801 |
| 1986 XF ₁ | 1993 09 12.15086 | 22 52 47.59 | -02 20 08.0 | 801 | 1988 TP ₁ | 1993 10 14.25310 | 01 32 58.17 | +06 44 41.1 | 801 |
| 1986 XF ₁ | 1993 09 12.16931 | 22 52 46.56 | -02 20 12.9 | 801 | 1988 VD ₁ | 1993 09 15.35581 | 03 31 19.52 | +30 39 37.0 | r 801 |
| 1986 XF ₁ | 1993 09 14.15789 | 22 51 03.72 | -02 29 04.0 | 801 | 1988 VD ₁ | 1993 09 15.38012 | 03 31 19.70 | +30 39 47.6 | r 801 |
| 1986 XF ₁ | 1993 09 14.17500 | 22 51 02.80 | -02 29 08.5 | 801 | 1988 VD ₁ | 1993 09 20.31472 | 03 31 36.99 | +31 14 17.6 | 801 |
| 1987 PL | 1993 10 13.31804 | 04 24 00.78 | +32 08 30.2 | 801 | 1988 VD ₁ | 1993 09 20.34988 | 03 31 36.93 | +31 14 32.2 | 801 |
| 1987 PL | 1993 10 13.36804 | 04 23 59.90 | +32 08 33.2 | 801 | 1988 VD ₁ | 1993 10 13.27868 | 03 23 32.93 | +33 24 15.3 | 801 |
| 1987 QW ₂ | 1993 10 14.08523 | 23 13 50.75 | -06 24 40.4 | 801 | 1988 VD ₁ | 1993 10 13.30236 | 03 23 31.89 | +33 24 21.2 | 801 |
| 1987 QW ₂ | 1993 10 14.12736 | 23 13 49.76 | -06 24 44.4 | 801 | 1988 XU ₁ | 1993 10 13.32431 | 04 48 07.95 | +15 48 55.8 | 801 |
| 1987 RY | 1993 10 14.07058 | 23 15 14.38 | -05 22 09.8 | 801 | 1988 XU ₁ | 1993 10 13.38163 | 04 48 07.26 | +15 48 55.9 | 801 |
| 1987 RY | 1993 10 14.12409 | 23 15 13.07 | -05 22 16.9 | 801 | 1988 XU ₁ | 1993 10 19.33773 | 04 46 36.99 | +15 49 49.1 | 801 |
| 1987 ST ₁ | 1993 10 14.38943 | 05 36 30.69 | +31 08 17.7 | 801 | 1988 XU ₁ | 1993 10 19.37564 | 04 46 36.23 | +15 49 49.3 | 801 |
| 1987 ST ₁ | 1993 10 19.35398 | 05 38 03.47 | +31 11 04.5 | 801 | 1989 AK | 1993 09 19.31881 | 02 24 19.62 | +07 52 04.2 | r 801 |
| 1987 ST ₁ | 1993 10 19.41431 | 05 38 04.22 | +31 11 05.9 | 801 | 1989 AK | 1993 09 19.37295 | 02 24 18.99 | +07 51 57.2 | r 801 |
| 1987 SJ ₃ | 1993 10 13.34752 | 06 54 27.74 | +48 50 22.8 | 801 | 1989 AK | 1993 10 12.27209 | 02 13 45.01 | +06 40 35.0 | 801 |
| 1987 SJ ₃ | 1993 10 13.35316 | 06 54 28.33 | +48 50 28.2 | 801 | 1989 AK | 1993 10 12.28751 | 02 13 44.34 | +06 40 31.5 | 801 |
| 1988 BB ₄ | 1993 09 20.11197 | 22 43 02.28 | +02 40 42.1 | 801 | 1989 AK | 1993 10 19.28275 | 02 08 27.74 | +06 14 22.1 | 801 |
| 1988 BB ₄ | 1993 09 20.12711 | 22 43 01.42 | +02 40 35.4 | 801 | 1989 AK | 1993 10 19.29747 | 02 08 27.05 | +06 14 18.7 | 801 |
| 1988 BJ ₄ | 1993 09 14.24370 | 00 17 37.59 | -01 34 51.3 | 801 | 1989 AQ | 1993 09 15.25581 | 01 50 08.86 | +08 32 23.3 | 801 |
| 1988 BJ ₄ | 1993 09 14.25912 | 00 17 36.83 | -01 34 59.2 | 801 | 1989 AQ | 1993 09 15.28409 | 01 50 08.24 | +08 32 19.4 | 801 |
| 1988 BJ ₄ | 1993 09 20.17200 | 00 12 48.75 | -02 25 33.6 | 801 | 1989 AQ | 1993 09 20.25153 | 01 48 10.84 | +08 19 42.6 | 801 |
| 1988 BJ ₄ | 1993 09 20.18598 | 00 12 48.00 | -02 25 40.5 | 801 | 1989 AQ | 1993 09 20.27516 | 01 48 10.17 | +08 19 38.4 | 801 |
| 1988 BJ ₄ | 1993 10 12.14154 | 23 55 08.54 | -05 12 50.8 | 801 | 1989 AQ | 1993 10 14.23929 | 01 32 47.51 | +06 51 47.8 | 801 |
| 1988 BJ ₄ | 1993 10 12.15749 | 23 55 07.88 | -05 12 56.4 | 801 | 1989 AQ | 1993 10 14.25498 | 01 32 46.75 | +06 51 43.6 | 801 |
| 1988 BJ ₄ | 1993 10 14.13615 | 23 53 52.47 | -05 24 01.7 | 801 | 1989 CV | 1993 09 12.21694 | 23 41 01.11 | -06 28 18.0 | 801 |
| 1988 BJ ₄ | 1993 10 14.15328 | 23 53 51.77 | -05 24 06.6 | 801 | 1989 CV | 1993 09 12.23582 | 23 41 00.36 | -06 28 21.5 | 801 |
| 1988 LB | 1993 09 14.30351 | 02 06 56.53 | +30 44 12.6 | 801 | 1989 GT ₄ | 1993 09 12.11874 | 22 28 38.10 | -06 29 44.1 | 801 |
| 1988 LB | 1993 09 14.34059 | 02 06 55.68 | +30 44 17.4 | 801 | 1989 GT ₄ | 1993 09 12.13303 | 22 28 37.47 | -06 29 50.4 | 801 |
| 1988 LB | 1993 09 20.26869 | 02 04 18.42 | +30 53 46.9 | 801 | 1989 GT ₄ | 1993 09 14.11714 | 22 27 19.30 | -06 44 11.9 | 801 |
| 1988 LB | 1993 09 20.29567 | 02 04 17.51 | +30 53 49.2 | 801 | 1989 GT ₄ | 1993 09 14.13477 | 22 27 18.54 | -06 44 19.1 | 801 |
| 1988 QD ₁ | 1993 09 12.33822 | 04 12 26.55 | +31 09 12.1 | 801 | 1989 JF | 1993 10 14.25788 | 03 02 25.96 | +21 51 30.4 | 801 |
| 1988 QD ₁ | 1993 09 12.35984 | 04 12 27.39 | +31 09 11.1 | 801 | 1989 JF | 1993 10 14.27231 | 03 02 25.15 | +21 51 29.3 | 801 |
| 1988 QD ₁ | 1993 09 20.37017 | 04 16 39.84 | +31 03 12.7 | 801 | 1989 KA | 1993 09 12.08567 | 21 55 51.25 | -04 51 22.0 | 801 |
| 1988 QD ₁ | 1993 09 20.39825 | 04 16 40.45 | +31 03 11.1 | 801 | 1989 KA | 1993 09 12.10084 | 21 55 50.57 | -04 51 28.2 | 801 |
| 1988 QD ₁ | 1993 10 12.33341 | 04 16 30.67 | +30 00 13.6 | 801 | 1989 KA | 1993 09 20.06993 | 21 50 51.52 | -05 40 15.8 | 801 |
| 1988 QD ₁ | 1993 10 12.36103 | 04 16 29.93 | +30 00 05.9 | 801 | 1989 LM | 1993 09 12.25502 | 00 27 44.36 | +12 39 56.8 | 801 |
| 1988 QD ₁ | 1993 10 14.31705 | 04 15 38.22 | +29 50 44.7 | 801 | 1989 LM | 1993 09 12.26853 | 00 27 43.62 | +12 39 53.8 | 801 |
| 1988 QD ₁ | 1993 10 14.34139 | 04 15 37.47 | +29 50 37.5 | 801 | 1989 LM | 1993 09 20.19066 | 00 20 20.92 | +12 06 10.6 | 801 |
| 1988 RE | 1993 09 12.38447 | 03 39 53.69 | +20 21 09.3 | 801 | 1989 LM | 1993 09 20.20416 | 00 20 20.10 | +12 06 06.3 | 801 |

| | | | | | | | | | |
|-----------------------|------------------|-------------|-------------|-----|-----------------------|------------------|-------------|-------------|-------|
| 1989 LM | 1993 10 19.12883 | 23 54 53.52 | +08 58 38.6 | 801 | 1989 UG ₃ | 1993 09 20.18816 | 00 13 21.51 | -08 03 26.9 | 801 |
| 1989 LM | 1993 10 19.14382 | 23 54 52.94 | +08 58 32.7 | 801 | 1989 WC | 1993 09 20.26153 | 01 39 57.97 | +13 13 13.4 | 801 |
| 1989 NO | 1993 09 14.31891 | 02 49 47.81 | +19 53 52.4 | 801 | 1989 WC | 1993 10 12.23822 | 01 24 00.85 | +11 49 36.1 | 801 |
| 1989 NO | 1993 09 14.36812 | 02 49 47.27 | +19 53 58.9 | 801 | 1989 WC | 1993 10 12.25240 | 01 24 00.09 | +11 49 31.6 | 801 |
| 1989 NO | 1993 09 19.36950 | 02 48 34.41 | +20 03 07.3 | 801 | 1989 WM ₃ | 1993 09 15.27890 | 01 52 15.13 | -03 34 02.5 | r 801 |
| 1989 NR | 1993 10 13.33981 | 05 44 32.00 | +35 40 14.5 | 801 | 1989 WM ₃ | 1993 09 19.30938 | 01 50 05.57 | -03 39 37.5 | 801 |
| 1989 NR | 1993 10 13.37487 | 05 44 33.06 | +35 40 22.2 | 801 | 1989 WM ₃ | 1993 09 19.33087 | 01 50 04.76 | -03 39 39.1 | 801 |
| 1989 NR | 1993 10 19.37308 | 05 47 06.82 | +36 01 41.6 | 801 | 1989 WM ₃ | 1993 10 12.24038 | 01 30 10.88 | -03 56 30.8 | 801 |
| 1989 NR | 1993 10 19.40934 | 05 47 07.39 | +36 01 49.7 | 801 | 1989 WM ₃ | 1993 10 12.25426 | 01 30 09.97 | -03 56 30.4 | 801 |
| 1989 PK | 1993 10 12.00929 | 20 53 07.64 | -07 50 43.4 | 801 | 1989 WM ₃ | 1993 10 19.25078 | 01 22 40.74 | -03 49 15.2 | 801 |
| 1989 PK | 1993 10 12.02296 | 20 53 08.26 | -07 50 31.5 | 801 | 1989 WM ₃ | 1993 10 19.26825 | 01 22 39.60 | -03 49 13.1 | 801 |
| 1989 PK | 1993 10 14.02618 | 20 54 49.83 | -07 21 33.9 | 801 | 1989 XF | 1993 10 13.32679 | 04 48 35.93 | +10 08 16.1 | 801 |
| 1989 RZ | 1993 10 13.38523 | 07 49 53.92 | +49 08 23.8 | 801 | 1989 XF | 1993 10 13.39678 | 04 48 36.09 | +10 08 07.3 | 801 |
| 1989 RZ | 1993 10 13.39325 | 07 49 55.50 | +49 08 24.7 | 801 | 1989 YB | 1993 09 12.37892 | 03 42 02.52 | +29 18 18.5 | 801 |
| 1989 RC ₁ | 1993 10 12.30487 | 05 37 20.37 | +03 45 07.5 | 801 | 1989 YB | 1993 09 12.39081 | 03 42 03.44 | +29 18 22.8 | 801 |
| 1989 RC ₁ | 1993 10 12.32157 | 05 37 20.96 | +03 45 04.9 | 801 | 1989 YB | 1993 09 14.34847 | 03 44 31.01 | +29 30 01.2 | 801 |
| 1989 RC ₁ | 1993 10 19.36558 | 05 40 53.37 | +03 27 40.9 | 801 | 1989 YB | 1993 09 14.36051 | 03 44 31.86 | +29 30 05.4 | 801 |
| 1989 RC ₁ | 1993 10 19.39950 | 05 40 54.03 | +03 27 36.6 | 801 | 1989 YF ₅ | 1993 10 13.33197 | 05 25 21.31 | +34 53 06.2 | 801 |
| 1989 SE | 1993 10 12.07197 | 22 53 59.19 | -09 05 19.8 | 801 | 1989 YF ₅ | 1993 10 13.40166 | 05 25 21.95 | +34 53 07.7 | 801 |
| 1989 SE | 1993 10 12.09778 | 22 53 58.88 | -09 05 08.3 | 801 | 1990 BX | 1993 10 13.32135 | 04 45 40.55 | +13 42 02.2 | 801 |
| 1989 SK | 1993 09 14.30031 | 01 55 50.36 | +20 02 01.8 | 801 | 1990 BX | 1993 10 13.39902 | 04 45 40.30 | +13 41 54.1 | 801 |
| 1989 SK | 1993 09 14.33284 | 01 55 49.93 | +20 02 10.2 | 801 | 1990 BX | 1993 10 19.33463 | 04 44 57.57 | +13 29 18.6 | 801 |
| 1989 SK | 1993 09 20.25922 | 01 54 11.11 | +20 24 53.8 | 801 | 1990 BX | 1993 10 19.38266 | 04 44 56.89 | +13 29 12.1 | 801 |
| 1989 SK | 1993 09 20.28906 | 01 54 10.37 | +20 24 59.7 | 801 | 1990 BN ₂ | 1993 10 14.36072 | 05 49 48.20 | +15 11 28.7 | 801 |
| 1989 TT ₁ | 1993 10 13.33632 | 05 20 13.34 | +21 25 01.1 | 801 | 1990 BN ₂ | 1993 10 14.39271 | 05 49 49.07 | +15 11 32.4 | 801 |
| 1989 TT ₁ | 1993 10 13.37213 | 05 20 14.21 | +21 24 55.2 | 801 | 1990 HM ₁ | 1993 10 14.29503 | 03 47 46.57 | +11 58 46.1 | 801 |
| 1989 TT ₁ | 1993 10 19.34750 | 05 22 16.79 | +21 07 24.8 | 801 | 1990 HM ₁ | 1993 10 14.32509 | 03 47 45.74 | +11 58 45.0 | 801 |
| 1989 TT ₁ | 1993 10 19.38638 | 05 22 17.20 | +21 07 17.6 | 801 | 1990 QM ₂ | 1993 10 12.34372 | 05 25 07.92 | -11 01 28.6 | 801 |
| 1989 TL ₁₅ | 1993 09 19.24498 | 00 40 45.37 | +06 14 57.4 | 801 | 1990 QM ₂ | 1993 10 12.35512 | 05 25 08.28 | -11 01 40.9 | 801 |
| 1989 TL ₁₅ | 1993 09 19.26350 | 00 40 44.50 | +06 14 53.5 | 801 | 1990 SM ₂₈ | 1993 09 14.24110 | 00 16 17.49 | +07 13 42.7 | 801 |
| 1989 TL ₁₅ | 1993 09 20.20182 | 00 40 00.57 | +06 11 07.9 | 801 | 1990 SM ₂₈ | 1993 09 14.25678 | 00 16 16.63 | +07 13 37.6 | 801 |
| 1989 TL ₁₅ | 1993 09 20.21941 | 00 39 59.68 | +06 11 02.9 | 801 | 1990 SM ₂₈ | 1993 09 19.21293 | 00 11 38.72 | +06 45 15.0 | 801 |
| 1989 UA | 1993 09 15.30329 | 02 35 53.66 | +07 50 14.2 | 801 | 1990 SM ₂₈ | 1993 09 19.22956 | 00 11 37.73 | +06 45 09.0 | 801 |
| 1989 UA | 1993 09 15.34366 | 02 35 53.20 | +07 50 17.8 | 801 | 1990 SM ₂₈ | 1993 10 12.13932 | 23 50 18.32 | +04 07 29.1 | 801 |
| 1989 UA | 1993 10 13.26635 | 02 19 36.25 | +08 06 46.5 | 801 | 1990 SM ₂₈ | 1993 10 12.15321 | 23 50 17.63 | +04 07 23.6 | 801 |
| 1989 UA | 1993 10 13.28137 | 02 19 35.36 | +08 06 46.5 | 801 | 1990 SM ₂₈ | 1993 10 19.11731 | 23 45 31.07 | +03 23 06.8 | 801 |
| 1989 UA | 1993 10 19.29311 | 02 13 38.55 | +08 07 22.1 | 801 | 1990 TN ₁ | 1993 09 19.35676 | 03 39 38.11 | +43 58 58.6 | 801 |
| 1989 UA | 1993 10 19.30569 | 02 13 37.72 | +08 07 21.9 | 801 | 1990 TN ₁ | 1993 09 19.37995 | 03 39 38.81 | +43 59 17.7 | 801 |
| 1989 UL ₁ | 1993 09 14.31476 | 02 32 16.46 | +07 58 39.2 | 801 | 1990 UW | 1993 09 12.11541 | 22 22 47.39 | -09 26 19.9 | 801 |
| 1989 UL ₁ | 1993 09 14.36508 | 02 32 15.68 | +07 58 42.6 | 801 | 1990 UW | 1993 09 12.12808 | 22 22 46.64 | -09 26 23.0 | 801 |
| 1989 UL ₁ | 1993 09 20.29090 | 02 30 23.64 | +08 03 56.7 | 801 | 1990 UW | 1993 09 14.11312 | 22 20 56.41 | -09 33 41.6 | 801 |
| 1989 UL ₁ | 1993 09 20.32051 | 02 30 22.84 | +08 03 58.3 | 801 | 1990 UW | 1993 09 14.12851 | 22 20 55.52 | -09 33 45.2 | 801 |
| 1989 UL ₁ | 1993 10 12.27027 | 02 14 45.14 | +08 04 29.5 | 801 | 1990 VF ₃ | 1993 09 12.26680 | 00 30 45.93 | -05 52 52.0 | 801 |
| 1989 UL ₁ | 1993 10 12.28170 | 02 14 44.48 | +08 04 29.2 | 801 | 1990 VF ₃ | 1993 09 12.27947 | 00 30 45.38 | -05 52 57.7 | 801 |
| 1989 UL ₁ | 1993 10 19.27925 | 02 07 42.16 | +08 01 38.2 | 801 | 1990 VF ₃ | 1993 09 20.19767 | 00 24 20.84 | -06 50 39.0 | 801 |
| 1989 UL ₁ | 1993 10 19.29141 | 02 07 41.37 | +08 01 38.0 | 801 | 1990 VF ₃ | 1993 09 20.21243 | 00 24 20.05 | -06 50 45.2 | 801 |
| 1989 UT ₂ | 1993 09 15.20736 | 01 14 52.77 | +19 10 16.3 | 801 | 1990 VG ₃ | 1993 10 14.16169 | 00 50 26.76 | -04 52 14.8 | E 801 |
| 1989 UT ₂ | 1993 09 15.23241 | 01 14 51.99 | +19 10 09.7 | 801 | 1990 VG ₃ | 1993 10 14.17338 | 00 50 26.13 | -04 52 18.1 | 801 |
| 1989 UT ₂ | 1993 09 19.27709 | 01 12 17.34 | +18 45 48.2 | 801 | 1990 VG ₃ | 1993 10 19.17297 | 00 46 24.21 | -05 13 13.7 | 801 |
| 1989 UG ₃ | 1993 09 14.24619 | 00 18 08.98 | -07 28 08.4 | 801 | 1990 VG ₃ | 1993 10 19.18934 | 00 46 23.44 | -05 13 17.1 | 801 |
| 1989 UG ₃ | 1993 09 14.26171 | 00 18 08.23 | -07 28 12.9 | 801 | 1990 XF | 1993 09 20.10451 | 22 38 17.03 | +05 48 10.3 | 801 |
| 1989 UG ₃ | 1993 09 20.17515 | 00 13 22.21 | -08 03 21.9 | 801 | 1990 XF | 1993 09 20.12414 | 22 38 16.05 | +05 48 05.3 | 801 |

| | | | | | | | | | |
|----------------------|------------------|-------------|-------------|-------|----------------------|------------------|-------------|-------------|-----|
| 1990 XF | 1993 10 12.03826 | 22 24 28.66 | +04 03 47.3 | 801 | 1991 DX | 1993 09 14.14135 | 22 31 09.53 | -03 54 17.9 | 801 |
| 1990 XF | 1993 10 12.06694 | 22 24 27.94 | +04 03 39.7 | 801 | 1991 DX | 1993 10 14.04897 | 22 17 47.07 | -08 18 16.8 | 801 |
| 1990 XM | 1993 09 15.24877 | 01 45 44.21 | +05 56 16.2 | 801 | 1991 DX | 1993 10 19.03926 | 22 17 40.83 | -08 47 54.4 | 801 |
| 1990 XM | 1993 09 15.27581 | 01 45 43.77 | +05 56 09.9 | 801 | 1991 DX | 1993 10 19.08168 | 22 17 40.88 | -08 48 09.4 | 801 |
| 1990 XM | 1993 09 20.24850 | 01 44 15.65 | +05 36 14.7 | 801 | 1991 FU | 1993 09 14.27152 | 00 56 27.47 | +23 56 24.8 | 801 |
| 1990 XM | 1993 09 20.27311 | 01 44 14.99 | +05 36 08.5 | 801 | 1991 FU | 1993 09 14.29198 | 00 56 26.59 | +23 56 26.9 | 801 |
| 1990 XP | 1993 09 14.31275 | 02 10 28.76 | +12 20 34.1 | 801 | 1991 FU | 1993 09 15.15988 | 00 55 46.57 | +23 57 45.3 | 801 |
| 1990 XP | 1993 09 14.36289 | 02 10 28.76 | +12 20 22.7 | 801 | 1991 FU | 1993 09 15.18149 | 00 55 45.55 | +23 57 47.2 | 801 |
| 1990 XP | 1993 09 20.27127 | 02 10 06.01 | +11 54 04.0 | 801 | 1991 FU | 1993 10 14.15481 | 00 28 32.01 | +23 03 41.8 | 801 |
| 1990 XP | 1993 09 20.30183 | 02 10 05.63 | +11 53 54.5 | 801 | 1991 FU | 1993 10 14.16822 | 00 28 31.27 | +23 03 37.8 | 801 |
| 1990 XP | 1993 10 12.26500 | 01 58 58.12 | +09 15 06.2 | 801 | 1991 FU | 1993 10 19.16502 | 00 23 54.78 | +22 37 40.1 | 801 |
| 1990 XP | 1993 10 12.27779 | 01 58 57.50 | +09 14 59.4 | 801 | 1991 FU | 1993 10 19.18051 | 00 23 53.94 | +22 37 34.8 | 801 |
| 1990 XP | 1993 10 19.27743 | 01 53 08.87 | +08 11 55.8 | 801 | 1991 FV | 1993 09 12.18792 | 23 37 55.85 | +13 36 08.1 | 801 |
| 1990 XP | 1993 10 19.28929 | 01 53 08.22 | +08 11 49.2 | 801 | 1991 FV | 1993 09 12.20392 | 23 37 55.09 | +13 36 04.4 | 801 |
| 1991 AF | 1993 09 13.30986 | 01 04 25.67 | +16 00 28.5 | b 801 | 1991 FV | 1993 09 14.19494 | 23 36 23.21 | +13 27 45.3 | 801 |
| 1991 AF | 1993 09 13.34486 | 01 04 24.49 | +16 00 22.6 | b 801 | 1991 FV | 1993 09 14.21133 | 23 36 22.44 | +13 27 41.0 | 801 |
| 1991 AF | 1993 09 15.18509 | 01 03 18.93 | +15 55 14.6 | 801 | 1991 GG ₁ | 1993 10 12.13652 | 23 39 44.69 | +05 58 22.0 | 801 |
| 1991 AF | 1993 09 15.20156 | 01 03 18.27 | +15 55 11.3 | 801 | 1991 GG ₁ | 1993 10 12.15535 | 23 39 43.88 | +05 58 18.4 | 801 |
| 1991 AN | 1993 09 15.36267 | 03 46 13.55 | +20 40 06.3 | 801 | 1991 GG ₁ | 1993 10 19.10109 | 23 35 22.51 | +05 37 52.3 | 801 |
| 1991 AN | 1993 09 15.37681 | 03 46 14.34 | +20 40 11.7 | 801 | 1991 GG ₁ | 1993 10 19.11471 | 23 35 21.97 | +05 37 50.7 | 801 |
| 1991 AN | 1993 10 14.29853 | 03 58 16.19 | +23 24 57.9 | 801 | 1992 CJ | 1993 09 12.22595 | 23 43 22.91 | +03 29 38.2 | 801 |
| 1991 AN | 1993 10 14.33451 | 03 58 15.75 | +23 25 08.5 | 801 | 1992 CJ | 1993 09 12.23987 | 23 43 22.13 | +03 29 30.8 | 801 |
| 1991 AN | 1993 10 19.32630 | 03 56 54.16 | +23 47 21.2 | 801 | 1992 CJ | 1993 09 20.16896 | 23 36 06.91 | +02 21 06.5 | 801 |
| 1991 AN | 1993 10 19.35652 | 03 56 53.35 | +23 47 29.3 | 801 | 1992 CJ | 1993 09 20.18209 | 23 36 06.14 | +02 20 59.2 | 801 |
| 1991 CK | 1993 09 14.35093 | 03 58 16.49 | +24 50 26.1 | 801 | 1992 EM | 1993 09 12.28890 | 01 15 22.49 | +18 20 37.8 | 801 |
| 1991 CK | 1993 09 14.37101 | 03 58 17.68 | +24 50 35.1 | 801 | 1992 EM | 1993 09 12.31113 | 01 15 21.41 | +18 20 39.8 | 801 |
| 1991 CK | 1993 09 20.36766 | 04 04 00.81 | +25 34 51.5 | 801 | 1992 EM | 1993 09 19.27398 | 01 09 21.97 | +18 26 25.6 | 801 |
| 1991 CK | 1993 09 20.37961 | 04 04 01.37 | +25 34 56.7 | 801 | 1992 EM | 1993 09 19.29326 | 01 09 20.83 | +18 26 25.6 | 801 |
| 1991 CK | 1993 10 12.35299 | 04 13 40.90 | +27 52 58.2 | 801 | 1992 EU ₁ | 1993 09 14.20085 | 23 19 14.14 | -15 04 40.1 | 801 |
| 1991 CK | 1993 10 12.38788 | 04 13 40.73 | +27 53 09.2 | 801 | 1992 EU ₁ | 1993 09 20.14810 | 23 13 39.15 | -15 42 28.8 | 801 |
| 1991 CK | 1993 10 19.32815 | 04 12 26.78 | +28 26 38.0 | w 801 | 1992 EU ₁ | 1993 09 20.16213 | 23 13 38.37 | -15 42 33.3 | 801 |
| 1991 CK | 1993 10 19.35821 | 04 12 26.17 | +28 26 45.4 | w 801 | 1992 EU ₁ | 1993 10 14.11821 | 22 56 37.29 | -17 00 27.4 | 801 |
| 1991 CO | 1993 10 13.34269 | 05 48 41.96 | +30 01 06.2 | 801 | 1992 FN | 1993 09 12.17998 | 23 20 35.06 | -03 22 49.7 | 801 |
| 1991 CO | 1993 10 13.37772 | 05 48 43.01 | +30 01 09.7 | 801 | 1992 FN | 1993 09 12.19354 | 23 20 34.30 | -03 22 55.9 | 801 |
| 1991 CO | 1993 10 19.37962 | 05 51 39.33 | +30 09 44.2 | 801 | 1992 FN | 1993 09 14.18432 | 23 18 38.83 | -03 36 25.9 | 801 |
| 1991 CO | 1993 10 19.41168 | 05 51 40.09 | +30 09 45.4 | 801 | 1992 FN | 1993 09 14.19764 | 23 18 38.06 | -03 36 32.1 | 801 |
| 1991 CL ₁ | 1993 09 15.31508 | 03 03 34.99 | +21 06 28.4 | 801 | 1992 FV | 1993 09 15.29431 | 02 12 47.33 | +06 43 52.3 | 801 |
| 1991 CL ₁ | 1993 09 15.34019 | 03 03 35.42 | +21 06 32.5 | 801 | 1992 FV | 1993 09 15.32684 | 02 12 46.48 | +06 43 44.8 | 801 |
| 1991 CL ₁ | 1993 09 19.33904 | 03 04 38.71 | +21 16 14.2 | I 801 | 1992 FV | 1993 09 20.27800 | 02 10 21.47 | +06 22 56.2 | 801 |
| 1991 CL ₁ | 1993 09 19.38640 | 03 04 39.05 | +21 16 20.8 | 801 | 1992 FV | 1993 09 20.29867 | 02 10 20.75 | +06 22 51.2 | 801 |
| 1991 CL ₁ | 1993 10 13.27047 | 02 59 41.85 | +21 23 34.8 | 801 | 1992 FV | 1993 10 12.26319 | 01 51 54.14 | +04 26 31.3 | 801 |
| 1991 CL ₁ | 1993 10 13.29273 | 02 59 40.98 | +21 23 32.5 | 801 | 1992 FV | 1993 10 12.27395 | 01 51 53.45 | +04 26 27.8 | 801 |
| 1991 CO ₃ | 1993 09 13.30506 | 00 41 00.19 | +47 52 47.3 | b 801 | 1992 FV | 1993 10 19.27575 | 01 44 28.47 | +03 48 32.8 | 801 |
| 1991 CO ₃ | 1993 09 13.32443 | 00 40 59.31 | +47 52 57.6 | b 801 | 1992 FV | 1993 10 19.28667 | 01 44 27.76 | +03 48 29.3 | 801 |
| 1991 CO ₃ | 1993 09 15.16718 | 00 39 23.88 | +48 09 17.5 | 801 | 1992 FR ₂ | 1993 09 14.27985 | 01 19 14.35 | -02 54 15.7 | 801 |
| 1991 CO ₃ | 1993 09 15.17508 | 00 39 23.43 | +48 09 21.7 | 801 | 1992 FR ₂ | 1993 09 14.29741 | 01 19 13.71 | -02 54 22.7 | 801 |
| 1991 CO ₃ | 1993 10 14.21338 | 00 05 21.86 | +48 46 56.9 | 801 | 1992 FR ₂ | 1993 09 15.22159 | 01 18 42.11 | -03 00 43.6 | 801 |
| 1991 CO ₃ | 1993 10 14.23174 | 00 05 20.51 | +48 46 49.6 | 801 | 1992 FR ₂ | 1993 09 15.23895 | 01 18 41.45 | -03 00 50.7 | 801 |
| 1991 CO ₃ | 1993 10 19.21453 | 23 59 49.23 | +48 08 01.7 | 801 | 1992 HJ | 1993 10 14.26463 | 02 36 02.88 | +07 03 29.0 | 801 |
| 1991 CO ₃ | 1993 10 19.23115 | 23 59 48.16 | +48 07 52.5 | 801 | 1992 HJ | 1993 10 14.28019 | 02 36 02.01 | +07 03 24.2 | 801 |
| 1991 DX | 1993 09 12.12568 | 22 32 38.83 | -03 33 21.0 | 801 | 1992 HJ | 1993 10 19.29991 | 02 31 20.27 | +06 36 35.7 | 801 |
| 1991 DX | 1993 09 12.13856 | 22 32 38.23 | -03 33 29.0 | 801 | 1992 HJ | 1993 10 19.31069 | 02 31 19.60 | +06 36 32.0 | 801 |

| | | | | | | | | | |
|----------------------|------------------|-------------|-------------|-------|----------------------|------------------|-------------|-------------|-----|
| 1992 HL | 1993 09 12.29190 | 01 21 22.47 | +07 05 45.0 | 801 | 1993 OC ₂ | 1993 10 14.03125 | 21 28 56.81 | -08 23 09.0 | 801 |
| 1992 HL | 1993 09 12.31434 | 01 21 21.72 | +07 05 33.0 | 801 | 1993 OC ₂ | 1993 10 19.02120 | 21 29 58.62 | -07 45 00.8 | 801 |
| 1992 HL | 1993 09 20.21573 | 01 16 36.83 | +05 50 38.9 | I 801 | 1993 OC ₂ | 1993 10 19.07309 | 21 29 59.34 | -07 44 37.5 | 801 |
| 1992 LU | 1993 09 12.17736 | 23 17 03.70 | -02 06 55.0 | 801 | 1993 PE | 1993 10 14.01380 | 21 09 13.11 | -10 47 19.0 | 801 |
| 1992 LU | 1993 09 12.19044 | 23 17 03.08 | -02 07 02.7 | 801 | 1993 PE | 1993 10 14.03514 | 21 09 14.10 | -10 47 21.8 | 801 |
| 1992 LU | 1993 09 20.15603 | 23 11 02.03 | -03 24 21.9 | 801 | 1993 QO | 1993 10 13.99997 | 21 03 22.41 | +08 20 18.4 | 801 |
| 1992 MA | 1993 10 12.20266 | 00 58 41.00 | +06 19 35.4 | 801 | 1993 QO | 1993 10 14.02854 | 21 03 22.88 | +08 20 28.4 | 801 |
| 1992 MA | 1993 10 12.21682 | 00 58 40.32 | +06 19 30.8 | 801 | 1993 QO | 1993 10 19.01273 | 21 05 32.27 | +08 49 18.3 | 801 |
| 1992 MA | 1993 10 19.19551 | 00 53 28.38 | +05 46 09.7 | 801 | 1993 QO | 1993 10 19.05826 | 21 05 33.69 | +08 49 34.1 | 801 |
| 1992 OP ₇ | 1993 09 14.32416 | 03 12 39.72 | +30 23 48.7 | 801 | 1993 QP | 1993 09 12.21267 | 23 25 09.13 | +28 52 56.2 | 801 |
| 1992 OP ₇ | 1993 09 14.35634 | 03 12 40.06 | +30 23 58.7 | 801 | 1993 QP | 1993 09 12.22054 | 23 25 09.46 | +28 53 06.0 | 801 |
| 1992 OP ₇ | 1993 09 19.34859 | 03 13 18.26 | +30 47 59.0 | 801 | 1993 QP | 1993 09 15.09916 | 23 27 55.10 | +29 49 28.8 | 801 |
| 1992 OP ₇ | 1993 09 19.38988 | 03 13 18.32 | +30 48 10.0 | 801 | 1993 QP | 1993 09 15.11278 | 23 27 55.75 | +29 49 43.8 | 801 |
| 1992 OP ₇ | 1993 10 13.27669 | 03 06 31.03 | +31 56 13.9 | 801 | 1993 QP | 1993 10 14.15110 | 23 57 23.36 | +31 24 00.4 | 801 |
| 1992 OP ₇ | 1993 10 13.30464 | 03 06 29.96 | +31 56 15.3 | 801 | 1993 QP | 1993 10 14.16419 | 23 57 24.11 | +31 23 54.5 | 801 |
| 1993 MF | 1993 09 12.25275 | 00 16 07.50 | +36 52 16.8 | 801 | 1993 QP | 1993 10 19.16330 | 00 03 20.19 | +30 39 53.3 | 801 |
| 1993 MF | 1993 09 12.26201 | 00 16 07.87 | +36 52 04.5 | 801 | 1993 QP | 1993 10 19.17653 | 00 03 21.08 | +30 39 45.5 | 801 |
| 1993 MF | 1993 09 15.12938 | 00 18 28.58 | +35 46 49.1 | 801 | 1993 QY | 1993 09 12.15595 | 22 57 10.72 | -16 45 29.2 | 801 |
| 1993 MF | 1993 09 15.13980 | 00 18 28.93 | +35 46 34.8 | 801 | 1993 QY | 1993 09 12.17064 | 22 57 10.20 | -16 45 54.7 | 801 |
| 1993 MF | 1993 10 19.18539 | 00 31 55.22 | +20 34 07.2 | 801 | 1993 QY | 1993 09 14.16436 | 22 56 04.70 | -17 44 09.7 | 801 |
| 1993 MF | 1993 10 19.19387 | 00 31 55.39 | +20 33 55.2 | 801 | 1993 QY | 1993 09 14.17214 | 22 56 04.45 | -17 44 21.8 | 801 |
| 1993 MG ₁ | 1993 09 12.03714 | 20 04 20.67 | +02 18 34.9 | 801 | 1993 QY | 1993 10 14.05833 | 22 48 55.45 | -28 37 44.1 | 801 |
| 1993 MG ₁ | 1993 09 12.05800 | 20 04 21.38 | +02 18 35.6 | 801 | 1993 QY | 1993 10 14.07383 | 22 48 55.60 | -28 37 56.2 | 801 |
| 1993 MG ₁ | 1993 09 13.03375 | 20 04 57.99 | +02 18 58.7 | 801 | 1993 QZ | 1993 10 14.01922 | 21 59 47.89 | -16 28 45.2 | 801 |
| 1993 MG ₁ | 1993 09 13.04591 | 20 04 58.42 | +02 18 59.1 | 801 | 1993 QZ | 1993 10 14.03846 | 21 59 48.46 | -16 28 56.2 | 801 |
| 1993 MG ₁ | 1993 10 11.98895 | 20 35 08.79 | +02 19 30.9 | 801 | 1993 QZ | 1993 10 19.02718 | 22 02 43.88 | -17 12 27.6 | 801 |
| 1993 MG ₁ | 1993 10 12.00131 | 20 35 09.77 | +02 19 31.0 | 801 | 1993 QZ | 1993 10 19.07850 | 22 02 45.78 | -17 12 51.8 | 801 |
| 1993 MG ₁ | 1993 10 13.99744 | 20 37 55.93 | +02 20 29.3 | 801 | 1993 RR ₂ | 1993 10 12.17726 | 00 46 58.67 | -14 57 04.9 | 801 |
| 1993 MG ₁ | 1993 10 14.00780 | 20 37 56.77 | +02 20 29.6 | 801 | 1993 RR ₂ | 1993 10 12.20512 | 00 46 58.16 | -14 57 14.2 | 801 |
| 1993 MG ₁ | 1993 10 19.95715 | 20 46 35.77 | +02 25 08.6 | 801 | 1993 RR ₂ | 1993 10 14.15887 | 00 46 32.83 | -15 06 59.2 | 801 |
| 1993 MG ₁ | 1993 10 19.96757 | 20 46 36.63 | +02 25 10.4 | 801 | 1993 RR ₂ | 1993 10 14.19539 | 00 46 32.22 | -15 07 06.9 | 801 |
| 1993 MS ₁ | 1993 09 12.04313 | 20 40 47.53 | -00 36 11.2 | 801 | 4018 P-L | 1993 09 15.24380 | 01 43 45.06 | +13 45 24.2 | 801 |
| 1993 MS ₁ | 1993 09 12.06711 | 20 40 47.09 | -00 36 21.2 | 801 | 4018 P-L | 1993 09 15.27311 | 01 43 44.44 | +13 45 28.5 | 801 |
| 1993 MS ₁ | 1993 09 13.03623 | 20 40 31.60 | -00 43 05.0 | 801 | 4018 P-L | 1993 09 20.24347 | 01 41 46.18 | +13 55 50.4 | 801 |
| 1993 MS ₁ | 1993 09 13.04884 | 20 40 31.39 | -00 43 10.3 | 801 | 4018 P-L | 1993 10 14.22775 | 01 23 19.60 | +13 52 36.1 | 801 |
| 1993 MS ₁ | 1993 10 11.99662 | 20 44 22.72 | -03 29 25.7 | 801 | 4018 P-L | 1993 10 14.24627 | 01 23 18.47 | +13 52 34.1 | 801 |
| 1993 MS ₁ | 1993 10 12.01998 | 20 44 23.40 | -03 29 31.2 | 801 | 6034 P-L | 1993 09 12.04637 | 20 42 52.39 | -07 33 14.1 | 801 |
| 1993 MS ₁ | 1993 10 18.98596 | 20 48 22.79 | -03 55 22.7 | 801 | 6034 P-L | 1993 09 12.07009 | 20 42 52.35 | -07 33 24.5 | 801 |
| 1993 MS ₁ | 1993 10 19.00413 | 20 48 23.48 | -03 55 26.1 | 801 | 6034 P-L | 1993 09 15.03817 | 20 43 00.20 | -07 54 44.1 | 801 |
| 1993 OD | 1993 09 12.03944 | 19 46 46.06 | -05 38 13.7 | 801 | 6034 P-L | 1993 09 15.06707 | 20 43 00.28 | -07 54 55.8 | 801 |
| 1993 OD | 1993 09 12.06324 | 19 46 45.71 | -05 38 02.0 | 801 | 6643 P-L | 1993 10 12.05834 | 22 40 41.16 | -13 38 14.5 | 801 |
| 1993 OD | 1993 09 15.03117 | 19 46 22.99 | -05 14 49.6 | 801 | 6643 P-L | 1993 10 12.09125 | 22 40 40.46 | -13 38 09.8 | 801 |
| 1993 OD | 1993 09 15.05498 | 19 46 22.86 | -05 14 39.4 | 801 | 6643 P-L | 1993 10 14.09187 | 22 40 06.65 | -13 31 39.0 | 801 |
| 1993 OD | 1993 10 13.99450 | 20 02 26.08 | -01 59 51.5 | 801 | 9540 P-L | 1993 09 12.25756 | 00 24 47.50 | +01 22 49.8 | 801 |
| 1993 OD | 1993 10 14.00539 | 20 02 26.79 | -01 59 47.8 | 801 | 9540 P-L | 1993 09 12.27252 | 00 24 46.78 | +01 22 46.0 | 801 |
| 1993 OD | 1993 10 18.98080 | 20 08 09.97 | -01 27 29.1 | 801 | 9540 P-L | 1993 09 19.23222 | 00 19 06.08 | +00 54 56.8 | 801 |
| 1993 OD | 1993 10 18.99553 | 20 08 11.06 | -01 27 24.1 | f 801 | 9540 P-L | 1993 09 19.24745 | 00 19 05.27 | +00 54 52.7 | 801 |
| 1993 OP | 1993 10 11.98381 | 20 33 00.60 | +14 17 27.7 | 801 | 2170 T-2 | 1993 09 20.05516 | 21 20 30.30 | -03 10 57.7 | 801 |
| 1993 OP | 1993 10 12.00419 | 20 33 01.31 | +14 17 24.4 | 801 | 4053 T-2 | 1993 10 14.25035 | 02 52 33.01 | +12 13 24.3 | 801 |
| 1993 OP | 1993 10 18.98274 | 20 38 12.44 | +14 01 10.0 | 801 | 4053 T-2 | 1993 10 14.26752 | 02 52 32.27 | +12 13 19.9 | 801 |
| 1993 OP | 1993 10 18.99801 | 20 38 13.31 | +14 01 07.5 | 801 | 4053 T-2 | 1993 10 19.30347 | 02 49 00.27 | +11 53 11.1 | 801 |
| 1993 OC ₂ | 1993 10 14.00278 | 21 28 56.71 | -08 23 22.4 | W 801 | 4053 T-2 | 1993 10 19.32419 | 02 48 59.29 | +11 53 06.7 | 801 |

| | | | | | | | | | |
|---|------------------|-------------|-------------|----------|-----------------------|------------------|-------------|-------------|----------|
| 2158 T-3 | 1993 09 12.25981 | 00 29 01.51 | +06 36 54.0 | I 801 | 1989 SR ₂ | 1993 07 20.20903 | 19 55 11.05 | -22 20 11.4 | 809 |
| 2158 T-3 | 1993 09 12.27522 | 00 29 00.70 | +06 36 51.5 | 801 | 1989 SR ₂ | 1993 07 20.22222 | 19 55 10.33 | -22 20 13.8 | 809 |
| (577) | 1993 10 12.13932 | 23 50 14.70 | +04 09 56.7 | 801 | 1989 SR ₂ | 1993 07 24.16042 | 19 51 45.50 | -22 33 00.3 | 809 |
| (577) | 1993 10 12.15321 | 23 50 14.15 | +04 09 53.7 | 801 | 1990 VL ₂ | 1993 07 20.19583 | 19 38 17.68 | -19 59 38.0 | 18.3 809 |
| (1459) | 1993 09 19.34471 | 03 11 04.24 | +12 14 48.2 | 801 | 1990 VL ₂ | 1993 07 20.20903 | 19 38 16.87 | -19 59 40.6 | 809 |
| (1459) | 1993 09 19.39245 | 03 11 03.92 | +12 15 02.8 | 801 | 1990 VL ₂ | 1993 07 20.22222 | 19 38 16.07 | -19 59 43.0 | 809 |
| (1459) | 1993 10 12.28354 | 03 01 01.90 | +14 06 28.8 | 801 | 1990 VL ₂ | 1993 07 24.16042 | 19 34 29.81 | -20 13 13.4 | 809 |
| (1459) | 1993 10 12.29598 | 03 01 01.30 | +14 06 32.3 | 801 | 1991 AF ₁ | 1993 07 24.16042 | 19 38 34.69 | -22 28 15.9 | 18.2 809 |
| (1926) | 1993 09 15.29895 | 02 25 45.99 | -05 09 54.1 | 801 | 1992 SW ₂₁ | 1992 09 03.27222 | 23 50 51.69 | -06 22 55.0 | 809 |
| (1926) | 1993 09 15.33084 | 02 25 45.33 | -05 10 04.6 | 801 | 1993 NF | 1993 07 20.19583 | 19 53 55.24 | -18 34 37.1 | 18.0 809 |
| (1926) | 1993 09 20.30667 | 02 23 48.07 | -05 37 55.3 | 801 | 1993 NF | 1993 07 20.20903 | 19 53 54.54 | -18 34 48.3 | 809 |
| (2337) | 1993 10 12.29850 | 05 07 18.35 | +29 15 39.0 | 801 | 1993 NF | 1993 07 20.22222 | 19 53 53.88 | -18 35 00.1 | 809 |
| (2337) | 1993 10 12.31098 | 05 07 18.60 | +29 15 46.2 | 801 | 1993 NF | 1993 07 24.16042 | 19 50 45.97 | -19 32 22.1 | 809 |
| (2337) | 1993 10 19.34470 | 05 09 01.21 | +30 27 26.5 | 801 | 1993 OB ₃ | 1993 07 20.19583 | 19 52 57.67 | -19 26 06.0 | 18.3 809 |
| (2337) | 1993 10 19.36234 | 05 09 01.28 | +30 27 37.3 | 801 | 1993 OB ₃ | 1993 07 20.20903 | 19 52 56.91 | -19 26 09.0 | 809 |
| (4055) | 1993 10 12.33749 | 04 15 36.91 | -21 00 43.7 | 801 | 1993 OB ₃ | 1993 07 20.22222 | 19 52 56.19 | -19 26 11.3 | 809 |
| (4055) | 1993 10 12.34612 | 04 15 36.66 | -21 00 57.6 | 801 | 1993 OC ₃ | 1993 07 20.19583 | 19 53 05.94 | -22 04 54.1 | 18.2 809 |
| (4055) | 1993 10 14.30519 | 04 14 43.92 | -21 53 05.0 | 801 | 1993 OC ₃ | 1993 07 20.20903 | 19 53 05.09 | -22 04 54.5 | 809 |
| (4055) | 1993 10 14.31427 | 04 14 43.64 | -21 53 18.6 | 801 | 1993 OC ₃ | 1993 07 20.22222 | 19 53 04.15 | -22 04 53.5 | 809 |
| (4177) | 1993 09 12.24891 | 23 51 21.30 | +16 24 39.9 | 801 | 1993 OC ₃ | 1993 07 24.16042 | 19 49 15.85 | -22 05 03.1 | 809 |
| (4177) | 1993 09 12.26391 | 23 51 20.80 | +16 24 31.3 | 801 | 1993 OD ₃ | 1993 07 20.19583 | 19 53 19.80 | -19 32 53.1 | 18.3 809 |
| (4177) | 1993 09 19.20355 | 23 47 33.39 | +15 13 12.9 | 801 | 1993 OD ₃ | 1993 07 20.20903 | 19 53 19.05 | -19 32 57.0 | 809 |
| (4177) | 1993 09 19.22698 | 23 47 32.56 | +15 12 57.4 | 801 | 1993 OD ₃ | 1993 07 20.22222 | 19 53 18.41 | -19 33 00.8 | 809 |
| (4177) | 1993 10 12.13417 | 23 36 36.09 | +10 21 04.3 | 801 | 1993 OD ₃ | 1993 07 24.16042 | 19 50 06.69 | -19 53 13.4 | 809 |
| (4177) | 1993 10 12.14674 | 23 36 35.83 | +10 20 54.2 | 801 | 1993 OE ₃ | 1993 07 20.19583 | 19 54 25.48 | -21 28 03.4 | 18.0 809 |
| (4177) | 1993 10 19.10795 | 23 34 52.35 | +08 50 02.2 | 801 | 1993 OE ₃ | 1993 07 20.20903 | 19 54 24.53 | -21 28 01.1 | 809 |
| (4177) | 1993 10 19.12037 | 23 34 52.20 | +08 49 52.7 | 801 | 1993 OE ₃ | 1993 07 20.22222 | 19 54 23.64 | -21 27 59.8 | 809 |
| (5661) | 1993 09 12.25109 | 00 14 45.84 | +16 42 01.0 | 801 | 1993 OE ₃ | 1993 07 24.16042 | 19 50 13.56 | -21 19 27.6 | 809 |
| (5661) | 1993 09 12.27048 | 00 14 45.00 | +16 42 01.0 | 801 | 1993 OF ₃ | 1993 07 20.19583 | 19 54 57.28 | -21 59 06.0 | 18.3 809 |
| (5661) | 1993 09 15.12484 | 00 12 43.12 | +16 41 14.4 | 801 | 1993 OF ₃ | 1993 07 20.20903 | 19 54 56.37 | -21 59 08.6 | 809 |
| (5661) | 1993 09 15.14233 | 00 12 42.36 | +16 41 13.8 | 801 | 1993 OF ₃ | 1993 07 20.22222 | 19 54 55.47 | -21 59 09.6 | 809 |
| (5679) | 1993 09 15.04694 | 21 06 21.29 | -14 48 00.2 | 801 | 1993 OF ₃ | 1993 07 24.16042 | 19 51 05.66 | -22 06 11.5 | 809 |
| (5679) | 1993 09 15.07471 | 21 06 20.68 | -14 48 04.7 | 801 | 1993 OH ₃ | 1993 07 20.19583 | 19 55 18.48 | -20 31 28.6 | 18.4 809 |
| | | | | | 1993 OH ₃ | 1993 07 20.20903 | 19 55 17.57 | -20 31 26.9 | 809 |
| 809 European Southern Observatory | | | | | 1993 OH ₃ | 1993 07 20.22222 | 19 55 16.60 | -20 31 26.1 | 809 |
| E. W. Elst, Observatoire Royal de Belgique, Avenue Circulaire 3, B-1180 Brussels, Belgium | | | | | 1993 OH ₃ | 1993 07 24.16042 | 19 51 04.82 | -20 23 07.6 | 809 |
| Observers E. W. Elst, G. Pizarro, O. Pizarro | | | | | 1993 OJ ₃ | 1993 07 20.19583 | 19 55 24.43 | -21 01 19.8 | 18.1 809 |
| Measurers E. W. Elst, J. P. Olivier | | | | | 1993 OJ ₃ | 1993 07 20.20903 | 19 55 23.50 | -21 01 18.2 | 809 |
| 1.0-m Schmidt | | | | | 1993 OJ ₃ | 1993 07 20.22222 | 19 55 22.58 | -21 01 17.1 | 809 |
| 1981 EU ₁₈ | 1993 07 20.19583 | 19 55 22.81 | -20 57 54.8 | 18.0 809 | 1993 OJ ₃ | 1993 07 24.16042 | 19 51 10.33 | -20 53 46.6 | 809 |
| 1981 EU ₁₈ | 1993 07 20.20903 | 19 55 22.04 | -20 57 56.9 | 809 | 1993 OL ₃ | 1993 07 20.19583 | 19 55 33.63 | -20 12 06.5 | 18.2 809 |
| 1981 EU ₁₈ | 1993 07 20.22222 | 19 55 21.37 | -20 57 58.2 | 809 | 1993 OL ₃ | 1993 07 20.20903 | 19 55 32.81 | -20 12 06.9 | 809 |
| 1981 EU ₁₈ | 1993 07 24.16042 | 19 52 06.67 | -21 07 02.8 | 809 | 1993 OL ₃ | 1993 07 20.22222 | 19 55 31.98 | -20 12 07.8 | 809 |
| 1981 EL ₃₆ | 1993 07 20.19583 | 19 55 29.91 | -19 26 58.4 | 18.2 809 | 1993 OL ₃ | 1993 07 24.16042 | 19 51 33.24 | -20 16 02.0 | 809 |
| 1981 EL ₃₆ | 1993 07 20.20903 | 19 55 29.13 | -19 26 59.0 | 809 | 1993 ON ₃ | 1993 07 20.19583 | 19 56 00.79 | -21 59 15.8 | 18.3 809 |
| 1981 EL ₃₆ | 1993 07 20.22222 | 19 55 28.29 | -19 26 59.4 | 809 | 1993 ON ₃ | 1993 07 20.20903 | 19 55 59.91 | -21 59 16.4 | 809 |
| 1981 EL ₃₆ | 1993 07 24.16042 | 19 51 45.16 | -19 30 08.4 | 809 | 1993 ON ₃ | 1993 07 20.22222 | 19 55 59.11 | -21 59 16.4 | 809 |
| 1989 GT ₃ | 1993 07 20.19583 | 19 51 22.95 | -19 52 06.1 | 18.0 809 | 1993 ON ₃ | 1993 07 24.16042 | 19 52 15.38 | -22 01 56.8 | 809 |
| 1989 GT ₃ | 1993 07 20.20903 | 19 51 22.02 | -19 52 08.0 | 809 | 1993 OO ₃ | 1993 07 20.19583 | 19 56 08.36 | -20 52 00.3 | 18.0 809 |
| 1989 GT ₃ | 1993 07 20.22222 | 19 51 21.17 | -19 52 09.7 | 809 | 1993 OO ₃ | 1993 07 20.20903 | 19 56 07.45 | -20 52 02.3 | 809 |
| 1989 GT ₃ | 1993 07 24.16042 | 19 47 15.20 | -20 00 37.9 | 809 | 1993 OO ₃ | 1993 07 20.22222 | 19 56 06.59 | -20 52 03.2 | 809 |
| 1989 SR ₂ | 1993 07 20.19583 | 19 55 11.81 | -22 20 08.0 | 18.2 809 | 1993 OO ₃ | 1993 07 24.16042 | 19 52 02.49 | -20 59 06.2 | 809 |

| | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|----------|
| 1993 OP ₃ | 1993 07 20.19583 | 19 56 28.60 | -22 45 32.1 | 18.5 | 809 | 1993 OM ₇ | 1993 07 24.16042 | 19 49 14.11 | -18 32 39.8 | 809 |
| 1993 OP ₃ | 1993 07 20.20903 | 19 56 27.76 | -22 45 33.0 | | 809 | 1993 OM ₇ | 1993 07 24.16458 | 19 49 13.11 | -18 32 30.8 | 809 |
| 1993 OP ₃ | 1993 07 20.22222 | 19 56 26.83 | -22 45 34.9 | | 809 | 1993 OM ₇ | 1993 07 24.16944 | 19 49 12.36 | -18 32 23.6 | 809 |
| 1993 OP ₃ | 1993 07 24.16042 | 19 52 28.93 | -22 50 51.8 | | 809 | 1993 OM ₇ | 1993 07 24.17361 | 19 49 11.73 | -18 32 18.4 | 809 |
| 1993 OQ ₃ | 1993 07 20.19583 | 19 56 42.93 | -21 10 23.0 | 18.4 | 809 | 1993 OM ₇ | 1993 07 24.17778 | 19 49 10.73 | -18 32 10.3 | 809 |
| 1993 OQ ₃ | 1993 07 20.20903 | 19 56 42.24 | -21 10 26.5 | | 809 | 1993 OM ₇ | 1993 07 24.20972 | 19 49 04.75 | -18 31 14.7 | 809 |
| 1993 OQ ₃ | 1993 07 20.22222 | 19 56 41.55 | -21 10 28.6 | | 809 | 1993 OM ₇ | 1993 07 24.21389 | 19 49 04.00 | -18 31 07.1 | 809 |
| 1993 OQ ₃ | 1993 07 24.16042 | 19 53 31.67 | -21 22 41.9 | | 809 | 1993 OM ₇ | 1993 07 24.21806 | 19 49 03.19 | -18 30 58.3 | 809 |
| 1993 OR ₃ | 1993 07 20.19583 | 19 56 47.67 | -19 39 55.7 | 18.3 | 809 | 1993 OM ₇ | 1993 07 24.22292 | 19 49 02.26 | -18 30 51.7 | 809 |
| 1993 OR ₃ | 1993 07 20.20903 | 19 56 46.83 | -19 39 58.2 | | 809 | 1993 OM ₇ | 1993 07 24.22708 | 19 49 01.53 | -18 30 44.2 | 809 |
| 1993 OR ₃ | 1993 07 20.22222 | 19 56 45.98 | -19 40 02.4 | | 809 | 1993 OM ₇ | 1993 07 24.23125 | 19 49 00.73 | -18 30 37.2 | 809 |
| 1993 OS ₃ | 1993 07 20.19583 | 19 56 57.70 | -21 13 50.6 | 18.3 | 809 | 1993 OM ₇ | 1993 07 24.23611 | 19 48 59.85 | -18 30 29.9 | 809 |
| 1993 OS ₃ | 1993 07 20.20903 | 19 56 56.83 | -21 13 49.5 | | 809 | 1993 OM ₇ | 1993 07 24.24028 | 19 48 59.11 | -18 30 23.5 | 809 |
| 1993 OS ₃ | 1993 07 20.22222 | 19 56 55.96 | -21 13 49.3 | | 809 | 1993 OM ₇ | 1993 07 24.24444 | 19 48 58.14 | -18 30 13.6 | 809 |
| 1993 OS ₃ | 1993 07 24.16042 | 19 52 44.89 | -21 08 53.9 | | 809 | 1993 ON ₇ | 1993 07 20.19583 | 19 56 24.39 | -18 31 18.1 | 18.2 809 |
| 1993 OT ₃ | 1993 07 20.19583 | 19 57 30.14 | -19 38 25.9 | 18.4 | 809 | 1993 ON ₇ | 1993 07 20.20903 | 19 56 23.52 | -18 31 17.1 | 809 |
| 1993 OT ₃ | 1993 07 20.20903 | 19 57 29.22 | -19 38 29.3 | | 809 | 1993 ON ₇ | 1993 07 20.22222 | 19 56 22.72 | -18 31 16.7 | 809 |
| 1993 OT ₃ | 1993 07 20.22222 | 19 57 28.25 | -19 38 32.6 | | 809 | 1993 ON ₇ | * 1993 07 20.24375 | 19 56 21.39 | -18 31 15.3 | 18.2 809 |
| 1993 OT ₃ | 1993 07 24.16042 | 19 53 04.14 | -19 55 20.7 | | 809 | 1993 ON ₇ | 1993 07 20.25694 | 19 56 20.53 | -18 31 14.1 | 809 |
| 1993 OV ₃ | 1993 07 20.19583 | 19 58 15.12 | -20 17 47.9 | 18.1 | 809 | 1993 ON ₇ | 1993 07 20.27014 | 19 56 19.73 | -18 31 14.2 | 809 |
| 1993 OV ₃ | 1993 07 20.20903 | 19 58 14.51 | -20 17 50.9 | | 809 | 1993 ON ₇ | 1993 07 24.16042 | 19 52 29.79 | -18 27 04.9 | 809 |
| 1993 OV ₃ | 1993 07 20.22222 | 19 58 13.94 | -20 17 54.0 | | 809 | 1993 ON ₇ | 1993 07 24.22708 | 19 52 25.92 | -18 26 58.5 | 18.5 809 |
| 1993 OV ₃ | 1993 07 24.16042 | 19 55 31.87 | -20 34 34.0 | | 809 | 1993 OO ₇ | * 1993 07 20.24375 | 19 57 35.63 | -18 36 33.0 | 18.0 809 |
| 1993 OW ₃ | 1993 07 20.19583 | 19 58 35.45 | -19 27 39.4 | 17.8 | 809 | 1993 OO ₇ | 1993 07 20.25694 | 19 57 34.79 | -18 36 31.6 | 809 |
| 1993 OW ₃ | 1993 07 20.20903 | 19 58 34.69 | -19 27 43.2 | | 809 | 1993 OO ₇ | 1993 07 20.27014 | 19 57 33.91 | -18 36 31.4 | 809 |
| 1993 OW ₃ | 1993 07 20.22222 | 19 58 33.93 | -19 27 47.3 | | 809 | 1993 OO ₇ | 1993 07 24.22708 | 19 53 30.96 | -18 33 01.1 | 809 |
| 1993 OW ₃ | 1993 07 24.16042 | 19 55 09.06 | -19 48 43.2 | | 809 | 1993 OP ₇ | * 1993 07 20.24375 | 20 06 12.49 | -19 28 12.2 | 18.0 809 |
| 1993 OZ ₃ | 1993 07 20.19583 | 19 59 19.97 | -22 01 03.2 | 18.4 | 809 | 1993 OP ₇ | 1993 07 20.25694 | 20 06 11.79 | -19 28 21.5 | 809 |
| 1993 OZ ₃ | 1993 07 20.20903 | 19 59 19.11 | -22 01 06.7 | | 809 | 1993 OP ₇ | 1993 07 20.27014 | 20 06 11.09 | -19 28 30.5 | 809 |
| 1993 OZ ₃ | 1993 07 20.22222 | 19 59 18.32 | -22 01 09.5 | | 809 | 1993 OP ₇ | 1993 07 24.22708 | 20 02 57.15 | -20 12 49.4 | 18.2 809 |
| 1993 OZ ₃ | 1993 07 24.16042 | 19 55 34.00 | -22 15 07.9 | | 809 | 1993 OQ ₇ | * 1993 07 20.24375 | 20 10 07.46 | -21 16 09.3 | 18.5 809 |
| 1993 OB ₄ | 1993 07 20.19583 | 19 59 40.24 | -21 00 00.3 | 18.3 | 809 | 1993 OQ ₇ | 1993 07 20.25694 | 20 10 06.65 | -21 16 11.4 | 809 |
| 1993 OB ₄ | 1993 07 20.20903 | 19 59 39.38 | -21 00 00.5 | | 809 | 1993 OQ ₇ | 1993 07 20.27014 | 20 10 05.81 | -21 16 13.8 | 809 |
| 1993 OB ₄ | 1993 07 20.22222 | 19 59 38.48 | -21 00 01.8 | | 809 | 1993 OQ ₇ | 1993 07 24.22708 | 20 05 47.34 | -21 29 01.8 | 18.7 809 |
| 1993 OB ₄ | 1993 07 24.16042 | 19 55 37.04 | -21 04 38.8 | | 809 | 1993 OR ₇ | * 1993 07 20.19583 | 19 38 12.59 | -19 09 10.9 | 18.3 809 |
| 1993 OC ₄ | 1993 07 20.19583 | 19 59 42.93 | -21 29 56.7 | 18.1 | 809 | 1993 OR ₇ | 1993 07 20.20903 | 19 38 11.90 | -19 09 12.8 | 809 |
| 1993 OC ₄ | 1993 07 20.20903 | 19 59 42.05 | -21 29 56.9 | | 809 | 1993 OR ₇ | 1993 07 20.22222 | 19 38 11.26 | -19 09 14.3 | 809 |
| 1993 OC ₄ | 1993 07 20.22222 | 19 59 41.05 | -21 29 57.9 | | 809 | 1993 OR ₇ | 1993 07 24.16042 | 19 35 07.24 | -19 19 15.8 | 809 |
| 1993 OC ₄ | 1993 07 24.16042 | 19 55 28.51 | -21 31 55.7 | | 809 | 1993 OS ₇ | * 1993 07 20.19583 | 19 38 27.81 | -21 20 57.1 | 18.0 809 |
| 1993 OM ₇ | * 1993 07 20.23958 | 20 01 09.98 | -20 20 52.3 | 18.0 | 809 | 1993 OS ₇ | 1993 07 20.20903 | 19 38 26.98 | -21 21 03.4 | 809 |
| 1993 OM ₇ | 1993 07 20.24375 | 20 01 09.26 | -20 20 46.0 | | 809 | 1993 OS ₇ | 1993 07 20.22222 | 19 38 26.21 | -21 21 10.1 | 809 |
| 1993 OM ₇ | 1993 07 20.24792 | 20 01 08.41 | -20 20 39.2 | | 809 | 1993 OS ₇ | 1993 07 24.16042 | 19 34 49.97 | -21 53 17.3 | 809 |
| 1993 OM ₇ | 1993 07 20.25278 | 20 01 07.37 | -20 20 30.3 | | 809 | 1993 OT ₇ | * 1993 07 20.19583 | 19 38 41.92 | -20 01 51.7 | 18.3 809 |
| 1993 OM ₇ | 1993 07 20.25694 | 20 01 06.70 | -20 20 24.8 | | 809 | 1993 OT ₇ | 1993 07 20.20903 | 19 38 41.24 | -20 01 53.7 | 809 |
| 1993 OM ₇ | 1993 07 20.26111 | 20 01 05.82 | -20 20 16.6 | | 809 | 1993 OT ₇ | 1993 07 20.22222 | 19 38 40.49 | -20 01 56.2 | 809 |
| 1993 OM ₇ | 1993 07 20.26597 | 20 01 04.70 | -20 20 08.6 | | 809 | 1993 OT ₇ | 1993 07 24.16042 | 19 35 29.73 | -20 13 36.2 | 809 |
| 1993 OM ₇ | 1993 07 20.27014 | 20 01 04.05 | -20 20 02.2 | | 809 | 1993 OU ₇ | * 1993 07 20.19583 | 19 39 03.47 | -18 58 18.8 | 18.2 809 |
| 1993 OM ₇ | 1993 07 20.27431 | 20 01 03.25 | -20 19 55.4 | | 809 | 1993 OU ₇ | 1993 07 20.20903 | 19 39 02.70 | -18 58 21.2 | 809 |
| 1993 OM ₇ | 1993 07 24.14306 | 19 49 17.22 | -18 33 07.5 | 18.5 | 809 | 1993 OU ₇ | 1993 07 20.22222 | 19 39 01.95 | -18 58 23.3 | 809 |
| 1993 OM ₇ | 1993 07 24.14722 | 19 49 16.51 | -18 33 01.5 | | 809 | 1993 OU ₇ | 1993 07 24.16042 | 19 35 30.59 | -19 09 16.7 | 809 |
| 1993 OM ₇ | 1993 07 24.15139 | 19 49 15.81 | -18 32 54.8 | | 809 | 1993 OV ₇ | * 1993 07 20.19583 | 19 39 08.05 | -19 49 47.9 | 19.2 809 |
| 1993 OM ₇ | 1993 07 24.15625 | 19 49 14.66 | -18 32 45.4 | | 809 | 1993 OV ₇ | 1993 07 20.20903 | 19 39 07.29 | -19 49 49.9 | 809 |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 OV ₇ | 1993 07 20.22222 | 19 39 06.52 | -19 49 50.0 | | 809 | 1993 OJ ₈ | 1993 07 20.22222 | 19 41 58.30 | -18 52 19.2 | | 809 |
| 1993 OV ₇ | 1993 07 24.16042 | 19 35 41.99 | -20 01 49.7 | | 809 | 1993 OJ ₈ | 1993 07 24.16042 | 19 38 23.51 | -19 00 22.2 | | 809 |
| 1993 OW ₇ | * 1993 07 20.19583 | 19 39 48.34 | -20 15 14.6 | 18.1 | 809 | 1993 OK ₈ | * 1993 07 20.19583 | 19 42 10.25 | -18 55 30.9 | 18.5 | 809 |
| 1993 OW ₇ | 1993 07 20.20903 | 19 39 47.56 | -20 15 19.2 | | 809 | 1993 OK ₈ | 1993 07 20.20903 | 19 42 09.36 | -18 55 32.4 | | 809 |
| 1993 OW ₇ | 1993 07 20.22222 | 19 39 46.78 | -20 15 23.8 | | 809 | 1993 OK ₈ | 1993 07 20.22222 | 19 42 08.46 | -18 55 34.5 | | 809 |
| 1993 OW ₇ | 1993 07 24.16042 | 19 36 18.62 | -20 40 51.3 | | 809 | 1993 OK ₈ | 1993 07 24.16042 | 19 38 04.84 | -19 04 39.5 | | 809 |
| 1993 OX ₇ | * 1993 07 20.19583 | 19 39 51.99 | -18 18 59.3 | 18.2 | 809 | 1993 OL ₈ | * 1993 07 20.19583 | 19 42 26.82 | -20 32 22.4 | 18.3 | 809 |
| 1993 OX ₇ | 1993 07 20.20903 | 19 39 51.22 | -18 19 05.8 | | 809 | 1993 OL ₈ | 1993 07 20.20903 | 19 42 26.16 | -20 32 30.9 | | 809 |
| 1993 OX ₇ | 1993 07 20.22222 | 19 39 50.44 | -18 19 14.1 | | 809 | 1993 OL ₈ | 1993 07 20.22222 | 19 42 25.47 | -20 32 39.0 | | 809 |
| 1993 OX ₇ | 1993 07 24.16042 | 19 36 12.71 | -18 50 10.4 | | 809 | 1993 OL ₈ | 1993 07 24.16042 | 19 39 21.03 | -21 13 32.1 | | 809 |
| 1993 OY ₇ | * 1993 07 20.19583 | 19 39 54.17 | -18 19 07.6 | 18.1 | 809 | 1993 OM ₈ | * 1993 07 20.19583 | 19 42 41.33 | -18 17 54.5 | 18.2 | 809 |
| 1993 OY ₇ | 1993 07 20.20903 | 19 39 53.32 | -18 19 11.5 | | 809 | 1993 OM ₈ | 1993 07 20.20903 | 19 42 40.57 | -18 17 56.1 | | 809 |
| 1993 OY ₇ | 1993 07 20.22222 | 19 39 52.49 | -18 19 15.1 | | 809 | 1993 OM ₈ | 1993 07 20.22222 | 19 42 39.90 | -18 17 57.6 | | 809 |
| 1993 OY ₇ | 1993 07 24.16042 | 19 35 51.52 | -18 36 57.7 | | 809 | 1993 OM ₈ | 1993 07 24.16042 | 19 39 25.27 | -18 26 30.8 | | 809 |
| 1993 OZ ₇ | * 1993 07 20.19583 | 19 40 20.21 | -21 22 26.8 | 18.5 | 809 | 1993 ON ₈ | * 1993 07 20.19583 | 19 42 52.24 | -22 10 09.0 | 18.4 | 809 |
| 1993 OZ ₇ | 1993 07 20.20903 | 19 40 19.39 | -21 22 27.8 | | 809 | 1993 ON ₈ | 1993 07 20.20903 | 19 42 51.33 | -22 10 12.3 | | 809 |
| 1993 OZ ₇ | 1993 07 20.22222 | 19 40 18.63 | -21 22 29.3 | | 809 | 1993 ON ₈ | 1993 07 20.22222 | 19 42 50.49 | -22 10 15.2 | | 809 |
| 1993 OZ ₇ | 1993 07 24.16042 | 19 36 45.62 | -21 28 17.9 | | 809 | 1993 ON ₈ | 1993 07 24.16042 | 19 38 50.27 | -22 26 28.8 | | 809 |
| 1993 OA ₈ | * 1993 07 20.19583 | 19 40 29.88 | -22 12 25.0 | 18.4 | 809 | 1993 OO ₈ | * 1993 07 20.19583 | 19 42 53.10 | -18 11 22.5 | 18.1 | 809 |
| 1993 OA ₈ | 1993 07 20.20903 | 19 40 29.07 | -22 12 23.5 | | 809 | 1993 OO ₈ | 1993 07 20.20903 | 19 42 52.30 | -18 11 27.9 | | 809 |
| 1993 OA ₈ | 1993 07 20.22222 | 19 40 28.19 | -22 12 22.0 | | 809 | 1993 OO ₈ | 1993 07 20.22222 | 19 42 51.57 | -18 11 34.0 | | 809 |
| 1993 OA ₈ | 1993 07 24.16042 | 19 36 33.79 | -22 04 24.8 | | 809 | 1993 OO ₈ | 1993 07 24.16042 | 19 39 37.55 | -18 39 01.2 | | 809 |
| 1993 OB ₈ | * 1993 07 20.19583 | 19 40 32.26 | -22 38 38.0 | 18.3 | 809 | 1993 OP ₈ | * 1993 07 20.19583 | 19 42 54.41 | -18 16 47.8 | 18.1 | 809 |
| 1993 OB ₈ | 1993 07 20.20903 | 19 40 31.49 | -22 38 39.6 | | 809 | 1993 OP ₈ | 1993 07 20.20903 | 19 42 53.59 | -18 16 47.2 | | 809 |
| 1993 OB ₈ | 1993 07 20.22222 | 19 40 30.78 | -22 38 40.7 | | 809 | 1993 OP ₈ | 1993 07 20.22222 | 19 42 52.77 | -18 16 45.7 | | 809 |
| 1993 OB ₈ | 1993 07 24.16042 | 19 37 09.80 | -22 45 14.9 | | 809 | 1993 OP ₈ | 1993 07 24.16042 | 19 39 01.83 | -18 11 43.1 | | 809 |
| 1993 OC ₈ | * 1993 07 20.19583 | 19 40 55.78 | -21 19 28.0 | 18.5 | 809 | 1993 OQ ₈ | * 1993 07 20.19583 | 19 42 55.57 | -21 50 58.9 | 18.2 | 809 |
| 1993 OC ₈ | 1993 07 20.20903 | 19 40 54.99 | -21 19 33.2 | | 809 | 1993 OQ ₈ | 1993 07 20.20903 | 19 42 54.70 | -21 51 02.2 | | 809 |
| 1993 OC ₈ | 1993 07 20.22222 | 19 40 53.99 | -21 19 39.4 | | 809 | 1993 OQ ₈ | 1993 07 20.22222 | 19 42 53.86 | -21 51 05.0 | | 809 |
| 1993 OC ₈ | 1993 07 24.16042 | 19 36 46.90 | -21 47 21.5 | | 809 | 1993 OQ ₈ | 1993 07 24.16042 | 19 38 59.04 | -22 06 35.3 | | 809 |
| 1993 OD ₈ | * 1993 07 20.19583 | 19 40 57.35 | -19 59 47.6 | 18.1 | 809 | 1993 OR ₈ | * 1993 07 20.19583 | 19 43 18.97 | -19 42 06.1 | 18.5 | 809 |
| 1993 OD ₈ | 1993 07 20.20903 | 19 40 56.40 | -19 59 47.9 | | 809 | 1993 OR ₈ | 1993 07 20.20903 | 19 43 18.28 | -19 42 07.9 | | 809 |
| 1993 OD ₈ | 1993 07 20.22222 | 19 40 55.50 | -19 59 47.4 | | 809 | 1993 OR ₈ | 1993 07 20.22222 | 19 43 17.59 | -19 42 10.9 | | 809 |
| 1993 OD ₈ | 1993 07 24.16042 | 19 36 53.39 | -19 59 00.6 | | 809 | 1993 OR ₈ | 1993 07 24.16042 | 19 39 57.81 | -19 53 09.4 | | 809 |
| 1993 OE ₈ | * 1993 07 20.19583 | 19 41 19.64 | -22 57 18.6 | 18.3 | 809 | 1993 OS ₈ | * 1993 07 20.19583 | 19 43 27.48 | -22 50 11.9 | 18.3 | 809 |
| 1993 OE ₈ | 1993 07 20.20903 | 19 41 18.73 | -22 57 16.3 | | 809 | 1993 OS ₈ | 1993 07 20.20903 | 19 43 26.72 | -22 50 13.3 | | 809 |
| 1993 OE ₈ | 1993 07 20.22222 | 19 41 17.86 | -22 57 14.8 | | 809 | 1993 OS ₈ | 1993 07 20.22222 | 19 43 26.03 | -22 50 13.6 | | 809 |
| 1993 OE ₈ | 1993 07 24.16042 | 19 37 24.94 | -22 46 48.5 | | 809 | 1993 OS ₈ | 1993 07 24.16042 | 19 40 01.73 | -22 53 40.0 | | 809 |
| 1993 OF ₈ | * 1993 07 20.19583 | 19 41 21.97 | -20 31 56.9 | 18.5 | 809 | 1993 OT ₈ | * 1993 07 20.19583 | 19 43 31.69 | -19 43 20.3 | 18.3 | 809 |
| 1993 OF ₈ | 1993 07 20.20903 | 19 41 21.12 | -20 31 55.3 | | 809 | 1993 OT ₈ | 1993 07 20.20903 | 19 43 30.93 | -19 43 22.8 | | 809 |
| 1993 OF ₈ | 1993 07 20.22222 | 19 41 20.26 | -20 31 55.3 | | 809 | 1993 OT ₈ | 1993 07 20.22222 | 19 43 30.30 | -19 43 25.2 | | 809 |
| 1993 OF ₈ | 1993 07 24.16042 | 19 37 23.29 | -20 26 29.7 | | 809 | 1993 OT ₈ | 1993 07 24.16042 | 19 40 14.73 | -19 55 25.8 | | 809 |
| 1993 OG ₈ | * 1993 07 20.19583 | 19 41 45.70 | -20 56 42.3 | 18.4 | 809 | 1993 OU ₈ | * 1993 07 20.19583 | 19 43 39.05 | -19 46 48.1 | 18.3 | 809 |
| 1993 OG ₈ | 1993 07 20.20903 | 19 41 44.99 | -20 56 45.3 | | 809 | 1993 OU ₈ | 1993 07 20.20903 | 19 43 38.22 | -19 46 51.0 | | 809 |
| 1993 OG ₈ | 1993 07 20.22222 | 19 41 44.21 | -20 56 47.9 | | 809 | 1993 OU ₈ | 1993 07 20.22222 | 19 43 37.34 | -19 46 54.3 | | 809 |
| 1993 OG ₈ | 1993 07 24.16042 | 19 38 17.80 | -21 11 27.8 | | 809 | 1993 OU ₈ | 1993 07 24.16042 | 19 40 09.61 | -20 03 50.6 | | 809 |
| 1993 OH ₈ | * 1993 07 20.19583 | 19 41 58.43 | -22 50 10.0 | 18.4 | 809 | 1993 OV ₈ | * 1993 07 20.19583 | 19 43 47.66 | -22 44 54.8 | 18.3 | 809 |
| 1993 OH ₈ | 1993 07 20.20903 | 19 41 57.98 | -22 50 10.2 | | 809 | 1993 OV ₈ | 1993 07 20.20903 | 19 43 47.01 | -22 44 57.2 | | 809 |
| 1993 OH ₈ | 1993 07 20.22222 | 19 41 57.56 | -22 50 11.0 | | 809 | 1993 OV ₈ | 1993 07 20.22222 | 19 43 46.20 | -22 45 00.0 | | 809 |
| 1993 OH ₈ | 1993 07 24.16042 | 19 40 35.96 | -22 57 57.4 | | 809 | 1993 OV ₈ | 1993 07 24.16042 | 19 40 37.80 | -22 55 38.9 | | 809 |
| 1993 OJ ₈ | * 1993 07 20.19583 | 19 41 59.88 | -18 52 15.8 | 18.2 | 809 | 1993 OW ₈ | * 1993 07 20.19583 | 19 43 52.77 | -22 47 38.1 | 18.0 | 809 |
| 1993 OJ ₈ | 1993 07 20.20903 | 19 41 59.07 | -18 52 17.7 | | 809 | 1993 OW ₈ | 1993 07 20.20903 | 19 43 51.80 | -22 47 37.7 | | 809 |

| | | | | | | | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 OW ₈ | 1993 07 20.22222 | 19 43 50.80 | -22 47 37.6 | | 809 | 1993 OK ₉ | 1993 07 20.22222 | 19 45 30.40 | -20 07 21.5 | | 809 |
| 1993 OW ₈ | 1993 07 24.16042 | 19 39 25.98 | -22 45 56.1 | | 809 | 1993 OK ₉ | 1993 07 24.16042 | 19 41 17.50 | -20 19 13.2 | | 809 |
| 1993 OX ₈ | * 1993 07 20.19583 | 19 44 07.64 | -19 58 20.6 | 18.2 | 809 | 1993 OL ₉ | * 1993 07 20.19583 | 19 45 34.35 | -19 46 47.5 | 18.5 | 809 |
| 1993 OX ₈ | 1993 07 20.20903 | 19 44 06.96 | -19 58 26.3 | | 809 | 1993 OL ₉ | 1993 07 20.20903 | 19 45 33.79 | -19 46 48.9 | | 809 |
| 1993 OX ₈ | 1993 07 20.22222 | 19 44 06.29 | -19 58 32.1 | | 809 | 1993 OL ₉ | 1993 07 20.22222 | 19 45 33.11 | -19 46 50.0 | | 809 |
| 1993 OX ₈ | 1993 07 24.16042 | 19 41 15.56 | -20 26 44.2 | | 809 | 1993 OL ₉ | 1993 07 24.16042 | 19 42 06.92 | -19 54 37.0 | | 809 |
| 1993 OY ₈ | * 1993 07 20.19583 | 19 44 30.41 | -21 10 49.8 | 18.3 | 809 | 1993 OM ₉ | * 1993 07 20.19583 | 19 45 38.87 | -22 57 11.7 | 18.5 | 809 |
| 1993 OY ₈ | 1993 07 20.20903 | 19 44 29.46 | -21 10 51.2 | | 809 | 1993 OM ₉ | 1993 07 20.20903 | 19 45 38.07 | -22 57 13.6 | | 809 |
| 1993 OY ₈ | 1993 07 20.22222 | 19 44 28.55 | -21 10 52.7 | | 809 | 1993 OM ₉ | 1993 07 20.22222 | 19 45 37.29 | -22 57 13.5 | | 809 |
| 1993 OY ₈ | 1993 07 24.16042 | 19 40 20.50 | -21 18 28.8 | | 809 | 1993 OM ₉ | 1993 07 24.16042 | 19 41 48.25 | -23 03 17.6 | | 809 |
| 1993 OZ ₈ | * 1993 07 20.19583 | 19 44 37.61 | -18 05 01.2 | 18.4 | 809 | 1993 ON ₉ | * 1993 07 20.19583 | 19 45 41.40 | -20 13 18.6 | 18.2 | 809 |
| 1993 OZ ₈ | 1993 07 20.20903 | 19 44 36.89 | -18 05 03.2 | | 809 | 1993 ON ₉ | 1993 07 20.20903 | 19 45 40.62 | -20 13 19.4 | | 809 |
| 1993 OZ ₈ | 1993 07 20.22222 | 19 44 36.22 | -18 05 04.9 | | 809 | 1993 ON ₉ | 1993 07 20.22222 | 19 45 39.70 | -20 13 20.4 | | 809 |
| 1993 OZ ₈ | 1993 07 24.16042 | 19 41 29.67 | -18 14 13.6 | | 809 | 1993 ON ₉ | 1993 07 24.16042 | 19 42 08.72 | -20 19 47.4 | | 809 |
| 1993 OA ₉ | * 1993 07 20.19583 | 19 44 39.64 | -19 04 48.6 | 18.3 | 809 | 1993 OO ₉ | * 1993 07 20.19583 | 19 45 47.95 | -18 03 37.2 | 18.5 | 809 |
| 1993 OA ₉ | 1993 07 20.20903 | 19 44 38.75 | -19 04 51.9 | | 809 | 1993 OO ₉ | 1993 07 20.20903 | 19 45 47.12 | -18 03 40.5 | | 809 |
| 1993 OA ₉ | 1993 07 20.22222 | 19 44 37.89 | -19 04 54.9 | | 809 | 1993 OO ₉ | 1993 07 20.22222 | 19 45 46.34 | -18 03 43.5 | | 809 |
| 1993 OA ₉ | 1993 07 24.16042 | 19 40 52.59 | -19 19 00.4 | | 809 | 1993 OO ₉ | 1993 07 24.16042 | 19 42 11.09 | -18 20 18.2 | | 809 |
| 1993 OB ₉ | * 1993 07 20.19583 | 19 44 47.08 | -20 05 50.3 | 18.4 | 809 | 1993 OP ₉ | * 1993 07 20.19583 | 19 45 55.39 | -21 07 28.4 | 18.5 | 809 |
| 1993 OB ₉ | 1993 07 20.20903 | 19 44 46.23 | -20 05 50.7 | | 809 | 1993 OP ₉ | 1993 07 20.20903 | 19 45 54.56 | -21 07 28.2 | | 809 |
| 1993 OB ₉ | 1993 07 20.22222 | 19 44 45.31 | -20 05 52.0 | | 809 | 1993 OP ₉ | 1993 07 20.22222 | 19 45 53.76 | -21 07 29.0 | | 809 |
| 1993 OB ₉ | 1993 07 24.16042 | 19 40 27.50 | -20 11 11.3 | | 809 | 1993 OP ₉ | 1993 07 24.16042 | 19 42 31.55 | -21 07 11.1 | | 809 |
| 1993 OC ₉ | * 1993 07 20.19583 | 19 44 54.11 | -22 02 45.6 | 18.3 | 809 | 1993 OQ ₉ | * 1993 07 20.19583 | 19 46 02.83 | -20 03 50.7 | 18.2 | 809 |
| 1993 OC ₉ | 1993 07 20.20903 | 19 44 53.18 | -22 02 48.0 | | 809 | 1993 OQ ₉ | 1993 07 20.20903 | 19 46 01.88 | -20 03 48.7 | | 809 |
| 1993 OC ₉ | 1993 07 20.22222 | 19 44 52.29 | -22 02 50.4 | | 809 | 1993 OQ ₉ | 1993 07 20.22222 | 19 46 00.99 | -20 03 47.8 | | 809 |
| 1993 OC ₉ | 1993 07 24.16042 | 19 40 38.66 | -22 15 39.6 | | 809 | 1993 OQ ₉ | 1993 07 24.16042 | 19 41 39.05 | -19 55 55.6 | | 809 |
| 1993 OD ₉ | * 1993 07 20.19583 | 19 44 57.55 | -21 48 07.3 | 18.6 | 809 | 1993 OR ₉ | * 1993 07 20.19583 | 19 46 13.00 | -19 02 46.3 | 18.2 | 809 |
| 1993 OD ₉ | 1993 07 20.20903 | 19 44 56.81 | -21 48 11.8 | | 809 | 1993 OR ₉ | 1993 07 20.20903 | 19 46 12.26 | -19 02 48.7 | | 809 |
| 1993 OD ₉ | 1993 07 20.22222 | 19 44 55.98 | -21 48 16.9 | | 809 | 1993 OR ₉ | 1993 07 20.22222 | 19 46 11.56 | -19 02 51.1 | | 809 |
| 1993 OD ₉ | 1993 07 24.16042 | 19 41 26.51 | -22 01 09.2 | | 809 | 1993 OR ₉ | 1993 07 24.16042 | 19 42 52.51 | -19 14 14.9 | | 809 |
| 1993 OE ₉ | * 1993 07 20.19583 | 19 45 13.98 | -21 27 25.9 | 18.3 | 809 | 1993 OS ₉ | * 1993 07 20.19583 | 19 46 28.69 | -20 55 56.0 | 18.3 | 809 |
| 1993 OE ₉ | 1993 07 20.20903 | 19 45 13.01 | -21 27 27.4 | | 809 | 1993 OS ₉ | 1993 07 20.20903 | 19 46 27.82 | -20 56 01.2 | | 809 |
| 1993 OE ₉ | 1993 07 20.22222 | 19 45 12.15 | -21 27 27.9 | | 809 | 1993 OS ₉ | 1993 07 20.22222 | 19 46 27.03 | -20 56 07.0 | | 809 |
| 1993 OE ₉ | 1993 07 24.16042 | 19 40 57.42 | -21 31 56.3 | | 809 | 1993 OS ₉ | 1993 07 24.16042 | 19 42 40.10 | -21 22 03.9 | | 809 |
| 1993 OF ₉ | * 1993 07 20.19583 | 19 45 23.17 | -22 46 35.8 | 18.0 | 809 | 1993 OT ₉ | * 1993 07 20.19583 | 19 47 01.28 | -22 39 48.2 | 18.4 | 809 |
| 1993 OF ₉ | 1993 07 20.20903 | 19 45 22.43 | -22 46 35.0 | | 809 | 1993 OT ₉ | 1993 07 20.20903 | 19 47 00.44 | -22 39 53.4 | | 809 |
| 1993 OF ₉ | 1993 07 20.22222 | 19 45 21.68 | -22 46 34.7 | | 809 | 1993 OT ₉ | 1993 07 20.22222 | 19 46 59.59 | -22 39 57.4 | | 809 |
| 1993 OF ₉ | 1993 07 24.16042 | 19 41 49.39 | -22 43 49.5 | | 809 | 1993 OT ₉ | 1993 07 24.16042 | 19 43 04.80 | -23 00 39.3 | | 809 |
| 1993 OG ₉ | * 1993 07 20.19583 | 19 45 24.24 | -18 20 06.6 | 18.5 | 809 | 1993 OU ₉ | * 1993 07 20.19583 | 19 47 20.30 | -21 05 05.3 | 18.4 | 809 |
| 1993 OG ₉ | 1993 07 20.20903 | 19 45 23.36 | -18 20 11.5 | | 809 | 1993 OU ₉ | 1993 07 20.20903 | 19 47 19.54 | -21 05 10.7 | | 809 |
| 1993 OG ₉ | 1993 07 20.22222 | 19 45 22.53 | -18 20 16.0 | | 809 | 1993 OU ₉ | 1993 07 20.22222 | 19 47 18.85 | -21 05 16.3 | | 809 |
| 1993 OG ₉ | 1993 07 24.16042 | 19 41 22.70 | -18 44 41.5 | | 809 | 1993 OU ₉ | 1993 07 24.16042 | 19 43 53.09 | -21 33 51.4 | | 809 |
| 1993 OH ₉ | * 1993 07 20.19583 | 19 45 26.77 | -18 19 23.5 | 18.3 | 809 | 1993 OV ₉ | * 1993 07 20.19583 | 19 47 21.46 | -21 22 22.3 | 18.8 | 809 |
| 1993 OH ₉ | 1993 07 20.20903 | 19 45 25.92 | -18 19 27.1 | | 809 | 1993 OV ₉ | 1993 07 20.20903 | 19 47 20.72 | -21 22 22.9 | | 809 |
| 1993 OH ₉ | 1993 07 20.22222 | 19 45 25.17 | -18 19 29.1 | | 809 | 1993 OV ₉ | 1993 07 20.22222 | 19 47 19.93 | -21 22 24.5 | | 809 |
| 1993 OH ₉ | 1993 07 24.16042 | 19 41 40.95 | -18 35 44.9 | | 809 | 1993 OV ₉ | 1993 07 24.16042 | 19 43 45.66 | -21 23 09.9 | | 809 |
| 1993 OJ ₉ | * 1993 07 20.19583 | 19 45 27.57 | -18 34 02.7 | 18.5 | 809 | 1993 OW ₉ | * 1993 07 20.19583 | 19 47 23.12 | -22 18 45.1 | 18.5 | 809 |
| 1993 OJ ₉ | 1993 07 20.20903 | 19 45 26.77 | -18 34 07.3 | | 809 | 1993 OW ₉ | 1993 07 20.20903 | 19 47 22.34 | -22 18 49.8 | | 809 |
| 1993 OJ ₉ | 1993 07 20.22222 | 19 45 26.00 | -18 34 11.1 | | 809 | 1993 OW ₉ | 1993 07 20.22222 | 19 47 21.59 | -22 18 54.5 | | 809 |
| 1993 OJ ₉ | 1993 07 24.16042 | 19 41 59.85 | -18 54 59.5 | | 809 | 1993 OW ₉ | 1993 07 24.16042 | 19 43 48.51 | -22 41 07.8 | | 809 |
| 1993 OK ₉ | * 1993 07 20.19583 | 19 45 31.84 | -20 07 17.1 | 18.2 | 809 | 1993 OX ₉ | * 1993 07 20.19583 | 19 47 26.64 | -21 45 18.1 | 18.3 | 809 |
| 1993 OK ₉ | 1993 07 20.20903 | 19 45 31.15 | -20 07 18.7 | | 809 | 1993 OX ₉ | 1993 07 20.20903 | 19 47 25.59 | -21 45 19.0 | | 809 |

| | | | | | | | | | | | |
|-----------------------|--------------------|-------------|-------------|------|-----|-----------------------|--------------------|-------------|-------------|------|-----|
| 1993 OX ₉ | 1993 07 20.22222 | 19 47 24.78 | -21 45 20.8 | | 809 | 1993 OL ₁₀ | 1993 07 20.22222 | 19 52 02.59 | -22 29 04.6 | | 809 |
| 1993 OX ₉ | 1993 07 24.16042 | 19 43 04.08 | -21 50 33.0 | | 809 | 1993 OL ₁₀ | 1993 07 24.16042 | 19 47 52.12 | -22 44 11.0 | | 809 |
| 1993 OY ₉ | * 1993 07 20.19583 | 19 47 49.32 | -22 14 19.1 | 18.2 | 809 | 1993 OM ₁₀ | * 1993 07 20.19583 | 19 52 16.77 | -19 24 18.7 | 18.4 | 809 |
| 1993 OY ₉ | 1993 07 20.20903 | 19 47 48.62 | -22 14 19.5 | | 809 | 1993 OM ₁₀ | 1993 07 20.20903 | 19 52 16.08 | -19 24 20.7 | | 809 |
| 1993 OY ₉ | 1993 07 20.22222 | 19 47 47.86 | -22 14 19.0 | | 809 | 1993 OM ₁₀ | 1993 07 20.22222 | 19 52 15.38 | -19 24 22.8 | | 809 |
| 1993 OY ₉ | 1993 07 24.16042 | 19 44 15.81 | -22 13 26.9 | | 809 | 1993 OM ₁₀ | 1993 07 24.16042 | 19 49 01.67 | -19 34 40.0 | | 809 |
| 1993 OZ ₉ | * 1993 07 20.19583 | 19 48 29.92 | -19 18 20.8 | 18.3 | 809 | 1993 ON ₁₀ | * 1993 07 20.19583 | 19 52 17.29 | -21 41 24.0 | 18.5 | 809 |
| 1993 OZ ₉ | 1993 07 20.20903 | 19 48 29.22 | -19 18 22.0 | | 809 | 1993 ON ₁₀ | 1993 07 20.20903 | 19 52 16.18 | -21 41 15.6 | | 809 |
| 1993 OZ ₉ | 1993 07 20.22222 | 19 48 28.36 | -19 18 22.9 | | 809 | 1993 ON ₁₀ | 1993 07 20.22222 | 19 52 15.00 | -21 41 06.6 | | 809 |
| 1993 OZ ₉ | 1993 07 24.16042 | 19 44 51.24 | -19 23 25.1 | | 809 | 1993 ON ₁₀ | 1993 07 24.16042 | 19 46 26.67 | -20 58 00.7 | | 809 |
| 1993 OA ₁₀ | * 1993 07 20.19583 | 19 48 30.10 | -22 56 19.4 | 17.9 | 809 | 1993 OO ₁₀ | * 1993 07 20.19583 | 19 52 24.83 | -20 51 02.6 | 18.1 | 809 |
| 1993 OA ₁₀ | 1993 07 20.20903 | 19 48 29.19 | -22 56 18.6 | | 809 | 1993 OO ₁₀ | 1993 07 20.20903 | 19 52 24.15 | -20 51 04.6 | | 809 |
| 1993 OA ₁₀ | 1993 07 20.22222 | 19 48 28.27 | -22 56 17.8 | | 809 | 1993 OO ₁₀ | 1993 07 20.22222 | 19 52 23.46 | -20 51 06.6 | | 809 |
| 1993 OA ₁₀ | 1993 07 24.16042 | 19 44 20.93 | -22 53 38.4 | | 809 | 1993 OO ₁₀ | 1993 07 24.16042 | 19 49 05.71 | -21 01 54.8 | | 809 |
| 1993 OB ₁₀ | * 1993 07 20.19583 | 19 48 31.71 | -21 01 22.6 | 18.3 | 809 | 1993 OP ₁₀ | * 1993 07 20.19583 | 19 52 46.56 | -22 29 11.4 | 18.3 | 809 |
| 1993 OB ₁₀ | 1993 07 20.20903 | 19 48 30.85 | -21 01 21.7 | | 809 | 1993 OP ₁₀ | 1993 07 20.20903 | 19 52 45.75 | -22 29 14.7 | | 809 |
| 1993 OB ₁₀ | 1993 07 20.22222 | 19 48 30.02 | -21 01 20.2 | | 809 | 1993 OP ₁₀ | 1993 07 20.22222 | 19 52 45.02 | -22 29 17.8 | | 809 |
| 1993 OB ₁₀ | 1993 07 24.16042 | 19 44 26.79 | -20 57 42.6 | | 809 | 1993 OP ₁₀ | 1993 07 24.16042 | 19 49 04.99 | -22 44 51.8 | | 809 |
| 1993 OC ₁₀ | * 1993 07 20.19583 | 19 48 50.29 | -22 09 48.3 | 18.7 | 809 | 1993 OQ ₁₀ | * 1993 07 20.19583 | 19 52 50.61 | -18 23 39.2 | 18.5 | 809 |
| 1993 OC ₁₀ | 1993 07 20.20903 | 19 48 49.44 | -22 09 52.6 | | 809 | 1993 OQ ₁₀ | 1993 07 20.20903 | 19 52 49.73 | -18 23 41.7 | | 809 |
| 1993 OC ₁₀ | 1993 07 20.22222 | 19 48 48.55 | -22 09 58.5 | | 809 | 1993 OQ ₁₀ | 1993 07 20.22222 | 19 52 49.09 | -18 23 41.8 | | 809 |
| 1993 OC ₁₀ | 1993 07 24.16042 | 19 44 44.79 | -22 29 05.6 | | 809 | 1993 OQ ₁₀ | 1993 07 24.16042 | 19 49 13.79 | -18 32 36.1 | | 809 |
| 1993 OD ₁₀ | * 1993 07 20.19583 | 19 48 52.28 | -23 04 20.4 | 18.5 | 809 | 1993 OR ₁₀ | * 1993 07 20.19583 | 19 52 59.90 | -21 03 36.4 | 18.5 | 809 |
| 1993 OD ₁₀ | 1993 07 20.20903 | 19 48 51.60 | -23 04 23.4 | | 809 | 1993 OR ₁₀ | 1993 07 20.20903 | 19 52 59.12 | -21 03 37.9 | | 809 |
| 1993 OD ₁₀ | 1993 07 20.22222 | 19 48 50.98 | -23 04 27.3 | | 809 | 1993 OR ₁₀ | 1993 07 20.22222 | 19 52 58.27 | -21 03 40.9 | | 809 |
| 1993 OD ₁₀ | 1993 07 24.16042 | 19 45 38.43 | -23 21 23.9 | | 809 | 1993 OR ₁₀ | 1993 07 24.16042 | 19 49 01.82 | -21 17 59.6 | | 809 |
| 1993 OE ₁₀ | * 1993 07 20.19583 | 19 49 12.73 | -18 55 45.2 | 18.5 | 809 | 1993 OS ₁₀ | * 1993 07 20.19583 | 19 53 21.39 | -18 19 25.0 | 18.0 | 809 |
| 1993 OE ₁₀ | 1993 07 20.20903 | 19 49 11.92 | -18 55 47.5 | | 809 | 1993 OS ₁₀ | 1993 07 20.20903 | 19 53 20.57 | -18 19 25.3 | | 809 |
| 1993 OE ₁₀ | 1993 07 20.22222 | 19 49 11.25 | -18 55 48.9 | | 809 | 1993 OS ₁₀ | 1993 07 20.22222 | 19 53 19.84 | -18 19 26.1 | | 809 |
| 1993 OE ₁₀ | 1993 07 24.16042 | 19 45 48.58 | -19 07 34.1 | | 809 | 1993 OS ₁₀ | 1993 07 24.16042 | 19 49 42.52 | -18 23 50.4 | | 809 |
| 1993 OF ₁₀ | * 1993 07 20.19583 | 19 50 27.51 | -19 25 58.6 | 18.5 | 809 | 1993 OT ₁₀ | * 1993 07 20.19583 | 19 53 24.09 | -20 30 59.6 | 18.6 | 809 |
| 1993 OF ₁₀ | 1993 07 20.20903 | 19 50 26.74 | -19 25 56.7 | | 809 | 1993 OT ₁₀ | 1993 07 20.20903 | 19 53 23.46 | -20 31 02.5 | | 809 |
| 1993 OF ₁₀ | 1993 07 20.22222 | 19 50 26.06 | -19 25 55.3 | | 809 | 1993 OT ₁₀ | 1993 07 20.22222 | 19 53 22.89 | -20 31 03.4 | | 809 |
| 1993 OF ₁₀ | 1993 07 24.16042 | 19 46 12.38 | -19 18 51.8 | | 809 | 1993 OT ₁₀ | 1993 07 24.16042 | 19 50 38.43 | -20 43 12.6 | | 809 |
| 1993 OG ₁₀ | * 1993 07 20.19583 | 19 50 39.11 | -21 16 30.5 | 18.2 | 809 | 1993 OU ₁₀ | * 1993 07 20.19583 | 19 53 55.06 | -23 00 39.0 | 18.2 | 809 |
| 1993 OG ₁₀ | 1993 07 20.20903 | 19 50 38.22 | -21 16 31.6 | | 809 | 1993 OU ₁₀ | 1993 07 20.20903 | 19 53 54.30 | -23 00 41.5 | | 809 |
| 1993 OG ₁₀ | 1993 07 20.22222 | 19 50 37.32 | -21 16 32.6 | | 809 | 1993 OU ₁₀ | 1993 07 20.22222 | 19 53 53.59 | -23 00 43.1 | | 809 |
| 1993 OG ₁₀ | 1993 07 24.16042 | 19 46 37.44 | -21 23 02.3 | | 809 | 1993 OU ₁₀ | 1993 07 24.16042 | 19 50 36.47 | -23 11 15.4 | | 809 |
| 1993 OH ₁₀ | * 1993 07 20.19583 | 19 51 30.75 | -22 27 32.2 | 18.4 | 809 | 1993 OV ₁₀ | * 1993 07 20.19583 | 19 53 56.26 | -18 38 11.6 | 18.4 | 809 |
| 1993 OH ₁₀ | 1993 07 20.20903 | 19 51 29.96 | -22 27 33.0 | | 809 | 1993 OV ₁₀ | 1993 07 20.20903 | 19 53 55.61 | -18 38 12.8 | | 809 |
| 1993 OH ₁₀ | 1993 07 20.22222 | 19 51 29.16 | -22 27 34.1 | | 809 | 1993 OV ₁₀ | 1993 07 20.22222 | 19 53 54.98 | -18 38 13.5 | | 809 |
| 1993 OH ₁₀ | 1993 07 24.16042 | 19 47 45.31 | -22 30 51.5 | | 809 | 1993 OV ₁₀ | 1993 07 24.16042 | 19 51 07.68 | -18 44 05.6 | | 809 |
| 1993 OJ ₁₀ | * 1993 07 20.19583 | 19 51 41.24 | -20 54 18.9 | 18.3 | 809 | 1993 OW ₁₀ | * 1993 07 20.19583 | 19 54 14.49 | -21 58 57.7 | 18.5 | 809 |
| 1993 OJ ₁₀ | 1993 07 20.20903 | 19 51 40.36 | -20 54 15.6 | | 809 | 1993 OW ₁₀ | 1993 07 20.20903 | 19 54 13.60 | -21 59 01.5 | | 809 |
| 1993 OJ ₁₀ | 1993 07 20.22222 | 19 51 39.53 | -20 54 12.8 | | 809 | 1993 OW ₁₀ | 1993 07 20.22222 | 19 54 12.70 | -21 59 05.4 | | 809 |
| 1993 OJ ₁₀ | 1993 07 24.16042 | 19 47 37.47 | -20 38 27.7 | | 809 | 1993 OW ₁₀ | 1993 07 24.16042 | 19 50 15.59 | -22 16 00.3 | | 809 |
| 1993 OK ₁₀ | * 1993 07 20.19583 | 19 51 59.75 | -19 02 11.4 | 17.9 | 809 | 1993 OX ₁₀ | * 1993 07 20.19583 | 19 54 14.60 | -19 49 11.0 | 18.5 | 809 |
| 1993 OK ₁₀ | 1993 07 20.20903 | 19 51 58.85 | -19 02 10.9 | | 809 | 1993 OX ₁₀ | 1993 07 20.20903 | 19 54 13.83 | -19 49 13.3 | | 809 |
| 1993 OK ₁₀ | 1993 07 20.22222 | 19 51 57.90 | -19 02 10.3 | | 809 | 1993 OX ₁₀ | 1993 07 20.22222 | 19 54 13.11 | -19 49 14.5 | | 809 |
| 1993 OK ₁₀ | 1993 07 24.16042 | 19 47 33.08 | -19 00 33.9 | | 809 | 1993 OX ₁₀ | 1993 07 24.16042 | 19 50 51.18 | -19 59 44.8 | | 809 |
| 1993 OL ₁₀ | * 1993 07 20.19583 | 19 52 04.38 | -22 28 58.4 | 18.3 | 809 | 1993 OY ₁₀ | * 1993 07 20.19583 | 19 54 58.51 | -20 51 35.8 | 18.3 | 809 |
| 1993 OL ₁₀ | 1993 07 20.20903 | 19 52 03.35 | -22 29 01.3 | | 809 | 1993 OY ₁₀ | 1993 07 20.20903 | 19 54 57.83 | -20 51 38.8 | | 809 |

| | | | | | | | | | | | |
|-----------------------|--------------------|-------------|-------------|------|-----|--------|------------------|-------------|-------------|------|-----|
| 1993 OY ₁₀ | 1993 07 20.22222 | 19 54 57.12 | -20 51 41.8 | | 809 | (2656) | 1993 07 20.22222 | 19 48 15.60 | -23 03 39.0 | | 809 |
| 1993 OY ₁₀ | 1993 07 24.16042 | 19 51 42.81 | -21 05 06.1 | | 809 | (2656) | 1993 07 24.16042 | 19 44 04.39 | -23 19 26.2 | | 809 |
| 1993 OZ ₁₀ | * 1993 07 20.19583 | 19 55 07.66 | -22 41 51.7 | 19.0 | 809 | (2733) | 1993 07 20.19583 | 19 53 06.54 | -19 27 37.9 | 18.0 | 809 |
| 1993 OZ ₁₀ | 1993 07 20.20903 | 19 55 06.80 | -22 41 51.9 | | 809 | (2733) | 1993 07 20.20903 | 19 53 05.63 | -19 27 43.0 | | 809 |
| 1993 OZ ₁₀ | 1993 07 20.22222 | 19 55 05.91 | -22 41 51.0 | | 809 | (2733) | 1993 07 20.22222 | 19 53 04.87 | -19 27 47.9 | | 809 |
| 1993 OZ ₁₀ | 1993 07 24.16042 | 19 51 06.81 | -22 42 18.1 | | 809 | (2733) | 1993 07 24.16042 | 19 49 07.88 | -19 53 12.0 | | 809 |
| 1993 OA ₁₁ | * 1993 07 20.19583 | 19 55 33.31 | -18 27 46.8 | 18.3 | 809 | (2891) | 1993 07 20.19583 | 19 53 40.06 | -21 12 22.9 | 17.9 | 809 |
| 1993 OA ₁₁ | 1993 07 20.20903 | 19 55 32.39 | -18 27 49.0 | | 809 | (2891) | 1993 07 20.20903 | 19 53 39.36 | -21 12 26.8 | | 809 |
| 1993 OA ₁₁ | 1993 07 20.22222 | 19 55 31.62 | -18 27 50.6 | | 809 | (2891) | 1993 07 20.22222 | 19 53 38.71 | -21 12 30.3 | | 809 |
| 1993 OA ₁₁ | 1993 07 24.16042 | 19 51 34.10 | -18 37 33.9 | | 809 | (2891) | 1993 07 24.16042 | 19 50 37.18 | -21 30 48.9 | | 809 |
| 1993 OB ₁₁ | * 1993 07 20.19583 | 19 55 39.24 | -20 03 35.1 | 18.0 | 809 | (3082) | 1993 07 20.19583 | 19 50 58.87 | -20 34 03.0 | 17.8 | 809 |
| 1993 OB ₁₁ | 1993 07 20.20903 | 19 55 38.31 | -20 03 39.7 | | 809 | (3082) | 1993 07 20.20903 | 19 50 58.11 | -20 34 08.6 | | 809 |
| 1993 OB ₁₁ | 1993 07 20.22222 | 19 55 37.46 | -20 03 44.9 | | 809 | (3082) | 1993 07 20.22222 | 19 50 57.34 | -20 34 14.4 | | 809 |
| 1993 OB ₁₁ | 1993 07 24.16042 | 19 51 35.42 | -20 30 13.7 | | 809 | (3082) | 1993 07 24.16042 | 19 47 20.11 | -21 03 03.9 | | 809 |
| 1993 OC ₁₁ | * 1993 07 20.19583 | 19 56 57.06 | -21 31 20.4 | 18.6 | 809 | (3236) | 1993 07 20.19583 | 19 43 06.21 | -19 25 40.3 | 18.0 | 809 |
| 1993 OC ₁₁ | 1993 07 20.20903 | 19 56 56.31 | -21 31 22.0 | | 809 | (3236) | 1993 07 20.20903 | 19 43 05.27 | -19 25 42.1 | | 809 |
| 1993 OC ₁₁ | 1993 07 20.22222 | 19 56 55.66 | -21 31 23.8 | | 809 | (3236) | 1993 07 20.22222 | 19 43 04.36 | -19 25 43.9 | | 809 |
| 1993 OC ₁₁ | 1993 07 24.16042 | 19 53 41.20 | -21 41 28.2 | | 809 | (3236) | 1993 07 24.16042 | 19 38 44.22 | -19 36 08.4 | | 809 |
| 1993 OD ₁₁ | * 1993 07 20.19583 | 19 57 07.38 | -20 52 22.7 | 18.6 | 809 | (3549) | 1993 07 20.19583 | 19 56 03.07 | -18 17 04.1 | 18.1 | 809 |
| 1993 OD ₁₁ | 1993 07 20.20903 | 19 57 06.69 | -20 52 28.2 | | 809 | (3549) | 1993 07 20.20903 | 19 56 02.37 | -18 17 05.0 | | 809 |
| 1993 OD ₁₁ | 1993 07 20.22222 | 19 57 05.96 | -20 52 36.1 | | 809 | (3549) | 1993 07 20.22222 | 19 56 01.57 | -18 17 05.4 | | 809 |
| 1993 OD ₁₁ | 1993 07 24.16042 | 19 53 58.11 | -21 23 00.0 | | 809 | (4242) | 1993 07 20.19583 | 19 38 57.59 | -21 59 58.4 | 18.0 | 809 |
| 1993 OE ₁₁ | * 1993 07 20.19583 | 19 57 47.49 | -21 40 39.2 | 18.4 | 809 | (4242) | 1993 07 20.20903 | 19 38 56.84 | -21 59 59.4 | | 809 |
| 1993 OE ₁₁ | 1993 07 20.20903 | 19 57 46.73 | -21 40 43.9 | | 809 | (4242) | 1993 07 20.22222 | 19 38 56.17 | -22 00 00.7 | | 809 |
| 1993 OE ₁₁ | 1993 07 20.22222 | 19 57 46.00 | -21 40 47.1 | | 809 | (4242) | 1993 07 24.16042 | 19 35 41.66 | -22 07 21.0 | | 809 |
| 1993 OE ₁₁ | 1993 07 24.16042 | 19 54 20.51 | -22 00 36.2 | | 809 | (4641) | 1993 07 20.19583 | 19 48 48.97 | -21 52 54.0 | 17.8 | 809 |
| 1993 OF ₁₁ | * 1993 07 20.19583 | 19 57 48.11 | -21 33 27.0 | 19.0 | 809 | (4641) | 1993 07 20.20903 | 19 48 48.01 | -21 52 56.6 | | 809 |
| 1993 OF ₁₁ | 1993 07 20.20903 | 19 57 47.47 | -21 33 27.3 | | 809 | (4641) | 1993 07 20.22222 | 19 48 47.11 | -21 52 59.5 | | 809 |
| 1993 OF ₁₁ | 1993 07 20.22222 | 19 57 46.84 | -21 33 25.3 | | 809 | (4641) | 1993 07 24.16042 | 19 44 23.81 | -22 08 10.3 | | 809 |
| 1993 OF ₁₁ | 1993 07 24.16042 | 19 54 27.89 | -21 32 34.6 | | 809 | (5141) | 1993 07 20.19583 | 19 57 53.58 | -19 05 38.0 | 18.0 | 809 |
| 1993 OG ₁₁ | * 1993 07 20.19583 | 19 58 26.62 | -19 31 14.6 | 18.7 | 809 | (5141) | 1993 07 20.20903 | 19 57 52.85 | -19 05 40.3 | | 809 |
| 1993 OG ₁₁ | 1993 07 20.20903 | 19 58 25.80 | -19 31 17.7 | | 809 | (5141) | 1993 07 20.22222 | 19 57 52.14 | -19 05 42.9 | | 809 |
| 1993 OG ₁₁ | 1993 07 20.22222 | 19 58 25.04 | -19 31 19.6 | | 809 | (5141) | 1993 07 24.16042 | 19 54 29.92 | -19 19 20.6 | | 809 |
| 1993 OG ₁₁ | 1993 07 24.16042 | 19 54 17.79 | -19 50 31.9 | | 809 | | | | | | |
| 9511 P-L | 1993 07 20.19583 | 19 56 47.59 | -19 47 54.2 | 18.1 | 809 | | | | | | |
| 9511 P-L | 1993 07 20.20903 | 19 56 46.86 | -19 47 56.5 | | 809 | | | | | | |
| 9511 P-L | 1993 07 20.22222 | 19 56 46.19 | -19 47 57.8 | | 809 | | | | | | |
| 9511 P-L | 1993 07 24.16042 | 19 53 34.96 | -19 57 45.6 | | 809 | | | | | | |
| (15) | 1993 07 24.16042 | 19 40 43.11 | -20 22 36.5 | 9.0 | 809 | | | | | | |
| (548) | 1993 07 20.19583 | 19 42 37.67 | -22 06 17.2 | 17.3 | 809 | | | | | | |
| (548) | 1993 07 20.20903 | 19 42 36.76 | -22 06 20.4 | | 809 | | | | | | |
| (548) | 1993 07 20.22222 | 19 42 35.85 | -22 06 23.7 | | 809 | | | | | | |
| (548) | 1993 07 24.16042 | 19 38 20.82 | -22 22 33.2 | | 809 | | | | | | |
| (832) | 1993 07 20.19583 | 19 58 34.87 | -19 33 35.2 | 17.9 | 809 | | | | | | |
| (832) | 1993 07 20.20903 | 19 58 34.09 | -19 33 36.6 | | 809 | | | | | | |
| (832) | 1993 07 20.22222 | 19 58 33.37 | -19 33 38.7 | | 809 | | | | | | |
| (2548) | 1993 07 20.19583 | 19 59 01.42 | -22 01 18.0 | 17.5 | 809 | | | | | | |
| (2548) | 1993 07 20.20903 | 19 59 00.41 | -22 01 14.7 | | 809 | | | | | | |
| (2548) | 1993 07 20.22222 | 19 58 59.46 | -22 01 10.0 | | 809 | | | | | | |
| (2548) | 1993 07 24.16042 | 19 54 29.33 | -21 41 43.1 | | 809 | | | | | | |
| (2656) | 1993 07 20.19583 | 19 48 17.39 | -23 03 33.0 | 18.0 | 809 | | | | | | |
| (2656) | 1993 07 20.20903 | 19 48 16.42 | -23 03 35.6 | | 809 | | | | | | |

816 Rand Observatory

G. R. Viscome, 100 Sentinel Road, Lake Placid, NY 12946, U.S.A.

0.37-m *f*/6 reflector + telecompressor + CCD

GSC

| | | | | | |
|---------|------------------|-------------|-------------|------|-----|
| 1993 MF | 1993 08 08.14154 | 23 00 46.00 | +39 47 34.9 | 13.4 | 816 |
| 1993 MF | 1993 08 08.14411 | 23 00 46.51 | +39 47 37.8 | 13.4 | 816 |
| 1993 MF | 1993 08 08.24130 | 23 01 05.46 | +39 49 21.2 | 13.6 | 816 |
| 1993 MF | 1993 08 08.24346 | 23 01 05.88 | +39 49 23.4 | 13.6 | 816 |
| 1993 MF | 1993 08 22.15027 | 23 42 13.44 | +41 24 13.1 | | 816 |
| 1993 MF | 1993 08 22.21781 | 23 42 22.46 | +41 24 07.5 | | 816 |
| 1993 MF | 1993 08 27.10960 | 23 53 13.81 | +40 58 56.4 | | 816 |
| 1993 MF | 1993 08 27.11354 | 23 53 14.28 | +40 58 55.2 | 13.7 | 816 |
| 1993 MF | 1993 09 14.21495 | 00 17 46.10 | +36 08 12.3 | | 816 |
| 1993 MF | 1993 09 14.22514 | 00 17 46.47 | +36 07 58.2 | | 816 |
| 1993 MF | 1993 09 15.14350 | 00 18 29.10 | +35 46 28.7 | | 816 |
| 1993 MF | 1993 09 15.15010 | 00 18 29.34 | +35 46 19.5 | | 816 |
| (654) | 1993 08 27.08968 | 21 01 55.35 | +04 16 17.6 | | 816 |
| (654) | 1993 08 27.09065 | 21 01 55.29 | +04 16 17.5 | | 816 |
| (1109) | 1993 07 21.11066 | 17 04 05.87 | -22 37 58.2 | | 816 |

| | | | | |
|--------|------------------|-------------|-------------|-----|
| (1109) | 1993 07 21.11826 | 17 04 05.75 | -22 37 57.7 | 816 |
| (1222) | 1993 08 27.16151 | 22 30 08.95 | +27 44 06.8 | 816 |
| (1222) | 1993 08 27.17157 | 22 30 08.48 | +27 44 05.0 | 816 |
| (3940) | 1993 07 24.10748 | 17 04 37.53 | +13 52 02.4 | 816 |
| (3940) | 1993 07 24.11139 | 17 04 37.47 | +13 51 59.9 | 816 |
| (3940) | 1993 07 25.12941 | 17 04 28.42 | +13 40 59.5 | 816 |
| (3940) | 1993 07 25.13938 | 17 04 28.29 | +13 40 53.0 | 816 |
| (4357) | 1993 07 18.19476 | 19 38 08.01 | -05 11 31.8 | 816 |
| (4357) | 1993 07 18.21008 | 19 38 07.22 | -05 11 33.9 | 816 |
| (4357) | 1993 07 24.15523 | 19 33 30.52 | -05 28 13.6 | 816 |
| (4357) | 1993 07 24.15678 | 19 33 30.42 | -05 28 14.1 | 816 |
| (4729) | 1993 07 18.22319 | 20 38 42.25 | -14 57 24.7 | 816 |
| (4729) | 1993 07 18.22990 | 20 38 41.89 | -14 57 25.4 | 816 |

868 Hidaka Observatory

S. Shirai, 13-2, Nishi-Kagaya 2 Chome, Suminoe-Ku, Osaka, 559 Japan

Observer S. Shirai

Measurer S. Hayakawa

0.25-m $f/3.4$ hyperboloid astrocamera

GSC

| | | | | | |
|---------|--------------------|-------------|-------------|------|-----|
| 1993 TQ | * 1993 10 09.56569 | 02 08 13.16 | +01 37 33.2 | 16.0 | 868 |
| 1993 TQ | 1993 10 09.59094 | 02 08 11.78 | +01 37 30.5 | | 868 |
| 1993 TQ | 1993 10 10.58764 | 02 07 20.72 | +01 35 53.6 | | 868 |
| 1993 TQ | 1993 10 10.61439 | 02 07 19.58 | +01 35 51.6 | | 868 |

871 Akou

K. Kawanishi, 2045-1, Kariya, Akou, Hyogo-Ken 678-02, Japan

0.33-m $f/3.3$ reflector + CCD

GSC

| | | | | | |
|----------------------|------------------|-------------|-------------|--------|-----|
| 1993 TO ₁ | 1993 10 19.64302 | 02 21 07.58 | +07 49 45.8 | 15.8 V | 871 |
| 1993 TO ₁ | 1993 10 19.64649 | 02 21 07.46 | +07 49 49.7 | | 871 |
| 1993 TO ₁ | 1993 10 19.64937 | 02 21 07.00 | +07 49 51.9 | | 871 |
| 1993 TO ₁ | 1993 10 19.65389 | 02 21 06.50 | +07 49 54.8 | | 871 |

894 Otomo

S. Otomo, Kiyosato 3545-3902, Takane-cho, Kitakoma-gun, Yamanashi-ken, 407-03, Japan

0.25-m $f/3.4$ reflector

PPM

| | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|
| 1982 SM ₆ | 1993 09 14.67743 | 23 53 25.33 | -03 42 01.2 | 16.5 | 894 |
| 1982 SM ₆ | 1993 09 14.69063 | 23 53 24.49 | -03 42 01.1 | | 894 |
| 1993 OW ₃ | 1993 07 15.70451 | 20 02 24.95 | -19 04 19.6 | 16.3 | 894 |
| 1993 OW ₃ | 1993 07 15.71771 | 20 02 24.37 | -19 04 24.1 | | 894 |
| 1993 RE | 1993 09 14.73300 | 00 01 41.33 | +03 41 09.7 | 17.0 | 894 |
| 1993 RE | 1993 09 14.74688 | 00 01 40.66 | +03 41 06.6 | | 894 |
| 1993 RH | 1993 09 14.76007 | 00 04 57.47 | -01 05 52.1 | 15.0 | 894 |
| 1993 RH | 1993 09 14.77396 | 00 04 56.52 | -01 05 49.7 | | 894 |
| 1993 RH | 1993 09 25.69802 | 23 52 22.18 | -00 19 07.9 | | 894 |
| 1993 RH | 1993 09 25.70972 | 23 52 21.41 | -00 19 05.8 | | 894 |
| 1993 RA ₂ | 1993 09 14.67743 | 23 52 45.36 | -02 17 58.9 | 16.7 | 894 |
| 1993 RA ₂ | 1993 09 14.69063 | 23 52 44.88 | -02 18 05.9 | | 894 |
| 1993 RU ₂ | * 1993 09 14.70660 | 23 49 29.89 | +03 55 43.6 | 15.0 | 894 |
| 1993 RU ₂ | 1993 09 14.71979 | 23 49 29.29 | +03 55 35.6 | | 894 |

| | | | | | |
|----------------------|--------------------|-------------|-------------|------|-----|
| 1993 RU ₂ | 1993 09 25.67535 | 23 42 04.91 | +02 02 03.5 | | 894 |
| 1993 RU ₂ | 1993 09 25.68611 | 23 42 04.55 | +02 01 56.9 | | 894 |
| 1993 TP ₁ | * 1993 10 10.62604 | 00 55 27.35 | +01 55 22.2 | 16.0 | 894 |
| 1993 TP ₁ | 1993 10 10.63924 | 00 55 26.42 | +01 55 22.9 | | 894 |
| 1993 TP ₁ | 1993 10 18.63854 | 00 47 41.05 | +02 00 53.0 | 16.0 | 894 |
| 1993 TP ₁ | 1993 10 18.65804 | 00 47 39.73 | +02 00 53.5 | | 894 |
| (240) | 1993 10 10.62604 | 00 56 07.26 | +01 53 28.0 | | 894 |
| (240) | 1993 10 10.63924 | 00 56 06.59 | +01 53 24.5 | | 894 |
| (240) | 1993 10 18.63854 | 00 49 37.89 | +01 13 03.7 | | 894 |
| (240) | 1993 10 18.65804 | 00 49 36.99 | +01 12 58.1 | | 894 |
| (312) | 1993 09 14.67743 | 23 53 02.94 | -04 00 28.8 | | 894 |
| (312) | 1993 09 14.69063 | 23 53 02.20 | -04 00 30.5 | | 894 |
| (396) | 1993 09 14.73300 | 00 01 32.98 | +04 23 00.9 | | 894 |
| (396) | 1993 09 14.74688 | 00 01 32.27 | +04 22 55.5 | | 894 |
| (3251) | 1993 09 14.76007 | 00 05 06.39 | -00 10 24.8 | | 894 |
| (3251) | 1993 09 14.77396 | 00 05 05.85 | -00 10 29.9 | | 894 |
| (5089) | 1993 09 14.70660 | 23 51 08.98 | +03 21 24.6 | | 894 |
| (5089) | 1993 09 14.71979 | 23 51 08.20 | +03 21 24.3 | | 894 |

896 Yatsugatake South Base Observatory

O. Muramatsu, 119-1, 2-8 Sakurazutsumi, Musashino, Tokyo 180, Japan

Observer Y. Kushida

Measurer O. Muramatsu

0.25-m $f/3.4$ reflector

GSC

| | | | | | |
|--------|------------------|-------------|-------------|------|-------|
| (4063) | 1993 05 26.65312 | 17 12 15.33 | -08 33 53.3 | 16.5 | W 896 |
| (4063) | 1993 05 26.68368 | 17 12 14.39 | -08 33 54.9 | 16.5 | W 896 |

900 Kiryuu Observatory, Ohtsu

Y. Ikari, Katsube 626, Moriyama, Shiga-Ken, 524 Japan

0.26-m $f/2.9$ reflector + CCD

GSC

| | | | | | |
|---------|------------------|-------------|-------------|--------|-----|
| 1993 RS | 1993 09 27.56116 | 00 00 13.74 | +13 15 17.4 | | 900 |
| 1993 RS | 1993 09 27.57981 | 00 00 11.49 | +13 15 27.8 | 15.5 V | 900 |
| 1993 RS | 1993 10 04.54977 | 23 47 12.84 | +14 18 51.6 | | 900 |
| 1993 RS | 1993 10 04.55571 | 23 47 12.20 | +14 18 53.0 | | 900 |
| 1993 TC | 1993 10 13.61366 | 01 40 12.11 | +09 59 02.7 | | 900 |
| 1993 TC | 1993 10 13.63123 | 01 40 10.21 | +09 59 14.8 | 15.5 V | 900 |

950 La Palma

A. Fitzsimmons, Physics Department, Queen's University, Belfast BT7 1NN, Northern Ireland

Observers A. Fitzsimmons, D. O'Ceallaigh, I. P. Williams

2.5-m Isaac Newton telescope + CCD

| | | | | | |
|----------------------|-------------------|-------------|-------------|--------|-----|
| 1992 QB ₁ | 1993 09 16.9417 | 00 05 13.02 | +00 38 42.3 | | 950 |
| 1992 QB ₁ | 1993 09 17.0772 | 00 05 12.42 | +00 38 38.6 | | 950 |
| 1992 QB ₁ | 1993 09 23.0103 | 00 04 45.43 | +00 35 47.2 | 22.4 R | 950 |
| 1992 QB ₁ | 1993 09 23.1550 | 00 04 44.78 | +00 35 42.6 | 22.3 R | 950 |
| 1993 RO | 1993 09 20.0877 | 23 21 53.2 | -04 04 29 | | 950 |
| 1993 SB | * 1993 09 16.9708 | 23 54 12.34 | -00 29 40.9 | | 950 |
| 1993 SB | 1993 09 17.1034 | 23 54 11.49 | -00 29 45.4 | | 950 |
| 1993 SB | 1993 09 18.0133 | 23 54 06.47 | -00 30 16.7 | | 950 |
| 1993 SB | 1993 09 18.1502 | 23 54 05.77 | -00 30 22.3 | | 950 |

| | | | | | | | | | | |
|---------|-------------------|-------------|-------------|--------|-----|-----|------------------|-------------|-------------|-----|
| 1993 SB | 1993 09 18.9420 | 23 54 01.31 | -00 30 48.1 | | 950 | (6) | 1989 02 24.80423 | 08 01 02.17 | +17 51 52.9 | 975 |
| 1993 SB | 1993 09 19.9982 | 23 53 55.46 | -00 31 28.1 | | 950 | (6) | 1989 02 24.81384 | 08 01 01.84 | +17 51 56.1 | 975 |
| 1993 SB | 1993 09 20.9737 | 23 53 49.99 | -00 32 02.3 | 22.7 R | 950 | (6) | 1989 03 03.79418 | 07 58 44.70 | +18 40 57.6 | 975 |
| 1993 SB | 1993 09 22.9511 | 23 53 38.91 | -00 33 12.8 | | 950 | (6) | 1989 03 03.79823 | 07 58 44.66 | +18 40 59.7 | 975 |
| 1993 SC | * 1993 09 17.9845 | 23 55 17.77 | -00 05 29.4 | | 950 | (6) | 1989 03 03.80231 | 07 58 44.53 | +18 41 02.1 | 975 |
| 1993 SC | 1993 09 18.1750 | 23 55 16.72 | -00 05 36.0 | | 950 | (6) | 1989 03 03.80709 | 07 58 44.47 | +18 41 03.2 | 975 |
| 1993 SC | 1993 09 18.9667 | 23 55 12.45 | -00 06 02.2 | | 950 | (6) | 1989 03 03.81119 | 07 58 44.49 | +18 41 04.6 | 975 |
| 1993 SC | 1993 09 19.9487 | 23 55 07.22 | -00 06 34.4 | | 950 | (6) | 1989 03 03.81523 | 07 58 44.43 | +18 41 07.1 | 975 |
| 1993 SC | 1993 09 20.0330 | 23 55 06.64 | -00 06 37.5 | | 950 | (7) | 1989 02 23.83516 | 09 09 07.05 | +07 35 10.7 | 975 |
| 1993 SC | 1993 09 20.1416 | 23 55 06.16 | -00 06 40.8 | | 950 | (7) | 1989 02 23.83844 | 09 09 07.01 | +07 35 10.9 | 975 |
| 1993 SC | 1993 09 20.9996 | 23 55 01.34 | -00 07 10.1 | 21.6 R | 950 | (7) | 1989 02 23.84189 | 09 09 06.75 | +07 35 12.2 | 975 |
| 1993 SC | 1993 09 21.0351 | 23 55 01.32 | -00 07 10.8 | | 950 | (7) | 1989 02 23.84733 | 09 09 06.45 | +07 35 14.7 | 975 |
| 1993 SC | 1993 09 21.1858 | 23 55 00.48 | -00 07 15.8 | 21.8 R | 950 | (7) | 1989 02 23.85123 | 09 09 06.28 | +07 35 13.7 | 975 |
| 1993 SC | 1993 09 22.9830 | 23 54 50.73 | -00 08 15.5 | 21.5 R | 950 | (7) | 1989 02 23.85547 | 09 09 05.97 | +07 35 16.6 | 975 |
| 1993 SC | 1993 09 23.1257 | 23 54 49.95 | -00 08 20.5 | 22.1 R | 950 | (7) | 1989 03 03.82497 | 09 03 12.09 | +08 10 01.6 | 975 |

975 Valencia

A. López G., Observatorio Astronómico de Valencia, Avda. Blasco Ibáñez 13,
E-46010 Valencia, Spain

Observers A. López G., J. M. Martínez G., A. Ortiz G.

0.25-m $f/15$ refractor

PPM

| | | | | | | | | | | |
|-----|------------------|-------------|-------------|--|-----|------|------------------|-------------|-------------|-----|
| (3) | 1989 04 16.85962 | 09 49 05.23 | +11 19 16.8 | | 975 | (7) | 1989 03 03.85156 | 09 03 10.96 | +08 10 08.6 | 975 |
| (3) | 1989 04 16.86439 | 09 49 05.33 | +11 19 17.3 | | 975 | (7) | 1989 03 03.85529 | 09 03 10.72 | +08 10 09.7 | 975 |
| (3) | 1989 04 16.86998 | 09 49 05.46 | +11 19 19.7 | | 975 | (7) | 1989 05 04.86356 | 09 17 07.82 | +09 19 58.9 | 975 |
| (3) | 1989 04 16.87461 | 09 49 05.57 | +11 19 20.2 | | 975 | (7) | 1989 05 04.86888 | 09 17 08.07 | +09 19 58.3 | 975 |
| (3) | 1989 04 16.87987 | 09 49 05.61 | +11 19 21.2 | | 975 | (7) | 1989 05 04.87467 | 09 17 08.46 | +09 19 59.1 | 975 |
| (3) | 1989 04 16.88479 | 09 49 05.70 | +11 19 22.2 | | 975 | (7) | 1989 05 04.88002 | 09 17 08.81 | +09 19 57.8 | 975 |
| (3) | 1989 04 28.85402 | 09 53 59.91 | +11 45 10.8 | | 975 | (7) | 1989 05 04.88566 | 09 17 09.04 | +09 19 58.2 | 975 |
| (3) | 1989 04 28.85859 | 09 53 59.86 | +11 45 10.9 | | 975 | (7) | 1989 05 04.89102 | 09 17 09.31 | +09 19 57.5 | 975 |
| (3) | 1989 04 28.87543 | 09 54 00.46 | +11 45 10.4 | | 975 | (15) | 1989 10 10.80425 | 21 38 21.17 | +01 15 31.5 | 975 |
| (3) | 1989 04 28.88014 | 09 54 00.26 | +11 45 08.7 | | 975 | (15) | 1989 10 10.80818 | 21 38 21.10 | +01 15 31.3 | 975 |
| (3) | 1989 04 28.88469 | 09 54 00.53 | +11 45 08.2 | | 975 | (15) | 1989 10 10.81186 | 21 38 21.14 | +01 15 30.8 | 975 |
| (3) | 1989 04 28.88996 | 09 54 00.61 | +11 45 09.3 | | 975 | (15) | 1989 10 10.81773 | 21 38 21.06 | +01 15 32.5 | 975 |
| (3) | 1989 04 28.89476 | 09 54 00.78 | +11 45 12.0 | | 975 | (15) | 1989 10 10.82146 | 21 38 21.15 | +01 15 31.2 | 975 |
| (3) | 1989 04 28.89933 | 09 54 00.84 | +11 45 09.1 | | 975 | (15) | 1989 10 10.82508 | 21 38 21.03 | +01 15 31.0 | 975 |
| (3) | 1989 05 04.91706 | 09 57 31.80 | +11 49 32.5 | | 975 | (15) | 1989 10 30.81479 | 21 45 23.42 | +01 03 34.9 | 975 |
| (3) | 1989 05 04.92207 | 09 57 32.15 | +11 49 32.8 | | 975 | (15) | 1989 10 30.82101 | 21 45 23.63 | +01 03 34.7 | 975 |
| (4) | 1989 10 10.77062 | 18 51 13.84 | -26 01 53.1 | | 975 | (15) | 1989 10 30.84112 | 21 45 24.42 | +01 03 37.0 | 975 |
| (4) | 1989 10 10.77410 | 18 51 14.11 | -26 01 53.4 | | 975 | (15) | 1989 10 30.84514 | 21 45 24.58 | +01 03 37.1 | 975 |
| (4) | 1989 10 10.77826 | 18 51 14.47 | -26 01 53.2 | | 975 | (15) | 1989 10 30.84896 | 21 45 24.74 | +01 03 37.2 | 975 |
| (4) | 1989 10 10.78208 | 18 51 14.86 | -26 01 53.1 | | 975 | (15) | 1989 10 31.79518 | 21 46 01.89 | +01 04 11.9 | 975 |
| (4) | 1989 10 10.78631 | 18 51 15.25 | -26 01 53.1 | | 975 | (15) | 1989 10 31.79923 | 21 46 02.04 | +01 04 12.3 | 975 |
| (4) | 1989 10 10.79001 | 18 51 15.58 | -26 01 53.1 | | 975 | (15) | 1989 10 31.80331 | 21 46 02.21 | +01 04 12.0 | 975 |
| (4) | 1989 10 31.76194 | 19 26 52.75 | -25 25 29.4 | | 975 | (15) | 1989 10 31.80823 | 21 46 02.41 | +01 04 11.8 | 975 |
| (4) | 1989 10 31.76581 | 19 26 53.16 | -25 25 28.8 | | 975 | (15) | 1989 10 31.81263 | 21 46 02.60 | +01 04 12.2 | 975 |
| (4) | 1989 10 31.76966 | 19 26 53.57 | -25 25 27.8 | | 975 | (15) | 1989 10 31.81691 | 21 46 02.77 | +01 04 11.8 | 975 |
| (4) | 1989 10 31.77420 | 19 26 54.09 | -25 25 27.5 | | 975 | (15) | 1989 11 07.80925 | 21 51 19.64 | +01 12 10.1 | 975 |
| (4) | 1989 10 31.77790 | 19 26 54.43 | -25 25 27.1 | | 975 | (15) | 1989 11 07.81793 | 21 51 20.00 | +01 12 11.2 | 975 |
| (4) | 1989 10 31.78193 | 19 26 54.85 | -25 25 26.7 | | 975 | (15) | 1989 11 07.82213 | 21 51 20.10 | +01 12 11.1 | 975 |
| (6) | 1989 02 24.78728 | 08 01 02.51 | +17 51 43.5 | | 975 | (15) | 1989 11 07.82630 | 21 51 20.46 | +01 12 11.7 | 975 |
| (6) | 1989 02 24.79144 | 08 01 02.46 | +17 51 45.7 | | 975 | (15) | 1989 11 07.83020 | 21 51 20.64 | +01 12 12.1 | 975 |
| (6) | 1989 02 24.79538 | 08 01 02.30 | +17 51 46.9 | | 975 | (15) | | | | |

ORBITAL ELEMENTS

Orbital elements have been computed by the following contributors:

- C. M. Bardwell, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A.
 E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, AZ 86001, U.S.A. (E)
 E. Goffin, Agfa-Gevaert N.V., Mortsel, Belgium
 K. Ichikawa, 45 Shiromae Kamiwada-cho, Okazaki-shi, Aichi, 444-02 Japan
 B. G. Marsden, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A. (M)
 S. Nakano, 3-19, 1 chome, Takenokuchi, Sumoto, Hyogo-ken 656, Japan (N)
 T. Nomura, 1-1-8, Yamate, Tarumiku, Kobe 655, Japan
 P. Sicoli, Via Valli 9, I-22040 Garbagnate Monastero (Como), Italy
 G. Sitarski, Polish Academy of Sciences, Space Research Center, Ul. Bartycka 18A, PL-00716 Warsaw, Poland
 T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
 G. V. Williams, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A. (W)

Periodic Comet Helin-Lawrence (1993l)

Epoch 1993 June 22.0 TT = JDT 2449160.5

| T 1993 June 30.39583 TT | | Nakano | |
|---------------------------|------------|--------------------|-------------------------|
| q | (2000.0) | P | Q |
| q | 3.0901383 | | |
| n | 0.10425623 | ω 163.73903 | -0.24156382 +0.95510745 |
| a | 4.4709660 | Ω 92.03683 | -0.90833400 -0.16036814 |
| e | 0.3088433 | i 9.88210 | -0.34143266 -0.24910203 |
| P | 9.45 | | |

From 64 observations 1993 Apr. 21–Oct. 10, mean residual 1".09.

Periodic Comet Urata-Niijima (1993q)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

| T 1993 July 13.57827 TT | | Marsden | |
|---------------------------|------------|-------------------|-------------------------|
| q | (2000.0) | P | Q |
| q | 1.4566449 | | |
| n | 0.14833112 | ω 21.48225 | +0.61332912 -0.75948608 |
| a | 3.5343905 | Ω 31.91260 | +0.65168193 +0.33151828 |
| e | 0.5878653 | i 24.21407 | +0.44624887 +0.55971111 |
| P | 6.64 | | |

From 71 observations 1986–1993, mean residual 0".83.

Comet Spacewatch (1992h)

Epoch 1993 Sept. 10.0 TT = JDT 2449240.5

| T 1993 Sept. 5.55024 TT | | Nakano | |
|---------------------------|-----------------|--------------------|-------------------------|
| q | (2000.0) | P | Q |
| q | 3.0070032 | | |
| z | +0.0000212 | ω 83.40119 | -0.32726734 +0.88654705 |
| | ± 0.0000036 | Ω 203.32377 | +0.10375428 +0.37768056 |
| e | 0.9999363 | i 124.31848 | +0.93921837 +0.26719230 |

From 154 observations 1992 May 1–1993 Sept. 26, mean residual 0".71.

Periodic Comet West-Kohoutek-Ikemura (1993o)

Epoch 1994 Jan. 8.0 TT = JDT 2449360.5

| T 1993 Dec. 25.34762 TT | | Nakano | |
|---------------------------|------------|--------------------|-------------------------|
| q | (2000.0) | P | Q |
| q | 1.5767831 | | |
| n | 0.15364423 | ω 359.97715 | +0.10195938 -0.85676691 |
| a | 3.4524326 | Ω 84.16767 | +0.91278127 -0.12147041 |
| e | 0.5432835 | i 30.54099 | +0.39551819 +0.50119398 |
| P | 6.41 | | |

From 58 observations 1975–1993, mean residual 1".20. Nongravitational parameters

$$A_1 = -0.05 \pm 0.04, A_2 = -0.0993 \pm 0.0012.$$

Comet Mueller (1993a)

Epoch 1994 Jan. 8.0 TT = JDT 2449360.5

| T 1994 Jan. 12.89417 TT | | Nakano | |
|---------------------------|-----------------|--------------------|-------------------------|
| q | (2000.0) | P | Q |
| q | 1.9374041 | | |
| z | -0.0009959 | ω 130.66695 | +0.78249548 +0.40401006 |
| | ± 0.0000026 | Ω 144.72281 | -0.26794514 -0.46837386 |
| e | 1.0019295 | i 124.87827 | +0.56205536 -0.78574919 |

From 286 observations 1992 Nov. 26–1993 Oct. 19, mean residual 0".83.

Comet Mueller (1993p)

T 1994 Mar. 26.30852 TT

| q 0.9671264 | | (2000.0) | | Marsden | |
|---------------|--------------------|-------------|-------------|---------|--|
| | | P | Q | | |
| | ω 261.05122 | +0.21209962 | -0.94973642 | | |
| | Ω 193.79179 | +0.18541365 | -0.19222091 | | |
| e 1.0 | i 105.02089 | -0.95949754 | -0.24708673 | | |

From 201 observations 1993 Aug. 16–Oct. 19.

One-opposition minor planets

| Planet | H | Epoch | M | ω | Ω | i | e | a | Arc | O | N | C |
|-----------------------|------|--------|--------|----------|----------|-------|--------|--------|-----|---|---|---|
| 1992 SY ₅ | 14.5 | 920915 | 304.20 | 298.87 | 112.19 | 1.57 | 0.0903 | 2.9511 | 2 | 7 | E | W |
| 1992 SD ₆ | 16.0 | 920915 | 188.97 | 60.27 | 100.08 | 1.62 | 0.1854 | 2.4014 | 2 | 8 | E | W |
| 1992 SM ₆ | 16.0 | 920915 | 46.34 | 293.52 | 2.77 | 9.49 | 0.0617 | 2.6827 | 3 | 8 | W | |
| 1992 SM ₂₀ | 15.5 | 920915 | 347.63 | 278.22 | 91.24 | 2.23 | 0.1391 | 2.5869 | 7 | 9 | W | |
| 1992 SU ₂₁ | 12.0 | 920915 | 307.01 | 49.63 | 17.32 | 6.85 | 0.2099 | 3.9216 | 7 | 9 | E | W |
| 1992 SW ₂₁ | 15.5 | 920915 | 63.12 | 265.22 | 12.06 | 6.99 | 0.1102 | 2.3408 | 26 | 0 | W | |
| 1992 SX ₂₁ | 15.5 | 920915 | 331.74 | 351.26 | 44.90 | 3.21 | 0.2224 | 2.7676 | 6 | 8 | W | |
| 1992 SZ ₂₁ | 13.5 | 920915 | 103.82 | 230.36 | 6.24 | 11.98 | 0.1091 | 3.0318 | 7 | 9 | W | |
| 1992 SA ₂₂ | 14.0 | 920915 | 101.29 | 212.37 | 26.79 | 4.87 | 0.1092 | 2.7476 | 7 | 9 | W | |
| 1992 SB ₂₂ | 14.0 | 920915 | 23.00 | 204.54 | 120.64 | 3.05 | 0.0865 | 3.0655 | 7 | 9 | W | |
| 1992 SN ₂₄ | 15.5 | 920915 | 354.06 | 126.70 | 235.53 | 5.88 | 0.1474 | 2.3744 | 7 | 7 | W | |
| 1992 SQ ₂₄ | 13.0 | 920915 | 208.26 | 304.61 | 204.28 | 10.15 | 0.0514 | 2.9914 | 22 | 9 | W | |
| 1992 SR ₂₄ | 13.5 | 920915 | 15.43 | 57.44 | 273.11 | 4.19 | 0.2170 | 2.5414 | 22 | 9 | W | |
| 1992 SS ₂₄ | 14.0 | 920915 | 327.73 | 114.10 | 283.10 | 5.34 | 0.1327 | 2.8476 | 22 | 9 | W | |
| 1993 AM | 13.5 | 930113 | 352.04 | 184.69 | 304.07 | 11.27 | 0.1207 | 2.7022 | 13 | 7 | W | |
| 1993 BS ₂ | 13.0 | 930113 | 174.82 | 191.97 | 116.63 | 7.89 | 0.1200 | 2.2165 | 3 | 7 | E | W |
| 1993 BT ₄ | 13.0 | 930113 | 116.82 | 255.75 | 106.43 | 3.73 | 0.1532 | 3.0713 | 2 | 0 | E | W |
| 1993 BZ ₄ | 14.0 | 930113 | 267.44 | 127.77 | 129.70 | 8.16 | 0.2992 | 2.6930 | 2 | 8 | E | W |
| 1993 BJ ₁₄ | 14.5 | 930202 | 17.86 | 190.20 | 286.69 | 5.50 | 0.0936 | 2.8475 | 34 | 6 | W | |
| 1993 DR ₂ | 13.0 | 930202 | 134.59 | 28.39 | 327.75 | 8.51 | 0.0615 | 3.0278 | 25 | 8 | W | |
| 1993 FA ₂ | 13.0 | 930222 | 354.25 | 86.67 | 98.34 | 6.16 | 0.1114 | 3.1913 | 27 | 7 | W | |
| 1993 GA ₁ | 14.5 | 930403 | 186.24 | 357.11 | 7.58 | 6.66 | 0.0886 | 2.3167 | 20 | 9 | W | |
| 1993 HM ₄ | 17.0 | 930403 | 279.91 | 240.12 | 51.34 | 9.56 | 0.1248 | 2.6220 | 2 | 0 | W | |
| 1993 HN ₄ | 17.0 | 930403 | 304.92 | 202.69 | 58.66 | 7.10 | 0.0913 | 2.4037 | 2 | 8 | W | |
| 1993 HV ₄ | 16.0 | 930403 | 344.18 | 160.97 | 55.04 | 8.75 | 0.0853 | 3.1820 | 4 | 0 | W | |
| 1993 HK ₅ | 17.0 | 930423 | 267.80 | 290.85 | 23.45 | 2.48 | 0.0637 | 2.1920 | 2 | 7 | E | W |
| 1993 KO | 13.9 | 930602 | 15.10 | 27.01 | 198.71 | 5.71 | 0.1180 | 2.2205 | 25 | 0 | B | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|-------------|---------------|---------------|---------------|---------------|--------------|---------------|---------------|----------|----------|----------|----------------------------|-------------|---------------|--------------|---------------|---------------|--------------|---------------|----------------|-----------|----------|------------|
| 1993 KY | 16.5 | 930513 | 324.42 | 133.57 | 147.22 | 2.94 | 0.1938 | 2.4131 | 4 | 8 | W | 1993 RB | 14.0 | 930910 | 220.73 | 161.30 | 337.75 | 8.33 | 0.0526 | 2.2230 | 24 | 0 | W |
| 1993 MC | 13.0 | 930712 | 20.40 | 37.17 | 220.71 | 12.92 | 0.2331 | 2.5550 | 57 | 8 | W | 1993 RC | 14.0 | 930910 | 29.11 | 131.06 | 187.36 | 17.19 | 0.1377 | 3.2115 | 28 | 0 | W |
| 1993 NF | 13.0 | 930712 | 353.48 | 184.26 | 120.68 | 19.28 | 0.2290 | 2.8644 | 9 | 9 | M | 1993 RH | 12.5 | 930930 | 14.95 | 338.45 | 359.42 | 14.93 | 0.2257 | 2.6538 | 38 | 0 | M |
| 1993 OC | 13.0 | 930801 | 349.25 | 25.28 | 299.54 | 23.73 | 0.1945 | 2.4611 | 36 | 7 | W | 1993 RK | 13.5 | 930910 | 359.40 | 11.70 | 344.00 | 12.29 | 0.2664 | 2.5802 | 29 | 0 | M |
| 1993 OM ₁ | 17.5 | 930801 | 18.49 | 344.77 | 306.34 | 11.85 | 0.1592 | 2.6877 | 20 | 9 | W | 1993 RQ | 17.5 | 930910 | 6.61 | 357.52 | 336.76 | 10.74 | 0.3556 | 2.3825 | 4 | 9 | W |
| 1993 OU ₁ | 15.0 | 930622 | 304.83 | 230.21 | 157.99 | 5.39 | 0.2238 | 3.1536 | 44 | 0 | W | 1993 RR | 16.0 | 930910 | 344.81 | 36.38 | 4.18 | 7.51 | 0.3505 | 2.5765 | 9 | 0 | N |
| 1993 OY ₂ | 14.0 | 930801 | 23.07 | 317.80 | 352.41 | 17.21 | 0.2035 | 2.6122 | 46 | 0 | W | 1993 RS | 14.0 | 930930 | 331.97 | 46.10 | 351.64 | 22.46 | 0.0479 | 1.8823 | 22 | 0 | N |
| 1993 OL ₃ | 15.5 | 930712 | 320.45 | 57.96 | 290.49 | 2.51 | 0.1675 | 2.3916 | 5 | 7 | M | 1993 RZ ₁ | 14.4 | 930930 | 30.19 | 64.17 | 253.31 | 0.90 | 0.1944 | 2.3127 | 9 | 8 | N |
| 1993 OW ₃ | 14.5 | 930712 | 339.85 | 197.18 | 128.12 | 2.87 | 0.2114 | 2.2896 | 4 | 0 | M | 1993 RA ₂ | 14.7 | 930910 | 7.98 | 170.22 | 165.92 | 4.07 | 0.3112 | 2.5116 | 9 | 0 | N |
| 1993 OA ₄ | 14.0 | 930712 | 358.56 | 174.96 | 122.47 | 2.83 | 0.0898 | 2.8292 | 5 | 7 | W | 1993 RC ₂ | 13.8 | 930930 | 339.22 | 38.30 | 4.09 | 13.97 | 0.2924 | 2.6162 | 26 | 8 | N |
| 1993 OD ₄ | 15.0 | 930712 | 50.00 | 111.45 | 119.81 | 7.20 | 0.1481 | 2.8332 | 5 | 7 | W | 1993 RD ₂ | 12.7 | 930930 | 30.20 | 150.87 | 175.02 | 15.75 | 0.1220 | 2.6224 | 23 | 8 | N |
| 1993 OK ₄ | 14.5 | 930712 | 345.90 | 147.22 | 168.26 | 0.27 | 0.1590 | 3.0716 | 5 | 7 | W | 1993 RE ₂ | 13.3 | 930930 | 35.64 | 313.97 | 8.61 | 9.88 | 0.0777 | 2.2557 | 4 | 6 | E N |
| 1993 OM ₄ | 16.5 | 930712 | 25.58 | 131.58 | 121.78 | 1.71 | 0.2365 | 2.3847 | 5 | 7 | W | 1993 RP ₂ | 15.0 | 930910 | 4.96 | 36.02 | 310.94 | 3.95 | 0.1948 | 2.2718 | 7 | 5 | W |
| 1993 OC ₅ | 16.5 | 930712 | 10.17 | 348.05 | 293.26 | 1.25 | 0.1588 | 2.4957 | 5 | 6 | W | 1993 RR₂ | 15.5 | 930910 | 11.83 | 161.91 | 155.05 | 11.38 | 0.4898 | 2.6610 | 34 | 0 | W |
| 1993 OH ₅ | 15.0 | 930712 | 358.39 | 147.19 | 151.21 | 0.57 | 0.2165 | 2.9098 | 5 | 7 | W | 1993 RZ ₂ | 16.0 | 930821 | 358.04 | 343.89 | 12.05 | 9.13 | 0.1885 | 3.0443 | 2 | 0 | W |
| 1993 OD ₆ | 15.5 | 930712 | 320.45 | 50.87 | 298.60 | 3.07 | 0.1646 | 2.3325 | 5 | 7 | W | 1993 SA | 17.0 | 930910 | 346.36 | 202.74 | 178.91 | 7.93 | 0.1995 | 2.3398 | 10 | 0 | W |
| 1993 OG ₆ | 15.5 | 930712 | 321.44 | 68.27 | 291.16 | 1.55 | 0.2671 | 2.5422 | 5 | 7 | W | 1993 SB | 8.0 | 930910 | 0.00 | 3.16 | 355.15 | 2.13 | 0.0000 | 33.0786 | 6 | 8 | E M |
| 1993 OM₇ | 18.5 | 930712 | 231.31 | 142.44 | 297.71 | 25.96 | 0.2331 | 1.3398 | 4 | 0 | M | 1993 SC | 7.0 | 930910 | 0.00 | 3.69 | 355.06 | 5.73 | 0.0000 | 34.3786 | 6 | 0 | E M |
| 1993 PE | 14.0 | 930910 | 348.08 | 77.70 | 267.09 | 3.93 | 0.0999 | 2.3816 | 63 | 0 | W | 1993 SE | 13.5 | 930930 | 142.05 | 244.89 | 321.65 | 5.50 | 0.2114 | 2.3088 | 25 | 0 | W |
| 1993 PC ₅ | 13.0 | 930821 | 347.80 | 179.77 | 167.29 | 11.81 | 0.0891 | 3.0793 | 25 | 8 | W | 1993 SF | 15.0 | 930910 | 269.26 | 141.77 | 317.21 | 4.50 | 0.1099 | 2.2618 | 23 | 0 | W |
| 1993 PO ₅ | 14.0 | 930821 | 16.41 | 18.60 | 292.91 | 5.84 | 0.1496 | 3.2077 | 32 | 8 | W | 1993 SO | 14.5 | 930821 | 349.87 | 176.25 | 168.25 | 8.27 | 0.0951 | 2.3722 | 35 | 0 | W |
| 1993 PB ₆ | 14.0 | 930821 | 315.63 | 220.27 | 181.68 | 4.14 | 0.2443 | 2.9681 | 26 | 8 | W | 1993 SZ | 13.7 | 930910 | 338.91 | 175.33 | 215.80 | 3.17 | 0.1577 | 2.2862 | 25 | 6 | N |
| 1993 PC ₆ | 13.5 | 930821 | 354.79 | 181.83 | 155.96 | 25.10 | 0.1973 | 2.3838 | 30 | 0 | W | 1993 SA ₁ | 13.3 | 930910 | 34.45 | 107.08 | 198.89 | 11.63 | 0.2686 | 2.5846 | 25 | 6 | N |
| 1993 PL ₆ | 15.0 | 930801 | 8.02 | 108.91 | 209.16 | 2.36 | 0.1684 | 2.7768 | 4 | 8 | E M | 1993 SB ₁ | 12.7 | 930910 | 71.27 | 298.84 | 351.91 | 5.99 | 0.0423 | 2.3426 | 25 | 6 | N |
| 1993 PP ₆ | 15.5 | 930801 | 36.13 | 334.11 | 299.85 | 3.97 | 0.2039 | 2.2506 | 4 | 8 | M | 1993 SD ₁ | 14.1 | 930930 | 355.94 | 332.43 | 39.40 | 4.00 | 0.1956 | 2.3642 | 24 | 7 | N |
| 1993 PS ₆ | 15.0 | 930801 | 309.58 | 240.59 | 168.53 | 5.95 | 0.2801 | 2.4435 | 4 | 8 | E M | 1993 SH ₁ | 13.6 | 930910 | 16.67 | 163.37 | 175.10 | 6.82 | 0.1463 | 2.3119 | 25 | 6 | N |
| 1993 PX ₆ | 15.5 | 930801 | 358.23 | 12.39 | 317.42 | 6.47 | 0.2415 | 2.4921 | 4 | 8 | M | 1993 SN ₁ | 14.4 | 930910 | 5.08 | 190.89 | 160.94 | 5.75 | 0.1904 | 2.2330 | 25 | 6 | N |
| 1993 PY ₆ | 13.5 | 930801 | 291.84 | 252.18 | 177.78 | 5.22 | 0.2473 | 2.9448 | 4 | 8 | E M | 1993 SQ ₁ | 12.9 | 930910 | 351.97 | 344.55 | 29.37 | 10.03 | 0.1863 | 2.7405 | 25 | 6 | N |
| 1993 PZ ₆ | 14.0 | 930801 | 6.53 | 25.09 | 299.33 | 3.60 | 0.0993 | 2.8464 | 4 | 8 | E M | 1993 SS ₁ | 13.1 | 930910 | 308.95 | 283.13 | 146.86 | 3.99 | 0.1476 | 2.5744 | 25 | 6 | N |
| 1993 PE ₇ | 13.5 | 930801 | 24.73 | 115.87 | 168.25 | 6.32 | 0.3318 | 3.8433 | 4 | 8 | E M | 1993 ST ₁ | 11.9 | 930910 | 340.20 | 217.26 | 173.30 | 11.19 | 0.0988 | 3.1300 | 25 | 6 | N |
| 1993 PH ₇ | 15.0 | 930801 | 300.54 | 233.49 | 177.58 | 3.29 | 0.1964 | 2.3408 | 4 | 7 | E M | 1993 SV ₁ | 11.7 | 930910 | 52.72 | 214.02 | 97.15 | 3.31 | 0.0268 | 2.8271 | 25 | 6 | N |
| 1993 PL ₇ | 14.5 | 930801 | 39.73 | 109.34 | 161.41 | 13.51 | 0.2294 | 2.7512 | 4 | 8 | E M | 1993 SA ₂ | 13.7 | 930930 | 10.20 | 12.98 | 333.25 | 9.72 | 0.2171 | 2.4496 | 17 | 6 | N |
| 1993 PM ₇ | 16.0 | 930801 | 6.75 | 72.73 | 243.01 | 0.47 | 0.2419 | 2.4877 | 4 | 8 | E M | 1993 SB ₂ | 13.9 | 930930 | 31.67 | 352.95 | 327.80 | 4.45 | 0.1265 | 2.1913 | 17 | 6 | N |
| 1993 PN ₇ | 15.0 | 930801 | 5.37 | 33.64 | 287.81 | 2.36 | 0.2030 | 2.6325 | 3 | 5 | M | 1993 SD ₂ | 11.3 | 930930 | 276.90 | 236.04 | 228.66 | 7.48 | 0.1860 | 3.1026 | 17 | 6 | N |
| 1993 PO ₇ | 13.5 | 930801 | 91.40 | 260.14 | 328.79 | 9.49 | 0.1276 | 2.8102 | 4 | 8 | E M | 1993 SG ₂ | 14.4 | 930930 | 357.12 | 19.47 | 346.79 | 4.44 | 0.1546 | 2.2693 | 18 | 0 | N |
| 1993 PP ₇ | 16.0 | 930801 | 8.49 | 0.29 | 315.54 | 1.72 | 0.1499 | 2.2209 | 4 | 8 | E M | 1993 SH ₂ | 13.0 | 930930 | 318.80 | 56.41 | 356.74 | 4.60 | 0.1286 | 2.5521 | 17 | 6 | N |
| 1993 PT ₇ | 16.5 | 930801 | 13.01 | 148.69 | 156.89 | 3.28 | 0.2090 | 2.1943 | 3 | 5 | E M | 1993 SK ₂ | 14.5 | 930930 | 32.73 | 315.04 | 359.15 | 13.71 | 0.2435 | 2.5806 | 25 | 6 | N |
| 1993 PW ₇ | 13.5 | 930801 | 347.09 | 16.32 | 331.77 | 3.38 | 0.0847 | 2.7906 | 4 | 8 | E M | 1993 SN ₂ | 16.0 | 930930 | 324.91 | 144.81 | 264.76 | 1.94 | 0.1574 | 2.3360 | 27 | 0 | W |
| 1993 QN | 12.5 | 930821 | 357.15 | 48.35 | 314.09 | 31.33 | 0.2900 | 2.6263 | 26 | 8 | W | 1993 SO ₂ | 13.5 | 930930 | 174.17 | 336.48 | 208.44 | 7.53 | 0.1069 | 2.7934 | 27 | 0 | W |
| 1993 QO | 13.0 | 930910 | 329.75 | 77.60 | 314.09 | 21.94 | 0.2856 | 2.2983 | 60 | 0 | W | 1993 SS ₂ | 12.0 | 930910 | 108.27 | 128.14 | 110.11 | 6.29 | 0.2047 | 2.2399 | 2 | 6 | E W |
| 1993 QS | 13.0 | 930821 | 353.62 | 176.48 | 164.14 | 13.26 | 0.2531 | 2.4476 | 26 | 8 | W | 1993 ST ₂ | 15.5 | 930910 | 2.54 | 157.54 | 191.78 | 4.53 | 0.2049 | 2.1407 | 8 | 0 | M |
| 1993 QW | 14.0 | 930821 | 13.75 | 160.78 | 157.28 | 25.63 | 0.2288 | 2.2698 | 24 | 8 | W | 1993 SY ₂ | 15.5 | 930910 | 333.16 | 92.84 | 302.70 | 3.12 | 0.2049 | 2.6756 | 3 | 4 | M |
| 1993 QY | 13.0 | 930910 | 335.78 | 235.95 | 156.36 | 28.33 | 0.3251 | 2.5954 | 60 | 0 | W | 1993 SZ ₂ | 18.0 | 930910 | 18.08 | 354.27 | 322.20 | 1.65 | 0.3166 | 2.1650 | 3 | 4 | E M |
| 1993 QZ | 13.0 | 930910 | 353.51 | 182.90 | 164.15 | 21.84 | 0.1582 | 2.3694 | 60 | 0 | W | 1993 SB ₃ | 14.0 | 930910 | 273.82 | 270.19 | 192.10 | 5.71 | 0.1763 | 2.8657 | 3 | 4 | E M |
| 1993 QA ₁ | 13.0 | 930821 | 330.46 | 248.58 | 125.61 | 11.00 | 0.2451 | 2.6906 | 27 | 8 | W | 1993 SC ₃ | 15.5 | 930910 | 30.24 | 121.27 | 194.09 | 7.60 | 0.1440 | 2.4905 | 3 | 4 | E M |
| 1993 QB ₁ | 13.0 | 930821 | 22.29 | 199.79 | 94.87 | 3.92 | 0.1748 | 2.2661 | 27 | 8 | W | 1993 SD ₃ | 16.5 | 930910 | 354.56 | 159.55 | 203.35 | 1.87 | 0.2302 | 2.4160 | 3 | 4 | E M |
| 1993 QD ₁ | 13.5 | 930821 | 342.24 | 17.13 | 340.30 | 13.65 | 0.2632 | 2.6212 | 26 | 6 | W | 1993 SE ₃ | 14.6 | 930910 | 311.67 | 225.50 | 205.89 | 4.05 | 0.2604 | 2.4938 | 3 | 6 | E N |
| 1993 QE ₁ | 12.0 | 930821 | 6.02 | 195.96 | 124.20 | 14.44 | 0.1623 | 2.6321 | 28 | 8 | W | 1993 SG ₃ | 15.5 | 930930 | 237.28 | 326.32 | 168.50 | 3.68 | 0.1248 | 2.3276 | 26 | 0 | W |
| 1993 QF ₁ | 13.0 | 930801 | 311.35 | 55.19 | 332.29 | 20.09 | 0.0252 | 3.1091 | 3 | 8 | M | 1993 TC | 14.0 | 930930 | 32.34 | 292.53 | 23.81 | 21.73 | 0.3260 | 2.3365 | 7 | 0 | W |
| 1993 QJ ₁ | 14.0 | 930801 | 72.92 | 89.26 | 167.09 | 9.43 | 0.0386 | 2.5182 | 3 | 8 | E M | 1993 TD | 14.0 | 930930 | 341.75 | 37.12 | 4.19 | 10.51 | 0.1946 | 2.4595 | 9 | 0 | W |
| 1993 QK ₁ | 14.0 | 930801 | 67.15 | 325.11 | 281.33 | 2.70 | 0.1782 | 2.4988 | 3 | 8 | E M | 1993 TP | 12.5 | 930930 | 357.59 | 327.71 | 41.22 | 6.80 | 0.2184 | 3.1561 | 4 | | |

| | | | | | | | | | | |
|----------------------------|-------------|---------------|---------------|---------------|---------------|--------------|---------------|---------------|------------|----------|
| 1993 TS₂ | 17.5 | 931020 | 42.40 | 70.91 | 230.86 | 4.44 | 0.3827 | 2.1331 | 9 0 | M |
| 1993 TT ₂ | 18.0 | 931020 | 59.91 | 57.23 | 242.93 | 2.93 | 0.2497 | 2.1892 | 9 0 | M |
| 1993 UA | 25.0 | 931020 | 8.03 | 330.09 | 27.15 | 4.60 | 0.5258 | 2.0251 | 3 0 | M |
| 1993 UB | 17.0 | 931020 | 346.14 | 20.78 | 32.25 | 22.00 | 0.3569 | 1.8644 | 2 7 | W |
| 1993 UC | 14.5 | 931020 | 327.98 | 322.73 | 169.93 | 30.96 | 0.6788 | 2.5186 | 5 7 | W |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (57) Mnemosyne | | | | | | | | | | |
| | | | Obs. | 1211 | <i>M</i> | 316.14819 | ω | 215.52891 | | |
| <i>H</i> | 7.03 | <i>G</i> | 0.15 | Opp. | 100 | <i>n</i> | 0.17639183 | Ω | 199.44383 | |
| rms res. | 0''91 | (M-C) | | 1859-1991 | <i>e</i> | 0.1192297 | <i>i</i> | 15.21105 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (79) Eurynome | | | | | | | | | | |
| | | | Obs. | 844 | <i>M</i> | 17.74789 | ω | 200.10553 | | |
| <i>H</i> | 7.96 | <i>G</i> | 0.25 | Opp. | 78 | <i>n</i> | 0.25793473 | Ω | 207.01492 | |
| rms res. | 1''05 | (M-C) | | 1863-1991 | <i>e</i> | 0.1936586 | <i>i</i> | 4.62564 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (120) Lachesis | | | | | | | | | | |
| | | | Obs. | 274 | <i>M</i> | 24.50703 | ω | 235.13432 | | |
| <i>H</i> | 7.75 | <i>G</i> | 0.15 | Opp. | 64 | <i>n</i> | 0.17925667 | Ω | 341.63429 | |
| rms res. | 1''03 | (M-C) | | 1872-1991 | <i>e</i> | 0.0644891 | <i>i</i> | 6.95728 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (123) Brunhild | | | | | | | | | | |
| | | | Obs. | 156 | <i>M</i> | 72.35445 | ω | 123.80117 | | |
| <i>H</i> | 8.89 | <i>G</i> | 0.15 | Opp. | 44 | <i>n</i> | 0.22278286 | Ω | 308.22343 | |
| rms res. | 1''04 | (M-C) | | 1872-1990 | <i>e</i> | 0.1199357 | <i>i</i> | 6.41526 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (141) Lumen | | | | | | | | | | |
| | | | Obs. | 229 | <i>M</i> | 236.01754 | ω | 57.69677 | | |
| <i>H</i> | 8.2 | <i>G</i> | 0.15 | Opp. | 42 | <i>n</i> | 0.22622885 | Ω | 318.91117 | |
| rms res. | 1''02 | (M-C) | | 1875-1988 | <i>e</i> | 0.2140594 | <i>i</i> | 11.88006 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (142) Polana | | | | | | | | | | |
| | | | Obs. | 175 | <i>M</i> | 151.00689 | ω | 292.41060 | | |
| <i>H</i> | 10.27 | <i>G</i> | 0.15 | Opp. | 43 | <i>n</i> | 0.26208408 | Ω | 291.46493 | |
| rms res. | 0''94 | (M-V) | | 1875-1990 | <i>e</i> | 0.1362222 | <i>i</i> | 2.23909 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (144) Vibilia | | | | | | | | | | |
| | | | Obs. | 238 | <i>M</i> | 72.84429 | ω | 293.21125 | | |
| <i>H</i> | 7.91 | <i>G</i> | 0.17 | Opp. | 54 | <i>n</i> | 0.22794027 | Ω | 76.72716 | |
| rms res. | 0''99 | (M-C) | | 1875-1990 | <i>e</i> | 0.2343946 | <i>i</i> | 4.81453 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (146) Lucina | | | | | | | | | | |
| | | | Obs. | 250 | <i>M</i> | 196.49501 | ω | 145.78907 | | |
| <i>H</i> | 8.20 | <i>G</i> | 0.11 | Opp. | 54 | <i>n</i> | 0.21977874 | Ω | 84.34172 | |
| rms res. | 1''03 | (M-C) | | 1875-1991 | <i>e</i> | 0.0638485 | <i>i</i> | 13.08680 | | |

| | | | | | | | | | | |
|---|-------|----------|-------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (163) Erigone | | | | | | | | | | |
| | | | Obs. | 195 | <i>M</i> | 222.36113 | ω | 297.28481 | | |
| <i>H</i> | 9.47 | <i>G</i> | -0.04 | Opp. | 44 | <i>n</i> | 0.27073289 | Ω | 160.45683 | |
| rms res. | 1''04 | (M-C) | | 1876-1992 | <i>e</i> | 0.1923881 | <i>i</i> | 4.79906 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (165) Loreley | | | | | | | | | | |
| | | | Obs. | 210 | <i>M</i> | 99.33654 | ω | 352.19818 | | |
| <i>H</i> | 7.65 | <i>G</i> | 0.15 | Opp. | 46 | <i>n</i> | 0.17791721 | Ω | 303.05755 | |
| rms res. | 1''02 | (M-C) | | 1876-1991 | <i>e</i> | 0.0757712 | <i>i</i> | 11.24342 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (166) Rhodope | | | | | | | | | | |
| | | | Obs. | 108 | <i>M</i> | 199.40337 | ω | 263.96772 | | |
| <i>H</i> | 9.89 | <i>G</i> | 0.15 | Opp. | 24 | <i>n</i> | 0.22356805 | Ω | 129.27048 | |
| rms res. | 1''03 | (M-C) | | 1876-1989 | <i>e</i> | 0.2108524 | <i>i</i> | 11.99720 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (203) Pompeja | | | | | | | | | | |
| | | | Obs. | 154 | <i>M</i> | 63.48858 | ω | 56.49339 | | |
| <i>H</i> | 8.76 | <i>G</i> | 0.15 | Opp. | 48 | <i>n</i> | 0.21773039 | Ω | 348.27513 | |
| rms res. | 1''01 | (M-V) | | 1879-1990 | <i>e</i> | 0.0605045 | <i>i</i> | 3.18428 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (216) Kleopatra | | | | | | | | | | |
| | | | Obs. | 1106 | <i>M</i> | 289.93154 | ω | 179.49645 | | |
| <i>H</i> | 7.30 | <i>G</i> | 0.29 | Opp. | 64 | <i>n</i> | 0.21123039 | Ω | 215.71398 | |
| rms res. | 0''74 | (M-C) | | 1880-1990 | <i>e</i> | 0.2523126 | <i>i</i> | 13.13287 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (255) Oppavia | | | | | | | | | | |
| | | | Obs. | 93 | <i>M</i> | 287.20611 | ω | 153.67276 | | |
| <i>H</i> | 10.39 | <i>G</i> | 0.15 | Opp. | 32 | <i>n</i> | 0.21656785 | Ω | 14.00834 | |
| rms res. | 0''92 | (M-C) | | 1886-1988 | <i>e</i> | 0.0771621 | <i>i</i> | 9.47984 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (263) Dresda | | | | | | | | | | |
| | | | Obs. | 91 | <i>M</i> | 331.37021 | ω | 161.45751 | | |
| <i>H</i> | 10.40 | <i>G</i> | 0.15 | Opp. | 28 | <i>n</i> | 0.20101980 | Ω | 216.82169 | |
| rms res. | 1''00 | (M-C) | | 1905-1993 | <i>e</i> | 0.0793944 | <i>i</i> | 1.30832 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (310) Margarita | | | | | | | | | | |
| | | | Obs. | 141 | <i>M</i> | 178.37666 | ω | 322.85842 | | |
| <i>H</i> | 10.3 | <i>G</i> | 0.15 | Opp. | 38 | <i>n</i> | 0.21457806 | Ω | 229.91645 | |
| rms res. | 1''10 | (M-C) | | 1891-1993 | <i>e</i> | 0.1133041 | <i>i</i> | 3.16015 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|---------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (312) Pierretta | | | | | | | | | | |
| | | | Obs. | 97 | <i>M</i> | 101.64918 | ω | 261.33044 | | |
| <i>H</i> | 8.89 | <i>G</i> | 0.15 | Opp. | 30 | <i>n</i> | 0.21226420 | Ω | 6.84836 | |
| rms res. | 1''04 | (M-C) | | 1891-1991 | <i>e</i> | 0.1590113 | <i>i</i> | 9.03595 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|----------|----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (347) Pariana | | | | | | | | | | |
| | | | Obs. | 167 | <i>M</i> | 255.54075 | ω | 84.97184 | | |
| <i>H</i> | 8.96 | <i>G</i> | 0.15 | Opp. | 38 | <i>n</i> | 0.23311972 | Ω | 85.96852 | |
| rms res. | 1''06 | (M-C) | | 1892-1991 | <i>e</i> | 0.1614281 | <i>i</i> | 11.70575 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (354) Eleonora | | | | | | | | | | |
| | | | Obs. | 1459 | <i>M</i> | 197.96592 | ω | 4.99110 | | |
| <i>H</i> | 6.44 | <i>G</i> | 0.37 | Opp. | 71 | <i>n</i> | 0.21072931 | Ω | 140.72204 | |
| rms res. | 0''92 | (M-C) | | 1893-1993 | <i>e</i> | 0.1163828 | <i>i</i> | 18.42757 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|----------|-----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (395) Delia | | | | | | | | | | |
| | | | Obs. | 129 | <i>M</i> | 274.44091 | ω | 10.89780 | | |
| <i>H</i> | 10.38 | <i>G</i> | 0.15 | Opp. | 28 | <i>n</i> | 0.21217221 | Ω | 259.87287 | |
| rms res. | 1''01 | (M-C) | | 1894-1991 | <i>e</i> | 0.0875139 | <i>i</i> | 3.35529 | | |

| | | | | | | | | | | |
|---|-------|----------|------|-----------|----------|-----------|------------|-----------|----------|--|
| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | | | | | | | |
| (486) Cremona | | | | | | | | | | |
| | | | Obs. | 81 | <i>M</i> | 171.54961 | ω | 124.09839 | | |
| <i>H</i> | 10.7 | <i>G</i> | 0.15 | Opp. | 25 | <i>n</i> | 0.27326171 | Ω | 94.42224 | |
| rms res. | 1''00 | (M-V) | | 1902-1992 | <i>e</i> | 0.1638995 | <i>i</i> | 11.08036 | | |

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(488) Kreusa Obs. 167 *M* 199.51664 ω 69.40423
H 7.81 *G* 0.15 Opp. 46 *n* 0.17636277 Ω 85.17052
rms res. 0".98 (M-C) 1901–1991 *e* 0.1766508 *i* 11.49799

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(492) Gismonda Obs. 131 *M* 247.62055 ω 290.17634
H 9.8 *G* 0.15 Opp. 35 *n* 0.17873855 Ω 46.96538
rms res. 1".02 (M-C) 1902–1991 *e* 0.1739669 *i* 1.63126

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(545) Messalina Obs. 103 *M* 342.88327 ω 322.34581
H 8.84 *G* 0.15 Opp. 32 *n* 0.17265263 Ω 334.61570
rms res. 1".03 (M-C) 1904–1992 *e* 0.1749886 *i* 11.10949

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(598) Octavia Obs. 92 *M* 203.99804 ω 291.06013
H 9.53 *G* 0.15 Opp. 33 *n* 0.21418004 Ω 92.04774
rms res. 0".91 (M-C) 1906–1991 *e* 0.2474862 *i* 12.20903

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(609) Fulvia Obs. 91 *M* 111.69672 ω 126.04801
H 10.00 *G* 0.15 Opp. 27 *n* 0.18153611 Ω 165.66889
rms res. 1".08 (M-C) 1906–1991 *e* 0.0335354 *i* 4.17310

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(617) Patroclus Obs. 125 *M* 163.89718 ω 307.03835
H 8.19 *G* 0.15 Opp. 36 *n* 0.08231103 Ω 44.41103
rms res. 0".91 (M-C) 1906–1990 *e* 0.1377671 *i* 22.03725

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(627) Charis Obs. 117 *M* 40.74204 ω 178.46753
H 9.95 *G* 0.15 Opp. 22 *n* 0.19951829 Ω 142.81966
rms res. 0".88 (M-C) 1907–1991 *e* 0.0600652 *i* 6.47584

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(630) Euphemia Obs. 91 *M* 172.78772 ω 38.95747
H 11.0 *G* 0.15 Opp. 20 *n* 0.23213321 Ω 105.84567
rms res. 0".93 (M-C) 1907–1990 *e* 0.1153235 *i* 13.86235

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(656) Beagle Obs. 147 *M* 84.82810 ω 334.26997
H 10.0 *G* 0.15 Opp. 35 *n* 0.17644829 Ω 184.65259
rms res. 0".98 (M-C) 1908–1992 *e* 0.1360473 *i* 0.51087

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(688) Melanie Obs. 80 *M* 45.27894 ω 139.76190
H 10.59 *G* 0.15 Opp. 20 *n* 0.22226430 Ω 171.21269
rms res. 1".06 (M-C) 1909–1992 *e* 0.1374553 *i* 10.24802

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(690) Wratislavia Obs. 160 *M* 39.87803 ω 116.88248
H 7.76 *G* 0.15 Opp. 38 *n* 0.17703023 Ω 253.47089
rms res. 0".96 (M-C) 1902–1987 *e* 0.1858061 *i* 11.27729

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Bowell
(792) Metcalfia Obs. 43 *M* 212.77434 ω 226.15676
H 10.33 *G* 0.15 Opp. 15 *n* 0.23230455 Ω 265.72177
rms res. 0".88 (M-C) 1922–1993 *e* 0.1345377 *i* 8.61819

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(804) Hispania Obs. 117 *M* 28.45932 ω 343.77366
H 7.84 *G* 0.18 Opp. 32 *n* 0.20607423 Ω 347.95753
rms res. 1".02 (M-C) 1915–1987 *e* 0.1401157 *i* 15.38461

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(895) Helio Obs. 72 *M* 266.45719 ω 181.26467
H 8.3 *G* 0.15 Opp. 25 *n* 0.17211377 Ω 264.87430
rms res. 1".05 (M-C) 1906–1989 *e* 0.1484202 *i* 26.05330

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(911) Agamemnon Obs. 129 *M* 234.76378 ω 80.63348
H 7.89 *G* 0.15 Opp. 28 *n* 0.08256629 Ω 338.00670
rms res. 1".12 (M-C) 1919–1989 *e* 0.0662735 *i* 21.82820

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(1002) Olbersia Obs. 64 *M* 43.72339 ω 355.19627
H 11.1 *G* 0.15 Opp. 21 *n* 0.21177962 Ω 344.16971
rms res. 0".97 (M-C) 1923–1991 *e* 0.1537743 *i* 10.77534

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(1054) Forsytia Obs. 49 *M* 265.12039 ω 295.64753
H 10.3 *G* 0.15 Opp. 22 *n* 0.19745717 Ω 86.13446
rms res. 1".11 (M-C) 1907–1991 *e* 0.1365135 *i* 10.85789

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Bowell
(1058) Grubba Obs. 55 *M* 5.39221 ω 93.82202
H 11.98 *G* 0.15 Opp. 13 *n* 0.30281465 Ω 222.09398
rms res. 0".88 (M-C) 1932–1993 *e* 0.1870613 *i* 3.69002

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(1151) Ithaka Obs. 23 *M* 100.81219 ω 122.51887
H 12.7 *G* 0.15 Opp. 8 *n* 0.26419995 Ω 225.64065
rms res. 1".18 (M-C) 1929–1987 *e* 0.2775111 *i* 6.56191

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(1172) Äneas Obs. 133 *M* 227.07731 ω 47.66130
H 8.33 *G* 0.15 Opp. 27 *n* 0.08384399 Ω 247.49297
rms res. 0".76 (M-C) 1930–1990 *e* 0.1021145 *i* 16.70862

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Bowell
(1230) Riceia Obs. 17 *M* 35.32404 ω 184.70767
H 12.8 *G* 0.15 Opp. 7 *n* 0.23891189 Ω 200.96995
rms res. 0".86 (M-C) 1931–1992 *e* 0.1789575 *i* 10.48427

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(1241) Dysona Obs. 65 *M* 235.20574 ω 323.56440
H 9.45 *G* 0.15 Opp. 20 *n* 0.17361152 Ω 322.57952
rms res. 1".04 (M-C) 1931–1985 *e* 0.1085275 *i* 23.54974

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1437) Diomedes Obs. 134 *M* 215.02210 ω 129.68652
H 8.30 *G* 0.15 Opp. 24 *n* 0.08506222 Ω 315.85436
 rms res. 0".81 (M-C) 1937–1989 *e* 0.0440298 *i* 20.57337

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1459) Magnya Obs. 22 *M* 36.97360 ω 330.18453
H 10.6 *G* 0.15 Opp. 6 *n* 0.17713386 Ω 41.72599
 rms res. 0".73 (M-C) 1937–1993 *e* 0.2367439 *i* 16.94792

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1531) Hartmut Obs. 58 *M* 316.84540 ω 142.74453
H 12.2 *G* 0.15 Opp. 13 *n* 0.23153603 Ω 279.37728
 rms res. 1".16 (M-C) 1938–1993 *e* 0.1539945 *i* 12.41815

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1627) Ivar Obs. 286 *M* 136.70107 ω 167.45262
H 13.20 *G* 0.60 Opp. 14 *n* 0.38749271 Ω 133.28142
 rms res. 0".88 (M-C) 1929–1990 *e* 0.3965594 *i* 8.43968

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1641) Tana Obs. 63 *M* 39.41697 ω 3.58547
H 10.53 *G* 0.15 Opp. 15 *n* 0.18789756 Ω 331.94343
 rms res. 0".80 (M-C) 1909–1991 *e* 0.1021265 *i* 9.34364

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1685) Toro Obs. 174 *M* 131.66910 ω 126.86958
H 14.23 *G* 0.15 Opp. 18 *n* 0.61652748 Ω 274.45985
 rms res. 0".91 (M-C) 1948–1992 *e* 0.4359709 *i* 9.37524

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1738) Oosterhoff Obs. 63 *M* 250.12366 ω 283.78274
H 12.3 *G* 0.15 Opp. 14 *n* 0.30537190 Ω 44.34704
 rms res. 0".95 (M-C) 1927–1990 *e* 0.2029574 *i* 4.87873

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1811) Bruwer Obs. 48 *M* 43.85144 ω 137.65938
H 10.7 *G* 0.15 Opp. 14 *n* 0.17665050 Ω 168.52970
 rms res. 0".84 (M-C) 1931–1993 *e* 0.0931975 *i* 8.52277

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1915) Quetzálcoatl Obs. 39 *M* 79.95589 ω 347.90870
H 18.97 *G* 0.10 Opp. 5 *n* 0.24404491 Ω 163.05642
 rms res. 0".93 (M-C) 1953–1985 *e* 0.5743806 *i* 20.45752

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1916) Boreas Obs. 76 *M* 299.40711 ω 335.24341
H 14.93 *G* 0.15 Opp. 4 *n* 0.28754996 Ω 340.92947
 rms res. 0".88 (M-C) 1953–1984 *e* 0.4495490 *i* 12.84558

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1926) Demidelaer Obs. 22 *M* 233.94830 ω 89.67014
H 11.6 *G* 0.15 Opp. 8 *n* 0.22749726 Ω 93.88042
 rms res. 1".21 (M-C) 1935–1993 *e* 0.1055694 *i* 13.73460

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(1980) Tezcatlipoca Obs. 46 *M* 136.87379 ω 115.27256
H 13.92 *G* 0.15 Opp. 8 *n* 0.44097353 Ω 246.75718
 rms res. 1".03 (M-C) 1950–1988 *e* 0.3653219 *i* 26.84833

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2042) Sitarski Obs. 40 *M* 58.64722 ω 53.9412
H 12.8 *G* 0.15 Opp. 7 *n* 0.21580267 Ω 17.7027
 rms res. 1".53 (M-C) 1960–1992 *e* 0.1505525 *i* 5.3410

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2059) Baboquivari Obs. 52 *M* 10.71322 ω 191.16815
H 15.8 *G* 0.15 Opp. 4 *n* 0.22852772 Ω 201.14920
 rms res. 0".97 (M-C) 1963–1993 *e* 0.5266219 *i* 10.99592

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2063) Bacchus Obs. 28 *M* 100.35328 ω 55.05861
H 16.4 *G* 0.15 Opp. 4 *n* 0.88111468 Ω 33.34100
 rms res. 0".98 (M-C) 1977–1986 *e* 0.3493479 *i* 9.42442

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2260) Neoptolemus Obs. 37 *M* 228.00923 ω 320.53249
H 9.31 *G* 0.15 Opp. 6 *n* 0.08341791 Ω 86.59709
 rms res. 0".98 (M-C) 1951–1991 *e* 0.0439218 *i* 17.78206

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2272) Montezuma Obs. 25 *M* 286.00918 ω 277.97767
H 13.94 *G* 0.15 Opp. 6 *n* 0.38641812 Ω 175.67963
 rms res. 0".77 (M-C) 1972–1993 *e* 0.0902072 *i* 24.32979

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2337) Boubin Obs. 15 *M* 24.20383 ω 26.19441
H 12.0 *G* 0.15 Opp. 4 *n* 0.23601609 Ω 37.71865
 rms res. 0".73 (M-C) 1955–1993 *e* 0.1701849 *i* 14.36842

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2340) Hathor Obs. 48 *M* 214.83456 ω 39.74475
H 20.26 *G* 0.15 Opp. 3 *n* 1.27119645 Ω 211.70590
 rms res. 0".97 (M-C) 1976–1983 *e* 0.4498920 *i* 5.84970

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2350) von Lüde Obs. 24 *M* 302.26515 ω 287.28754
H 13.4 *G* 0.15 Opp. 6 *n* 0.29358800 Ω 141.26707
 rms res. 0".82 (M-C) 1938–1993 *e* 0.1273042 *i* 5.06998

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2354) Lavrov Obs. 103 *M* 127.77186 ω 188.59187
H 11.8 *G* 0.15 Opp. 15 *n* 0.21857207 Ω 176.37274
 rms res. 0".73 (M-C) 1929–1992 *e* 0.1057821 *i* 3.25853

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5
(2388) Gase Obs. 33 *M* 126.38785 ω 253.88850
H 12.9 *G* 0.15 Opp. 7 *n* 0.25698314 Ω 324.74624
 rms res. 0".88 (M-C) 1951–1992 *e* 0.1809028 *i* 2.21858

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(2456) Palamedes Obs. 37 *M* 202.45797 ω 92.84561
H 9.6 *G* 0.15 Opp. 9 *n* 0.08387550 Ω 327.53524
 rms res. 0".88 (M-C) 1966–1990 *e* 0.0746886 *i* 13.88253

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 **(2859) Paganini** Obs. 62 *M* 81.75756 ω 340.68559
H 13.5 *G* 0.15 Opp. 8 *n* 0.29422756 Ω 165.50287
 rms res. 0".89 (M-C) 1951–1991 *e* 0.1187215 *i* 3.54973

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(2920) Automedon Obs. 33 *M* 191.31930 ω 197.23214
H 8.8 *G* 0.15 Opp. 6 *n* 0.08432282 Ω 231.05165
 rms res. 0".88 (M-C) 1981–1988 *e* 0.0274499 *i* 21.07665

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 **(3079) Schiller** Obs. 24 *M* 122.60310 ω 300.80639
H 13.3 *G* 0.15 Opp. 6 *n* 0.22402714 Ω 183.44895
 rms res. 0".77 (M-C) 1931–1993 *e* 0.2168116 *i* 3.91872

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Williams
(3082) Dzhilil Obs. 18 *M* 3.91466 ω 232.02583
H 12.3 *G* 0.15 Opp. 6 *n* 0.23824860 Ω 117.89460
 rms res. 0".97 (M-C) 1936–1993 *e* 0.0769153 *i* 10.35093

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Williams
(3100) Zimmerman Obs. 22 *M* 48.51810 ω 94.34945
H 13.9 *G* 0.15 Opp. 6 *n* 0.29026975 Ω 27.28684
 rms res. 0".99 (M-C) 1951–1989 *e* 0.0874035 *i* 2.82585

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Williams
(3125) Hay Obs. 44 *M* 320.97380 ω 354.80021
H 12.3 *G* 0.15 Opp. 10 *n* 0.23467175 Ω 134.60456
 rms res. 0".97 (M-C) 1951–1993 *e* 0.1990814 *i* 12.73191

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 **(3334) 1981 YR** Obs. 28 *M* 4.95345 ω 186.53071
H 12.0 *G* 0.15 Opp. 11 *n* 0.20499392 Ω 86.73262
 rms res. 0".90 (M-C) 1942–1992 *e* 0.0238415 *i* 3.26164

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Goffin
(3361) Orpheus Obs. 61 *M* 6.98768 ω 301.54447
H 19.03 *G* 0.15 Opp. 4 *n* 0.74101317 Ω 189.85801
 rms res. 0".82 (M-C) 1982–1990 *e* 0.3226095 *i* 2.68184

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Sitarski
(3836) Lem Obs. 24 *M* 182.25038 ω 204.5230
H 13.8 *G* 0.15 Opp. 7 *n* 0.29433939 Ω 78.2432
 rms res. 0".99 (M-C) 1978–1991 *e* 0.1461590 *i* 2.0392

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Williams
(4030) 1984 EO₁ Obs. 49 *M* 98.15966 ω 302.26798
H 13.0 *G* 0.15 Opp. 6 *n* 0.25544064 Ω 342.62355
 rms res. 0".67 (M-C) 1970–1993 *e* 0.0945186 *i* 6.51731

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Williams
(4177) 1987 SS₁ Obs. 40 *M* 18.79960 ω 159.18171
H 12.8 *G* 0.15 Opp. 5 *n* 0.16340153 Ω 210.85617
 rms res. 0".80 (M-C) 1984–1993 *e* 0.2804537 *i* 17.14962

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Williams
(4189) Andreev Obs. 18 *M* 85.87847 ω 126.80736
H 13.4 *G* 0.15 Opp. 5 *n* 0.28215672 Ω 194.38865
 rms res. 0".91 (M-C) 1979–1993 *e* 0.1354941 *i* 5.34783

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 **(4204) Barsig** Obs. 14 *M* 240.79471 ω 322.66338
H 13.0 *G* 0.15 Opp. 4 *n* 0.28835823 Ω 223.01337
 rms res. 0".63 (M-C) 1954–1988 *e* 0.0854013 *i* 3.81074

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 **(4271) Novosibirsk** Obs. 21 *M* 76.87856 ω 133.49605
H 11.9 *G* 0.15 Opp. 7 *n* 0.18810081 Ω 160.37151
 rms res. 0".80 (M-C) 1976–1993 *e* 0.0883448 *i* 10.91932

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 **(4492) Debussy** Obs. 21 *M* 35.46801 ω 52.31322
H 12.9 *G* 0.15 Opp. 5 *n* 0.21423709 Ω 350.38777
 rms res. 0".88 (M-C) 1951–1990 *e* 0.1801162 *i* 8.03157

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 **(4683) 1976 GJ₁** Obs. 23 *M* 143.26390 ω 300.35271
H 11.9 *G* 0.15 Opp. 9 *n* 0.17927635 Ω 164.52116
 rms res. 0".66 (M-C) 1935–1992 *e* 0.1574209 *i* 1.21975

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Williams
(4693) Drummond Obs. 23 *M* 325.62260 ω 208.76329
H 13.4 *G* 0.15 Opp. 6 *n* 0.28630364 Ω 245.70684
 rms res. 1".01 (M-C) 1976–1993 *e* 0.0831632 *i* 4.86103

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 **(4784) 1984 DF₁** Obs. 86 *M* 105.54533 ω 169.20575
H 13.4 *G* 0.15 Opp. 6 *n* 0.22507351 Ω 349.47291
 rms res. 0".70 (M-C) 1953–1993 *e* 0.1161322 *i* 3.55451

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 **(5073) 1943 EN** Obs. 23 *M* 91.77666 ω 183.70011
H 13.2 *G* 0.15 Opp. 6 *n* 0.29674420 Ω 14.82707
 rms res. 0".72 (M-C) 1943–1993 *e* 0.1004101 *i* 6.61763

(5701)* 1929 VS = 1956 RO = 1961 VC = 1987 KS = 1991 GS₂

Discovered 1929 Oct. 26 by C. W. Tombaugh at the Lowell Observatory.

Id. H. Kaneda (*MPC* 18617)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 Williams
M 35.72429 (2000.0) **P** **Q**
n 0.21581940 ω 347.69021 +0.91963098 -0.38773537
a 2.7525955 Ω 35.33111 +0.36895082 +0.79790925
e 0.1929872 *i* 6.23134 +0.13473734 +0.46152152
P 4.57 *H* 12.2 *G* 0.15

Residuals in seconds of arc

291026 690 0.8- 2.2- 910320 809 0.3+ 0.8- 910419 809 0.4+ 0.3+
 291027 690 0.6- 1.7- 910321 809 0.1+ 0.8- 910419 809 0.1- 0.4+

| | | | | | | | | | | | |
|--------|-----|-------|-------|--------|-----|------|------|--------|-----|------|------|
| 291103 | 690 | 3.0+ | 0.5- | 910321 | 809 | 0.1+ | 0.9- | 910419 | 809 | 0.3+ | 0.1+ |
| 560909 | 760 | 0.2- | 0.4- | 910321 | 809 | 0.1+ | 0.7- | 930914 | 801 | 0.5- | 1.9+ |
| 560909 | 760 | 0.0 | 1.3+ | 910323 | 809 | 0.2- | 0.2+ | 930914 | 801 | 0.7- | 1.4+ |
| 611104 | 760 | 0.5+ | 0.5+ | 910323 | 809 | 0.1+ | 0.2+ | 930919 | 801 | 0.3- | 0.8+ |
| 611104 | 760 | 1.4+ | 0.9+ | 910323 | 809 | 0.6+ | 0.0 | 930919 | 801 | 0.3- | 0.9+ |
| 611110 | 760 | 0.7- | 0.9- | 910408 | 809 | 0.7+ | 0.9+ | 931010 | 596 | 0.5- | 0.6+ |
| 611110 | 760 | 0.3- | 0.4- | 910408 | 809 | 0.7+ | 1.2+ | 931010 | 596 | 0.6- | 0.8+ |
| 870530 | 413 | 1.1- | 1.1- | 910408 | 809 | 0.3+ | 1.2+ | 931010 | 596 | 0.3- | 0.7- |
| 870530 | 413 | (1.8- | 2.9-) | 910410 | 809 | 0.1+ | 1.9+ | 931013 | 801 | 0.2- | 1.0+ |
| 910320 | 809 | 0.2- | 0.7- | 910410 | 809 | 0.3- | 1.0+ | 931013 | 801 | 0.4- | 1.0+ |
| 910320 | 809 | 0.0 | 0.7- | 910410 | 809 | 0.0 | 1.4+ | | | | |

(5702)* 1931 FC = 2177 T-2 = 1982 DJ₅ = 1983 RE₈

Discovered 1931 Mar. 16 by M. Wolf at Heidelberg.

Id. S. Nakano (*MPC* 15062), G. V. Williams (*MPC* 19854)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 142.04704 | (2000.0) | |
| <i>n</i> | 0.28978088 | ω 223.91689 | -0.79714144 +0.60369202 |
| <i>a</i> | 2.2616370 | Ω 353.19131 | -0.52515155 -0.70220995 |
| <i>e</i> | 0.1257356 | <i>i</i> 5.33418 | -0.29796204 -0.37743494 |
| <i>P</i> | 3.40 | <i>H</i> 13.4 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|-------|-------|--------|-----|-------|-------|--------|-----|-------|-------|
| 310316 | 024 | 2.0- | 2.4+ | 730929 | 675 | (0.4- | 3.0+) | 830911 | 095 | (4.4- | 0.6+) |
| 310318 | 024 | 2.8+ | 0.4+ | 730929 | 675 | (0.3+ | 3.1+) | 900920 | 675 | 0.5- | 0.2+ |
| 310326 | 024 | 2.3+ | 1.5+ | 730930 | 675 | 0.0 | 0.6+ | 900920 | 675 | 0.9- | 1.2+ |
| 730919 | 675 | 1.0- | 0.6+ | 730930 | 675 | 0.1- | 0.6- | 920206 | 801 | 1.0+ | 0.0 |
| 730919 | 675 | 1.8- | 1.2+ | 731004 | 675 | 0.9+ | 0.1+ | 920206 | 801 | 1.0+ | 0.1+ |
| 730920 | 675 | 1.6- | 0.6+ | 731004 | 675 | 0.8+ | 0.2- | 930716 | 675 | 0.2+ | 0.9+ |
| 730924 | 675 | (3.4- | 1.2+) | 731005 | 675 | 1.4+ | 0.7- | 930724 | 801 | 0.1+ | 0.4+ |
| 730924 | 675 | (3.8- | 2.0+) | 731005 | 675 | 1.8+ | 0.6+ | 930724 | 801 | 0.2+ | 0.5+ |
| 730925 | 675 | 1.0- | 2.0- | 801014 | 675 | 0.2+ | 1.4+ | 930824 | 413 | 0.2- | 0.6+ |
| 730925 | 675 | 1.3- | 0.4- | 820222 | 010 | 2.4- | 0.5+ | 930824 | 413 | 0.1- | 0.6+ |

(5703)* 1931 VS = 1931 XH = 1964 VU = 1989 VL

Discovered 1931 Nov. 15 by K. Reinmuth at Heidelberg.

Id. K. Reinmuth (d, *RI* 530), T. Kobayashi (*MPC* 15548, *MPC* 19008)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|-------------------|-------------------------|
| <i>M</i> | 10.28638 | (2000.0) | |
| <i>n</i> | 0.23751836 | ω 12.81906 | +0.64816398 -0.74685257 |
| <i>a</i> | 2.5822875 | Ω 37.08753 | +0.67510483 +0.47326667 |
| <i>e</i> | 0.1770814 | <i>i</i> 14.26999 | +0.35230231 +0.46715083 |
| <i>P</i> | 4.15 | <i>H</i> 13.0 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|-------|-------|--------|-----|------|------|--------|-----|------|------|
| 311115 | 024 | (4.3+ | 4.4-) | 891121 | 888 | 0.8- | 0.1+ | 891201 | 888 | 0.2- | 0.6+ |
| 311212 | 024 | (7.1+ | 3.1-) | 891121 | 888 | 0.9- | 0.2- | 891202 | 888 | 0.5- | 0.4- |
| 311231 | 024 | 0.7+ | 1.6- | 891124 | 372 | 0.8+ | 0.2+ | 891202 | 888 | 0.8- | 0.3- |
| 540408 | 675 | 0.9+ | 0.2+ | 891124 | 372 | 1.5- | 0.9- | 891220 | 888 | 0.6- | 1.2- |
| 540408 | 675 | 0.2+ | 1.3+ | 891125 | 888 | 1.7- | 0.7+ | 891220 | 888 | 0.4- | 1.3- |
| 641106 | 760 | (0.9+ | 4.7-) | 891125 | 888 | 1.0- | 0.0 | 930912 | 801 | 0.3- | 0.3+ |
| 641106 | 760 | (3.0- | 2.2+) | 891125 | 888 | 1.2- | 0.5+ | 930912 | 801 | 0.3- | 0.2+ |
| 891102 | 875 | 0.9+ | 0.7+ | 891125 | 888 | 0.6- | 0.3+ | 930919 | 801 | 0.4- | 0.0 |
| 891102 | 875 | 0.8+ | 2.3+ | 891126 | 888 | 0.0 | 0.6+ | 930919 | 801 | 0.6- | 0.3- |
| 891104 | 875 | 1.7+ | 0.4- | 891126 | 888 | 0.1- | 0.7+ | 931012 | 801 | 0.3+ | 0.1+ |

| | | | | | | | | | | | |
|--------|-----|-------|-------|--------|-----|------|------|--------|-----|------|------|
| 891104 | 875 | 1.9+ | 1.2- | 891129 | 888 | 0.7+ | 0.8+ | 931012 | 801 | 0.2+ | 0.0 |
| 891119 | 888 | (3.3+ | 0.1+) | 891129 | 888 | 1.4+ | 0.4+ | 931019 | 801 | 0.4+ | 0.7- |
| 891119 | 888 | (4.8+ | 0.0) | 891201 | 888 | 0.5+ | 0.5+ | 931019 | 801 | 0.5+ | 0.3- |

(5704)* 1950 DE = 1950 BL₁ = 1990 DB₁ = 1990 EX₅

Discovered 1950 Feb. 17 by K. Reinmuth at Heidelberg.

Id. O. Kippes (d, *NAZ* 12,23), R. Nagata (*MPC* 17423), G. V. Williams (d, *MPC* 17178)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 226.63621 | (2000.0) | |
| <i>n</i> | 0.17104186 | ω 24.76669 | -0.99516844 -0.03238240 |
| <i>a</i> | 3.2141620 | Ω 152.88182 | +0.01090671 -0.97466266 |
| <i>e</i> | 0.1161437 | <i>i</i> 11.73242 | +0.09757472 -0.22132348 |
| <i>P</i> | 5.76 | <i>H</i> 11.8 | <i>G</i> 0.15 |

Residuals in seconds of arc (or two decimals in units of degrees)

| | | | | | | | | | | | | |
|--------|-----|--------|--------|---|--------|-----|------|------|--------|-----|------|------|
| 500125 | 094 | (0.05+ | 0.06-) | X | 900301 | 809 | 0.3+ | 0.7- | 920808 | 010 | 0.1- | 1.6- |
| 500217 | 024 | (4.4+ | 1.7+) | | 900301 | 095 | 0.4- | 1.8- | 920809 | 010 | 0.1+ | 1.1- |
| 500223 | 024 | (0.3- | 3.6+) | | 900302 | 809 | 1.2- | 0.5- | 920809 | 010 | 0.2- | 0.8- |
| 500308 | 024 | 0.3+ | 2.1- | | 900302 | 809 | 1.0- | 0.4- | 920809 | 010 | 0.2+ | 0.8- |
| 500322 | 024 | 0.7- | 0.9- | | 900302 | 809 | 0.6- | 0.5- | 930919 | 801 | 0.2+ | 0.4+ |
| 900216 | 399 | 0.1- | 0.1- | | 900303 | 809 | 1.0+ | 0.2- | 930919 | 801 | 1.3+ | 0.2- |
| 900216 | 399 | 0.3- | 0.9+ | | 900303 | 809 | 0.8+ | 0.3- | 930920 | 801 | 0.9- | 0.0 |
| 900216 | 399 | 0.6- | 0.4+ | | 900303 | 809 | 0.8+ | 0.5- | 931014 | 801 | 0.4+ | 0.3- |
| 900221 | 220 | (0.04+ | 0.00-) | | 900304 | 809 | 0.0 | 0.1+ | 931014 | 801 | 0.0 | 0.2+ |
| 900221 | 220 | (0.04+ | 0.00-) | | 900304 | 809 | 0.4+ | 0.2+ | 931019 | 801 | 0.1+ | 1.1- |
| 900222 | 220 | (1.0+ | 5.7-) | | 900304 | 809 | 0.9+ | 0.4+ | 931019 | 801 | 0.7- | 1.3- |
| 900301 | 809 | 0.6- | 0.8- | | 920808 | 010 | 0.3+ | 1.1- | | | | |
| 900301 | 809 | 0.1- | 0.8- | | 920808 | 010 | 0.6+ | 1.4- | | | | |

(5705)* 1965 UA = 1979 RU = 1979 SZ₈

Discovered 1965 Oct. 21 by H. Debehogne at Uccle.

Id. B. G. Marsden (*MPC* 11430)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 38.58095 | (2000.0) | |
| <i>n</i> | 0.27989851 | ω 351.21050 | +0.99382453 +0.11090885 |
| <i>a</i> | 2.3145629 | Ω 2.42988 | -0.09618711 +0.87664699 |
| <i>e</i> | 0.2258571 | <i>i</i> 4.69169 | -0.05532484 +0.46817655 |
| <i>P</i> | 3.52 | <i>H</i> 14.1 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|-------|-------|--------|-----|-------|-------|--------|-----|------|------|
| 530415 | 675 | 0.4+ | 0.2- | 790924 | 095 | (3.2+ | 0.1+) | 930815 | 801 | 0.2+ | 0.7- |
| 530415 | 675 | 0.2- | 0.4- | 791213 | 809 | 0.7+ | 0.8- | 930815 | 801 | 0.2- | 0.3+ |
| 651021 | 012 | (0.9+ | 3.0-) | 791215 | 809 | 0.2+ | 0.4+ | 930822 | 801 | 0.4+ | 0.5- |
| 651022 | 012 | 1.3+ | 0.3- | 791216 | 809 | 0.9+ | 1.7+ | 930822 | 801 | 0.5+ | 0.4- |
| 651025 | 012 | 1.5- | 0.7- | 860906 | 095 | (1.1- | 2.7-) | 930912 | 801 | 0.0 | 0.1- |
| 651029 | 012 | 1.1+ | 1.6- | 860909 | 095 | 1.4- | 1.5+ | 930912 | 801 | 0.2- | 0.0 |
| 770112 | 675 | 0.0 | 0.1+ | 860915 | 095 | 1.5+ | 0.7- | 930914 | 801 | 0.2+ | 0.1- |
| 770113 | 675 | 0.5- | 0.5+ | 861002 | 095 | 1.2- | 1.5+ | 930914 | 801 | 0.1+ | 0.3- |
| 790902 | 095 | 0.0 | 1.1- | 861008 | 095 | 1.6- | 1.9+ | | | | |

(5706)* 1971 SS₁ = 1982 SY = 1988 XY₃

Discovered 1971 Sept. 23 at the Crimean Astrophysical Observatory.

Id. C. M. Bardwell (*MPC* 13588), S. Nakano (*MPC* 15401)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| M | | (2000.0) | | P | | Q | |
|----------|------------|----------|-----------|-------------|-------------|---|--|
| <i>n</i> | 0.17898455 | ω | 357.06987 | +0.41818180 | -0.90800012 | | |
| <i>a</i> | 3.1183559 | Ω | 68.20913 | +0.83396855 | +0.37257168 | | |
| <i>e</i> | 0.2011526 | <i>i</i> | 1.58515 | +0.36002838 | +0.19164062 | | |
| <i>P</i> | 5.51 | <i>H</i> | 12.3 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------------|------|------------|------|------|------------|------|------|
| 710923 095 | 0.7+ | 1.9+ | 881207 399 | 1.1+ | 1.5- | 890110 054 | 0.1+ | 0.1+ |
| 711011 095 | 1.3- | 0.1- | 881207 399 | 0.1+ | 1.0- | 930919 801 | 0.4+ | 0.1+ |
| 711021 095 | (0.3+ 4.0-) | | 881211 399 | 0.3- | 0.2+ | 930919 801 | 0.7+ | 0.2+ |
| 820917 801 | (5.1- 3.9-) | | 881211 399 | 0.1+ | 0.4- | 930920 801 | 0.4- | 0.0 |
| 820919 095 | 0.8+ | 0.6- | 881211 399 | 1.0- | 1.5+ | 930920 801 | 0.2- | 0.6- |
| 820928 095 | 0.4- | 0.7- | 881211 399 | 0.5- | 0.2+ | 931012 801 | 0.1+ | 0.0 |
| 881201 054 | 0.1+ | 0.5+ | 881212 054 | 1.2- | 0.2+ | 931012 801 | 0.0 | 0.1+ |
| 881207 399 | 0.0 | 0.2- | 881213 054 | 0.2+ | 0.0 | 931019 801 | 0.0 | 0.2- |
| 881207 399 | 0.9+ | 0.5- | 890110 054 | 0.4+ | 0.7+ | 931019 801 | 0.3- | 0.1+ |

(5707)* 1976 GY₃ = 1953 EE₁ = 1992 FW

Discovered 1976 Apr. 2 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. H. Kaneda (*MPC* 20008)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| M | | (2000.0) | | P | | Q | |
|----------|------------|----------|-----------|-------------|-------------|---|--|
| <i>n</i> | 0.30474191 | ω | 317.71891 | -0.85132226 | -0.52445600 | | |
| <i>a</i> | 2.1869957 | Ω | 190.67588 | +0.49932169 | -0.80174832 | | |
| <i>e</i> | 0.0646763 | <i>i</i> | 4.33759 | +0.16102257 | -0.28661041 | | |
| <i>P</i> | 3.23 | <i>H</i> | 13.2 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc (or two decimals in units of degrees)

| | | | | | | | | |
|------------|---------------|------|------------|------|------|------------|-------------|------|
| 530310 210 | (0.24- 0.00+) | X | 920409 691 | 0.2+ | 1.0- | 930822 801 | 0.1+ | 0.8- |
| 530314 760 | 0.5- | 2.0- | 920409 691 | 0.2+ | 0.9- | 930910 596 | 1.0- | 0.5- |
| 530314 760 | (0.6+ 4.7-) | | 920409 691 | 0.4- | 1.1- | 930910 596 | (1.7- 2.3-) | |
| 760402 095 | 2.3+ | 2.4+ | 920429 801 | 0.0 | 0.3- | 930910 596 | 1.2+ | 0.4+ |
| 760405 095 | 0.7- | 1.4+ | 920429 801 | 0.0 | 0.8- | 930912 801 | 0.2+ | 0.1+ |
| 760502 095 | 0.6- | 0.7+ | 920507 801 | 0.1+ | 0.9- | 930912 801 | 0.2+ | 0.2+ |
| 920323 400 | 1.2- | 0.3- | 920507 801 | 0.6+ | 0.9- | 930914 801 | 0.3- | 0.2- |
| 920323 400 | 1.1+ | 1.1+ | 930820 801 | 0.4+ | 0.9- | 930914 801 | 0.0 | 0.4+ |
| 920324 400 | 1.6- | 0.9+ | 930820 801 | 0.5+ | 1.6- | | | |
| 920324 400 | 0.6- | 1.6- | 930822 801 | 0.1+ | 1.1- | | | |

(5708)* 1977 TC₁ = 1977 TB₅ = 1948 TD = 1990 VA₂

Discovered 1977 Oct. 12 by P. Wild at Zimmerwald.

Id. O. Kippes (d, *MPC* 5347), H. Kaneda (*MPC* 17425)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| M | | (2000.0) | | P | | Q | |
|----------|------------|----------|-----------|-------------|-------------|---|--|
| <i>n</i> | 0.30638089 | ω | 115.82654 | +0.93904314 | +0.34153453 | | |
| <i>a</i> | 2.1791892 | Ω | 224.23264 | -0.33218384 | +0.87180465 | | |
| <i>e</i> | 0.2114628 | <i>i</i> | 3.23764 | -0.08861080 | +0.35115638 | | |
| <i>P</i> | 3.22 | <i>H</i> | 14.4 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 481008 062 | 1.1- | 0.7+ | 771110 026 | 0.0 | 1.2+ | 930724 801 | 0.1- | 0.0 |
| 481008 062 | 0.3- | 0.4+ | 771110 026 | 1.7+ | 1.5+ | 930724 801 | 0.1- | 0.2+ |
| 510730 675 | 0.2+ | 0.5- | 800803 675 | 1.4- | 0.6+ | 930914 801 | 0.1+ | 0.5+ |
| 510730 675 | 0.2+ | 0.3+ | 800805 675 | 1.0+ | 0.3+ | 930914 801 | 0.0 | 0.6+ |

| | | | | | | | | |
|------------|-------------|------|------------|-------------|------------|------------|------|------|
| 771007 095 | 0.8- | 0.7- | 901112 399 | (7.1- 2.1-) | 930915 596 | 0.3- | 0.2+ | |
| 771012 026 | 1.2+ | 1.1- | 901112 399 | 0.9- | 2.1- | 930915 596 | 0.2- | 0.3+ |
| 771013 026 | (0.0 3.3-) | | 901112 399 | (1.5- 2.9-) | 930919 801 | 0.1+ | 0.2+ | |
| 771017 095 | 2.5+ | 1.2- | 901113 400 | 0.5- | 1.2+ | 930919 801 | 0.0 | 0.2+ |
| 771018 026 | 1.0- | 1.5- | 901113 400 | 1.3+ | 1.9+ | 930919 400 | 0.7- | 1.5- |
| 771019 026 | 0.3- | 0.7- | 901114 403 | 1.2+ | 1.0+ Y | 930919 400 | 0.4+ | 0.5- |
| 771103 026 | (3.3- 2.1+) | | 901114 403 | 2.3- | 0.1- Y | | | |

(5709)* 1977 TS₃ = 1977 VN₁ = 1977 VQ₁ = 1988 VE₂

Discovered 1977 Oct. 12 at the Purple Mountain Observatory.

Id. O. Kippes (d, *MPC* 5347), T. Urata (d, *NOC* 1101), B. G. Marsden(*MPC* 14012), S. Nakano (*ibid.*)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| M | | (2000.0) | | P | | Q | |
|----------|-----------|----------|-----------|-------------|-------------|---|--|
| <i>n</i> | 13.53597 | ω | 261.69023 | +0.96031603 | -0.27076851 | | |
| <i>a</i> | 3.0755766 | Ω | 113.99866 | +0.27593779 | +0.88736647 | | |
| <i>e</i> | 0.2540534 | <i>i</i> | 4.20045 | +0.04063802 | +0.37318247 | | |
| <i>P</i> | 5.39 | <i>H</i> | 12.0 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------------|------|------------|-------------|------|------------|------|------|
| 770923 095 | 0.3+ | 0.3+ | 881112 877 | 0.1- | 0.7+ | 910411 033 | 0.9- | 1.2+ |
| 771008 095 | 0.6- | 0.0 | 881127 877 | (2.3+ 1.3+) | | 910411 033 | 0.2- | 0.7+ |
| 771012 330 | (2.3+ 0.6+) | | 881127 877 | (1.5+ 3.3+) | | 910412 033 | 0.8- | 0.0 |
| 771103 330 | 0.9- | 0.4+ | 881207 875 | 0.5+ | 1.7+ | 910413 033 | 0.2+ | 0.3- |
| 771104 330 | (3.1+ 0.8+) | | 881207 875 | (1.8+ 2.8+) | | 920603 809 | 1.4+ | 1.7+ |
| 771104 330 | 0.4- | 0.4- | 881207 054 | 0.2+ | 1.4+ | 920603 809 | 1.2+ | 1.5+ |
| 810508 675 | 1.5+ | 0.2- | 881207 054 | 0.0 | 0.1- | 920603 809 | 0.8+ | 1.1+ |
| 810509 675 | 0.6+ | 0.7- | 881208 385 | (2.1- 0.1-) | | 930914 801 | 0.1+ | 0.4- |
| 881107 877 | (3.5+ 3.0+) | | 881208 385 | (3.3- 2.1-) | | 930914 801 | 0.0 | 0.3- |
| 881107 877 | (3.3+ 3.0+) | | 881214 875 | (0.4+ 3.2+) | | 930920 801 | 0.4- | 0.1- |
| 881109 877 | (0.3+ 2.2-) | | 881214 875 | (0.9- 3.1+) | | 930920 801 | 0.1- | 0.1+ |
| 881109 877 | (0.9+ 3.0-) | | 910409 033 | 1.0- | 1.1+ | 931012 801 | 0.7- | 0.3+ |
| 881112 877 | 1.2+ | 1.6+ | 910409 033 | 0.8- | 1.4+ | 931012 801 | 0.8- | 0.2- |

(5710)* 1977 UP

Discovered 1977 Oct. 18 by P. Wild at Zimmerwald.

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| M | | (2000.0) | | P | | Q | |
|----------|-----------|----------|-----------|-------------|-------------|---|--|
| <i>n</i> | 49.97204 | ω | 1.70544 | +0.99999672 | -0.00196552 | | |
| <i>a</i> | 2.1766548 | Ω | 358.40441 | +0.00101473 | +0.89248239 | | |
| <i>e</i> | 0.1516269 | <i>i</i> | 3.37512 | +0.00234965 | +0.45107795 | | |
| <i>P</i> | 3.21 | <i>H</i> | 14.2 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------------|------|------------|------|------|------------|------|------|
| 770919 095 | 1.9- | 1.7+ | 771110 026 | 0.2+ | 0.7- | 930913 801 | 0.3- | 1.0+ |
| 770922 095 | 0.5- | 0.1+ | 771111 026 | 1.4+ | 0.5+ | 930913 801 | 0.3- | 0.6+ |
| 771018 026 | 0.9+ | 0.3+ | 800902 688 | 0.7- | 0.8- | 930915 801 | 0.1+ | 0.3+ |
| 771019 026 | 0.6- | 0.2- | 800904 688 | 0.7- | 1.2- | 930915 801 | 0.1+ | 0.3+ |
| 771020 026 | 0.3+ | 1.6+ | 800907 688 | 1.5+ | 0.1+ | 931014 801 | 0.1+ | 0.2+ |
| 771103 026 | (4.4+ 0.4+) | | 820301 801 | 1.2+ | 1.7+ | 931014 801 | 0.1+ | 0.3+ |
| 771105 026 | 1.0- | 1.1- | 901111 675 | 0.6- | 0.8- | 931019 801 | 0.2- | 0.2+ |
| 771109 026 | (0.9- 3.6-) | | 901112 675 | 0.5- | 1.0- | 931019 801 | 0.2- | 0.3+ |
| 771109 026 | 1.9+ | 2.1- | 901113 675 | 0.0 | 0.6+ | | | |

(5711)* 1978 SO₄ = 1981 AS₃ = 1986 TS₁₂ = 1991 GR₃

Discovered 1978 Sept. 27 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. B. G. Marsden (*MPC* 18414)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | | | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| | | (2000.0) | | | Q | | |
| <i>M</i> | 35.92270 | | | | | | |
| <i>n</i> | 0.12576044 | ω | 298.54704 | +0.68551251 | +0.72750528 | | |
| <i>a</i> | 3.9455421 | Ω | 14.83847 | -0.62316106 | +0.60649302 | | |
| <i>e</i> | 0.1672364 | <i>i</i> | 6.37534 | -0.37648757 | +0.32078387 | | |
| <i>P</i> | 7.84 | <i>H</i> | 11.1 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|-------------|------|
| 780926 095 | 1.4- | 0.6+ | 781128 675 | 0.1+ | 0.6- | 910419 809 | 1.3- | 1.9- |
| 780927 095 | 0.2- | 0.6+ | 781129 675 | 0.3+ | 0.7- | 910419 809 | (0.1+ 2.6-) | |
| 780930 049 | 0.2+ | 0.3- | 810108 381 | 0.7+ | 0.1+ | 930815 801 | 0.3+ | 0.3- |
| 780930 049 | 0.1+ | 0.6- | 810108 381 | 0.3+ | 0.0 | 930815 801 | 0.2+ | 0.3- |
| 781001 049 | 0.6+ | 0.2- | 861005 095 | 0.3- | 1.1- | 930822 801 | 0.1- | 0.5+ |
| 781002 095 | (5.3- | 1.2+) | 910408 809 | 0.1- | 0.1+ | 930822 801 | 0.3- | 1.6+ |
| 781003 095 | 0.2+ | 1.2- | 910408 809 | 0.3+ | 0.1- | 930825 413 | 0.3- | 0.5- |
| 781004 675 | 0.6+ | 0.2+ | 910408 809 | 0.4- | 0.7- | 930825 413 | 0.3- | 0.3- |
| 781005 675 | 0.2+ | 0.0 | 910410 809 | 0.7+ | 0.7- | 930825 413 | 0.3- | 0.3- |
| 781027 675 | 0.2+ | 0.5- | 910410 809 | 0.8- | 0.2- | 930912 801 | 0.7+ | 0.2- |
| 781028 675 | 0.8+ | 0.7- | 910410 809 | 1.2- | 0.5- | 930912 801 | 0.8+ | 0.2- |
| 781029 675 | 0.1+ | 0.0 | 910419 809 | (1.8+ | 2.4-) | | | |

(5712)* 1979 SR = 1975 XF₄ = 1992 LH

Discovered 1979 Sept. 25 by A. Mrkos at Kleť.

Id. E. Bowell (k, *MPC* 20496), G. V. Williams (*ibid.*)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| | | (2000.0) | | | Q | | |
| <i>M</i> | 57.71263 | | | | | | |
| <i>n</i> | 0.21356145 | ω | 129.14155 | +0.90799150 | +0.41362798 | | |
| <i>a</i> | 2.7719633 | Ω | 206.62428 | -0.41548002 | +0.86827651 | | |
| <i>e</i> | 0.1687346 | <i>i</i> | 8.57358 | -0.05410907 | +0.27387551 | | |
| <i>P</i> | 4.62 | <i>H</i> | 12.7 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|-------|-------|
| 510807 675 | (3.3- | 0.7+) | 790927 046 | (2.2- | 2.9-) | 920606 675 | 0.1- | 0.6- |
| 510807 675 | 0.7- | 1.4+ | 791015 046 | 0.1- | 0.0 | 930814 801 | 0.5- | 1.2+ |
| 510922 675 | 0.0 | 0.7+ | 791015 046 | 0.2+ | 0.3- | 930814 801 | 0.1- | 0.9+ |
| 510922 675 | 0.0 | 0.1- | 791019 046 | 1.6+ | 0.8- | 930915 801 | 0.3- | 0.2+ |
| 550522 675 | 0.4+ | 0.7+ | 791019 046 | 0.6+ | 0.9- | 930915 801 | 0.1- | 0.3+ |
| 550522 675 | 0.8- | 2.0+ | 910210 675 | 0.0 | 1.8- | 930919 801 | 0.2- | 0.5+ |
| 751203 095 | (0.7+ | 3.3+) | 910210 675 | 0.5- | 1.6- | 930919 801 | 0.2- | 0.2+ |
| 790925 046 | 0.3- | 1.3- | 920603 675 | 0.9+ | 0.6- | 930920 596 | (0.6- | 2.4-) |
| 790925 046 | 1.0+ | 0.9- | 920603 675 | 0.4+ | 2.1- | 930920 596 | 0.9- | 0.1- |
| 790926 046 | 0.0 | 1.9- | 920605 675 | 1.0- | 1.5- | 930920 596 | 0.3- | 1.0+ |
| 790926 046 | 1.3+ | 1.9- | 920605 675 | 1.2- | 0.1+ | | | |
| 790927 046 | (1.9- | 4.6-) | 920606 675 | 0.8+ | 0.2- | | | |

(5713)* 1982 FF₃ = 1987 WV₃ = 1990 RW₁

Discovered 1982 Mar. 21 by H. Debehogne at the European Southern Observatory.

Id. E. Bowell (k, *MPC* 17629), B. G. Marsden (*ibid.*)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | | | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| | | (2000.0) | | | Q | | |
| <i>M</i> | 319.43117 | | | | | | |
| <i>n</i> | 0.29907213 | ω | 150.90594 | +0.37843256 | -0.92519100 | | |
| <i>a</i> | 2.2145496 | Ω | 276.84514 | +0.84360585 | +0.35739256 | | |
| <i>e</i> | 0.1207302 | <i>i</i> | 1.64302 | +0.38094352 | +0.12764082 | | |
| <i>P</i> | 3.30 | <i>H</i> | 13.3 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|-------|-------|
| 820321 809 | 0.9- | 1.3- | 820330 809 | (2.8+ | 0.6+) | 900915 095 | (0.7+ | 4.6+) |
| 820321 809 | 0.7- | 1.4- | 820331 809 | 0.5- | 0.1+ | 900915 095 | (1.5+ | 3.9-) |
| 820321 809 | 0.5- | 1.4- | 820331 809 | 0.4- | 0.0 | 900917 675 | (0.1+ | 2.6-) |
| 820324 809 | 0.2- | 1.3- | 820331 809 | 0.2- | 0.3- | 900917 675 | (0.5+ | 3.1-) |
| 820324 809 | 0.3- | 0.8- | 820331 809 | 0.7- | 0.1+ | 900923 095 | 0.3+ | 1.2- |
| 820324 809 | 0.2- | 0.4- | 820331 809 | 0.6- | 0.3+ | 901011 095 | 1.8- | 0.1- |
| 820326 809 | 0.0 | 0.6+ | 820331 809 | 0.7- | 0.0 | 901015 095 | (2.8- | 0.0) |
| 820326 809 | 0.1+ | 0.3+ | 820401 809 | 0.4- | 0.2- | 901015 095 | (1.3- | 2.2+) |
| 820326 809 | 0.3+ | 0.1- | 820401 809 | 0.5- | 0.3- | 920323 399 | 0.3- | 1.4+ |
| 820327 809 | (2.8- | 0.8+) | 820401 809 | 0.4- | 0.3- | 920324 399 | 1.2+ | 0.3+ |
| 820327 809 | (2.3- | 1.1+) | 871124 688 | 0.9+ | 0.2- | 920324 399 | 0.2- | 1.0+ |
| 820327 809 | 1.9- | 1.3+ | 871124 688 | 0.1+ | 1.2- | 930717 801 | 0.4+ | 1.1- |
| 820328 809 | 0.9+ | 0.1- | 900826 095 | (2.9+ | 1.4+) | 930717 801 | 0.5+ | 0.8- |
| 820328 809 | 1.1+ | 0.2- | 900827 095 | 0.7- | 0.0 | 930721 801 | 0.5+ | 0.8- |
| 820328 809 | 1.4+ | 0.2- | 900830 095 | (2.1+ | 0.1-) | 930915 801 | 0.3+ | 0.1+ |
| 820330 809 | 1.5+ | 0.4+ | 900831 095 | 0.6+ | 1.1+ | 930915 801 | 0.5+ | 0.2+ |
| 820330 809 | 1.8+ | 0.9+ | 900915 675 | (0.1- | 3.0-) | | | |

(5714)* 1982 PR = 1985 DA₄ = 1988 VG = 1990 DP₅

Discovered 1982 Aug. 14 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. T. Kobayashi (*MPC* 13856), G. V. Williams (*MPC* 21254)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| | | (2000.0) | | | Q | | |
| <i>M</i> | 3.06328 | | | | | | |
| <i>n</i> | 0.17796111 | ω | 339.79271 | +0.98347360 | -0.18079519 | | |
| <i>a</i> | 3.1303002 | Ω | 30.62835 | +0.16860104 | +0.89515864 | | |
| <i>e</i> | 0.2020507 | <i>i</i> | 1.08325 | +0.06597998 | +0.40743602 | | |
| <i>P</i> | 5.54 | <i>H</i> | 12.0 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|--------|------------|-------|-------|------------|------|------|
| 820814 095 | 1.3- | 2.9+ | 881104 327 | 1.1- | 1.1+ | 920603 801 | 0.2+ | 0.5- |
| 820816 095 | 0.1+ | 1.1+ | 881106 399 | 1.0- | 0.2+ | 920603 801 | 0.1+ | 0.6- |
| 820823 095 | (6.0- | 1.6-) | 881106 399 | 0.4+ | 0.3- | 930722 801 | 0.1+ | 0.9- |
| 820913 095 | 1.5- | 1.0+ | 881106 399 | 0.5+ | 0.2+ | 930722 801 | 0.1+ | 0.9- |
| 850220 675 | 1.5+ | 1.1+ | 881106 399 | (4.5+ | 0.8+) | 930724 801 | 0.2+ | 0.8- |
| 850222 675 | (1.3+ | 19.5-) | 881107 897 | 0.7+ | 0.2+ | 930724 801 | 0.2+ | 0.7- |
| 881103 897 | (2.0- | 3.4-) | 881107 897 | 0.8- | 0.2- | 930914 801 | 0.3- | 0.1- |
| 881103 897 | 0.5+ | 2.0+ | 881108 399 | (1.1- | 3.5-) | 930914 801 | 0.3+ | 0.3- |
| 881103 327 | 1.2+ | 1.5- | 881108 399 | (0.9+ | 4.2-) | 930920 801 | 0.4+ | 0.5- |
| 881103 327 | 1.1+ | 1.2- | 881108 399 | (1.8+ | 3.6-) | 930920 801 | 0.0 | 0.2+ |
| 881103 327 | 0.0 | 1.0- | 900223 033 | 1.0- | 0.0 | | | |
| 881103 327 | 0.2+ | 0.7- | 900223 033 | 0.8- | 0.2+ | | | |

(5715)* 1982 SE₁ = 1988 XG

Discovered 1982 Sept. 22 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. S. Nakano (*MPC* 14017)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 353.68933 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.17254187 | ω 94.42997 | +0.94593649 | -0.31723782 |
| <i>a</i> | 3.1955066 | Ω 284.07698 | +0.26306365 | +0.87221647 |
| <i>e</i> | 0.1639835 | <i>i</i> 3.99397 | +0.18974107 | +0.37228833 |
| <i>P</i> | 5.71 | <i>H</i> 12.1 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------|------|
| 820919 095 | 1.6+ | 1.4+ | 881201 888 | (5.0+ | 1.4+) | 930718 801 | 0.2+ | 0.4+ |
| 820921 095 | 0.5- | 2.5+ | 881203 888 | 0.2+ | 0.1- | 930718 801 | 1.0+ | 0.1- |
| 820922 688 | 0.3+ | 1.6- | 881203 888 | 0.1+ | 0.2- | 930721 801 | 0.8+ | 0.4- |
| 820922 688 | 0.1- | 1.4- | 881207 888 | 0.1- | 1.2+ | 930912 801 | 0.2+ | 0.5+ |
| 821011 688 | 0.8- | 1.6- | 881207 888 | 0.5+ | 0.2+ | 930915 801 | 0.4+ | 0.5+ |
| 821011 688 | 1.0+ | 0.6- | 881211 888 | (1.4+ | 4.4+) | 930915 801 | 0.2+ | 0.4+ |
| 821021 688 | 0.4- | 1.1- | 881211 888 | (1.0+ | 5.5+) | 930918 691 | 1.3- | 0.8+ |
| 821021 688 | 0.1+ | 0.5- | 881228 888 | 0.6- | 0.5+ | 930918 691 | 1.3- | 0.1+ |
| 881201 888 | (3.2+ | 0.7+) | 881228 888 | 1.7- | 1.1+ | 930918 691 | 1.2- | 0.1+ |
| 881201 888 | (6.2+ | 0.6+) | 890101 888 | 0.9+ | 0.4- | | | |
| 881201 888 | (4.0+ | 0.2+) | 890101 888 | (3.5+ | 3.1+) | | | |

(5716)* 1982 UH = 1971 TK = 1975 XM₅

Discovered 1982 Oct. 17 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. C. M. Bardwell (*MPC* 7470)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Bardwell

| <i>M</i> | 19.10194 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.26885978 | ω 146.41631 | +0.71966788 | -0.69323231 |
| <i>a</i> | 2.3774907 | Ω 257.52136 | +0.62795643 | +0.67371951 |
| <i>e</i> | 0.1946771 | <i>i</i> 2.27872 | +0.29622436 | +0.25599021 |
| <i>P</i> | 3.67 | <i>H</i> 13.7 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|------|------|------------|------|------|
| 711010 095 | 0.5+ | 0.9+ | 821017 688 | 0.2+ | 1.3- | 930914 801 | 0.3- | 0.3- |
| 711021 095 | 1.8- | 2.4- | 821024 688 | 0.2+ | 0.2+ | 930914 801 | 0.2- | 0.2- |
| 751204 095 | 0.9+ | 2.4+ | 821024 688 | 0.5+ | 0.2+ | 930920 801 | 0.4- | 0.1- |
| 770424 675 | 1.4+ | 1.1- | 821115 688 | 1.4+ | 0.5- | 930920 801 | 0.4- | 0.2+ |
| 770425 675 | 1.3- | 0.5+ | 821115 688 | 1.6+ | 1.7- | 931012 801 | 0.0 | 0.2+ |
| 820917 095 | 1.0+ | 1.5+ | 870130 801 | 0.1+ | 1.8+ | 931012 801 | 0.0 | 0.1+ |
| 820920 095 | (0.4+ | 4.0+) | 910208 675 | 0.4- | 0.6+ | 931019 801 | 0.2- | 0.4+ |
| 820922 095 | (3.3+ | 1.4-) | 910208 675 | 0.4- | 0.2- | 931019 801 | 0.2- | 0.0 |
| 820926 095 | 0.6- | 2.0+ | 910215 511 | 1.1- | 2.2- | | | |
| 821017 688 | 0.1+ | 2.3- | 910216 511 | 0.0 | 1.6- | | | |

(5717)* 1982 UM₆ = 1978 RA₄ = 1978 RH₁₅ = 1978 SM₃ = 1981 GB₁

Discovered 1982 Oct. 20 by L. G. Karachkina at the Crimean Astrophysical Observatory.

Id. H. Kaneda (*MPC* 15882), W. Landgraf (*ibid.*)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 66.55521 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.26562945 | ω 335.62737 | +0.87780550 | +0.47900820 |
| <i>a</i> | 2.3967270 | Ω 355.74852 | -0.43272298 | +0.79032325 |
| <i>e</i> | 0.2153742 | <i>i</i> 2.27292 | -0.20544666 | +0.38202133 |
| <i>P</i> | 3.71 | <i>H</i> 14.4 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 780903 095 | 1.3- | 1.4+ | 821114 095 | 0.7- | 0.8+ | 930912 801 | 0.2+ | 0.4- |
| 780906 809 | 1.5+ | 0.4+ | 920405 675 | 0.7+ | 1.0+ | 930915 801 | 0.1+ | 0.1- |
| 780927 095 | 1.2- | 0.8- | 920405 675 | 0.9- | 0.2- | 930915 801 | 0.3+ | 0.3- |
| 810411 801 | 1.7+ | 0.9+ | 920409 691 | 0.2- | 0.1+ | 931014 801 | 0.4+ | 0.3+ |
| 821020 095 | 1.4- | 0.5- | 920409 691 | 0.2- | 0.3+ | 931019 801 | 0.1- | 0.1+ |
| 821025 095 | 1.1+ | 0.8+ | 920409 691 | 0.2- | 0.1+ | 931019 801 | 0.0 | 0.0 |
| 821109 095 | 0.4+ | 0.7+ | 930912 801 | 0.2- | 0.3- | | | |

(5718)* 1983 PB

Discovered 1983 Aug. 4 by A. C. Gilmore and P. M. Kilmartin at the Mount John University Observatory.

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Marsden

| <i>M</i> | 72.19826 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.29924654 | ω 243.07926 | +0.72144792 | +0.68495302 |
| <i>a</i> | 2.2136891 | Ω 73.49576 | -0.59173163 | +0.68612224 |
| <i>e</i> | 0.2308730 | <i>i</i> 6.09160 | -0.35967566 | +0.24510332 |
| <i>P</i> | 3.29 | <i>H</i> 14.9 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | | |
|------------|--------|--------|---|------------|------|------|------------|------|------|
| 830804 474 | (13.7+ | 12.4-) | Y | 860508 474 | 0.7- | 1.3- | 890404 474 | 1.7+ | 0.7- |
| 830804 474 | (8.6- | 4.3+) | Y | 860508 474 | 1.2- | 1.0- | 901113 675 | 0.7+ | 0.4- |
| 830808 474 | 0.9- | 0.9+ | | 860514 474 | 0.5- | 0.2+ | 901113 675 | 0.1- | 1.6- |
| 830808 474 | (2.4- | 0.4-) | | 860514 474 | 0.3+ | 0.3- | 901114 675 | 0.1+ | 0.9- |
| 830810 474 | 0.4+ | 0.2+ | | 860613 474 | 0.6+ | 0.7- | 901114 675 | 0.0 | 0.5+ |
| 830810 474 | 0.3+ | 0.4+ | | 860613 474 | 0.6- | 1.0- | 930731 413 | 0.0 | 0.0 |
| 830813 474 | 0.4- | 0.8+ | | 860713 474 | 0.1+ | 0.3+ | 930731 413 | 0.1+ | 0.0 |
| 830813 474 | (13.1+ | 0.8+) | | 860713 474 | 0.5+ | 0.2+ | 930815 474 | 0.5+ | 1.9- |
| 830911 474 | 1.2+ | 0.1+ | | 890401 474 | 0.6- | 1.0+ | 930815 474 | 0.2+ | 1.5- |
| 830911 474 | (2.5+ | 0.7-) | | 890401 474 | 0.1+ | 0.3+ | 930916 474 | 0.1- | 0.5+ |
| 830928 474 | 0.4- | 0.0 | | 890403 474 | 1.0+ | 0.3+ | 930916 474 | 0.3+ | 0.8+ |
| 830928 474 | 0.8- | 0.0 | | 890403 474 | 0.6- | 0.6+ | | | |
| 831101 474 | 0.5- | 0.2- | | 890404 474 | 0.6- | 0.0 | | | |

(5719)* 1983 RX = 1982 DK₂ = 1989 FF

Discovered 1983 Sept. 7 by A. Mrkos at Kletř.

Id. S. Nakano (*MPC* 14616)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 92.66605 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.29850711 | ω 339.21920 | +0.48857425 | +0.87114764 |
| <i>a</i> | 2.2173433 | Ω 319.98423 | -0.78939400 | +0.41742626 |
| <i>e</i> | 0.1693015 | <i>i</i> 4.36683 | -0.37168847 | +0.25856739 |
| <i>P</i> | 3.30 | <i>H</i> 13.6 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------------|------|------|
| 801101 675 | 0.3+ | 0.6+ | 830908 046 | 0.6- | 1.8- | 930724 801 | 0.4- | 0.3+ | |
| 801102 675 | 0.2+ | 0.6+ | 890329 896 | (1.5- | 5.0+) | Y | 930912 801 | 0.4- | 0.6+ |
| 820221 046 | (3.7- | 0.2+) | 890329 896 | 0.5- | 1.8+ | Y | 930912 801 | 0.5- | 0.8+ |
| 820221 046 | 0.8+ | 0.7+ | 890401 896 | (4.0- | 1.6+) | Y | 930919 801 | 0.9- | 0.1+ |
| 830717 413 | 0.9+ | 1.9+ | 890403 896 | 1.0+ | 0.0 | | 930919 801 | 0.6- | 0.4+ |
| 830717 413 | 0.6- | 0.6+ | 890413 896 | (0.3- | 5.4-) | Y | 930923 596 | 1.0+ | 0.6- |
| 830807 095 | 1.0+ | 1.8+ | 901114 809 | 1.4- | 0.1+ | | 930923 596 | 0.7+ | 0.1- |
| 830907 046 | (4.7+ | 2.0+) | 901114 809 | 0.1+ | 0.4+ | | 930923 596 | 1.1+ | 0.9+ |
| 830907 046 | (6.5+ | 2.1+) | 901114 809 | 0.1- | 0.1- | | | | |
| 830908 046 | 0.8- | 2.7- | 930724 801 | 0.3- | 0.3+ | | | | |

(5720)* 1984 FN = 1986 VT₆

Discovered 1984 Mar. 29 by C. S. Shoemaker at Palomar.

Id. C. M. Bardwell (*MPC* 11630)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | (2000.0) | | Williams | |
|----------|------------|----------|----------|-------------|-------------|
| <i>M</i> | 341.20118 | | | P | Q |
| <i>n</i> | 0.28382102 | ω | 81.85706 | -0.58151217 | -0.75747705 |
| <i>a</i> | 2.2931881 | Ω | 48.12769 | +0.49582984 | -0.61920052 |
| <i>e</i> | 0.3064749 | <i>i</i> | 23.48719 | +0.64497780 | -0.20692810 |
| <i>P</i> | 3.47 | <i>H</i> | 14.0 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|------|------|------------|-------|--------|
| 840329 675 | 0.5+ | 0.0 | 910317 801 | 0.1+ | 0.3- | 910510 675 | 0.3- | 0.3- |
| 840329 675 | 1.0- | 0.7+ | 910410 033 | 0.2+ | 0.1- | 910512 675 | 1.1+ | 1.1- |
| 840331 675 | 1.1+ | 0.4- | 910410 033 | 1.0- | 0.1- | 910512 675 | 1.6+ | 0.6- |
| 840331 675 | 0.1- | 0.5+ | 910411 033 | 0.1- | 0.1+ | 910514 675 | 0.9+ | 0.2+ |
| 840429 675 | 0.5+ | 0.0 | 910412 033 | 0.6+ | 0.1- | 910514 376 | (4.2+ | 0.3+)Y |
| 840430 675 | 0.7- | 0.0 | 910412 801 | 0.1- | 0.1- | 910514 376 | (4.6+ | 1.0-)Y |
| 861104 675 | (3.0+ | 0.1-) | 910412 801 | 0.1- | 0.2- | 910516 675 | 0.1- | 0.3- |
| 861104 675 | (4.8+ | 0.9-) | 910412 033 | 0.2- | 0.2- | 910516 675 | 0.8+ | 0.1- |
| 861106 688 | 0.9- | 0.1+ | 910414 801 | 0.4- | 0.3- | 930902 413 | 0.7+ | 0.4- |
| 861106 688 | 0.3+ | 1.5+ | 910414 801 | 0.5- | 0.1- | 930902 413 | 0.8+ | 0.4- |
| 861228 801 | 0.2+ | 0.2- | 910414 675 | 1.6- | 0.1+ | 930902 413 | 0.8+ | 0.5- |
| 910316 801 | 0.0 | 0.1- | 910416 675 | 1.1- | 0.8+ | 931012 801 | 0.2- | 0.8- |
| 910316 801 | 0.1+ | 0.1+ | 910417 675 | 0.1+ | 0.0 | 931012 801 | 0.2- | 1.0- |
| 910317 801 | 0.0 | 0.1- | 910510 675 | 0.7- | 0.8+ | | | |

(5721)* 1984 SO₅ = 1980 TL₁₄ = 1989 WE₂

Discovered 1984 Sept. 18 by H. Debehogne at the European Southern Observatory.

Id. T. Kobayashi (*MPC* 15709)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | (2000.0) | | Nakano | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 16.66710 | | | P | Q |
| <i>n</i> | 0.22415542 | ω | 248.41820 | +0.86046470 | -0.50704281 |
| <i>a</i> | 2.6839220 | Ω | 141.99898 | +0.49237423 | +0.80222193 |
| <i>e</i> | 0.1243138 | <i>i</i> | 4.66576 | +0.13102714 | +0.31519449 |
| <i>P</i> | 4.40 | <i>H</i> | 13.1 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|-------|-------|
| 801013 095 | 2.3+ | 0.5- | 840924 809 | 0.4+ | 0.1- | 880816 675 | (2.0+ | 3.9+) |
| 840918 809 | 1.0- | 0.8- | 840924 809 | 0.4+ | 0.1- | 891130 875 | 1.9- | 1.6- |
| 840918 809 | 0.3- | 0.8- | 840926 809 | 0.0 | 0.7+ | 891130 875 | 0.6+ | 0.5+ |
| 840918 809 | 0.0 | 0.7- | 840926 809 | 0.3+ | 0.6+ | 891201 875 | 0.1- | 1.3+ |
| 840921 809 | 1.3- | 0.4+ | 840926 809 | 0.5+ | 0.4+ | 891201 875 | 2.4- | 0.1- |
| 840921 809 | 0.8- | 0.3+ | 840927 809 | 0.6+ | 0.5+ | 891225 033 | 0.2- | 0.2+ |
| 840921 809 | 0.2- | 0.2+ | 840927 809 | 0.4+ | 0.6+ | 891225 033 | 0.8+ | 0.3+ |
| 840922 809 | 0.2- | 0.3+ | 840927 809 | 0.2- | 0.6+ | 891226 033 | 1.5+ | 0.3+ |
| 840922 809 | 0.0 | 0.1- | 840928 809 | 0.4- | 0.6- | 930914 801 | 0.0 | 0.3- |
| 840922 809 | 0.0 | 0.1- | 840928 809 | 0.7- | 0.6- | 930914 801 | 0.4- | 0.2- |
| 840922 809 | 0.8+ | 0.5- | 840928 809 | 0.5- | 0.7- | 930920 801 | 0.2+ | 0.4- |
| 840922 809 | 0.9+ | 0.1- | 840929 809 | 1.0- | 1.0+ | 930920 801 | 0.4+ | 0.2- |
| 840922 809 | 0.7+ | 0.3- | 840929 809 | 1.0- | 0.7+ | 931014 801 | 0.3+ | 0.4- |
| 840923 809 | 0.2+ | 0.3- | 840929 809 | 0.7- | 0.6+ | 931014 801 | 0.3+ | 0.2- |
| 840923 809 | 0.1+ | 0.1- | 841001 809 | 0.5- | 0.8- | 931019 801 | 0.6+ | 0.4+ |
| 840923 809 | 0.1+ | 0.2+ | 841001 809 | 0.3- | 0.2- | 931019 801 | 0.3+ | 0.9+ |
| 840924 809 | 0.4+ | 0.1- | 880816 675 | 1.1+ | 0.5+ | | | |

(5722)* 1986 JS = 1933 FV₁ = 1982 BA₁₀

Discovered 1986 May 2 at Palomar in the course of the International Near-Earth Asteroid Survey.

Id. R. Nagata (*MPC* 17631)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | (2000.0) | | Nakano | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 92.64240 | | | P | Q |
| <i>n</i> | 0.29803357 | ω | 141.43411 | +0.00701090 | +0.99621129 |
| <i>a</i> | 2.2196914 | Ω | 128.79487 | -0.94283137 | +0.03546921 |
| <i>e</i> | 0.1542847 | <i>i</i> | 6.38555 | -0.33319642 | -0.07940407 |
| <i>P</i> | 3.31 | <i>H</i> | 13.2 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|-------|-------|------------|-------|-------|
| 330328 024 | 0.3+ | 1.4+ | 860606 675 | 2.3- | 0.3- | 930720 675 | 0.5+ | 1.4+ |
| 820119 095 | 0.8+ | 1.4- | 860608 675 | (4.9- | 0.9-) | 930722 801 | 0.2+ | 1.4+ |
| 860402 413 | 0.1+ | 0.4- | 890211 675 | 2.6- | 0.4- | 930722 801 | 0.1+ | 0.4- |
| 860402 413 | 0.1- | 2.0- | 890211 675 | 0.1+ | 2.1- | 930811 894 | 0.4- | 0.5- |
| 860502 675 | 0.4- | 1.0+ | 930719 801 | 0.5+ | 0.5- | 930811 894 | 0.7+ | 0.8- |
| 860502 675 | 1.4+ | 0.2+ | 930719 801 | 0.3+ | 0.2- | 930820 675 | (3.0+ | 1.3-) |
| 860503 675 | 1.8+ | 0.3+ | 930720 675 | 1.8- | 1.7- | 930822 675 | 0.1+ | 1.7- |

(5723)* 1986 RR₂ = 1969 TR₆ = 1979 QX₆

Discovered 1986 Sept. 6 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. S. Nakano (*MPC* 11349)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | (2000.0) | | Nakano | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 58.52582 | | | P | Q |
| <i>n</i> | 0.28770209 | ω | 193.95352 | +0.99858149 | +0.04539457 |
| <i>a</i> | 2.2725182 | Ω | 163.36919 | -0.03453456 | +0.94997211 |
| <i>e</i> | 0.2450509 | <i>i</i> | 5.57954 | -0.04052611 | +0.30901831 |
| <i>P</i> | 3.43 | <i>H</i> | 14.2 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------|------|
| 691015 095 | 0.3+ | 1.3- | 860915 095 | (1.2- | 3.6+) | 920427 691 | 0.0 | 0.6- |
| 691115 095 | (0.2+ | 3.7-) | 860929 095 | (0.1- | 3.2+) | 920427 691 | 0.4- | 0.3- |
| 790819 095 | 0.5- | 0.9+ | 861002 095 | 0.0 | 0.7- | 930912 801 | 0.5- | 0.5+ |
| 790821 095 | 0.1+ | 0.4+ | 861005 688 | (1.8+ | 3.2+) | 930912 801 | 0.0 | 0.2+ |
| 860906 688 | 1.4+ | 1.8- | 861005 688 | 1.3+ | 1.1+ | 930914 801 | 0.2+ | 0.0 |
| 860906 688 | 0.6+ | 1.2- | 861008 095 | 2.4- | 1.9+ | 930914 801 | 0.1- | 0.2+ |
| 860906 095 | (1.0+ | 2.2-) | 880322 675 | (0.6- | 3.4-) | 931013 801 | 0.0 | 0.1+ |
| 860912 688 | 0.5- | 1.2- | 880322 675 | 0.1- | 1.6- | 931013 801 | 0.1- | 0.0 |
| 860912 688 | 0.9+ | 0.3- | 920427 691 | 0.2- | 0.4- | | | |

(5724)* 1986 WE = 1938 GD

Discovered 1986 Nov. 22 by K. Suzuki and T. Urata at Toyota.

Id. T. Kobayashi (*MPC* 11512)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | (2000.0) | | Nakano | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 269.81861 | | | P | Q |
| <i>n</i> | 0.25850687 | ω | 41.08812 | -0.78004619 | -0.61616157 |
| <i>a</i> | 2.4405516 | Ω | 100.54265 | +0.54121051 | -0.75177961 |
| <i>e</i> | 0.1898680 | <i>i</i> | 6.36337 | +0.31403683 | -0.23488793 |
| <i>P</i> | 3.81 | <i>H</i> | 13.0 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|------|------|------------|-------|-------|
| 380405 062 | (3.2- | 3.0+) | 901115 801 | 0.6- | 0.1+ | 910114 675 | 0.7- | 0.4- |
| 380405 062 | (3.7+ | 1.1+) | 901115 801 | 0.6- | 0.1+ | 910114 046 | 2.5+ | 2.6- |
| 380405 062 | 0.3- | 1.2+ | 901116 801 | 0.5- | 0.2+ | 910114 046 | (3.2+ | 3.8-) |

| | | | | | | | | | | | |
|--------|-----|-------|--------|--------|-----|-------|-------|--------|-----|------|------|
| 380406 | 062 | 1.0+ | 0.5+ | 901116 | 801 | 0.9- | 0.4- | 910115 | 675 | 0.1+ | 0.8- |
| 861122 | 881 | 1.2- | 1.9+ Y | 901213 | 801 | 0.1- | 0.3+ | 910117 | 046 | 1.6- | 0.1+ |
| 861122 | 881 | 0.6- | 2.4+ Y | 901213 | 801 | 0.1- | 0.2+ | 910117 | 046 | 1.6- | 0.0 |
| 861129 | 881 | 0.1+ | 0.4+ | 901214 | 801 | 0.0 | 0.2+ | 910208 | 881 | 0.7+ | 0.5+ |
| 861129 | 881 | 0.9- | 0.5+ | 901215 | 894 | 0.0 | 0.9- | 910208 | 881 | 0.7+ | 0.1+ |
| 861205 | 881 | 0.3+ | 0.5+ | 901215 | 894 | 2.0+ | 1.6- | 930914 | 385 | 0.5+ | 0.4+ |
| 861205 | 881 | 0.3- | 0.6+ | 901227 | 886 | (3.3+ | 0.0) | 930914 | 385 | 0.8+ | 0.4- |
| 861208 | 888 | 0.2- | 0.1- | 901227 | 886 | 0.7- | 1.0- | 930914 | 385 | 0.3- | 0.0 |
| 861208 | 888 | 1.9+ | 1.0- | 910108 | 563 | 1.4- | 0.4+ | 931012 | 385 | 0.4- | 0.4- |
| 861209 | 888 | (3.0+ | 0.0) | 910108 | 563 | 0.1- | 0.5+ | 931012 | 385 | 0.9- | 0.3+ |
| 861209 | 888 | 1.7+ | 0.2+ | 910108 | 563 | 0.4+ | 1.9+ | 931012 | 385 | 0.1+ | 0.4- |
| 861226 | 881 | (3.4- | 1.2+) | 910108 | 563 | 2.1+ | 2.4+ | | | | |
| 861226 | 881 | 1.4- | 1.4- | 910114 | 675 | 0.2- | 2.3- | | | | |

(5725)* 1988 BK₂ = 1991 VM₃

Discovered 1988 Jan. 23 by C. S. Shoemaker at Palomar.

Id. G. V. Williams (*MPC* 19501)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|-------------------|---------------|
| <i>M</i> | 118.16523 | (2000.0) | <i>Q</i> |
| <i>n</i> | 0.22461461 | ω 78.87514 | -0.63670251 |
| <i>a</i> | 2.6802628 | Ω 55.43888 | +0.46756121 |
| <i>e</i> | 0.0569781 | <i>i</i> 22.57012 | +0.61318547 |
| <i>P</i> | 4.39 | <i>H</i> 12.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|------|------|--------|-----|------|------|--------|-----|------|------|
| 880123 | 675 | 0.3- | 1.5+ | 911109 | 675 | 0.8+ | 0.2- | 930220 | 801 | 0.2+ | 0.5+ |
| 880124 | 675 | 1.5+ | 0.5- | 911130 | 402 | 0.6+ | 0.0 | 930220 | 801 | 0.2+ | 0.1- |
| 880216 | 675 | 2.2- | 0.1+ | 911130 | 402 | 1.1+ | 2.1+ | 930313 | 596 | 1.6+ | 0.7- |
| 880217 | 675 | 1.4+ | 0.8- | 920107 | 033 | 0.0 | 0.5+ | 930313 | 596 | 1.3- | 0.3+ |
| 880220 | 675 | 0.1- | 1.7- | 920107 | 033 | 0.2- | 0.4+ | 930323 | 675 | 0.4- | 0.5- |
| 911103 | 675 | 0.7- | 0.3+ | 930119 | 801 | 0.5+ | 0.9+ | 930323 | 675 | 0.2+ | 0.7- |
| 911103 | 675 | 0.3+ | 0.3+ | 930119 | 801 | 0.5+ | 1.5+ | 930325 | 675 | 0.2- | 0.1+ |
| 911105 | 675 | 0.6- | 0.5- | 930125 | 801 | 0.5+ | 0.7+ | 930325 | 675 | 0.4+ | 0.5+ |
| 911105 | 675 | 0.3- | 1.5- | 930125 | 801 | 0.1+ | 0.8+ | 930414 | 675 | 0.1- | 0.3+ |
| 911107 | 675 | 1.2- | 1.3- | 930218 | 801 | 0.2+ | 0.1+ | 930416 | 675 | 0.8- | 1.5- |
| 911107 | 675 | 0.3+ | 0.5- | 930218 | 801 | 0.2+ | 0.1+ | 930416 | 675 | 1.0- | 1.4- |

(5726)* 1988 BN₂

Discovered 1988 Jan. 24 by C. S. Shoemaker at Palomar.

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|---------------|
| <i>M</i> | 153.96098 | (2000.0) | <i>Q</i> |
| <i>n</i> | 0.27373713 | ω 162.99054 | -0.58647749 |
| <i>a</i> | 2.3491653 | Ω 69.22753 | -0.78392048 |
| <i>e</i> | 0.1579534 | <i>i</i> 25.27327 | -0.20374700 |
| <i>P</i> | 3.60 | <i>H</i> 13.3 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|------|------|--------|-----|------|------|--------|-----|------|------|
| 880124 | 675 | 0.3+ | 0.6+ | 920205 | 801 | 0.4- | 0.7+ | 920405 | 675 | 0.8- | 0.0 |
| 880124 | 675 | 0.2+ | 0.8+ | 920206 | 801 | 0.4- | 0.2- | 920405 | 675 | 0.3+ | 0.6+ |
| 880125 | 675 | 0.5+ | 0.6+ | 920206 | 801 | 0.3- | 0.2- | 930903 | 413 | 0.2- | 0.5+ |
| 880217 | 675 | 0.4- | 1.4+ | 920301 | 801 | 0.1- | 0.7- | 930903 | 413 | 0.0 | 0.5+ |
| 880220 | 675 | 0.8- | 0.2- | 920301 | 801 | 0.1- | 0.8- | 931008 | 413 | 0.1- | 0.0 |
| 901113 | 675 | 1.1+ | 1.7- | 920302 | 801 | 0.5+ | 0.2+ | 931008 | 413 | 0.6- | 0.5+ |
| 901114 | 675 | 0.6+ | 1.1- | 920302 | 801 | 0.7- | 0.6+ | | | | |
| 920205 | 801 | 1.9+ | 1.1- | 920403 | 675 | 1.0- | 0.7- | | | | |

(5727)* 1988 BB₄ = 1976 YN₁ = 1986 RF₁₀

Discovered 1988 Jan. 19 by H. Debehogne at the European Southern

Observatory.

Id. S. Nakano (*MPC* 14792)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|---------------|
| <i>M</i> | 224.20366 | (2000.0) | <i>Q</i> |
| <i>n</i> | 0.27720489 | ω 256.42997 | -0.96722896 |
| <i>a</i> | 2.3295326 | Ω 270.20795 | +0.25386579 |
| <i>e</i> | 0.0757952 | <i>i</i> 6.20783 | -0.00450632 |
| <i>P</i> | 3.56 | <i>H</i> 13.2 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|------|------|--------|-----|------|------|--------|-----|------|------|
| 761216 | 095 | 0.1+ | 0.1+ | 880124 | 809 | 0.4- | 0.0 | 901121 | 801 | 0.1+ | 0.8+ |
| 860908 | 095 | 0.8- | 2.5- | 880124 | 809 | 0.5- | 0.1- | 901214 | 801 | 0.3+ | 0.7+ |
| 860911 | 095 | 1.4+ | 2.2- | 880126 | 809 | 0.3- | 0.3- | 901214 | 801 | 0.5+ | 0.7+ |
| 880119 | 809 | 0.7- | 0.8+ | 880126 | 809 | 0.2+ | 0.2- | 901220 | 801 | 0.1- | 0.0 |
| 880119 | 809 | 0.8- | 0.7+ | 880128 | 809 | 0.8+ | 0.2- | 901220 | 801 | 0.2+ | 0.2+ |
| 880119 | 809 | 0.6- | 0.8+ | 880128 | 809 | 0.8+ | 0.6- | 930529 | 691 | 0.9- | 0.3- |
| 880120 | 809 | 0.3- | 0.4+ | 880130 | 809 | 2.7+ | 1.2- | 930529 | 691 | 1.9- | 1.1- |
| 880120 | 809 | 0.3- | 0.4+ | 890710 | 675 | 1.2+ | 2.5+ | 930529 | 691 | 2.1- | 0.2- |
| 880122 | 809 | 0.8- | 0.2+ | 890710 | 675 | 0.1- | 0.2+ | 930920 | 801 | 0.8+ | 1.8+ |
| 880122 | 809 | 0.7- | 0.3- | 901121 | 801 | 0.2+ | 0.7+ | 930920 | 801 | 0.3- | 0.5+ |

(5728)* 1988 BJ₄ = 1988 BQ₅ = 1976 SC₈ = 1990 WV₃

Discovered 1988 Jan. 20 by H. Debehogne at the European Southern

Observatory.

Id. C. M. Bardwell (d, *MPC* 14752), B. G. Marsden (*MPC* 17634), G. V. Williams

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | |
|----------|------------|--------------------|---------------|
| <i>M</i> | 25.42060 | (2000.0) | <i>Q</i> |
| <i>n</i> | 0.28964911 | ω 226.87128 | +0.92958739 |
| <i>a</i> | 2.2623228 | Ω 154.62498 | +0.35599025 |
| <i>e</i> | 0.0944164 | <i>i</i> 4.23529 | +0.09559403 |
| <i>P</i> | 3.40 | <i>H</i> 13.6 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|-------|-------|--------|-----|-------|---------|--------|-----|------|------|
| 760925 | 095 | 0.4+ | 0.6- | 880123 | 303 | (6.7+ | 7.8-) | 901123 | 809 | 2.0+ | 1.1- |
| 880120 | 809 | 0.2- | 0.3+ | 880125 | 809 | 0.4+ | 0.2+ | 901123 | 809 | 1.0+ | 1.1- |
| 880120 | 809 | 0.1- | 0.0 | 880125 | 809 | 0.4+ | 0.3+ | 920430 | 801 | 0.2+ | 0.4- |
| 880120 | 809 | 0.3+ | 0.2- | 880127 | 809 | 0.2+ | 0.7+ | 920430 | 801 | 0.3+ | 0.7- |
| 880121 | 809 | 0.1+ | 0.5- | 880127 | 809 | 0.4+ | 0.3+ | 920507 | 801 | 0.1+ | 1.7- |
| 880121 | 809 | 0.1+ | 0.0 | 880129 | 809 | 0.1- | 0.5+ | 930914 | 801 | 0.2+ | 0.6+ |
| 880122 | 303 | 0.4- | 0.9+ | 880129 | 809 | 0.1+ | 0.5+ | 930914 | 801 | 0.1+ | 0.5+ |
| 880122 | 303 | 0.1+ | 0.7+ | 880211 | 399 | 0.8- | 0.4+ Y | 930920 | 801 | 0.2+ | 0.1+ |
| 880122 | 303 | 1.9- | 1.6+ | 880211 | 399 | (4.2- | 0.3+) Y | 930920 | 801 | 0.0 | 0.4+ |
| 880123 | 303 | 0.2- | 0.4+ | 880211 | 399 | 0.8+ | 1.6- | 931012 | 801 | 0.7- | 0.1+ |
| 880123 | 809 | 0.3- | 0.1+ | 901121 | 809 | 0.8- | 0.5- | 931012 | 801 | 0.5- | 0.1+ |
| 880123 | 809 | 0.4- | 0.0 | 901121 | 809 | 0.4- | 0.2- | 931014 | 801 | 0.5- | 0.3- |
| 880123 | 303 | (6.3+ | 8.0-) | 901123 | 809 | 0.7+ | 1.1- | 931014 | 801 | 0.9- | 0.3+ |

(5729)* 1988 TA₁ = 1991 GX₃

Discovered 1988 Oct. 13 by S. Ueda and H. Kaneda at Kushiro.

Id. B. G. Marsden (*MPC* 18429)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Marsden

| <i>M</i> | 337.48553 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.18357686 | ω 204.45527 | +0.66679545 | -0.74173876 |
| <i>a</i> | 3.0661314 | Ω 203.93014 | +0.70969412 | +0.66155537 |
| <i>e</i> | 0.1012974 | <i>i</i> 10.24780 | +0.22741610 | +0.11030915 |
| <i>P</i> | 5.37 | <i>H</i> 12.1 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | |
|------------|-------------|------------|-------------|------|------------|-------------|------|
| 881005 399 | (3.4+ 2.0-) | 881102 399 | 1.9+ | 1.3+ | 910410 809 | 0.0 | 1.4- |
| 881005 399 | (3.9+ 2.2+) | 881103 033 | 0.4- | 0.0 | 910410 809 | (0.4+ 2.7-) | |
| 881011 046 | (9.8+ 0.2+) | 881103 033 | 1.1- | 0.6- | 910419 809 | (0.4- 2.8-) | |
| 881012 046 | (9.3+ 0.2+) | 881104 033 | 0.7- | 0.0 | 910419 809 | 1.5- 1.3- | |
| 881013 399 | (4.3+ 0.6-) | 900117 399 | (3.1- 2.2-) | | 910419 809 | (0.2- 2.9-) | |
| 881013 399 | 1.2+ 0.4- | 900117 399 | 0.3- | 0.4+ | 920629 801 | (1.6+ 2.1-) | |
| 881013 399 | 0.4+ 0.7- | 900128 399 | 0.8- | 0.7- | 920702 801 | 0.3- 0.3- | |
| 881014 046 | (2.0+ 2.5-) | 900128 399 | (3.6- 3.4-) | | 920702 801 | 0.5- 0.3- | |
| 881014 046 | 1.8+ 1.5- | 900128 399 | 0.2+ | 2.1- | 930912 801 | 0.7+ 0.7- | |
| 881016 399 | 0.6- 0.1- | 900130 399 | (3.6- 1.8-) | | 930920 801 | 0.4+ 0.6- | |
| 881016 399 | (2.0- 0.8+) | 900130 399 | (1.4- 3.3-) | | 930920 801 | 0.4+ 0.6- | |
| 881019 399 | 0.3- 1.6- | 910408 809 | 1.0+ | 1.1- | 931012 801 | 0.4- 0.6- | |
| 881019 399 | (0.6- 2.0-) | 910408 809 | 0.6- | 2.1- | 931012 801 | 0.3+ 0.4- | |
| 881102 399 | 1.5- 1.5- | 910408 809 | (1.0- 2.7-) | | 931014 801 | 0.7- 0.5- | |
| 881102 399 | 0.4+ 1.4+ | 910410 809 | 0.5+ | 1.0- | 931014 801 | 0.5+ 0.5- | |

(5730)* 1988 TP₁ = 1973 UO₃

Discovered 1988 Oct. 13 by Y. Oshima at Gekko.

Id. H. Oishi (*MPC* 16029)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 44.88852 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.19828806 | ω 268.05256 | +0.99903618 | +0.02959840 |
| <i>a</i> | 2.9125385 | Ω 90.25031 | -0.01428844 | +0.91751769 |
| <i>e</i> | 0.1034753 | <i>i</i> 1.85750 | -0.04150355 | +0.39659202 |
| <i>P</i> | 4.97 | <i>H</i> 12.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | |
|------------|-------------|------------|-------------|------|------------|-------------|------|
| 710324 675 | 0.2- 1.4- | 881015 888 | 0.5- | 1.2+ | 910323 809 | 0.1- | 1.1- |
| 710324 675 | 0.3- 1.5- | 881019 888 | 0.5- | 2.0- | 910323 809 | 0.2+ | 1.1- |
| 710325 675 | 0.8- 0.3- | 881019 888 | 1.3+ | 2.1- | 910323 809 | 0.4+ | 1.2- |
| 710325 675 | 1.0- 0.1- | 881102 888 | (1.4+ 2.8+) | | 910324 809 | 0.3- | 0.6+ |
| 710326 675 | 0.0 1.0- | 881102 888 | 1.0- | 0.4+ | 910324 809 | 0.4+ | 0.4+ |
| 710327 675 | 0.5+ 0.2- | 881102 888 | 1.7+ | 1.4- | 910324 809 | 0.5+ | 0.2+ |
| 710402 675 | 0.3+ 0.9- | 881102 888 | 0.5+ | 1.6- | 910325 809 | 0.9+ | 0.5+ |
| 710416 675 | 1.0+ 1.6- | 881105 888 | 1.1+ | 0.3- | 910325 809 | 0.9+ | 0.0 |
| 710416 675 | 0.7+ 1.5- | 881105 888 | 1.6+ | 0.5+ | 910325 809 | 0.8+ | 0.1+ |
| 710513 675 | 1.3- 0.9- | 881105 888 | 0.8+ | 1.7- | 910326 809 | 1.8- | 0.1- |
| 710514 675 | 0.2- 1.6- | 881105 888 | 0.7+ | 0.2+ | 910326 809 | 1.4- | 0.1+ |
| 710516 675 | 0.3- 0.7- | 881111 888 | 0.3+ | 1.0- | 910326 809 | 1.4- | 0.3+ |
| 731029 095 | 0.8- 0.5- | 881111 888 | 0.5- | 1.4- | 930919 801 | 1.0+ | 2.0+ |
| 881004 046 | 2.4- 0.6- | 891229 888 | 0.5+ | 0.5+ | 930919 801 | 0.1+ | 0.7+ |
| 881004 046 | (2.5- 3.3-) | 891229 888 | 0.7- | 0.8+ | 930920 801 | 0.2+ | 0.5+ |
| 881011 046 | 0.9+ 0.9- | 900105 888 | 0.1+ | 0.0 | 930920 801 | 0.0 | 0.9+ |
| 881011 046 | 0.6+ 0.6- | 900105 888 | 0.6+ | 0.1+ | 930922 303 | 0.6+ | 0.9- |
| 881013 888 | (1.9- 2.9-) | 900125 888 | 0.5- | 1.1+ | 930922 303 | 0.5+ | 0.4+ |
| 881013 888 | 0.5- 2.2- | 900125 888 | 0.6- | 1.3+ | 930922 303 | (2.4+ 1.8+) | |
| 881014 046 | 1.2- 0.8- | 910322 809 | 0.8- | 0.4+ | 930923 303 | (3.8+ 0.4+) | |

| | | | | | | | |
|------------|-----------|------------|------|------|------------|------|------|
| 881014 046 | 0.4- 0.6- | 910322 809 | 0.4- | 0.5+ | 931014 801 | 0.9+ | 1.5+ |
| 881015 888 | 0.0 1.1+ | 910322 809 | 0.4- | 0.4+ | | | |

(5731)* 1988 VP₄

Discovered 1988 Nov. 4 by C. S. Shoemaker at Palomar.

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 167.67331 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.28954179 | ω 215.59191 | -0.73617638 | -0.64749446 |
| <i>a</i> | 2.2628818 | Ω 282.81472 | +0.65826650 | -0.61741178 |
| <i>e</i> | 0.6528773 | <i>i</i> 11.65372 | +0.15725633 | -0.44671424 |
| <i>P</i> | 3.40 | <i>H</i> 15.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | |
|------------|-------------|------------|-------------|------------|-------------|--|--|
| 880913 675 | 1.7+ 1.8- | 890127 568 | (1.1- 2.4-) | 890604 474 | (2.2- 1.6-) | | |
| 880913 675 | (0.3- 4.2-) | 890331 474 | 0.0 1.5- | 890605 568 | (2.6- 2.1+) | | |
| 881011 675 | (0.2- 3.0-) | 890331 474 | (6.6+ 2.8+) | 890608 474 | (1.3- 2.3+) | | |
| 881011 675 | (1.1- 3.0-) | 890401 474 | 0.6- 1.1- | 890608 474 | (1.9- 2.6+) | | |
| 881104 675 | 0.2+ 1.0- | 890401 474 | 0.7- 1.2- | 890629 474 | 1.3+ 0.1+ | | |
| 881104 675 | 1.6+ 2.0- | 890404 474 | 0.0 0.3- | 890629 474 | 1.2+ 0.1+ | | |
| 881106 675 | 0.8+ 1.1- | 890404 474 | 0.9- 0.5- | 900827 688 | 0.1- 0.3+ | | |
| 881106 675 | (2.9+ 0.2+) | 890414 413 | 1.6+ 0.8- | 900827 688 | 0.4+ 0.6+ | | |
| 881205 801 | 1.2- 1.7+ | 890415 413 | 0.8+ 0.7+ | 910807 688 | 0.4- 0.2- | | |
| 881206 801 | 0.8- 0.3+ | 890415 413 | 0.1- 0.7- | 910807 688 | 0.6- 0.2- | | |
| 881214 698 | 0.3+ 1.0- | 890416 413 | 0.3+ 0.2- | 930701 413 | 1.2- 0.9+ | | |
| 881214 698 | 0.3- 1.0- | 890416 413 | 0.6+ 0.3- | 930701 413 | 0.1- 0.6+ | | |
| 890105 801 | 0.4- 0.1- | 890509 474 | 0.6+ 0.2+ | 930824 413 | 0.2+ 0.0 | | |
| 890109 675 | 1.5- 0.4- | 890509 474 | 0.8+ 0.5- | 930824 413 | 0.7+ 0.1- | | |
| 890110 675 | (2.4+ 1.3-) | 890604 474 | 1.5- 1.0- | 930824 413 | 0.5+ 0.1- | | |

(5732)* 1988 WC

Discovered 1988 Nov. 29 by M. Arai and H. Mori at Yorii.

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 174.62210 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.29767087 | ω 252.68332 | -0.62836334 | -0.70207703 |
| <i>a</i> | 2.2214941 | Ω 241.10404 | +0.77544593 | -0.59961878 |
| <i>e</i> | 0.4039379 | <i>i</i> 22.49961 | -0.06199291 | -0.38411608 |
| <i>P</i> | 3.31 | <i>H</i> 13.7 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | |
|------------|-------------|------------|-------------|------------|-----------|--|--|
| 551215 675 | 0.4- 0.1+ | 881207 897 | (0.4- 2.1-) | 890112 875 | 0.3- 0.5- | | |
| 551215 675 | 0.4+ 0.2+ | 881207 897 | 0.2- 1.1- | 890112 875 | 0.1+ 1.8- | | |
| 760501 413 | 0.3+ 0.7- | 881207 054 | 0.7- 0.3- | 890127 875 | 1.9+ 1.1+ | | |
| 760501 413 | (1.8+ 3.8-) | 881207 054 | 0.2- 0.9- | 890201 801 | 0.9+ 0.0 | | |
| 830709 413 | (3.9+ 1.3-) | 881209 875 | 0.9+ 0.6- | 890304 801 | 0.3+ 0.4+ | | |
| 830813 413 | 0.2+ 0.5- | 881210 894 | 1.3- 1.5- | 890310 801 | 1.9+ 0.1+ | | |
| 881129 875 | 1.1+ 1.4- | 881210 894 | 0.4+ 0.9+ | 900729 688 | 1.2+ 0.1+ | | |
| 881129 875 | 0.7+ 1.6+ | 881210 894 | 0.4- 0.9- | 900729 688 | 1.0+ 0.0 | | |
| 881129 875 | 0.7+ 0.2+ | 881212 875 | 0.8- 0.0 | 900827 688 | 0.8+ 0.2- | | |
| 881130 875 | 1.0+ 0.8+ | 881212 054 | (2.2- 4.1-) | 900827 688 | 0.8+ 0.0 | | |
| 881130 875 | 0.6+ 1.6+ | 881212 054 | (1.9- 4.1-) | 930725 658 | 0.7- 0.6+ | | |
| 881201 875 | 0.3+ 1.6+ | 881216 875 | (2.5- 0.1-) | 930725 658 | 0.5- 0.5+ | | |
| 881201 875 | (0.3- 4.8+) | 881216 875 | (3.0- 2.8+) | 930725 658 | 0.5- 0.5+ | | |
| 881201 054 | 0.2- 0.7- | 890103 875 | 1.5- 1.0+ | 930731 413 | 0.8- 0.7+ | | |
| 881207 875 | 0.6- 1.8- | 890106 801 | 1.4- 0.5+ | 930824 413 | 1.1- 0.2+ | | |
| 881207 875 | 1.8- 1.7+ | 890112 875 | 0.4+ 1.2+ | 930824 413 | 1.1- 0.4+ | | |

(5733)* 1989 AQ = 1976 UF₃ = 1987 RC₃

Discovered 1989 Jan. 4 by S. Ueda and H. Kaneda at Kushiro.

Id. T. Kobayashi (*MPC* 15418)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 356.47831 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.17268411 | ω 337.87675 | +0.52537994 | -0.85018605 |
| <i>a</i> | 3.1937515 | Ω 80.41451 | +0.78573812 | +0.46941966 |
| <i>e</i> | 0.1695008 | <i>i</i> 1.97910 | +0.32648356 | +0.23838803 |
| <i>P</i> | 5.71 | <i>H</i> 11.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | |
|------------|-------------|------------|-----------|------------|-----------|
| 761026 095 | (2.3- 4.0-) | 890113 399 | 1.3- 1.2+ | 930915 801 | 0.5+ 0.5- |
| 870902 095 | 0.0 2.0- | 890113 399 | 0.1+ 0.2- | 930915 801 | 0.5+ 0.6- |
| 870920 095 | 0.8+ 1.2+ | 890113 399 | 2.6- 0.0 | 930920 801 | 0.4+ 0.0 |
| 870922 095 | 0.7- 1.1+ | 900327 675 | 1.0- 1.1- | 930920 801 | 0.4+ 0.3- |
| 890104 399 | 0.9- 0.5+ | 900327 675 | 0.0 1.8- | 930922 303 | 2.2- 1.2- |
| 890104 399 | 0.6+ 0.0 | 900329 801 | 0.2- 0.9- | 930922 303 | 0.5- 1.2- |
| 890104 399 | 1.9+ 0.6+ | 900329 801 | 0.0 0.5- | 930922 303 | 0.1- 0.5- |
| 890104 399 | 0.6+ 1.0+ | 910513 801 | 0.2- 0.2- | 930923 303 | 2.0+ 0.6- |
| 890106 399 | 1.6+ 1.5- | 910513 801 | 0.2- 0.1+ | 931014 801 | 0.5+ 0.5+ |
| 890106 399 | 0.6- 1.0- | 910516 801 | 0.0 0.1- | 931014 801 | 0.3+ 0.2+ |
| 890106 399 | 0.3+ 0.2+ | 910516 801 | 0.1- 0.4+ | | |

(5734)* 1989 AL₁ = 1980 TM₂ = 1982 DD₁

Discovered 1989 Jan. 15 by K. Endate and K. Watanabe at Kitami.

Id. H. Kaneda (*MPC* 17635)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 157.01899 | (2000.0) | P | Q |
|----------|------------|-------------------|---------------|-------------|
| <i>n</i> | 0.27422389 | ω 11.73697 | -0.34606922 | -0.92940421 |
| <i>a</i> | 2.3463846 | Ω 98.61388 | +0.84995503 | -0.36844624 |
| <i>e</i> | 0.0719868 | <i>i</i> 7.45207 | +0.39725626 | -0.02133500 |
| <i>P</i> | 3.59 | <i>H</i> 13.4 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | |
|------------|--------------|------------|-------------|------------|-------------|
| 591204 760 | (14.3+ 1.5-) | 890130 400 | (9.6- 5.2-) | 911008 801 | 0.4- 0.8+ |
| 801005 809 | 0.4+ 0.2- | 890207 400 | (2.8- 2.3-) | 930121 801 | 1.2- 1.1- |
| 820221 688 | 0.4- 1.2+ | 890207 400 | (6.4- 1.7+) | 930124 801 | 0.9- 0.1+ |
| 820221 688 | (3.6- 0.1+) | 910907 801 | 0.1+ 0.7+ | 930124 801 | 0.3- 0.2+ |
| 890113 400 | (1.3+ 5.5+) | 910907 801 | 0.0 0.4+ | 930220 801 | 0.4- 0.1+ |
| 890113 400 | 2.1+ 1.6- | 910911 675 | 0.2+ 0.8- | 930220 801 | 0.4- 0.4+ |
| 890115 400 | 0.0 0.2- | 910911 675 | 0.6- 0.2- | 930226 801 | 0.2+ 0.6+ |
| 890115 400 | 0.7- 0.4+ | 910913 801 | 0.2+ 0.3+ | 930226 801 | 0.2- 0.8+ |
| 890115 400 | 0.0 0.3- | 910913 801 | 0.1+ 0.5+ | 930323 010 | 1.3+ 1.6+ |
| 890129 400 | 1.0- 0.0 | 910913 675 | 0.6- 0.3- | 930323 010 | 1.2+ 0.4+ |
| 890129 400 | 0.9- 0.0 | 911005 801 | 0.5- 0.8+ | 930323 010 | 1.1+ 0.0 |
| 890129 400 | (4.3+ 1.8-) | 911005 801 | 0.4- 0.7+ | 930325 010 | (0.2- 2.9+) |
| 890130 400 | 1.6+ 0.0 | 911008 801 | 0.4- 0.8+ | | |

(5735)* 1989 LM = 1971 BX₃ = 1983 VM₂ = 1986 RM₁₃ = 1986 SP₁

Discovered 1989 June 4 by E. F. Helin at Palomar.

Id. B. G. Marsden (*MPC* 14958)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Marsden

| <i>M</i> | 110.81398 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.28506514 | ω 356.41706 | +0.15976815 | +0.98337824 |
| <i>a</i> | 2.2865111 | Ω 282.76251 | -0.90348372 | +0.11045836 |
| <i>e</i> | 0.1484976 | <i>i</i> 5.07437 | -0.39773272 | +0.14410481 |
| <i>P</i> | 3.46 | <i>H</i> 13.7 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | |
|------------|--------------|------------|-------------|------------|-----------|
| 710129 805 | 1.4+ 1.1- | 890630 675 | 1.3- 0.1- | 901218 675 | 0.7- 0.2+ |
| 831108 381 | 1.6+ 0.5+ | 890630 675 | 0.5+ 0.6+ | 901218 675 | 0.5- 0.4- |
| 831108 381 | 1.1- 0.2- | 890703 675 | 1.3+ 0.5+ | 930912 801 | 0.4+ 0.9+ |
| 860911 095 | 1.1- 3.7- | 890703 675 | 0.7- 0.1- | 930912 801 | 0.4+ 0.7+ |
| 860929 010 | (27.6+ 1.0-) | 901111 675 | 0.0 0.4- | 930920 801 | 1.0+ 0.7+ |
| 860929 010 | (28.3+ 1.0+) | 901111 675 | 0.5- 1.8- | 930920 801 | 1.0+ 0.5+ |
| 890604 675 | (0.2+ 2.5-) | 901112 675 | (0.8- 2.5-) | 931019 801 | 0.1- 1.1+ |
| 890604 675 | (0.2+ 2.7-) | 901113 675 | 0.0 1.6- | 931019 801 | 0.1+ 1.1+ |
| 890606 675 | 0.6- 1.8- | 901215 675 | 1.5- 1.2+ | | |
| 890606 675 | 0.2+ 1.2- | 901215 675 | 0.0 1.6- | | |

(5736)* 1989 LW

Discovered 1989 June 6 by E. F. Helin at Palomar.

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 71.59136 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.26902769 | ω 90.84070 | +0.65707377 | +0.70893303 |
| <i>a</i> | 2.3765013 | Ω 224.06942 | -0.74994597 | +0.64920922 |
| <i>e</i> | 0.2741582 | <i>i</i> 21.61916 | +0.07638783 | +0.27557457 |
| <i>P</i> | 3.66 | <i>H</i> 13.4 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | |
|------------|-------------|------------|-----------|------------|-------------|
| 780608 675 | (4.0- 5.5+) | 890629 675 | 1.2+ 0.8- | 930724 801 | 0.8+ 0.2+ |
| 780608 675 | 0.1- 0.6+ | 890629 675 | 1.0+ 0.5- | 930814 801 | 0.1+ 0.7+ |
| 850608 413 | 0.1+ 1.5+ | 890701 675 | 0.6- 1.9- | 930814 801 | 0.1- 0.5+ |
| 850608 413 | 0.5- 1.1+ | 890701 675 | 0.6+ 1.4- | 930822 801 | 0.6- 0.4- |
| 880320 413 | 0.4- 2.3- | 890806 801 | 0.0 2.2+ | 930919 693 | 0.1+ 1.4- |
| 880320 413 | (1.4- 3.2-) | 930723 801 | 0.1+ 0.1+ | 930919 693 | (0.6- 2.6-) |
| 890606 675 | 0.6- 0.2- | 930723 801 | 0.2+ 0.3+ | | |
| 890606 675 | 1.0- 0.0 | 930724 801 | 0.3- 0.2+ | | |

(5737)* 1989 SK = 1977 UX = 1981 ST₇ = 1987 HH₂

Discovered 1989 Sept. 30 by T. Nomura and K. Kawanishi at the Minami-Oda

Observatory.

Id. S. Nakano (*MPC* 15421)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 3.88471 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.24514753 | ω 103.99669 | +0.38117817 | -0.92251787 |
| <i>a</i> | 2.5284306 | Ω 323.41121 | +0.80418706 | +0.36315848 |
| <i>e</i> | 0.2167894 | <i>i</i> 5.82845 | +0.45605524 | +0.13067787 |
| <i>P</i> | 4.02 | <i>H</i> 13.2 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | |
|------------|-----------|------------|-------------|------------|-----------|
| 771016 330 | 1.0- 0.5+ | 891009 374 | 2.5- 0.2- | 930914 801 | 0.5+ 0.5+ |
| 810929 095 | 1.5+ 2.3+ | 891009 374 | 1.2- 2.6- | 930918 410 | 0.3+ 1.1+ |
| 811002 095 | 1.1- 0.2+ | 891023 374 | 1.8- 1.2+ | 930920 801 | 0.2- 0.0 |
| 870423 010 | 0.0 0.7+ | 891023 374 | (8.5+ 6.7-) | 930920 801 | 0.1- 0.0 |
| 870423 010 | 0.6+ 1.4+ | 891023 095 | 0.9+ 0.4+ | 930925 410 | 1.2- 0.3+ |
| 870423 010 | 0.7+ 0.5+ | 891023 095 | (3.2+ 0.1+) | 930925 410 | 0.2- 0.7+ |

| | | |
|------------------------|------------------------|----------------------|
| 890930 374 2.3+ 0.7+ | 891104 095 1.6+ 0.2+ | 930925 410 0.0 0.1- |
| 890930 374 0.6+ 1.4+ | 891104 095 0.9+ 0.2+ | 931008 410 1.1- 0.4- |
| 890930 374 1.2- 0.1+ | 891106 095 1.2- 0.5- | 931008 410 0.6- 0.6- |
| 891004 871 (3.6- 0.0) | 891106 095 0.4+ 0.5+ | 931008 410 0.5+ 1.3- |
| 891004 871 0.8+ 0.0 | 891120 095 0.0 1.1- | 931011 410 0.9+ 0.4- |
| 891007 374 0.9- 0.3- | 891120 095 (3.7- 5.1+) | 931011 410 1.2+ 1.5- |
| 891007 374 1.3+ 0.9+ | 930914 801 0.5+ 0.6+ | |

(5738)* 1989 UY₃ = 1980 WV₄

Discovered 1989 Oct. 27 by E. F. Helin at Palomar.

Id. S. J. Bus (*MPC* 18817)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.21741741 | ω 245.14017 | -0.52479911 -0.78684350 |
| <i>a</i> | 2.7390913 | Ω 240.44173 | +0.85122610 -0.48517772 |
| <i>e</i> | 0.4756045 | <i>i</i> 21.92172 | -0.00016038 -0.38141827 |
| <i>P</i> | 4.53 | <i>H</i> 14.1 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | |
|------------------------|----------------------|----------------------|
| 801129 675 0.2+ 0.7- | 891129 675 0.5- 0.8- | 930824 658 1.9+ 0.6- |
| 801201 675 0.2- 0.6+ | 891202 675 1.0- 0.7+ | 930916 658 0.2- 0.7+ |
| 891027 675 0.4+ 0.4- | 891229 801 0.3+ 0.1- | 930916 658 0.2+ 0.8+ |
| 891027 675 (2.8- 2.8-) | 891229 801 0.2+ 0.2- | 930916 658 0.1+ 0.6+ |
| 891029 675 0.0 0.1+ | 930824 658 1.3- 0.8- | |
| 891129 675 0.6+ 0.6+ | 930824 658 0.7- 0.7- | |

(5739)* 1989 WK₂

Discovered 1989 Nov. 24 by R. H. McNaught at Siding Spring.

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.21294729 | ω 299.95762 | +0.05727198 -0.96634550 |
| <i>a</i> | 2.7772905 | Ω 143.96304 | +0.99790511 +0.04783960 |
| <i>e</i> | 0.3268437 | <i>i</i> 25.23255 | +0.03008834 +0.25276024 |
| <i>P</i> | 4.63 | <i>H</i> 13.4 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | |
|------------------------|----------------------|----------------------|
| 810308 413 1.5- 0.9- | 900215 413 0.7+ 1.1+ | 920821 413 0.4- 0.0 |
| 810308 413 1.6+ 0.6+ | 900215 413 0.1+ 0.6- | 920821 413 0.4- 0.0 |
| 880715 413 0.2+ 0.0 | 900227 801 0.0 0.2- | 920822 413 0.2- 0.1- |
| 880715 413 (3.5+ 1.1+) | 900228 801 0.3+ 0.5+ | 920822 413 0.3- 0.0 |
| 891124 413 0.0 0.8- | 900228 801 0.4- 0.2- | 930731 413 0.4+ 0.1- |
| 891124 413 0.1+ 0.6- | 900326 801 0.5- 0.4+ | 930731 413 0.4+ 0.2- |
| 891125 413 1.2- 0.3- | 900326 801 0.3- 1.4- | 930825 413 0.2+ 0.5- |
| 891125 413 0.7+ 0.3- | 910321 801 0.3- 1.0- | 930825 413 0.4+ 0.5- |
| 891206 413 0.3+ 0.1+ | 910321 801 0.1- 0.8- | 930923 413 0.5- 0.4+ |
| 891206 413 0.3+ 0.2+ | 910419 801 0.1+ 0.3+ | 930923 413 0.3- 0.4+ |
| 891227 413 0.2- 0.7+ | 910419 801 0.5+ 0.4+ | |

(5740)* 1989 WM₃ = 1942 VD = 1972 VB₁ = 1973 AL₂ = 1987 HP₂

Discovered 1989 Nov. 29 by Y. Oshima at Gekko.

Id. H. Oishi (*MPC* 15726), S. Nakano (d, *ibid.*)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|-------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.23151879 | ω 18.65835 | +0.37825523 -0.90835991 |
| <i>a</i> | 2.6267085 | Ω 49.53512 | +0.81669201 +0.23675978 |
| <i>e</i> | 0.1933776 | <i>i</i> 13.55686 | +0.43581778 +0.34471303 |
| <i>P</i> | 4.26 | <i>H</i> 12.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | |
|------------------------|------------------------|----------------------|
| 421105 062 0.9+ 0.3- | 891124 897 1.3+ 0.1- | 891227 888 1.2- 0.1+ |
| 421105 062 0.7+ 0.3+ | 891124 897 1.7+ 0.1- | 891228 888 0.4- 1.1+ |
| 421107 062 0.0 0.2+ | 891126 897 0.5+ 0.3+ | 891228 888 0.8- 1.1+ |
| 721109 095 (0.9- 5.7+) | 891126 897 0.3- 0.3+ | 930915 801 1.4- 0.5- |
| 730102 095 1.0- 2.4- | 891129 888 (1.4- 6.9+) | 930919 801 0.8- 0.4+ |
| 730103 095 2.2- 2.1- | 891129 888 1.4- 1.7+ | 930919 801 0.8- 0.6+ |
| 870429 046 0.5+ 0.2+ | 891130 888 0.9+ 1.3+ | 931012 801 0.3+ 0.2- |
| 870429 046 1.1+ 1.5+ | 891130 888 (0.9- 3.7+) | 931012 801 0.3+ 0.1- |
| 891104 095 (0.1- 4.0+) | 891223 888 0.1- 1.2- | 931019 801 0.1+ 0.7- |
| 891105 095 1.1+ 2.7+ | 891223 888 0.3+ 1.2- | 931019 801 0.3+ 0.3- |

(5741)* 1989 XC = 1986 CX₁

Discovered 1989 Dec. 2 by W. Kakei, M. Kizawa and T. Urata at the Oohira Station of the Nihondaira Observatory.

Id. T. Urata (*MPC* 15726)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.20342194 | ω 300.39816 | +0.91207143 -0.40618315 |
| <i>a</i> | 2.8633264 | Ω 83.61732 | +0.39288839 +0.82662779 |
| <i>e</i> | 0.1074396 | <i>i</i> 3.23284 | +0.11732187 +0.38948908 |
| <i>P</i> | 4.85 | <i>H</i> 12.3 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | |
|----------------------|------------------------|----------------------|
| 540731 675 0.3+ 0.2- | 860213 809 0.5- 0.1+ | 891209 385 1.0- 0.1+ |
| 540731 675 0.1- 0.3- | 860213 809 0.3- 0.0 | 891209 385 0.3+ 1.1+ |
| 540922 675 0.0 0.3- | 860213 809 0.0 0.2+ | 900104 385 1.6- 0.6- |
| 540922 675 0.1+ 0.3- | 860214 809 1.5- 0.5+ | 900104 385 2.3- 0.1- |
| 860211 809 0.2- 0.7+ | 860214 809 1.4- 0.3+ | 930914 385 0.7+ 0.2+ |
| 860211 809 0.1- 0.8+ | 860214 809 1.2- 0.1+ | 930914 385 0.0 0.3- |
| 860211 809 0.2+ 0.9+ | 891202 385 0.3- 0.0 | 930914 385 0.2- 0.5- |
| 860212 809 1.4+ 1.7- | 891202 385 2.4+ 0.6- | 931009 385 0.7- 0.2+ |
| 860212 809 1.5+ 1.7- | 891204 385 2.3+ 0.4- | 931009 385 0.3- 0.1+ |
| 860212 809 1.7+ 1.6- | 891204 385 (3.4+ 0.9-) | 931009 385 0.7+ 0.0 |

(5742)* 1990 TN₄ = 1982 JF = 1985 WR

Discovered 1990 Oct. 9 by R. H. McNaught at Siding Spring.

Id. G. V. Williams (*MPC* 17454)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.18056249 | ω 117.45633 | -0.93565579 +0.25508336 |
| <i>a</i> | 3.1001618 | Ω 78.16736 | -0.34031463 -0.83514522 |
| <i>e</i> | 0.0862327 | <i>i</i> 14.42909 | +0.09345692 -0.48730375 |
| <i>P</i> | 5.46 | <i>H</i> 11.7 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | |
|----------------------|------------------------|----------------------|
| 820513 033 0.2+ 0.4- | 901022 413 1.5+ 0.0 | 930326 801 0.3- 0.3- |
| 820513 033 0.6+ 1.1+ | 901029 413 (3.1+ 0.7-) | 930419 801 0.1+ 0.1- |
| 851120 095 1.1- 0.3- | 901029 413 0.6- 0.5- | 930419 801 0.4+ 0.2- |

| | | |
|------------------------|----------------------|----------------------|
| 901009 413 1.0+ 1.6- | 901119 413 0.3- 0.1- | 930730 413 0.3- 0.3- |
| 901009 413 1.8+ 0.7+ | 930221 801 0.1+ 0.3- | 930730 413 0.4- 0.1- |
| 901014 095 (2.8- 0.3-) | 930221 801 0.3+ 0.4- | 930923 413 0.1- 0.3+ |
| 901014 095 (2.6- 0.8+) | 930225 801 0.0 0.2+ | 930923 413 0.4- 0.3+ |
| 901020 413 2.0- 0.1+ | 930225 801 0.0 0.2+ | 930923 413 0.4- 0.5+ |
| 901020 413 0.1- 1.6+ | 930326 801 0.5- 0.4- | |

(5743)* 1990 UW = 1983 RQ₁ = 1988 AE₁

Discovered 1990 Oct. 19 by M. Akiyama and T. Furuta at Mishima.

Id. S. Nakano (*MPC* 17456), R. Nagata (*ibid.*)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.29478601 | ω 107.19875 | +0.14978643 -0.98844573 |
| <i>a</i> | 2.2359640 | Ω 334.15245 | +0.88569379 +0.14457863 |
| <i>e</i> | 0.1017941 | <i>i</i> 3.05267 | +0.43944345 +0.04551976 |
| <i>P</i> | 3.34 | <i>H</i> 13.1 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | |
|------------------------|------------------------|------------------------|
| 801101 675 0.9+ 0.5+ | 901019 886 0.1+ 1.4- | Y 920504 809 0.3- 0.7+ |
| 801102 675 1.1+ 0.1- | 901021 886 (2.8- 1.3+) | Y 920507 809 0.2- 0.8- |
| 830902 688 0.5- 2.4- | 901024 886 0.4- 2.6- | 920507 809 0.7- 0.6- |
| 830902 688 0.4+ 2.0- | 901024 886 1.1+ 1.6- | Y 920507 809 0.3- 0.5- |
| 830906 688 1.6- 1.2+ | 901026 886 0.6- 0.3+ | Y 930724 801 0.9- 0.2- |
| 830906 688 0.2+ 0.7+ | 901026 886 (2.9+ 1.8-) | Y 930724 801 1.2- 0.2- |
| 880109 046 0.2- 0.1+ | 901110 877 0.2+ 0.6+ | 930815 010 1.1+ 2.0+ |
| 880109 046 1.3+ 1.1+ | 901110 877 2.0- 0.4- | 930815 010 0.9+ 1.9+ |
| 880110 046 0.5- 0.5+ | 901112 877 0.2+ 1.4+ | 930815 010 0.7+ 2.2+ |
| 880110 046 0.9- 1.1+ | 901112 877 0.4+ 0.1- | 930912 801 0.0 0.2+ |
| 880112 046 1.1+ 0.8- | 920503 809 0.8+ 0.1+ | 930912 801 0.1- 0.0 |
| 880112 046 0.5- 0.7+ | 920503 809 1.1+ 0.0 | 930914 801 0.1- 0.0 |
| 901015 399 0.8- 0.8+ | 920503 809 1.4+ 0.0 | 930914 801 0.4- 0.3- |
| 901015 399 0.6+ 0.9+ | 920504 809 1.1- 0.9+ | |
| 901019 886 (3.3+ 1.0-) | Y 920504 809 0.6- 0.6+ | |

(5744)* 1990 XP = 1991 AG = 1983 TM₂

Discovered 1990 Dec. 14 by A. Natori and T. Urata at the JCPM Yakiimo

Station.

Id. G. V. Williams (*MPC* 17828), F. N. Bowman (d, unpublished)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.29777392 | ω 219.29798 | +0.66590415 -0.74592119 |
| <i>a</i> | 2.2209815 | Ω 188.97733 | +0.70396902 +0.63409742 |
| <i>e</i> | 0.1400353 | <i>i</i> 4.83859 | +0.24698034 +0.20376956 |
| <i>P</i> | 3.31 | <i>H</i> 13.6 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | |
|----------------------|----------------------|----------------------|
| 500814 675 0.7+ 0.4+ | 910105 885 0.6- 0.8- | 930925 385 0.5- 0.1+ |
| 500814 675 1.6- 0.6+ | 910107 413 2.4- 0.7+ | 931012 801 0.2+ 0.1- |
| 820422 413 0.4- 0.3- | 910108 413 0.1- 0.1+ | 931012 801 0.5+ 0.1- |
| 820422 413 0.4- 0.7- | 910117 413 0.9+ 1.1- | 931012 385 0.5+ 0.1+ |
| 831004 688 1.5+ 1.7- | 910207 413 0.2+ 0.2- | 931012 385 0.2+ 0.1+ |
| 831004 688 0.8+ 0.3- | 910209 413 0.6+ 0.0 | 931012 385 0.6+ 0.1+ |
| 850512 413 0.3+ 0.6- | 930914 801 0.1- 0.1- | 931016 596 0.1- 0.2+ |
| 901214 885 0.3- 1.0+ | 930914 801 0.0 0.0 | 931016 596 0.2- 0.1+ |
| 901214 885 0.1+ 0.6- | 930920 801 0.4- 0.0 | 931016 596 0.5- 0.0 |

| | | |
|----------------------|----------------------|----------------------|
| 901216 885 1.7+ 1.0+ | 930920 801 0.3- 0.1- | 931019 801 0.3- 0.1- |
| 901216 885 2.0+ 1.6- | 930925 385 0.2- 0.1+ | 931019 801 0.4- 0.2- |
| 910105 885 1.6- 0.9+ | 930925 385 0.4- 0.2+ | |

(5745)* 1991 AN = 1928 TE = 1980 TC₁₅ = 1983 RB₉

Discovered 1991 Jan. 9 by T. Hioki and S. Hayakawa at Okutama.

Id. R. Nagata (*MPC* 17831)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|-------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.30392138 | ω 27.66381 | +0.62841888 -0.77713391 |
| <i>a</i> | 2.1909302 | Ω 23.45222 | +0.69700668 +0.54317445 |
| <i>e</i> | 0.1597023 | <i>i</i> 4.89354 | +0.34535692 +0.31784335 |
| <i>P</i> | 3.24 | <i>H</i> 14.0 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | |
|----------------------|------------------------|----------------------|
| 281015 024 1.3- 2.0+ | 910113 877 (3.2- 0.6+) | 930915 801 0.4- 1.1- |
| 801015 095 1.4+ 1.9+ | 910113 877 0.4+ 0.1+ | 930915 801 0.3+ 1.3- |
| 801017 095 1.5+ 2.0- | 910114 877 (6.7- 1.2+) | 931014 801 0.9+ 0.8- |
| 830911 095 2.2- 0.5+ | 910114 877 1.1- 0.7+ | 931014 801 1.2+ 0.3- |
| 880217 675 1.6+ 0.4- | 910205 877 2.3- 0.6+ | 931019 801 0.4+ 0.2- |
| 880217 675 1.4+ 1.5- | 910205 877 0.6+ 0.4+ | 931019 801 0.0 0.5+ |
| 910109 877 0.1+ 0.2+ | 910219 877 1.4- 0.8- | |
| 910109 877 1.5- 1.6+ | 910219 877 (3.8- 0.8-) | |

(5746)* 1991 CK = 1950 QE₁ = 1950 RY = 1975 RL = 1977 DU₉

Discovered 1991 Feb. 5 by M. Arai and H. Mori at Yorii.

Id. H. Kaneda (*MPC* 17969), R. Nagata (*ibid.*), B. G. Marsden (d, *ibid.*)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.27722327 | ω 15.77015 | +0.97593066 -0.21802567 |
| <i>a</i> | 2.3294296 | Ω 356.81066 | +0.18931767 +0.85818489 |
| <i>e</i> | 0.2164329 | <i>i</i> 5.06869 | +0.10825053 +0.46474026 |
| <i>P</i> | 3.56 | <i>H</i> 13.0 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | |
|------------------------|------------------------|----------------------|
| 500819 711 2.0- 1.5+ Y | 910205 875 1.3- 0.4+ | 910313 809 0.5+ 1.1- |
| 500909 711 2.2+ 2.0- Y | 910205 875 0.8- 0.5+ | 910313 809 1.3+ 1.3- |
| 500914 839(43.2- 5.1-) | Y 910207 875 1.6- 0.9- | 930914 801 0.7+ 0.1+ |
| 750902 095 1.8- 0.0 | 910212 875 0.1- 0.7+ | 930914 801 0.3+ 0.1- |
| 750905 095 1.6+ 0.3- | 910212 875 1.7+ 1.5- | 930920 801 0.4+ 0.3+ |
| 770219 381 0.7+ 0.1- | 910217 875 0.5+ 0.1+ | 930920 801 0.1+ 0.3+ |
| 770219 381 0.2+ 0.4- | 910217 875 0.1+ 2.0+ | 931012 801 0.0 0.5+ |
| 910117 033 0.8+ 0.1+ | 910220 875 1.8- 1.5+ | 931012 801 0.4- 0.7+ |
| 910117 033 0.7- 0.2- | 910220 875 0.9+ 1.6+ | 931019 801 0.7- 0.2- |
| 910118 033 0.3- 1.2- | 910313 809 0.3- 0.9- | 931019 801 0.3+ 0.5- |

(5747)* 1991 CO₃ = 1972 BF

Discovered 1991 Feb. 10 by R. H. McNaught at Siding Spring.

Id. G. V. Williams (*MPC* 18437)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.26515431 | ω 170.15252 | -0.05844702 -0.91199874 |
| <i>a</i> | 2.3995893 | Ω 282.33114 | +0.88531608 +0.14058178 |
| <i>e</i> | 0.2390004 | <i>i</i> 24.55683 | +0.46130184 -0.38535056 |
| <i>P</i> | 3.72 | <i>H</i> 12.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | |
|--------|-----|-------------|--------|-----|-------------|------|--------|-----|------|------|
| 720119 | 095 | (4.4+ 2.7+) | 910210 | 413 | 1.1+ | 0.6+ | 920529 | 413 | 0.3- | 0.2+ |
| 770910 | 413 | 0.4- 0.4- | 910211 | 413 | 1.8+ | 0.5- | 930913 | 801 | 0.4- | 0.8+ |
| 770910 | 413 | 1.5+ 0.1- | 910214 | 413 | 0.4- | 0.1- | 930913 | 801 | 1.0+ | 0.5+ |
| 770911 | 413 | 0.7- 1.3+ | 910321 | 413 | 0.4+ | 0.4- | 930915 | 801 | 0.0 | 0.0 |
| 770916 | 413 | 0.3+ 1.5+ | 910323 | 413 | 0.5- | 0.2+ | 930915 | 801 | 0.0 | 0.1+ |
| 800312 | 413 | 0.4+ 1.1+ | 910406 | 413 | 0.9- | 0.3+ | 931014 | 801 | 0.2- | 0.2- |
| 800312 | 413 | 1.5- 0.4- | 910504 | 413 | 0.2+ | 0.4+ | 931014 | 801 | 0.3- | 0.1- |
| 870109 | 413 | 0.7+ 0.3- | 910515 | 413 | 0.8- | 0.1+ | 931019 | 801 | 0.4- | 0.0 |
| 870109 | 413 | 0.0 1.0+ | 920529 | 413 | (3.4- 0.3-) | | 931019 | 801 | 0.4- | 0.1+ |

(5748)* 1991 DX = 1983 EL₄ = 1989 SK₉

Discovered 1991 Feb. 19 by E. F. Helin at Palomar.

Id. B. G. Marsden (MPC 18128)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | | |
|---|------------|--------------------|-------------|--|-------------|
| M | 317.66174 | (2000.0) | P | | Q |
| n | 0.24078393 | ω 263.20790 | +0.17169679 | | -0.98507213 |
| a | 2.5588867 | Ω 176.82476 | +0.96888256 | | +0.16657524 |
| e | 0.1500356 | i 12.90826 | +0.17828854 | | +0.04342329 |
| P | 4.09 | H 12.9 | G 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | | | |
|--------|-----|-----------|--------|-----|------|------|--------|-----|------|------|
| 830315 | 095 | 0.3- 2.3- | 910219 | 675 | 0.3- | 1.1- | 930912 | 801 | 0.4+ | 0.4- |
| 890925 | 809 | 0.8- 0.6- | 910219 | 675 | 1.3- | 0.5- | 930912 | 801 | 0.4+ | 0.4- |
| 890925 | 809 | 0.1+ 0.5- | 910220 | 675 | 0.6- | 0.5- | 930914 | 801 | 0.7+ | 0.4- |
| 890925 | 809 | 0.8+ 0.5- | 910318 | 675 | 0.0 | 1.3- | 930916 | 691 | 0.6- | 0.4- |
| 890926 | 809 | 0.4- 0.8+ | 910318 | 675 | 0.9+ | 0.2- | 930916 | 691 | 0.7- | 0.5- |
| 890926 | 809 | 0.1- 0.6+ | 930819 | 675 | 0.6- | 1.0+ | 930916 | 691 | 0.6- | 0.4- |
| 890926 | 809 | 0.1+ 0.6+ | 930819 | 675 | 1.1- | 0.7+ | 931014 | 801 | 0.5+ | 1.7- |
| 910208 | 675 | 0.5+ 0.9+ | 930821 | 675 | 0.9+ | 0.3- | 931019 | 801 | 0.3+ | 0.1- |
| 910208 | 675 | 0.6+ 1.2+ | 930821 | 675 | 1.3+ | 0.3- | 931019 | 801 | 0.2+ | 1.3- |

(5749)* 1991 FV = 1973 YN₁ = 1982 QZ₃ = 1988 SL₄ = 1989 YR₅

Discovered 1991 Mar. 17 by E. F. Helin at Palomar.

Id. S. Nakano (MPC 18301)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | | |
|---|------------|--------------------|-------------|--|-------------|
| M | 72.36067 | (2000.0) | P | | Q |
| n | 0.18884365 | ω 41.89745 | +0.60024360 | | +0.78239974 |
| a | 3.0088541 | Ω 265.65856 | -0.77091804 | | +0.51066733 |
| e | 0.0772861 | i 9.58348 | -0.21305630 | | +0.35646811 |
| P | 5.22 | H 10.7 | G 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | | | |
|--------|-----|-------------|--------|-----|------|------|--------|-----|------|------|
| 731220 | 095 | 1.7+ 1.7- | 910317 | 675 | 0.2+ | 0.0 | 930822 | 801 | 0.4+ | 0.0 |
| 820818 | 808 | 0.2- 2.0- | 910318 | 675 | 1.3+ | 0.1- | 930912 | 801 | 0.8+ | 0.1- |
| 820818 | 808 | 0.4- 1.5- | 910318 | 675 | 0.4+ | 0.1- | 930912 | 801 | 0.8+ | 0.0 |
| 880916 | 095 | 0.6- 2.0+ | 910410 | 675 | 0.0 | 2.7- | 930913 | 675 | 0.7- | 0.5- |
| 880916 | 095 | (2.6+ 3.1+) | 910410 | 675 | 0.4- | 1.0- | 930913 | 675 | 0.1- | 0.0 |
| 891229 | 511 | 1.8- 0.5+ | 910412 | 675 | 0.5- | 1.1- | 930914 | 801 | 0.7+ | 0.2+ |
| 891229 | 511 | 0.9- 0.1+ | 910412 | 675 | 0.2- | 0.1+ | 930914 | 801 | 0.9+ | 0.2+ |
| 891230 | 511 | 1.7- 0.7- | 910412 | 413 | 0.1- | 0.1+ | 930916 | 675 | 1.3+ | 0.2- |
| 891230 | 511 | 0.7+ 0.8+ | 910412 | 413 | 1.2- | 0.1- | 930916 | 675 | 0.0 | 0.3+ |
| 900104 | 511 | 0.1+ 0.8- | 930821 | 801 | 0.5+ | 0.1- | 930920 | 596 | 1.8- | 1.9- |
| 900104 | 511 | 0.2+ 0.7- | 930821 | 801 | 0.2+ | 0.1+ | 930920 | 596 | 0.1+ | 0.7- |
| 910317 | 675 | 0.2- 0.1+ | 930822 | 801 | 0.3+ | 0.0 | 930920 | 596 | 0.1- | 0.5- |

(5750)* 1991 GG₁ = 1970 ES₃ = 1975 EH₂ = 1978 UZ₂ = 1980 BZ
= 1980 EH = 1985 BG₂ = 1988 RQ₁₃

Discovered 1991 Apr. 11 by A. Takahashi and K. Watanabe at Kitami.

Id. H. Kaneda (MPC 18439), A. Lowe (*ibid.*)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | | |
|---|------------|--------------------|-------------|--|-------------|
| M | 282.94614 | (2000.0) | P | | Q |
| n | 0.19065135 | ω 138.71570 | -0.38411888 | | -0.92010378 |
| a | 2.9898045 | Ω 333.60167 | +0.79546353 | | -0.28770467 |
| e | 0.0533753 | i 9.91579 | +0.46871149 | | -0.26577258 |
| P | 5.17 | H 11.3 | G 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | | |
|--------|-----|-------------|--------|-----|-------------|--------|-----|------|------|
| 700308 | 805 | 1.1+ 1.1- | 910411 | 400 | (2.1- 4.6+) | 930912 | 400 | 2.0+ | 0.2- |
| 700308 | 805 | 0.4- 0.5- | 910411 | 400 | 0.8- 0.9- | 930913 | 400 | 1.1+ | 1.0+ |
| 700308 | 805 | 0.5- 0.4- | 910414 | 400 | 0.5+ 1.3+ | 930913 | 400 | 1.2- | 1.3- |
| 750308 | 095 | 1.6- 0.1+ | 910414 | 400 | 0.0 0.9+ | 930919 | 400 | 0.2+ | 1.0+ |
| 781026 | 675 | (4.4+ 1.9-) | 910416 | 400 | (0.4+ 5.7+) | 930919 | 400 | 0.3- | 0.1- |
| 781027 | 675 | (6.1+ 2.6-) | 910416 | 400 | (3.9+ 3.3+) | 930919 | 596 | 0.9+ | 0.9+ |
| 800123 | 095 | (1.4+ 3.4-) | 910514 | 399 | 0.2+ 0.6- | 930919 | 596 | 0.0 | 0.6- |
| 800315 | 095 | 0.5+ 0.5- | 910514 | 400 | 1.5+ 0.6+ | 930919 | 596 | 0.3+ | 0.2+ |
| 850121 | 688 | 1.7+ 0.4+ | 910514 | 399 | 0.5+ 1.1+ | 931012 | 801 | 0.3- | 0.2- |
| 850121 | 688 | 1.0- 0.4+ | 910514 | 399 | 1.2- 0.1+ | 931012 | 801 | 0.5- | 0.3- |
| 880914 | 095 | (2.9- 3.0-) | 910514 | 400 | 0.2+ 1.4- | 931019 | 801 | 0.2+ | 0.4- |
| 880914 | 095 | (0.5- 6.8-) | 910515 | 400 | 0.9- 0.4+ | 931019 | 801 | 0.7- | 0.3+ |
| 880916 | 095 | 0.7- 1.2- | 910515 | 400 | 0.5- 1.1- | | | | |
| 880916 | 095 | 0.9- 0.8- | 930912 | 400 | 0.3+ 0.2+ | | | | |

(5751)* 1992 AC = 1989 EN₁

Discovered 1992 Jan. 5 by M. Koishikawa at the Ayashi Station of the Sendai

Observatory.

Id. T. Kobayashi (MPC 19522)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | | |
|---|------------|--------------------|-------------|--|-------------|
| M | 236.20022 | (2000.0) | P | | Q |
| n | 0.32282781 | ω 25.14468 | -0.82424708 | | -0.51515561 |
| a | 2.1045315 | Ω 121.81964 | +0.46144670 | | -0.85166365 |
| e | 0.4212132 | i 16.05622 | +0.32815193 | | -0.09635210 |
| P | 3.05 | H 13.4 | G 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | | |
|--------|-----|-------------|--------|-----|-----------|--------|-----|-------------|------|
| 890310 | 897 | 0.8- 0.5- | 920124 | 364 | 0.9- 0.9- | 920206 | 104 | (2.6- 0.5-) | |
| 890310 | 897 | 0.1+ 1.0- | 920124 | 364 | 0.4+ 0.7+ | 920207 | 658 | 0.0 | 0.2+ |
| 890315 | 897 | (3.5+ 1.0+) | 920124 | 391 | 1.2+ 0.3- | 920207 | 658 | 0.0 | 0.2+ |
| 890315 | 897 | 0.6+ 0.5- | 920124 | 391 | 1.0+ 0.8- | 920213 | 372 | 0.6- | 0.8+ |
| 890315 | 897 | 1.7+ 1.2+ | 920124 | 391 | 1.0+ 0.2- | 920213 | 372 | 0.4- | 0.1- |
| 890329 | 897 | 0.5- 0.8+ | 920124 | 411 | 0.2- 0.3- | 920222 | 411 | 0.7+ | 0.3- |
| 890329 | 897 | 0.9- 0.2+ | 920124 | 411 | 0.2+ 0.2+ | 920222 | 411 | 0.5+ | 0.0 |
| 920103 | 886 | 0.6+ 1.1+ Y | 920124 | 411 | 0.5+ 0.1+ | 920222 | 411 | 0.5+ | 0.1- |
| 920103 | 886 | 1.4+ 1.3+ Y | 920124 | 411 | 0.8+ 0.2+ | 920222 | 411 | 0.5+ | 0.0 |
| 920105 | 391 | 0.6+ 1.1- | 920124 | 411 | 0.2+ 0.2+ | 920222 | 411 | 0.4+ | 0.1- |
| 920105 | 391 | 0.3+ 0.5- | 920124 | 411 | 0.6+ 0.3- | 920222 | 411 | 0.4+ | 0.2- |
| 920107 | 896 | 0.6+ 2.2- | 920124 | 391 | 1.4+ 1.0+ | 920222 | 411 | 0.5+ | 0.2- |
| 920107 | 402 | 0.4- 0.3- | 920124 | 391 | 1.0+ 0.6- | 920222 | 372 | 0.2+ | 0.4- |
| 920107 | 896 | 0.6+ 1.8- | 920124 | 391 | 1.1+ 0.5- | 920301 | 293 | (3.5- 2.4+) | |
| 920107 | 402 | 0.2+ 0.4- | 920125 | 411 | 0.6+ 0.1+ | 920301 | 293 | 2.4- | 1.0- |
| 920109 | 896 | 0.3- 2.1- | 920125 | 411 | 0.7+ 0.1+ | 920304 | 104 | 0.6+ | 0.5+ |

| | | |
|-------------------------|------------------------|----------------------|
| 920109 372 (0.7- 2.6+) | 920125 411 0.3+ 0.0 | 920304 104 0.6+ 0.1+ |
| 920109 372 2.0- 1.8+ | 920125 411 0.4+ 0.3+ | 920304 012 0.7- 1.7- |
| 920109 372 (2.9- 2.5+) | 920125 411 0.2+ 0.0 | 920322 104 0.1- 0.1+ |
| 920109 372 1.4- 1.6+ | 920125 411 0.5+ 0.0 | 920322 104 1.4+ 0.8- |
| 920109 372 1.5- 1.5+ | 920125 104 (5.2+ 1.7+) | 920328 104 0.8- 0.3- |
| 920110 413 0.7+ 0.2- | 920125 104 (4.6+ 2.2+) | 920328 104 0.3- 0.3- |
| 920110 391 0.1- 1.2- | 920126 657 0.4+ 0.0 | 920329 596 0.1- 0.1- |
| 920110 886 0.8- 0.5+ | 920126 657 0.3+ 0.2+ | 920329 596 0.3- 0.4- |
| 920110 411 0.1- 0.1- | 920126 364 0.7- 1.4- | 920329 596 0.9+ 1.5- |
| 920110 391 0.4+ 0.4- | 920126 364 0.5+ 0.6- | 920407 046 0.2- 1.8+ |
| 920110 411 0.1- 0.5- | 920126 391 0.8+ 1.8+ | 920407 046 1.2+ 1.0+ |
| 920110 411 0.1+ 0.1- | 920127 364 0.3+ 0.5- | 920501 411 0.2- 0.0 |
| 920110 411 0.0 0.3- | 920127 364 0.4+ 0.4- | 920501 411 0.4- 0.2+ |
| 920110 411 0.5+ 0.1- | 920128 391 1.8+ 2.0+ | 920501 411 0.7+ 0.3+ |
| 920110 411 0.3+ 0.1- | 920128 391 1.2+ 1.8+ | 920501 411 0.0 0.5+ |
| 920110 402 0.9+ 0.3- | 920128 104 0.4+ 1.3+ | 920504 801 0.1+ 0.1+ |
| 920110 402 1.0+ 0.4+ | 920128 104 1.5+ 0.8- | 920504 801 0.1+ 0.1- |
| 920110 391 0.0 0.6- | 920129 391 0.5- 1.3+ | 920506 801 0.4+ 0.5- |
| 920110 391 0.0 1.0- | 920129 391 1.1- 1.4+ | 920506 801 0.5+ 1.0- |
| 920110 391 0.9+ 0.9- | 920129 391 0.8- 2.0+ | 920529 801 0.0 0.3+ |
| 920110 896 (0.4+ 3.8-) | 920129 391 0.9- 1.3+ | 920529 801 0.1- 0.2+ |
| 920111 411 0.0 0.3+ | 920129 399 0.5- 0.1- | 920531 801 0.1+ 0.3+ |
| 920111 411 0.2+ 0.4+ | 920129 391 0.9- 1.3+ | 920531 801 0.2- 0.1+ |
| 920111 411 0.6- 0.1- | 920129 399 0.5+ 0.1+ | 920622 657 0.1- 0.5+ |
| 920111 411 0.4- 0.4+ | 920129 399 1.3- 1.2+ | 920622 657 0.8+ 1.3+ |
| 920111 411 0.3+ 0.2+ | 920130 012 0.1+ 0.8+ | 920707 711 1.0- 0.2- |
| 920111 411 0.3+ 0.4+ | 920130 012 0.7- 1.2- | 920728 658 1.2- 0.3+ |
| 920111 413 0.3+ 0.3- | 920130 012 0.6- 0.2- | 920728 658 1.2- 0.2+ |
| 920111 391 0.5+ 0.8+ | 920130 012 0.1- 0.1+ | 930510 413 0.3- 0.6- |
| 920111 391 0.9- 0.3+ | 920130 675 2.4+ 1.1+ | 930510 413 0.6+ 0.1- |
| 920112 413 0.6+ 0.2+ | 920130 675 0.7- 2.1+ | 930510 413 0.1+ 0.8- |
| 920112 391 (2.8+ 1.7+) | 920130 104 2.1- 1.4- | 930511 413 1.0- 0.6+ |
| 920112 391 (2.8+ 0.4-) | 920130 104 1.2- 0.7- | 930511 413 1.3- 0.1- |
| 920112 391 2.2+ 0.4+ | 920130 104 0.9- 0.9- | 930630 413 0.2- 0.9+ |
| 920112 897 (2.6- 4.1-)Y | 920131 104 (3.6- 0.8-) | 930630 413 0.4- 0.9+ |
| 920112 897 (2.9- 1.4-)Y | 920131 587 0.9- 0.9+ | 930630 413 0.6- 0.6+ |
| 920114 894 1.0- 2.4- | 920201 675 1.9+ 1.1- | 930701 413 0.0 0.7+ |
| 920114 894 0.5- 1.5- | 920201 104 (3.7+ 4.0+) | 930701 413 0.1- 0.9+ |
| 920114 894 2.4- 0.6- | 920201 104 (1.5+ 2.7+) | 930701 413 0.4- 0.9+ |
| 920115 372 (3.4- 1.4+) | 920203 071 (3.1+ 2.8+) | 930730 413 0.1- 1.0+ |
| 920115 372 1.5- 2.0+ | 920203 071 (3.2+ 3.4+) | 930730 413 0.5+ 0.4+ |
| 920115 372 1.6- 1.6+ | 920204 049 0.9- 0.5- | 930731 413 0.1- 0.9+ |
| 920115 372 1.9- 1.8+ | 920204 049 0.5- 0.8- | 930731 413 0.1+ 0.8+ |
| 920115 372 (3.3- 0.9+) | 920205 367 0.0 0.5+ | 930824 413 0.5+ 1.1+ |
| 920122 568 0.0 1.3- | 920205 367 1.2- 1.6- | 930824 413 0.4+ 1.0+ |
| 920123 568 0.4- 0.7- | 920205 367 0.4- 0.2- | 930923 413 0.9+ 0.1+ |
| 920123 391 0.3+ 0.2- | 920206 658 1.5- 0.1- | 930923 413 0.8+ 0.2+ |
| 920123 391 1.0- 0.5+ | 920206 658 1.4- 0.2- | |
| 920123 391 0.5- 0.3- | 920206 104 (3.3- 0.3-) | |

(5752)* 1992 CJ = 1952 KN = 1973 UV

Discovered 1992 Feb. 10 by N. Kawasato at Uenohara.
Id. K. Ichikawa (*MPC* 20511)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Ichikawa

| <i>M</i> | 143.07826 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.29316342 | ω 39.51661 | -0.44697691 | +0.89369168 |
| <i>a</i> | 2.2442067 | Ω 204.01011 | -0.84311838 | -0.43547542 |
| <i>e</i> | 0.1230774 | <i>i</i> 5.51063 | -0.29893651 | -0.10805710 |
| <i>P</i> | 3.36 | <i>H</i> 13.3 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | |
|-------------------------|----------------------|------------------------|
| 520520 711 1.6- 1.6+ Y | 920224 046 0.4- 0.7- | 930823 675 0.5+ 1.7- |
| 520520 711 (0.5- 7.5-)Y | 920227 376 2.0+ 1.9- | 930823 675 0.0 0.8- |
| 520522 711 1.4+ 2.1- Y | 920227 376 0.3- 0.5+ | 930912 801 0.2- 0.5+ |
| 731026 095 0.5+ 0.4- | 930811 376 0.4+ 0.2+ | 930912 801 0.0 0.0 |
| 920210 376 0.5- 0.5+ | 930811 376 0.0 0.5- | 930914 376 (1.1+ 3.2+) |
| 920210 376 0.8- 0.5- | 930811 376 0.9+ 1.9- | 930914 376 (3.3+ 0.5-) |
| 920213 376 0.3+ 1.1- | 930821 801 0.9+ 0.7- | 930920 801 0.2- 0.6+ |
| 920213 376 1.5- 0.3- | 930821 801 0.4- 0.8+ | 930920 801 0.7- 0.3+ |
| 920224 046 (3.9+ 0.4+) | 930822 675 0.3- 0.4- | |

(5753)* 1992 EM = 1959 UL = 1979 OT₁₅ = 1985 DL₃

Discovered 1992 Mar. 4 by K. Endate and K. Watanabe at Kitami.

Id. H. Kaneda (*MPC* 20034)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 123.63304 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.28876937 | ω 305.28813 | +0.05586088 | +0.99521793 |
| <i>a</i> | 2.2669153 | Ω 327.63168 | -0.86056772 | +0.00729800 |
| <i>e</i> | 0.1637641 | <i>i</i> 8.60811 | -0.50626352 | +0.09740644 |
| <i>P</i> | 3.41 | <i>H</i> 13.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | |
|----------------------|------------------------|------------------------|
| 591029 760 0.9- 2.1+ | 920308 400 1.5- 0.1- | 930822 801 0.2- 0.2+ |
| 591029 760 0.7+ 1.0- | 920308 400 (3.1- 1.7-) | 930912 801 0.5+ 0.2+ |
| 790730 095 0.1+ 0.6- | 920322 400 0.2+ 1.5+ | 930912 801 0.4+ 0.1+ |
| 850220 675 0.9- 0.5- | 920322 400 0.0 0.6- | 930919 801 0.2- 0.7- |
| 850222 675 0.1- 0.2+ | 930814 801 0.1- 0.9+ | 930919 801 0.3- 0.7- |
| 920304 400 0.1+ 0.1- | 930814 801 0.1+ 0.2- | 931008 400 0.7+ 1.1- |
| 920304 400 1.5+ 1.4- | 930822 801 0.2- 0.1+ | 931008 400 (3.5- 1.9-) |

(5754)* 1992 FR₂ = 1935 SD = 1941 KB = 1952 UJ = 1969 RR = 1982 JK₃ = 1982 KV = 1990 WC₃

Discovered 1992 Mar. 24 by S. Ueda and H. Kaneda at Kushiro.

Id. S. Nakano (*MPC* 22057)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 69.40239 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.28864369 | ω 226.51794 | +0.88050209 | +0.46484193 |
| <i>a</i> | 2.2675733 | Ω 105.58175 | -0.40230749 | +0.83645614 |
| <i>e</i> | 0.1414566 | <i>i</i> 5.53692 | -0.25072845 | +0.29028107 |
| <i>P</i> | 3.41 | <i>H</i> 12.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc (or two decimals in units of degrees)

| | | |
|-------------------------|----------------------|----------------------|
| 350924 012 0.9+ 0.3- | 820526 688 1.8- 0.8- | 930724 801 0.4+ 0.1- |
| 350928 012(0.08+ 0.08-) | 901118 675 1.3+ 0.8- | 930724 801 0.4+ 0.0 |
| 351001 012 1.0+ 1.2+ | 901118 675 0.4- 1.1+ | 930914 801 0.3- 1.0- |
| 410516 024 1.3+ 0.7- | 901121 675 0.2- 2.0- | 930914 801 0.4- 0.8- |
| 521022 760 1.0- 1.1- | 901121 675 0.5- 0.7- | 930915 801 0.2+ 0.6- |
| 521022 760 0.5- 0.0 | 920323 399 1.0+ 0.4- | 930915 801 0.1+ 0.5- |
| 521025 760 2.5- 0.2- | 920323 399 0.1- 0.5+ | 930923 413 1.3+ 1.0+ |

521025 760 (2.9- 3.9+) 920324 399 0.1- 1.1+ 930923 413 0.8- 0.9+
 690908 095 (8.1+ 1.3+) 920324 399 0.0 0.8- 930924 413 1.7+ 0.4+
 820513 095 0.8+ 0.2- 920331 400 0.9- 0.2- 930924 413 0.1+ 0.1+
 820526 688 0.0 1.2- 920331 400 1.0- 0.6+

**(5755)* 1992 OP₇ = 1937 BB = 1951 XE = 1974 CB₁ = 1979 BU₁
 = 1987 QG₁₁**

Discovered 1992 July 20 by H. Debehogne and A. López G. at the European Southern Observatory.

Id. G. V. Williams (*MPC* 21583)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | Williams | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 32.90034 | (2000.0) | P | Q | |
| <i>n</i> | 0.18799772 | ω 80.36861 | +0.85967031 | -0.49532414 | |
| <i>a</i> | 3.0178797 | Ω 309.21061 | +0.38214589 | +0.78590437 | |
| <i>e</i> | 0.1180103 | <i>i</i> 9.28267 | +0.33901544 | +0.37014634 | |
| <i>P</i> | 5.24 | <i>H</i> 11.0 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | |
|-------------------------|------------|------|------|------------|------|------|
| 370117 053 (1.8+ 5.8-)X | 920728 809 | 1.3+ | 0.2- | 920805 809 | 0.9- | 0.2- |
| 370117 053 (5.4+ 1.8-)Y | 920728 809 | 1.5+ | 0.1- | 920806 809 | 0.8+ | 0.9- |
| 511203 760 0.4- 1.0+ | 920728 809 | 1.9+ | 0.1- | 920806 809 | 0.8+ | 1.0- |
| 511203 760 0.4- 1.1+ | 920730 809 | 1.4- | 0.4+ | 920806 809 | 0.9+ | 0.6- |
| 740215 095 (0.8- 3.7-) | 920730 809 | 0.9- | 0.4+ | 920808 809 | 1.8- | 0.4- |
| 790124 095 0.1- 0.3- | 920730 809 | 0.7- | 0.5+ | 920808 809 | 1.6- | 0.6- |
| 870828 095 0.6- 0.6+ | 920731 809 | 0.3- | 0.3- | 920808 809 | 1.2- | 0.6- |
| 870831 095 1.5+ 1.3- | 920731 809 | 0.1- | 0.3- | 930914 801 | 0.1+ | 0.4- |
| 920720 809 0.1+ 1.3+ | 920731 809 | 0.3+ | 0.4- | 930914 801 | 0.2+ | 0.2- |
| 920720 809 0.2+ 1.1+ | 920804 809 | 0.0 | 0.0 | 930919 801 | 0.0 | 0.4- |
| 920720 809 0.3+ 0.9+ | 920804 809 | 0.2- | 0.1- | 930919 801 | 0.2- | 0.5- |
| 920721 809 0.5+ 1.1+ | 920804 809 | 0.2- | 0.2- | 931013 801 | 0.0 | 0.1- |
| 920721 809 0.8+ 1.1+ | 920805 809 | 1.0- | 0.4- | 931013 801 | 0.1+ | 0.1- |
| 920721 809 0.8+ 1.0+ | 920805 809 | 0.8- | 0.3- | | | |

(5756)* 6034 P-L = 1985 TG₁

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. E. Bowell (*MPC* 10310)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | Williams | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 30.10635 | (2000.0) | P | Q | |
| <i>n</i> | 0.23768341 | ω 142.86593 | +0.94503528 | +0.32433540 | |
| <i>a</i> | 2.5810919 | Ω 198.34085 | -0.32259931 | +0.90426360 | |
| <i>e</i> | 0.2279057 | <i>i</i> 7.56216 | -0.05327298 | +0.27769388 | |
| <i>P</i> | 4.15 | <i>H</i> 14.0 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | |
|----------------------|------------|-------------|------------|------------|------|------|
| 600924 675 0.5+ 0.2- | 851016 049 | (2.7+ 0.1+) | 890904 511 | 0.4+ | 1.5- | |
| 600925 675 0.5+ 0.1+ | 851016 049 | 1.8+ | 2.0+ | 890905 511 | 0.1- | 1.6- |
| 600926 675 0.0 0.1- | 851016 049 | 2.2- | 0.8+ | 890907 511 | 1.1+ | 1.0- |
| 600928 675 0.2- 0.6- | 851018 095 | 0.5- | 1.2- | 890907 511 | 0.4+ | 0.8- |
| 601017 675 0.2- 0.2- | 851020 688 | 1.7+ | 2.3+ | 930814 801 | 0.1- | 0.3- |
| 601022 675 0.2- 1.3- | 851020 688 | 0.7+ | 0.2+ | 930814 801 | 0.5+ | 1.0+ |
| 601024 675 1.1+ 1.0- | 851024 049 | 0.6+ | 1.1- | 930820 801 | 0.4- | 1.0+ |
| 601026 675 0.7- 0.3+ | 851024 049 | 2.3- | 1.2+ | 930820 801 | 0.3- | 1.0+ |
| 811024 675 0.1- 1.5- | 851107 688 | 1.4- | 1.3+ | 930912 801 | 0.6- | 1.2+ |
| 811025 675 0.2+ 0.1- | 851107 688 | (4.2+ 4.4-) | 930912 801 | 0.2- | 1.3+ | |

850921 095 0.3- 0.7+ 890901 801 (3.5+ 3.5+) 930915 801 0.2- 1.0+
 851015 688 1.5- 1.9+ 890903 511 0.5+ 1.2- 930915 801 0.5- 1.5+
 851015 688 2.0+ 0.6+ 890903 511 0.0 2.0-
 851016 049 (3.1+ 4.8-) 890904 511 0.1- 1.7-

1976 DJ₁ = 1981 UO₂₁

Id. E. Bowell (*MPC* 20495)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | Williams | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 33.53529 | (2000.0) | P | Q | |
| <i>n</i> | 0.12379977 | ω 96.18039 | -0.85921531 | +0.50270422 | |
| <i>a</i> | 3.9870912 | Ω 114.03409 | -0.50085814 | -0.78860092 | |
| <i>e</i> | 0.1369552 | <i>i</i> 5.97475 | -0.10435601 | -0.35411448 | |
| <i>P</i> | 7.96 | <i>H</i> 12.0 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | |
|----------------------|------------|------|------|------------|------|------|
| 760227 033 0.6- 0.4+ | 760303 033 | 1.7+ | 1.4- | 920127 691 | 0.5+ | 0.2- |
| 760301 033 0.4+ 0.2+ | 811024 675 | 0.5+ | 0.2- | 920127 691 | 0.5- | 0.0 |
| 760302 033 0.0 0.1+ | 811025 675 | 0.3+ | 0.4+ | | | |
| 760303 033 1.5- 0.8+ | 811026 675 | 0.8- | 0.2- | | | |

1976 QR = 1976 SX = 1978 EL₄ = 1991 FP₆ = 1993 QP₁

Id. J. G. Williams (d, *MPC* 5638; unpublished), E. Bowell (k), G. V. Williams

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | Williams | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 357.38310 | (2000.0) | P | Q | |
| <i>n</i> | 0.23264928 | ω 238.94263 | +0.75812362 | -0.64706726 | |
| <i>a</i> | 2.6181925 | Ω 160.98335 | +0.65019582 | +0.74054469 | |
| <i>e</i> | 0.1805997 | <i>i</i> 14.38438 | +0.04993975 | +0.18137672 | |
| <i>P</i> | 4.24 | <i>H</i> 12.5 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | |
|------------------------|------------|------|------|------------|------|------|
| 760826 095 (1.8- 8.3+) | 760927 675 | 0.4- | 0.2- | 910320 809 | 1.1+ | 0.7- |
| 760827 675 0.8- 0.1+ | 760927 675 | 0.0 | 0.5+ | 930816 010 | 0.6- | 0.7- |
| 760828 675 1.3+ 0.6+ | 780306 095 | 0.5+ | 0.9- | 930816 010 | 1.4+ | 0.6- |
| 760830 675 1.2+ 0.8+ | 910320 809 | 1.4- | 1.1+ | 930816 010 | 0.9+ | 0.6- |
| 760924 095 2.2- 2.4+ | 910320 809 | 0.2- | 0.1+ | 930817 010 | 0.7- | 2.4- |

1976 SQ₇ = 1952 QK₁ = 1993 RU₂

Id. G. V. Williams, P. Wild

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | Williams | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 54.78192 | (2000.0) | P | Q | |
| <i>n</i> | 0.28959818 | ω 142.08970 | +0.93722690 | +0.34756705 | |
| <i>a</i> | 2.2625881 | Ω 197.63573 | -0.33842877 | +0.88696561 | |
| <i>e</i> | 0.2106904 | <i>i</i> 5.36650 | -0.08409340 | +0.30412030 | |
| <i>P</i> | 3.40 | <i>H</i> 13.5 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | |
|----------------------|------------|------|------|------------|------|------|
| 520828 760 0.2+ 0.4+ | 930914 894 | 0.6- | 0.2+ | 930920 026 | 0.4+ | 0.9+ |
| 520828 760 0.1- 0.6- | 930914 894 | 0.9- | 0.1+ | 930922 033 | 0.2- | 0.5- |
| 760925 095 1.0- 1.9+ | 930918 033 | 0.6+ | 1.0- | 930925 894 | 1.9- | 0.1+ |
| 760928 095 2.2+ 1.5+ | 930918 033 | 0.9+ | 1.2- | 930925 894 | 0.6- | 0.3+ |
| 761025 095 0.0 0.6- | 930919 026 | 0.5+ | 0.3+ | 931009 026 | 1.7+ | 0.1- |
| 761027 095 2.1- 1.2- | 930920 033 | 0.1- | 0.9- | 931011 026 | 1.1+ | 0.1+ |

1977 AZ₁ = 1966 DK = 1979 MN = 1981 UX₁₉

Id. S. Nakano (*MPC* 12448; unpublished)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 348.95764 | ω | (2000.0) | P | Q |
|----------|------------|----------|----------|-------------|-------------|
| <i>n</i> | 0.17121452 | ω | 22.52587 | -0.38098463 | -0.90521361 |
| <i>a</i> | 3.2120009 | Ω | 90.29394 | +0.81701423 | -0.42492373 |
| <i>e</i> | 0.1035337 | <i>i</i> | 10.85097 | +0.43282614 | +0.00530527 |
| <i>P</i> | 5.76 | <i>H</i> | 11.6 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|------|------|--------|-----|------|------|--------|-----|------|------|
| 660220 | 760 | 0.6+ | 0.5+ | 770113 | 095 | 0.5- | 2.5- | 790625 | 805 | 0.6+ | 1.4- |
| 660220 | 760 | 0.6- | 0.5- | 770120 | 095 | 0.6+ | 2.9- | 811027 | 095 | 0.5+ | 1.3- |
| 770112 | 675 | 1.2+ | 0.0 | 790622 | 805 | 1.9- | 0.8- | | | | |
| 770113 | 675 | 1.2- | 3.0+ | 790622 | 805 | 0.7+ | 1.0- | | | | |

1977 QG₂ = 1993 SC₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 93.50974 | ω | (2000.0) | P | Q |
|----------|------------|----------|-----------|-------------|-------------|
| <i>n</i> | 0.18729604 | ω | 284.90404 | +0.44115879 | +0.89674788 |
| <i>a</i> | 3.0254060 | Ω | 11.46512 | -0.74086777 | +0.38590361 |
| <i>e</i> | 0.0874951 | <i>i</i> | 10.12972 | -0.50645223 | +0.21661404 |
| <i>P</i> | 5.26 | <i>H</i> | 11.6 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|-------|-------|--------|-----|------|------|--------|-----|------|------|
| 770820 | 095 | 1.2+ | 0.6+ | 770922 | 095 | 0.8- | 0.1- | 930918 | 400 | 2.3- | 1.8- |
| 770908 | 095 | 0.4- | 0.1- | 930916 | 400 | 0.6+ | 0.5- | 931011 | 400 | 0.2+ | 1.0+ |
| 770910 | 095 | 0.0 | 0.2- | 930916 | 400 | 0.1- | 0.4+ | 931011 | 400 | 1.2+ | 0.3+ |
| 770918 | 095 | (5.1+ | 0.9-) | 930918 | 400 | 0.4+ | 0.5+ | | | | |

1978 SE₃ = 1981 JY₂Id. H. Oishi (*JAM* 1990), E. Bowell (*MPC* 10516)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 61.42446 | ω | (2000.0) | P | Q |
|----------|------------|----------|-----------|-------------|-------------|
| <i>n</i> | 0.25959313 | ω | 97.68518 | +0.61463861 | +0.78835786 |
| <i>a</i> | 2.4337385 | Ω | 210.29130 | -0.74296252 | +0.56722583 |
| <i>e</i> | 0.1124976 | <i>i</i> | 3.03086 | -0.26500201 | +0.23821574 |
| <i>P</i> | 3.80 | <i>H</i> | 14.0 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|------|------|--------|-----|------|------|--------|-----|------|------|
| 780926 | 095 | 1.1- | 0.4- | 810505 | 675 | 0.3- | 1.7+ | 920407 | 691 | 0.5+ | 0.4- |
| 781002 | 095 | 0.6+ | 1.1+ | 810505 | 675 | 1.8+ | 0.0 | 920407 | 691 | 0.3- | 0.2- |
| 781005 | 095 | 0.3+ | 0.3- | 810506 | 675 | 2.5- | 0.2+ | 920407 | 691 | 0.6- | 0.2- |
| 781008 | 095 | 0.6+ | 1.2- | 810510 | 675 | 1.0+ | 1.9- | | | | |

1978 SA₈ = 1993 SC₂

Id. K. Watanabe

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 26.56430 | ω | (2000.0) | P | Q |
|----------|------------|----------|-----------|-------------|-------------|
| <i>n</i> | 0.26126306 | ω | 163.77017 | +0.96189401 | -0.27234704 |
| <i>a</i> | 2.4233569 | Ω | 212.06544 | +0.24551349 | +0.89931450 |
| <i>e</i> | 0.1906680 | <i>i</i> | 2.61573 | +0.12034550 | +0.34214109 |
| <i>P</i> | 3.77 | <i>H</i> | 14.2 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|------|------|--------|-----|------|------|--------|-----|------|------|
| 780926 | 095 | 0.2- | 1.1+ | 781028 | 675 | 0.5+ | 0.3- | 930919 | 400 | 1.2+ | 0.9- |
| 781002 | 095 | 1.2+ | 1.1+ | 781029 | 675 | 0.2+ | 0.9- | 930919 | 400 | 0.5- | 0.3- |
| 781008 | 095 | 1.7- | 0.2+ | 781128 | 675 | 0.2- | 0.1+ | 930921 | 400 | 0.0 | 0.1- |
| 781027 | 675 | 0.2- | 0.5- | 781129 | 675 | 0.2+ | 0.0 | 930921 | 400 | 0.3- | 0.5+ |

1981 EK₃₅

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 353.12249 | ω | (2000.0) | P | Q |
|----------|------------|----------|-----------|-------------|-------------|
| <i>n</i> | 0.19025090 | ω | 79.47685 | +0.99979747 | -0.01447576 |
| <i>a</i> | 2.9939984 | Ω | 281.35154 | +0.00766949 | +0.91634685 |
| <i>e</i> | 0.0992439 | <i>i</i> | 0.81708 | +0.01860655 | +0.40012361 |
| <i>P</i> | 5.18 | <i>H</i> | 14.0 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|------|------|--------|-----|------|------|--------|-----|------|------|
| 781003 | 675 | 1.5+ | 1.1- | 810311 | 413 | 1.2+ | 0.9- | 930622 | 691 | 0.8- | 0.0 |
| 781004 | 675 | 0.7- | 0.7- | 810329 | 413 | 1.6- | 1.6+ | 930622 | 691 | 1.1- | 0.2+ |
| 810209 | 413 | 1.8- | 0.8- | 810329 | 413 | 0.4- | 1.6+ | 930731 | 413 | 1.4+ | 0.1- |
| 810213 | 413 | 0.7+ | 0.1+ | 810426 | 413 | 0.3+ | 2.0- | 930731 | 413 | 1.2+ | 0.3- |
| 810302 | 413 | 0.3- | 0.0 | 810502 | 413 | 1.3- | 0.8- | | | | |
| 810307 | 413 | 2.0+ | 1.6- | 930622 | 691 | 0.8- | 0.3- | | | | |

1982 BM = 1993 QN₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 236.47942 | ω | (2000.0) | P | Q |
|----------|------------|----------|-----------|-------------|-------------|
| <i>n</i> | 0.22203424 | ω | 201.70218 | -0.86182057 | -0.50497683 |
| <i>a</i> | 2.7009886 | Ω | 307.87945 | +0.47377598 | -0.76796207 |
| <i>e</i> | 0.1455911 | <i>i</i> | 3.45582 | +0.18111221 | -0.39399575 |
| <i>P</i> | 4.44 | <i>H</i> | 13.0 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|------|------|--------|-----|------|------|--------|-----|------|------|
| 811224 | 095 | 1.1+ | 0.7+ | 820118 | 046 | 1.9- | 1.4- | 930816 | 010 | 0.5- | 0.1- |
| 820116 | 046 | 0.9- | 0.3+ | 820119 | 046 | 0.2- | 0.0 | 930817 | 010 | 0.6+ | 0.4+ |
| 820116 | 046 | 0.8- | 1.4+ | 820119 | 046 | 0.3- | 0.3- | 930914 | 691 | 0.3+ | 0.5- |
| 820118 | 688 | 1.0+ | 2.8- | 820119 | 095 | 1.5+ | 3.6+ | 930914 | 691 | 0.1+ | 0.1- |
| 820118 | 688 | 0.9+ | 0.7- | 930816 | 010 | 0.1- | 0.4+ | | | | |
| 820118 | 046 | 0.2- | 0.8- | 930816 | 010 | 0.4- | 0.1- | | | | |

1982 KK₁ = 1993 SX₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 97.68709 | ω | (2000.0) | P | Q |
|----------|------------|----------|-----------|-------------|-------------|
| <i>n</i> | 0.28743075 | ω | 205.04009 | +0.52402140 | +0.84733547 |
| <i>a</i> | 2.2739482 | Ω | 96.66897 | -0.76609232 | +0.51313450 |
| <i>e</i> | 0.0971719 | <i>i</i> | 4.97670 | -0.37216143 | +0.13680494 |
| <i>P</i> | 3.43 | <i>H</i> | 14.0 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|------|------|--------|-----|-------|-------|--------|-----|------|------|
| 820515 | 675 | 0.2- | 0.0 | 820518 | 675 | 0.3+ | 0.4- | 930916 | 400 | 0.4- | 0.2- |
| 820516 | 675 | 0.3+ | 0.0 | 820527 | 675 | 1.9+ | 0.9+ | 930918 | 400 | 0.7- | 1.1- |
| 820516 | 675 | 2.2- | 0.0 | 820527 | 675 | (5.4+ | 0.2+) | 930918 | 400 | 0.7- | 0.3- |
| 820517 | 675 | 0.1- | 0.6- | 930916 | 400 | 1.9+ | 1.5+ | | | | |

1984 KB

Id. R. H. McNaught (1993 observations)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 354.44857 | ω | (2000.0) | P | Q |
|----------|------------|----------|-----------|-------------|-------------|
| <i>n</i> | 0.29872217 | ω | 336.50903 | -0.83379819 | -0.55187274 |
| <i>a</i> | 2.2162789 | Ω | 169.95609 | +0.51896507 | -0.79262344 |
| <i>e</i> | 0.7643349 | <i>i</i> | 4.84598 | +0.18829721 | -0.25919984 |
| <i>P</i> | 3.30 | <i>H</i> | 15.0 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | | | | |
|--------|-----|-------|-------|--------|-----|-------|-------|--------|-----|------|------|
| 840527 | 675 | 1.8- | 0.7- | 840604 | 801 | 0.7- | 0.5+ | 840622 | 474 | 0.1+ | 0.3+ |
| 840527 | 675 | (3.1- | 1.6-) | 840604 | 688 | (2.8+ | 1.0+) | 840622 | 474 | 0.9+ | 0.9- |

| | | | | | | | | |
|------------|------|------|------------|-------|-------|------------|-------|-------|
| 840529 675 | 0.9+ | 1.1+ | 840604 688 | 0.6- | 0.6- | 840623 474 | 0.3- | 0.4+ |
| 840529 675 | 0.9+ | 1.5+ | 840604 688 | (0.8- | 4.4-) | 840623 474 | 0.2+ | 0.4+ |
| 840529 675 | 1.2+ | 0.0 | 840604 688 | (6.6+ | 1.3+) | 840627 801 | 0.7- | 0.6+ |
| 840529 675 | 0.7- | 1.1- | 840604 688 | 1.3+ | 2.6- | 840703 801 | (5.6+ | 1.9+) |
| 840530 675 | 0.4- | 0.7+ | 840605 801 | 1.2- | 0.3+ | 840725 801 | 0.2+ | 0.6+ |
| 840531 657 | 2.1+ | 0.5- | 840613 474 | (1.7- | 3.4+) | 840729 801 | 0.9+ | 0.9+ |
| 840601 381 | 0.0 | 0.9+ | 840613 474 | 2.0- | 0.0 | 930923 413 | 0.3+ | 0.2+ |
| 840601 381 | 1.2- | 0.0 | 840613 474 | (2.5- | 0.0) | 930923 413 | 0.3+ | 0.2+ |
| 840602 688 | 0.8+ | 0.7+ | 840615 474 | 1.1+ | 1.0+ | 930924 413 | 0.3- | 0.4- |
| 840603 801 | 0.9- | 0.2+ | 840615 474 | 0.1+ | 1.0- | 930924 413 | 0.2- | 0.4- |
| 840603 675 | 0.9- | 1.5- | 840618 474 | 0.3- | 0.2+ | | | |
| 840603 675 | 1.5+ | 0.1- | 840618 474 | 0.1- | 0.4- | | | |

1984 UD = 1993 TP₁

| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | Nakano | | | |
|---|------------|----------|----------|-------------|-------------|--|--|
| <i>M</i> | (2000.0) | | | <i>P</i> | <i>Q</i> | | |
| <i>n</i> | 0.21697297 | ω | 24.33174 | +0.61885521 | -0.78198798 | | |
| <i>a</i> | 2.7428304 | Ω | 27.61533 | +0.69188596 | +0.49790378 | | |
| <i>e</i> | 0.2487094 | <i>i</i> | 9.21747 | +0.37190328 | +0.37494883 | | |
| <i>P</i> | 4.54 | <i>H</i> | 13.3 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 841017 046 | 0.4+ | 0.1- | 841028 046 | 1.4- | 0.4- | 841120 688 | 0.2+ | 0.3+ |
| 841017 046 | 0.1- | 1.5+ | 841028 046 | 0.9+ | 0.6+ | 841120 688 | 0.4- | 0.6+ |
| 841018 046 | 1.0+ | 0.9- | 841029 046 | 1.5+ | 1.2- | 931010 894 | 1.4+ | 1.0- |
| 841018 046 | 1.1+ | 2.3+ | 841029 046 | 0.3+ | 0.4- | 931010 894 | 0.3- | 0.6- |
| 841026 688 | 1.4- | 0.8- | 841030 046 | 1.7- | 0.7- | 931018 894 | 0.7+ | 1.3+ |
| 841026 688 | 2.4- | 1.2- | 841030 046 | 2.1+ | 0.1+ | 931018 894 | 2.0- | 0.6+ |

1985 QX₄ = 1993 RG₂

| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | Williams | | | |
|---|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | (2000.0) | | | <i>P</i> | <i>Q</i> | | |
| <i>n</i> | 0.12651945 | ω | 174.99265 | +0.98751233 | +0.15717482 | | |
| <i>a</i> | 3.9297464 | Ω | 175.91725 | -0.14927591 | +0.95532520 | | |
| <i>e</i> | 0.0504402 | <i>i</i> | 8.68125 | -0.05035979 | +0.25029950 | | |
| <i>P</i> | 7.79 | <i>H</i> | 11.0 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|-------|-------|------------|------|------|
| 850818 095 | 0.2- | 0.2+ | 930915 400 | 0.4+ | 0.5+ | 930916 400 | 0.1+ | 1.0- |
| 850915 095 | 0.7- | 1.1- | 930915 400 | 0.6- | 0.5+ | | | |
| 850920 095 | 0.9+ | 0.9+ | 930916 400 | (0.4- | 2.7+) | | | |

1985 QD₆ = 1993 OW₇

| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | Marsden | | | |
|---|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | (2000.0) | | | <i>P</i> | <i>Q</i> | | |
| <i>n</i> | 0.24152848 | ω | 225.54608 | +0.97355123 | +0.21523111 | | |
| <i>a</i> | 2.5536252 | Ω | 121.88240 | -0.17548219 | +0.91924355 | | |
| <i>e</i> | 0.2950826 | <i>i</i> | 5.17832 | -0.14630104 | +0.32964657 | | |
| <i>P</i> | 4.08 | <i>H</i> | 15.0 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 850824 095 | 0.2+ | 1.4+ | 850920 095 | 1.1+ | 0.9+ | 930720 809 | 0.2- | 1.4+ |
| 850911 095 | 0.5- | 1.5- | 930720 809 | 0.6+ | 0.5+ | 930724 809 | 0.6- | 3.2- |
| 850919 095 | 0.8- | 0.5- | 930720 809 | 0.2+ | 1.0+ | | | |

1985 RM₆ = 1979 QD₈ = 1991 WH = 1993 BX₄Id. B. G. Marsden (*MPC* 21786), G. V. Williams

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | Williams | | | |
|---|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | (2000.0) | | | <i>P</i> | <i>Q</i> | | |
| <i>n</i> | 0.17391411 | ω | 147.07873 | +0.99144704 | -0.13049579 | | |
| <i>a</i> | 3.1786754 | Ω | 220.41965 | +0.11909716 | +0.91061323 | | |
| <i>e</i> | 0.1837524 | <i>i</i> | 0.16808 | +0.05337262 | +0.39211528 | | |
| <i>P</i> | 5.67 | <i>H</i> | 13.0 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|-------|-------|
| 510806 675 | 0.6+ | 1.7- | 911111 691 | 1.8- | 0.5+ | 930128 010 | 0.8- | 0.1- |
| 510806 675 | (1.1+ | 4.3-) | 911127 046 | 1.7+ | 1.6+ | 930220 010 | (3.8+ | 0.7-) |
| 790826 095 | 0.8- | 2.0- | 911127 046 | (0.6- | 2.8+) | 930220 010 | (3.2+ | 0.8-) |
| 850915 095 | 1.2+ | 1.8- | 930127 010 | 0.3- | 1.5- | 930220 010 | (2.9+ | 1.0-) |
| 850920 095 | 1.1+ | 0.8+ | 930127 010 | 0.5- | 1.2- | 930222 010 | 0.7+ | 1.1- |
| 850922 095 | 2.0+ | 0.3- | 930127 010 | 0.2- | 1.9- | 930223 010 | 0.8+ | 0.1- |
| 911111 691 | 1.6- | 0.3+ | 930128 010 | 0.2+ | 1.1- | | | |
| 911111 691 | 1.8- | 0.3+ | 930128 010 | 1.0- | 0.8+ | | | |

1986 PD₁ = 1988 BU₃Id. C. M. Bardwell (*MPC* 13466)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | Williams | | | |
|---|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | (2000.0) | | | <i>P</i> | <i>Q</i> | | |
| <i>n</i> | 0.23417739 | ω | 267.16057 | +0.66192491 | -0.72857952 | | |
| <i>a</i> | 2.6067902 | Ω | 139.50608 | +0.74899193 | +0.63366376 | | |
| <i>e</i> | 0.2042197 | <i>i</i> | 15.73910 | +0.02943658 | +0.26008100 | | |
| <i>P</i> | 4.21 | <i>H</i> | 13.0 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|--------|-------|------------|------|------|------------|-------|-------|
| 860801 675 | (2.4- | 3.4+) | 860904 809 | 0.1+ | 0.3- | 880118 809 | 0.4- | 0.1- |
| 860801 675 | (5.0- | 5.2+) | 860904 809 | 0.0 | 0.3- | 880119 809 | 0.9- | 0.1+ |
| 860802 675 | (3.5- | 4.4+) | 860904 809 | 0.0 | 0.3- | 880119 809 | 0.4- | 0.0 |
| 860802 675 | (50.5- | 0.2+) | 860906 809 | 0.4+ | 0.5+ | 880121 809 | 0.6- | 0.7+ |
| 860802 675 | (3.2- | 4.3+) | 860906 809 | 0.5+ | 0.5+ | 880121 809 | 0.7- | 0.5+ |
| 860802 675 | (44.8- | 6.8+) | 860906 809 | 0.2+ | 0.4+ | 880123 809 | 0.8- | 0.1- |
| 860804 675 | (22.2- | 0.2-) | 860908 809 | 0.8+ | 0.6+ | 880123 809 | 1.1- | 0.0 |
| 860804 675 | (21.5- | 1.5+) | 860908 809 | 1.1+ | 0.6+ | 880124 809 | 0.7- | 0.2+ |
| 860826 809 | 1.8- | 1.2- | 860908 809 | 1.3+ | 0.6+ | 880124 809 | 0.0 | 0.3- |
| 860826 809 | 1.8- | 1.4- | 860910 809 | 1.0+ | 1.2+ | 880124 809 | 0.3- | 0.3- |
| 860826 809 | 1.6- | 1.7- | 860910 809 | 1.2+ | 0.7+ | 880126 809 | 0.9+ | 0.8- |
| 860827 809 | 1.7- | 1.8- | 860910 809 | 1.1+ | 0.9+ | 880126 809 | 1.0+ | 0.8- |
| 860827 809 | 1.4- | 1.4- | 860912 809 | 1.4+ | 0.8+ | 880128 809 | 2.4+ | 1.5- |
| 860827 809 | 1.1- | 1.4- | 860912 809 | 1.5+ | 0.6+ | 880128 809 | 2.7+ | 1.3- |
| 860829 809 | 0.8- | 0.4- | 860912 809 | 1.5+ | 0.4+ | 880130 809 | (4.7+ | 1.5-) |
| 860829 809 | 0.4- | 0.4- | 880118 809 | 0.7- | 0.1- | 920109 675 | 0.4+ | 0.1- |
| 860829 809 | 0.5- | 0.3- | 880118 809 | 0.6- | 0.1- | 920109 675 | 0.5- | 0.9+ |

1986 RK = 1993 RS₂

Id. K. Watanabe

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| Epoch 1994 Feb. 17.0 TT = JDT 2449400.5 | | | | Nakano | | | |
|---|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | (2000.0) | | | <i>P</i> | <i>Q</i> | | |
| <i>n</i> | 0.28511781 | ω | 88.40061 | +0.80412684 | +0.58439303 | | |
| <i>a</i> | 2.2862295 | Ω | 235.82507 | -0.58422088 | +0.74304049 | | |
| <i>e</i> | 0.2025458 | <i>i</i> | 7.56552 | -0.10984532 | +0.32615274 | | |
| <i>P</i> | 3.46 | <i>H</i> | 13.7 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|------|------|------------|------|------|
| 860905 688 | 0.7- | 0.2+ | 860911 095 | 2.8- | 2.3- | 930915 400 | 0.1- | 1.1- |
| 860905 688 | 0.5- | 0.5+ | 860911 054 | 0.3- | 0.7+ | 930915 400 | 0.9+ | 0.5+ |
| 860908 095 | (5.3- | 1.5+) | 860911 054 | 0.8- | 0.1- | 930916 400 | 0.3+ | 0.8- |
| 860911 688 | 2.0+ | 0.3- | 861005 688 | 0.5- | 1.1+ | 930916 400 | 0.5- | 0.5- |
| 860911 688 | 2.1+ | 0.3- | 861005 688 | 0.9+ | 2.3+ | | | |

1986 RG₃ = 1979 ON₁₆ = 1993 SW₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | <i>P</i> | <i>Q</i> |
| <i>n</i> | 0.28499520 | ω 152.14886 | +0.72004203 +0.69285642 |
| <i>a</i> | 2.2868851 | Ω 163.80569 | -0.65961522 +0.70064901 |
| <i>e</i> | 0.2592118 | <i>i</i> 7.95409 | -0.21551618 +0.17041407 |
| <i>P</i> | 3.46 | <i>H</i> 14.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|------|------|------------|-------|-------|
| 790731 095 | 0.0 | 0.3+ | 860930 010 | 2.3- | 1.6- | 930918 400 | 0.7- | 1.1+ |
| 860907 095 | (0.5+ | 3.7-) | 860930 010 | 2.1+ | 0.5+ | 931011 400 | (2.0+ | 4.4-) |
| 860911 688 | 0.8- | 1.4- | 930916 400 | 2.7- | 1.2- | 931011 400 | 0.6- | 0.0 |
| 860911 688 | 0.2+ | 0.7+ | 930916 400 | 1.7+ | 1.1+ | | | |
| 860912 095 | 0.8+ | 0.4+ | 930918 400 | 2.2+ | 0.2+ | | | |

1986 RN₅ = 1955 TL = 1993 RG

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | <i>P</i> | <i>Q</i> |
| <i>n</i> | 0.28498786 | ω 343.42380 | +0.95630477 +0.29237046 |
| <i>a</i> | 2.2869244 | Ω 359.57353 | -0.25377789 +0.82863747 |
| <i>e</i> | 0.2244762 | <i>i</i> 6.49183 | -0.14518256 +0.47736721 |
| <i>P</i> | 3.46 | <i>H</i> 14.4 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|-------|-------|
| 551011 760 | 0.4+ | 0.5+ | 860908 809 | 0.4+ | 1.1+ | 930912 400 | 1.3+ | 0.1+ |
| 551011 760 | 0.2+ | 0.4+ | 860908 809 | 0.4+ | 1.3+ | 930912 400 | 1.0+ | 0.9+ |
| 551020 760 | 1.2- | 0.1+ | 860908 809 | 0.8+ | 1.3+ | 930913 400 | 0.9- | 0.0 |
| 860907 809 | 0.6- | 1.6- | 860911 809 | 0.9- | 0.8+ | 930913 400 | (3.8+ | 1.5+) |
| 860907 809 | 0.3- | 1.5- | 860911 809 | 0.3- | 0.7+ | 930919 400 | 0.2+ | 0.6- |
| 860907 809 | 0.1+ | 1.4- | 860911 809 | 0.2- | 0.6+ | 930919 400 | 0.4- | 2.6- |

1988 HA = 1976 JJ₁ = 1986 WA₇ = 1993 SS

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | <i>P</i> | <i>Q</i> |
| <i>n</i> | 0.24449881 | ω 19.92874 | -0.67689477 +0.73601650 |
| <i>a</i> | 2.5329010 | Ω 207.47248 | -0.67814530 -0.62866452 |
| <i>e</i> | 0.0812680 | <i>i</i> 1.19897 | -0.28623839 -0.25111877 |
| <i>P</i> | 4.03 | <i>H</i> 13.0 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|-------|-------|--------------|------|------|
| 760502 095 | 0.3+ | 1.0+ | 880414 046 | (5.0- | 0.9+) | 930918 691 | 0.2+ | 0.4+ |
| 861128 010 | 0.1+ | 0.4+ | 880416 399 | (3.4- | 0.1-) | Y 930918 691 | 0.3- | 0.1+ |
| 861128 010 | 1.1- | 0.2- | 880416 399 | 0.7+ | 1.2- | Y 930919 691 | 0.1- | 0.1- |
| 861128 010 | 1.0+ | 0.3+ | 880416 399 | 0.8- | 0.2+ | Y 930919 691 | 0.1- | 0.1- |
| 880408 400 | 0.4+ | 0.8- | 880416 046 | 2.8+ | 1.4+ | 930919 691 | 0.0 | 0.0 |
| 880408 400 | 1.8- | 0.6+ | 880416 046 | (4.8+ | 1.3+) | | | |
| 880414 046 | 1.5- | 0.8- | 930918 691 | 0.3+ | 0.2- | | | |

1988 RE

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | <i>P</i> | <i>Q</i> |
| <i>n</i> | 0.40102856 | ω 105.52367 | +0.54677880 +0.80841928 |
| <i>a</i> | 1.8211785 | Ω 202.29149 | -0.79653398 +0.58244741 |
| <i>e</i> | 0.2523054 | <i>i</i> 35.06577 | +0.25800497 +0.08493106 |
| <i>P</i> | 2.46 | <i>H</i> 14.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|--------------|-------|-------|------------|------|------|
| 800122 413 | 0.6+ | 2.2+ | 881013 399 | (3.0+ | 0.9-) | 881022 675 | 0.2- | 0.1- |
| 800122 413 | 0.0 | 0.6- | 881013 399 | (3.1+ | 1.9+) | 881022 675 | 0.0 | 0.3+ |
| 880911 675 | 1.8+ | 0.7+ | Y 881014 046 | 1.1+ | 1.9- | 881112 801 | 2.2- | 1.7- |
| 880911 675 | (0.7+ | 5.2+) | Y 881014 046 | 1.4+ | 0.3- | 881207 675 | 0.4- | 0.9+ |
| 880914 675 | (1.3- | 2.4-) | Y 881016 046 | (2.0- | 5.9-) | 881207 675 | 0.5- | 0.7+ |
| 880914 675 | 0.1+ | 2.8+ | Y 881016 046 | 0.6+ | 2.1+ | 881207 675 | 0.5- | 0.6+ |
| 880919 675 | 0.2+ | 0.1- | 881016 046 | (3.7- | 3.5-) | 890102 675 | 0.3- | 0.1+ |
| 880919 675 | 0.0 | 0.0 | 881016 046 | (0.0 | 4.5+) | 890102 675 | 1.2- | 0.1+ |
| 880919 675 | 0.1- | 0.1- | 881017 046 | 2.3+ | 1.0+ | 890102 675 | 0.4- | 0.2+ |
| 880920 675 | 0.3- | 0.1- | 881017 046 | (0.7+ | 4.9-) | 890102 675 | 0.6- | 0.2+ |
| 880920 675 | 0.0 | 0.0 | 881018 046 | 0.7+ | 0.7- | 930912 801 | 0.0 | 0.1- |
| 880920 675 | 0.1- | 0.1- | 881018 046 | 0.5+ | 0.8+ | 930912 801 | 0.1+ | 0.0 |
| 881005 675 | 1.2- | 2.3- | 881021 675 | 0.8- | 0.3- | 930914 801 | 0.8- | 1.3- |
| 881005 675 | 0.1- | 1.2+ | 881021 675 | 0.9- | 0.3- | 930914 801 | 0.2+ | 0.2- |
| 881006 801 | (1.5+ | 2.9+) | 881021 675 | 0.7- | 0.2- | | | |
| 881013 399 | (2.5+ | 2.6+) | 881022 675 | 0.2- | 0.0 | | | |

1988 RE₂ = 1988 SR = 1986 HZ = 1993 OO₁₀

Id. F. N. Bowman (d, MPC 14462), B. G. Marsden

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | <i>P</i> | <i>Q</i> |
| <i>n</i> | 0.17890515 | ω 284.08167 | +0.74088288 -0.67092794 |
| <i>a</i> | 3.1192785 | Ω 118.06715 | +0.62889373 +0.67691159 |
| <i>e</i> | 0.1962755 | <i>i</i> 1.99991 | +0.23576521 +0.30273158 |
| <i>P</i> | 5.51 | <i>H</i> 12.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|--------|--------|------------|------|------|------------|------|------|
| 860429 675 | (28.8- | 24.3+) | 880914 807 | 0.1+ | 0.4+ | 881006 807 | 0.3+ | 0.3- |
| 860429 675 | (30.2- | 24.7+) | 880915 807 | 0.1+ | 0.2+ | 881007 807 | 0.6- | 1.0- |
| 880908 046 | (2.8+ | 0.7-) | 880916 675 | 0.2+ | 1.1- | 881104 807 | 0.2- | 0.3+ |
| 880908 046 | 0.8+ | 1.9- | 880916 675 | 0.4+ | 0.8- | 881106 807 | 0.1- | 0.9+ |
| 880909 046 | 1.8+ | 0.3+ | 880919 809 | 0.0 | 1.7+ | 930720 809 | 0.2+ | 0.0 |
| 880909 046 | 0.4- | 1.2- | 880919 809 | 0.0 | 1.3+ | 930720 809 | 0.2+ | 0.2+ |
| 880910 046 | 1.1- | 1.3- | 880919 809 | 1.4+ | 1.2+ | 930720 809 | 0.2+ | 0.4+ |
| 880910 046 | 0.1- | 0.6- | 880920 809 | 1.1- | 1.6+ | 930724 809 | 0.6- | 0.1- |
| 880913 675 | 0.5+ | 0.7- | 880920 809 | 1.0- | 1.0+ | | | |
| 880913 675 | 0.2+ | 0.8- | 880920 809 | 1.0- | 0.8+ | | | |

1988 RV₁₀ = 1993 OR₇

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | <i>P</i> | <i>Q</i> |
| <i>n</i> | 0.17222631 | ω 35.14025 | -0.99732149 +0.06837227 |
| <i>a</i> | 3.1994087 | Ω 148.74968 | -0.07314204 -0.93085463 |
| <i>e</i> | 0.1193703 | <i>i</i> 2.87077 | -0.00029121 -0.35893579 |
| <i>P</i> | 5.72 | <i>H</i> 13.0 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | |
|-----------------|------|-----------------|------|-----------------|------|
| 880914 807 0.8- | 0.0 | 881008 807 0.2+ | 0.5- | 930720 809 0.2- | 0.2+ |
| 880915 807 0.6+ | 0.2+ | 881008 807 0.2+ | 0.1+ | 930720 809 0.1- | 0.7+ |
| 880916 807 0.4+ | 0.3+ | 881103 807 0.2+ | 0.1+ | 930724 809 0.2- | 1.1- |
| 881004 807 0.1- | 0.3+ | 881105 807 0.1- | 0.4- | | |
| 881007 807 0.5- | 0.0 | 930720 809 0.5+ | 0.1+ | | |

1988 TX₁ = 1993 SY₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.18726197 | ω 97.42085 | +0.54840438 +0.83326534 |
| <i>a</i> | 3.0257728 | Ω 206.21846 | -0.81612072 +0.51506021 |
| <i>e</i> | 0.0918891 | <i>i</i> 9.13678 | -0.18220761 +0.20095236 |
| <i>P</i> | 5.26 | <i>H</i> 12.0 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | |
|-----------------|------|------------------|-------|-----------------|------|
| 881005 399 0.0 | 0.7+ | 881016 399 1.0- | 1.5- | 881106 399 1.1- | 1.4- |
| 881005 399 0.4+ | 0.3+ | 881019 399 0.9+ | 1.1- | 881106 399 0.7+ | 0.4+ |
| 881013 399 0.6- | 0.0 | 881019 399 (3.2+ | 3.3-) | 930919 400 0.3- | 1.3- |
| 881013 399 1.9- | 0.4+ | 881103 033 0.2+ | 0.6+ | 930919 400 1.1- | 0.9+ |
| 881013 399 1.8+ | 0.8- | 881103 033 0.4+ | 0.5+ | 930921 400 2.0+ | 1.0- |
| 881016 399 0.7- | 1.0+ | 881104 033 0.8+ | 0.9+ | 930921 400 0.6- | 1.3+ |

1988 WF = 1954 UM₃ = 1982 SY₁₁ = 1993 SL₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nomura | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.17746992 | ω 310.63094 | +0.75786703 -0.65159356 |
| <i>a</i> | 3.1360734 | Ω 90.05708 | +0.60798704 +0.68725326 |
| <i>e</i> | 0.1897414 | <i>i</i> 1.86873 | +0.23662062 +0.32110557 |
| <i>P</i> | 5.55 | <i>H</i> 12.4 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | |
|-------------------|-------|-----------------|------|-----------------|------|
| 541020 760 (11.5- | 5.3-) | 881203 400 0.2- | 1.0+ | 930916 400 0.4- | 0.8+ |
| 541020 760 2.5+ | 5.6- | 881203 400 0.9- | 1.3+ | 930919 400 1.7+ | 3.6+ |
| 820928 095 0.5- | 0.5+ | 881205 385 2.5- | 2.0- | 930919 400 0.6+ | 3.0+ |
| 881129 385 2.5+ | 1.9+ | 881205 385 1.8- | 2.2- | 931012 400 1.9- | 0.5+ |
| 881129 385 0.4+ | 1.2- | 881206 385 0.2+ | 0.5- | 931012 400 1.0- | 3.1- |
| 881202 400 0.3+ | 1.7+ | 881206 385 0.2+ | 0.4- | | |
| 881202 400 1.9+ | 1.1+ | 930916 400 1.0- | 0.2- | | |

1989 OL

Id. R. H. McNaught (1977, 1993 observations)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.24365897 | ω 250.11101 | +0.43704265 +0.88416694 |
| <i>a</i> | 2.5387179 | Ω 46.94124 | -0.71737873 +0.45335118 |
| <i>e</i> | 0.1357754 | <i>i</i> 13.05568 | -0.54255090 +0.11278973 |
| <i>P</i> | 4.05 | <i>H</i> 14.0 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | |
|-----------------|------|-----------------|------|-----------------|------|
| 770904 413 0.8- | 0.7+ | 890808 474 0.5- | 0.7+ | 891025 474 0.6+ | 0.1- |
| 770904 413 1.0+ | 0.9- | 890808 474 0.9- | 0.3+ | 891025 474 0.7- | 0.3- |
| 890729 474 0.4+ | 0.2- | 890902 474 0.7+ | 0.3+ | 930731 413 0.1+ | 0.3- |
| 890729 474 0.3- | 0.2- | 890902 474 0.3+ | 0.2+ | 930731 413 0.3+ | 0.4- |

1989 SU = 1976 FB = 1993 RB₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.24458738 | ω 31.90835 | +0.81007568 +0.58256953 |
| <i>a</i> | 2.5322895 | Ω 292.31788 | -0.55187928 +0.71943736 |
| <i>e</i> | 0.2369137 | <i>i</i> 4.10723 | -0.19800669 +0.37818333 |
| <i>P</i> | 4.03 | <i>H</i> 13.3 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | |
|-----------------|------|------------------|-------|-----------------|------|
| 760327 801 0.3+ | 0.8+ | 891003 399 (3.8+ | 1.8+) | 891029 399 1.1- | 0.5+ |
| 890929 399 1.7- | 0.3+ | 891023 399 1.1- | 2.7- | 930915 400 1.4- | 0.2+ |
| 890929 399 0.1- | 2.0+ | 891023 399 (2.0- | 3.4-) | 930915 400 1.8+ | 2.2- |
| 890929 399 1.0+ | 1.4+ | 891023 399 0.7+ | 0.3- | 930916 400 0.4- | 1.9+ |
| 891003 399 1.0+ | 0.3- | 891029 399 0.8+ | 0.4- | 930916 400 0.5+ | 1.5- |
| 891003 399 0.3+ | 0.4+ | 891029 399 0.7- | 0.9+ | | |

1989 SX = 1993 SF₁

Id. S. Nakano, R. H. McNaught

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.24110171 | ω 354.99391 | +0.92036530 -0.38722036 |
| <i>a</i> | 2.5566377 | Ω 27.98567 | +0.36271256 +0.79301862 |
| <i>e</i> | 0.3028444 | <i>i</i> 6.68965 | +0.14617566 +0.47029976 |
| <i>P</i> | 4.09 | <i>H</i> 13.9 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | |
|------------------|-------|------------------|-------|-----------------|------|
| 890930 675 0.3+ | 0.6- | 891023 046 0.4- | 2.0- | 891104 364 0.5+ | 0.3- |
| 890930 675 0.0 | 0.0 | 891023 046 0.1- | 2.1- | 891104 095 1.9+ | 0.3+ |
| 890930 400 1.1- | 2.3+ | 891023 095 (2.8+ | 1.9-) | 891104 095 1.1+ | 0.4+ |
| 890930 400 0.5+ | 0.7+ | 891023 095 1.0+ | 0.2- | 930910 413 0.0 | 0.6- |
| 890930 400 (0.6+ | 3.1+) | 891024 046 1.8- | 1.5- | 930910 413 1.5+ | 0.5- |
| 891008 400 0.4+ | 0.0 | 891024 046 1.1- | 2.0- | 930916 400 0.6- | 0.8+ |
| 891008 400 0.2- | 1.0+ | 891025 400 0.6+ | 0.7+ | 930916 400 0.4+ | 0.0 |
| 891008 400 0.5+ | 0.4- | 891025 400 0.7+ | 0.8+ | 930919 400 0.5- | 1.3- |
| 891010 400 1.4+ | 0.5+ | 891102 403 0.5+ | 2.3+ | 930919 400 0.1+ | 1.0+ |
| 891010 400 0.3+ | 0.3+ | 891102 403 0.2- | 1.5+ | 931009 376 0.3- | 0.6+ |
| 891021 400 (3.0+ | 2.8+) | 891102 364 0.0 | 0.9+ | 931009 376 0.5- | 0.7+ |
| 891021 400 (2.0+ | 4.0+) | 891102 364 1.2+ | 0.3- | 931010 376 0.0 | 0.4+ |
| 891021 400 (3.5+ | 4.5+) | 891104 403 0.3+ | 0.9+ | 931010 376 0.1- | 0.9- |
| 891022 046 1.7- | 2.0- | 891104 403 1.9- | 0.9+ | | |
| 891022 046 2.2- | 2.2- | 891104 364 0.2- | 0.1+ | | |

1989 SF₁ = 1993 QL₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Bowell | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | (2000.0) | P | Q |
| <i>n</i> | 0.23207162 | ω 129.29527 | +0.34152257 +0.93872914 |
| <i>a</i> | 2.6225354 | Ω 160.52164 | -0.89945194 +0.34074889 |
| <i>e</i> | 0.1431293 | <i>i</i> 7.99306 | -0.27266929 +0.05174746 |
| <i>P</i> | 4.25 | <i>H</i> 14.0 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | |
|-----------------|------|-----------------|------|-----------------|------|
| 890926 809 0.4+ | 0.7- | 891007 809 0.6- | 0.8- | 930816 010 0.2+ | 0.6+ |
| 890926 809 0.1+ | 0.7- | 891007 809 1.0- | 0.3- | 930816 010 0.7+ | 0.3+ |
| 890926 809 0.7- | 1.7- | 891007 809 2.1- | 0.7- | 930816 010 0.2- | 0.3+ |
| 890928 809 1.1+ | 1.4+ | 891008 809 1.1+ | 0.7+ | 930817 010 0.7- | 1.2- |

890928 809 0.0 1.6+ 891008 809 1.3+ 0.1-
 890928 809 0.6- 1.0+ 891008 809 1.1+ 0.3+

1989 TT = 1993 SW₂

Id. K. Watanabe, R. H. McNaught

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 14.15398 | (2000.0) | | P | Q |
| <i>n</i> | 0.23570933 | ω | 221.31067 | +0.81802358 | -0.57422945 |
| <i>a</i> | 2.5954831 | Ω | 173.47580 | +0.57386299 | +0.81088533 |
| <i>e</i> | 0.2811187 | <i>i</i> | 16.95537 | +0.03897042 | +0.11280745 |
| <i>P</i> | 4.18 | <i>H</i> | 13.5 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|------|------|------------|-------|-------|
| 891001 675 | 1.1- | 0.5- | 891028 675 | 0.3+ | 1.8- | 930919 400 | 0.1+ | 0.8+ |
| 891001 675 | 0.6- | 1.2- | 891129 675 | 0.2- | 0.1- | 930921 400 | 0.6- | 1.5- |
| 891005 675 | 1.2+ | 0.8+ | 891202 675 | 0.2+ | 0.4+ | 930921 400 | 1.1- | 0.4+ |
| 891005 675 | (3.8- | 0.1+) | 930912 413 | 1.4+ | 0.2+ | 930923 413 | 1.1+ | 0.5+ |
| 891026 675 | 0.7+ | 1.2+ | 930912 413 | 0.6+ | 1.5+ | 930923 413 | (0.6+ | 2.8+) |
| 891026 675 | 0.6- | 1.0+ | 930919 400 | 1.6- | 1.5- | | | |

1989 TJ₁ = 1992 HU₅

Id. E. Bowell (1951, 1954 observations), G. V. Williams

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 324.48928 | (2000.0) | | P | Q |
| <i>n</i> | 0.20903132 | ω | 70.94324 | +0.91329022 | -0.40674256 |
| <i>a</i> | 2.8118694 | Ω | 313.05067 | +0.36177591 | +0.83429491 |
| <i>e</i> | 0.0913121 | <i>i</i> | 1.68457 | +0.18713411 | +0.37217267 |
| <i>P</i> | 4.72 | <i>H</i> | 12.5 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------|------|
| 510806 675 | 0.2- | 0.7- | 891009 391 | 0.1+ | 2.3+ | 891102 391 | 1.5- | 0.8+ |
| 510806 675 | 0.5+ | 0.0 | 891028 807 | 0.0 | 0.8- | 891104 391 | 0.5- | 0.6+ |
| 540402 675 | 0.1+ | 0.0 | 891029 391 | 1.9+ | 0.3- | 891104 391 | 1.4+ | 0.7+ |
| 891002 807 | 0.3+ | 0.9- | 891029 391 | 0.1- | 0.1+ | 891129 888 | 0.5- | 0.1- |
| 891004 807 | 0.4+ | 0.8- | 891030 391 | (3.8- | 0.9+) | 891129 888 | 0.9- | 1.2- |
| 891008 391 | (5.7+ | 0.5+) | 891030 391 | (3.2- | 1.9-) | 920425 809 | 0.1- | 1.6+ |
| 891008 391 | (4.1+ | 1.4-) | 891031 807 | 0.1+ | 1.2- | 920425 809 | 0.3+ | 0.4+ |
| 891009 391 | 0.9- | 2.1+ | 891102 391 | 1.0- | 0.7+ | 920425 809 | 0.6+ | 0.0 |

1990 SS₅ = 1979 OP₄ = 1993 OC₉

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | | | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 300.00077 | (2000.0) | | P | Q |
| <i>n</i> | 0.28079950 | ω | 331.23777 | +0.31845633 | -0.94743977 |
| <i>a</i> | 2.3096092 | Ω | 100.17869 | +0.87557954 | +0.28157702 |
| <i>e</i> | 0.1859024 | <i>i</i> | 1.78830 | +0.36324376 | +0.15189554 |
| <i>P</i> | 3.51 | <i>H</i> | 15.0 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 790724 675 | 0.3+ | 2.0+ | 900922 809 | 1.1+ | 0.1- | 930720 809 | 0.4+ | 0.9- |
| 790724 413 | 0.9- | 1.4- | 900922 809 | 0.2+ | 0.3+ | 930720 809 | 0.3- | 0.7- |
| 790725 675 | 0.2+ | 1.0+ | 900922 809 | 0.5+ | 0.7- | 930720 809 | 0.3- | 0.4- |
| 900915 809 | 0.1- | 0.8- | 900925 809 | 0.9- | 0.9+ | 930724 809 | 0.4+ | 0.6+ |
| 900915 809 | 0.2+ | 0.3- | 900925 809 | 0.3- | 1.0+ | | | |
| 900915 809 | 0.0 | 0.5- | 900925 809 | 0.6- | 0.2+ | | | |

1990 TL₆ = 1993 OW₈

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | | | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 20.57803 | (2000.0) | | P | Q |
| <i>n</i> | 0.30845493 | ω | 50.34324 | +0.99740580 | +0.05003081 |
| <i>a</i> | 2.1694097 | Ω | 306.72777 | -0.06753863 | +0.89916019 |
| <i>e</i> | 0.1758552 | <i>i</i> | 3.70239 | +0.02490400 | +0.43475035 |
| <i>P</i> | 3.20 | <i>H</i> | 14.5 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 900911 657 | 0.0 | 0.4- | 900920 675 | 1.4+ | 0.6- | 901009 413 | 0.3+ | 1.9+ |
| 900911 657 | 0.7- | 1.5+ | 900920 675 | 0.1- | 0.8+ | 901011 413 | 0.2- | 1.9+ |
| 900915 675 | 0.1- | 1.1+ | 900922 095 | 1.1- | 1.2- | 930720 809 | 0.1- | 0.0 |
| 900915 675 | 0.1- | 1.1+ | 900922 095 | 1.0- | 4.2- | 930720 809 | 0.4- | 0.2+ |
| 900916 675 | 1.4+ | 1.3+ | 900924 095 | 0.7+ | 1.0- | 930720 809 | 1.2- | 0.0 |
| 900916 675 | 2.0+ | 0.8+ | 900924 095 | 0.5- | 0.8- | 930724 809 | 1.7+ | 0.0 |
| 900918 095 | 0.4+ | 0.4- | 900926 095 | 0.1+ | 0.4- | | | |
| 900918 095 | 1.0- | 1.2- | 900926 095 | 1.4- | 0.3+ | | | |

1990 TT₁₂ = 1962 CX

Id. G. V. Williams, L. D. Schmadel

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 324.74672 | (2000.0) | | P | Q |
| <i>n</i> | 0.19827050 | ω | 321.90118 | +0.79897009 | +0.60137052 |
| <i>a</i> | 2.9127104 | Ω | 1.13111 | -0.54486029 | +0.72426869 |
| <i>e</i> | 0.0611057 | <i>i</i> | 1.55772 | -0.25450747 | +0.33732532 |
| <i>P</i> | 4.97 | <i>H</i> | 12.5 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------|------|
| 620210 033 | 1.4- | 0.6+ | 901113 675 | (0.1+ | 2.0-) | 910115 033 | 0.6- | 0.4+ |
| 620210 033 | 1.5+ | 0.0 | 901114 675 | (0.9+ | 3.1-) | 910116 033 | 0.4- | 0.4+ |
| 901014 033 | 0.9- | 1.2- | 901114 675 | (0.0 | 3.0-) | 910118 033 | 0.1+ | 0.9+ |
| 901015 033 | 0.2+ | 0.0 | 901115 887 | 2.3+ | 0.6+ | 920226 691 | 0.0 | 0.4- |
| 901015 033 | 0.2+ | 0.6- | 901115 887 | 1.3- | 0.9- | 920226 691 | 0.5- | 0.4- |
| 901018 033 | 1.2+ | 1.3- | 901121 887 | 0.2- | 0.5+ | 920226 691 | 0.0 | 0.7- |
| 901018 033 | 0.3+ | 0.9- | 901121 887 | 1.2- | 1.4+ | | | |
| 901113 675 | (0.1+ | 3.6-) | 910114 033 | 0.2- | 0.5+ | | | |

1990 VB₁₄ = 1993 OY₈

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | | | |
|----------|------------|----------|-----------|-------------|-------------|
| <i>M</i> | 314.31660 | (2000.0) | | P | Q |
| <i>n</i> | 0.26130357 | ω | 123.95564 | +0.53517877 | -0.84434412 |
| <i>a</i> | 2.4231064 | Ω | 293.66784 | +0.76543400 | +0.49763933 |
| <i>e</i> | 0.2006117 | <i>i</i> | 1.61548 | +0.35734365 | +0.19859029 |
| <i>P</i> | 3.77 | <i>H</i> | 13.5 | <i>G</i> | 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 901114 095 | 0.4- | 0.1- | 901120 095 | 1.4+ | 1.3+ | 930720 809 | 0.8+ | 0.9- |
| 901114 095 | 1.0- | 0.2- | 901120 095 | 1.0+ | 0.4- | 930720 809 | 0.4- | 0.8- |
| 901118 049 | 0.2- | 0.3+ | 901220 049 | 0.1- | 1.7- | 930720 809 | 1.0- | 0.7- |
| 901118 049 | 0.5- | 0.3+ | 901220 049 | 0.2- | 0.1- | 930724 809 | 0.7+ | 1.8+ |

1990 WT₆ = 3344 T-1 = 1993 PM₅

Id. E. Bowell (k), G. V. Williams

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 345.33843 | (2000.0) | |
| <i>n</i> | 0.28519530 | ω 241.12121 | +0.57299083 -0.81951492 |
| <i>a</i> | 2.2858153 | Ω 173.89758 | +0.77772550 +0.54033731 |
| <i>e</i> | 0.1534740 | <i>i</i> 4.72884 | +0.25850447 +0.19086876 |
| <i>P</i> | 3.46 | <i>H</i> 15.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 710326 675 | 0.2- | 0.4- | 901121 809 | 0.8- | 0.1- | 930815 010 | 1.2- | 0.3- |
| 710326 675 | 0.4- | 0.1- | 901121 809 | 1.4- | 0.1- | 930816 010 | 0.1+ | 1.6- |
| 710327 675 | 0.5+ | 2.0- | 901122 809 | 1.5+ | 0.5+ | 930816 010 | 0.1+ | 0.1- |
| 710402 675 | 0.6- | 0.7+ | 901122 809 | 0.2- | 0.1+ | 930816 010 | 0.3- | 1.8- |
| 901116 809 | 0.1+ | 2.1- | 901122 809 | 0.2+ | 0.6+ | 930918 691 | 1.2+ | 0.9+ |
| 901121 809 | 0.6+ | 0.1- | 930815 010 | 0.5- | 0.3+ | 930918 691 | 1.2+ | 1.2+ |

1990 YC = 1988 FU₁ = 1993 TU₁

Id. K. Watanabe (k), S. Nakano

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 14.82017 | (2000.0) | |
| <i>n</i> | 0.29832177 | ω 335.95994 | +0.52751641 -0.84819774 |
| <i>a</i> | 2.2182616 | Ω 82.17053 | +0.78705568 +0.46674910 |
| <i>e</i> | 0.1600519 | <i>i</i> 2.76691 | +0.31979649 +0.25041141 |
| <i>P</i> | 3.30 | <i>H</i> 13.9 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|-------|-------|------------|------|------|
| 880318 033 | 0.5- | 0.0 | 910105 399 | 2.3- | 0.0 | 931015 400 | 0.9- | 2.1- |
| 880318 033 | 0.6+ | 0.1+ | 910105 399 | 1.5- | 0.7+ | 931016 400 | 0.8- | 0.1- |
| 901217 399 | 1.2- | 0.1+ | 910114 399 | 0.5- | 0.7+ | 931016 400 | 0.3+ | 0.5+ |
| 901217 399 | 2.2+ | 0.2- | 910114 399 | 2.4+ | 1.1+ | 931016 367 | 0.6- | 0.5+ |
| 901217 399 | 0.2- | 0.4- | 910114 399 | (3.6+ | 0.7+) | 931016 367 | 1.3- | 0.7- |
| 901219 399 | 0.9+ | 1.2- | 910117 046 | 0.0 | 1.0+ | 931017 367 | 1.0+ | 1.3+ |
| 901219 399 | 1.7+ | 2.5- | 910117 046 | 0.0 | 0.1- | 931017 367 | 1.6+ | 0.8+ |
| 910105 399 | 1.6- | 0.4+ | 931015 400 | 0.5+ | 0.4+ | | | |

1991 AL₃ = 1974 SL₄ = 1989 RD₄ = 1993 RJ₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 83.35469 | (2000.0) | |
| <i>n</i> | 0.25848568 | ω 347.61080 | +0.57495569 +0.81772645 |
| <i>a</i> | 2.4406850 | Ω 317.47740 | -0.74717061 +0.51112432 |
| <i>e</i> | 0.1738598 | <i>i</i> 2.32130 | -0.33340970 +0.26471756 |
| <i>P</i> | 3.81 | <i>H</i> 13.2 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 740925 095 | 0.2+ | 0.6- | 910115 033 | 0.0 | 0.1- | 930916 400 | 1.1- | 0.2- |
| 890908 095 | 0.5- | 1.2+ | 910116 033 | 0.3- | 0.4+ | 930916 400 | 1.1- | 0.6- |
| 910109 033 | 0.2+ | 0.3+ | 930915 400 | 1.2+ | 0.4- | 930918 400 | 2.7+ | 1.1+ |
| 910115 033 | 0.1+ | 0.2+ | 930915 400 | 1.0- | 1.2- | 930918 400 | 0.5- | 0.9+ |

1991 BD = 1982 RM₂ = 1993 SX₃

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Urata | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 9.64644 | (2000.0) | |
| <i>n</i> | 0.27209497 | ω 121.79129 | +0.70564448 -0.70170399 |
| <i>a</i> | 2.3586077 | Ω 282.98388 | +0.61117921 +0.67300932 |
| <i>e</i> | 0.0941597 | <i>i</i> 5.79415 | +0.35850500 +0.23381611 |
| <i>P</i> | 3.62 | <i>H</i> 13.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|--------------|------|------|
| 820912 095 | 0.2- | 0.5+ | 910118 889 | 0.6+ | 0.4- | Y 910208 889 | 0.9- | 0.2+ |
| 901219 372 | 0.2- | 0.5+ | 910118 511 | 0.9+ | 1.9- | 910208 889 | 0.3+ | 1.3+ |
| 901219 372 | 1.2- | 0.8+ | 910119 511 | (3.0- | 1.2+) | 930925 385 | 0.4- | 0.7- |
| 901227 372 | (2.8+ | 0.3+) | 910119 511 | 1.9- | 1.1+ | 930925 385 | 0.2+ | 0.7- |
| 901227 372 | 2.2+ | 0.1+ | 910120 889 | 0.4- | 1.3+ | 930925 385 | 0.1- | 0.2- |
| 910118 511 | 0.1- | 0.8- | 910120 889 | 1.3+ | 1.5+ | 931012 385 | 0.1+ | 0.2+ |
| 910118 511 | 1.8+ | 2.2- | 910120 511 | 0.6- | 0.1- | 931012 385 | 0.3- | 0.2+ |
| 910118 889 | 0.8- | 0.3- | 910120 511 | 0.9- | 0.7- | 931012 385 | 0.6+ | 0.6+ |

1991 DO = 1978 LU = 1988 RX₉Id. T. Urata (*MPC* 18128), S. Nakano

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 173.84925 | (2000.0) | |
| <i>n</i> | 0.21525234 | ω 247.10812 | -0.72197743 +0.68934435 |
| <i>a</i> | 2.7574277 | Ω 336.33335 | -0.56787595 -0.63956236 |
| <i>e</i> | 0.0917820 | <i>i</i> 8.53953 | -0.39530432 -0.34024161 |
| <i>P</i> | 4.58 | <i>H</i> 12.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|--------------|------|------|
| 780608 809 | 0.1- | 0.6- | 910210 372 | (4.3- | 4.6-) | 930925 385 | 0.7- | 0.4+ |
| 880910 809 | 0.6- | 0.1- | 910219 889 | 0.2- | 1.4+ | Y 930925 385 | 0.3- | 0.1- |
| 880910 809 | 0.3- | 0.2- | 910219 889 | 1.0- | 0.7+ | 930925 385 | 0.4+ | 1.0- |
| 880910 809 | 0.0 | 0.2- | 910221 889 | 0.8- | 0.9- | 931012 385 | 0.7+ | 0.5- |
| 880913 809 | 0.4- | 1.0+ | 910221 889 | 1.9+ | 0.6+ | 931012 385 | 0.2+ | 0.2- |
| 880913 809 | 0.2- | 1.2+ | 910223 889 | 1.4+ | 0.0 | 931012 385 | 0.5+ | 0.0 |
| 880913 809 | 0.1- | 1.2+ | 910223 889 | 0.3- | 0.0 | | | |
| 910210 372 | (4.4- | 3.6-) | 910309 889 | (4.7+ | 1.5+) | | | |

1991 FJ = 1975 FA₁ = 1977 RT₂ = 1980 DP₃ = 1985 BF₂ = 1986 GF₂ = 1993 RN₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 171.09541 | (2000.0) | |
| <i>n</i> | 0.18487792 | ω 221.26650 | -0.86680747 +0.49763519 |
| <i>a</i> | 3.0517294 | Ω 348.45195 | -0.40583059 -0.74096558 |
| <i>e</i> | 0.0341069 | <i>i</i> 9.10716 | -0.28973494 -0.45092042 |
| <i>P</i> | 5.33 | <i>H</i> 12.5 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|--------------|------|------|
| 750317 095 | 3.2- | 0.6+ | 910312 511 | 1.7- | 1.2+ | 930915 691 | 0.5- | 0.0 |
| 770909 095 | 1.5+ | 0.9+ | 910315 511 | 0.7- | 0.3+ | 930915 691 | 0.6- | 0.0 |
| 800220 095 | 2.3+ | 0.8- | 910315 511 | 1.2+ | 1.6- | 930915 691 | 0.7- | 0.0 |
| 850121 688 | (4.5- | 0.1-) | 910317 894 | 2.4+ | 0.7+ | Y 930915 098 | 1.0+ | 0.4+ |
| 850121 688 | 0.9- | 0.2- | 910320 894 | 1.3+ | 0.7+ | 930915 098 | 1.0+ | 1.1+ |
| 860411 413 | 0.2- | 0.6- | 910323 894 | (2.6+ | 5.3+) | 930920 691 | 1.1- | 0.5- |
| 860411 413 | 0.4+ | 0.8- | 910403 894 | 1.2+ | 0.0 | 930920 691 | 1.1- | 0.1- |
| 910311 511 | 0.9- | 1.7+ | 910403 894 | (3.3+ | 0.3+) | 930920 691 | 0.7- | 0.2- |

1991 FJ₁ = 1978 GR₄ = 1993 SL₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nakano | |
|----------|------------|--------------------|-------------------------|
| <i>M</i> | 294.07172 | (2000.0) | |
| <i>n</i> | 0.22429821 | ω 280.00202 | -0.49241358 -0.86716887 |
| <i>a</i> | 2.6827828 | Ω 200.03005 | +0.85917467 -0.47062610 |
| <i>e</i> | 0.1303778 | <i>i</i> 12.55910 | +0.13909621 -0.16287792 |
| <i>P</i> | 4.39 | <i>H</i> 12.2 | <i>G</i> 0.15 |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|-------|-------|
| 780411 095 | 0.2+ | 1.4+ | 910409 402 | 1.0+ | 0.0 | 910416 402 | 0.9- | 0.0 |
| 910318 402 | 0.8- | 0.4- | 910409 402 | 0.4- | 0.6+ | 930916 400 | (5.7+ | 3.6+) |
| 910318 402 | 0.9+ | 0.8+ | 910414 402 | 1.0- | 1.5- | 930916 400 | 0.6+ | 0.0 |
| 910403 402 | 0.3+ | 0.1- | 910414 402 | 0.4- | 0.2- | 930919 400 | 1.0- | 0.3- |
| 910403 402 | 1.1+ | 0.4- | 910416 402 | 0.4- | 2.0- | 930919 400 | 0.8+ | 1.7- |

1991 GK₄ = 1993 TV

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Nomura | | | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 9.58382 | (2000.0) | P | Q | |
| <i>n</i> | 0.20674006 | ω 172.09233 | +0.72350138 | -0.69015271 | |
| <i>a</i> | 2.8326068 | Ω 231.56164 | +0.63228310 | +0.67142089 | |
| <i>e</i> | 0.0791640 | <i>i</i> 1.12137 | +0.27706286 | +0.26996892 | |
| <i>P</i> | 4.77 | <i>H</i> 13.5 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 910408 809 | 0.5+ | 0.2+ | 910410 809 | 0.7- | 0.2- | 910419 809 | 0.0 | 1.6- |
| 910408 809 | 0.5+ | 0.6- | 910410 809 | 0.1+ | 1.6+ | 910419 809 | 0.3+ | 1.5- |
| 910408 809 | 1.1- | 0.8- | 910410 809 | 0.1- | 0.9+ | 931011 400 | 0.1+ | 0.9- |
| 910408 809 | 1.0+ | 0.3- | 910410 809 | 0.1+ | 1.1+ | 931011 400 | 1.3+ | 0.4+ |
| 910408 809 | 0.6+ | 0.9- | 910419 809 | 1.1+ | 1.4+ | 931012 400 | 1.0- | 2.4+ |
| 910408 809 | 0.3+ | 0.9- | 910419 809 | 1.8- | 1.8+ | 931012 400 | 0.5- | 1.9- |
| 910410 809 | 0.6- | 0.2+ | 910419 809 | 0.1+ | 0.7+ | | | |
| 910410 809 | 1.3- | 0.1+ | 910419 809 | 1.0+ | 1.5- | | | |

1992 BB

Id. R. H. McNaught (1993 observations)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 258.09122 | (2000.0) | P | Q | |
| <i>n</i> | 0.38180806 | ω 330.33751 | -0.92881276 | -0.32388868 | |
| <i>a</i> | 1.8817965 | Ω 194.67319 | +0.24697913 | -0.90326572 | |
| <i>e</i> | 0.2668860 | <i>i</i> 45.28681 | -0.27623933 | +0.28143768 | |
| <i>P</i> | 2.58 | <i>H</i> 15.5 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|-------|-------|
| 920125 413 | 0.4+ | 0.5+ | 920212 413 | 0.2- | 0.0 | 920524 413 | 0.3- | 1.0+ |
| 920125 413 | 1.1- | 0.8- | 920212 413 | 0.2- | 0.2- | 920524 413 | (0.3+ | 2.8-) |
| 920129 413 | 0.1+ | 0.6- | 920331 474 | 0.3+ | 0.3- | 930923 413 | 0.3+ | 0.3- |
| 920205 474 | 0.3- | 0.2+ | 920331 474 | 1.3+ | 0.5+ | 930923 413 | 0.6+ | 0.2- |
| 920205 474 | 1.1+ | 1.1+ | 920422 413 | 0.1- | 0.5- | 930923 413 | 0.6+ | 0.1+ |
| 920211 413 | 0.1- | 0.1+ | 920422 413 | 0.0 | 0.7- | 930923 413 | 1.2- | 0.4+ |
| 920211 413 | 0.2- | 0.1+ | 920422 413 | 0.2- | 0.7- | 930923 413 | 0.4+ | 0.3- |
| 920211 413 | 0.1- | 0.2+ | 920423 413 | 0.3- | 0.1+ | 930924 413 | 0.1- | 0.2+ |
| 920212 413 | 0.2- | 0.0 | 920423 413 | 0.2+ | 0.4+ | 930924 413 | 0.7- | 0.1- |

1992 BO = 1989 LN₁ = 1990 TS₁₄

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 136.76456 | (2000.0) | P | Q | |
| <i>n</i> | 0.29346616 | ω 213.15330 | -0.60550019 | +0.79535616 | |
| <i>a</i> | 2.2426630 | Ω 19.62752 | -0.71091893 | -0.52479920 | |
| <i>e</i> | 0.1102191 | <i>i</i> 4.76350 | -0.35772029 | -0.30330575 | |
| <i>P</i> | 3.36 | <i>H</i> 13.5 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 890603 675 | 1.7+ | 0.6+ | 920128 399 | 1.8+ | 0.3+ | 920205 399 | 0.3+ | 0.2- |
| 890603 675 | 0.4+ | 1.1- | 920128 399 | 2.3- | 1.2+ | 920205 399 | 1.3+ | 0.9- |
| 890605 675 | 1.5- | 0.3- | 920129 399 | 2.1- | 0.5- | 920208 399 | 1.8- | 0.1- |

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 890605 675 | 1.3- | 0.4- | 920129 399 | 1.7- | 1.6+ | 920208 399 | 0.1- | 0.8- |
| 901015 046 | 0.3- | 2.0- | 920204 894 | 1.0+ | 0.2+ | 920222 399 | 1.3- | 0.3- |
| 901015 046 | 1.1+ | 0.6+ | 920204 894 | 1.6+ | 0.8- | 920222 399 | 2.9+ | 0.2- |

1992 CH₁

Id. G. J. Garradd (1993 observations)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Williams | | | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 352.68075 | (2000.0) | P | Q | |
| <i>n</i> | 0.47597472 | ω 355.47831 | -0.78517276 | -0.58411014 | |
| <i>a</i> | 1.6246013 | Ω 145.97343 | +0.57908134 | -0.81024434 | |
| <i>e</i> | 0.2891526 | <i>i</i> 21.56938 | +0.21947333 | +0.04816079 | |
| <i>P</i> | 2.07 | <i>H</i> 18.0 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------|------|
| 920208 493 | (0.4+ | 2.9+) | 920212 493 | 0.4+ | 1.7+ | 920411 493 | 0.5+ | 0.4- |
| 920209 493 | (3.8- | 3.1-) | 920212 493 | (0.7+ | 2.5+) | 930924 413 | 0.8- | 0.8+ |
| 920209 493 | (3.3- | 0.5-) | 920215 493 | 0.9- | 0.5+ | 930924 413 | 0.6- | 0.5+ |
| 920211 493 | 1.5+ | 0.3- | 920215 493 | 0.7- | 0.5+ | 930925 413 | 0.7+ | 0.2+ |
| 920211 493 | 0.2+ | 1.0- | 920313 493 | 0.3- | 0.6+ | 930925 413 | 0.1+ | 0.1- |
| 920211 493 | 1.2+ | 1.5- | 920313 493 | 0.7- | 1.0+ | 930925 413 | 0.2+ | 0.2+ |
| 920211 493 | 0.5- | 0.5- | 920411 493 | 0.8- | 0.3+ | | | |

1992 CA₂ = 1993 OY₇

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Marsden | | | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 248.45309 | (2000.0) | P | Q | |
| <i>n</i> | 0.28893539 | ω 328.88571 | -0.32240390 | -0.94538188 | |
| <i>a</i> | 2.2660469 | Ω 139.86657 | +0.88309408 | -0.31866538 | |
| <i>e</i> | 0.0543935 | <i>i</i> 4.27514 | +0.34088205 | -0.06859645 | |
| <i>P</i> | 3.41 | <i>H</i> 13.5 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 920212 303 | 0.8+ | 0.8- | 920228 691 | 0.0 | 0.1+ | 930720 809 | 0.4- | 0.7+ |
| 920213 303 | 1.1- | 0.3+ | 920228 691 | 0.1+ | 0.0 | 930720 809 | 0.1- | 0.6+ |
| 920228 691 | 0.1+ | 0.3+ | 930720 809 | 0.4- | 1.1+ | 930724 809 | 1.0+ | 2.6- |

1992 HL = 1972 TP₉

Id. G. V. Williams

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | Bardwell | | | |
|----------|------------|--------------------|---------------|-------------|--|
| <i>M</i> | 137.21675 | (2000.0) | P | Q | |
| <i>n</i> | 0.23395407 | ω 61.63683 | -0.36180953 | +0.93149713 | |
| <i>a</i> | 2.6084488 | Ω 187.45128 | -0.92407212 | -0.36366280 | |
| <i>e</i> | 0.2015500 | <i>i</i> 16.81242 | -0.12322572 | -0.00790323 | |
| <i>P</i> | 4.21 | <i>H</i> 13.0 | <i>G</i> 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|-------|-------|--------------|------|------|
| 721009 033 | 0.7+ | 1.4+ | 920501 675 | 0.7- | 1.0- | 920726 801 | 0.2- | 0.1- |
| 721009 033 | 0.5+ | 0.3- | 920501 675 | 0.8+ | 0.8+ | 920726 801 | 0.1- | 0.1- |
| 721009 033 | 0.5- | 0.3- | 920505 896 | (1.3+ | 4.0-) | Y 930912 801 | 0.2+ | 0.0 |
| 721009 033 | 0.7- | 0.9- | 920505 896 | (3.3- | 1.0-) | Y 930912 801 | 0.1+ | 0.1+ |
| 920430 896 | 1.5- | 0.3- | 920511 896 | 0.2+ | 0.2- | 930920 801 | 0.3- | 0.2+ |
| 920430 896 | 0.0 | 0.9+ | 920524 896 | 1.4+ | 0.0 | | | |

1992 LU

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Bardwell

| <i>M</i> | 189.95578 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.23647200 | ω 16.21707 | -0.97936626 | +0.20105309 |
| <i>a</i> | 2.5898994 | Ω 175.23744 | -0.20171425 | -0.96629289 |
| <i>e</i> | 0.1087495 | <i>i</i> 14.27967 | -0.01237317 | -0.16079706 |
| <i>P</i> | 4.17 | <i>H</i> 13.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 920604 675 | 0.3+ | 0.8- | 920628 675 | 0.4- | 0.5- | 930912 801 | 0.2+ | 0.1- |
| 920604 675 | 0.4+ | 1.2+ | 920629 675 | 0.0 | 0.2+ | 930912 801 | 0.2+ | 0.2- |
| 920627 675 | 1.8- | 0.5- | 920629 675 | 0.4+ | 0.3- | 930920 801 | 0.4- | 0.2+ |
| 920627 675 | 0.7+ | 0.3+ | 920821 413 | 0.3+ | 0.4+ | | | |
| 920628 675 | 0.0 | 0.0 | 920821 413 | 0.2+ | 0.5+ | | | |

1992 SO₂₄ = 1981 WY₈ = 1991 LY₃

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 3.50077 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.25463618 | ω 272.04730 | -0.63942703 | -0.76498287 |
| <i>a</i> | 2.4652217 | Ω 218.06259 | +0.74571259 | -0.59266628 |
| <i>e</i> | 0.0840685 | <i>i</i> 7.17785 | +0.18720524 | -0.25208705 |
| <i>P</i> | 3.87 | <i>H</i> 14.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 811125 095 | 0.0 | 0.3- | 910608 809 | 0.4- | 0.2- | 920925 033 | 0.3- | 1.1+ |
| 910606 809 | 0.1+ | 0.4+ | 920907 033 | 0.7- | 0.5- | 920926 033 | 0.4+ | 0.7+ |
| 910606 809 | 0.3- | 0.7+ | 920907 033 | 0.8- | 1.1- | 920927 033 | 0.1- | 0.3+ |
| 910606 809 | 0.3+ | 0.3- | 920921 033 | 0.2+ | 0.5- | 920928 033 | 0.1+ | 0.4- |
| 910608 809 | 0.1+ | 0.1- | 920921 033 | 1.1+ | 0.1+ | | | |
| 910608 809 | 0.2+ | 0.7- | 920922 033 | 0.0 | 0.3+ | | | |

1992 SP₂₄ = 1980 PP₃ = 1981 UH₂₉ = 1987 WC₄

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 15.39641 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.17263031 | ω 193.06159 | +0.05431732 | -0.99498533 |
| <i>a</i> | 3.1944151 | Ω 253.87243 | +0.92380772 | +0.08199881 |
| <i>e</i> | 0.1592648 | <i>i</i> 5.01564 | +0.37898407 | -0.05727470 |
| <i>P</i> | 5.71 | <i>H</i> 13.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|-------|-------|------------|------|------|
| 800803 675 | 0.5- | 0.3- | 871119 054 | 0.1- | 0.6- | 920921 033 | 0.3+ | 0.0 |
| 800805 675 | 0.7+ | 0.2- | 871124 688 | 0.1- | 1.0+ | 920922 033 | 0.5+ | 0.1+ |
| 811024 675 | 0.7+ | 0.9+ | 871124 688 | (3.8- | 4.1-) | 920925 033 | 0.3+ | 0.2+ |
| 811025 675 | 0.2- | 0.6- | 920907 033 | 0.6- | 0.2+ | 920926 033 | 0.5+ | 1.0- |
| 811026 675 | 0.5- | 0.4- | 920907 033 | 0.8- | 0.2- | 920927 033 | 0.2- | 0.2+ |
| 871119 054 | 0.3+ | 0.6- | 920921 033 | 0.3- | 0.8+ | 920928 033 | 0.1- | 0.1+ |

1993 HL₆ = 1967 GF = 1990 KH₃ = 1991 UL

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Ichikawa

| <i>M</i> | 87.58204 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.30281479 | ω 345.41558 | -0.93051044 | +0.35816067 |
| <i>a</i> | 2.1962646 | Ω 215.87082 | -0.32158318 | -0.89905071 |
| <i>e</i> | 0.1436223 | <i>i</i> 7.51392 | -0.17531283 | -0.25185067 |
| <i>P</i> | 3.25 | <i>H</i> 13.1 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 670406 095 | 0.2- | 0.7- | 911028 399 | 1.6+ | 0.9- | 930420 809 | 0.4- | 0.4+ |
| 900522 095 | 1.5- | 1.8+ | 911029 399 | 0.3- | 1.7+ | 930421 809 | 0.6- | 0.9+ |

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------|------|
| 900522 095 | 1.4+ | 1.7- | 911029 399 | 0.5- | 0.3- | 930421 809 | 0.8- | 1.7+ |
| 911018 399 | 0.2+ | 1.7- | 911031 399 | 2.3- | 1.8+ | 930423 809 | 1.4+ | 1.0+ |
| 911018 399 | 0.4+ | 2.8- | 911031 399 | (3.4- | 2.7+) | 930424 809 | 0.9+ | 0.9+ |
| 911019 399 | (1.9- | 3.3-) | 930417 809 | 2.2- | 0.6- | 930426 809 | 0.7+ | 0.5- |
| 911019 399 | (2.1- | 3.3-) | 930418 809 | 0.9- | 1.1- | 930426 809 | 0.3+ | 0.3- |
| 911028 399 | 0.8+ | 2.1+ | 930418 809 | 0.9+ | 1.4- | 930427 809 | 0.9+ | 0.4- |

1993 MF

Id. E. F. Helin (1989 observations)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 51.48561 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.25791419 | ω 74.76153 | +0.71026832 | +0.69320586 |
| <i>a</i> | 2.4442890 | Ω 241.17421 | -0.68751470 | +0.64579840 |
| <i>e</i> | 0.5317100 | <i>i</i> 8.03192 | -0.15113716 | +0.32001572 |
| <i>P</i> | 3.82 | <i>H</i> 14.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|------|------|------------|------|------|
| 890502 675 | 0.5+ | 0.9+ | 930720 107 | 0.6- | 0.2+ | 930818 104 | 0.5- | 0.1- |
| 890502 675 | 2.0+ | 1.1- | 930722 303 | 0.2+ | 0.1+ | 930818 108 | 0.6+ | 1.1+ |
| 890504 675 | 0.6+ | 0.1+ | 930722 303 | 1.0+ | 0.6+ | 930818 108 | 0.3- | 0.5+ |
| 890504 675 | 1.3- | 1.7+ | 930722 303 | 1.7+ | 1.6+ | 930818 108 | 0.3- | 0.5+ |
| 890603 675 | 0.6- | 1.1- | 930723 801 | 0.4+ | 0.1- | 930820 801 | 0.1- | 0.2+ |
| 890603 675 | 0.7- | 0.5- | 930723 801 | 0.4+ | 0.0 | 930820 801 | 0.2- | 0.0 |
| 890605 675 | 1.0- | 1.6- | 930723 587 | 0.6+ | 0.3- | 930820 675 | 0.7- | 0.0 |
| 890605 675 | (0.3+ | 3.7-) | 930723 587 | 0.3+ | 0.1- | 930820 675 | 1.8- | 1.6+ |
| 930622 675 | (3.3+ | 2.6+) | 930723 587 | 0.4+ | 0.6- | 930820 108 | 0.1- | 0.1- |
| 930622 675 | 0.8+ | 0.1+ | 930723 107 | 0.7+ | 0.0 | 930820 108 | 0.1+ | 0.2- |
| 930624 675 | 1.1- | 0.6+ | 930723 107 | 0.8+ | 0.8- | 930820 108 | 0.5- | 0.6- |
| 930624 675 | 1.6- | 0.3- | 930724 557 | 0.0 | 0.2- | 930820 108 | 0.1- | 1.0- |
| 930625 670 | 0.0 | 0.6+ | 930724 046 | 1.2+ | 1.0+ | 930821 095 | 0.1- | 1.3- |
| 930625 670 | 0.6- | 0.3+ | 930724 046 | 1.0- | 1.6+ | 930821 046 | 1.2- | 0.6- |
| 930625 670 | 0.8- | 1.2- | 930724 557 | 0.1- | 0.4- | 930821 046 | 1.8- | 1.8- |
| 930625 670 | 0.5+ | 0.9+ | 930724 046 | 1.7- | 1.1+ | 930821 095 | 0.1- | 0.8- |
| 930625 670 | 0.7- | 1.1- | 930724 557 | 0.1+ | 0.5- | 930821 095 | 1.0+ | 0.8- |
| 930625 670 | 0.0 | 0.2+ | 930724 557 | 0.1+ | 0.1+ | 930821 095 | 0.7+ | 0.6- |
| 930625 413 | 0.6- | 0.0 | 930724 046 | 0.1+ | 0.5+ | 930822 816 | 0.2- | 0.1+ |
| 930626 478 | (0.9+ | 4.5+) | 930724 557 | 0.0 | 0.1+ | 930822 816 | 0.2- | 0.2+ |
| 930626 675 | 1.7- | 0.1+ | 930724 557 | 0.0 | 0.0 | 930822 104 | 1.5- | 0.4+ |
| 930626 657 | 0.6+ | 0.9+ | 930724 557 | 0.2+ | 0.3- | 930822 104 | 1.0- | 0.1+ |
| 930626 657 | 0.9- | 0.8- | 930724 557 | 0.0 | 0.2- | 930822 104 | 0.5- | 0.1+ |
| 930626 675 | (3.1- | 0.5+) | 930724 557 | 0.1+ | 0.6- | 930823 675 | 0.7+ | 0.1+ |
| 930626 568 | 0.4- | 0.6+ | 930724 557 | 0.0 | 0.5- | 930823 675 | 1.0+ | 0.7+ |
| 930626 905 | 0.1- | 0.1- | 930724 557 | 0.0 | 0.2- | 930823 970 | 0.2- | 1.7- |
| 930626 905 | 0.9- | 1.0- | 930724 557 | 0.4+ | 0.1- | 930824 658 | 0.5- | 0.5+ |
| 930626 905 | 0.2+ | 0.1- | 930724 557 | 0.2+ | 0.2- | 930824 658 | 0.5- | 0.5+ |
| 930626 474 | 0.1+ | 0.5- | 930724 557 | 0.1+ | 0.4- | 930824 658 | 0.3- | 0.4+ |
| 930626 474 | 0.4+ | 0.5+ | 930724 557 | 0.2+ | 0.1- | 930824 413 | 0.3- | 0.4+ |
| 930626 474 | 1.1+ | 0.1+ | 930724 557 | 0.0 | 0.2- | 930824 413 | 0.4- | 0.3+ |
| 930626 385 | 0.2- | 0.2- | 930724 557 | 0.3- | 0.3- | 930824 413 | 0.3- | 0.3+ |
| 930626 385 | 0.3+ | 0.1+ | 930724 557 | 0.1+ | 0.3- | 930824 413 | 0.2- | 0.3+ |
| 930626 474 | 0.3+ | 0.4- | 930725 557 | 0.3+ | 0.5- | 930824 095 | 1.1+ | 0.0 |
| 930626 474 | 0.8+ | 0.3- | 930725 557 | 0.2+ | 1.0- | 930824 095 | 0.3+ | 1.0- |
| 930626 385 | 0.0 | 0.4- | 930725 557 | 0.3+ | 0.5- | 930824 095 | 0.5+ | 0.1+ |
| 930626 385 | 0.2+ | 0.2- | 930725 557 | 0.1+ | 0.7- | 930824 095 | 0.3+ | 0.8- |

| | | | | | |
|------------------|-------|------------------|-------|------------------|-------|
| 930626 474 0.1- | 0.6- | 930725 557 0.2+ | 0.8- | 930825 095 0.1+ | 0.0 |
| 930626 474 0.5+ | 0.1- | 930725 557 0.4+ | 0.0 | 930825 095 0.5+ | 0.4- |
| 930626 587 0.2+ | 0.0 | 930725 557 0.4+ | 0.5- | 930825 095 0.5+ | 0.9- |
| 930626 587 0.1+ | 0.0 | 930725 557 0.3+ | 0.3- | 930825 095 0.6+ | 0.2+ |
| 930626 587 0.2+ | 0.0 | 930725 303 (1.3+ | 3.3+) | 930827 816 0.1- | 0.5- |
| 930627 478 2.0+ | 0.6+ | 930725 658 0.9- | 0.6- | 930827 816 0.1+ | 0.2- |
| 930628 970 (2.3+ | 0.5-) | 930725 658 0.7- | 0.3- | 930828 108 0.5+ | 1.1- |
| 930629 046 (2.1- | 1.9-) | 930725 658 0.8- | 0.5- | 930828 108 0.5- | 0.8- |
| 930630 670 0.4- | 1.1+ | 930726 046 0.1- | 1.5+ | 930828 108 0.5- | 1.0+ |
| 930630 670 0.5- | 0.6+ | 930726 046 1.9- | 1.1+ | 930828 108 (1.7- | 2.7+) |
| 930630 670 0.0 | 0.7+ | 930727 046 (2.1- | 0.7+) | 930830 970 1.6+ | 0.7- |
| 930630 670 0.4- | 0.9+ | 930727 046 (4.1- | 0.4-) | 930830 970 1.9+ | 0.9- |
| 930630 413 0.7- | 0.4+ | 930727 675 0.0 | 0.1- | 930905 107 1.0- | 0.8- |
| 930630 413 0.9- | 0.2- | 930727 675 0.3+ | 0.4- | 930905 107 0.4+ | 0.2+ |
| 930630 413 0.7- | 0.3+ | 930727 107 0.3- | 0.3+ | 930909 657 0.1- | 0.1+ |
| 930630 413 0.7- | 0.2+ | 930727 107 1.1+ | 0.8+ | 930909 657 0.2- | 0.1+ |
| 930630 557 0.2- | 0.6+ | 930727 587 0.5+ | 0.2+ | 930909 657 0.1- | 0.1+ |
| 930630 557 0.7- | 0.2- | 930727 587 0.6+ | 0.3+ | 930910 107 0.3+ | 0.0 |
| 930630 557 0.4- | 1.0+ | 930727 587 0.6+ | 0.2+ | 930910 107 0.3+ | 0.1+ |
| 930630 557 0.4- | 0.2+ | 930728 107 0.1+ | 0.9- | 930910 107 0.3+ | 0.1- |
| 930630 557 0.6- | 0.1- | 930728 107 (1.3+ | 2.1-) | 930912 670 0.4+ | 0.1- |
| 930630 557 0.6- | 0.6+ | 930730 107 0.0 | 0.2+ | 930912 670 0.5+ | 0.1- |
| 930630 557 0.7- | 0.0 | 930730 107 0.5+ | 0.4+ | 930912 670 0.2+ | 0.1+ |
| 930630 557 0.3- | 0.2+ | 930731 413 0.2+ | 0.0 | 930912 801 0.0 | 0.1+ |
| 930630 557 0.8- | 0.1- | 930731 413 0.2+ | 0.0 | 930912 801 0.2- | 0.1+ |
| 930630 557 0.5- | 0.5+ | 930731 413 0.2+ | 0.0 | 930914 816 0.1+ | 0.2- |
| 930701 046 0.6- | 0.5+ | 930731 413 0.0 | 0.1+ | 930914 816 0.1+ | 0.2- |
| 930701 046 1.4+ | 0.4+ | 930731 107 0.3- | 1.7- | 930915 801 0.0 | 0.3- |
| 930701 046 0.9- | 0.6+ | 930731 107 0.7- | 1.1- | 930915 801 0.2- | 0.3- |
| 930701 046 (1.9+ | 2.7+) | 930801 108 0.1- | 0.5+ | 930915 816 0.2- | 0.1- |
| 930701 046 1.7+ | 0.3+ | 930801 108 0.4+ | 0.4+ | 930915 816 0.1- | 0.2- |
| 930701 046 (3.0+ | 1.6+) | 930801 108 0.8+ | 0.0 | 930915 107 0.2+ | 0.0 |
| 930701 046 0.7+ | 0.0 | 930801 108 0.2- | 0.5- | 930915 107 0.1- | 0.3+ |
| 930701 046 (2.5+ | 3.0+) | 930802 107 0.8+ | 1.6+ | 930916 107 0.0 | 0.0 |
| 930701 046 1.4+ | 0.5+ | 930802 107 0.3+ | 0.1+ | 930916 107 0.1- | 0.5- |
| 930701 413 0.0 | 0.5- | 930806 587 0.5- | 0.7- | 930917 107 1.1+ | 0.6- |
| 930701 413 0.1- | 0.3- | 930806 587 0.2- | 0.6- | 930918 557 0.2- | 0.0 |
| 930701 413 0.1- | 0.5- | 930806 587 0.1- | 0.3- | 930918 557 0.1- | 0.2+ |
| 930703 376 0.9+ | 0.4+ | 930808 816 0.5- | 0.2- | 930918 557 0.1- | 0.1+ |
| 930703 376 0.5+ | 0.5+ | 930808 816 0.5- | 0.1- | 930918 557 0.0 | 0.1+ |
| 930703 376 0.1+ | 0.1+ | 930808 816 0.3- | 0.2- | 930918 557 0.0 | 0.2+ |
| 930706 587 0.4- | 0.3+ | 930808 816 0.3- | 0.2- | 930918 557 0.5- | 0.3- |
| 930706 587 0.6- | 0.0 | 930809 108 0.3+ | 0.2+ | 930918 557 0.5- | 0.0 |
| 930706 587 0.5- | 0.2+ | 930809 108 1.1+ | 0.1+ | 930919 693 (0.6+ | 2.3+) |
| 930706 587 0.5- | 0.2+ | 930812 657 0.3- | 0.4+ | 930919 693 0.1+ | 0.3- |
| 930707 657 0.3- | 0.2+ | 930812 657 0.3- | 0.4+ | 930919 674 0.6+ | 0.4+ |
| 930707 657 0.2- | 0.4+ | 930812 657 0.3- | 0.3+ | 930919 674 0.6+ | 0.5+ |
| 930707 657 0.3- | 0.4+ | 930812 104 0.8- | 0.3+ | 930919 674 1.1+ | 0.2+ |
| 930707 970 0.2+ | 1.5- | 930812 557 0.4- | 0.5+ | 930919 674 1.3+ | 0.2+ |
| 930707 970 1.4+ | 1.3- | 930812 104 0.1+ | 0.7+ | 930919 674 0.6+ | 0.1+ |
| 930709 596 0.6+ | 0.6- | 930812 557 0.4- | 0.4+ | 930919 674 0.4+ | 0.6+ |
| 930709 596 1.0+ | 0.6- | 930812 557 0.0 | 0.9+ | 930919 674 1.0+ | 0.3+ |

| | | | | | |
|-----------------|------|-----------------|------|------------------|-------|
| 930709 596 0.8+ | 0.7- | 930812 108 0.2+ | 0.8+ | 930919 674 0.0 | 1.5+ |
| 930709 596 0.9+ | 0.4- | 930812 557 0.1- | 1.3+ | 930919 674 0.0 | 0.7+ |
| 930715 675 0.4+ | 1.7- | 930812 557 0.2- | 0.8+ | 930920 107 (0.4+ | 2.4-) |
| 930715 675 0.5- | 0.0 | 930812 108 0.2+ | 1.4+ | 930920 107 0.0 | 0.4- |
| 930717 801 0.2+ | 0.5- | 930812 557 0.3- | 1.4+ | 930922 107 0.1- | 0.9+ |
| 930717 801 0.6+ | 0.9+ | 930812 557 0.1- | 1.0+ | 930922 107 0.2- | 0.2- |
| 930717 658 0.4+ | 0.6- | 930812 108 0.3- | 0.9+ | 930928 107 (1.8- | 2.3+) |
| 930717 658 0.1+ | 0.5- | 930812 046 0.9- | 0.5- | 930929 107 0.5+ | 0.1- |
| 930717 658 0.1+ | 0.5- | 930812 046 0.1- | 1.0- | 930929 107 0.4- | 0.2- |
| 930717 970 1.9+ | 1.6- | 930812 108 0.2- | 0.5+ | 930929 107 0.8+ | 0.4- |
| 930718 675 0.3- | 0.2+ | 930814 801 0.3- | 0.2+ | 931004 107 0.0 | 0.0 |
| 930718 801 0.0 | 0.1- | 930817 095 1.2- | 0.4+ | 931004 107 0.3- | 0.1- |
| 930718 801 0.1- | 0.2- | 930817 095 0.6- | 0.0 | 931015 107 0.8- | 1.1- |
| 930718 675 0.6- | 0.2+ | 930817 095 0.5- | 0.4+ | 931015 107 1.3- | 0.5+ |
| 930720 107 0.6+ | 0.3+ | 930817 095 0.8- | 0.1+ | 931019 801 0.8- | 0.0 |
| 930720 107 0.7- | 0.3- | 930818 104 0.2+ | 0.3+ | 931019 801 0.6- | 0.1+ |

1993 MG₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 50.81364 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.22371986 | ω 15.49510 | +0.38672354 | +0.88751218 |
| <i>a</i> | 2.6874044 | Ω 277.79119 | -0.87069667 | +0.26187995 |
| <i>e</i> | 0.3836838 | <i>i</i> 14.64728 | -0.30386218 | +0.37913193 |
| <i>P</i> | 4.41 | <i>H</i> 13.5 | <i>G</i> 0.15 | |

From 25 observations 1993 June 23-Oct. 19, mean residual 0".76.

1993 OP

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 13.72460 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.28493139 | ω 95.58187 | +0.84624744 | -0.36412068 |
| <i>a</i> | 2.2872266 | Ω 286.26506 | +0.15908730 | +0.86940945 |
| <i>e</i> | 0.1993389 | <i>i</i> 23.90149 | +0.50848452 | +0.33398104 |
| <i>P</i> | 3.46 | <i>H</i> 13.0 | <i>G</i> 0.15 | |

From 12 observations 1993 July 18-Oct. 18, mean residual 0".75.

1993 OW₁ = 1992 BV

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 51.44932 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.36426068 | ω 212.60788 | +0.89647547 | +0.25620907 |
| <i>a</i> | 1.9417554 | Ω 128.10495 | -0.23867258 | +0.96661753 |
| <i>e</i> | 0.0963415 | <i>i</i> 27.34966 | -0.37331907 | -0.00273212 |
| <i>P</i> | 2.71 | <i>H</i> 14.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | |
|-----------------|------|-----------------|------|-----------------|------|
| 920130 675 0.3+ | 0.7- | 930724 675 0.2+ | 1.5+ | 931005 413 0.1+ | 0.9+ |
| 920130 675 1.0- | 0.2+ | 930724 675 0.4+ | 1.1+ | 931006 413 0.3+ | 0.7- |
| 920201 675 0.6+ | 0.7+ | 930725 675 1.3- | 1.9- | 931006 413 0.6- | 0.5+ |
| 920201 675 0.1+ | 0.1- | 930725 675 0.6+ | 1.2- | 931007 413 0.8+ | 0.4+ |
| 930723 675 0.1+ | 0.6+ | 931005 413 0.0 | 1.0- | 931007 413 0.7- | 0.0 |

1993 OC₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Bardwell

| <i>M</i> | 191.13131 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.36631719 | ω 224.45348 | -0.92902756 | +0.34463402 |
| <i>a</i> | 1.9344812 | Ω 334.75808 | -0.18419179 | -0.74640783 |
| <i>e</i> | 0.0540559 | <i>i</i> 18.40866 | -0.32090680 | -0.56930022 |
| <i>P</i> | 2.69 | <i>H</i> 14.0 | <i>G</i> 0.15 | |

From 14 observations 1993 July 23–Oct. 19, mean residual 0''.93.

1993 OX₂ = 1979 QJ₃

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 31.97201 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.21443557 | ω 215.11643 | +0.99826707 | -0.00482569 |
| <i>a</i> | 2.7644251 | Ω 145.01910 | +0.02330925 | +0.94753891 |
| <i>e</i> | 0.1748056 | <i>i</i> 5.87153 | -0.05403279 | +0.31960402 |
| <i>P</i> | 4.60 | <i>H</i> 15.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 790822 809 | 0.6+ | 0.1+ | 930814 664 | 0.3- | 0.3- | 930816 664 | 0.6- | 0.4+ |
| 790822 809 | 0.3- | 0.5- | 930814 664 | 0.1- | 0.1- | 930907 664 | 0.1- | 0.1+ |
| 790822 809 | 0.2- | 0.3- | 930814 664 | 0.0 | 0.1+ | 930907 664 | 0.8- | 0.3- |
| 790823 809 | 0.1- | 0.6- | 930815 664 | 0.8- | 0.3+ | 930907 664 | 0.3- | 0.4- |
| 790823 809 | 0.3+ | 0.6+ | 930815 664 | 0.1- | 0.2+ | 930907 664 | 0.5- | 0.4- |
| 930725 664 | 0.2+ | 1.3- | 930815 664 | 0.5- | 0.9+ | 930907 664 | 0.5+ | 0.6- |
| 930725 664 | 0.9+ | 0.3+ | 930815 664 | 0.6- | 0.7+ | 930908 664 | 0.0 | 0.1- |
| 930725 664 | 0.8+ | 0.4+ | 930815 664 | 0.8- | 0.9+ | 930908 664 | 0.2- | 0.1+ |
| 930725 664 | 0.0 | 0.3+ | 930816 664 | 0.2- | 0.6+ | 930909 664 | 1.8+ | 0.4- |
| 930814 664 | 0.0 | 0.3- | 930816 664 | 0.2+ | 0.4+ | 930909 664 | 1.4+ | 0.5- |

1993 PJ₇ = 1991 EL₅

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 57.38795 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.18830347 | ω 338.90638 | +0.67319297 | +0.73926789 |
| <i>a</i> | 3.0146056 | Ω 333.39844 | -0.67284601 | +0.60275631 |
| <i>e</i> | 0.0412782 | <i>i</i> 2.19526 | -0.30674007 | +0.30027956 |
| <i>P</i> | 5.23 | <i>H</i> 13.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 910314 809 | 0.2+ | 0.1+ | 910317 809 | 0.6- | 0.2+ | 930909 691 | 0.1+ | 0.0 |
| 910314 809 | 0.7+ | 0.0 | 930815 010 | 0.2+ | 0.4+ | 930909 691 | 0.3- | 0.3+ |
| 910314 809 | 0.7+ | 0.0 | 930815 010 | 0.4- | 0.3- | 930909 691 | 0.3+ | 0.1- |
| 910317 809 | 0.6- | 0.3- | 930815 010 | 0.1- | 0.2- | | | |
| 910317 809 | 0.4- | 0.1+ | 930817 010 | 0.1+ | 0.0 | | | |

1993 QP

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Bardwell

| <i>M</i> | 47.06884 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.28109789 | ω 46.53835 | +0.95604868 | +0.27097826 |
| <i>a</i> | 2.3079744 | Ω 297.44847 | -0.29198475 | +0.84502682 |
| <i>e</i> | 0.4692901 | <i>i</i> 7.24984 | -0.02675502 | +0.46097773 |
| <i>P</i> | 3.51 | <i>H</i> 17.5 | <i>G</i> 0.15 | |

From 42 observations 1993 Aug. 23–Oct. 19, mean residual 0''.64.

1993 QT = 1990 MY

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 77.07922 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.36008477 | ω 336.85167 | +0.76115244 | +0.64109334 |
| <i>a</i> | 1.9567389 | Ω 342.15598 | -0.53359691 | +0.53291607 |
| <i>e</i> | 0.0696723 | <i>i</i> 18.69431 | -0.36867506 | +0.55226786 |
| <i>P</i> | 2.74 | <i>H</i> 13.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 900622 413 | 0.6- | 0.3- | 930819 675 | 0.8+ | 0.3+ | 930912 675 | 0.8+ | 0.5+ |
| 900622 413 | 0.7- | 0.9+ | 930821 675 | 0.5- | 0.1+ | 930915 675 | 1.2- | 0.1- |
| 900623 413 | 1.4+ | 0.6- | 930821 675 | 1.2- | 0.7- | 930915 675 | 0.4+ | 0.1+ |
| 930819 675 | 0.7+ | 0.2+ | 930912 675 | 0.2+ | 0.4- | | | |

1993 RD = 1989 UP₉ = 1990 YM₁ = 1991 AN₄

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 95.08779 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.24016221 | ω 302.06666 | +0.20060964 | +0.97859816 |
| <i>a</i> | 2.5633009 | Ω 339.35765 | -0.84929388 | +0.15039768 |
| <i>e</i> | 0.1737242 | <i>i</i> 7.47153 | -0.48831924 | +0.14044991 |
| <i>P</i> | 4.10 | <i>H</i> 12.8 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|-------|-------|
| 891029 399 | 1.2+ | 0.4- | 930912 400 | 0.8- | 0.6- | 930919 400 | 1.9- | 1.1- |
| 891029 399 | 0.1+ | 0.5- | 930912 400 | (3.7- | 0.1-) | 930920 033 | 1.3+ | 1.9- |
| 891029 399 | 1.6- | 1.4+ | 930913 400 | 1.0- | 2.3+ | 930921 400 | (3.8- | 0.9+) |
| 901224 372 | 0.8- | 0.1+ | 930913 400 | 0.7+ | 2.3+ | 930921 400 | 0.7- | 0.7+ |
| 901224 372 | (0.1- | 6.0-) | 930918 033 | 1.9- | 1.0- | 930922 033 | 0.1+ | 0.5- |
| 910106 372 | 0.7+ | 0.2- | 930918 033 | 1.0+ | 1.2- | 931006 400 | 2.3+ | 2.1+ |
| 910106 372 | (1.6+ | 3.8+) | 930919 400 | 0.1+ | 1.9- | 931006 400 | 1.2+ | 0.4+ |

1993 RE = 1982 YY₂ = 1991 EV₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 7.04143 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.25968608 | ω 146.62622 | +0.72809947 | -0.68484351 |
| <i>a</i> | 2.4331577 | Ω 256.62614 | +0.62212577 | +0.67817705 |
| <i>e</i> | 0.1692070 | <i>i</i> 1.72787 | +0.28780320 | +0.26658068 |
| <i>P</i> | 3.80 | <i>H</i> 13.6 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|-------|-------|------------|------|------|
| 821222 095 | 0.0 | 0.5+ | 930912 400 | (3.7- | 3.5-) | 930918 033 | 0.4+ | 0.1- |
| 910307 809 | 0.5+ | 0.2+ | 930912 400 | (5.3- | 1.3+) | 930919 400 | 1.2- | 0.5+ |
| 910307 809 | 1.1+ | 0.0 | 930913 400 | 0.6+ | 2.2- | 930919 400 | 1.5- | 0.2+ |
| 910307 809 | 1.8+ | 0.1- | 930913 400 | 1.4+ | 0.7+ | 930920 033 | 0.6+ | 0.2- |
| 910309 809 | 1.4- | 0.3- | 930914 894 | 0.2- | 0.0 | 930922 033 | 0.4- | 0.2- |
| 910309 809 | 1.3- | 0.3- | 930914 894 | 0.4+ | 1.2+ | 931006 400 | 2.2+ | 0.2- |
| 910309 809 | 1.0- | 0.4- | 930918 033 | 1.8- | 0.3+ | 931006 400 | 0.2- | 0.7- |

1993 RY₁ = 1971 VZ = 1975 NJ = 1976 SN₈ = 1987 OW = 1987 QH₁₁ = 1991 FL₅

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Ichikawa

| <i>M</i> | 51.26859 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.17419789 | ω 142.31225 | +0.85645645 | +0.51574725 |
| <i>a</i> | 3.1752222 | Ω 186.75091 | -0.50742356 | +0.83323483 |
| <i>e</i> | 0.0857818 | <i>i</i> 10.82163 | -0.09488771 | +0.19931003 |
| <i>P</i> | 5.66 | <i>H</i> 12.1 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|------|------|------------|-------|-------|
| 711110 805 | 0.6- | 0.2+ | 870727 511 | 1.6- | 0.5- | 930918 033 | 0.1- | 0.9- |
| 711110 805 | 0.4- | 0.4+ | 870828 095 | 1.1+ | 0.5+ | 930919 400 | 1.2+ | 0.6- |
| 711110 805 | 0.0 | 0.9- | 910321 808 | 1.9+ | 0.8+ | 930919 400 | 1.5+ | 0.4+ |
| 711111 805 | 0.1- | 0.7+ | 910321 808 | 2.2- | 0.7+ | 930920 033 | 1.1+ | 0.4- |
| 711111 805 | 0.6+ | 0.2+ | 930912 400 | 2.4- | 0.8- | 930921 400 | 0.1- | 1.3- |
| 711111 805 | 1.4+ | 0.0 | 930912 400 | 1.0+ | 1.6+ | 930921 400 | (3.9- | 1.2+) |
| 750708 095 | 0.9+ | 0.2+ | 930913 400 | 1.2- | 0.5- | 930922 033 | 0.5+ | 0.5+ |
| 760928 095 | (4.2+ | 4.4+) | 930913 400 | 0.3- | 0.4+ | | | |
| 760928 095 | 2.3- | 2.8+ | 930918 033 | 0.2+ | 0.6- | | | |

1993 RF₂ = 1976 SB₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Ichikawa

| <i>M</i> | 72.48039 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.29034942 | ω 326.10862 | +0.76670635 | +0.64193675 |
| <i>a</i> | 2.2586836 | Ω 353.93189 | -0.56885670 | +0.67289199 |
| <i>e</i> | 0.1821207 | <i>i</i> 4.81035 | -0.29759607 | +0.36760519 |
| <i>P</i> | 3.39 | <i>H</i> 14.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|------|------|------------|------|------|
| 760924 095 | 0.3- | 1.6- | 930915 400 | 1.0+ | 0.5+ | 930916 400 | 1.1- | 0.1- |
| 760928 095 | 0.7+ | 0.9+ | 930915 400 | 1.5+ | 0.8+ | 931011 400 | 2.5+ | 0.3+ |
| 760928 095 | (8.7- | 0.5+) | 930916 400 | 2.0- | 0.5- | 931011 400 | 2.2- | 0.4- |

1993 RH₂ = 1985 SU₆ = 1985 UT₅ = 1989 TA₂

Id. K. Ichikawa

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 43.21805 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.24473319 | ω 349.38649 | +0.99184826 | +0.12657968 |
| <i>a</i> | 2.5312836 | Ω 3.44446 | -0.09154425 | +0.78780984 |
| <i>e</i> | 0.2016630 | <i>i</i> 14.11273 | -0.08863790 | +0.60277130 |
| <i>P</i> | 4.03 | <i>H</i> 13.8 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 850922 095 | 1.9- | 4.3+ | 891004 046 | 0.4+ | 0.3+ | 930916 400 | 0.4- | 1.5- |
| 851018 095 | 0.5- | 0.6- | 891005 046 | 0.7+ | 0.1+ | 930916 400 | 0.5- | 2.2- |
| 891003 046 | 2.6- | 2.1- | 891005 046 | 3.2+ | 1.4+ | 931011 400 | 0.2- | 2.5+ |
| 891003 046 | 0.8- | 1.9- | 930915 400 | 1.0- | 1.4+ | 931011 400 | 3.3+ | 0.1+ |
| 891004 046 | 1.2+ | 1.2- | 930915 400 | 0.9- | 0.3- | | | |

1993 SD = 1983 UB₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 37.07053 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.19038534 | ω 153.11094 | +0.97808984 | +0.20241331 |
| <i>a</i> | 2.9925888 | Ω 195.44491 | -0.20818319 | +0.95079684 |
| <i>e</i> | 0.0798001 | <i>i</i> 10.53109 | -0.00016410 | +0.23455110 |
| <i>P</i> | 5.18 | <i>H</i> 13.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 831030 675 | 0.1+ | 0.4- | 930916 589 | 0.2- | 0.3+ | 930921 589 | 0.1+ | 0.4+ |
| 831104 675 | 0.1- | 0.5+ | 930918 589 | 0.3- | 0.1- | 930921 589 | 0.4+ | 0.2- |
| 930916 589 | 0.4- | 0.6+ | 930918 589 | 0.0 | 0.3- | 931009 589 | 0.3- | 0.2- |
| 930916 589 | 0.6+ | 0.8- | 930918 589 | 0.5+ | 0.3+ | 931009 589 | 0.4- | 0.1- |
| 930916 589 | 0.2- | 0.3+ | 930920 589 | 0.4+ | 0.1- | 931009 589 | 0.1- | 0.1- |
| 930916 589 | 0.5- | 0.0 | 930920 589 | 0.2+ | 0.1- | | | |

1993 SG = 1949 SK₁ = 1982 SC₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 38.33023 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.26953491 | ω 24.86851 | +0.97638669 | -0.21528167 |
| <i>a</i> | 2.3735190 | Ω 347.52371 | +0.18167635 | +0.86327511 |
| <i>e</i> | 0.2106452 | <i>i</i> 4.77074 | +0.11688769 | +0.45651932 |
| <i>P</i> | 3.66 | <i>H</i> 14.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|-------|-------|
| 490925 760 | (5.5+ | 0.3-) | 930925 596 | (3.2+ | 1.5-) | 931010 596 | 0.1+ | 0.3- |
| 490925 760 | 0.2+ | 0.4- | 930925 596 | 0.9- | 1.7- | 931011 596 | 0.5+ | 1.1- |
| 820917 095 | 0.4+ | 1.7+ | 930926 596 | 1.3+ | 0.4+ | 931011 596 | 0.8- | 0.9- |
| 820919 095 | 0.3+ | 0.4+ | 930926 596 | 1.2+ | 0.4+ | 931011 596 | 0.0 | 0.5+ |
| 820919 095 | (2.0- | 3.2-) | 931004 596 | 2.0+ | 0.4- | 931013 596 | 0.7+ | 1.2+ |
| 820922 688 | (2.9- | 4.1-) | 931004 596 | 0.4- | 0.3+ | 931013 596 | 0.2- | 1.5+ |
| 820922 688 | (1.5- | 5.5-) | 931004 596 | 0.8+ | 1.4+ | 931013 596 | 0.0 | 0.2- |
| 820924 095 | 2.0- | 0.5+ | 931004 596 | (4.0+ | 1.9+) | 931016 596 | 0.4+ | 0.4+ |
| 930920 596 | 2.4+ | 0.0 | 931007 596 | 1.9- | 1.3- | 931016 596 | 0.0 | 0.8+ |
| 930920 596 | 1.9- | 0.9- | 931007 596 | 0.7- | 0.4+ | 931016 596 | 1.1+ | 0.9+ |
| 930921 596 | 0.9- | 0.7- | 931009 596 | 0.5- | 1.3+ | 931016 596 | 0.5- | 0.3- |
| 930921 596 | 0.1+ | 0.9- | 931009 596 | (1.9+ | 2.9+) | 931017 596 | 0.1- | 0.1+ |
| 930922 596 | 0.4- | 0.3+ | 931010 596 | (5.7+ | 2.5+) | 931017 596 | (0.4- | 2.7+) |
| 930922 596 | (4.2+ | 0.8-) | 931010 596 | (5.0+ | 0.4+) | 931017 596 | 0.7- | 1.3- |
| 930923 596 | 0.6+ | 0.0 | 931010 596 | 0.2+ | 1.0- | | | |
| 930923 596 | (2.9+ | 0.1+) | 931010 596 | 0.5- | 1.1- | | | |

1993 SJ₁ = 1976 ST₂ = 1986 PP₅ = 1992 GO₅

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 78.44821 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.29024371 | ω 141.35338 | +0.68828097 | +0.72531836 |
| <i>a</i> | 2.2592320 | Ω 172.10794 | -0.68763592 | +0.65823104 |
| <i>e</i> | 0.2071015 | <i>i</i> 5.64758 | -0.23114099 | +0.20160647 |
| <i>P</i> | 3.40 | <i>H</i> 14.6 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|-------|-------|
| 760924 095 | 1.2- | 3.4+ | 920403 033 | 0.5- | 0.9+ | 930918 400 | 0.5+ | 1.4+ |
| 760929 095 | 1.5+ | 4.0- | 930916 400 | 1.2- | 1.8- | 931011 400 | (4.6- | 0.9-) |
| 860809 095 | 0.0 | 0.1- | 930916 400 | 2.0+ | 2.8+ | 931011 400 | 1.0- | 0.4- |
| 920403 033 | 0.7+ | 0.3- | 930918 400 | 0.6- | 0.9- | | | |

1993 SK₁ = 1973 UP₂ = 1983 VJ₇ = 1990 VC₁₄

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 68.27164 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.29035066 | ω 274.12791 | +0.88110295 | +0.47149220 |
| <i>a</i> | 2.2586772 | Ω 57.74463 | -0.41481599 | +0.80784974 |
| <i>e</i> | 0.0844893 | <i>i</i> 2.49262 | -0.22712396 | +0.35365789 |
| <i>P</i> | 3.39 | <i>H</i> 13.1 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 731027 095 | 0.6- | 2.4+ | 901114 095 | 1.9- | 2.2+ | 930919 400 | 1.9- | 0.5+ |
| 831104 688 | 2.0+ | 1.6- | 901114 095 | 1.5+ | 0.2+ | 931008 400 | 1.4- | 0.4+ |
| 831104 688 | 1.3+ | 1.2- | 930916 400 | 2.5+ | 0.4+ | 931008 400 | 0.1+ | 1.2- |
| 831107 688 | 0.9+ | 1.1- | 930916 400 | 0.0 | 1.2+ | | | |
| 831107 688 | 1.5- | 1.9- | 930919 400 | 0.6- | 1.0+ | | | |

1993 SR₁ = 1986 RB₁₃ = 1986 SO₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | Nakano | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | 40.53448 | (2000.0) | P | Q | | | |
| <i>n</i> | 0.28416643 | ω | 329.81815 | +0.99007656 | -0.13428697 | | |
| <i>a</i> | 2.2913294 | Ω | 37.96901 | +0.13860040 | +0.88445484 | | |
| <i>e</i> | 0.2171114 | <i>i</i> | 3.86006 | +0.02320189 | +0.44688550 | | |
| <i>P</i> | 3.47 | <i>H</i> | 14.2 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 860909 095 | 0.9- | 0.5+ | 930916 400 | 0.4- | 0.8+ | 931011 400 | 0.5- | 0.0 |
| 860929 095 | 2.5+ | 3.9- | 930918 400 | 0.9- | 2.0+ | 931011 400 | 1.6+ | 0.4- |
| 930916 400 | 1.0- | 0.7+ | 930918 400 | 0.5- | 0.1+ | | | |

1993 SL₃ = 1982 HB = 1985 BN₁ = 1985 FW₂ = 1989 KN

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | Nakano | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | 91.26703 | (2000.0) | P | Q | | | |
| <i>n</i> | 0.28752253 | ω | 285.34567 | +0.50189545 | +0.85733160 | | |
| <i>a</i> | 2.2734642 | Ω | 16.34441 | -0.55147206 | +0.41907294 | | |
| <i>e</i> | 0.2188326 | <i>i</i> | 23.98287 | -0.66631789 | +0.29893210 | | |
| <i>P</i> | 3.43 | <i>H</i> | 12.5 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|--------|-------|------------|------|------|
| 820418 688 | 1.2- | 0.9- | 850325 801 | (9.1- | 9.9+) | 930922 303 | 0.9- | 0.0 |
| 820418 688 | 1.3+ | 0.3- | 850326 801 | 1.4- | 1.7+ | 930923 303 | 0.7+ | 1.0+ |
| 820425 688 | (4.9+ | 2.2+) | 890529 808 | 2.1+ | 1.8+ | 930923 675 | 1.4+ | 1.5+ |
| 820425 688 | 2.7- | 1.3- | 890530 808 | (23.8+ | 1.7-) | 931009 374 | 0.2+ | 0.1+ |
| 850118 691 | 0.3- | 0.2- | 930919 675 | 0.1- | 0.3- | 931009 374 | 0.9- | 0.8- |
| 850118 691 | 1.0+ | 0.2- | 930922 303 | 0.7- | 0.9- | | | |
| 850118 691 | 1.7+ | 0.1- | 930922 303 | 0.9+ | 0.8- | | | |

1993 SY₃ = 1981 WQ₆ = 1989 UF₅

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | Ichikawa | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | 11.45594 | (2000.0) | P | Q | | | |
| <i>n</i> | 0.24239145 | ω | 194.01805 | +0.74296887 | -0.66758807 | | |
| <i>a</i> | 2.5475606 | Ω | 208.04835 | +0.62354897 | +0.71653332 | | |
| <i>e</i> | 0.1739760 | <i>i</i> | 5.88373 | +0.24327751 | +0.20225273 | | |
| <i>P</i> | 4.07 | <i>H</i> | 13.4 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 811124 095 | 0.1- | 1.7+ | 930916 400 | 1.4+ | 1.5+ | 930918 400 | 0.3+ | 0.2+ |
| 891030 807 | 0.0 | 0.8- | 930916 400 | 0.0 | 1.7+ | 931011 400 | 1.7- | 2.3- |
| 891101 807 | 0.2- | 1.1- | 930918 400 | 0.6+ | 2.1+ | 931011 400 | 0.1- | 2.4- |

1993 TE = 1985 VB₅ = 1989 UA₅

Id. T. Kobayashi

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | Nakano | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | 46.15659 | (2000.0) | P | Q | | | |
| <i>n</i> | 0.24310296 | ω | 161.63441 | +0.99394676 | +0.10490375 | | |
| <i>a</i> | 2.5425874 | Ω | 192.47948 | -0.10977983 | +0.95990765 | | |
| <i>e</i> | 0.2739936 | <i>i</i> | 8.68633 | +0.00426917 | +0.25994711 | | |
| <i>P</i> | 4.05 | <i>H</i> | 14.0 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 851111 095 | 0.0 | 1.8- | 891102 046 | 2.5+ | 2.3+ | 931009 367 | 0.8+ | 0.3+ |
| 891029 807 | 3.1- | 0.6- | 931008 367 | 1.3+ | 0.1- | 931014 367 | 0.8+ | 0.1- |
| 891101 807 | 3.0- | 0.9- | 931008 367 | 0.5- | 1.0- | 931014 367 | 0.1+ | 0.3+ |
| 891102 046 | 3.6+ | 1.9+ | 931009 367 | 2.5- | 0.4- | | | |

1993 TF = 1971 TU₁ = 1982 UO₁ = 1991 EK₆

Id. T. Kobayashi

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | Nakano | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | 14.88674 | (2000.0) | P | Q | | | |
| <i>n</i> | 0.26843241 | ω | 324.02856 | +0.62279429 | -0.78177838 | | |
| <i>a</i> | 2.3800135 | Ω | 87.43050 | +0.72484031 | +0.56171150 | | |
| <i>e</i> | 0.1889085 | <i>i</i> | 1.76788 | +0.29450600 | +0.27074481 | | |
| <i>P</i> | 3.67 | <i>H</i> | 13.7 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|-------|-------|------------|------|------|
| 711012 095 | 3.6+ | 7.5- | 821021 046 | (4.2+ | 1.3+) | 931009 367 | 0.9- | 0.9+ |
| 821016 046 | 0.9- | 0.2- | 910305 071 | 1.1+ | 0.4+ | 931011 367 | 0.7+ | 0.9+ |
| 821016 046 | 0.0 | 0.5- | 910305 071 | 0.8- | 0.4+ | 931011 367 | 1.3- | 2.2+ |
| 821020 046 | 0.3- | 0.6- | 931008 367 | 0.8+ | 0.6- | 931014 367 | 0.3- | 1.7+ |
| 821020 046 | 0.4+ | 0.1- | 931008 367 | 0.2- | 1.1+ | 931014 367 | 1.0- | 1.1+ |
| 821021 046 | 0.5- | 1.0+ | 931009 367 | 0.4- | 0.9+ | | | |

1993 TX = 1972 XU

Id. T. Kobayashi

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | Nakano | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | 34.82457 | (2000.0) | P | Q | | | |
| <i>n</i> | 0.23296482 | ω | 329.94318 | +0.97054024 | -0.19980231 | | |
| <i>a</i> | 2.6158278 | Ω | 42.27214 | +0.24089049 | +0.81589744 | | |
| <i>e</i> | 0.2960382 | <i>i</i> | 11.54736 | -0.00483941 | +0.54257756 | | |
| <i>P</i> | 4.23 | <i>H</i> | 12.5 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 721202 095 | 0.0 | 1.7- | 931011 367 | 0.0 | 0.6+ | 931016 367 | 2.0- | 0.1+ |
| 721206 095 | 0.0 | 1.6+ | 931014 367 | 0.5+ | 0.3- | 931016 367 | 0.1- | 0.4+ |
| 931011 367 | 2.0+ | 1.0- | 931014 367 | 0.4- | 0.2+ | | | |

1993 TZ

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | Marsden | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | 29.25659 | (2000.0) | P | Q | | | |
| <i>n</i> | 0.34269728 | ω | 231.07523 | +0.26263494 | -0.96445217 | | |
| <i>a</i> | 2.0223778 | Ω | 203.74740 | +0.90622433 | +0.25695739 | | |
| <i>e</i> | 0.5631430 | <i>i</i> | 4.16365 | +0.33133118 | +0.06168389 | | |
| <i>P</i> | 2.88 | <i>H</i> | 26.0 | <i>G</i> | 0.15 | | |

From 11 observations 1993 Oct. 15-16, mean residual 1''.20.

2572 P-L = 1972 GR₁Id. H. Oishi (*MPC* 14626)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

| | | | | Williams | | | |
|----------|------------|----------|-----------|-------------|-------------|--|--|
| <i>M</i> | 248.36172 | (2000.0) | P | Q | | | |
| <i>n</i> | 0.29438755 | ω | 112.89542 | -0.53940864 | -0.84200658 | | |
| <i>a</i> | 2.2379812 | Ω | 9.75967 | +0.75435088 | -0.48740791 | | |
| <i>e</i> | 0.1008536 | <i>i</i> | 2.68898 | +0.37415647 | -0.23121083 | | |
| <i>P</i> | 3.35 | <i>H</i> | 15.0 | <i>G</i> | 0.15 | | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 600924 675 | 0.9- | 0.1+ | 601022 675 | 1.5+ | 0.3+ | 720410 805 | 3.0- | 0.6+ |
| 600926 675 | 0.0 | 0.2+ | 601025 675 | 0.6+ | 0.3- | 720410 805 | 0.4+ | 0.6- |
| 600928 675 | 0.2+ | 0.2- | 601026 675 | 0.2- | 0.4- | 920403 033 | 0.2- | 0.2+ |
| 600929 675 | 0.7- | 0.1- | 720409 805 | 0.0 | 0.0 | 920403 033 | 0.4+ | 0.4+ |
| 601017 675 | 0.2- | 0.1+ | 720409 805 | 2.1+ | 0.8- | | | |

2765 P-L = 1978 WS₁Id. K. Hurukawa (*JAM* 1639)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 174.31481 | (2000.0) | P | Q |
|----------|------------|-------------------|---------------|-------------|
| <i>n</i> | 0.22216028 | ω 25.69743 | +0.75786805 | -0.65238454 |
| <i>a</i> | 2.6999669 | Ω 15.02820 | +0.59484317 | +0.68750076 |
| <i>e</i> | 0.1862444 | <i>i</i> 1.21903 | +0.26795077 | +0.31896257 |
| <i>P</i> | 4.44 | <i>H</i> 16.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 600924 675 | 0.1- | 0.7+ | 601022 675 | 0.0 | 0.0 | 781130 675 | 0.5- | 0.3- |
| 600926 675 | 0.7+ | 1.7- | 601025 675 | 0.5- | 0.7+ | 911008 691 | 0.6- | 1.3+ |
| 600928 675 | 0.7+ | 2.8- | 601026 675 | 0.2- | 0.1+ | 911008 691 | 0.4- | 1.0+ |
| 600929 675 | 0.4+ | 0.9+ | 781129 675 | 0.6+ | 0.2- | | | |

3526 P-L = 1985 FG₂ = 1990 EQ₁₀ = 1993 RT₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 14.80637 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.17961404 | ω 51.66264 | +0.87480394 | -0.47798131 |
| <i>a</i> | 3.1110657 | Ω 336.57019 | +0.35878985 | +0.74883862 |
| <i>e</i> | 0.1127519 | <i>i</i> 11.46992 | +0.32555783 | +0.45910194 |
| <i>P</i> | 5.49 | <i>H</i> 11.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 601017 675 | 0.6+ | 0.0 | 601025 675 | 0.0 | 0.0 | 930915 400 | 1.5- | 1.2- |
| 601022 675 | 0.4+ | 1.4- | 601026 675 | 1.2+ | 0.3- | 930915 400 | 0.5+ | 1.9+ |
| 601022 675 | 1.1+ | 1.2- | 601026 675 | 0.1- | 1.1- | 930916 400 | 0.4+ | 3.0+ |
| 601022 675 | 0.5- | 0.4- | 850324 688 | 2.0- | 1.3- | 930916 400 | 2.0- | 0.6+ |
| 601024 675 | 0.9+ | 0.2- | 850324 688 | 0.2+ | 0.5- | | | |
| 601025 675 | 0.3- | 0.5- | 900301 095 | 1.4+ | 1.2+ | | | |

4040 P-L = 1991 GB₁₄ = 1992 ST₂₄

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 138.50539 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.21548670 | ω 97.95457 | +0.68482426 | +0.72537882 |
| <i>a</i> | 2.7554280 | Ω 215.59312 | -0.70678875 | +0.63794703 |
| <i>e</i> | 0.2235544 | <i>i</i> 6.86597 | -0.17738488 | +0.25855206 |
| <i>P</i> | 4.57 | <i>H</i> 14.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 600924 675 | 0.1+ | 0.5+ | 601024 675 | 0.5+ | 0.8- | 920921 033 | 0.4- | 2.5+ |
| 600925 675 | 0.2- | 0.3+ | 601026 675 | 0.2+ | 0.8- | 920922 033 | 0.6- | 0.5+ |
| 600926 675 | 0.6+ | 0.5+ | 910410 809 | 0.6- | 0.2+ | 920925 033 | 1.1+ | 1.0- |
| 600928 675 | 0.4+ | 0.3+ | 910410 809 | 0.1+ | 1.0- | 920927 033 | 0.4+ | 0.7- |
| 601017 675 | 0.7- | 1.1- | 910410 809 | 0.1+ | 0.9- | 920928 033 | 0.4- | 0.2- |
| 601022 675 | 0.3- | 0.5- | 920921 033 | 0.0 | 1.1- | | | |

4121 P-L = 1982 UH₄ = 1993 TO₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 28.23888 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.18076616 | ω 184.03800 | +0.91950554 | -0.38990352 |
| <i>a</i> | 3.0978327 | Ω 199.14717 | +0.36476442 | +0.89364372 |
| <i>e</i> | 0.1797525 | <i>i</i> 8.74151 | +0.14648028 | +0.22220746 |
| <i>P</i> | 5.45 | <i>H</i> 13.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 600924 675 | 0.2- | 0.4- | 601022 675 | 0.7+ | 1.7- | 931015 400 | 1.3+ | 0.1- |
| 600925 675 | 0.2- | 0.2- | 601024 675 | 0.7- | 1.5+ | 931015 400 | 1.3+ | 0.6+ |

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 600926 675 | 0.6- | 0.0 | 601025 675 | 0.4+ | 0.2+ | 931016 400 | 1.7- | 0.3+ |
| 600928 675 | 0.7- | 0.1+ | 601026 675 | 0.0 | 0.0 | 931016 400 | 0.9- | 1.0- |
| 601017 675 | 0.6+ | 0.5+ | 601026 675 | 0.1+ | 1.2- | | | |
| 601017 675 | 0.4+ | 0.8+ | 821020 033 | 0.0 | 0.4+ | | | |

4529 P-L = 1977 RV₁₃Id. E. Bowell (*MPC* 17974)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 339.08482 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.17333785 | ω 330.94565 | +0.85862270 | +0.51260165 |
| <i>a</i> | 3.1857165 | Ω 358.21088 | -0.45296491 | +0.75636196 |
| <i>e</i> | 0.1289353 | <i>i</i> 4.72423 | -0.23997887 | +0.40639406 |
| <i>P</i> | 5.69 | <i>H</i> 14.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 600924 675 | 0.3+ | 0.2- | 601017 675 | 0.5- | 0.3- | 770910 675 | 0.2+ | 0.3- |
| 600926 675 | 0.5+ | 0.4- | 601022 675 | 0.8- | 0.3- | 920326 691 | 0.6- | 0.7- |
| 600927 675 | 1.1+ | 0.5+ | 601024 675 | 0.1- | 0.6+ | 920326 691 | 0.5- | 0.8- |
| 600928 675 | 0.2+ | 0.1- | 601026 675 | 0.2- | 0.4- | 920326 691 | 0.1+ | 0.5- |
| 600928 675 | 0.1- | 0.6- | 770909 675 | 0.2+ | 0.4- | | | |

6541 P-L = 1977 CC₁Id. E. Bowell (*MPC* 10832)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 227.66157 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.08081282 | ω 262.51273 | +0.55021614 | -0.83267720 |
| <i>a</i> | 5.2984545 | Ω 153.80204 | +0.81107024 | +0.51512368 |
| <i>e</i> | 0.0670487 | <i>i</i> 8.14363 | +0.19856300 | +0.20321482 |
| <i>P</i> | 12.20 | <i>H</i> 12.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 600924 675 | 0.3- | 0.3- | 601022 675 | 0.1+ | 0.1- | 920408 691 | 0.1- | 0.1- |
| 600926 675 | 0.6- | 0.2+ | 601025 675 | 0.6- | 0.3+ | 920408 691 | 0.0 | 0.1- |
| 600927 675 | 0.4+ | 0.9- | 601026 675 | 0.8+ | 0.3+ | 920408 691 | 0.0 | 0.1- |
| 600928 675 | 0.9+ | 0.1+ | 770213 675 | 0.1- | 0.2- | | | |
| 601017 675 | 0.7- | 0.1- | 770214 675 | 0.1+ | 0.1- | | | |

1047 T-1 = 1985 DJ₂ = 1993 RF

Id. G. V. Williams, S. Nakano

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 256.14337 | (2000.0) | P | Q |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.28513611 | ω 284.34722 | -0.85411468 | -0.51645833 |
| <i>a</i> | 2.2861317 | Ω 224.60226 | +0.50446267 | -0.79400671 |
| <i>e</i> | 0.0529898 | <i>i</i> 5.00907 | +0.12651295 | -0.32066203 |
| <i>P</i> | 3.46 | <i>H</i> 12.9 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|--------|-------|------------|-------|-------|------------|-------|-------|
| 710324 675 | 1.7+ | 0.9- | 850224 010 | 0.2- | 1.0- | 930919 400 | 0.3+ | 1.3+ |
| 710325 675 | 1.4- | 0.5+ | 930912 400 | 0.3- | 0.7+ | 930921 400 | 0.5+ | 0.3+ |
| 710325 675 | 0.8- | 1.5+ | 930912 400 | 0.8+ | 0.4+ | 930921 400 | 1.3- | 1.2+ |
| 710326 675 | 0.9+ | 1.5- | 930913 400 | 0.1+ | 0.1- | 931006 400 | (1.9- | 4.5-) |
| 710327 675 | 0.2- | 1.0+ | 930913 400 | 0.3- | 1.5- | 931006 400 | 0.2+ | 2.5- |
| 850224 010 | (18.7+ | 7.2-) | 930919 400 | (3.0+ | 1.5+) | | | |

1265 T-2 = 1993 ST

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 253.01476 | (2000.0) | <i>P</i> | <i>Q</i> |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.24259844 | ω 284.05479 | -0.64961717 | -0.76018217 |
| <i>a</i> | 2.5461113 | Ω 206.46784 | +0.70668913 | -0.59845217 |
| <i>e</i> | 0.1266841 | <i>i</i> 1.41189 | +0.28033550 | -0.25293887 |
| <i>P</i> | 4.06 | <i>H</i> 15.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 730920 675 | 0.9- | 0.2- | 730929 675 | 0.9+ | 0.5- | 930918 691 | 0.1- | 0.6- |
| 730924 675 | 0.1+ | 0.0 | 730930 675 | 0.2+ | 1.6+ | 930918 691 | 0.5+ | 0.3+ |
| 730924 675 | 1.8+ | 0.3- | 730930 675 | 0.8- | 1.2+ | 930918 691 | 0.1- | 0.2+ |
| 730925 675 | 1.9- | 0.8- | 731004 675 | 0.4- | 0.1- | 930919 691 | 0.0 | 0.0 |
| 730925 675 | 0.2- | 1.0+ | 731004 675 | 0.0 | 2.1- | 930919 691 | 0.2- | 0.0 |
| 730929 675 | 1.2+ | 0.3- | 731005 675 | 0.1+ | 0.7+ | 930919 691 | 0.1- | 0.0 |

1279 T-2 = 1993 QQ₃

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Bowell

| <i>M</i> | 18.45879 | (2000.0) | <i>P</i> | <i>Q</i> |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.29470619 | ω 213.66772 | +0.88875580 | -0.45837376 |
| <i>a</i> | 2.2363677 | Ω 173.61290 | +0.42549641 | +0.82289318 |
| <i>e</i> | 0.1676581 | <i>i</i> 1.32650 | +0.17048735 | +0.33576823 |
| <i>P</i> | 3.34 | <i>H</i> 15.6 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------|------|
| 730919 675 | 0.8- | 0.6- | 730924 675 | 0.0 | 0.4+ | 731004 675 | 0.9- | 0.4- |
| 730919 675 | 0.6+ | 0.3- | 730925 675 | (2.0- | 3.0-) | 731004 675 | 0.4- | 0.7+ |
| 730919 675 | 0.2- | 0.5+ | 730925 675 | 0.6- | 1.5+ | 731005 675 | 0.6+ | 0.6+ |
| 730919 675 | 1.2+ | 0.2+ | 730925 675 | 1.7+ | 0.5- | 731005 675 | 0.1+ | 0.1+ |
| 730920 675 | 1.9- | 0.5+ | 730925 675 | 0.2- | 1.5+ | 930818 010 | 0.6- | 0.5- |
| 730920 675 | (1.9- | 2.0+) | 730929 675 | 0.0 | 0.8- | 930819 010 | 0.4+ | 0.3+ |
| 730924 675 | 0.1+ | 1.9- | 730929 675 | 0.7+ | 1.2- | 930819 010 | 0.5+ | 0.7+ |
| 730924 675 | 0.4+ | 0.2- | 730930 675 | 0.2- | 0.8+ | 930819 010 | 0.3- | 0.4- |
| 730924 675 | 0.6+ | 0.4- | 730930 675 | 0.5- | 0.5- | | | |

2144 T-2 = 1992 FH₃ = 1993 QT₃

Id. E. Bowell (k), G. V. Williams

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 95.37070 | (2000.0) | <i>P</i> | <i>Q</i> |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.24421276 | ω 278.95215 | +0.11518194 | +0.99333932 |
| <i>a</i> | 2.5348785 | Ω 357.65492 | -0.87810522 | +0.10032207 |
| <i>e</i> | 0.1317616 | <i>i</i> 4.45823 | -0.46439675 | +0.05667874 |
| <i>P</i> | 4.04 | <i>H</i> 15.0 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------|------|
| 730919 675 | 0.7- | 0.4+ | 730929 675 | (0.2+ | 2.6+) | 731005 675 | 1.7+ | 0.3+ |
| 730919 675 | 0.5- | 0.1+ | 730929 675 | 0.8- | 2.2+ | 920325 691 | 0.0 | 0.0 |
| 730920 675 | 1.7- | 1.7- | 730930 675 | 0.5+ | 0.7+ | 920325 691 | 0.0 | 0.0 |
| 730924 675 | (3.7- | 0.8+) | 730930 675 | 0.7+ | 0.4- | 930818 010 | 0.5- | 0.4+ |
| 730924 675 | (3.7- | 0.2+) | 731004 675 | 1.0+ | 0.3+ | 930819 010 | 0.8+ | 0.8- |

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 730925 675 | 1.5- | 1.2- | 731004 675 | 1.8+ | 0.4+ | 930819 010 | 0.2- | 0.3+ |
| 730925 675 | 0.2- | 1.0- | 731005 675 | 0.3- | 0.2- | 930819 010 | 0.0 | 0.1+ |

2285 T-2 = 1987 RE₆ = 1992 ST₂₃

Id. S. Nakano (MPC 15571; unpublished)

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 91.26023 | (2000.0) | <i>P</i> | <i>Q</i> |
|----------|------------|-------------------|---------------|-------------|
| <i>n</i> | 0.21032990 | ω 43.71809 | +0.58863570 | -0.80790207 |
| <i>a</i> | 2.8002838 | Ω 10.33182 | +0.69148454 | +0.48504614 |
| <i>e</i> | 0.1321675 | <i>i</i> 9.08659 | +0.41875666 | +0.33470059 |
| <i>P</i> | 4.69 | <i>H</i> 13.4 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|-------|-------|------------|-------|-------|------------|------|------|
| 730925 675 | 2.9+ | 2.8- | 731004 675 | 2.3+ | 0.9- | 920925 033 | 0.6+ | 0.6+ |
| 730925 675 | (3.5+ | 2.0-) | 731005 675 | 1.1- | 0.2- | 920925 033 | 0.8+ | 0.5+ |
| 730929 675 | 0.9- | 1.2+ | 731005 675 | 2.0- | 0.6- | 920927 033 | 0.6- | 1.0+ |
| 730929 675 | 0.5- | 0.6+ | 870904 095 | 2.3- | 1.1+ | 920928 033 | 0.6- | 0.7- |
| 730930 675 | 0.1- | 0.4- | 870924 095 | 0.3- | 2.6+ | 920929 033 | 2.3- | 0.4- |
| 730930 675 | 0.7+ | 0.9- | 870927 095 | (3.1- | 7.1+) | | | |
| 731004 675 | 1.8+ | 1.3- | 920923 033 | 1.6+ | 1.0+ | | | |

5211 T-2 = 1993 TA₂

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Nakano

| <i>M</i> | 357.11174 | (2000.0) | <i>P</i> | <i>Q</i> |
|----------|------------|--------------------|---------------|-------------|
| <i>n</i> | 0.19951446 | ω 207.21270 | +0.24158128 | -0.96281643 |
| <i>a</i> | 2.9005908 | Ω 229.07026 | +0.91688526 | +0.26728857 |
| <i>e</i> | 0.2165877 | <i>i</i> 9.21024 | +0.31774189 | -0.03925993 |
| <i>P</i> | 4.94 | <i>H</i> 12.3 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 730919 675 | 2.4+ | 1.7+ | 730925 675 | 0.0 | 0.5- | 730930 675 | 0.5- | 0.4+ |
| 730920 675 | 1.9- | 0.6- | 730925 675 | 0.3+ | 0.2- | 931015 400 | 0.6+ | 0.2+ |
| 730920 675 | 0.1+ | 0.3- | 730929 675 | 0.8+ | 0.5- | 931015 400 | 0.3+ | 1.2- |
| 730924 675 | 0.7- | 0.0 | 730929 675 | 0.6+ | 0.5- | 931016 400 | 0.7- | 0.2- |
| 730924 675 | 0.8- | 0.2+ | 730930 675 | 0.3- | 0.3+ | 931016 400 | 0.1- | 1.3+ |

3137 T-3 = 1993 TH₁

Epoch 1994 Feb. 17.0 TT = JDT 2449400.5

Williams

| <i>M</i> | 16.95139 | (2000.0) | <i>P</i> | <i>Q</i> |
|----------|------------|-------------------|---------------|-------------|
| <i>n</i> | 0.18572551 | ω 12.66994 | +0.79239484 | -0.60487172 |
| <i>a</i> | 3.0424376 | Ω 25.07295 | +0.54214923 | +0.63895467 |
| <i>e</i> | 0.1365635 | <i>i</i> 10.74367 | +0.27961515 | +0.47525482 |
| <i>P</i> | 5.31 | <i>H</i> 12.5 | <i>G</i> 0.15 | |

Residuals in seconds of arc

| | | | | | | | | |
|------------|------|------|------------|------|------|------------|------|------|
| 771007 675 | 1.7+ | 1.0- | 771016 675 | 0.0 | 0.6- | 771022 675 | 0.1- | 1.4- |
| 771011 675 | 0.9- | 0.7+ | 771017 675 | 1.1- | 0.8+ | 931015 400 | 1.2+ | 1.9- |
| 771011 675 | 0.9- | 1.0+ | 771017 675 | 1.8- | 0.3+ | 931015 400 | 0.9+ | 0.7+ |
| 771012 675 | 0.8+ | 0.3- | 771021 675 | 0.3+ | 1.2+ | 931016 400 | 0.4- | 1.4+ |
| 771012 675 | 0.3+ | 0.0 | 771021 675 | 0.5+ | 0.9+ | 931016 400 | 1.8- | 0.2- |
| 771016 675 | 0.9+ | 0.1+ | 771022 675 | 0.3+ | 1.6- | | | |

| Object | <i>H</i> | Epoch | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | <i>a</i> | Obs. | Opp. | Arc | rms | Computer | <i>MPC</i> | Object |
|-----------------------|----------|--------|-----------|-----------|-----------|----------|-----------|-----------|------|------|-----------|------|----------|------------|-----------------------|
| 1930 UX | 14.0 | 940217 | 48.70711 | 57.06925 | 334.30120 | 4.73866 | 0.2042104 | 2.2993107 | 12 | 5 | 1930-1993 | 0.77 | Bardwell | 19008 | 1930 UX |
| 1931 TC ₂ | 12.8 | 940217 | 124.70185 | 349.95354 | 348.33073 | 8.29721 | 0.2530793 | 2.6690038 | 8 | 2 | 1931-1977 | 1.84 | Nakano | 12578 | 1931 TC ₂ |
| 1934 GA | 10.5 | 940217 | 329.00727 | 77.13235 | 68.71008 | 24.59177 | 0.2134892 | 2.6580978 | 11 | 3 | 1934-1993 | 0.96 | Williams | 22072 | 1934 GA |
| 1952 SW ₁ | 13.5 | 940217 | 149.57605 | 184.69355 | 36.80905 | 14.06934 | 0.0986556 | 2.5911499 | 27 | 4 | 1952-1993 | 0.79 | Williams | 21963 | 1952 SW ₁ |
| 1967 JN | 12.0 | 940217 | 85.94221 | 244.10907 | 38.45190 | 13.67576 | 0.1816480 | 2.9420262 | 14 | 4 | 1967-1993 | 0.86 | Williams | 20327 | 1967 JN |
| 1971 SX ₃ | 12.6 | 940217 | 25.65840 | 285.32079 | 192.57177 | 12.61958 | 0.0993811 | 2.6047696 | 7 | 2 | 1971-1986 | 0.63 | Ichikawa | 12007 | 1971 SX ₃ |
| 1971 UQ | 15.0 | 940217 | 229.60993 | 311.58407 | 55.20903 | 3.57241 | 0.1710225 | 2.2568673 | 8 | 2 | 1971-1977 | 1.16 | Marsden | 12442 | 1971 UQ |
| 1971 UN ₁ | 13.0 | 940217 | 351.00677 | 208.80057 | 187.39005 | 1.36247 | 0.2140513 | 3.1562233 | 25 | 4 | 1971-1993 | 0.90 | Williams | 22598 | 1971 UN ₁ |
| 1971 UT ₁ | 13.0 | 940217 | 15.08962 | 184.13891 | 171.89388 | 2.33609 | 0.2156948 | 3.1549641 | 21 | 7 | 1954-1993 | 0.61 | Williams | 22491 | 1971 UT ₁ |
| 1972 AU | 12.8 | 940217 | 206.67015 | 10.29239 | 342.32644 | 12.54517 | 0.1718532 | 2.6019715 | 6 | 3 | 1970-1987 | 1.47 | Nakano | 13602 | 1972 AU |
| 1974 SJ ₃ | 12.0 | 940217 | 305.91225 | 141.62286 | 5.08661 | 16.96747 | 0.0831786 | 2.7600680 | 13 | 7 | 1951-1993 | 0.88 | Williams | 22598 | 1974 SJ ₃ |
| 1975 SZ ₁ | 15.7 | 940217 | 98.15879 | 247.72616 | 173.55994 | 2.93780 | 0.1714204 | 2.2730390 | 8 | 2 | 1975-1982 | 0.61 | Nakano | 13300 | 1975 SZ ₁ |
| 1976 GL ₈ | 12.3 | 940217 | 77.40569 | 355.33412 | 272.55038 | 6.54487 | 0.1544403 | 2.5605748 | 9 | 2 | 1976-1990 | 0.76 | Ichikawa | 17624 | 1976 GL ₈ |
| 1976 QZ ₁ | 13.0 | 940217 | 63.56295 | 264.56316 | 62.65807 | 6.76996 | 0.0621471 | 2.2478380 | 21 | 5 | 1953-1993 | 0.53 | Williams | 22072 | 1976 QZ ₁ |
| 1976 QL ₂ | 12.3 | 940217 | 324.12451 | 8.06533 | 35.73037 | 9.92176 | 0.0930061 | 3.1658809 | 16 | 2 | 1976-1988 | 1.14 | Nakano | 14185 | 1976 QL ₂ |
| 1976 SW ₃ | 12.5 | 940217 | 35.04649 | 217.74233 | 173.90999 | 5.29625 | 0.1737664 | 3.1289771 | 27 | 4 | 1976-1993 | 0.88 | Williams | 21964 | 1976 SW ₃ |
| 1976 SZ ₉ | 13.0 | 940217 | 357.04620 | 20.39333 | 11.92898 | 3.78475 | 0.2067662 | 3.1937700 | 34 | 4 | 1976-1993 | 1.10 | Williams | 22598 | 1976 SZ ₉ |
| 1977 UO ₅ | 12.0 | 940217 | 327.26334 | 356.75837 | 68.58927 | 2.40342 | 0.2029270 | 3.1152537 | 23 | 6 | 1977-1993 | 0.63 | Bardwell | 22598 | 1977 UO ₅ |
| 1978 NN ₁ | 13.5 | 940217 | 71.07827 | 172.10606 | 143.12329 | 7.97215 | 0.2883650 | 2.8463674 | 21 | 4 | 1978-1993 | 0.85 | Bardwell | 21926 | 1978 NN ₁ |
| 1978 OP | 14.0 | 940217 | 185.33984 | 193.22994 | 109.30977 | 14.87474 | 0.1607196 | 2.6968221 | 10 | 2 | 1978-1982 | 0.78 | Ichikawa | 11338 | 1978 OP |
| 1978 PX ₂ | 14.5 | 940217 | 48.71935 | 13.83652 | 344.36348 | 2.19541 | 0.1988420 | 2.3945222 | 24 | 3 | 1978-1993 | 0.85 | Marsden | 22270 | 1978 PX ₂ |
| 1978 PD ₃ | 13.9 | 940217 | 72.12724 | 44.96797 | 327.28516 | 6.20723 | 0.1207869 | 2.3571525 | 10 | 2 | 1978-1989 | 1.03 | Nakano | 15403 | 1978 PD ₃ |
| 1978 SP ₅ | 13.2 | 940217 | 118.48799 | 194.32449 | 186.68888 | 3.94381 | 0.1114883 | 2.7728917 | 6 | 2 | 1978-1987 | 1.37 | Nakano | 15403 | 1978 SP ₅ |
| 1978 UK ₇ | 15.0 | 940217 | 358.85714 | 199.20090 | 201.99162 | 1.64842 | 0.1757000 | 2.4358129 | 20 | 3 | 1978-1993 | 0.85 | Marsden | 22587 | 1978 UK ₇ |
| 1978 VZ ₂ | 14.4 | 940217 | 232.55751 | 23.03290 | 67.44916 | 1.66635 | 0.0856991 | 2.5670938 | 11 | 3 | 1978-1986 | 0.67 | Ichikawa | 16575 | 1978 VZ ₂ |
| 1978 VD ₇ | 14.3 | 940217 | 87.59179 | 331.68215 | 74.61099 | 3.12883 | 0.0742007 | 2.8359844 | 12 | 3 | 1978-1992 | 0.77 | Nakano | 12696 | 1978 VD ₇ |
| 1978 VV ₉ | 12.0 | 940217 | 121.61464 | 315.25620 | 270.35464 | 2.53679 | 0.1069346 | 3.1353273 | 19 | 5 | 1978-1993 | 0.79 | Williams | 21965 | 1978 VV ₉ |
| 1979 MP ₁ | 14.9 | 940217 | 273.22325 | 164.00473 | 166.07209 | 1.68071 | 0.1201455 | 2.4380152 | 13 | 3 | 1978-1987 | 1.28 | Nakano | 13603 | 1979 MP ₁ |
| 1979 MB ₂ | 13.7 | 940217 | 91.73673 | 297.36495 | 141.48679 | 5.73358 | 0.2740462 | 2.5480837 | 21 | 4 | 1951-1992 | 0.72 | Bowell | 22073 | 1979 MB ₂ |
| 1979 MU ₂ | 14.0 | 940217 | 226.56465 | 150.37226 | 161.72033 | 5.73761 | 0.1555855 | 3.1133697 | 11 | 2 | 1977-1979 | 1.25 | Marsden | 6639 | 1979 MU ₂ |
| 1979 MP ₃ | 15.5 | 940217 | 358.02187 | 182.37090 | 222.72082 | 2.96657 | 0.1496425 | 2.2761937 | 19 | 4 | 1979-1993 | 0.69 | Marsden | 21965 | 1979 MP ₃ |
| 1979 TT ₂ | 14.0 | 940217 | 190.37235 | 314.95895 | 42.34696 | 3.72928 | 0.2656490 | 2.5718818 | 5 | 2 | 1978-1979 | 0.51 | Williams | 13164 | 1979 TT ₂ |
| 1980 BJ ₄ | 12.0 | 940217 | 135.23647 | 244.41711 | 58.00314 | 2.99910 | 0.0332535 | 2.8865968 | 19 | 4 | 1980-1993 | 1.05 | Bardwell | 21784 | 1980 BJ ₄ |
| 1980 LY | 14.5 | 940217 | 93.28660 | 174.23379 | 101.38278 | 4.52593 | 0.1575261 | 2.1662494 | 14 | 4 | 1980-1993 | 0.70 | Williams | 17428 | 1980 LY |
| 1980 UL ₁ | 12.5 | 940217 | 10.95682 | 94.96289 | 237.47415 | 8.24945 | 0.1658089 | 2.7578876 | 18 | 4 | 1962-1993 | 0.65 | Bardwell | 22492 | 1980 UL ₁ |
| 1981 DN | 15.5 | 940217 | 147.72047 | 211.08367 | 306.71273 | 7.07770 | 0.2128173 | 2.4491948 | 20 | 2 | 1977-1981 | 1.00 | Williams | 11148 | 1981 DN |
| 1981 DS ₁ | 14.5 | 940217 | 207.59565 | 89.00965 | 295.12633 | 8.61120 | 0.1090302 | 2.5664028 | 19 | 2 | 1978-1981 | 0.99 | Williams | 11148 | 1981 DS ₁ |
| 1981 DF ₂ | 14.0 | 940217 | 32.31723 | 126.39079 | 256.08761 | 7.30195 | 0.2029227 | 2.3165204 | 22 | 3 | 1981-1993 | 1.01 | Bardwell | 22598 | 1981 DF ₂ |
| 1981 EN | 14.5 | 940217 | 212.83703 | 350.38165 | 164.21854 | 9.56855 | 0.1613618 | 2.3664087 | 45 | 2 | 1978-1981 | 0.80 | Williams | 10768 | 1981 EN |
| 1981 EX ₃ | 14.5 | 940217 | 0.76163 | 235.55587 | 234.19209 | 7.91996 | 0.0950825 | 2.7471080 | 17 | 2 | 1977-1981 | 1.04 | Williams | 10820 | 1981 EX ₃ |
| 1981 EO ₄ | 14.5 | 940217 | 10.48239 | 56.78393 | 293.50714 | 9.50065 | 0.1177159 | 2.9935625 | 21 | 2 | 1981-1993 | 0.90 | Williams | 22587 | 1981 EO ₄ |
| 1981 EK ₈ | 15.0 | 940217 | 116.00769 | 353.78106 | 283.16549 | 5.37853 | 0.1409946 | 2.3648201 | 26 | 4 | 1978-1993 | 0.79 | Williams | 15241 | 1981 EK ₈ |
| 1981 ET ₈ | 14.5 | 940217 | 145.31337 | 352.88349 | 213.58232 | 3.87836 | 0.0623072 | 2.3987643 | 23 | 2 | 1978-1981 | 1.05 | Williams | 10769 | 1981 ET ₈ |
| 1981 EA ₉ | 15.0 | 940217 | 35.33266 | 21.70519 | 333.05836 | 6.86511 | 0.2429477 | 2.3483750 | 15 | 3 | 1977-1993 | 0.99 | Bardwell | 21966 | 1981 EA ₉ |
| 1981 EH ₉ | 15.5 | 940217 | 238.30268 | 246.40826 | 264.18537 | 3.46470 | 0.1874778 | 2.3392907 | 29 | 4 | 1979-1993 | 0.80 | Williams | 21930 | 1981 EH ₉ |
| 1981 EL ₁₀ | 14.9 | 940217 | 192.26590 | 0.33524 | 301.77428 | 4.81334 | 0.1067245 | 2.7386567 | 25 | 2 | 1981-1990 | 1.19 | Nakano | 16424 | 1981 EL ₁₀ |
| 1981 EP ₁₀ | 16.5 | 940217 | 110.51378 | 296.74597 | 311.32868 | 5.88388 | 0.0990065 | 2.4023961 | 20 | 2 | 1977-1981 | 0.97 | Williams | 10820 | 1981 EP ₁₀ |
| 1981 EE ₁₂ | 15.0 | 940217 | 354.22402 | 146.46233 | 281.89200 | 5.29510 | 0.0992379 | 2.3005113 | 13 | 2 | 1981-1984 | 0.81 | Williams | 12706 | 1981 EE ₁₂ |
| 1981 EC ₁₃ | 14.5 | 940217 | 157.43560 | 289.16953 | 310.57046 | 6.58353 | 0.0237675 | 2.9198321 | 28 | 5 | 1981-1993 | 0.84 | Williams | 21966 | 1981 EC ₁₃ |
| 1981 EW ₁₃ | 15.0 | 940217 | 171.77489 | 242.26520 | 271.52594 | 1.77134 | 0.0777526 | 2.4283397 | 28 | 3 | 1978-1988 | 0.94 | Williams | 13041 | 1981 EW ₁₃ |
| 1981 EX ₁₃ | 12.5 | 940217 | 63.18190 | 105.07626 | 210.71803 | 9.55430 | 0.0953956 | 2.9709071 | 30 | 5 | 1978-1993 | 1.00 | Bardwell | 22598 | 1981 EX ₁₃ |

| | | | | | | | | | | | | | | | |
|-----------------------|------|--------|-----------|-----------|-----------|----------|-----------|-----------|----|---|-----------|------|----------|-------|-----------------------|
| 1981 EB ₁₅ | 15.5 | 940217 | 100.57322 | 216.28917 | 257.66793 | 2.58457 | 0.1375593 | 2.5745344 | 19 | 3 | 1978-1992 | 1.19 | Williams | 11149 | 1981 EB ₁₅ |
| 1981 EV ₁₇ | 16.5 | 940217 | 105.20262 | 21.80633 | 234.28630 | 1.79288 | 0.1490904 | 2.4018483 | 11 | 2 | 1977-1981 | 1.10 | Williams | 10822 | 1981 EV ₁₇ |
| 1981 EQ ₁₈ | 14.0 | 940217 | 233.10590 | 255.32939 | 147.65977 | 1.86999 | 0.1794927 | 3.1301373 | 16 | 3 | 1978-1981 | 0.84 | Williams | 11042 | 1981 EQ ₁₈ |
| 1981 EU ₁₈ | 14.0 | 940217 | 44.87640 | 199.50869 | 88.76011 | 0.21485 | 0.1582410 | 3.0842566 | 30 | 3 | 1981-1993 | 1.21 | Marsden | 22588 | 1981 EU ₁₈ |
| 1981 EY ₁₉ | 15.0 | 940217 | 106.76083 | 48.37262 | 260.43682 | 1.07069 | 0.0341843 | 2.8707941 | 15 | 2 | 1977-1981 | 1.14 | Williams | 11042 | 1981 EY ₁₉ |
| 1981 EO ₂₀ | 15.0 | 940217 | 136.86370 | 113.76924 | 169.27153 | 2.75466 | 0.2189433 | 2.3414514 | 21 | 2 | 1981-1989 | 0.94 | Nakano | 16228 | 1981 EO ₂₀ |
| 1981 ED ₂₁ | 14.0 | 940217 | 1.36745 | 95.95397 | 346.57966 | 9.21322 | 0.3569682 | 2.7366373 | 40 | 4 | 1981-1993 | 0.79 | Williams | 21967 | 1981 ED ₂₁ |
| 1981 EO ₂₂ | 17.0 | 940217 | 123.72142 | 302.95264 | 278.83214 | 0.84582 | 0.1365162 | 2.4169611 | 12 | 2 | 1977-1981 | 1.08 | Williams | 10823 | 1981 EO ₂₂ |
| 1981 EH ₂₄ | 15.0 | 940217 | 351.33292 | 22.51222 | 29.66605 | 2.22319 | 0.0714775 | 2.8780161 | 21 | 4 | 1981-1993 | 1.00 | Williams | 22430 | 1981 EH ₂₄ |
| 1981 EL ₂₄ | 13.5 | 940217 | 349.92603 | 85.76326 | 314.62787 | 1.14478 | 0.0626293 | 2.9117756 | 31 | 5 | 1977-1993 | 1.01 | Williams | 22430 | 1981 EL ₂₄ |
| 1981 EM ₂₄ | 13.8 | 940217 | 66.30836 | 51.21856 | 333.96509 | 2.84694 | 0.1031756 | 2.7894141 | 16 | 2 | 1981-1988 | 1.09 | Nakano | 14187 | 1981 EM ₂₄ |
| 1981 ER ₂₄ | 16.0 | 940217 | 229.32800 | 81.73831 | 205.98114 | 1.76107 | 0.0939325 | 2.2178669 | 13 | 2 | 1978-1981 | 1.03 | Williams | 10771 | 1981 ER ₂₄ |
| 1981 EF ₂₅ | 15.5 | 940217 | 218.19504 | 21.60677 | 77.71304 | 0.33888 | 0.1612440 | 2.4182808 | 19 | 2 | 1977-1981 | 1.04 | Williams | 10823 | 1981 EF ₂₅ |
| 1981 EJ ₂₅ | 17.0 | 940217 | 119.20455 | 45.16139 | 181.05413 | 2.40157 | 0.1706476 | 2.4226423 | 15 | 2 | 1977-1981 | 1.15 | Williams | 11149 | 1981 EJ ₂₅ |
| 1981 ET ₂₇ | 15.0 | 940217 | 134.23500 | 82.33853 | 167.88658 | 2.20697 | 0.0255785 | 2.9466617 | 20 | 5 | 1978-1993 | 0.84 | Williams | 21932 | 1981 ET ₂₇ |
| 1981 EG ₂₈ | 14.0 | 940217 | 57.87323 | 157.25298 | 191.97569 | 4.82712 | 0.1353795 | 2.3384326 | 27 | 6 | 1977-1993 | 1.13 | Williams | 22050 | 1981 EG ₂₈ |
| 1981 EA ₂₉ | 14.5 | 940217 | 76.90128 | 201.87052 | 194.61583 | 8.45720 | 0.2111808 | 2.7235724 | 13 | 2 | 1978-1981 | 0.67 | Williams | 10772 | 1981 EA ₂₉ |
| 1981 EF ₃₀ | 14.5 | 940217 | 254.36242 | 332.57264 | 162.65937 | 6.08721 | 0.0650831 | 2.3420870 | 26 | 3 | 1981-1993 | 0.91 | Marsden | 22599 | 1981 EF ₃₀ |
| 1981 ER ₃₁ | 15.5 | 940217 | 161.44267 | 354.50005 | 159.34788 | 4.69112 | 0.1225002 | 2.4390454 | 12 | 2 | 1977-1981 | 0.69 | Williams | 10824 | 1981 ER ₃₁ |
| 1981 EQ ₃₃ | 16.5 | 940217 | 75.71413 | 1.86521 | 294.81204 | 5.18863 | 0.1331406 | 2.3883310 | 16 | 4 | 1978-1993 | 0.88 | Williams | 22588 | 1981 EQ ₃₃ |
| 1981 ES ₃₃ | 15.0 | 940217 | 272.62121 | 13.65248 | 320.00049 | 6.50748 | 0.1628414 | 2.5546672 | 10 | 2 | 1978-1981 | 2.15 | Nakano | 12796 | 1981 ES ₃₃ |
| 1981 EU ₃₃ | 15.5 | 940217 | 51.41997 | 105.75037 | 234.24612 | 5.69554 | 0.1359340 | 2.3547876 | 12 | 3 | 1977-1981 | 1.35 | Williams | 11150 | 1981 EU ₃₃ |
| 1981 EE ₃₅ | 15.5 | 940217 | 314.01205 | 170.02197 | 165.71668 | 7.32605 | 0.1917178 | 2.4878006 | 13 | 2 | 1978-1981 | 1.03 | Williams | 10772 | 1981 EE ₃₅ |
| 1981 EL ₃₆ | 16.0 | 940217 | 71.55570 | 351.92992 | 282.11763 | 2.50936 | 0.1707166 | 2.4284847 | 11 | 2 | 1981-1993 | 1.07 | Marsden | 22588 | 1981 EL ₃₆ |
| 1981 EW ₃₈ | 15.3 | 940217 | 260.02084 | 305.81719 | 281.86141 | 4.11487 | 0.0611386 | 2.7501400 | 17 | 3 | 1969-1990 | 0.68 | Nakano | 16424 | 1981 EW ₃₈ |
| 1981 EL ₄₁ | 15.5 | 940217 | 153.12900 | 166.79789 | 4.45965 | 10.32280 | 0.0109066 | 3.0696073 | 11 | 2 | 1978-1981 | 1.06 | Nakano | 10632 | 1981 EL ₄₁ |
| 1981 EA ₄₂ | 15.8 | 940217 | 118.67407 | 218.27863 | 173.75115 | 7.59586 | 0.1073463 | 2.2078093 | 29 | 3 | 1981-1992 | 1.15 | Nakano | 15705 | 1981 EA ₄₂ |
| 1981 EA ₄₃ | 16.0 | 940217 | 318.05821 | 76.96620 | 330.25024 | 1.49598 | 0.1968664 | 2.3622845 | 7 | 2 | 1977-1981 | 0.87 | Williams | 10825 | 1981 EA ₄₃ |
| 1981 EQ ₄₃ | 17.0 | 940217 | 114.55710 | 35.15114 | 189.81775 | 1.24775 | 0.1332069 | 2.4256330 | 7 | 2 | 1977-1981 | 0.84 | Williams | 10825 | 1981 EQ ₄₃ |
| 1981 ES ₄₇ | 16.0 | 940217 | 61.29455 | 318.70257 | 53.96765 | 2.42202 | 0.1533671 | 2.2950728 | 9 | 2 | 1978-1981 | 0.98 | Williams | 10773 | 1981 ES ₄₇ |
| 1981 FL | 14.5 | 940217 | 199.52336 | 357.26606 | 184.20814 | 7.89580 | 0.1866447 | 2.3700811 | 20 | 5 | 1970-1993 | 0.98 | Williams | 22074 | 1981 FL |
| 1981 FP | 15.5 | 940217 | 119.06238 | 18.48853 | 181.63386 | 2.40165 | 0.1381308 | 2.4440335 | 20 | 2 | 1977-1981 | 0.81 | Williams | 10825 | 1981 FP |
| 1981 JE ₂ | 14.0 | 940217 | 103.87732 | 244.17781 | 62.59627 | 3.01807 | 0.2079611 | 2.3916140 | 15 | 3 | 1980-1989 | 0.82 | Nakano | 16230 | 1981 JE ₂ |
| 1981 KJ | 12.5 | 940217 | 70.70849 | 263.02745 | 36.09558 | 15.21250 | 0.1464061 | 3.1308918 | 19 | 4 | 1975-1993 | 0.77 | Bardwell | 22074 | 1981 KJ |
| 1981 RQ ₂ | 13.0 | 940217 | 20.92150 | 91.48062 | 230.99267 | 10.14822 | 0.1848173 | 2.5931637 | 10 | 2 | 1981-1993 | 0.82 | Bardwell | 22399 | 1981 RQ ₂ |
| 1981 SJ | 14.9 | 940217 | 124.11649 | 22.45278 | 318.78217 | 1.27037 | 0.2186968 | 2.4095849 | 13 | 4 | 1936-1992 | 0.73 | Bowell | 22223 | 1981 SJ |
| 1981 SN | 13.5 | 940217 | 57.13015 | 156.05265 | 116.25523 | 5.17964 | 0.1584861 | 2.4832153 | 22 | 4 | 1981-1993 | 1.09 | Williams | 21968 | 1981 SN |
| 1982 BS | 13.0 | 940217 | 22.24189 | 118.83502 | 296.43205 | 12.74821 | 0.1703567 | 2.5909895 | 14 | 4 | 1953-1993 | 1.12 | Bardwell | 20812 | 1982 BS |
| 1982 ST | 14.0 | 940217 | 77.03200 | 44.95252 | 343.70767 | 20.10038 | 0.1045913 | 1.9256798 | 28 | 5 | 1954-1993 | 1.02 | Williams | 22492 | 1982 ST |
| 1982 SO ₄ | 13.5 | 940217 | 0.55384 | 53.96421 | 14.61276 | 7.56382 | 0.2906674 | 2.3916774 | 23 | 3 | 1982-1993 | 0.49 | Williams | 21968 | 1982 SO ₄ |
| 1982 SM ₆ | 13.8 | 940217 | 19.98215 | 15.87736 | 6.48330 | 6.93714 | 0.1298439 | 2.3897862 | 18 | 4 | 1971-1993 | 1.17 | Nakano | 22589 | 1982 SM ₆ |
| 1982 SG ₁₂ | 14.5 | 940217 | 42.57927 | 235.45257 | 184.28657 | 6.44084 | 0.1180987 | 2.3056830 | 8 | 2 | 1977-1982 | 1.54 | Nakano | 13686 | 1982 SG ₁₂ |
| 1982 UV ₁ | 12.5 | 940217 | 45.75687 | 253.50870 | 113.08827 | 2.98144 | 0.1767801 | 3.0929025 | 19 | 7 | 1954-1993 | 1.03 | Williams | 22075 | 1982 UV ₁ |
| 1982 UX ₅ | 13.7 | 940217 | 151.05407 | 160.70116 | 273.25426 | 4.03463 | 0.0893645 | 2.7282784 | 15 | 2 | 1982-1989 | 0.57 | Nakano | 14784 | 1982 UX ₅ |
| 1982 VZ | 12.5 | 940217 | 345.09163 | 297.92669 | 128.88145 | 1.83438 | 0.1858491 | 3.1825157 | 21 | 2 | 1982-1984 | 0.45 | Nakano | 9360 | 1982 VZ |
| 1982 XQ ₁ | 12.5 | 940217 | 185.13136 | 67.54012 | 149.59320 | 1.72890 | 0.1039175 | 3.2064052 | 32 | 6 | 1979-1993 | 0.98 | Williams | 22075 | 1982 XQ ₁ |
| 1983 RB | 15.5 | 940217 | 73.77222 | 114.77105 | 169.50577 | 19.42311 | 0.5060633 | 2.2223464 | 43 | 2 | 1983-1993 | 0.80 | Williams | 22589 | 1983 RB |
| 1983 RM ₃ | 13.5 | 940217 | 323.10680 | 129.07015 | 316.92807 | 6.74171 | 0.1450799 | 2.2278682 | 69 | 3 | 1983-1993 | 0.93 | Bardwell | 22589 | 1983 RM ₃ |
| 1983 RX ₃ | 12.9 | 940217 | 62.66611 | 136.44795 | 170.63792 | 14.09393 | 0.3204558 | 2.8675794 | 26 | 5 | 1977-1993 | 1.01 | Bardwell | 22430 | 1983 RX ₃ |
| 1983 VQ ₁ | 14.5 | 940217 | 318.59160 | 346.95678 | 55.98667 | 26.81768 | 0.2912089 | 2.3345185 | 20 | 3 | 1983-1993 | 0.58 | Williams | 22430 | 1983 VQ ₁ |
| 1984 DA | 14.5 | 940217 | 257.11725 | 358.45957 | 159.33792 | 23.43712 | 0.0575664 | 1.9195416 | 7 | 3 | 1984-1993 | 0.93 | Williams | 22076 | 1984 DA |
| 1984 SG ₁ | 12.5 | 940217 | 349.81993 | 95.56599 | 287.63587 | 3.27699 | 0.0845361 | 2.7814318 | 18 | 5 | 1984-1993 | 0.92 | Williams | 22076 | 1984 SG ₁ |

| | | | | | | | | | | | | | | | |
|-----------------------|------|--------|-----------|-----------|-----------|----------|-----------|-----------|----|---|-----------|------|----------|-------|-----------------------|
| 1984 UT | 13.0 | 940217 | 341.69695 | 201.71001 | 232.57711 | 16.19692 | 0.2303399 | 2.7825909 | 28 | 3 | 1984-1993 | 0.84 | Williams | 18424 | 1984 UT |
| 1984 UX ₂ | 12.0 | 940217 | 78.64391 | 323.49441 | 15.78358 | 11.98936 | 0.2017614 | 2.6820175 | 13 | 3 | 1931-1993 | 0.82 | Williams | 22271 | 1984 UX ₂ |
| 1984 YY ₁ | 15.5 | 940217 | 298.08187 | 23.91547 | 13.71782 | 2.53164 | 0.1727158 | 2.2347771 | 8 | 3 | 1977-1992 | 0.53 | Williams | 17958 | 1984 YY ₁ |
| 1985 CS ₁ | 13.0 | 940217 | 147.62451 | 76.55384 | 173.15926 | 4.94935 | 0.2139300 | 2.2766961 | 63 | 4 | 1985-1993 | 0.83 | Williams | 22076 | 1985 CS ₁ |
| 1985 PL ₁ | 13.8 | 940217 | 258.53330 | 141.23968 | 192.55681 | 11.89064 | 0.0574570 | 2.8856677 | 15 | 2 | 1985-1988 | 1.06 | Nakano | 13449 | 1985 PL ₁ |
| 1985 QP ₅ | 13.3 | 940217 | 63.82799 | 307.97204 | 358.34609 | 14.15491 | 0.0952884 | 2.5524023 | 11 | 3 | 1965-1989 | 1.00 | Nakano | 16024 | 1985 QP ₅ |
| 1985 RQ | 15.0 | 940217 | 39.92635 | 329.79660 | 18.48788 | 6.38531 | 0.2963225 | 2.5226115 | 15 | 4 | 1973-1993 | 0.86 | Williams | 15884 | 1985 RQ |
| 1985 SX ₂ | 13.5 | 940217 | 328.52205 | 78.36163 | 323.76432 | 3.67833 | 0.1416231 | 2.6208327 | 6 | 2 | 1981-1985 | 1.07 | Williams | 14194 | 1985 SX ₂ |
| 1985 SL ₃ | 14.3 | 940217 | 187.13029 | 26.87431 | 308.95033 | 5.30679 | 0.1878847 | 2.2725008 | 5 | 2 | 1978-1985 | 0.73 | Nakano | 14194 | 1985 SL ₃ |
| 1985 SW ₄ | 12.8 | 940217 | 244.06142 | 276.40880 | 26.79447 | 7.32201 | 0.1626577 | 3.1185357 | 7 | 3 | 1948-1990 | 1.49 | Nakano | 17016 | 1985 SW ₄ |
| 1985 TM ₁ | 13.0 | 940217 | 22.93309 | 31.20007 | 21.77017 | 11.54856 | 0.2181523 | 2.4794103 | 29 | 3 | 1985-1993 | 0.91 | Williams | 22077 | 1985 TM ₁ |
| 1985 UC | 13.5 | 940217 | 56.02065 | 294.66102 | 11.40792 | 16.60679 | 0.2340030 | 2.5783836 | 19 | 3 | 1985-1993 | 0.87 | Williams | 16232 | 1985 UC |
| 1985 UF ₃ | 12.0 | 940217 | 1.60300 | 181.26700 | 195.01478 | 12.49251 | 0.1685167 | 2.6009768 | 13 | 3 | 1985-1993 | 1.10 | Bardwell | 22484 | 1985 UF ₃ |
| 1985 YH | 12.5 | 940217 | 278.60900 | 253.32230 | 276.40195 | 11.88775 | 0.1129382 | 2.6041130 | 29 | 4 | 1985-1993 | 0.79 | Williams | 21970 | 1985 YH |
| 1986 AJ | 14.0 | 940217 | 56.54912 | 90.95684 | 290.79457 | 16.85683 | 0.1049637 | 1.9550004 | 20 | 4 | 1986-1993 | 0.77 | Bardwell | 21970 | 1986 AJ |
| 1986 CP ₁ | 13.6 | 940217 | 294.96836 | 129.38231 | 35.91267 | 4.10146 | 0.1213995 | 2.6633283 | 43 | 3 | 1977-1986 | 0.82 | Nakano | 10944 | 1986 CP ₁ |
| 1986 EQ ₂ | 13.3 | 940217 | 0.09282 | 194.74097 | 181.48171 | 1.78579 | 0.0851053 | 2.9021682 | 11 | 2 | 1982-1986 | 1.33 | Ichikawa | 11143 | 1986 EQ ₂ |
| 1986 GU | 13.0 | 940217 | 343.79644 | 58.62324 | 81.72455 | 31.38968 | 0.2666849 | 2.6391131 | 29 | 4 | 1986-1993 | 0.95 | Williams | 21970 | 1986 GU |
| 1986 PQ ₁ | 12.5 | 940217 | 18.28268 | 341.49987 | 87.15962 | 2.51399 | 0.0132248 | 3.1599929 | 7 | 2 | 1979-1986 | 1.76 | Nakano | 11148 | 1986 PQ ₁ |
| 1986 PN ₄ | 11.9 | 940217 | 145.86645 | 14.23698 | 310.88675 | 15.46888 | 0.1949112 | 3.0688540 | 8 | 2 | 1981-1986 | 1.16 | Nakano | 14786 | 1986 PN ₄ |
| 1986 PK ₆ | 13.5 | 940217 | 147.83235 | 345.68884 | 258.21863 | 4.24348 | 0.1604574 | 2.2470800 | 16 | 4 | 1955-1993 | 0.80 | Williams | 22272 | 1986 PK ₆ |
| 1986 QQ | 13.5 | 940217 | 327.88542 | 84.71219 | 359.21022 | 4.32621 | 0.1489796 | 2.2805569 | 75 | 6 | 1976-1993 | 0.65 | Williams | 22599 | 1986 QQ |
| 1986 QJ ₂ | 13.1 | 940217 | 168.55041 | 272.49227 | 5.64101 | 4.57942 | 0.1383633 | 3.1180688 | 29 | 2 | 1986-1990 | 0.32 | Nakano | 16580 | 1986 QJ ₂ |
| 1986 RQ | 13.5 | 940217 | 65.06458 | 113.64101 | 210.92644 | 9.31494 | 0.1862782 | 2.3102146 | 30 | 6 | 1965-1993 | 1.01 | Marsden | 20013 | 1986 RQ |
| 1986 RV ₂ | 14.0 | 940217 | 107.71649 | 104.73651 | 188.24918 | 4.45172 | 0.1858640 | 2.2717537 | 14 | 4 | 1986-1993 | 0.85 | Williams | 22077 | 1986 RV ₂ |
| 1986 RB ₅ | 13.0 | 940217 | 79.64418 | 210.03927 | 122.84522 | 5.66796 | 0.1790997 | 2.2426849 | 30 | 4 | 1949-1993 | 0.62 | Williams | 21970 | 1986 RB ₅ |
| 1986 RB ₁₂ | 11.0 | 940217 | 102.62232 | 87.43335 | 265.34990 | 14.70179 | 0.1189117 | 3.1938046 | 7 | 2 | 1986-1987 | 1.35 | Nakano | 14789 | 1986 RB ₁₂ |
| 1986 TN ₁ | 13.0 | 940217 | 252.35849 | 271.38824 | 235.75165 | 11.93219 | 0.0704007 | 2.3735878 | 21 | 6 | 1979-1993 | 0.89 | Williams | 21970 | 1986 TN ₁ |
| 1986 XF ₁ | 13.5 | 940217 | 18.92631 | 94.09348 | 287.60265 | 2.54328 | 0.1953111 | 2.3734751 | 23 | 5 | 1975-1993 | 0.80 | Williams | 22599 | 1986 XF ₁ |
| 1987 PL | 12.0 | 940217 | 105.82833 | 27.18823 | 294.10764 | 9.03593 | 0.0985583 | 2.9938597 | 26 | 5 | 1981-1993 | 0.77 | Williams | 22078 | 1987 PL |
| 1987 QW ₂ | 12.5 | 940217 | 65.39115 | 259.37771 | 41.57321 | 1.34968 | 0.1484027 | 3.1923431 | 16 | 6 | 1952-1993 | 0.74 | Williams | 21936 | 1987 QW ₂ |
| 1987 RY | 12.0 | 940217 | 52.76008 | 253.08143 | 62.66184 | 0.39176 | 0.1637454 | 3.2286510 | 30 | 4 | 1964-1993 | 0.98 | Williams | 22078 | 1987 RY |
| 1987 RC ₁ | 11.5 | 940217 | 80.50099 | 254.29025 | 36.44443 | 1.25071 | 0.1342647 | 3.2035803 | 46 | 5 | 1953-1993 | 0.74 | Williams | 22590 | 1987 RC ₁ |
| 1987 ST ₁ | 12.5 | 940217 | 42.46402 | 101.98469 | 288.80710 | 8.24722 | 0.2333572 | 3.1211825 | 22 | 4 | 1987-1993 | 0.86 | Bardwell | 22078 | 1987 ST ₁ |
| 1987 SJ ₃ | 13.5 | 940217 | 116.62217 | 331.85600 | 15.14791 | 24.60280 | 0.0977641 | 1.9859358 | 24 | 4 | 1955-1993 | 0.86 | Williams | 22078 | 1987 SJ ₃ |
| 1987 SO ₅ | 12.2 | 940217 | 25.32257 | 71.97141 | 354.99324 | 8.31588 | 0.0276716 | 3.0339901 | 6 | 2 | 1982-1987 | 0.48 | Nakano | 16026 | 1987 SO ₅ |
| 1987 SZ ₆ | 10.7 | 940217 | 55.53104 | 77.81491 | 277.54246 | 8.93868 | 0.1680441 | 3.1374462 | 6 | 2 | 1965-1987 | 0.27 | Nakano | 15415 | 1987 SZ ₆ |
| 1987 SS ₉ | 13.3 | 940217 | 22.92960 | 290.62904 | 113.51814 | 2.62485 | 0.1938678 | 3.1717872 | 11 | 2 | 1987-1989 | 1.38 | Nakano | 14620 | 1987 SS ₉ |
| 1987 SN ₁₁ | 13.4 | 940217 | 358.41456 | 272.70970 | 165.87008 | 1.91329 | 0.1635358 | 3.1264429 | 17 | 2 | 1982-1987 | 0.60 | Nakano | 13607 | 1987 SN ₁₁ |
| 1987 UP ₂ | 13.9 | 940217 | 311.26297 | 155.93564 | 240.35565 | 3.49844 | 0.2737478 | 2.2407501 | 9 | 3 | 1950-1987 | 1.10 | Nakano | 15416 | 1987 UP ₂ |
| 1988 CX ₁ | 14.0 | 940217 | 163.98603 | 307.31339 | 294.54739 | 2.57597 | 0.1043903 | 2.2808628 | 27 | 5 | 1954-1993 | 0.87 | Williams | 21568 | 1988 CX ₁ |
| 1988 ER ₁ | 13.5 | 940217 | 154.14655 | 239.80501 | 27.35960 | 7.16031 | 0.0942861 | 2.3500993 | 12 | 4 | 1975-1988 | 0.67 | Nakano | 13161 | 1988 ER ₁ |
| 1988 GL | 13.5 | 940217 | 165.54357 | 149.20755 | 68.01769 | 15.24637 | 0.1900697 | 2.4454529 | 19 | 3 | 1988-1993 | 1.07 | Williams | 22079 | 1988 GL |
| 1988 JP | 12.5 | 940217 | 39.85920 | 256.76443 | 79.44568 | 29.39486 | 0.3606811 | 2.6309248 | 17 | 3 | 1988-1993 | 0.70 | Williams | 22079 | 1988 JP |
| 1988 LB | 12.5 | 940217 | 121.43760 | 7.97025 | 275.56598 | 12.27456 | 0.1305240 | 2.5533964 | 20 | 5 | 1984-1993 | 0.94 | Williams | 22079 | 1988 LB |
| 1988 QP | 12.4 | 940217 | 218.02075 | 188.51735 | 296.13433 | 8.49725 | 0.0897837 | 3.0964939 | 8 | 2 | 1984-1988 | 1.31 | Nakano | 13859 | 1988 QP |
| 1988 QD ₁ | 12.5 | 940217 | 74.73790 | 69.62014 | 249.67201 | 15.85359 | 0.3740530 | 2.7625561 | 17 | 4 | 1951-1993 | 1.03 | Williams | 21972 | 1988 QD ₁ |
| 1988 VD ₁ | 11.5 | 940217 | 90.48205 | 330.01863 | 357.53638 | 13.48926 | 0.1146184 | 2.8932020 | 21 | 4 | 1963-1993 | 0.56 | Marsden | 22080 | 1988 VD ₁ |
| 1988 XC | 13.5 | 940217 | 346.01596 | 58.32923 | 12.29250 | 3.86075 | 0.2856256 | 3.0853950 | 16 | 4 | 1973-1993 | 1.10 | Williams | 14202 | 1988 XC |
| 1988 XJ ₁ | 12.5 | 940217 | 2.13120 | 322.51842 | 73.83780 | 13.64463 | 0.0504548 | 3.1420872 | 14 | 3 | 1977-1993 | 1.09 | Nakano | 20816 | 1988 XJ ₁ |
| 1988 XU ₁ | 11.5 | 940217 | 181.63992 | 172.81327 | 84.85147 | 11.15023 | 0.0573931 | 2.9974035 | 21 | 6 | 1955-1993 | 0.80 | Williams | 21972 | 1988 XU ₁ |
| 1988 YB | 12.2 | 940217 | 315.31659 | 44.89447 | 70.38056 | 1.86898 | 0.1479779 | 3.2258042 | 20 | 4 | 1978-1993 | 1.05 | Nakano | 20816 | 1988 YB |

| | | | | | | | | | | | | | | | |
|-----------------------|------|--------|-----------|-----------|-----------|----------|-----------|-----------|----|---|-----------|------|----------|-------|-----------------------|
| 1989 AK | 12.5 | 940217 | 350.27096 | 353.88505 | 89.90680 | 4.36074 | 0.2751785 | 3.0905337 | 27 | 4 | 1977-1993 | 0.99 | Bardwell | 22080 | 1989 AK |
| 1989 AM | 12.5 | 940217 | 51.86840 | 265.57496 | 76.98225 | 26.28966 | 0.0770770 | 1.9365939 | 21 | 4 | 1989-1993 | 1.05 | Williams | 22080 | 1989 AM |
| 1989 AO ₆ | 12.0 | 940217 | 53.53309 | 87.86171 | 317.61301 | 8.58513 | 0.0934279 | 3.0558409 | 26 | 3 | 1987-1992 | 0.59 | Williams | 22080 | 1989 AO ₆ |
| 1989 CV | 11.5 | 940217 | 120.44752 | 217.44099 | 26.41775 | 5.39757 | 0.0683035 | 3.9537341 | 20 | 7 | 1955-1993 | 0.79 | Nakano | 22599 | 1989 CV |
| 1989 CS ₂ | 14.4 | 940217 | 41.11654 | 50.14007 | 198.51403 | 6.54605 | 0.0647393 | 2.3389448 | 12 | 2 | 1987-1989 | 0.47 | Nakano | 14622 | 1989 CS ₂ |
| 1989 EJ ₁ | 14.5 | 940217 | 134.93208 | 76.56690 | 167.03815 | 4.16040 | 0.1171850 | 2.1693678 | 14 | 2 | 1989-1993 | 0.97 | Marsden | 22591 | 1989 EJ ₁ |
| 1989 GT ₃ | 14.0 | 940217 | 19.33649 | 90.30769 | 262.06375 | 0.95247 | 0.1429112 | 2.2419644 | 31 | 4 | 1980-1993 | 0.91 | Marsden | 22493 | 1989 GT ₃ |
| 1989 GH ₄ | 14.5 | 940217 | 16.13316 | 321.62026 | 351.20887 | 4.93894 | 0.0214513 | 2.3258472 | 25 | 4 | 1951-1990 | 0.89 | Bowell | 21973 | 1989 GH ₄ |
| 1989 GT ₄ | 14.5 | 940217 | 69.76733 | 120.19637 | 188.73337 | 3.15527 | 0.1813334 | 2.2558974 | 41 | 7 | 1949-1993 | 0.80 | Marsden | 22599 | 1989 GT ₄ |
| 1989 JF | 13.5 | 940217 | 135.51285 | 281.20149 | 0.72074 | 4.43826 | 0.1698382 | 2.1818108 | 15 | 3 | 1989-1993 | 1.06 | Williams | 21973 | 1989 JF |
| 1989 KA | 13.5 | 940217 | 139.96168 | 355.59244 | 225.04100 | 4.75781 | 0.1925823 | 2.3183480 | 18 | 4 | 1971-1993 | 0.93 | Bardwell | 22081 | 1989 KA |
| 1989 KB | 13.0 | 940217 | 60.73437 | 241.36337 | 80.15083 | 23.08470 | 0.2427829 | 2.3500253 | 22 | 4 | 1975-1993 | 0.70 | Williams | 22081 | 1989 KB |
| 1989 NO | 13.0 | 940217 | 156.91669 | 263.66062 | 356.05420 | 4.76645 | 0.1528330 | 2.2527511 | 26 | 5 | 1985-1993 | 0.84 | Bardwell | 21973 | 1989 NO |
| 1989 NR | 13.0 | 940217 | 110.64375 | 27.47599 | 311.66776 | 9.44041 | 0.0844046 | 2.2066073 | 21 | 5 | 1953-1993 | 1.16 | Williams | 22272 | 1989 NR |
| 1989 NE ₁ | 13.5 | 940217 | 40.00157 | 258.93125 | 38.32367 | 12.74267 | 0.2522425 | 2.5684095 | 25 | 4 | 1976-1993 | 0.74 | Williams | 22272 | 1989 NE ₁ |
| 1989 PK | 13.0 | 940217 | 35.67676 | 5.79532 | 328.19411 | 20.27378 | 0.3174865 | 2.5980879 | 15 | 2 | 1989-1993 | 0.88 | Williams | 22591 | 1989 PK |
| 1989 RZ | 12.5 | 940217 | 35.82657 | 81.54388 | 341.18475 | 21.13769 | 0.3391186 | 2.4089464 | 24 | 4 | 1959-1993 | 0.72 | Williams | 22599 | 1989 RZ |
| 1989 RC ₁ | 13.0 | 940217 | 57.48168 | 257.06499 | 114.88512 | 14.10700 | 0.2749430 | 2.3732137 | 23 | 6 | 1982-1993 | 0.77 | Williams | 22402 | 1989 RC ₁ |
| 1989 SE | 14.5 | 940217 | 33.89385 | 347.29361 | 8.15623 | 7.62509 | 0.2898599 | 2.5463146 | 13 | 3 | 1981-1993 | 0.90 | Williams | 22081 | 1989 SE |
| 1989 SG | 13.0 | 940217 | 8.49742 | 80.86778 | 357.18985 | 6.66694 | 0.1507656 | 2.3854434 | 17 | 3 | 1934-1989 | 1.06 | Ichikawa | 16434 | 1989 SG |
| 1989 SZ ₁ | 14.6 | 940217 | 222.98615 | 101.53606 | 158.95929 | 4.17916 | 0.1589268 | 2.1933244 | 11 | 2 | 1985-1989 | 0.69 | Nakano | 16030 | 1989 SZ ₁ |
| 1989 SR ₂ | 13.5 | 940217 | 259.92173 | 342.51442 | 99.71471 | 3.37166 | 0.0431107 | 2.8945076 | 23 | 2 | 1989-1993 | 0.67 | Marsden | 22591 | 1989 SR ₂ |
| 1989 TT ₁ | 13.5 | 940217 | 23.88021 | 205.11438 | 223.79781 | 5.11706 | 0.1027823 | 2.4051136 | 25 | 3 | 1978-1993 | 0.85 | Williams | 19026 | 1989 TT ₁ |
| 1989 TL ₁₅ | 14.0 | 940217 | 3.35295 | 87.39791 | 322.66245 | 1.42311 | 0.1527461 | 2.5250309 | 18 | 5 | 1969-1993 | 0.68 | Williams | 19026 | 1989 TL ₁₅ |
| 1989 TA ₁₆ | 15.0 | 940217 | 66.84968 | 71.79711 | 233.18396 | 2.29154 | 0.1634982 | 2.5875550 | 21 | 4 | 1981-1993 | 0.63 | Williams | 22591 | 1989 TA ₁₆ |
| 1989 UA | 12.5 | 940217 | 11.24655 | 6.62008 | 45.70805 | 10.78321 | 0.0999718 | 2.5457707 | 23 | 4 | 1954-1993 | 0.98 | Williams | 22493 | 1989 UA |
| 1989 UL ₁ | 12.5 | 940217 | 70.04966 | 294.43730 | 44.66481 | 10.26197 | 0.1127310 | 2.5600591 | 28 | 3 | 1971-1993 | 0.80 | Williams | 19303 | 1989 UL ₁ |
| 1989 UT ₂ | 13.0 | 940217 | 106.23059 | 58.25592 | 224.67069 | 12.17279 | 0.1693521 | 2.5756832 | 35 | 5 | 1984-1993 | 0.94 | Bardwell | 22599 | 1989 UT ₂ |
| 1989 UG ₃ | 13.3 | 940217 | 358.78075 | 320.21706 | 87.91669 | 4.91596 | 0.1638837 | 2.6097296 | 17 | 4 | 1982-1993 | 0.96 | Nakano | 15896 | 1989 UG ₃ |
| 1989 UL ₃ | 11.9 | 940217 | 334.77926 | 351.81701 | 84.73515 | 14.60401 | 0.2358400 | 2.6715734 | 10 | 3 | 1976-1993 | 1.11 | Nakano | 15719 | 1989 UL ₃ |
| 1989 UB ₈ | 12.7 | 940217 | 284.82623 | 182.28114 | 213.16959 | 4.93532 | 0.1755009 | 3.1083752 | 8 | 2 | 1978-1989 | 0.84 | Nakano | 16585 | 1989 UB ₈ |
| 1989 VK | 15.0 | 940217 | 7.64761 | 131.03715 | 267.56441 | 3.09435 | 0.3100711 | 2.6213529 | 13 | 4 | 1955-1993 | 1.01 | Marsden | 15720 | 1989 VK |
| 1989 WC | 13.0 | 940217 | 350.69981 | 153.16107 | 280.76879 | 1.62364 | 0.1569167 | 2.6216040 | 13 | 3 | 1978-1993 | 1.00 | Bardwell | 18119 | 1989 WC |
| 1989 WG ₇ | 13.6 | 940217 | 339.12587 | 222.50109 | 237.31580 | 1.65216 | 0.1617301 | 2.6166150 | 19 | 4 | 1976-1993 | 1.10 | Nakano | 21973 | 1989 WG ₇ |
| 1989 XF | 12.5 | 940217 | 57.79379 | 255.00015 | 113.51027 | 8.71952 | 0.2071498 | 2.5612590 | 25 | 7 | 1952-1993 | 1.02 | Williams | 21973 | 1989 XF |
| 1989 YB | 12.7 | 940217 | 43.12994 | 101.26212 | 276.78609 | 6.58824 | 0.3023420 | 2.5433546 | 20 | 4 | 1981-1993 | 1.24 | Nakano | 22494 | 1989 YB |
| 1989 YA ₂ | 13.8 | 940217 | 6.77895 | 200.60447 | 280.10406 | 5.31617 | 0.1765945 | 2.5303157 | 12 | 2 | 1980-1990 | 0.91 | Nakano | 15900 | 1989 YA ₂ |
| 1989 YF ₅ | 12.0 | 940217 | 98.59986 | 57.93546 | 279.84441 | 14.05681 | 0.1299394 | 2.5845163 | 33 | 6 | 1982-1993 | 0.93 | Williams | 21973 | 1989 YF ₅ |
| 1990 BX | 12.5 | 940217 | 17.41227 | 301.43553 | 123.75244 | 6.51554 | 0.0629425 | 2.7503431 | 18 | 3 | 1989-1993 | 1.17 | Williams | 21573 | 1990 BX |
| 1990 BG ₁ | 12.3 | 940217 | 283.16961 | 77.72596 | 75.74922 | 6.09145 | 0.1719322 | 2.8865111 | 21 | 6 | 1964-1993 | 1.02 | Nakano | 21973 | 1990 BG ₁ |
| 1990 BN ₂ | 13.0 | 940217 | 355.76152 | 16.62605 | 89.92532 | 14.28877 | 0.1325899 | 2.6449726 | 12 | 3 | 1977-1993 | 0.76 | Williams | 22272 | 1990 BN ₂ |
| 1990 GS | 14.4 | 940217 | 222.21753 | 308.08327 | 359.40321 | 11.43330 | 0.0637215 | 2.5343663 | 12 | 2 | 1974-1990 | 0.72 | Nakano | 16587 | 1990 GS |
| 1990 HM ₁ | 11.0 | 940217 | 309.84188 | 55.07199 | 77.39761 | 10.80068 | 0.1266768 | 3.1564344 | 9 | 5 | 1978-1993 | 1.14 | Williams | 22431 | 1990 HM ₁ |
| 1990 KK | 13.5 | 940217 | 285.17536 | 21.90747 | 80.64183 | 23.59371 | 0.0313684 | 1.9135151 | 22 | 5 | 1975-1993 | 0.96 | Williams | 21974 | 1990 KK |
| 1990 QM ₂ | 13.5 | 940217 | 93.50848 | 193.41766 | 161.83937 | 22.81740 | 0.0930712 | 1.9384116 | 21 | 3 | 1990-1993 | 0.80 | Williams | 20147 | 1990 QM ₂ |
| 1990 SK | 14.0 | 940217 | 337.30894 | 326.62899 | 47.20411 | 26.07153 | 0.2690979 | 2.2883555 | 11 | 3 | 1976-1993 | 0.55 | Williams | 22494 | 1990 SK |
| 1990 SA ₂ | 14.0 | 940217 | 4.17564 | 7.71857 | 359.42167 | 1.43200 | 0.1331055 | 2.2742339 | 21 | 3 | 1983-1992 | 1.26 | Williams | 17216 | 1990 SA ₂ |
| 1990 SM ₂₈ | 13.0 | 940217 | 343.29773 | 170.04171 | 259.36241 | 2.70808 | 0.0384239 | 2.1365429 | 29 | 7 | 1951-1993 | 0.68 | Bardwell | 22273 | 1990 SM ₂₈ |
| 1990 TN | 13.0 | 940217 | 260.98030 | 63.72274 | 38.59066 | 9.47421 | 0.0973767 | 2.3791697 | 21 | 5 | 1968-1993 | 1.13 | Williams | 22082 | 1990 TN |
| 1990 TN ₁ | 13.5 | 940217 | 301.57164 | 196.29030 | 317.65606 | 16.98166 | 0.0652755 | 1.9784092 | 12 | 3 | 1986-1993 | 0.84 | Bardwell | 17453 | 1990 TN ₁ |
| 1990 UF ₂ | 14.0 | 940217 | 217.33730 | 338.01170 | 205.61244 | 6.89664 | 0.1351021 | 2.2562940 | 27 | 4 | 1980-1993 | 1.30 | Williams | 22082 | 1990 UF ₂ |
| 1990 VL ₂ | 13.5 | 940217 | 278.02210 | 306.73099 | 131.00098 | 3.36655 | 0.1167740 | 2.5119805 | 22 | 4 | 1978-1993 | 0.94 | Marsden | 20150 | 1990 VL ₂ |

| | | | | | | | | | | | | | | | |
|----------------------|------|--------|-----------|-----------|-----------|----------|-----------|------------|----|---|-----------|------|----------|-------|----------------------|
| 1990 VX ₂ | 13.0 | 940217 | 287.53460 | 41.64245 | 53.40211 | 24.46790 | 0.2933839 | 2.4478383 | 35 | 4 | 1984-1993 | 0.87 | Williams | 21975 | 1990 VX ₂ |
| 1990 VF ₃ | 13.5 | 940217 | 58.55949 | 236.04482 | 106.06933 | 4.33178 | 0.1364814 | 2.2066195 | 15 | 3 | 1980-1993 | 0.99 | Bardwell | 17644 | 1990 VF ₃ |
| 1990 VG ₃ | 14.5 | 940217 | 36.10861 | 261.42127 | 118.17466 | 4.50799 | 0.1496000 | 2.1664227 | 14 | 3 | 1982-1993 | 0.94 | Williams | 17460 | 1990 VG ₃ |
| 1990 WE | 12.5 | 940217 | 212.13283 | 3.40980 | 91.19823 | 9.07518 | 0.1961815 | 2.7394081 | 15 | 4 | 1983-1993 | 1.00 | Williams | 19868 | 1990 WE |
| 1990 XF | 12.0 | 940217 | 240.27826 | 218.68941 | 293.29837 | 11.04859 | 0.1999892 | 2.5540719 | 23 | 4 | 1983-1993 | 1.08 | Nakano | 21975 | 1990 XF |
| 1990 XM | 13.5 | 940217 | 44.91136 | 257.98112 | 114.65681 | 2.34707 | 0.1742008 | 2.1627479 | 19 | 4 | 1974-1993 | 1.04 | Williams | 22494 | 1990 XM |
| 1991 AF | 14.0 | 940217 | 352.57275 | 180.37148 | 247.67458 | 5.57672 | 0.0887498 | 2.2834569 | 20 | 8 | 1955-1993 | 1.09 | Bardwell | 21975 | 1991 AF |
| 1991 AF ₁ | 12.0 | 940217 | 239.71864 | 158.58430 | 299.33964 | 9.42408 | 0.0745187 | 2.9921739 | 32 | 5 | 1934-1993 | 0.84 | Marsden | 22494 | 1991 AF ₁ |
| 1991 AP ₁ | 14.5 | 940217 | 341.47675 | 84.30746 | 332.47831 | 1.50147 | 0.2151174 | 2.3620617 | 16 | 4 | 1968-1993 | 0.91 | Williams | 22600 | 1991 AP ₁ |
| 1991 AO ₃ | 13.5 | 940217 | 55.65442 | 250.22634 | 89.33518 | 7.28804 | 0.1170550 | 2.3933763 | 16 | 3 | 1989-1993 | 0.69 | Williams | 18125 | 1991 AO ₃ |
| 1991 CO | 13.0 | 940217 | 316.64214 | 206.34963 | 300.52526 | 5.80835 | 0.0310309 | 2.2520717 | 20 | 6 | 1973-1993 | 0.94 | Williams | 22083 | 1991 CO |
| 1991 CY | 12.8 | 940217 | 248.36969 | 226.78261 | 290.50546 | 9.45868 | 0.1209345 | 2.6420946 | 24 | 4 | 1978-1993 | 0.54 | Nakano | 22600 | 1991 CY |
| 1991 CL ₁ | 13.5 | 940217 | 353.86585 | 161.50935 | 287.52141 | 2.45855 | 0.1409566 | 2.3251899 | 20 | 3 | 1986-1993 | 0.99 | Williams | 17970 | 1991 CL ₁ |
| 1991 CM ₃ | 12.8 | 940217 | 4.84020 | 297.35750 | 127.68815 | 4.54433 | 0.1324652 | 2.4308672 | 12 | 3 | 1951-1991 | 0.60 | Bowell | 18127 | 1991 CM ₃ |
| 1991 FF | 13.0 | 940217 | 189.22566 | 199.01595 | 338.47905 | 17.89075 | 0.0607339 | 3.2253488 | 15 | 4 | 1987-1993 | 0.58 | Williams | 21975 | 1991 FF |
| 1991 FG | 13.0 | 940217 | 235.03132 | 325.01544 | 204.92271 | 13.48864 | 0.3376795 | 2.7601686 | 22 | 3 | 1987-1993 | 0.64 | Williams | 22405 | 1991 FG |
| 1991 FU | 11.5 | 940217 | 280.72316 | 187.39789 | 311.15263 | 12.67345 | 0.1082795 | 2.5874719 | 25 | 4 | 1970-1993 | 0.81 | Williams | 18438 | 1991 FU |
| 1991 GQ ₂ | 13.0 | 940217 | 217.46984 | 343.83451 | 179.94537 | 2.04760 | 0.1157323 | 3.0663894 | 22 | 5 | 1977-1993 | 0.93 | Williams | 21975 | 1991 GQ ₂ |
| 1991 GZ ₉ | 13.5 | 940217 | 250.46128 | 228.54153 | 284.06861 | 7.56094 | 0.2192064 | 2.7467591 | 13 | 6 | 1977-1993 | 0.31 | Williams | 21975 | 1991 GZ ₉ |
| 1991 RC | 17.0 | 940217 | 182.61393 | 8.26792 | 161.37389 | 23.24586 | 0.8268076 | 1.0815222 | 22 | 3 | 1991-1993 | 0.67 | Williams | 22593 | 1991 RC |
| 1991 UB ₂ | 13.4 | 940217 | 6.92765 | 22.37955 | 233.99445 | 6.22361 | 0.0998147 | 2.3338347 | 12 | 4 | 1954-1993 | 0.84 | Bowell | 22084 | 1991 UB ₂ |
| 1991 VK | 17.0 | 940217 | 303.82430 | 173.15686 | 295.15373 | 5.41578 | 0.5058937 | 1.8433374 | 58 | 4 | 1981-1993 | 1.01 | Williams | 21976 | 1991 VK |
| 1992 BW | 13.5 | 940217 | 349.39475 | 86.13771 | 315.47715 | 21.78622 | 0.0864687 | 1.9376535 | 21 | 3 | 1985-1993 | 1.03 | Williams | 22600 | 1992 BW |
| 1992 CA | 13.5 | 940217 | 18.46438 | 240.63570 | 142.50837 | 24.71757 | 0.0834558 | 1.9491722 | 19 | 2 | 1992-1993 | 0.99 | Williams | 22600 | 1992 CA |
| 1992 EU ₁ | 13.0 | 940217 | 226.69526 | 56.68445 | 110.10490 | 7.08544 | 0.1320625 | 2.2445042 | 22 | 4 | 1953-1993 | 0.63 | Bardwell | 20643 | 1992 EU ₁ |
| 1992 FN | 14.0 | 940217 | 210.07164 | 354.14966 | 189.04773 | 1.41289 | 0.1196917 | 2.2134055 | 20 | 5 | 1954-1993 | 0.93 | Williams | 22495 | 1992 FN |
| 1992 FV | 13.5 | 940217 | 158.10808 | 96.04959 | 158.67910 | 3.93368 | 0.1162307 | 2.1498301 | 22 | 5 | 1979-1993 | 1.33 | Williams | 21977 | 1992 FV |
| 1992 FM ₁ | 14.0 | 940217 | 215.25235 | 201.30500 | 345.30573 | 24.71065 | 0.1149332 | 2.2633033 | 27 | 5 | 1979-1993 | 0.78 | Williams | 22600 | 1992 FM ₁ |
| 1992 GA | 14.0 | 940217 | 161.64895 | 246.87873 | 310.07671 | 11.68211 | 0.1171917 | 2.6368525 | 19 | 3 | 1992-1993 | 0.95 | Williams | 21111 | 1992 GA |
| 1992 HJ | 13.5 | 940217 | 171.67513 | 130.07046 | 117.60377 | 4.76726 | 0.1211583 | 2.2635487 | 20 | 4 | 1955-1993 | 0.87 | Williams | 22273 | 1992 HJ |
| 1992 MA | 12.0 | 940217 | 88.65080 | 91.64927 | 202.63114 | 0.37858 | 0.1544538 | 3.0895884 | 22 | 7 | 1953-1993 | 0.87 | Williams | 22495 | 1992 MA |
| 1992 QB ₁ | 7.5 | 940217 | 16.80363 | 343.09357 | 359.40676 | 2.19314 | 0.0709922 | 43.8607781 | 37 | 2 | 1992-1993 | 0.64 | Williams | 22594 | 1992 QB ₁ |
| 1993 FR ₂ | 14.0 | 940217 | 104.61693 | 18.76873 | 167.24325 | 3.79391 | 0.0810626 | 2.2154324 | 18 | 4 | 1951-1993 | 0.81 | Bowell | 22241 | 1993 FR ₂ |
| 1993 KC | 16.0 | 940217 | 66.95997 | 37.40130 | 228.59030 | 25.33612 | 0.3569849 | 2.2061890 | 34 | 1 | 125 days | 0.62 | Williams | 22596 | 1993 KC |
| 1993 MO | 16.0 | 940217 | 106.08369 | 167.07943 | 111.59656 | 22.63349 | 0.2207304 | 1.6261725 | 67 | 1 | 84 days | 0.82 | Williams | 22596 | 1993 MO |
| 1993 ME ₁ | 15.5 | 940217 | 59.07025 | 359.54073 | 252.24473 | 23.02093 | 0.4850773 | 2.6375945 | 46 | 1 | 85 days | 0.69 | Williams | 22600 | 1993 ME ₁ |
| 1993 MS ₁ | 12.0 | 940217 | 132.11830 | 350.25436 | 229.09750 | 11.33472 | 0.1325195 | 2.4759965 | 21 | 5 | 1974-1993 | 0.94 | Williams | 22600 | 1993 MS ₁ |
| 1993 OD | 13.5 | 940217 | 359.58807 | 104.58728 | 302.14951 | 20.29115 | 0.1502238 | 1.8204783 | 25 | 2 | 1992-1993 | 0.72 | Williams | 22490 | 1993 OD |
| 1993 OV ₁ | 16.5 | 940217 | 69.37558 | 323.32199 | 311.02067 | 11.18302 | 0.4370436 | 2.3388293 | 53 | 2 | 1975-1993 | 0.75 | Williams | 22596 | 1993 OV ₁ |
| 1993 PB | 16.5 | 940217 | 207.45082 | 212.20093 | 316.03803 | 40.84647 | 0.6065114 | 1.4232569 | 34 | 1 | 39 days | 0.58 | Williams | 22597 | 1993 PB |
| 1993 PC | 18.5 | 940217 | 331.72259 | 168.07356 | 337.62962 | 4.15914 | 0.4744658 | 1.1545165 | 20 | 1 | 35 days | 0.52 | Williams | 22597 | 1993 PC |
| 2040 P-L | 16.7 | 940217 | 111.52275 | 342.92405 | 1.08553 | 4.82192 | 0.2445107 | 2.1940723 | 21 | 2 | 1960-1973 | 0.91 | Nakano | 15073 | 2040 P-L |
| 2064 P-L | 13.3 | 940217 | 205.67580 | 196.89153 | 299.47217 | 3.54212 | 0.1004484 | 3.1776471 | 14 | 2 | 1960-1989 | 0.62 | Nakano | 16033 | 2064 P-L |
| 2110 P-L | 15.0 | 940217 | 354.19684 | 24.43393 | 299.89006 | 1.91398 | 0.1457684 | 2.6166146 | 15 | 3 | 1960-1977 | 1.27 | Nakano | 12698 | 2110 P-L |
| 2113 P-L | 15.7 | 940217 | 229.88124 | 166.47690 | 222.50170 | 3.52436 | 0.0878102 | 2.6630333 | 17 | 2 | 1960-1973 | 0.97 | Nakano | 15073 | 2113 P-L |
| 2514 P-L | 16.2 | 940217 | 279.19251 | 321.94558 | 9.06541 | 11.89513 | 0.1812254 | 2.6603123 | 17 | 2 | 1960-1973 | 0.98 | Nakano | 15073 | 2514 P-L |
| 2547 P-L | 14.2 | 940217 | 311.77664 | 268.94762 | 74.79417 | 2.50715 | 0.1894932 | 3.1986184 | 13 | 2 | 1960-1989 | 0.50 | Ichikawa | 16033 | 2547 P-L |
| 2594 P-L | 14.4 | 940217 | 347.86292 | 143.82284 | 149.16459 | 2.50628 | 0.0430820 | 2.8967406 | 11 | 2 | 1960-1979 | 0.81 | Ichikawa | 9298 | 2594 P-L |
| 2740 P-L | 15.5 | 940217 | 207.80339 | 244.79622 | 165.43709 | 5.45777 | 0.1049308 | 2.6662291 | 24 | 2 | 1960-1973 | 0.98 | Williams | 14959 | 2740 P-L |
| 3005 P-L | 14.0 | 940217 | 219.22911 | 348.14404 | 280.17609 | 9.36098 | 0.0673170 | 3.0181376 | 14 | 2 | 1960-1989 | 0.58 | Nakano | 14627 | 3005 P-L |
| 4018 P-L | 14.0 | 940217 | 2.78980 | 73.44257 | 353.87614 | 5.06606 | 0.2423698 | 2.5663891 | 25 | 4 | 1960-1993 | 0.86 | Williams | 22086 | 4018 P-L |
| 4028 P-L | 14.5 | 940217 | 325.40948 | 223.77273 | 207.63779 | 7.16081 | 0.1780295 | 2.5842270 | 16 | 4 | 1960-1993 | 0.77 | Williams | 22086 | 4028 P-L |

| | | | | | | | | | | | | | | | |
|----------|------|--------|-----------|-----------|-----------|----------|-----------|-----------|----|---|-----------|------|----------|-------|----------|
| 4075 P-L | 15.4 | 940217 | 242.70920 | 109.14223 | 326.80683 | 0.71837 | 0.0979684 | 2.4256261 | 11 | 2 | 1960-1981 | 0.62 | Ichikawa | 12688 | 4075 P-L |
| 4274 P-L | 15.9 | 940217 | 49.50956 | 248.00189 | 280.82795 | 2.14875 | 0.0742360 | 2.2998363 | 11 | 2 | 1960-1990 | 0.52 | Nakano | 16439 | 4274 P-L |
| 4636 P-L | 13.7 | 940217 | 215.83035 | 131.52116 | 13.28148 | 14.09896 | 0.0735752 | 3.1517412 | 18 | 2 | 1960-1977 | 0.82 | Nakano | 12699 | 4636 P-L |
| 4806 P-L | 15.2 | 940217 | 211.97489 | 336.42768 | 160.47790 | 2.62906 | 0.1099297 | 2.6073864 | 20 | 2 | 1960-1977 | 1.13 | Nakano | 12699 | 4806 P-L |
| 5016 P-L | 15.5 | 940217 | 231.56667 | 205.20380 | 14.54797 | 4.92697 | 0.1073517 | 2.1991359 | 18 | 2 | 1960-1973 | 1.15 | Williams | 14960 | 5016 P-L |
| 6053 P-L | 14.4 | 940217 | 21.44040 | 83.97675 | 211.47097 | 3.31372 | 0.1946670 | 2.6089144 | 17 | 2 | 1960-1977 | 0.80 | Nakano | 12699 | 6053 P-L |
| 6193 P-L | 15.6 | 940217 | 294.07159 | 137.56153 | 191.67311 | 12.39204 | 0.1204872 | 2.6489445 | 18 | 2 | 1960-1973 | 1.04 | Nakano | 15074 | 6193 P-L |
| 6245 P-L | 14.5 | 940217 | 130.59876 | 13.80497 | 193.58812 | 13.00855 | 0.0852969 | 2.6039811 | 16 | 2 | 1960-1977 | 1.06 | Nakano | 12700 | 6245 P-L |
| 6531 P-L | 15.0 | 940217 | 67.66368 | 18.59241 | 16.54694 | 4.71839 | 0.0681603 | 2.1949262 | 21 | 2 | 1960-1973 | 0.75 | Williams | 14961 | 6531 P-L |
| 6600 P-L | 15.0 | 940217 | 261.35408 | 136.34742 | 64.47729 | 1.95907 | 0.0627050 | 2.1920347 | 23 | 2 | 1960-1973 | 1.19 | Williams | 14961 | 6600 P-L |
| 6602 P-L | 16.5 | 940217 | 91.64282 | 2.51736 | 11.75512 | 6.56788 | 0.1378912 | 2.1928223 | 24 | 2 | 1960-1973 | 0.73 | Williams | 14961 | 6602 P-L |
| 6643 P-L | 14.0 | 940217 | 359.20879 | 18.41044 | 31.46955 | 4.80416 | 0.1695409 | 2.2202603 | 17 | 3 | 1960-1993 | 0.86 | Williams | 17651 | 6643 P-L |
| 7590 P-L | 16.5 | 940217 | 230.67618 | 11.71320 | 35.19530 | 6.96319 | 0.2902194 | 2.6567666 | 18 | 2 | 1960-1973 | 0.98 | Williams | 14962 | 7590 P-L |
| 9511 P-L | 13.0 | 940217 | 64.85442 | 101.02253 | 160.64280 | 0.85228 | 0.1293693 | 3.1623602 | 32 | 6 | 1954-1993 | 1.01 | Marsden | 22601 | 9511 P-L |
| 9540 P-L | 13.5 | 940217 | 47.05296 | 331.01171 | 15.72980 | 2.31248 | 0.1274575 | 2.5698638 | 26 | 5 | 1960-1993 | 0.79 | Williams | 22087 | 9540 P-L |
| 9570 P-L | 15.0 | 940217 | 321.74503 | 209.68437 | 93.67813 | 3.79752 | 0.0575270 | 2.6473188 | 15 | 2 | 1960-1973 | 0.96 | Williams | 15074 | 9570 P-L |
| 1089 T-1 | 13.5 | 940217 | 145.42898 | 129.19670 | 346.66968 | 9.24061 | 0.0572177 | 3.0792935 | 8 | 2 | 1971-1979 | 0.48 | Williams | 19319 | 1089 T-1 |
| 1104 T-1 | 14.0 | 940217 | 225.35113 | 73.82476 | 352.89487 | 11.67821 | 0.1291621 | 2.3538454 | 9 | 2 | 1971-1987 | 0.60 | Williams | 19319 | 1104 T-1 |
| 1181 T-1 | 13.0 | 940217 | 184.18571 | 229.00425 | 325.70145 | 3.60010 | 0.0894067 | 2.9463450 | 36 | 5 | 1971-1993 | 0.93 | Williams | 22274 | 1181 T-1 |
| 1217 T-1 | 13.5 | 940217 | 335.92338 | 90.04550 | 335.73521 | 2.46149 | 0.1149606 | 2.5459665 | 15 | 2 | 1971-1989 | 0.78 | Williams | 19320 | 1217 T-1 |
| 1280 T-1 | 12.0 | 940217 | 294.08624 | 99.31124 | 189.41714 | 9.12953 | 0.0290552 | 3.1555894 | 17 | 2 | 1971-1979 | 1.01 | Williams | 19321 | 1280 T-1 |
| 1287 T-1 | 15.5 | 940217 | 220.24649 | 52.38907 | 216.13827 | 1.76393 | 0.0197022 | 2.2383448 | 25 | 2 | 1971-1981 | 1.02 | Williams | 19321 | 1287 T-1 |
| 3252 T-1 | 15.5 | 940217 | 43.88686 | 40.42615 | 257.58252 | 2.44574 | 0.1193822 | 2.3421292 | 12 | 2 | 1971-1990 | 0.69 | Williams | 19324 | 3252 T-1 |
| 3271 T-1 | 13.0 | 940217 | 312.51424 | 286.27358 | 347.11857 | 2.03874 | 0.0251028 | 2.7244353 | 14 | 3 | 1971-1990 | 0.90 | Williams | 19324 | 3271 T-1 |
| 3300 T-1 | 15.0 | 940217 | 337.91594 | 344.63483 | 328.00346 | 2.33205 | 0.1931086 | 2.1572457 | 16 | 2 | 1971-1978 | 1.02 | Williams | 19325 | 3300 T-1 |
| 1001 T-2 | 13.5 | 940217 | 303.32261 | 261.64148 | 179.49322 | 2.24461 | 0.1032382 | 2.9447068 | 19 | 2 | 1973-1993 | 0.71 | Marsden | 22597 | 1001 T-2 |
| 1139 T-2 | 14.5 | 940217 | 184.22758 | 96.38935 | 184.17211 | 6.76480 | 0.1772975 | 2.8037702 | 29 | 2 | 1973-1981 | 1.00 | Nakano | 15076 | 1139 T-2 |
| 1169 T-2 | 14.1 | 940217 | 250.41255 | 209.06353 | 339.32364 | 2.19819 | 0.1234461 | 2.8643776 | 17 | 2 | 1973-1989 | 1.37 | Nakano | 15906 | 1169 T-2 |
| 1173 T-2 | 14.9 | 940217 | 306.26367 | 48.94466 | 1.24599 | 9.39584 | 0.0674547 | 2.9770907 | 28 | 2 | 1973-1981 | 1.17 | Nakano | 15077 | 1173 T-2 |
| 1210 T-2 | 14.0 | 940217 | 162.59626 | 233.63737 | 348.35592 | 3.55226 | 0.0778841 | 2.2427486 | 35 | 3 | 1973-1993 | 1.01 | Williams | 22601 | 1210 T-2 |
| 1251 T-2 | 13.5 | 940217 | 195.56947 | 313.51551 | 152.33142 | 1.24059 | 0.1657174 | 3.0737732 | 67 | 2 | 1973-1981 | 0.84 | Williams | 15077 | 1251 T-2 |
| 1269 T-2 | 14.0 | 940217 | 299.59952 | 145.15365 | 296.28990 | 0.95677 | 0.0075971 | 2.9411017 | 45 | 4 | 1971-1993 | 1.09 | Williams | 22087 | 1269 T-2 |
| 2083 T-2 | 13.0 | 940217 | 96.87051 | 341.44307 | 165.41499 | 0.96677 | 0.1564463 | 3.1582492 | 25 | 4 | 1973-1987 | 1.13 | Williams | 14964 | 2083 T-2 |
| 2137 T-2 | 16.3 | 940217 | 196.78989 | 118.64121 | 214.57497 | 1.47769 | 0.1142250 | 2.1489670 | 24 | 3 | 1973-1992 | 1.19 | Nakano | 15082 | 2137 T-2 |
| 2170 T-2 | 13.5 | 940217 | 108.41083 | 60.25311 | 186.69780 | 14.33339 | 0.1349724 | 2.5510465 | 25 | 4 | 1973-1993 | 0.85 | Bardwell | 22601 | 2170 T-2 |
| 2225 T-2 | 15.0 | 940217 | 247.60853 | 201.45380 | 16.62859 | 2.17239 | 0.1344609 | 2.4574817 | 23 | 2 | 1973-1977 | 1.13 | Williams | 14966 | 2225 T-2 |
| 2257 T-2 | 14.5 | 940217 | 345.85149 | 108.12744 | 22.65726 | 3.44663 | 0.1291454 | 2.4657648 | 21 | 2 | 1973-1977 | 1.10 | Williams | 14966 | 2257 T-2 |
| 2304 T-2 | 14.7 | 940217 | 261.39902 | 26.56615 | 43.67462 | 2.69644 | 0.0862342 | 3.0226454 | 21 | 2 | 1973-1981 | 1.02 | Nakano | 15083 | 2304 T-2 |
| 3020 T-2 | 13.5 | 940217 | 69.16338 | 334.60093 | 5.48420 | 14.18160 | 0.2210586 | 2.8849489 | 22 | 2 | 1973-1978 | 0.79 | Nakano | 15083 | 3020 T-2 |
| 3067 T-2 | 14.5 | 940217 | 292.42319 | 60.66949 | 132.43158 | 2.21008 | 0.0679450 | 2.1769219 | 26 | 3 | 1973-1988 | 1.10 | Williams | 14967 | 3067 T-2 |
| 3076 T-2 | 12.5 | 940217 | 118.89301 | 70.32454 | 75.14521 | 2.09059 | 0.1088826 | 3.1104223 | 37 | 2 | 1973-1984 | 1.03 | Williams | 14967 | 3076 T-2 |
| 3145 T-2 | 14.0 | 940217 | 73.68605 | 303.80057 | 127.68478 | 4.80604 | 0.1174511 | 2.7948455 | 20 | 3 | 1961-1989 | 1.10 | Williams | 14968 | 3145 T-2 |
| 3189 T-2 | 16.5 | 940217 | 54.41988 | 16.74679 | 27.60716 | 6.34345 | 0.1518690 | 2.4744950 | 26 | 2 | 1973-1977 | 0.91 | Williams | 14968 | 3189 T-2 |
| 3289 T-2 | 12.5 | 940217 | 233.16044 | 304.88423 | 169.31728 | 9.78165 | 0.0246175 | 2.9883958 | 28 | 2 | 1973-1983 | 0.97 | Williams | 14969 | 3289 T-2 |
| 4053 T-2 | 12.5 | 940217 | 342.42006 | 301.02252 | 140.06380 | 2.82079 | 0.0237910 | 2.8877975 | 39 | 6 | 1971-1993 | 0.95 | Williams | 22088 | 4053 T-2 |
| 4068 T-2 | 16.0 | 940217 | 141.16947 | 19.55630 | 52.03469 | 3.63664 | 0.0653083 | 2.7169822 | 16 | 2 | 1973-1978 | 0.90 | Williams | 15085 | 4068 T-2 |
| 4129 T-2 | 14.0 | 940217 | 68.13647 | 199.21751 | 29.83563 | 5.20659 | 0.1448405 | 2.3002911 | 33 | 4 | 1973-1993 | 1.03 | Williams | 22598 | 4129 T-2 |
| 4136 T-2 | 14.0 | 940217 | 48.09121 | 306.56882 | 32.38386 | 7.49757 | 0.2173839 | 2.9156439 | 19 | 3 | 1973-1988 | 0.78 | Williams | 14969 | 4136 T-2 |
| 4171 T-2 | 15.0 | 940217 | 203.60019 | 120.15534 | 138.62963 | 5.54638 | 0.0829221 | 2.4568742 | 17 | 2 | 1973-1977 | 1.00 | Williams | 14970 | 4171 T-2 |
| 5065 T-2 | 15.5 | 940217 | 329.35719 | 243.53732 | 243.52183 | 9.80797 | 0.0729907 | 2.4770079 | 24 | 2 | 1973-1977 | 0.97 | Williams | 14970 | 5065 T-2 |
| 5104 T-2 | 14.7 | 940217 | 298.84687 | 183.03375 | 253.06030 | 7.66486 | 0.0162086 | 2.9532283 | 22 | 2 | 1973-1981 | 1.02 | Nakano | 15087 | 5104 T-2 |
| 5162 T-2 | 12.1 | 940217 | 338.93487 | 353.02286 | 316.61700 | 8.69488 | 0.0734001 | 3.0657616 | 17 | 2 | 1973-1989 | 0.99 | Nakano | 15907 | 5162 T-2 |

| | | | | | | | | | | | | | | | |
|----------|------|--------|-----------|-----------|-----------|----------|-----------|-----------|----|---|-----------|------|----------|-------|----------|
| 1078 T-3 | 14.3 | 940217 | 198.45929 | 266.38569 | 237.66476 | 14.04858 | 0.0721059 | 2.6091299 | 10 | 2 | 1960-1977 | 1.24 | Nakano | 12701 | 1078 T-3 |
| 1182 T-3 | 14.1 | 940217 | 169.46889 | 313.41890 | 331.29685 | 8.56193 | 0.0214112 | 2.9611094 | 17 | 2 | 1977-1990 | 0.95 | Nakano | 16440 | 1182 T-3 |
| 1214 T-3 | 12.5 | 940217 | 45.45543 | 65.00495 | 326.90834 | 9.11836 | 0.0978564 | 2.9998271 | 19 | 3 | 1977-1990 | 1.05 | Williams | 16440 | 1214 T-3 |
| 2158 T-3 | 14.5 | 940217 | 111.60417 | 358.27481 | 284.44919 | 1.75919 | 0.1277122 | 2.1786185 | 41 | 4 | 1977-1993 | 1.02 | Marsden | 22088 | 2158 T-3 |
| 2203 T-3 | 13.5 | 940217 | 225.86691 | 273.28240 | 215.25157 | 11.92720 | 0.1013393 | 3.1692145 | 16 | 2 | 1960-1977 | 1.18 | Williams | 12701 | 2203 T-3 |
| 2416 T-3 | 13.0 | 940217 | 81.37857 | 208.22133 | 274.05584 | 1.43711 | 0.1588260 | 2.3792018 | 13 | 2 | 1977-1988 | 0.71 | Williams | 13863 | 2416 T-3 |
| 3166 T-3 | 15.5 | 940217 | 55.77966 | 306.08314 | 179.46695 | 2.45142 | 0.1588451 | 2.4011195 | 17 | 2 | 1977-1990 | 0.71 | Williams | 16440 | 3166 T-3 |
| 4017 T-3 | 14.5 | 940217 | 127.57647 | 213.72518 | 46.45646 | 5.34614 | 0.0516660 | 2.1919116 | 14 | 2 | 1977-1982 | 1.09 | Williams | 12702 | 4017 T-3 |
| 4203 T-3 | 14.5 | 940217 | 160.63378 | 3.48065 | 185.71353 | 12.99271 | 0.1035698 | 2.5969862 | 15 | 2 | 1960-1977 | 0.94 | Williams | 12703 | 4203 T-3 |
| 4327 T-3 | 14.5 | 940217 | 172.16186 | 138.34465 | 56.24787 | 9.28135 | 0.1076067 | 2.5754661 | 15 | 2 | 1977-1988 | 0.88 | Williams | 13304 | 4327 T-3 |
| 4343 T-3 | 13.0 | 940217 | 13.59482 | 15.98731 | 177.64107 | 10.39807 | 0.2366686 | 2.7919672 | 15 | 2 | 1977-1980 | 1.17 | Williams | 12703 | 4343 T-3 |
| 5175 T-3 | 14.6 | 940217 | 346.97466 | 50.87677 | 103.07720 | 11.01905 | 0.1716541 | 2.4393915 | 9 | 2 | 1977-1990 | 0.88 | Ichikawa | 16441 | 5175 T-3 |
| 5193 T-3 | 13.0 | 940217 | 183.21104 | 83.73750 | 151.58350 | 12.52102 | 0.1963312 | 3.0101603 | 18 | 2 | 1977-1980 | 0.99 | Ichikawa | 16441 | 5193 T-3 |

EPHEMERIDES

| 1992 BB | | | | | | | | 1993 11 09 | | | | | | | |
|----------------------------|-----------------|-----------------|----------|-------|------------|--------|------|----------------------------|-----------------|-----------------|----------|-------|------------|--------|------|
| $a, e, i = 1.88, 0.27, 45$ | | | | | | | | Elements MPC 22688 | | | | | | | |
| Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V | Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V |
| 1993 10 20 | 23 20.58 | +08 18.2 | 1.443 | 2.335 | 145.8 | 13.9 | 18.9 | 1993 11 19 | 00 53.13 | -12 58.8 | 1.017 | 1.804 | 128.1 | 25.5 | 18.0 |
| 1993 10 30 | 23 16.09 | +04 16.9 | 1.517 | 2.322 | 134.3 | 17.8 | 19.2 | 1993 11 29 | 01 00.03 | -11 19.2 | 1.151 | 1.861 | 121.0 | 27.0 | 18.4 |
| 1993 11 09 | 23 14.82 | +00 52.0 | 1.613 | 2.308 | 123.1 | 21.1 | 19.4 | 1993 12 09 | 01 08.68 | -09 27.7 | 1.294 | 1.920 | 114.1 | 27.9 | 18.7 |
| 1993 11 19 | 23 16.60 | -01 52.6 | 1.725 | 2.293 | 112.5 | 23.5 | 19.6 | 1993 12 19 | 01 18.80 | -07 29.3 | 1.447 | 1.979 | 107.5 | 28.3 | 19.0 |
| 1993 11 29 | 23 21.14 | -03 58.4 | 1.848 | 2.277 | 102.6 | 25.0 | 19.8 | 1993 12 29 | 01 30.14 | -05 27.8 | 1.607 | 2.038 | 101.1 | 28.3 | 19.3 |
| 1993 12 09 | 23 28.03 | -05 29.7 | 1.974 | 2.259 | 93.5 | 25.8 | 19.9 | 1994 01 08 | 01 42.43 | -03 26.1 | 1.773 | 2.097 | 94.8 | 27.9 | 19.6 |
| 1993 12 19 | 23 36.92 | -06 31.5 | 2.101 | 2.240 | 84.9 | 25.9 | 20.0 | 1994 01 18 | 01 55.54 | -01 26.2 | 1.943 | 2.156 | 88.6 | 27.1 | 19.8 |
| 1984 KB | | | | | | | | 1993 11 09 | | | | | | | |
| $a, e, i = 2.22, 0.76, 5$ | | | | | | | | Elements MPC 22682 | | | | | | | |
| Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V | Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V |
| 1993 10 20 | 23 47.74 | -04 33.7 | 1.154 | 2.069 | 148.5 | 14.5 | 17.7 | 1993 10 20 | 00 52.86 | -24 52.4 | 0.987 | 1.881 | 143.1 | 18.5 | 16.8 |
| 1993 10 30 | 23 32.35 | -06 25.7 | 1.147 | 1.973 | 134.4 | 21.1 | 17.8 | 1993 10 30 | 00 37.80 | -28 55.7 | 0.972 | 1.788 | 131.0 | 24.8 | 16.8 |
| 1993 11 09 | 23 20.26 | -07 51.3 | 1.159 | 1.873 | 121.0 | 26.9 | 17.9 | 1993 11 09 | 00 24.28 | -32 01.0 | 0.975 | 1.694 | 119.0 | 30.8 | 16.9 |
| 1993 11 19 | 23 12.37 | -08 46.3 | 1.182 | 1.769 | 108.8 | 31.9 | 18.0 | 1993 11 19 | 00 14.19 | -34 05.1 | 0.988 | 1.597 | 107.8 | 36.1 | 17.0 |
| 1993 11 29 | 23 08.92 | -09 11.3 | 1.207 | 1.660 | 97.8 | 36.1 | 18.0 | 1993 11 29 | 00 08.74 | -35 15.7 | 1.002 | 1.498 | 97.8 | 40.7 | 17.0 |
| 1993 12 09 | 23 09.69 | -09 09.1 | 1.228 | 1.546 | 87.9 | 39.6 | 18.0 | 1993 12 09 | 00 08.28 | -35 44.3 | 1.011 | 1.399 | 89.0 | 44.8 | 17.0 |
| 1993 12 19 | 23 14.32 | -08 42.6 | 1.239 | 1.427 | 78.9 | 42.6 | 17.9 | 1993 12 19 | 00 12.70 | -35 40.9 | 1.008 | 1.299 | 81.3 | 48.5 | 16.9 |
| 1993 12 29 | 23 22.39 | -07 54.7 | 1.235 | 1.303 | 70.9 | 45.5 | 17.8 | 1993 12 29 | 00 21.63 | -35 13.1 | 0.990 | 1.199 | 74.8 | 52.3 | 16.8 |
| 1994 01 08 | 23 33.49 | -06 47.6 | 1.210 | 1.174 | 63.7 | 48.7 | 17.6 | 1993 UB | | | | | | | |
| 1993 QP | | | | | | | | $a, e, i = 1.86, 0.36, 22$ | | | | | | | |
| $a, e, i = 2.31, 0.47, 7$ | | | | | | | | Elements MPC 22691 | | | | | | | |
| Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V | Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V |
| 1993 10 20 | 00 04.37 | +30 31.9 | 0.362 | 1.322 | 150.1 | 22.0 | 17.0 | 1993 10 20 | 01 01.76 | -12 03.9 | 0.267 | 1.244 | 155.8 | 19.2 | 15.6 |
| 1993 10 30 | 00 17.45 | +28 43.1 | 0.414 | 1.364 | 148.4 | 22.4 | 17.3 | 1993 10 25 | 00 46.90 | -05 59.2 | 0.258 | 1.233 | 154.7 | 20.1 | 15.5 |
| 1993 11 09 | 00 31.77 | +26 50.7 | 0.479 | 1.410 | 145.0 | 23.8 | 17.8 | 1993 10 30 | 00 32.69 | +00 38.0 | 0.256 | 1.223 | 151.0 | 23.2 | 15.6 |
| 1993 11 19 | 00 47.17 | +25 10.8 | 0.557 | 1.460 | 140.3 | 25.6 | 18.2 | 1993 11 04 | 00 19.83 | +07 23.5 | 0.260 | 1.215 | 145.5 | 27.5 | 15.7 |
| 1993 11 29 | 01 03.48 | +23 52.3 | 0.648 | 1.514 | 134.8 | 27.5 | 18.7 | 1993 11 09 | 00 08.86 | +13 54.0 | 0.270 | 1.208 | 139.5 | 32.2 | 15.9 |
| 1993 12 09 | 01 20.45 | +22 57.1 | 0.752 | 1.570 | 128.9 | 29.2 | 19.1 | 1993 11 14 | 00 00.15 | +19 53.2 | 0.285 | 1.203 | 133.6 | 36.6 | 16.2 |
| 1993 12 19 | 01 37.96 | +22 23.8 | 0.868 | 1.628 | 123.0 | 30.5 | 19.6 | 1993 11 19 | 23 53.89 | +25 13.9 | 0.304 | 1.200 | 128.2 | 40.3 | 16.4 |
| 1993 12 29 | 01 55.92 | +22 09.3 | 0.996 | 1.688 | 117.0 | 31.3 | 20.0 | 1993 11 24 | 23 50.11 | +29 55.8 | 0.326 | 1.199 | 123.6 | 43.3 | 16.6 |
| 1994 01 08 | 02 14.21 | +22 09.4 | 1.135 | 1.747 | 111.0 | 31.7 | 20.3 | 1993 11 29 | 23 48.72 | +34 02.5 | 0.351 | 1.200 | 119.7 | 45.6 | 16.9 |
| 1993 RR ₂ | | | | | | | | 1993 TQ ₂ | | | | | | | |
| $a, e, i = 2.66, 0.49, 11$ | | | | | | | | $a, e, i = 1.98, 0.42, 6$ | | | | | | | |
| Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V | Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V |
| 1993 10 20 | 00 45.66 | -15 22.9 | 0.694 | 1.638 | 151.1 | 17.1 | 16.7 | 1993 10 20 | 02 46.59 | +23 21.6 | 0.366 | 1.345 | 159.3 | 15.2 | 18.8 |
| 1993 10 30 | 00 45.82 | -15 10.8 | 0.788 | 1.692 | 143.3 | 20.6 | 17.1 | 1993 10 30 | 02 44.30 | +27 15.0 | 0.313 | 1.298 | 165.1 | 11.3 | 18.2 |
| | | | | | | | | 1993 11 09 | 02 39.13 | +31 39.4 | 0.274 | 1.257 | 164.6 | 12.1 | 17.9 |
| | | | | | | | | 1993 11 19 | 02 33.05 | +36 19.0 | 0.247 | 1.220 | 157.9 | 17.7 | 17.8 |

| | | | | | | | |
|------------|----------|----------|-------|-------|-------|------|------|
| 1993 11 29 | 02 29.92 | +40 53.3 | 0.231 | 1.191 | 149.7 | 24.7 | 17.8 |
| 1993 12 09 | 02 34.07 | +45 03.1 | 0.223 | 1.170 | 142.4 | 30.9 | 17.9 |
| 1993 12 19 | 02 49.58 | +48 30.5 | 0.222 | 1.157 | 137.0 | 35.5 | 18.0 |
| 1993 12 29 | 03 18.84 | +50 56.3 | 0.228 | 1.153 | 133.7 | 38.0 | 18.1 |
| 1994 01 08 | 04 00.43 | +51 54.2 | 0.239 | 1.158 | 132.3 | 38.9 | 18.3 |
| 1994 01 18 | 04 49.07 | +51 03.2 | 0.258 | 1.173 | 132.1 | 38.5 | 18.4 |

1988 RE

| | | $a, e, i = 1.82, 0.25, 35$ | | | | Elements MPC 22684 | | |
|------------|-----------------|----------------------------|----------|-------|------------|--------------------|------|--|
| Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V | |
| 1993 10 20 | 03 30.85 | -03 10.0 | 0.784 | 1.716 | 149.1 | 17.3 | 16.1 | |
| 1993 10 30 | 03 18.89 | -09 28.1 | 0.808 | 1.749 | 152.2 | 15.3 | 16.1 | |
| 1993 11 09 | 03 05.93 | -14 32.8 | 0.860 | 1.782 | 148.5 | 16.9 | 16.3 | |
| 1993 11 19 | 02 54.06 | -18 05.6 | 0.937 | 1.815 | 141.0 | 20.1 | 16.7 | |
| 1993 11 29 | 02 44.96 | -20 10.0 | 1.032 | 1.847 | 132.3 | 23.3 | 17.0 | |
| 1993 12 09 | 02 39.43 | -21 01.8 | 1.142 | 1.878 | 123.8 | 25.8 | 17.3 | |
| 1993 12 19 | 02 37.61 | -20 59.2 | 1.261 | 1.908 | 115.9 | 27.6 | 17.6 | |
| 1993 12 29 | 02 39.28 | -20 18.3 | 1.387 | 1.938 | 108.5 | 28.8 | 17.9 | |
| 1994 01 08 | 02 43.95 | -19 11.8 | 1.516 | 1.967 | 101.7 | 29.3 | 18.2 | |
| 1994 01 18 | 02 51.18 | -17 48.6 | 1.647 | 1.995 | 95.3 | 29.4 | 18.4 | |
| 1994 01 28 | 03 00.55 | -16 15.7 | 1.776 | 2.021 | 89.3 | 29.2 | 18.6 | |

1992 CH₁

| | | $a, e, i = 1.62, 0.29, 22$ | | | | Elements MPC 22688 | | |
|------------|-----------------|----------------------------|----------|-------|------------|--------------------|------|--|
| Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V | |
| 1993 10 20 | 05 05.70 | -22 08.5 | 0.791 | 1.549 | 119.9 | 33.9 | 19.9 | |
| 1993 10 30 | 05 10.95 | -26 24.6 | 0.728 | 1.509 | 121.8 | 34.0 | 19.6 | |
| 1993 11 09 | 05 11.96 | -30 27.4 | 0.674 | 1.468 | 122.6 | 34.6 | 19.4 | |
| 1993 11 19 | 05 08.30 | -33 54.0 | 0.628 | 1.428 | 122.5 | 35.7 | 19.2 | |
| 1993 11 29 | 05 00.31 | -36 19.2 | 0.589 | 1.388 | 121.4 | 37.3 | 19.1 | |
| 1993 12 09 | 04 49.21 | -37 20.3 | 0.554 | 1.349 | 119.8 | 39.3 | 18.9 | |
| 1993 12 19 | 04 37.20 | -36 38.7 | 0.523 | 1.312 | 117.7 | 41.6 | 18.8 | |
| 1993 12 29 | 04 27.08 | -34 05.1 | 0.495 | 1.277 | 115.4 | 44.1 | 18.7 | |
| 1994 01 08 | 04 21.05 | -29 38.8 | 0.469 | 1.245 | 113.2 | 46.6 | 18.6 | |
| 1994 01 18 | 04 20.52 | -23 23.7 | 0.447 | 1.217 | 110.9 | 49.0 | 18.5 | |
| 1994 01 28 | 04 26.12 | -15 30.6 | 0.429 | 1.194 | 108.7 | 51.4 | 18.4 | |
| 1994 02 07 | 04 37.84 | -06 17.9 | 0.419 | 1.175 | 106.4 | 53.6 | 18.4 | |
| 1994 02 17 | 04 55.71 | +03 43.3 | 0.418 | 1.162 | 104.1 | 55.6 | 18.4 | |
| 1994 02 27 | 05 19.76 | +13 47.5 | 0.428 | 1.156 | 101.7 | 57.0 | 18.5 | |
| 1994 03 09 | 05 49.93 | +23 04.9 | 0.451 | 1.156 | 99.4 | 58.0 | 18.7 | |
| 1994 03 19 | 06 26.14 | +30 53.4 | 0.485 | 1.162 | 97.3 | 58.2 | 18.8 | |
| 1994 03 29 | 07 07.64 | +36 47.7 | 0.528 | 1.174 | 95.6 | 57.8 | 19.0 | |
| 1994 04 08 | 07 52.79 | +40 39.8 | 0.580 | 1.192 | 94.1 | 56.9 | 19.3 | |

Periodic Comet Urata-Nijjima (1993q)

| | | $a, e, i = 1.62, 0.29, 22$ | | | | Elements MPC 22663 | | |
|------------|-----------------|----------------------------|----------|-------|------------|--------------------|-------|--|
| Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | m_2 | |
| 1993 10 20 | 10 23.19 | +33 06.0 | 1.993 | 1.790 | 63.7 | 29.9 | 20.0 | |
| 1993 10 30 | 10 46.55 | +32 16.3 | 1.970 | 1.849 | 68.2 | 29.9 | 20.1 | |
| 1993 11 09 | 11 07.40 | +31 33.6 | 1.943 | 1.910 | 73.2 | 29.8 | 20.3 | |
| 1993 11 19 | 11 25.69 | +31 02.2 | 1.910 | 1.972 | 78.8 | 29.4 | 20.4 | |
| 1993 11 29 | 11 41.32 | +30 45.7 | 1.873 | 2.037 | 84.8 | 28.8 | 20.5 | |
| 1993 12 09 | 11 54.16 | +30 46.5 | 1.832 | 2.102 | 91.4 | 27.9 | 20.5 | |
| 1993 12 19 | 12 03.98 | +31 06.5 | 1.790 | 2.168 | 98.6 | 26.7 | 20.6 | |
| 1993 12 29 | 12 10.46 | +31 45.6 | 1.748 | 2.234 | 106.3 | 25.0 | 20.7 | |
| 1994 01 08 | 12 13.32 | +32 41.9 | 1.711 | 2.300 | 114.6 | 22.9 | 20.8 | |
| 1994 01 18 | 12 12.23 | +33 51.0 | 1.681 | 2.367 | 123.1 | 20.4 | 20.9 | |

| | | | | | | | |
|------------|----------|----------|-------|-------|-------|------|------|
| 1994 01 28 | 12 07.11 | +35 04.9 | 1.665 | 2.433 | 131.7 | 17.6 | 21.0 |
| 1994 02 07 | 11 58.20 | +36 13.0 | 1.665 | 2.499 | 139.6 | 14.8 | 21.1 |
| 1994 02 17 | 11 46.22 | +37 03.6 | 1.687 | 2.565 | 145.7 | 12.5 | 21.2 |
| 1994 02 27 | 11 32.49 | +37 26.5 | 1.734 | 2.630 | 148.7 | 11.3 | 21.4 |
| 1994 03 09 | 11 18.58 | +37 16.8 | 1.805 | 2.695 | 147.4 | 11.5 | 21.6 |
| 1994 03 19 | 11 06.01 | +36 34.9 | 1.902 | 2.759 | 142.5 | 12.7 | 21.8 |

(5349) 1988 RA

| | | $a, e, i = 2.79, 0.47, 29$ | | | | Elements MPC 20917 | | |
|------------|-----------------|----------------------------|----------|-------|------------|--------------------|------|--|
| Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | V | |
| 1993 10 20 | 10 23.61 | +39 02.9 | 1.581 | 1.504 | 67.0 | 37.6 | 16.1 | |
| 1993 10 30 | 10 53.93 | +36 37.3 | 1.553 | 1.523 | 69.5 | 37.7 | 16.1 | |
| 1993 11 09 | 11 20.45 | +34 07.6 | 1.524 | 1.547 | 72.4 | 37.6 | 16.1 | |
| 1993 11 19 | 11 43.39 | +31 41.0 | 1.491 | 1.576 | 75.9 | 37.5 | 16.1 | |
| 1993 11 29 | 12 02.92 | +29 22.7 | 1.453 | 1.609 | 80.1 | 37.1 | 16.0 | |
| 1993 12 09 | 12 19.12 | +27 16.5 | 1.409 | 1.647 | 85.0 | 36.6 | 16.0 | |
| 1993 12 19 | 12 31.92 | +25 24.9 | 1.360 | 1.688 | 90.7 | 35.7 | 16.0 | |
| 1993 12 29 | 12 41.09 | +23 49.3 | 1.307 | 1.732 | 97.3 | 34.3 | 15.9 | |
| 1994 01 08 | 12 46.31 | +22 29.5 | 1.252 | 1.779 | 104.8 | 32.3 | 15.8 | |
| 1994 01 18 | 12 47.12 | +21 24.4 | 1.197 | 1.827 | 113.5 | 29.6 | 15.7 | |
| 1994 01 28 | 12 43.11 | +20 30.1 | 1.148 | 1.878 | 123.3 | 26.0 | 15.6 | |
| 1994 02 07 | 12 34.12 | +19 40.9 | 1.108 | 1.930 | 134.2 | 21.5 | 15.4 | |

1991 WA

| | | $a, e, i = 1.58, 0.64, 40$ | | | | Elements MPC 19683 | | |
|------------|-----------------|----------------------------|----------|-------|-----------|--------------------|------|--|
| Date TT | α_{2000} | δ_{2000} | Δ | r | Variation | | V | |
| 1993 10 20 | 11 16.50 | -51 33.6 | 0.457 | 0.788 | +15.79 | -62.7 | 19.1 | |
| 1993 10 25 | 10 42.92 | -53 38.6 | 0.396 | 0.844 | +17.09 | -98.9 | 18.8 | |
| 1993 10 30 | 09 57.45 | -55 11.8 | 0.337 | 0.901 | +17.29 | -147.2 | 18.3 | |
| 1993 11 04 | 08 53.75 | -55 28.3 | 0.283 | 0.959 | +14.44 | -211.1 | 17.8 | |
| 1993 11 09 | 07 28.99 | -52 27.6 | 0.236 | 1.016 | +6.22 | -280.5 | 17.1 | |
| 1993 11 14 | 05 56.86 | -43 08.9 | 0.205 | 1.072 | -3.96 | -317.6 | 16.4 | |
| 1993 11 19 | 04 40.97 | -27 25.3 | 0.199 | 1.128 | -9.06 | -290.7 | 15.9 | |
| 1993 11 24 | 03 48.86 | -10 46.7 | 0.222 | 1.182 | -9.53 | -224.2 | 15.8 | |
| 1993 11 29 | 03 15.09 | +02 03.4 | 0.270 | 1.236 | -8.37 | -164.2 | 16.1 | |
| 1993 12 04 | 02 53.28 | +10 46.4 | 0.333 | 1.288 | -7.00 | -123.4 | 16.7 | |
| 1993 12 09 | 02 39.20 | +16 38.0 | 0.406 | 1.339 | -5.79 | -96.7 | 17.3 | |
| 1993 12 14 | 02 30.30 | +20 42.3 | 0.485 | 1.389 | -4.81 | -78.5 | 17.9 | |
| 1993 12 19 | 02 25.05 | +23 39.5 | 0.569 | 1.437 | -4.04 | -65.5 | 18.4 | |
| 1993 12 24 | 02 22.45 | +25 53.8 | 0.656 | 1.485 | -3.43 | -55.7 | 18.8 | |
| 1993 12 29 | 02 21.86 | +27 39.6 | 0.746 | 1.530 | -2.95 | -48.1 | 19.2 | |
| 1994 01 03 | 02 22.80 | +29 05.9 | 0.838 | 1.575 | -2.56 | -42.1 | 19.5 | |
| 1994 01 08 | 02 24.97 | +30 18.4 | 0.932 | 1.619 | -2.25 | -37.2 | 19.8 | |

Comet Shoemaker-Levy (1993h)

| | | $a, e, i = 1.58, 0.64, 40$ | | | | Elements MPC 22472 | | |
|------------|-----------------|----------------------------|----------|-------|------------|--------------------|-------|--|
| Date TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | m_1 | |
| 1993 11 29 | 14 35.05 | -50 57.5 | 5.646 | 4.882 | 35.9 | 6.8 | 17.1 | |
| 1993 12 09 | 14 46.03 | -52 57.1 | 5.590 | 4.875 | 39.8 | 7.4 | 17.1 | |
| 1993 12 19 | 14 57.23 | -55 02.6 | 5.521 | 4.869 | 44.6 | 8.2 | 17.1 | |
| 1993 12 29 | 15 08.58 | -57 13.7 | 5.440 | 4.864 | 49.8 | 8.9 | 17.0 | |
| 1994 01 08 | 15 19.98 | -59 30.5 | 5.352 | 4.861 | 55.4 | 9.6 | 17.0 | |
| 1994 01 18 | 15 31.30 | -61 52.6 | 5.256 | 4.858 | 61.1 | 10.2 | 17.0 | |
| 1994 01 28 | 15 42.38 | -64 19.7 | 5.157 | 4.857 | 67.0 | 10.8 | 16.9 | |
| 1994 02 07 | 15 53.02 | -66 51.4 | 5.057 | 4.858 | 72.8 | 11.2 | 16.9 | |
| 1994 02 17 | 16 02.89 | -69 26.9 | 4.958 | 4.859 | 78.5 | 11.5 | 16.8 | |
| 1994 02 27 | 16 11.5 | -72 05.3 | 4.863 | 4.862 | 84.1 | 11.7 | 16.8 | |

| | | | | | | | | | | | | | | | | |
|------------|---------|----------|-------|-------|-------|------|------|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|
| 1994 03 09 | 16 18.1 | -74 45.1 | 4.775 | 4.866 | 89.3 | 11.8 | 16.8 | 1991 FJ ₁ | 93 09 30.7 | 00 28.32 | +07 18.6 | 15.9 | -0.77 | - 9.4 | 1.4/02.3 | 22687 |
| 1994 03 19 | 16 21.3 | -77 24.3 | 4.696 | 4.871 | 94.2 | 11.8 | 16.7 | 1989 SV ₅ | 93 10 01.0 | 00 29.34 | -06 52.1 | 18.9 | -0.91 | - 4.8 | 3.4/27.8 | 20505 |
| 1994 03 29 | 16 18.6 | -80 00.0 | 4.628 | 4.878 | 98.6 | 11.7 | 16.7 | 1979 MJ ₅ | 93 10 01.1 | 00 29.47 | +00 55.0 | 17.0 | -0.92 | - 8.2 | 0.9/30.3 | 21965 |
| 1994 04 08 | 16 04.6 | -82 27.6 | 4.572 | 4.886 | 102.4 | 11.5 | 16.7 | 1989 SX | 93 10 01.1 | 00 29.75 | -02 40.6 | 15.0 | -0.89 | + 1.7 | 3.1/29.6 | 22685 |
| 1994 04 18 | 15 26.8 | -84 37.7 | 4.529 | 4.895 | 105.5 | 11.4 | 16.7 | 1985 JK | 93 10 01.2 | 00 30.14 | -06 41.3 | 17.7 | -0.93 | - 6.0 | 3.7/28.1 | 22076 |
| 1994 04 28 | 14 01 | -86 08.5 | 4.501 | 4.905 | 107.9 | 11.3 | 16.7 | 1988 GL | 93 10 01.3 | 00 30.51 | -20 09.3 | 17.6 | -1.01 | - 2.3 | 7.7/24.4 | 22698 |
| 1994 05 08 | 11 51 | -86 22.7 | 4.487 | 4.916 | 109.4 | 11.2 | 16.7 | 1989 TL ₁₅ | 93 10 01.3 | 00 30.58 | +05 20.3 | 16.3 | -0.88 | - 5.0 | 0.9/02.0 | 22699 |
| 1994 05 18 | 10 17 | -85 23.8 | 4.487 | 4.929 | 110.2 | 11.1 | 16.7 | 1991 BD | 93 10 01.7 | 00 31.92 | +15 05.9 | 16.0 | -0.94 | - 5.3 | 4.9/05.5 | 22687 |
| 1994 05 28 | 09 35.2 | -83 58.6 | 4.501 | 4.942 | 110.1 | 11.1 | 16.7 | (5238) | 93 10 01.8 | 00 32.20 | +10 20.1 | 15.5 | -0.93 | - 7.8 | 2.5/04.2 | 20324 |
| 1994 06 07 | 09 19.7 | -82 33.1 | 4.527 | 4.957 | 109.4 | 11.1 | 16.7 | 1992 ES ₁ | 93 10 01.8 | 00 32.39 | -04 42.8 | 16.6 | -1.05 | - 2.6 | 3.1/29.6 | 20154 |
| 1994 06 17 | 09 17.1 | -81 17.3 | 4.563 | 4.973 | 108.1 | 11.2 | 16.8 | 1988 JP | 93 10 01.9 | 00 32.57 | -60 30.8 | 15.0 | -1.16 | +14.8 | 31.9/23.8 | 22698 |
| 1994 06 27 | 09 21.2 | -80 15.4 | 4.610 | 4.991 | 106.3 | 11.3 | 16.8 | 1991 AL ₃ | 93 10 02.0 | 00 32.97 | +07 12.9 | 15.5 | -0.94 | - 5.2 | 1.5/03.2 | 22687 |
| 1994 07 07 | 09 29.5 | -79 29.1 | 4.664 | 5.009 | 104.0 | 11.4 | 16.8 | 1989 YB ₆ | 93 10 02.3 | 00 34.04 | -15 29.8 | 18.4 | -0.69 | - 4.9 | 4.5/25.6 | 18817 |
| 1994 07 17 | 09 40.7 | -78 59.3 | 4.725 | 5.028 | 101.5 | 11.4 | 16.9 | 1981 EC ₁₃ | 93 10 02.5 | 00 34.60 | +13 12.3 | 18.7 | -0.83 | - 4.0 | 2.9/05.6 | 22696 |
| 1994 07 27 | 09 54.0 | -78 46.3 | 4.792 | 5.049 | 98.9 | 11.5 | 16.9 | 1987 RZ | 93 10 02.6 | 00 34.94 | +00 32.1 | 16.9 | -0.72 | - 5.0 | 1.2/01.5 | 15887 |
| 1994 08 06 | 10 09.2 | -78 49.5 | 4.862 | 5.070 | 96.1 | 11.5 | 17.0 | 1981 EK ₈ | 93 10 02.7 | 00 35.44 | +13 59.1 | 17.9 | -0.97 | - 6.1 | 4.0/06.1 | 22696 |
| 1994 08 16 | 10 26.4 | -79 08.4 | 4.935 | 5.093 | 93.2 | 11.5 | 17.0 | (5354) | 93 10 02.7 | 00 35.44 | -02 19.6 | 16.1 | -0.70 | - 5.1 | 1.7/30.7 | 20919 |
| 1994 08 26 | 10 45.9 | -79 42.1 | 5.010 | 5.117 | 90.3 | 11.4 | 17.1 | 1984 ER ₁ | 93 10 02.7 | 00 35.57 | +01 30.4 | 16.5 | -0.74 | - 5.3 | 0.7/02.0 | 22076 |
| 1994 09 05 | 11 08.3 | -80 29.0 | 5.087 | 5.141 | 87.5 | 11.3 | 17.1 | 1992 EP | 93 10 02.8 | 00 35.94 | -05 36.2 | 16.8 | -0.98 | - 4.4 | 3.5/30.0 | 20034 |
| 1994 09 15 | 11 35.1 | -81 27.5 | 5.163 | 5.167 | 84.6 | 11.2 | 17.2 | 1991 FU | 93 10 03.6 | 00 38.92 | +23 44.7 | 15.4 | -0.99 | - 2.8 | 6.6/09.7 | 22700 |
| 1994 09 25 | 12 08.5 | -82 34.8 | 5.240 | 5.194 | 81.9 | 11.0 | 17.3 | (5250) | 93 10 03.7 | 00 39.07 | -16 46.2 | 15.7 | -0.71 | - 7.9 | 8.5/25.7 | 20489 |
| 1994 10 05 | 12 53.3 | -83 46.5 | 5.316 | 5.221 | 79.2 | 10.8 | 17.3 | 1992 GA ₁ | 93 10 03.7 | 00 39.30 | +09 05.9 | 18.1 | -0.85 | -13.9 | 1.6/05.7 | 20344 |
| 1994 10 15 | 13 57.7 | -84 54.6 | 5.391 | 5.250 | 76.6 | 10.6 | 17.4 | 6217 P-L | 93 10 03.7 | 00 39.30 | +06 36.9 | 19.4 | -0.67 | - 7.8 | 0.6/04.7 | 15905 |
| 1994 10 25 | 15 33 | -85 42.6 | 5.464 | 5.279 | 74.1 | 10.4 | 17.4 | 1993 SY ₃ | 93 10 03.9 | 00 39.72 | +07 41.5 | 15.6 | -0.77 | - 8.8 | 1.4/05.0 | 22693 |
| 1994 11 04 | 17 33 | -85 46.4 | 5.536 | 5.310 | 71.7 | 10.2 | 17.5 | 1988 UH | 93 10 04.0 | 00 40.32 | +05 32.3 | 16.7 | -0.72 | - 5.4 | 0.3/04.5 | 21972 |
| 1994 11 14 | 19 21.1 | -84 55.6 | 5.606 | 5.341 | 69.5 | 10.0 | 17.5 | 1991 DO | 93 10 04.2 | 00 40.92 | +12 50.7 | 16.6 | -0.89 | - 3.4 | 2.6/06.8 | 22687 |
| 1994 11 24 | 20 36.6 | -83 26.0 | 5.675 | 5.373 | 67.4 | 9.8 | 17.6 | (5710) | 93 10 04.3 | 00 41.11 | +06 13.9 | 15.3 | -1.00 | - 3.0 | 0.9/05.0 | 22670 |
| 1994 12 04 | 21 28.0 | -81 35.0 | 5.741 | 5.406 | 65.4 | 9.5 | 17.6 | 1981 EH ₂₄ | 93 10 04.4 | 00 41.44 | +03 13.9 | 18.4 | -0.82 | - 4.3 | 0.4/04.0 | 22697 |
| 1994 12 14 | 22 05.4 | -79 33.0 | 5.804 | 5.439 | 63.7 | 9.3 | 17.7 | 1981 DF ₂ | 93 10 04.4 | 00 41.79 | +19 37.4 | 15.6 | -0.78 | - 7.4 | 7.3/10.1 | 22696 |
| 1994 12 24 | 22 34.7 | -77 25.3 | 5.864 | 5.474 | 62.1 | 9.1 | 17.7 | (5207) | 93 10 04.6 | 00 42.18 | +24 51.7 | 16.4 | -1.08 | - 2.2 | 8.0/11.0 | 20135 |
| 1995 01 03 | 22 59.0 | -75 15.2 | 5.922 | 5.509 | 60.8 | 9.0 | 17.8 | 1989 KB | 93 10 04.6 | 00 42.58 | -43 59.1 | 15.5 | -1.18 | + 8.7 | 23.4/23.0 | 22699 |

Periodic Comet Tuttle (1992r)

Elements MPC 20775

| Date | TT | α_{2000} | δ_{2000} | Δ | r | ϵ | ϕ | m_1 |
|------------|----|-----------------|-----------------|----------|-------|------------|--------|-------|
| 1993 12 09 | | 20 38.41 | +38 53.7 | 2.754 | 2.752 | 79.6 | 20.6 | 21.6 |
| 1993 12 19 | | 20 53.48 | +37 52.0 | 2.730 | 2.655 | 75.2 | 21.0 | 21.4 |
| 1993 12 29 | | 21 10.51 | +37 06.8 | 2.704 | 2.558 | 70.9 | 21.3 | 21.2 |
| 1994 01 08 | | 21 29.41 | +36 37.8 | 2.674 | 2.459 | 66.8 | 21.6 | 21.0 |
| 1994 01 18 | | 21 50.17 | +36 24.0 | 2.641 | 2.358 | 62.7 | 21.8 | 20.8 |
| 1994 01 28 | | 22 12.78 | +36 24.0 | 2.604 | 2.257 | 58.8 | 21.9 | 20.6 |
| 1994 02 07 | | 22 37.27 | +36 35.2 | 2.563 | 2.154 | 55.0 | 22.0 | 20.4 |
| 1994 02 17 | | 23 03.74 | +36 54.5 | 2.520 | 2.050 | 51.2 | 22.1 | 20.1 |
| 1994 02 27 | | 23 32.23 | +37 17.8 | 2.474 | 1.946 | 47.4 | 22.0 | 19.9 |
| 1994 03 09 | | 00 02.83 | +37 39.7 | 2.427 | 1.841 | 43.6 | 21.8 | 19.6 |
| 1994 03 19 | | 00 35.54 | +37 54.3 | 2.379 | 1.736 | 39.8 | 21.5 | 19.3 |
| 1994 03 29 | | 01 10.27 | +37 54.6 | 2.332 | 1.631 | 35.9 | 21.0 | 19.0 |
| 1994 04 08 | | 01 46.78 | +37 33.0 | 2.285 | 1.528 | 31.8 | 20.2 | 18.6 |

OPPOSITION DATA

| Planet | Opposition | α_{2000} | δ_{2000} | V | $\dot{\alpha}$ | $\dot{\delta}$ | ϕ_{MIN} | MPC |
|----------------------|------------|-----------------|-----------------|------|----------------|----------------|---------------------|-------|
| 1989 SJ ₁ | 93 09 30.0 | 00 25.86 | -04 43.2 | 17.4 | -0.84 | - 3.7 | 3.5/27.7 | 20504 |
| (5148) | 93 09 30.1 | 00 26.20 | +03 23.8 | 18.3 | -0.73 | - 4.4 | 0.1/30.4 | 19852 |
| 1988 FS ₂ | 93 09 30.2 | 00 26.40 | +02 46.3 | 16.8 | -0.94 | - 5.1 | 0.0/30.2 | 21569 |

| | | | | | | | | |
|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|
| 1991 FJ ₁ | 93 09 30.7 | 00 28.32 | +07 18.6 | 15.9 | -0.77 | - 9.4 | 1.4/02.3 | 22687 |
| 1989 SV ₅ | 93 10 01.0 | 00 29.34 | -06 52.1 | 18.9 | -0.91 | - 4.8 | 3.4/27.8 | 20505 |
| 1979 MJ ₅ | 93 10 01.1 | 00 29.47 | +00 55.0 | 17.0 | -0.92 | - 8.2 | 0.9/30.3 | 21965 |
| 1989 SX | 93 10 01.1 | 00 29.75 | -02 40.6 | 15.0 | -0.89 | + 1.7 | 3.1/29.6 | 22685 |
| 1985 JK | 93 10 01.2 | 00 30.14 | -06 41.3 | 17.7 | -0.93 | - 6.0 | 3.7/28.1 | 22076 |
| 1988 GL | 93 10 01.3 | 00 30.51 | -20 09.3 | 17.6 | -1.01 | - 2.3 | 7.7/24.4 | 22698 |
| 1989 TL ₁₅ | 93 10 01.3 | 00 30.58 | +05 20.3 | 16.3 | -0.88 | - 5.0 | 0.9/02.0 | 22699 |
| 1991 BD | 93 10 01.7 | 00 31.92 | +15 05.9 | 16.0 | -0.94 | - 5.3 | 4.9/05.5 | 22687 |
| (5238) | 93 10 01.8 | 00 32.20 | +10 20.1 | 15.5 | -0.93 | - 7.8 | 2.5/04.2 | 20324 |
| 1992 ES ₁ | 93 10 01.8 | 00 32.39 | -04 42.8 | 16.6 | -1.05 | - 2.6 | 3.1/29.6 | 20154 |
| 1988 JP | 93 10 01.9 | 00 32.57 | -60 30.8 | 15.0 | -1.16 | +14.8 | 31.9/23.8 | 22698 |
| 1991 AL ₃ | 93 10 02.0 | 00 32.97 | +07 12.9 | 15.5 | -0.94 | - 5.2 | 1.5/03.2 | 22687 |
| 1989 YB ₆ | 93 10 02.3 | 00 34.04 | -15 29.8 | 18.4 | -0.69 | - 4.9 | 4.5/25.6 | 18817 |
| 1981 EC ₁₃ | 93 10 02.5 | 00 34.60 | +13 12.3 | 18.7 | -0.83 | - 4.0 | 2.9/05.6 | 22696 |
| 1987 RZ | 93 10 02.6 | 00 34.94 | +00 32.1 | 16.9 | -0.72 | - 5.0 | 1.2/01.5 | 15887 |
| 1981 EK ₈ | 93 10 02.7 | 00 35.44 | +13 59.1 | 17.9 | -0.97 | - 6.1 | 4.0/06.1 | 22696 |
| (5354) | 93 10 02.7 | 00 35.44 | -02 19.6 | 16.1 | -0.70 | - 5.1 | 1.7/30.7 | 20919 |
| 1984 ER ₁ | 93 10 02.7 | 00 35.57 | +01 30.4 | 16.5 | -0.74 | - 5.3 | 0.7/02.0 | 22076 |
| 1992 EP | 93 10 02.8 | 00 35.94 | -05 36.2 | 16.8 | -0.98 | - 4.4 | 3.5/30.0 | 20034 |
| 1991 FU | 93 10 03.6 | 00 38.92 | +23 44.7 | 15.4 | -0.99 | - 2.8 | 6.6/09.7 | 22700 |
| (5250) | 93 10 03.7 | 00 39.07 | -16 46.2 | 15.7 | -0.71 | - 7.9 | 8.5/25.7 | 20489 |
| 1992 GA ₁ | 93 10 03.7 | 00 39.30 | +09 05.9 | 18.1 | -0.85 | -13.9 | 1.6/05.7 | 20344 |
| 6217 P-L | 93 10 03.7 | 00 39.30 | +06 36.9 | 19.4 | -0.67 | - 7.8 | 0.6/04.7 | 15905 |
| 1993 SY ₃ | 93 10 03.9 | 00 39.72 | +07 41.5 | 15.6 | -0.77 | - 8.8 | 1.4/05.0 | 22693 |
| 1988 UH | 93 10 04.0 | 00 40.32 | +05 32.3 | 16.7 | -0.72 | - 5.4 | 0.3/04.5 | 21972 |
| 1991 DO | 93 10 04.2 | 00 40.92 | +12 50.7 | 16.6 | -0.89 | - 3.4 | 2.6/06.8 | 22687 |
| (5710) | 93 10 04.3 | 00 41.11 | +06 13.9 | 15.3 | -1.00 | - 3.0 | 0.9/05.0 | 22670 |
| 1981 EH ₂₄ | 93 10 04.4 | 00 41.44 | +03 13.9 | 18.4 | -0.82 | - 4.3 | 0.4/04.0 | 22697 |
| 1981 DF ₂ | 93 10 04.4 | 00 41.79 | +19 37.4 | 15.6 | -0.78 | - 7.4 | 7.3/10.1 | 22696 |
| (5207) | 93 10 04.6 | 00 42.18 | +24 51.7 | 16.4 | -1.08 | - 2.2 | 8.0/11.0 | 20135 |
| 1989 KB | 93 10 04.6 | 00 42.58 | -43 59.1 | 15.5 | -1.18 | + 8.7 | 23.4/23.0 | 22699 |
| (5736) | 93 10 04.7 | 00 42.61 | +27 51.2 | 15.5 | -0.71 | -20.7 | 9.5/15.9 | 22676 |
| (5331) | 93 10 04.8 | 00 43.04 | -24 15.0 | 13.6 | -0.52 | - 5.0 | 14.2/21.2 | 20797 |
| 1993 SJ ₁ | 93 10 04.9 | 00 43.48 | +00 34.7 | 16.2 | -0.83 | - 9.7 | 1.9/03.5 | 22692 |
| 1993 SR ₁ | 93 10 05.3 | 00 44.80 | +00 34.9 | 15.2 | -0.91 | - 1.6 | 2.2/04.1 | 22693 |
| (5450) | 93 10 05.4 | 00 45.22 | -01 25.4 | 15.8 | -0.79 | - 6.3 | 2.1/03.3 | 21558 |
| 1988 GD | 93 10 05.5 | 00 45.43 | -04 15.2 | 16.5 | -0.91 | - 5.4 | 3.2/02.6 | 20501 |
| 1986 RK | 93 10 05.7 | 00 46.17 | +16 05.6 | 15.5 | -0.83 | -10.6 | 5.1/10.0 | 22683 |
| 1933 FE ₁ | 93 10 05.7 | 00 46.38 | +08 29.1 | 17.7 | -0.96 | - 6.4 | 1.2/06.9 | 22072 |

| | | | | | | | | | | | | | | | | | |
|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|
| 1990 BC ₁ | 93 10 07.1 | 00 51.46 | -06 35.9 | 16.2 | -0.72 | - 6.8 | 3.7/02.9 | 21973 | 1985 CS ₁ | 93 10 16.1 | 01 24.70 | +04 40.3 | 16.2 | -0.97 | - 7.4 | 1.5/14.8 | 22698 |
| 1986 RG ₃ | 93 10 07.2 | 00 51.72 | -03 22.0 | 16.0 | -0.77 | -10.5 | 4.3/04.0 | 22684 | 1990 YM | 93 10 16.3 | 01 25.39 | -31 24.7 | 16.7 | -1.05 | - 2.8 | 13.0/01.4 | 18436 |
| 4136 T-2 | 93 10 07.4 | 00 52.39 | +00 56.6 | 16.8 | -0.90 | - 1.3 | 1.9/06.1 | 22701 | 1990 XM | 93 10 16.3 | 01 25.46 | +03 17.1 | 14.6 | -0.89 | - 5.1 | 2.9/14.6 | 22700 |
| 1977 QG ₂ | 93 10 07.6 | 00 53.35 | +06 39.7 | 15.5 | -0.87 | - 2.1 | 0.3/07.9 | 22682 | 1298 T-2 | 93 10 16.3 | 01 25.60 | +03 44.5 | 17.7 | -0.95 | - 8.3 | 2.1/14.7 | 18832 |
| 1981 EE ₁₂ | 93 10 07.6 | 00 53.36 | +16 22.9 | 17.4 | -0.97 | - 5.7 | 4.6/11.0 | 22696 | 1979 MR ₆ | 93 10 16.4 | 01 25.60 | +04 33.7 | 19.1 | -0.97 | - 7.1 | 1.6/15.1 | 22073 |
| 1983 RX ₃ | 93 10 07.7 | 00 53.83 | -04 27.9 | 15.6 | -0.70 | -11.3 | 4.0/03.9 | 22697 | 1992 FP ₁ | 93 10 16.4 | 01 25.68 | +01 27.5 | 16.6 | -0.84 | - 8.3 | 2.4/14.0 | 20156 |
| 1982 SM ₇ | 93 10 07.8 | 00 53.94 | +05 06.1 | 16.5 | -0.78 | - 4.1 | 0.2/07.6 | 22075 | (5740) | 93 10 16.4 | 01 25.74 | -03 53.1 | 15.2 | -1.07 | + 1.1 | 5.5/13.4 | 22677 |
| 1981 EO ₂₆ | 93 10 07.8 | 00 54.24 | +07 18.2 | 18.1 | -0.81 | - 5.0 | 0.5/08.4 | 21967 | 1986 AA ₂ | 93 10 16.6 | 01 26.58 | -00 35.0 | 16.8 | -0.84 | - 4.9 | 3.2/13.7 | 21970 |
| (5424) | 93 10 08.1 | 00 55.00 | +10 19.4 | 15.4 | -0.94 | - 7.4 | 1.9/09.6 | 21764 | 1993 TE | 93 10 17.0 | 01 28.01 | +05 34.3 | 15.4 | -0.64 | -11.9 | 1.7/15.7 | 22693 |
| 1976 UR ₁₅ | 93 10 08.1 | 00 55.21 | -04 59.8 | 17.2 | -0.96 | - 1.8 | 4.1/05.1 | 22072 | (5356) | 93 10 17.1 | 01 28.56 | -03 23.8 | 14.9 | -0.76 | -11.2 | 4.8/12.5 | 20920 |
| 1990 VG ₃ | 93 10 08.2 | 00 55.61 | -04 19.0 | 15.9 | -0.88 | - 6.2 | 5.1/04.9 | 22700 | (5276) | 93 10 17.2 | 01 28.77 | -01 19.7 | 17.3 | -0.81 | - 7.4 | 3.2/13.8 | 20618 |
| (5721) | 93 10 08.5 | 00 56.56 | -00 50.4 | 15.9 | -0.80 | - 6.4 | 2.7/06.2 | 22673 | 1981 EU ₁₅ | 93 10 17.5 | 01 29.89 | +13 29.6 | 18.0 | -0.96 | - 7.8 | 1.7/18.8 | 21967 |
| 1989 UT ₂ | 93 10 08.6 | 00 57.11 | +16 02.4 | 16.3 | -0.83 | -10.0 | 3.5/12.3 | 22699 | (5733) | 93 10 17.6 | 01 30.20 | +06 38.0 | 15.0 | -0.77 | - 4.1 | 1.0/16.8 | 22676 |
| 1984 UD | 93 10 08.7 | 00 57.36 | +01 54.9 | 15.5 | -0.99 | + 0.2 | 1.9/07.7 | 22683 | (5730) | 93 10 17.6 | 01 30.23 | +06 29.8 | 15.3 | -0.82 | - 4.4 | 1.0/16.8 | 22675 |
| (5754) | 93 10 09.2 | 00 58.96 | -05 33.9 | 14.5 | -0.93 | - 4.9 | 5.4/05.6 | 22680 | 1985 JY | 93 10 17.8 | 01 31.20 | +06 55.1 | 17.4 | -0.74 | - 3.7 | 0.7/17.1 | 19295 |
| 1993 SG | 93 10 09.4 | 00 59.92 | +11 52.4 | 15.4 | -0.95 | - 1.6 | 2.7/11.0 | 22692 | 1982 XQ ₁ | 93 10 18.0 | 01 31.73 | +07 28.7 | 17.4 | -0.72 | - 4.4 | 0.6/17.4 | 22697 |
| 1988 CX ₁ | 93 10 09.5 | 01 00.09 | +11 05.9 | 17.0 | -1.00 | - 6.0 | 1.8/11.0 | 22698 | (5703) | 93 10 18.1 | 01 32.09 | +02 48.4 | 15.3 | -1.14 | + 2.9 | 3.0/16.7 | 22669 |
| 1992 MA | 93 10 09.6 | 01 00.69 | +06 32.4 | 15.8 | -0.77 | - 4.9 | 0.0/09.7 | 22700 | 3502 T-3 | 93 10 18.1 | 01 32.27 | +08 28.3 | 18.9 | -1.06 | - 5.2 | 0.5/17.8 | 12802 |
| 1992 HL | 93 10 09.9 | 01 01.71 | +02 26.7 | 16.8 | -0.79 | -10.3 | 1.3/08.5 | 22688 | (5737) | 93 10 18.4 | 01 33.36 | +20 33.3 | 15.4 | -0.97 | - 2.7 | 4.9/21.4 | 22676 |
| (5712) | 93 10 10.2 | 01 02.78 | +09 12.8 | 15.5 | -0.74 | - 9.3 | 0.9/11.1 | 22671 | 1991 GK ₄ | 93 10 18.5 | 01 33.64 | +10 37.8 | 16.7 | -0.83 | - 5.2 | 0.3/18.8 | 22688 |
| (5726) | 93 10 10.5 | 01 04.18 | -31 47.3 | 17.3 | -1.22 | + 2.3 | 13.6/30.7 | 22674 | 1981 EP ₂₇ | 93 10 18.9 | 01 35.35 | +03 24.9 | 17.8 | -0.73 | - 8.5 | 2.1/16.8 | 21967 |
| 1981 EK ₂₃ | 93 10 10.6 | 01 04.28 | +05 34.0 | 16.9 | -0.89 | - 7.6 | 0.6/10.2 | 21931 | (5291) | 93 10 19.2 | 01 36.32 | +10 15.3 | 16.7 | -0.93 | - 6.0 | 0.1/19.3 | 20624 |
| (5706) | 93 10 10.7 | 01 04.50 | +04 42.9 | 15.6 | -0.78 | - 4.4 | 0.8/10.0 | 22669 | 1985 QA ₁ | 93 10 19.6 | 01 37.74 | +10 34.2 | 16.2 | -0.90 | - 8.4 | 9.2/30.0 | 20813 |
| 1978 VK ₅ | 93 10 10.7 | 01 04.60 | +08 59.1 | 16.1 | -0.94 | - 4.8 | 0.8/11.4 | 18415 | 1993 TF | 93 10 19.6 | 01 37.76 | +06 46.7 | 15.3 | -0.91 | - 4.5 | 1.6/18.7 | 22693 |
| (5237) | 93 10 11.1 | 01 06.01 | +03 36.3 | 15.7 | -1.05 | - 4.2 | 1.3/10.2 | 20324 | 4094 T-3 | 93 10 19.8 | 01 38.43 | +04 56.0 | 17.8 | -0.96 | - 3.2 | 2.1/18.4 | 22088 |
| 1992 LN | 93 10 11.2 | 01 06.60 | -05 37.2 | 16.9 | -0.96 | - 4.4 | 4.6/07.5 | 20827 | 1986 RS ₁ | 93 10 19.8 | 01 38.48 | +01 24.8 | 16.1 | -0.84 | - 8.1 | 4.2/17.0 | 14949 |
| 1990 VR ₈ | 93 10 11.6 | 01 08.02 | +00 27.1 | 17.1 | -1.04 | - 5.6 | 2.7/09.7 | 20336 | 1988 LB | 93 10 20.1 | 01 39.75 | +29 25.7 | 16.2 | -0.97 | - 6.8 | 6.6/26.5 | 22698 |
| 1975 RP | 93 10 12.0 | 01 09.48 | +07 16.8 | 15.9 | -0.75 | - 4.9 | 0.0/12.0 | 21963 | 1993 TX | 93 10 20.5 | 01 41.05 | +02 53.0 | 13.9 | -1.06 | + 6.2 | 4.0/19.2 | 22693 |
| 1993 SL ₃ | 93 10 12.1 | 01 09.64 | +10 15.2 | 14.4 | -1.63 | + 7.1 | 1.4/12.5 | 22693 | 1992 NJ | 93 10 20.7 | 01 41.90 | +10 53.2 | 16.1 | -1.02 | + 1.6 | 0.1/20.8 | 22600 |
| 1973 EK | 93 10 12.2 | 01 10.36 | +07 24.3 | 16.1 | -0.84 | - 5.7 | 0.0/12.3 | 21963 | 1991 EA ₁ | 93 10 20.8 | 01 42.17 | +06 52.8 | 16.5 | -0.89 | - 2.7 | 1.1/19.8 | 22431 |
| (5215) | 93 10 12.3 | 01 10.49 | -14 53.0 | 15.0 | -0.83 | - 5.2 | 7.6/05.0 | 20138 | 5041 T-3 | 93 10 20.8 | 01 42.24 | -03 50.0 | 17.2 | -0.73 | - 5.6 | 4.2/16.3 | 16039 |
| 1981 ET ₄₂ | 93 10 12.4 | 01 10.75 | +10 05.8 | 17.3 | -0.99 | - 5.4 | 1.1/13.2 | 22074 | 1981 QT ₃ | 93 10 20.9 | 01 42.55 | +14 56.7 | 16.6 | -0.80 | - 3.2 | 1.2/22.2 | 22483 |
| 1981 EG ₂₈ | 93 10 12.4 | 01 11.10 | +06 18.1 | 15.8 | -0.84 | - 8.8 | 0.5/12.1 | 22697 | 1992 FV | 93 10 20.9 | 01 42.75 | +03 40.3 | 16.2 | -1.06 | - 5.0 | 2.8/19.1 | 22700 |
| 1992 KF | 93 10 12.6 | 01 11.63 | -12 36.6 | 17.5 | -0.98 | - 1.3 | 6.8/07.1 | 21977 | 1988 RQ ₂ | 93 10 21.2 | 01 43.99 | +27 59.7 | 16.8 | -0.94 | - 3.8 | 5.3/26.4 | 21570 |
| 1992 GZ | 93 10 12.6 | 01 11.73 | +09 06.7 | 16.3 | -0.92 | - 5.0 | 0.5/13.1 | 22085 | (5214) | 93 10 21.4 | 01 44.47 | +14 58.1 | 16.0 | -1.15 | - 3.3 | 1.7/22.5 | 22476 |
| 1988 XJ ₁ | 93 10 12.6 | 01 11.75 | -11 22.3 | 16.9 | -0.82 | - 1.9 | 5.8/07.0 | 22698 | 1991 JB ₁ | 93 10 21.4 | 01 44.63 | +04 44.7 | 17.0 | -0.75 | - 3.5 | 1.6/19.7 | 22494 |
| 1981 ER ₁₅ | 93 10 12.9 | 01 12.68 | +13 50.8 | 19.2 | -0.96 | - 6.7 | 2.2/15.0 | 22429 | 1981 EX ₂₈ | 93 10 21.4 | 01 44.69 | +22 05.4 | 17.9 | -1.04 | - 5.6 | 4.2/25.0 | 15242 |
| 1988 CG | 93 10 13.1 | 01 13.76 | +02 30.4 | 17.7 | -0.94 | - 7.6 | 1.9/11.5 | 18429 | 1988 DD ₅ | 93 10 21.6 | 01 45.33 | +26 07.6 | 17.9 | -1.03 | - 6.3 | 5.0/26.4 | 21971 |
| 1987 DG ₆ | 93 10 13.3 | 01 14.16 | +09 44.2 | 16.9 | -0.88 | - 5.3 | 0.6/13.9 | 22599 | 1981 ED ₂₁ | 93 10 21.7 | 01 45.52 | +24 54.6 | 15.9 | -1.06 | + 2.1 | 6.9/24.7 | 22697 |
| (5704) | 93 10 13.7 | 01 15.70 | -04 19.8 | 16.9 | -0.68 | - 5.6 | 3.2/09.6 | 22669 | 1981 EW ₂₄ | 93 10 21.7 | 01 45.70 | +08 04.2 | 16.7 | -0.81 | - 5.2 | 1.0/20.9 | 22492 |
| 1978 RZ | 93 10 13.8 | 01 16.04 | +02 59.5 | 16.5 | -0.79 | - 5.0 | 1.7/12.2 | 20140 | 1986 RV ₂ | 93 10 21.8 | 01 46.28 | +08 04.0 | 16.4 | -0.98 | - 7.8 | 1.2/21.0 | 22698 |
| 1978 PX ₂ | 93 10 13.8 | 01 16.10 | +10 57.3 | 16.0 | -0.91 | - 4.0 | 1.4/15.0 | 22696 | 1981 EY ₁₄ | 93 10 22.2 | 01 47.46 | +17 28.7 | 17.7 | -1.02 | - 6.1 | 2.6/24.0 | 21967 |
| (5716) | 93 10 14.4 | 01 18.51 | +12 27.6 | 15.3 | -0.86 | - 6.2 | 2.0/15.8 | 22672 | 1986 SF | 93 10 22.2 | 01 47.71 | +15 55.6 | 16.4 | -1.09 | - 4.7 | 1.9/23.6 | 22077 |
| (5271) | 93 10 14.5 | 01 18.58 | -12 14.8 | 17.5 | -0.81 | - 5.7 | 6.2/07.7 | 20616 | (5744) | 93 10 22.8 | 01 50.10 | +07 40.2 | 15.1 | -0.87 | - 9.0 | 1.7/21.7 | 22678 |
| (5717) | 93 10 14.5 | 01 18.94 | +10 27.5 | 16.1 | -0.96 | - 4.2 | 1.0/15.2 | 22672 | 3097 P-L | 93 10 23.0 | 01 50.82 | +22 54.2 | 17.9 | -0.92 | - 5.2 | 3.8/26.6 | 15423 |
| 1978 VT ₈ | 93 10 15.0 | 01 20.38 | +12 11.0 | 17.1 | -0.77 | - 5.8 | 1.1/16.2 | 18619 | 1992 FA ₁ | 93 10 24.0 | 01 54.36 | +15 46.6 | 16.2 | -1.01 | - 7.3 | 1.6/25.2 | 22273 |
| 1979 MF | 93 10 15.1 | 01 20.93 | +01 48.9 | 17.9 | -0.97 | - 7.4 | 2.4/13.1 | 21965 | (5329) | 93 10 24.1 | 01 54.69 | -14 23.5 | 14.6 | -0.66 | - 6.7 | 12.1/14.2 | 20796 |
| 1981 EE ₁₄ | 93 10 15.2 | 01 21.37 | +10 40.1 | 18.0 | -0.90 | - 9.0 | 0.8/15.9 | 21966 | 1990 EJ ₂ | 93 10 24.3 | 01 55.41 | +16 53.7 | 16.2 | -0.72 | - 6.4 | 1.5/25.9 | 22082 |
| 1989 WC | 93 10 15.2 | 01 21.41 | +11 34.1 | 15.6 | -0.88 | - 5.3 | 1.2/16.2 | 22699 | 1988 RS ₄ | 93 10 24.3 | 01 55.79 | +12 53.9 | 16.4 | -0.88 | - 4.4 | 0.4/24.7 | 19301 |
| 4018 P-L | 93 10 15.4 | 01 22.19 | +13 50.5 | 16.0 | -0.97 | - 1.9 | 2.4/16.9 | 22700 | 3137 T-3 | 93 10 24.5 | 01 56.19 | +14 01.3 | 15.8 | -0.94 | - 0.4 | 0.8/25.0 | 22695 |
| 1989 SR ₄ | 93 10 16.0 | 01 24.41 | +05 08.2 | 17.4 | -0.94 | - 2.2 | 1.7/15.1 | 18293 | 2055 P-L | 93 10 25.3 | 01 59.70 | +23 35.7 | 19.2 | -1.10 | - 3.3 | 4.0/28.4 | 22274 |

| | | | | | | | | | | | | | | | | | |
|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|
| 1990 YC | 93 10 25.4 | 01 59.96 | +07 24.7 | 15.3 | -0.99 | - 3.7 | 2.4/24.2 | 22687 | 1987 BS ₂ | 93 11 01.9 | 02 29.10 | +10 01.1 | 16.3 | -0.97 | - 5.3 | 2.0/31.8 | 21970 |
| 1985 JN ₁ | 93 10 25.4 | 02 00.01 | +03 16.1 | 17.8 | -1.02 | - 3.5 | 3.3/23.2 | 22076 | 1988 ER ₁ | 93 11 02.0 | 02 29.13 | +17 31.2 | 16.5 | -1.11 | - 2.2 | 1.1/02.6 | 22698 |
| 1980 PB ₃ | 93 10 25.7 | 02 00.84 | -02 07.1 | 16.2 | -0.84 | - 0.5 | 3.8/22.1 | 21966 | (5336) | 93 11 02.0 | 02 29.40 | +04 18.5 | 16.7 | -0.73 | - 5.3 | 2.8/30.1 | 20800 |
| 1983 RZ ₁ | 93 10 25.7 | 02 00.86 | +14 36.5 | 16.3 | -1.14 | - 3.5 | 1.1/26.3 | 18109 | 1981 EY ₉ | 93 11 02.4 | 02 30.76 | +21 55.5 | 17.3 | -1.08 | - 5.2 | 3.1/04.0 | 21966 |
| 1989 UL ₁ | 93 10 25.7 | 02 00.96 | +07 59.7 | 15.3 | -1.05 | - 0.2 | 1.7/24.8 | 22699 | (5245) | 93 11 02.5 | 02 31.28 | +09 16.4 | 16.4 | -1.06 | - 5.5 | 2.2/01.2 | 20487 |
| (5340) | 93 10 25.7 | 02 01.11 | +16 49.4 | 17.3 | -0.78 | - 4.5 | 1.2/27.1 | 20801 | 1986 QT | 93 11 02.6 | 02 31.44 | +09 43.8 | 17.2 | -1.07 | - 4.8 | 2.1/01.4 | 22077 |
| 1979 MK ₆ | 93 10 25.8 | 02 01.53 | +08 44.5 | 17.5 | -0.85 | - 5.4 | 1.4/24.8 | 18804 | (5353) | 93 11 02.7 | 02 31.94 | +15 38.0 | 15.2 | -1.03 | - 2.2 | 0.3/02.9 | 20918 |
| 1981 EC ₁₆ | 93 10 25.9 | 02 01.67 | +17 40.6 | 17.4 | -1.01 | - 6.2 | 1.9/27.4 | 21967 | 1978 RZ ₉ | 93 11 02.7 | 02 32.02 | -15 43.5 | 17.7 | -0.92 | - 6.8 | 10.7/25.0 | 22073 |
| 1985 FE ₃ | 93 10 26.0 | 02 02.13 | +00 28.1 | 16.6 | -1.03 | - 3.7 | 4.2/23.0 | 21969 | 1981 ES ₃₂ | 93 11 03.1 | 02 33.65 | +29 18.2 | 18.7 | -1.07 | - 5.1 | 6.5/06.9 | 22271 |
| 1989 OA | 93 10 26.1 | 02 02.55 | +16 31.5 | 16.2 | -0.99 | - 7.3 | 1.6/27.3 | 22081 | 1986 RB ₅ | 93 11 03.5 | 02 35.29 | +03 39.3 | 15.1 | -1.02 | - 3.4 | 5.4/31.9 | 22698 |
| 1992 OJ | 93 10 26.1 | 02 02.76 | +39 54.4 | 17.0 | -1.06 | - 3.5 | 7.6/03.9 | 22600 | 4053 T-2 | 93 11 03.8 | 02 36.47 | +10 48.0 | 16.3 | -0.84 | - 4.1 | 1.5/02.7 | 22701 |
| 1989 AK | 93 10 26.2 | 02 02.81 | +05 49.7 | 15.5 | -0.83 | - 3.4 | 2.5/24.4 | 22699 | 1991 EA | 93 11 03.8 | 02 36.54 | +24 02.5 | 16.7 | -1.08 | - 2.8 | 3.3/05.9 | 22494 |
| 1987 SC ₆ | 93 10 26.3 | 02 03.36 | +11 06.7 | 16.5 | -0.78 | - 4.4 | 0.4/26.0 | 22078 | 1985 GO | 93 11 03.9 | 02 36.84 | +08 34.8 | 17.1 | -1.05 | - 4.0 | 2.6/02.4 | 21969 |
| 1984 OA | 93 10 26.4 | 02 03.86 | -17 45.6 | 15.0 | -0.81 | - 3.3 | 12.6/17.4 | 22599 | 1989 JF | 93 11 04.4 | 02 38.96 | +20 58.4 | 16.2 | -1.19 | - 3.8 | 2.2/05.7 | 22699 |
| 1981 ES ₂₉ | 93 10 26.6 | 02 04.59 | +11 49.5 | 17.6 | -0.79 | - 6.1 | 0.2/26.4 | 22074 | 1991 CN ₁ | 93 11 04.5 | 02 39.02 | +13 26.8 | 17.0 | -0.98 | - 5.5 | 0.8/04.0 | 22083 |
| 1992 LG | 93 10 26.8 | 02 05.46 | +07 07.3 | 16.6 | -1.05 | - 5.2 | 2.3/25.4 | 21977 | 1981 ET ₂₄ | 93 11 04.5 | 02 39.04 | +07 48.4 | 17.7 | -0.97 | - 6.9 | 3.0/02.5 | 22492 |
| 1989 UA | 93 10 26.9 | 02 05.62 | +08 09.2 | 15.1 | -1.07 | + 0.4 | 1.9/26.0 | 22699 | 1989 WL ₇ | 93 11 04.5 | 02 39.18 | -12 17.4 | 15.1 | -0.92 | - 0.4 | 11.3/29.0 | 21973 |
| 1982 JE ₁ | 93 10 26.9 | 02 05.78 | +05 01.0 | 16.0 | -1.01 | - 1.0 | 3.9/25.2 | 22075 | 1991 CL ₁ | 93 11 04.7 | 02 40.16 | +20 02.3 | 15.5 | -1.02 | - 5.2 | 2.0/05.9 | 22700 |
| 1989 UZ ₄ | 93 10 27.0 | 02 06.13 | +03 17.3 | 15.9 | -0.85 | - 6.3 | 4.0/24.3 | 22081 | (5701) | 93 11 04.8 | 02 40.51 | +17 08.3 | 14.6 | -0.98 | - 0.6 | 0.7/05.2 | 22668 |
| (5541) | 93 10 27.4 | 02 07.56 | +05 45.9 | 15.9 | -0.69 | - 8.7 | 2.4/25.1 | 22039 | 1990 YK | 93 11 05.3 | 02 42.22 | +12 23.7 | 16.3 | -1.05 | - 5.8 | 1.4/04.5 | 17829 |
| 1988 PM ₂ | 93 10 28.3 | 02 10.95 | +04 50.2 | 17.4 | -0.83 | - 4.9 | 3.0/26.0 | 21971 | 6097 P-L | 93 11 05.5 | 02 43.38 | +17 42.6 | 17.9 | -1.06 | - 5.3 | 0.8/06.1 | 22087 |
| 1988 EN | 93 10 28.3 | 02 11.23 | +06 17.5 | 17.2 | -0.95 | - 5.7 | 2.4/26.5 | 22079 | 1989 SM ₈ | 93 11 05.9 | 02 44.51 | +16 44.0 | 16.4 | -1.02 | - 3.4 | 0.4/06.1 | 20505 |
| 1991 CM ₃ | 93 10 28.5 | 02 11.72 | +04 19.8 | 15.2 | -0.92 | - 4.9 | 3.9/26.1 | 22700 | 1972 RU ₁ | 93 11 06.0 | 02 45.00 | +13 44.3 | 16.8 | -1.00 | - 7.4 | 1.0/05.4 | 22072 |
| 1988 UC | 93 10 28.5 | 02 11.77 | +12 57.0 | 16.1 | -0.86 | - 3.4 | 0.1/28.5 | 22599 | 1981 EE ₃₈ | 93 11 06.0 | 02 45.19 | +19 42.0 | 18.0 | -0.90 | - 4.0 | 1.4/07.0 | 21967 |
| 1982 QK ₃ | 93 10 29.0 | 02 13.88 | +18 20.2 | 15.8 | -1.01 | - 4.6 | 2.3/30.4 | 22075 | (5755) | 93 11 06.4 | 02 46.68 | +31 18.0 | 14.7 | -0.93 | - 4.0 | 5.3/10.4 | 22681 |
| 1988 YB | 93 10 29.1 | 02 14.03 | +11 47.0 | 16.3 | -0.79 | - 3.6 | 0.5/28.7 | 22698 | 1992 JQ ₃ | 93 11 06.6 | 02 47.28 | +19 08.1 | 16.9 | -1.11 | - 5.7 | 1.1/07.3 | 22057 |
| 4121 P-L | 93 10 29.1 | 02 14.05 | +09 17.9 | 16.2 | -0.72 | - 7.7 | 1.5/27.8 | 22694 | (5337) | 93 11 06.6 | 02 47.69 | +18 27.6 | 16.4 | -0.77 | - 4.8 | 0.6/07.3 | 20800 |
| 1985 GS | 93 10 29.2 | 02 14.53 | -10 04.1 | 16.4 | -0.77 | - 3.5 | 6.6/22.3 | 21565 | 1978 VP ₁₀ | 93 11 07.2 | 02 49.71 | +12 08.0 | 17.4 | -1.02 | - 2.9 | 1.7/06.3 | 22073 |
| 1989 NO | 93 10 29.3 | 02 15.12 | +19 05.6 | 16.1 | -1.12 | - 4.1 | 2.1/30.8 | 22699 | 1987 SZ ₆ | 93 11 07.2 | 02 50.04 | +27 35.0 | 14.5 | -0.86 | - 5.7 | 3.8/10.4 | 22698 |
| 1987 SE ₁₃ | 93 10 29.6 | 02 16.26 | +09 18.0 | 15.3 | -0.80 | - 3.4 | 1.6/28.5 | 21567 | 1988 RU ₆ | 93 11 07.3 | 02 50.28 | +15 06.1 | 17.5 | -0.91 | - 4.5 | 0.4/07.0 | 22079 |
| 1991 BJ | 93 10 29.7 | 02 16.22 | +10 05.6 | 15.6 | -1.04 | - 2.9 | 1.5/28.9 | 22600 | 1990 EF ₇ | 93 11 07.4 | 02 50.75 | +13 25.6 | 17.7 | -0.77 | - 3.4 | 0.8/06.7 | 20925 |
| 1981 EM ₁₉ | 93 10 29.7 | 02 16.58 | +15 29.5 | 17.7 | -0.87 | - 4.2 | 0.6/30.3 | 22074 | 1991 GA ₆ | 93 11 07.5 | 02 51.04 | +17 42.3 | 17.4 | -0.88 | - 4.0 | 0.4/07.9 | 21942 |
| 1972 RF ₂ | 93 10 30.1 | 02 17.85 | +09 42.7 | 17.0 | -0.93 | - 7.3 | 2.0/29.0 | 21250 | 4031 P-L | 93 11 07.8 | 02 52.48 | +26 14.7 | 16.3 | -1.06 | - 2.1 | 4.7/10.0 | 22274 |
| 1981 EY ₁₉ | 93 10 30.3 | 02 18.72 | +15 02.6 | 18.7 | -0.85 | - 4.5 | 0.4/30.7 | 22697 | (5216) | 93 11 08.4 | 02 54.78 | -07 40.3 | 14.9 | -0.89 | - 2.7 | 9.4/02.9 | 20315 |
| 1978 NN ₁ | 93 10 30.4 | 02 19.03 | +00 36.2 | 16.8 | -0.86 | - 4.5 | 5.0/26.9 | 22696 | (5351) | 93 11 08.5 | 02 55.17 | +08 15.1 | 16.9 | -0.96 | - 4.7 | 2.9/06.6 | 20918 |
| (5253) | 93 10 30.6 | 02 19.82 | -24 39.7 | 16.6 | -1.65 | + 6.3 | 17.1/23.2 | 20490 | (5270) | 93 11 08.5 | 02 55.28 | +09 11.5 | 17.1 | -0.88 | - 6.9 | 2.4/06.6 | 20616 |
| 1992 HJ | 93 10 30.6 | 02 19.95 | +05 39.7 | 16.7 | -1.02 | - 4.6 | 3.1/28.6 | 22700 | (5288) | 93 11 08.8 | 02 56.28 | +32 18.0 | 14.6 | -0.99 | - 7.5 | 6.1/13.1 | 20623 |
| 5211 T-2 | 93 10 30.9 | 02 21.20 | +17 15.1 | 15.0 | -0.78 | - 8.8 | 1.2/32.0 | 22695 | 1992 OB | 93 11 08.8 | 02 56.37 | +15 12.2 | 18.6 | -0.94 | + 0.1 | 0.5/08.6 | 22407 |
| 1990 BG ₁ | 93 10 31.0 | 02 21.40 | +08 00.3 | 16.5 | -0.87 | - 3.0 | 1.9/29.5 | 22699 | 1982 UV ₁ | 93 11 08.9 | 02 56.75 | +12 13.1 | 15.9 | -0.84 | - 3.0 | 1.7/07.9 | 22697 |
| 1991 BR | 93 10 31.1 | 02 21.88 | +06 43.4 | 17.8 | -0.87 | - 5.8 | 2.2/29.1 | 21975 | 1981 JS ₂ | 93 11 09.1 | 02 57.68 | +19 36.6 | 17.5 | -1.09 | - 4.0 | 1.0/09.8 | 21968 |
| 1978 UA ₇ | 93 10 31.2 | 02 22.32 | +17 42.3 | 16.3 | -1.08 | - 2.4 | 1.3/01.1 | 20807 | 1988 VD ₁ | 93 11 09.2 | 02 57.98 | +34 08.6 | 15.6 | -1.09 | - 1.1 | 5.8/13.0 | 22698 |
| (5021) | 93 10 31.3 | 02 22.86 | +10 38.2 | 15.7 | -0.80 | - 3.6 | 1.2/30.5 | 19487 | (5723) | 93 11 09.4 | 02 58.97 | +05 50.8 | 15.7 | -0.91 | - 5.2 | 5.7/06.9 | 22673 |
| 1989 YH | 93 10 31.4 | 02 23.06 | +28 52.2 | 15.5 | -0.94 | - 4.0 | 5.9/04.5 | 21973 | 1992 FS ₁ | 93 11 09.5 | 02 59.12 | +06 15.3 | 16.2 | -1.08 | - 2.6 | 4.2/07.4 | 21977 |
| 1989 WG ₇ | 93 10 31.4 | 02 23.26 | +15 12.9 | 16.2 | -0.92 | - 5.3 | 0.4/31.8 | 22699 | (5280) | 93 11 09.7 | 02 59.74 | +07 13.7 | 17.4 | -0.87 | - 6.4 | 3.0/07.2 | 20620 |
| 1986 QA ₃ | 93 10 31.5 | 02 23.25 | +11 44.7 | 16.5 | -1.07 | - 4.8 | 1.0/30.9 | 22077 | (5478) | 93 11 09.7 | 02 59.75 | +18 28.5 | 15.8 | -0.94 | - 7.8 | 0.6/10.1 | 21775 |
| 1979 QJ ₁ | 93 10 31.9 | 02 24.77 | +01 36.9 | 17.1 | -0.99 | - 6.0 | 4.9/28.5 | 13598 | 1992 KE | 93 11 09.8 | 03 00.20 | +05 48.3 | 16.4 | -1.00 | - 2.3 | 4.2/07.5 | 20645 |
| (5347) | 93 11 01.0 | 02 25.37 | +01 34.0 | 16.1 | -0.75 | - 5.6 | 3.9/28.3 | 20916 | 1985 TM ₁ | 93 11 09.8 | 03 00.56 | +28 26.7 | 14.8 | -1.22 | + 4.6 | 5.7/11.4 | 22698 |
| (5316) | 93 11 01.5 | 02 27.41 | +18 57.3 | 15.9 | -0.76 | - 7.8 | 1.3/02.9 | 20791 | 1981 EB ₂₄ | 93 11 09.9 | 03 00.79 | +21 22.4 | 17.9 | -0.96 | - 2.4 | 1.5/10.9 | 21967 |
| 1986 AJ | 93 11 01.7 | 02 28.39 | +50 01.0 | 15.9 | -1.32 | - 8.1 | 17.3/15.5 | 22698 | (5169) | 93 11 10.0 | 03 01.22 | +22 15.5 | 15.3 | -1.06 | - 3.4 | 2.5/11.2 | 19996 |
| 1989 WB ₂ | 93 11 01.8 | 02 28.31 | +23 45.0 | 15.9 | -0.98 | - 4.9 | 3.8/04.0 | 22600 | 5193 T-3 | 93 11 10.1 | 03 01.65 | +00 00.7 | 18.3 | -0.76 | - 3.6 | 4.5/06.1 | 22702 |
| 1986 TB ₃ | 93 11 01.8 | 02 28.69 | +07 38.8 | 15.7 | -1.01 | - 6.4 | 2.9/31.1 | 22078 | 1980 TG ₄ | 93 11 10.4 | 03 02.64 | +30 22.6 | 16.2 | -1.20 | + 0.5 | 5.3/12.9 | 15702 |

| | | | | | | | | | | | | | | | | | |
|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|
| 1169 T-2 | 93 11 10.6 | 03 03.43 | +20 25.5 | 18.4 | -0.90 | - 3.4 | 1.0/11.3 | 22701 | 1984 EY | 93 11 18.7 | 03 36.82 | +24 26.5 | 16.5 | -1.16 | - 1.2 | 1.9/19.5 | 22492 |
| 3020 T-2 | 93 11 10.6 | 03 03.68 | +34 33.9 | 17.1 | -1.17 | - 0.1 | 6.4/14.2 | 22701 | 1992 PX ₂ | 93 11 18.8 | 03 37.51 | +32 16.9 | 17.3 | -1.05 | - 5.1 | 4.1/21.6 | 21584 |
| 3178 T-2 | 93 11 10.9 | 03 04.60 | +19 02.3 | 17.4 | -0.92 | - 2.6 | 0.6/11.3 | 19329 | 1991 GQ ₁₀ | 93 11 18.9 | 03 37.52 | +11 58.1 | 15.8 | -0.92 | - 2.5 | 2.8/17.6 | 18826 |
| 1990 TN ₁ | 93 11 10.9 | 03 04.78 | +50 52.6 | 16.1 | -1.67 | - 2.8 | 15.3/19.1 | 22699 | 1987 SS ₁₇ | 93 11 19.1 | 03 38.34 | +28 25.7 | 16.8 | -0.94 | - 2.0 | 2.8/20.8 | 22079 |
| (5403) | 93 11 10.9 | 03 04.96 | +02 00.8 | 16.0 | -0.81 | - 2.5 | 4.7/07.5 | 21248 | 5192 T-3 | 93 11 19.6 | 03 40.52 | +15 47.8 | 16.3 | -0.95 | + 0.6 | 1.3/19.1 | 21978 |
| 1981 JE ₂ | 93 11 10.9 | 03 05.01 | +16 04.7 | 16.7 | -1.09 | - 3.0 | 0.5/10.7 | 22697 | 1984 UX ₂ | 93 11 19.6 | 03 40.54 | +33 40.6 | 15.3 | -1.21 | + 0.1 | 5.4/21.9 | 22698 |
| 1992 HR ₄ | 93 11 11.0 | 03 05.23 | +08 15.7 | 17.8 | -1.04 | - 3.9 | 3.4/09.1 | 21582 | 1989 YB | 93 11 20.0 | 03 42.22 | +28 27.6 | 14.2 | -0.92 | - 8.4 | 4.4/22.2 | 22699 |
| 1981 EV ₁₀ | 93 11 11.1 | 03 05.43 | +18 45.4 | 18.6 | -1.02 | - 7.2 | 0.6/11.4 | 22270 | 1988 QD ₁ | 93 11 20.0 | 03 42.41 | +24 58.3 | 15.7 | -1.06 | -10.1 | 2.0/21.4 | 22698 |
| 1976 SA ₆ | 93 11 11.2 | 03 05.93 | +18 44.8 | 16.8 | -1.13 | - 3.5 | 0.5/11.5 | 22072 | 1978 QC ₃ | 93 11 20.4 | 03 43.95 | -01 39.7 | 14.8 | -0.87 | - 0.9 | 8.5/16.8 | 16575 |
| 4069 P-L | 93 11 12.0 | 03 09.11 | +11 46.4 | 17.9 | -0.78 | - 5.4 | 1.8/10.6 | 22274 | (5746) | 93 11 20.5 | 03 44.19 | +29 10.8 | 14.7 | -1.15 | - 1.9 | 4.7/22.1 | 22678 |
| 2532 P-L | 93 11 12.2 | 03 10.13 | +09 06.2 | 16.9 | -0.83 | - 5.2 | 2.9/10.2 | 21977 | 1984 DB | 93 11 20.5 | 03 44.25 | -19 48.3 | 17.1 | -0.93 | - 4.1 | 17.9/08.9 | 22271 |
| 1979 TY ₁ | 93 11 12.2 | 03 10.31 | +23 07.2 | 16.1 | -1.21 | + 2.3 | 2.7/13.1 | 22073 | 1990 FR ₁ | 93 11 20.5 | 03 44.39 | -00 08.3 | 17.1 | -0.84 | + 0.5 | 6.1/17.5 | 19303 |
| 1987 SV ₁₂ | 93 11 12.4 | 03 10.81 | +16 01.2 | 16.4 | -0.87 | - 2.5 | 0.6/12.1 | 22078 | 5016 P-L | 93 11 21.5 | 03 48.68 | +26 06.6 | 18.5 | -1.23 | - 2.1 | 2.4/22.5 | 22701 |
| (5305) | 93 11 13.1 | 03 13.62 | +18 01.2 | 16.9 | -1.01 | - 4.5 | 0.0/13.1 | 21764 | 1992 ME | 93 11 21.7 | 03 49.24 | -14 20.5 | 18.4 | -1.07 | + 1.2 | 11.3/17.3 | 21112 |
| 6299 P-L | 93 11 13.2 | 03 14.11 | +05 37.4 | 18.0 | -0.83 | - 8.0 | 4.5/09.9 | 22087 | 1989 TN | 93 11 21.8 | 03 49.84 | +16 08.6 | 17.7 | -1.09 | - 1.9 | 1.6/21.3 | 19025 |
| (5720) | 93 11 13.2 | 03 14.23 | +20 55.1 | 15.6 | -1.75 | +12.2 | 1.5/13.3 | 22673 | 1980 SD | 93 11 21.8 | 03 50.01 | +33 36.8 | 16.9 | -1.20 | - 0.3 | 4.7/24.0 | 21966 |
| 1979 KG | 93 11 13.2 | 03 14.26 | -06 19.4 | 15.3 | -0.91 | + 0.0 | 10.1/08.8 | 22073 | 1992 PD ₂ | 93 11 22.1 | 03 50.82 | +14 33.7 | 17.0 | -0.84 | - 3.9 | 1.6/21.1 | 20934 |
| (5408) | 93 11 13.7 | 03 15.96 | +15 18.2 | 16.8 | -1.06 | - 5.8 | 1.1/13.1 | 21250 | (5299) | 93 11 22.1 | 03 51.22 | +27 42.7 | 15.9 | -0.92 | - 2.8 | 2.5/23.5 | 20785 |
| 1992 JN ₁ | 93 11 13.9 | 03 16.98 | +03 01.2 | 16.6 | -1.03 | + 0.8 | 5.6/11.6 | 21977 | 1978 NU ₃ | 93 11 22.2 | 03 51.41 | +09 26.7 | 17.8 | -1.08 | - 2.0 | 4.5/20.7 | 21964 |
| 1992 HG ₄ | 93 11 13.9 | 03 17.21 | +17 40.7 | 17.0 | -1.07 | - 4.5 | 9.4/04.0 | 22085 | (5303) | 93 11 22.2 | 03 51.71 | +20 49.9 | 16.2 | -0.94 | - 2.0 | 0.2/22.4 | 20786 |
| 1971 UK | 93 11 14.0 | 03 17.40 | +16 38.9 | 16.4 | -1.01 | - 7.1 | 0.7/13.7 | 22072 | 1974 SJ ₃ | 93 11 22.5 | 03 52.96 | +43 23.3 | 16.0 | -1.29 | + 0.9 | 8.1/25.8 | 22696 |
| 1981 EF ₄₈ | 93 11 14.1 | 03 17.78 | +17 55.4 | 18.3 | -0.69 | - 2.9 | 0.1/14.1 | 21968 | 1981 EN ₁₅ | 93 11 22.5 | 03 52.98 | +23 26.9 | 18.0 | -1.10 | - 4.4 | 1.5/23.2 | 21967 |
| 1981 EV ₄₅ | 93 11 14.1 | 03 17.91 | +21 44.0 | 20.0 | -0.89 | - 3.7 | 1.0/14.9 | 20811 | 1991 EG | 93 11 22.6 | 03 53.01 | +22 26.7 | 15.8 | -1.21 | + 0.3 | 1.1/22.9 | 21975 |
| 1983 XN ₁ | 93 11 14.1 | 03 18.02 | +31 43.8 | 16.9 | -0.96 | - 3.6 | 4.6/17.2 | 21969 | 1981 SN | 93 11 22.6 | 03 53.37 | +16 21.6 | 15.8 | -0.97 | - 5.8 | 1.7/21.9 | 22697 |
| 4047 P-L | 93 11 14.2 | 03 18.02 | +21 24.7 | 18.2 | -0.94 | - 3.3 | 1.1/14.9 | 21978 | 1988 EA ₂ | 93 11 22.8 | 03 54.18 | +13 47.7 | 16.8 | -1.08 | - 3.5 | 2.7/21.8 | 21971 |
| 3033 T-2 | 93 11 14.2 | 03 18.40 | +16 21.0 | 17.2 | -0.91 | - 2.5 | 0.7/13.9 | 16243 | 1976 SW ₃ | 93 11 22.8 | 03 54.22 | +12 24.4 | 16.0 | -0.83 | - 3.3 | 2.9/21.5 | 22696 |
| 1262 T-2 | 93 11 14.4 | 03 19.20 | +24 25.7 | 19.3 | -1.20 | - 2.9 | 2.3/15.6 | 15078 | 1987 PL | 93 11 23.0 | 03 54.79 | +31 06.8 | 16.3 | -0.96 | - 4.3 | 3.4/25.1 | 22698 |
| 1988 RN ₄ | 93 11 14.6 | 03 19.94 | +34 45.0 | 17.7 | -1.11 | - 3.0 | 4.9/18.1 | 22079 | 1989 WC ₂ | 93 11 23.0 | 03 55.06 | +18 59.9 | 15.6 | -1.10 | + 3.0 | 0.6/23.0 | 15725 |
| 1981 SE | 93 11 14.9 | 03 21.12 | +15 48.8 | 16.4 | -1.01 | - 4.1 | 1.0/14.4 | 21968 | 4283 T-1 | 93 11 23.1 | 03 55.21 | +28 59.4 | 16.0 | -1.26 | + 1.5 | 4.2/24.1 | 19327 |
| 1985 YH | 93 11 14.9 | 03 21.23 | +31 22.6 | 16.3 | -1.04 | - 6.4 | 4.5/18.0 | 22698 | (5220) | 93 11 23.1 | 03 55.54 | +26 02.0 | 16.6 | -1.23 | - 1.9 | 2.2/24.0 | 20317 |
| 1982 BS | 93 11 15.3 | 03 22.95 | +39 32.9 | 15.7 | -1.06 | - 6.6 | 9.0/20.9 | 22697 | 1989 UF ₇ | 93 11 23.4 | 03 56.71 | +21 07.4 | 16.8 | -1.07 | - 2.2 | 0.3/23.6 | 21973 |
| 1992 NR | 93 11 15.5 | 03 23.40 | -02 34.3 | 17.5 | -0.88 | - 2.9 | 6.6/11.1 | 21582 | 1979 QT ₈ | 93 11 23.5 | 03 56.82 | +25 14.6 | 16.6 | -1.18 | - 3.4 | 2.2/24.3 | 22073 |
| 1988 XW ₁ | 93 11 15.5 | 03 23.73 | +13 26.4 | 14.8 | -0.94 | + 0.5 | 1.8/14.7 | 22493 | 2222 T-2 | 93 11 24.0 | 03 58.89 | +14 55.8 | 17.2 | -0.75 | - 2.3 | 1.5/23.1 | 21978 |
| 1984 DY | 93 11 15.6 | 03 23.78 | +19 30.9 | 16.4 | -0.86 | - 3.0 | 0.3/15.8 | 14191 | 1971 OV | 93 11 24.0 | 03 58.90 | +13 47.4 | 16.7 | -1.11 | - 4.6 | 3.2/22.9 | 16693 |
| 1990 HM ₁ | 93 11 15.7 | 03 24.23 | +11 32.8 | 15.2 | -0.88 | - 0.4 | 2.2/14.5 | 22699 | 1985 PG ₂ | 93 11 24.0 | 03 59.22 | +20 22.7 | 16.2 | -1.06 | - 0.1 | 0.1/24.1 | 22076 |
| 1969 TR ₁ | 93 11 15.7 | 03 24.40 | +22 11.1 | 15.1 | -1.17 | - 3.8 | 1.7/16.4 | 21925 | 1991 GP ₁ | 93 11 24.2 | 04 00.11 | +00 33.9 | 16.5 | -0.86 | - 1.4 | 5.6/21.2 | 21110 |
| 1987 SN ₁₁ | 93 11 15.8 | 03 24.97 | +15 46.4 | 16.8 | -0.84 | - 3.4 | 1.0/15.3 | 22698 | 1992 RF ₇ | 93 11 24.4 | 04 00.72 | +23 12.0 | 17.2 | -0.87 | - 1.4 | 0.7/24.8 | 21586 |
| 1989 RD ₂ | 93 11 16.4 | 03 27.36 | +13 52.1 | 16.7 | -1.06 | - 4.2 | 2.2/15.5 | 21973 | 1990 DB | 93 11 24.5 | 04 01.29 | +17 08.5 | 16.3 | -0.83 | - 2.4 | 1.0/24.0 | 22592 |
| 1989 SG | 93 11 16.6 | 03 27.96 | +30 11.0 | 15.1 | -1.15 | - 0.9 | 5.3/18.5 | 22699 | (5374) | 93 11 24.5 | 04 01.39 | +35 31.0 | 15.7 | -0.94 | - 3.7 | 4.3/27.3 | 21092 |
| 4068 P-L | 93 11 16.9 | 03 29.40 | +25 02.9 | 16.5 | -1.16 | - 3.4 | 2.8/18.1 | 22086 | 1981 ES ₄₇ | 93 11 24.6 | 04 01.45 | +21 21.5 | 17.7 | -1.13 | - 1.4 | 0.3/24.7 | 22697 |
| 2023 P-L | 93 11 17.0 | 03 29.56 | +19 54.1 | 17.5 | -0.88 | - 3.1 | 0.3/17.2 | 22086 | 1360 T-2 | 93 11 25.1 | 04 03.66 | +19 28.6 | 17.9 | -0.92 | - 2.8 | 0.4/24.9 | 22087 |
| 1992 LE | 93 11 17.0 | 03 29.67 | -02 33.6 | 18.2 | -0.85 | - 2.8 | 6.5/12.9 | 20826 | 1991 JG | 93 11 25.1 | 04 03.68 | +20 20.3 | 16.1 | -1.03 | + 0.6 | 0.1/25.1 | 22494 |
| 1973 SF ₆ | 93 11 17.2 | 03 30.77 | +09 24.3 | 16.8 | -1.07 | - 5.5 | 4.4/15.4 | 22429 | 1988 RU ₃ | 93 11 25.1 | 04 03.93 | +16 02.0 | 18.2 | -0.95 | - 2.6 | 1.7/24.5 | 22272 |
| (5745) | 93 11 17.4 | 03 31.49 | +24 53.8 | 15.3 | -1.16 | + 0.1 | 3.1/18.3 | 22678 | 1344 T-2 | 93 11 25.2 | 04 03.96 | +17 06.7 | 17.4 | -0.92 | - 2.3 | 1.3/24.6 | 22087 |
| 1987 SS ₉ | 93 11 17.4 | 03 31.54 | +15 18.3 | 16.5 | -0.84 | - 2.3 | 1.4/16.8 | 22698 | 1991 CU ₁ | 93 11 25.3 | 04 04.39 | +24 43.1 | 16.0 | -1.14 | - 4.8 | 1.7/26.0 | 22600 |
| 1980 FH ₁ | 93 11 17.6 | 03 32.19 | +36 37.2 | 17.3 | -1.07 | - 1.5 | 5.6/20.9 | 21965 | 2312 T-1 | 93 11 25.3 | 04 04.46 | +22 39.2 | 17.3 | -0.96 | - 1.7 | 0.7/25.6 | 22490 |
| 1988 PG ₁ | 93 11 17.7 | 03 32.45 | +38 59.8 | 17.1 | -1.15 | - 4.6 | 7.3/22.3 | 18289 | 1987 RG | 93 11 25.4 | 04 04.91 | +16 18.1 | 16.7 | -0.88 | - 1.8 | 1.4/24.8 | 22078 |
| (5441) | 93 11 17.7 | 03 32.46 | +03 10.4 | 16.3 | -0.81 | - 2.0 | 4.7/14.7 | 21555 | 1992 OB ₉ | 93 11 25.9 | 04 07.21 | +06 15.5 | 17.4 | -0.92 | - 0.3 | 4.6/24.1 | 21583 |
| 3181 T-2 | 93 11 18.1 | 03 34.30 | +15 46.1 | 17.7 | -0.91 | - 2.2 | 1.2/17.5 | 21978 | (5278) | 93 11 26.0 | 04 07.41 | +18 37.5 | 16.0 | -1.12 | - 5.2 | 1.0/25.6 | 20619 |
| (5368) | 93 11 18.3 | 03 35.11 | +11 02.0 | 16.5 | -0.67 | - 2.6 | 2.0/16.7 | 21089 | 1986 AG ₁ | 93 11 26.0 | 04 07.85 | +55 25.8 | 15.3 | -1.79 | -10.4 | 16.3/05.6 | 22077 |
| 1981 EO ₂₀ | 93 11 18.4 | 03 35.79 | +15 08.8 | 18.4 | -1.07 | - 4.0 | 1.5/17.7 | 22697 | (5411) | 93 11 26.1 | 04 07.82 | +28 58.2 | 16.2 | -0.93 | - 2.7 | 2.5/27.4 | 21543 |

| | | | | | | | | | | | | | | | | | |
|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|-----------------------|------------|----------|----------|------|-------|-------|-----------|-------|
| 1977 RZ ₈ | 93 11 26.1 | 04 08.25 | +42 47.6 | 17.5 | -1.12 | - 1.8 | 6.2/29.7 | 19495 | 1981 ET ₁₃ | 93 12 03.9 | 04 41.72 | +26 30.2 | 18.6 | -1.18 | - 3.1 | 1.5/04.5 | 21966 |
| 1983 PX | 93 11 26.2 | 04 08.42 | +11 29.4 | 17.5 | -0.93 | - 4.1 | 3.2/24.7 | 21969 | 1981 EY ₃₅ | 93 12 04.1 | 04 42.58 | +28 12.9 | 17.8 | -1.21 | - 1.6 | 2.3/04.8 | 21967 |
| 1980 BJ ₄ | 93 11 26.4 | 04 09.18 | +21 30.3 | 15.8 | -0.94 | - 1.5 | 0.2/26.5 | 22696 | 1978 VL ₁₁ | 93 12 04.1 | 04 42.60 | +21 43.9 | 15.9 | -1.12 | - 0.2 | 0.2/04.1 | 21926 |
| 2496 T-3 | 93 11 26.6 | 04 10.00 | +15 56.9 | 17.0 | -0.86 | - 4.6 | 1.7/25.7 | 16038 | 1930 UX | 93 12 04.2 | 04 42.64 | +31 58.7 | 15.7 | -1.17 | - 3.0 | 4.9/05.4 | 22696 |
| 6761 P-L | 93 11 27.0 | 04 11.60 | +07 27.9 | 17.8 | -0.82 | - 3.2 | 4.4/24.8 | 22087 | 1988 XK | 93 12 04.6 | 04 44.69 | +19 25.6 | 16.6 | -0.93 | - 4.4 | 1.1/04.3 | 22272 |
| 1987 QW ₁ | 93 11 27.1 | 04 12.16 | +18 06.8 | 16.8 | -0.90 | - 2.4 | 1.0/26.7 | 22078 | 1991 CN | 93 12 04.8 | 04 45.57 | +29 05.2 | 16.1 | -1.23 | - 1.3 | 2.9/05.5 | 21575 |
| 1968 OL | 93 11 27.2 | 04 12.77 | -09 49.4 | 18.4 | -1.08 | + 1.7 | 10.1/24.1 | 20627 | (5380) | 93 12 04.9 | 04 45.69 | +19 55.6 | 17.2 | -0.99 | - 4.0 | 0.8/04.6 | 21094 |
| 3057 T-1 | 93 11 27.3 | 04 13.11 | +20 11.8 | 17.8 | -1.02 | - 3.5 | 0.4/27.2 | 21601 | 1979 KD | 93 12 05.1 | 04 46.87 | +10 52.5 | 17.8 | -0.96 | - 1.2 | 3.7/04.1 | 21965 |
| 4041 P-L | 93 11 27.3 | 04 13.26 | +23 53.6 | 17.2 | -1.07 | - 3.7 | 1.3/27.8 | 15903 | (5213) | 93 12 05.2 | 04 47.23 | +10 40.0 | 15.9 | -0.85 | - 3.3 | 4.0/03.8 | 20137 |
| 1987 BB | 93 11 27.5 | 04 13.92 | +20 30.9 | 16.8 | -1.10 | - 2.8 | 0.3/27.4 | 18626 | 1992 OO ₁ | 93 12 05.3 | 04 47.86 | +00 24.9 | 16.7 | -0.97 | + 0.9 | 8.2/03.8 | 22273 |
| 1986 QN ₃ | 93 11 27.6 | 04 14.56 | +19 19.5 | 16.2 | -1.15 | - 0.6 | 0.9/27.5 | 22077 | 1991 FL | 93 12 05.4 | 04 48.34 | +22 44.8 | 16.9 | -1.12 | - 2.5 | 0.1/05.5 | 22083 |
| 1985 SR | 93 11 27.7 | 04 14.92 | +23 19.7 | 17.4 | -1.13 | - 1.9 | 0.8/28.0 | 22077 | 1985 RV | 93 12 05.5 | 04 48.78 | +24 10.4 | 19.0 | -1.14 | - 5.2 | 0.6/05.8 | 22430 |
| 1983 GU | 93 11 27.8 | 04 15.07 | +03 24.7 | 16.3 | -0.98 | + 0.8 | 6.1/26.0 | 17957 | 1986 TK ₁ | 93 12 05.8 | 04 49.62 | +25 57.5 | 16.5 | -1.23 | - 4.5 | 1.5/06.2 | 22077 |
| 1988 DO ₁ | 93 11 27.8 | 04 15.48 | +12 52.0 | 15.7 | -1.11 | - 1.4 | 3.3/26.9 | 21971 | (5382) | 93 12 05.8 | 04 49.91 | +02 31.1 | 16.6 | -0.93 | - 2.1 | 7.1/03.7 | 21095 |
| 1990 BX | 93 11 28.4 | 04 17.94 | +12 15.1 | 15.9 | -0.94 | - 0.8 | 3.4/27.4 | 22699 | 1989 YF ₅ | 93 12 05.9 | 04 50.25 | +32 22.3 | 15.4 | -1.14 | - 7.0 | 3.7/07.5 | 22699 |
| 1988 XU ₁ | 93 11 28.5 | 04 18.48 | +15 58.0 | 15.9 | -0.91 | + 0.5 | 1.7/28.0 | 22698 | 6600 P-L | 93 12 06.1 | 04 50.89 | +23 04.3 | 17.4 | -1.21 | - 1.0 | 0.3/06.2 | 22701 |
| 1989 XF | 93 11 28.7 | 04 19.21 | +09 30.8 | 15.1 | -1.02 | + 1.7 | 5.3/27.8 | 22699 | 3553 P-L | 93 12 06.3 | 04 51.81 | +30 23.3 | 16.7 | -1.05 | - 3.5 | 3.1/07.2 | 21977 |
| 1979 MA ₄ | 93 11 29.2 | 04 21.02 | +16 28.4 | 17.2 | -0.80 | - 2.4 | 1.5/28.5 | 21927 | 1980 RU | 93 12 06.3 | 04 52.03 | +48 26.8 | 16.1 | -1.41 | - 2.0 | 10.4/09.5 | 22074 |
| 1986 GV | 93 11 29.3 | 04 21.43 | +03 46.3 | 17.7 | -0.92 | + 0.7 | 5.4/27.4 | 18626 | 5061 T-2 | 93 12 06.4 | 04 52.30 | +30 54.0 | 17.5 | -1.33 | - 4.7 | 3.7/07.5 | 15258 |
| 1214 T-3 | 93 11 29.3 | 04 21.59 | +35 33.0 | 16.4 | -1.03 | - 2.8 | 4.9/01.4 | 22702 | 1989 EE | 93 12 06.4 | 04 52.51 | -23 00.7 | 17.0 | -0.82 | - 1.6 | 16.1/27.8 | 21107 |
| 1975 XP ₃ | 93 11 29.4 | 04 21.86 | +26 33.5 | 15.9 | -1.12 | - 1.5 | 2.4/30.0 | 21964 | 1986 PQ ₁ | 93 12 06.4 | 04 52.53 | +21 42.8 | 16.7 | -0.89 | - 0.8 | 0.3/06.4 | 22698 |
| 1991 EL ₄ | 93 11 29.4 | 04 21.99 | +04 25.7 | 17.5 | -0.89 | - 3.2 | 5.3/26.9 | 21576 | (5211) | 93 12 06.5 | 04 53.14 | -17 19.6 | 16.7 | -1.15 | + 6.1 | 15.6/08.1 | 20136 |
| 1978 VE ₉ | 93 11 29.8 | 04 23.85 | +22 50.3 | 16.8 | -0.92 | - 2.3 | 0.4/30.0 | 22222 | 1991 CD ₁ | 93 12 06.8 | 04 54.21 | -09 45.8 | 16.4 | -1.10 | + 2.6 | 11.8/04.6 | 22083 |
| 1988 BS ₃ | 93 11 29.9 | 04 24.33 | +13 13.7 | 17.5 | -1.10 | - 2.6 | 3.1/28.9 | 21971 | (5252) | 93 12 07.0 | 04 55.11 | +09 40.1 | 16.9 | -1.05 | - 0.4 | 4.8/06.1 | 20489 |
| 1986 CP ₁ | 93 11 30.1 | 04 25.09 | +25 11.6 | 17.0 | -1.06 | - 1.0 | 1.3/30.5 | 22698 | 1989 TT ₁ | 93 12 07.1 | 04 55.64 | +17 43.6 | 15.8 | -1.04 | - 4.3 | 2.2/06.6 | 22699 |
| 1989 AH | 93 11 30.3 | 04 26.00 | +02 58.8 | 16.7 | -0.90 | + 3.2 | 5.7/29.0 | 22080 | 1982 UJ ₇ | 93 12 07.1 | 04 55.64 | +20 09.8 | 15.8 | -0.90 | - 0.5 | 0.9/07.0 | 21969 |
| 1991 HO | 93 11 30.4 | 04 26.62 | +16 21.1 | 16.6 | -1.00 | + 1.7 | 1.6/30.0 | 21975 | 1978 TU ₈ | 93 12 07.2 | 04 55.91 | +21 01.1 | 16.0 | -0.94 | - 1.9 | 0.6/07.1 | 20806 |
| 1989 VQ ₁ | 93 11 30.4 | 04 26.66 | +09 37.2 | 17.7 | -1.02 | - 1.7 | 4.7/29.0 | 21572 | (5247) | 93 12 07.2 | 04 56.17 | +02 10.0 | 16.2 | -1.04 | - 7.7 | 7.2/04.2 | 20487 |
| (5535) | 93 11 30.5 | 04 27.10 | +15 22.2 | 15.9 | -1.14 | - 1.0 | 2.9/29.9 | 22036 | 1981 EM ₃₈ | 93 12 07.3 | 04 56.39 | +27 53.7 | 19.1 | -1.02 | - 2.7 | 2.1/07.9 | 22430 |
| 1992 JF | 93 11 30.7 | 04 27.48 | +23 22.8 | 17.2 | -1.19 | - 1.0 | 0.6/30.9 | 20346 | 1991 GB ₂ | 93 12 07.4 | 04 57.03 | +04 46.1 | 16.9 | -0.93 | + 0.3 | 5.8/06.2 | 21975 |
| 1988 PJ ₁ | 93 11 30.8 | 04 28.32 | +42 35.7 | 17.1 | -1.24 | - 4.0 | 7.1/04.2 | 22079 | 1980 GG | 93 12 07.5 | 04 57.26 | +18 30.9 | 16.9 | -1.14 | + 0.5 | 1.6/07.3 | 18620 |
| 1988 KC | 93 11 30.9 | 04 28.48 | +15 54.4 | 16.2 | -1.05 | - 5.8 | 2.2/30.0 | 22493 | 1978 RV ₇ | 93 12 07.5 | 04 57.43 | +17 48.5 | 19.5 | -0.94 | - 1.8 | 1.5/07.1 | 21251 |
| 1989 PT | 93 12 01.0 | 04 28.92 | +11 13.5 | 17.1 | -1.09 | - 1.5 | 4.2/29.9 | 20503 | (5279) | 93 12 07.6 | 04 57.70 | +13 28.8 | 16.9 | -1.08 | + 1.9 | 3.1/07.3 | 20620 |
| 1990 EZ ₅ | 93 12 01.7 | 04 32.24 | +21 57.4 | 17.7 | -0.86 | - 1.8 | 0.0/01.8 | 21940 | 1990 QM ₂ | 93 12 07.6 | 04 57.75 | -21 44.9 | 16.0 | -1.13 | + 2.0 | 21.5/06.2 | 22699 |
| (5301) | 93 12 01.8 | 04 32.47 | +20 32.2 | 15.6 | -0.82 | - 4.6 | 0.4/01.6 | 20785 | 1981 ED ₃₇ | 93 12 07.7 | 04 58.36 | +27 43.5 | 17.5 | -1.25 | - 0.7 | 2.0/08.2 | 21967 |
| 1991 GP ₁₀ | 93 12 01.9 | 04 32.68 | +17 35.7 | 17.7 | -1.00 | - 1.1 | 1.6/01.5 | 22431 | 1989 VV | 93 12 07.8 | 04 58.33 | +22 09.6 | 16.3 | -1.10 | - 0.6 | 0.2/07.8 | 22081 |
| (5251) | 93 12 02.1 | 04 33.82 | +22 05.4 | 15.9 | -1.24 | -14.0 | 0.0/02.2 | 20489 | (5282) | 93 12 07.9 | 04 59.23 | +13 35.2 | 16.6 | -0.95 | - 4.9 | 3.2/06.9 | 20621 |
| 3134 T-3 | 93 12 02.2 | 04 34.24 | +16 08.4 | 17.5 | -1.19 | - 3.1 | 2.6/01.6 | 22088 | 1989 AF ₇ | 93 12 08.2 | 05 00.41 | +21 56.4 | 17.5 | -0.89 | - 1.3 | 0.3/08.2 | 21972 |
| 1985 RL ₁ | 93 12 02.3 | 04 34.65 | +12 05.0 | 16.5 | -1.03 | - 5.5 | 4.0/30.9 | 21970 | 1934 GA | 93 12 08.2 | 05 00.48 | +28 57.9 | 13.3 | -1.40 | +10.5 | 2.6/08.0 | 22696 |
| 5065 T-2 | 93 12 02.4 | 04 34.89 | +20 01.0 | 18.2 | -1.03 | - 7.0 | 0.8/02.1 | 22701 | (5430) | 93 12 08.3 | 05 00.59 | -04 55.8 | 17.1 | -1.05 | + 2.9 | 9.1/07.3 | 21550 |
| 1981 EF ₁₂ | 93 12 02.4 | 04 34.96 | +24 27.3 | 19.2 | -1.15 | - 4.2 | 0.9/02.8 | 21966 | (5346) | 93 12 08.3 | 05 00.63 | +23 01.5 | 16.1 | -0.92 | - 0.6 | 0.1/08.4 | 20916 |
| 1981 EN ₂₆ | 93 12 02.5 | 04 35.30 | +10 58.0 | 17.6 | -0.91 | - 3.1 | 3.7/01.1 | 21967 | 1982 TF ₂ | 93 12 08.3 | 05 00.76 | +24 20.2 | 16.4 | -1.17 | - 2.4 | 10.7/29.0 | 22075 |
| 1987 QS ₇ | 93 12 02.8 | 04 36.66 | +18 59.5 | 17.1 | -0.91 | - 1.9 | 1.0/02.5 | 22078 | (5355) | 93 12 08.5 | 05 01.80 | +21 40.7 | 15.8 | -1.16 | - 1.8 | 0.4/08.5 | 20919 |
| 4072 P-L | 93 12 02.8 | 04 36.84 | +21 02.5 | 19.2 | -1.09 | - 2.9 | 0.3/02.7 | 20829 | 1981 EB ₂₈ | 93 12 08.6 | 05 02.04 | +19 48.3 | 18.4 | -1.13 | - 1.3 | 1.1/08.4 | 22074 |
| 1317 T-2 | 93 12 02.9 | 04 37.12 | +30 38.0 | 19.7 | -1.16 | - 0.9 | 3.0/03.8 | 22432 | 7082 P-L | 93 12 08.6 | 05 02.08 | -17 00.9 | 17.6 | -1.07 | - 7.7 | 20.1/01.6 | 22087 |
| 6214 P-L | 93 12 02.9 | 04 37.24 | +18 09.0 | 17.1 | -1.04 | - 4.7 | 1.8/02.4 | 14629 | 4195 T-1 | 93 12 08.7 | 05 02.37 | +21 10.7 | 17.8 | -0.96 | - 0.4 | 0.5/08.6 | 19879 |
| 1986 QX ₁ | 93 12 03.4 | 04 39.29 | +26 34.1 | 16.8 | -1.26 | - 1.5 | 1.8/04.0 | 22430 | 1978 PD ₃ | 93 12 08.8 | 05 03.07 | +33 19.4 | 16.5 | -1.23 | - 3.0 | 4.6/09.9 | 22696 |
| (5342) | 93 12 03.5 | 04 39.66 | +00 56.4 | 18.0 | -0.96 | - 1.8 | 6.8/01.3 | 20802 | 1991 FS ₁ | 93 12 09.0 | 05 03.72 | +23 05.4 | 17.9 | -1.10 | - 1.4 | 0.1/09.1 | 21110 |
| 1981 EN ₁₇ | 93 12 03.8 | 04 40.96 | +16 30.1 | 16.0 | -1.08 | - 4.2 | 2.7/03.1 | 21967 | 2225 T-2 | 93 12 09.0 | 05 03.77 | +25 48.4 | 18.5 | -1.12 | - 1.1 | 1.1/09.3 | 22701 |
| (5428) | 93 12 03.9 | 04 41.35 | +22 39.8 | 16.4 | -0.94 | - 2.0 | 7.8/24.0 | 21549 | 1992 QM | 93 12 09.4 | 05 05.68 | +29 02.7 | 17.3 | -1.00 | - 1.7 | 1.8/10.0 | 22488 |
| 4257 P-L | 93 12 03.9 | 04 41.66 | +32 53.0 | 18.7 | -1.22 | - 2.7 | 4.7/05.2 | 16035 | 9519 P-L | 93 12 09.4 | 05 05.71 | +28 10.2 | 18.8 | -1.04 | - 0.3 | 1.8/09.8 | 14631 |