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Astrometric positions for 18 irregular satellites of giant planets from 23 years of observations[⋆,⋆⋆,⋆⋆⋆]

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ABSTRACT

Context. The irregular satellites of the giant planets are believed to have been captured during the evolution of the solar system. Knowing their physical parameters, such as size, density and albedo is important to constrain where they came from and how they were captured. The best way to obtain these parameters are observations in loco by spacecrafts or from stellar occultations by the objects. Both techniques demand that the orbits are well known.
Aims. We aimed to obtain good astrometric positions of irregular satellites in order to improve their orbits and ephemeris.
Methods. We identified and reduced observations of several irregular satellites from three database containing more than eight thousand images obtained between 1992 and 2014 at three sites (Observatório do Pico dos Dias, Observatoire de Haute-Provence and European Southern Observatory - La Silla). We used the software PRAIA (Platform for Reduction of Astronomical Images Automatically) to make the astrometric reduction of the CCD frames. The UCAC4 catalogue represented the International Celestial Reference System in the reductions. The identification of the satellites in the frames was done through their ephemerides as determined from the SPICE/NAIF kernels. Some procedures were taken to overcome missing or incomplete information (coordinates, date), mostly for the older images.
Results. We managed to obtain more than 6000 positions for 18 irregular satellites, being 12 of Jupiter, 4 of Saturn, 1 of Uranus (Sycorax) and 1 of Neptune (Nereid). For some satellites the number of obtained positions is more than 50% of that used in earlier orbital numerical integrations.
Conclusions. Comparison of our positions with recent JPL ephemeris suggests the presence of systematic errors in the orbits of at least a few irregular satellites. The most evident case was an error in the inclination of Carme.

Key words. Planets and satellites: general - Astrometry: individual: Jovian and Saturnian irregular satellites

1. Introduction

The irregular satellites of the giant planets are smaller than the regular moons, having more eccentric, inclined, distant and, in most cases, retrograde orbits. Due to their orbital configurations, it is largely accepted that these objects were captured in the early solar system (Sheppard & Jewitt 2003).

Because they are faint, the majority of these objects was discovery only in the last decade[1] . They were never visited by a spacecraft, with the exception of Himalia and Phoebe, in a flyby by the Cassini space probe in 2000 for Himalia (Porco et al. 2003) and in 2004 for Phoebe (Desmars et al. 2013).

There are some mechanisms about the capture of objects by Giant Planets. There is the Gas Drag in the primordial circumplanetary nebulae (Sheppard 2006) where the object would be affected by the gas drag and its velocity slowed down until it be captured by the planet. Another mechanism is called pull-down capture (Sheppard 2006), where the mass of the planet would increase while the object was temporarily captured.

A mechanism based in the Nice model (Morbidelli et al. 2005; Tsiganis et al. 2005; Gomes et al. 2005) was proposed by Nesvorný et al. 2007 and, in the specific case of Jupiter with the modern Nice model, by Nesvorný et al.

Send offprint requests to: A. R. Gomes-Júnior
⋆ The complete version of Table 8 is only available through CDS.
⋆⋆ Based on observations made at Laboratório Nacional de Astrofísica (LNA), Itajubá-MG, Brazil.
⋆⋆⋆ Partially based on observations through the ESO runs 079.A-9202(A), 075.C-0154, 077.C-0283 and 079.C-0345.
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[1] Website: http://ssd.jpl.nasa.gov/?sat_discovery

2014. During the early solar system instability, encounters between the outer planets occurred. These planetary encounters could exchange energy and angular momentum between planets and the objects nearby making it possible for the capture of irregular bodies by the giant planets. In this scenario, the survival rate of prior-LHB (Late Heavy Bombardment) satellites is very small.

Another important mechanism is the capture through collisional interactions (Sheppard 2006). A collision between two small bodies in the Hill's sphere of the planet could generate fragmented objects and the dissipated energy could be such that some of these objects could be captured.

Some of these objects are in dynamical groups with similar orbital elements, called families, similar to families found in the main belt of asteroids. These families may have been created by a parent body disrupted by collisions with comets or other satellites (Nesvorný et al. 2004). Collisions with comets are more likely to have occurred during the Late Heavy Bombardment (LHB) (Gomes et al. 2005).

Nesvorný et al. 2003 studied the collision rates between irregular satellites and concluded that some satellites could have been removed by collision with a bigger satellite. The rate collision between satellites of the Himalia Group (Himalia, Elara, Lysithea and Leda, mainly), for instance, was found to be more than 1 during the solar system age suggesting that their current structure was originated by satellite-satellite collision.

For Phoebe, ejected material from its surface caused by impacts could evolve due to Poynting-Robertson drag and collide with Iapetus causing the large variation in albedo observed on it (Nesvorný et al. 2003). Indeed, Cassini was able to detected in Phoebe an absorption feature at 2.42 μm (probably CN combinations) that was also detected in the dark side of Iapetus (Clark et al. 2005).

If these objects were captured, there remains the question of where they came from. Clark et al. 2005 showed from imaging spectroscopy from Cassini that Phoebe has a surface probably covered by material from the outer solar system and Grav et al. 2003 showed that the satellites of the Jovian Prograde Group Himalia have grey colors implying that their surfaces are similar to that of C-type asteroids. In that same work, the Jovian Retrograde Group Carme was found to have surface colors similar to the D-type asteroids like Hilda or Trojan families while JXIII Kalyke has a redder color like Centaurs or trans-neptunian objects (TNOs).

For Saturnian satellites, Grav & Bauer 2007 showed by their colors and spectral slopes that these satellites contain a more or less equal fraction of C-, P- and D-like objects but SXXII Ijiraq is marginally redder than D-type objects. These works may suggest different origins for the irregular satellites.

In this context, we used 3 databases for deriving precise positions for the irregular satellites observed at Observatório do Pico dos Dias (1.6 m and 0.6 m telescopes, IAU code 874), Observatoire Haute-Provence (1.2m telescope, IAU code 511) and ESO (2.2 m telescope, IAU code 809). Many irregular satellites were observed between 1992 and 2014 covering a few orbital periods of these objects (12 satellites of Jupiter, 4 of Saturn, Sycorax of Uranus and Nereid of Neptune). The positions derived from the observations can be used in new numerical integrations, generating more precise ephemerides. Stellar occultations by these satellites could then be better predicted. Once observed, they will make it possible to obtain the satellites' physical parameters (shape, size, albedo, density) with unprecedented precision. The knowledge of these parameters would in turn bring valuable information for the study of the capture mechanisms and origin of the irregular satellites.

The databases are described in Sect. 2. The astrometric procedures in Sect. 3. The obtained positions are presented in Sect 4 and analysed in Sect. 5. Conclusions are given in Sect. 6.

2. Databases

Our three databases consist in optical CCD images from many observational programs performed with different telescopes/detectors targeting a variety of objects, among which irregular satellites. The observations were made at 3 sites: Observatório do Pico dos Dias (OPD), Observatoire Haute-Provence (OHP) and European Southern Observatory (ESO). Altogether there are more than 100 thousand FITS images obtained in a large time span (1992-2014). Since the OHP and mostly the OPD database registers were not well organized, we had to start from scratch and develop an automatic procedure to identify and filter only the images of interest, that is, of the irregular satellites. The instruments and images characteristics are described in the following subsections.

2.1. OPD

The OPD database was produced at Observatório do Pico dos Dias (OPD, IAU code 874)[2], located at geographical longitude $+45^\circ\ 34'\ 57''$, latitude $-22^\circ\ 32'\ 04''$ and an altitude of 1864 m, in Brazil. The observations were made between 1992 and 2014 by our group in a variety of observational programs. In Fig 1 we plot the number of frames obtained per satellite over time and in Fig 2 the number of frames per satellite for each telescope. Two telescopes of 0.6 m diameter (Zeiss and Boller & Chivens) and one 1.6 m diameter (Perkin-Elmer) were used for the observations. It was identified 5248 observations containing irregular satellites, being 3168 from the Boller & Chivens, 1967 from the Perkin-Elmer and 113 from the Zeiss.

This is an inhomogeneous database with observations made with 9 different detectors (see Table 1) and 6 different filters. The headers of most of the older FITS images had missing, incomplete or incorrect coordinates or date. In some cases, we could not identify the detector origin. The procedures used to overcome these problems are described in Sect. 3.

2.2. OHP

The instrument used at the Observatoire de Haute Provence (OHP, IAU code 511, $5^\circ\ 42'\ 56.5''$ E, $43^\circ\ 55'\ 54.7''$N, 633.9 m) was the 1.2m-telescope in a Newton configuration. The focal length is 7.2 m. The observations were made between 1997 and 2008. During this time only one CCD detector 1024×1024 was used. The size of field is $12'\times12'$ with a pixel scale of $0.69''$. All the images were acquired without the use of filters. Fig. 3 shows the distribution of the observation of the satellites over time and Fig. 4 the number of frames

[2] Website: http://www.lna.br/opd/opd.html - in Portuguese

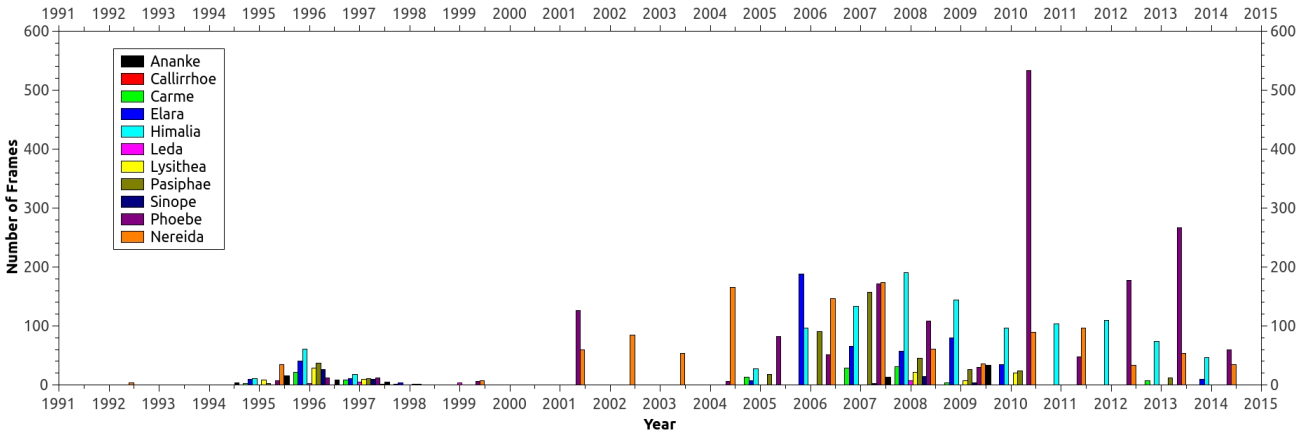

Fig. 1. Distribution of observations of the satellites over time at OPD.

Table 1. Characteristics of OPD detectors used in this work.

Perkin-Elmer		
Detector	Field of View (arcmin)	Pixel Scale ("/px)
CCD048	770 x 1152	22.5
CCD098	2048 x 2048	13.5
CCD101	1024 x 1024	24.0
CCD105	2048 x 2048	13.5
CCD106	1024 x 1024	24.0
CCD301	385 x 578	22.0
CCD523	455 x 512	19.0
IKON	2048 x 2048	13.5
IXON	1024 x 1024	13.5

The plate scale of the telescopes are 13.09"/mm for Perkin-Elmer, 25.09"/mm for Boller & Chivens and 27.5"/mm for Zeiss.

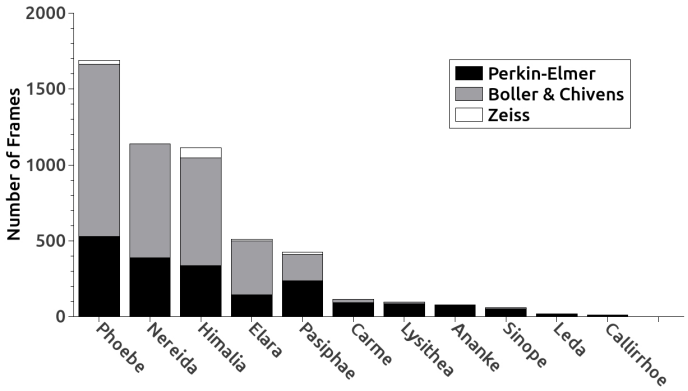

Fig. 2. Number of frames observed per satellite by OPD telescope.

observed for each satellite. From these observations, 2408 were identified containing irregular satellites.

2.3. ESO

Observations were made at the 2.2 m Max-Planck ESbyO (ESO2p2) telescope (IAU code 809) with the Wide Field Imager (WFI) CCD mosaic detector. Each mosaic is composed by eight CCDs of $7.5' \times 15'$ (α, δ) sizes, resulting in a total coverage of $30' \times 30'$ per mosaic. Each CCD has $4k \times 2k$ pixels with a pixel scale of $0.238''$. The filter used was a

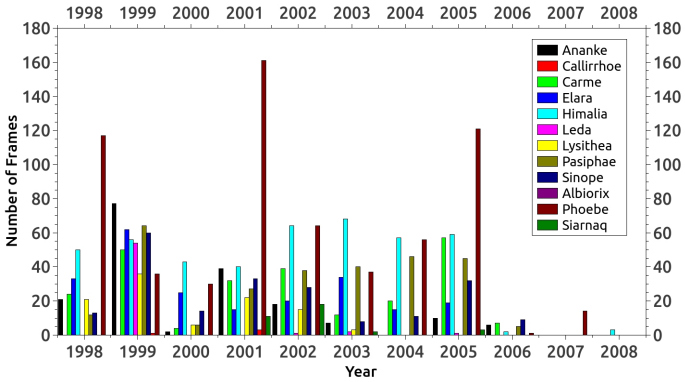

Fig. 3. Distribution of the observations of the satellites over time from observations at OHP.

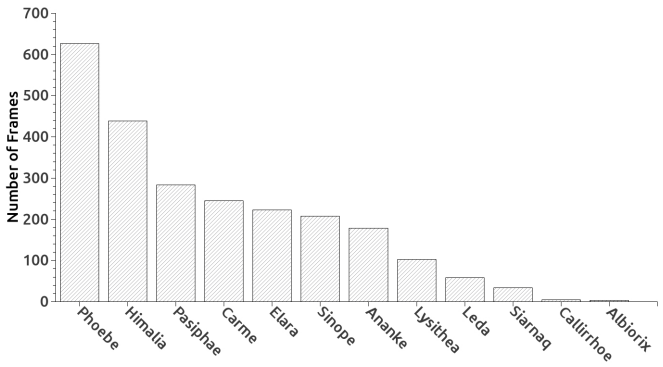

Fig. 4. Number of frames per satellite observed at OHP.

broad-band R filter (ESO#844) with $\lambda_c = 651.725$ nm and $\Delta\lambda = 162.184$ nm. The telescope was shifted between exposures in such a way that each satellite was observed at least twice in different CCDs.

The satellites were observed in 24 nights, divided in 5 runs, between April 2007 and May 2009 in paralel with, and using the same observational and astrometric procedures of the program that observed stars along the sky path of trans-neptunian objects (TNOs) to identify candidates to stellar occultation (see Assafin et al. (2010, 2012); Camargo et al. (2014)). A total of 810 observations for irregular satellites were obtained. Fig 5 shows the number of frames per satellite.

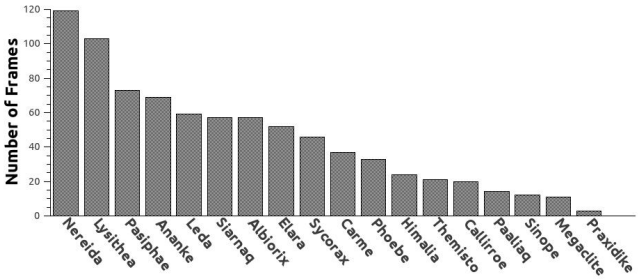

Fig. 5. Number of frames per satellite observed at ESO.

Table 2. Astrometric (α, δ) reduction by telescope.

Telescope	Mean errors σ_α mas	σ_δ mas	UCAC4 stars
Perkin-Elmer(OPD)	51	48	24
Boller & Chivens (OPD)	56	55	36
Zeiss (OPD)	58	57	95
OHP	50	49	46
ESO	26	25	632

Mean errors are the standard deviations in the (O−C) residuals from (α, δ) reductions with the UCAC4 catalog.

3. Astrometry

Almost all the frames were photometrically calibrated with auxiliary bias and flat-field frames by means of standard procedures using IRAF[3] and, for the mosaics, using the esowfi (Jones & Valdes 2000) and mscred (Valdes 1998) packages. Some of the nights at OPD didn't have bias and flat-field images so the correction was not possible.

The astrometric treatment were made with the Platform for Reduction of Astronomical Images Automatically (PRAIA) (Assafin et al. 2011). The (x, y) measurements were performed with 2-dimensional circular symmetric Gaussian fits within 1 Full Width Half Maximum (FWHM = seeing). Within 1 FWHM, the image profile is well described by a Gaussian profile, free from the wing distortions, which may jeopardize the center determination. PRAIA automatically recognizes catalog stars and determines (α, δ) with a user-defined model relating the (x, y) measured and (X, Y) standard coordinates projected in the sky tangent plane.

We used the UCAC4 (Zacharias et al. 2013) as the practical representative of the International Celestial Reference System (ICRS). For each frame, we used the six constants polynomial model to relate the (x, y) measurements with the (X, Y) tangent plane coordinates. For ESO, we followed the same astrometric procedures described in detail in Assafin et al. (2012); the (x, y) measurements of the individual CCDs were pre-corrected by a field distortion pattern, and all positions coming from different CCDs and mosaics were then combined using a 3rd degree polynomial model to produce a global solution for each night and field observed, and final (α, δ) object positions were obtained in the UCAC4 system. For all databases, about 10% of outlier reference stars were eliminated for presenting (O-C) position residuals higher than 120 mas in the (α, δ) reductions.

To help identifying the satellites in the frames, and derive the ephemeris for the instants of the observations for comparisons (see Sect 5), we used the kernels from SPICE/JPL[4]. The JPL ephemeris that represented the Jovian satellites was the DE421 + JUP300. For the Saturnian satellites the ephemeris was DE421 + SAT359 to Hyperion, Iapetus and Phoebe and DE421 + SAT361 to Albiorix, Siarnaq and Paaliaq. The DE421 + URA095 was used for Sycorax and DE421 + NEP081 for Nereid. More recent ephemeris versions became available after completion of this work, but this did not affect the results.

In the OPD database, there were some images (mostly the older ones) with missing coordinates or wrong date in their headers. In the case of missing or wrong coordinates, we adopted the ephemeris as the central coordinates of the frames. When the time was not correct, the FOV identification failed. In this case, a search for wrong date (year) displaying was performed. Problems like registering local time instead of UTC were also identified and corrected.

In all databases, for each night a sigma-clipping procedure was performed to eliminate discrepant positions (outliers). A threshold of 120 mas and a deviation of more than 2.5 sigmas from the nightly average ephemeris offsets were adopted.

In Table 2 we list the average mean error in α and δ for the reference stars obtained by telescope.

From Table 3 to 7 we list the average dispersion (standard deviation) of the position offsets with regard to the ephemeris for α and δ obtained by telescope for each satellite. The final number of frames, number of nights (in parenthesis), the mean number of UCAC4 stars used in the reduction and the mean magnitude V are also given. The dashed lines separate the satellites from different families with similar orbital parameters: Himalia Group (Himalia, Elara, Lysithea and Leda), Pasiphae Group (Pasiphae, Callirrhoe and Megaclite) and Ananke Group (Ananke and Praxidike). Carme and Sinope are the only samples of their groups. From Saturn, Siarnaq and Paaliaq are from the Inuit Group while Phoebe and Albiorix are the only samples of their groups.

The differences in the dispersion of the ephemeris offsets of the same satellite for distinct telescopes seen in Tables 3 to 7 are caused by the different distribution of observations along the orbit for each telescope. This can be seen in Fig 6 for Carme, 7 for Pasiphae and for all objects in the online material. Since the observations cover different segments of the orbit, the dispersion of the offsets may vary for different telescopes for a single satellite, with larger covered segments usually implying in larger dispersions and vice-versa. For Nereid, due to its high eccentric orbit, the observations are located between 90° and 270° of True Anomaly where Nereid remains most of the time.

No solar phase correction was applied to the positions. For the biggest irregular satellite of Jupiter, Himalia, it was verified that the maximum deviation in the position due to phase angle is 1.94 *mas* using the phase correction described in Lindegren (1977). For the other satellites, which are smaller objects, this deviation is even smaller. Since our position error is one order of magnitude higher, this effect was neglected.

[3] Website: http://iraf.noao.edu/

[4] Website: http://naif.jpl.nasa.gov/naif/toolkit.html

Table 3. Astrometric (α, δ) reduction for each satellite observed with the Perkin-Elmer telescope.

Perkin-Elmer					
Satellite	Offsets (sigma) σ_α mas	σ_δ mas	Nr frames (nights)	UCAC4 stars	Mag
Himalia	290	45	238 (18)	37	14
Elara	230	118	99 (12)	32	16
Lysithea	107	79	53 (8)	41	18
Leda	207	79	6 (2)	46	19
Pasiphae	157	92	144 (13)	22	17
Callirrhoe	66	35	9 (1)	3	21
Carme	97	94	68 (7)	49	18
Sinope	155	77	37 (8)	42	18
Ananke	93	185	52 (7)	40	19
Phoebe	73	95	410 (22)	6	16
Nereid	200	142	289 (29)	8	19

The offsets (sigma) are the average standard deviations of the ephemeris offsets from the (α, δ) positions of the satellites. Also given are the approximate satellite V magnitude and the average number of UCAC4 reference stars per frame.

Table 4. Astrometric (α, δ) reduction for each satellite observed with the Boller & Chivens telescope.

Boller & Chivens					
Satellite	Offsets (sigma) σ_α mas	σ_δ mas	Nr frames (nights)	UCAC4 stars	Mag
Himalia	83	43	560 (31)	57	14
Elara	55	43	294 (23)	53	16
Lysithea	23	42	7 (2)	60	18
Pasiphae	128	71	140 (14)	57	17
Carme	68	111	22 (4)	45	18
Sinope	59	17	4 (1)	22	18
Phoebe	43	48	810 (42)	17	16
Nereid	61	45	514 (38)	20	19

Same as in Table 3.

Table 5. Astrometric (α, δ) reduction for each satellite observed with the Zeiss telescope.

Zeiss					
Satellite	Offsets (sigma) σ_α mas	σ_δ mas	Nr frames (nights)	UCAC4 stars	Mag
Himalia	112	72	56 (4)	91	14
Elara	17	21	10 (1)	146	16
Pasiphae	24	25	11 (1)	140	17
Phoebe	37	30	19 (1)	16	16

Same as in Table 3.

4. Satellite positions

The final set of positions of the satellites consists in 6523 catalogued positions observed between 1992 and 2014 for 12 satellites of Jupiter, 4 of Saturn, 1 of Uranus and 1 of Neptune. The topocentric positions are in the ICRS. The catalogues (one for each satellite) contain epoch of observations, the position error, filter used, estimated magnitude (from PSF fitting) and telescope origin. The magnitude errors can be as high as 1 mag; they are not photometrically calibrated and should be used with care. The position errors were estimated from the dispersion of the ephemeris offsets of the night of observation of each position. Thus, these position errors are probably overestimated, as there must be ephemeris errors present in the dispersion of the offsets. These positions catalogues are freely available in electronic form at the CDS (see a sample in Table 8).

The number of positions acquired is significant compared to the number used in the numerical integration of orbits by the JPL (Jacobson et al. 2012) as shown in Table 9.

Table 6. Astrometric (α, δ) reduction for each satellite observed with the OHP telescope.

OHP					
Satellite	Offsets (sigma) σ_α mas	σ_δ mas	Nr frames (nights)	UCAC4 stars	Mag
Himalia	49	66	357 (43)	49	14
Elara	52	61	187 (25)	37	16
Lysithea	63	50	84 (13)	56	18
Leda	118	33	48 (7)	14	19
Pasiphae	101	75	248 (32)	39	17
Carme	114	96	204 (29)	39	18
Sinope	196	73	169 (25)	43	18
Ananke	100	89	141 (20)	62	19
Phoebe	30	31	516 (63)	51	16
Siarnaq	46	98	20 (6)	32	20

Same as in Table 3.

Table 7. Astrometric (α, δ) reduction for each satellite observed with the ESO telescope.

ESO					
Satellite	Offsets (sigma) σ_α mas	σ_δ mas	Nr frames (nights)	UCAC4 stars	Mag
Himalia	76	74	23 (2)	1153	14
Elara	112	87	46 (4)	1492	16
Lysithea	76	88	90 (6)	695	18
Leda	60	125	44 (3)	632	19
Pasiphae	70	114	66 (5)	836	17
Callirrhoe	29	33	16 (1)	493	21
Megaclite	52	34	10 (1)	445	22
Ananke	225	19	57 (3)	761	18
Praxidike	7	38	2 (1)	1934	21
Carme	140	110	37 (4)	1074	18
Sinope	339	70	11 (2)	1542	18
Themisto	894	28	16 (2)	1232	21
Phoebe	102	57	32 (5)	312	16
Siarnaq	86	66	56 (6)	283	20
Paaliaq	301	59	11 (4)	382	21
Albiorix	76	50	46 (6)	330	20
Sycorax	150	82	35 (9)	375	21
Nereid	115	78	99 (12)	362	19

Same as in Table 3.

5. Comparison with ephemeris

Intending to see the potential of our results to improve the orbit of the irregular satellites observed, we analysed the offsets of our positions with regard to the ephemeris men-

Table 8. CDS data table sample.

Himalia							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
16 59 11.6508	-22 00 44.855	17	12	2454147.78241319	16.0	C	BC
16 59 11.6845	-22 00 44.932	17	12	2454147.78332384	15.8	C	BC
16 59 11.7181	-22 00 44.978	17	12	2454147.78422477	16.0	C	BC
16 59 11.7818	-22 00 45.143	17	12	2454147.78602662	15.9	C	BC
16 59 11.8188	-22 00 45.232	17	12	2454147.78693750	16.0	C	BC
17 17 11.0344	-22 47 19.415	30	24	2454205.63885463	16.1	U	BC
17 17 11.0270	-22 47 19.381	30	24	2454205.63959167	16.1	U	BC
17 17 11.0258	-22 47 19.366	30	24	2454205.64031875	16.1	U	BC
17 17 11.0192	-22 47 19.417	30	24	2454205.64104583	16.1	U	BC

This sample corresponds to 9 observations of Himalia from February 16, 2007 and April 15, 2007. Tables contain the topocentric ICRS coordinates of the irregular satellites, the position error estimated from the dispersion of the ephemeris offsets of the night of observation, the estimated magnitude, the filter used and telescope origin. The filters may be U, B, V, R or I following the Johnson system; C stands for clear (no filter used), resulting in a broader R band magnitude. E, OH, PE, BC and Z stand respectively for the ESO, OHP, Perkin-Elmer, Bollen & Chivens and Zeiss telescopes.

Table 9. Comparison of positions obtained with Jacobson et al. 2012.

	Number of Positions				
Satellite	OPD	OHP	ESO	Total	Jacobson
Ananke	52	141	57	250	600
Callirrhoe	9	-	16	25	95
Carme	90	204	37	331	973
Elara	403	187	46	636	1115
Himalia	854	357	23	1234	1757
Leda	6	48	44	98	178
Lysithea	60	84	90	234	431
Megaclite	-	-	10	10	50
Pasiphae	295	248	66	609	1629
Praxidike	-	-	2	2	59
Sinope	41	169	11	221	854
Themisto	-	-	16	16	55
Albiorix	-	-	46	50	137
Paaliaq	-	-	11	11	82
Phoebe	1239	516	32	1787	3479
Siarnaq	-	20	56	76	239
Sycorax	-	-	35	35	237
Nereid	803	-	99	902	716

Comparison between the number of positions obtained in our work with the number used in the numerical integration of orbits by the JPL as published by Jacobson et al. 2012.

tioned in Sect. 3. Taking Carme as example, we plot in Fig. 6 the mean ephemeris offsets for each night and their dispersions (1 sigma error bars) as a function of the true anomaly in right ascension (6a) and declination (6b). Fig. 6b clearly shows a systematic error in declination. When Carme is close to its apojove (true anomaly = 180°) its offsets are more likely to be more negative than those close to its perijove (true anomaly = 0°). The offsets obtained from observations by 4 telescopes using different cameras and filters are in good agreement, meaning that there is an error in the ephemeris of Carme, most probably due to an error in its orbital inclination.

This pattern in declination was also seen for other satellites like Pasiphae (Fig: 7) and Ananke (plots for other satellites with significant number of observations can be seen in the online material. For some satellites, the orbital coverage is not enough to clearly indicate the presence of systematic errors in specific orbital elements. However, comparing the internal position mean errors of the reductions (Table 2) with the external position errors estimated from the dispersion of the ephemeris offsets (Tables 3 to 7), we see position error values much larger than expected from the mean errors. This means that besides some expected astrometric errors, significant ephemeris errors must also be present.

6. Conclusions

The positions of all the objects were determined using the PRAIA package. The package was suited to cope with the huge amount of observations and the task of identifying the satellites within the database. PRAIA tasks were also useful to deal with the missing or incorrect coordinate and time stamps present mostly in the old observations. The UCAC4 was used as the reference frame.

We managed a large database with more than 100 thousand FITS images acquired by 5 telescopes in 3 sites between 1992 and 2014. From that, we identified 8466 observations of irregular satellites, from which we managed to obtain 6523 suitable astrometric positions, giving a total of 3666 positions for 12 satellites of Jupiter, 1920 positions for 4 satellites of Saturn, 35 positions for Sycorax (Uranus) and 902 positions for Nereid (Neptune).

For some satellites the number is comparable to the number used in the numerical integration of orbits by the JPL (Jacobson et al. 2012) (see Table 9). Systematic errors in the ephemeris were found for at least some satellites (Ananke, Carme, Elara and Pasiphae). In the case of Carme, we evidenced an error in the orbital inclination.

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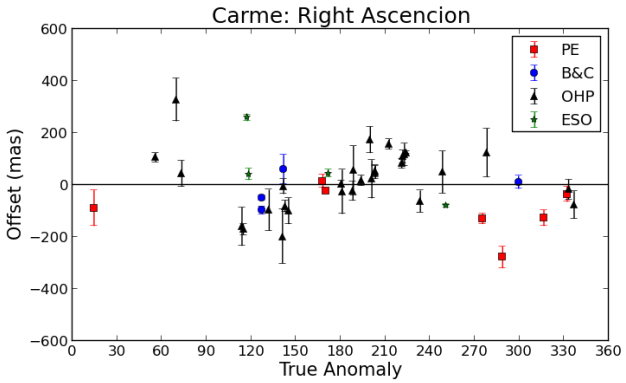
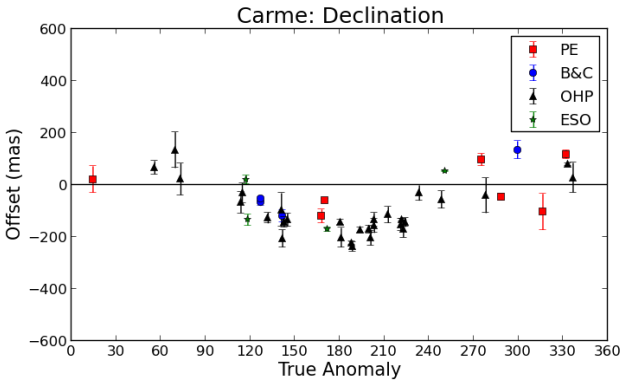
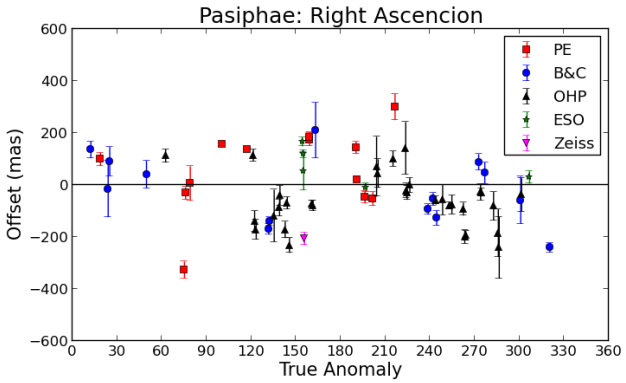


(a) Right Ascension

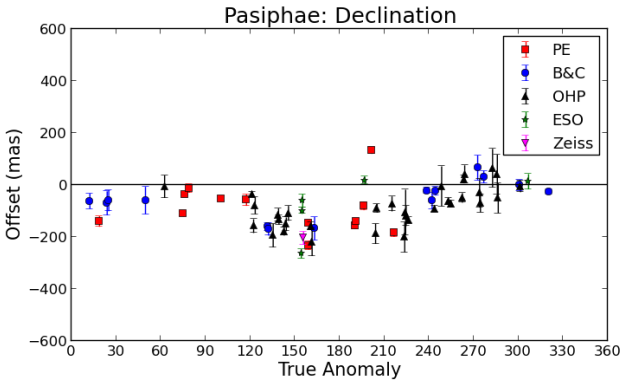


(b) Declination

Fig. 6. Mean ephemeris offsets and dispersions (1 sigma error bars) in the coordinates of Carme taken night by night by true anomaly for each telescope.



(a) Right Ascension



(b) Declination

Fig. 7. Same as in Fig 6 for Pasiphae.

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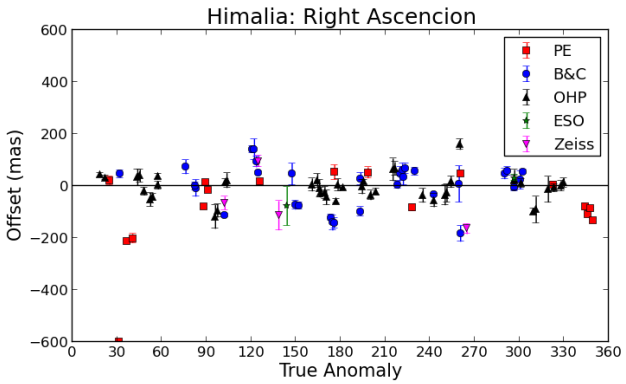
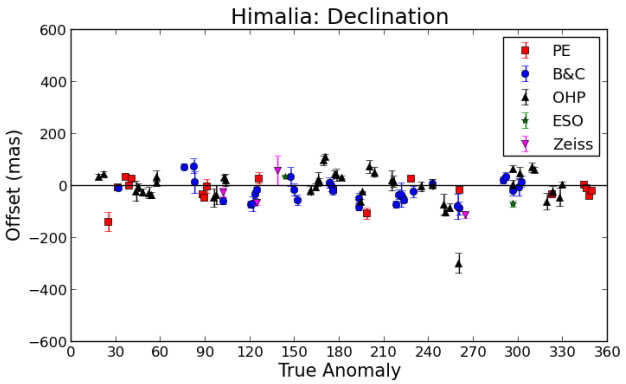
Appendix A: Ephemeris offsets as a function of true anomaly for all observed irregular satellites

The distribution of ephemeris offsets along the orbit of the satellites are shown below. The red square is for the observations with the Perkin-Elmer telescope from OPD, the blue circle for Boller & Chivens, the magenta triangle down for Zeiss, the black triangle up for OHP and the green star for ESO.

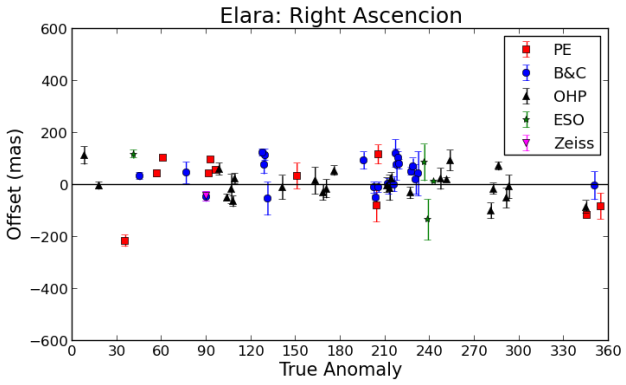


(a) Right Ascension

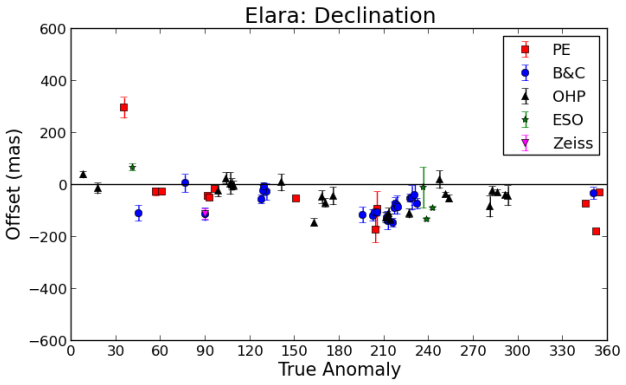


(b) Declination

Fig. A.1. Mean ephemeris offset and dispersion (1 sigma error bars) in the coordinates of Himalia taken night by night as a function of true anomaly.

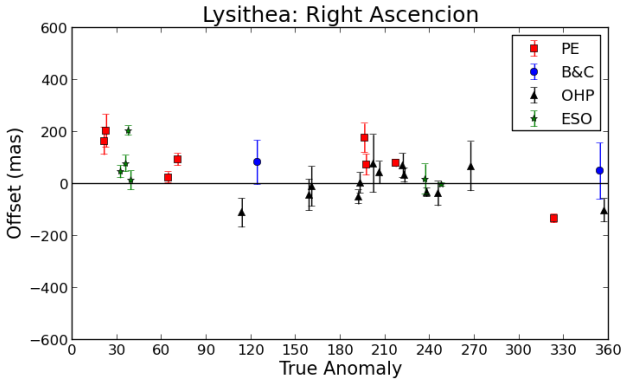


(a) Right Ascension

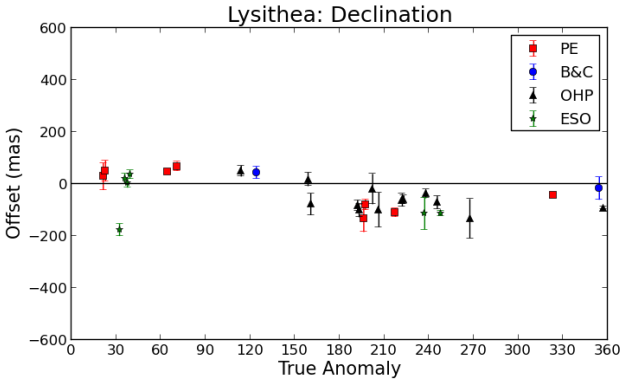


(b) Declination

Fig. A.2. Same as in Fig A.1 for Elara.

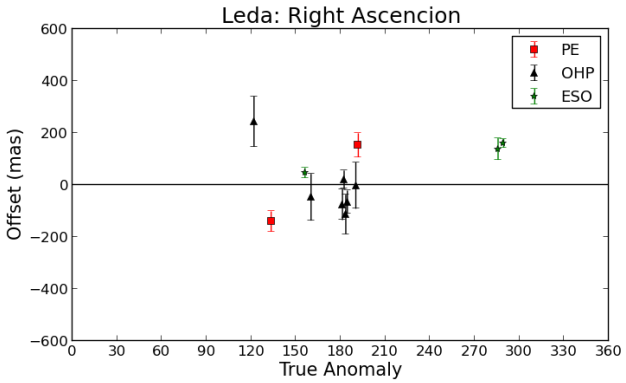


(a) Right Ascension

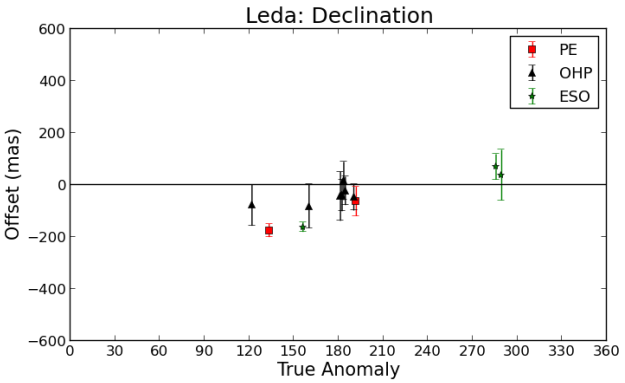


(b) Declination

Fig. A.3. Same as in Fig A.1 for Lysithea.

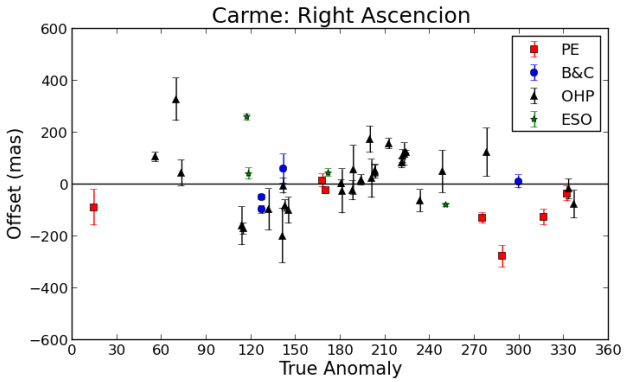


(a) Right Ascension

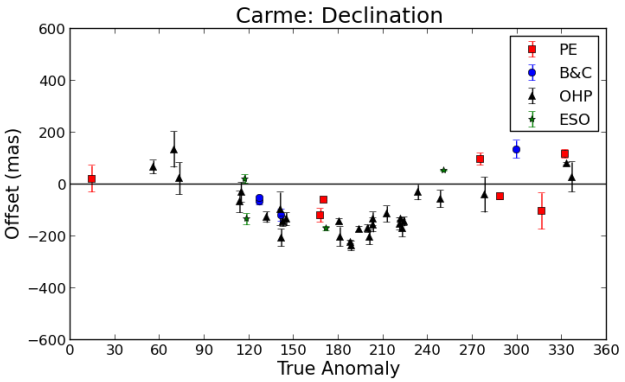


(b) Declination

Fig. A.4. Same as in Fig A.1 for Leda.

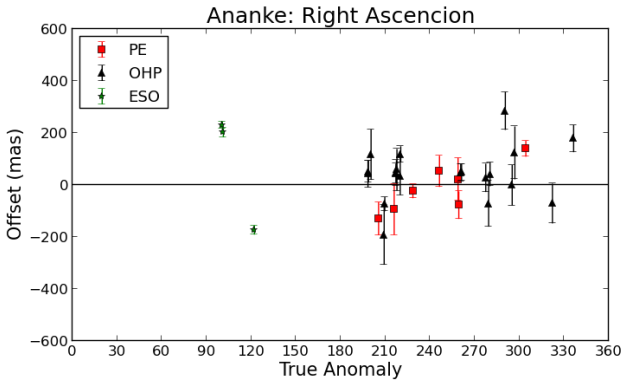


(a) Right Ascension

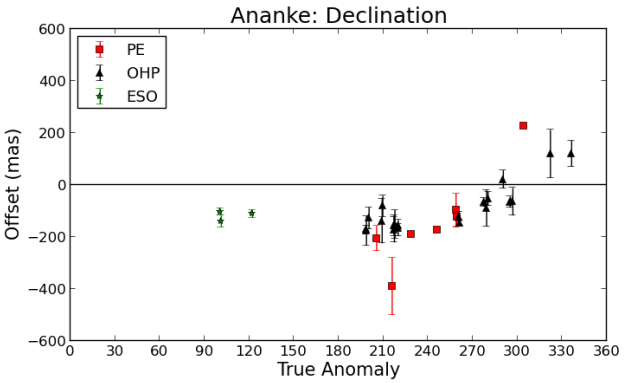


(b) Declination

Fig. A.5. Same as in Fig A.1 for Carme.

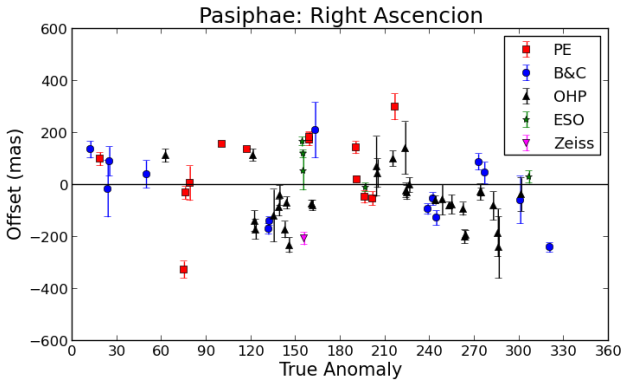


(a) Right Ascension

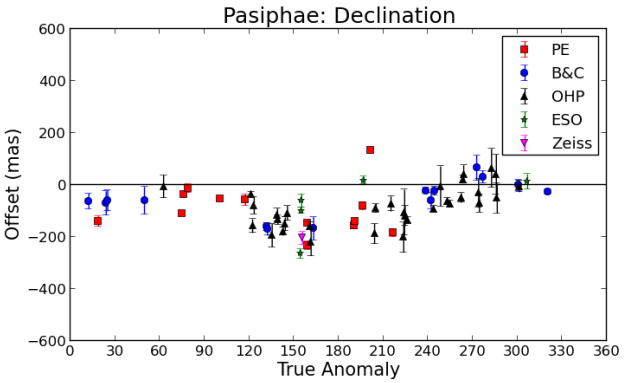


(b) Declination

Fig. A.6. Same as in Fig A.1 for Ananke.

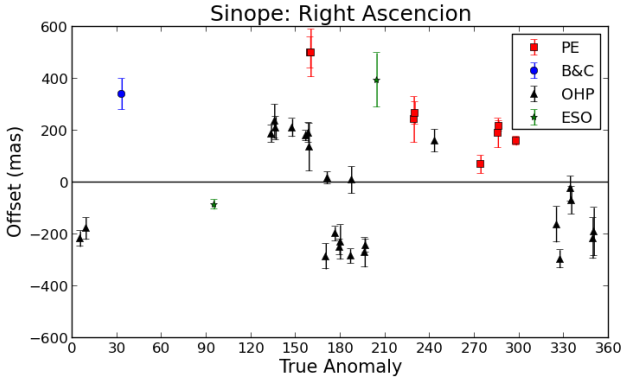


(a) Right Ascension

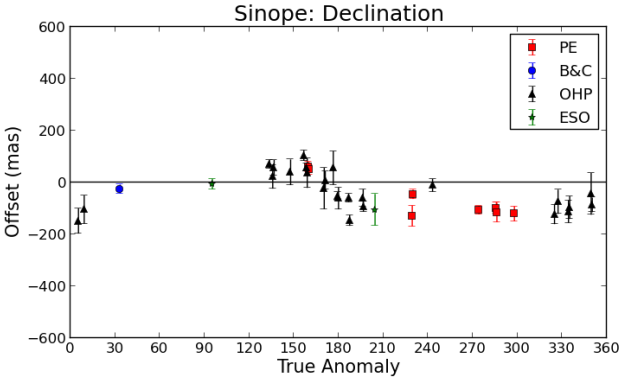


(b) Declination

Fig. A.7. Same as in Fig A.1 for Pasiphae.

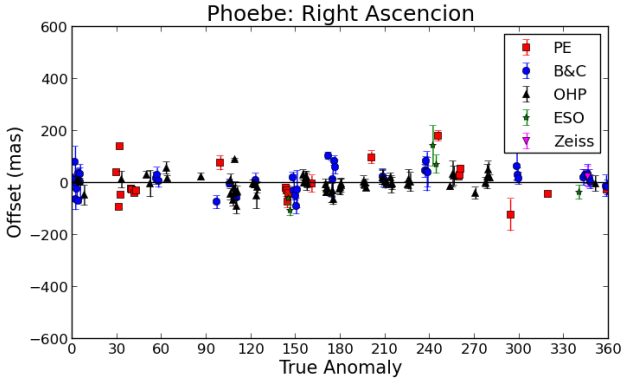


(a) Right Ascension

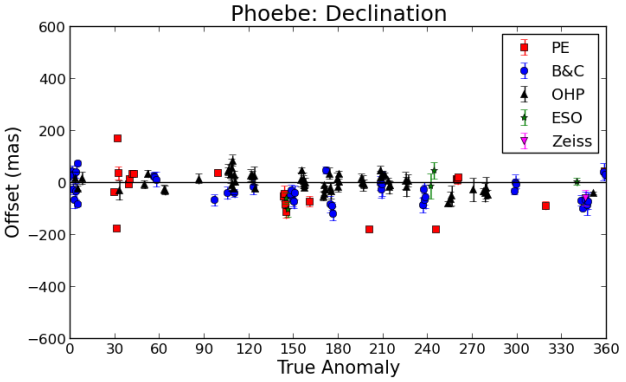


(b) Declination

Fig. A.8. Same as in Fig A.1 for Sinope.

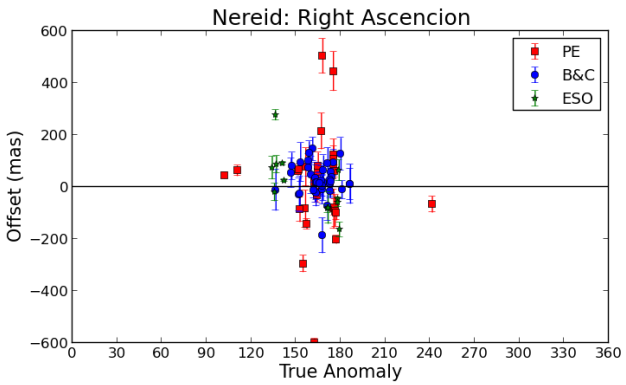


(a) Right Ascension

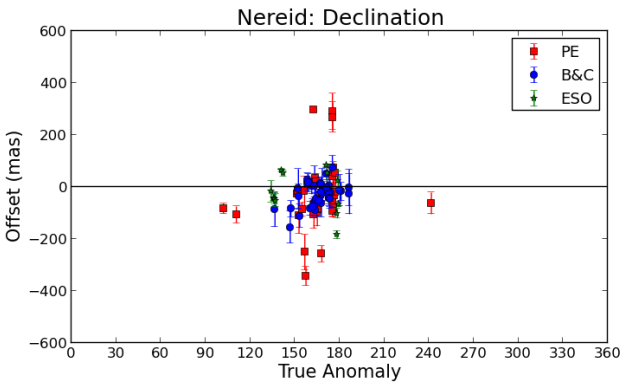


(b) Declination

Fig. A.9. Same as in Fig A.1 for Phoebe.



(a) Right Ascension



(b) Declination

Fig. A.10. Same as in Fig A.1 for Nereid.

Appendix B: CDS Tables

Tables contain the topocentric ICRS coordinates of the irregular satellites, the position error estimated from the dispersion of the ephemeris offsets of the night of observation, the estimated magnitude, the filter used and telescope origin. The filters may be U, B, V, R or I following the Johnson system; C stands for clear (no filter used), resulting in a broader R band magnitude, and "un" for unknown filter. E, OH, PE, BC and Z stand respectively for the ESO, OHP, Perkin-Elmer, Bollen & Chivens and Zeiss telescopes.

Appendix B.1: Satellites of Jupiter

Table B.1. CDS data for Himalia.

Himalia							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
16 30 30.0725	-20 47 13.562	21	22	2449877.66006910	14.6	C	PE
16 30 30.0471	-20 47 13.534	21	22	2449877.66104051	14.5	C	PE
16 30 30.0139	-20 47 13.560	21	22	2449877.66211806	14.3	C	PE
19 05 47.0036	-22 42 48.968	9	5	2450255.56083565	15.0	C	PE
19 05 46.9331	-22 42 48.987	9	5	2450255.56273264	15.0	C	PE
19 05 46.9007	-22 42 49.011	9	5	2450255.56363993	15.0	C	PE
19 05 46.8684	-22 42 49.023	9	5	2450255.56453993	15.0	C	PE
19 03 58.2058	-22 43 27.773	3	7	2450258.55265046	14.9	C	PE
19 03 58.1422	-22 43 27.784	3	7	2450258.55432870	14.8	C	PE
19 03 58.0973	-22 43 27.811	3	7	2450258.55552083	14.9	C	PE
19 03 58.0519	-22 43 27.824	3	7	2450258.55671296	14.9	C	PE
19 03 20.7165	-22 43 40.468	18	5	2450259.55634259	14.5	C	PE
19 03 20.6141	-22 43 40.517	18	5	2450259.55894676	14.7	C	PE
19 03 20.5689	-22 43 40.526	18	5	2450259.56013889	14.7	C	PE
19 03 20.5241	-22 43 40.543	18	5	2450259.56133102	14.7	C	PE
19 02 41.8561	-22 43 53.328	17	4	2450260.58834491	14.6	C	PE
19 02 41.7730	-22 43 53.361	17	4	2450260.59045139	14.8	C	PE
19 02 41.7277	-22 43 53.371	17	4	2450260.59164352	14.7	C	PE
19 02 41.6794	-22 43 53.398	17	4	2450260.59283565	14.6	C	PE
18 43 57.0335	-22 48 34.434	8	12	2450289.50114977	15.1	un	PE
18 43 56.9944	-22 48 34.438	8	12	2450289.50221829	15.1	un	PE
18 43 56.9739	-22 48 34.461	8	12	2450289.50280949	15.1	un	PE
18 43 56.9673	-22 48 34.442	8	12	2450289.50300521	15.1	un	PE
18 43 56.9585	-22 48 34.434	8	12	2450289.50320231	15.1	un	PE
18 43 56.9449	-22 48 34.445	8	12	2450289.50359641	15.1	un	PE
18 43 56.9384	-22 48 34.445	8	12	2450289.50379225	15.1	un	PE
18 43 56.9315	-22 48 34.445	8	12	2450289.50398935	15.1	un	PE
18 43 56.9241	-22 48 34.434	8	12	2450289.50418646	15.1	un	PE
18 43 56.9156	-22 48 34.432	8	12	2450289.50438287	15.1	un	PE
18 43 56.9085	-22 48 34.456	8	12	2450289.50457928	15.1	un	PE
18 43 56.9020	-22 48 34.471	8	12	2450289.50477639	15.1	un	PE
18 43 56.8804	-22 48 34.475	8	12	2450289.50536632	15.1	un	PE
18 43 56.8736	-22 48 34.462	8	12	2450289.50556400	15.1	un	PE
18 43 56.8662	-22 48 34.472	8	12	2450289.50575984	15.1	un	PE
18 43 18.1707	-22 48 43.199	5	10	2450290.60347778	15.2	un	PE
18 43 18.1303	-22 48 43.215	5	10	2450290.60460289	15.3	un	PE
18 43 18.1115	-22 48 43.207	5	10	2450290.60514641	15.1	un	PE
18 43 18.0918	-22 48 43.213	5	10	2450290.60569132	15.1	un	PE
18 43 18.0727	-22 48 43.226	5	10	2450290.60622338	15.2	un	PE
18 43 18.0337	-22 48 43.244	5	10	2450290.60732315	15.2	un	PE
18 43 18.0139	-22 48 43.221	5	10	2450290.60786736	15.0	un	PE
18 43 17.9952	-22 48 43.221	5	10	2450290.60841088	15.1	un	PE
18 43 17.9747	-22 48 43.247	5	10	2450290.60895498	15.1	un	PE
18 42 44.4963	-22 48 50.904	6	26	2450291.57708032	15.0	un	PE
18 42 44.4770	-22 48 50.854	6	26	2450291.57762315	15.1	un	PE
18 42 44.4569	-22 48 50.925	6	26	2450291.57816806	15.0	un	PE
18 42 44.4377	-22 48 50.887	6	26	2450291.57871157	15.0	un	PE
18 42 44.4191	-22 48 50.877	6	26	2450291.57925567	15.0	un	PE

continued ...

Himalia

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
18 42 44.4000	-22 48 50.902	6	26	2450291.57979919	15.0	un	PE
18 42 44.3807	-22 48 50.938	6	26	2450291.58034410	15.0	un	PE
18 42 44.3619	-22 48 50.885	6	26	2450291.58088819	15.1	un	PE
18 35 26.3874	-23 01 40.608	29	8	2450357.45423576	15.9	C	PE
18 35 26.4047	-23 01 40.601	29	8	2450357.45517465	15.8	C	PE
18 35 27.6208	-23 01 41.013	29	8	2450357.50933935	15.8	C	PE
21 13 50.6932	-17 19 10.730	9	5	2450675.59245370	14.7	un	PE
21 13 50.6655	-17 19 10.905	9	5	2450675.59359954	14.7	un	PE
21 13 48.2452	-17 19 25.495	9	5	2450675.69005787	14.6	un	PE
21 13 48.2161	-17 19 25.666	9	5	2450675.69120370	14.7	un	PE
21 04 29.1307	-17 54 25.562	16	37	2450745.49646991	15.7	V	PE
21 04 29.1509	-17 54 25.435	16	37	2450745.49850694	16.1	V	PE
21 04 29.1669	-17 54 25.290	16	37	2450745.49982639	16.3	V	PE
21 04 29.1810	-17 54 25.170	16	37	2450745.50112269	16.4	V	PE
23 54 25.2334	-01 48 44.024	46	34	2451037.46378438	14.9	R	OH
23 54 25.1527	-01 48 44.350	46	34	2451037.46754711	14.8	R	OH
23 54 25.1216	-01 48 44.651	46	34	2451037.46952373	14.8	R	OH
23 54 25.0547	-01 48 44.880	46	34	2451037.47246250	14.8	R	OH
23 54 24.9982	-01 48 45.257	46	34	2451037.47553067	14.9	R	OH
23 54 24.9493	-01 48 45.457	46	34	2451037.47805602	14.9	R	OH
23 54 24.8851	-01 48 45.753	46	34	2451037.48116829	14.9	R	OH
23 54 24.8444	-01 48 45.959	46	34	2451037.48326389	15.2	I	OH
23 54 24.7993	-01 48 46.215	46	34	2451037.48574433	14.7	V	OH
23 54 24.7537	-01 48 46.471	46	34	2451037.48798553	15.1	I	OH
23 54 24.6958	-01 48 46.660	46	34	2451037.49060810	15.0	R	OH
23 54 05.2419	-01 50 27.680	26	37	2451038.47741146	15.0	R	OH
23 54 04.9232	-01 50 29.384	26	37	2451038.49300069	15.0	R	OH
23 54 04.8254	-01 50 29.801	26	37	2451038.49757662	15.0	R	OH
23 54 04.7406	-01 50 30.308	26	37	2451038.50175150	15.0	R	OH
23 54 04.6946	-01 50 30.529	26	37	2451038.50409375	15.0	R	OH
23 54 04.6460	-01 50 30.810	26	37	2451038.50643218	15.0	R	OH
23 54 04.5948	-01 50 31.023	26	37	2451038.50877269	15.0	R	OH
23 54 04.4978	-01 50 31.556	26	37	2451038.51345498	15.0	R	OH
23 54 04.4535	-01 50 31.823	26	37	2451038.51580498	15.0	R	OH
23 54 04.3999	-01 50 32.025	26	37	2451038.51814907	15.0	R	OH
23 54 04.3546	-01 50 32.342	26	37	2451038.52048773	15.1	R	OH
23 54 04.3054	-01 50 32.532	26	37	2451038.52283773	15.0	R	OH
23 54 04.2591	-01 50 32.765	26	37	2451038.52518044	15.0	R	OH
23 54 04.2089	-01 50 33.028	26	37	2451038.52751690	15.1	R	OH
23 54 04.1609	-01 50 33.318	26	37	2451038.52986250	15.1	R	OH
23 54 04.1121	-01 50 33.552	26	37	2451038.53220995	15.0	R	OH
23 54 04.0624	-01 50 33.833	26	37	2451038.53455613	15.0	R	OH
23 22 02.7322	-05 37 09.392	27	19	2451164.23281574	15.4	R	OH
23 22 02.9097	-05 37 08.425	27	19	2451164.23982546	15.5	R	OH
23 22 03.0116	-05 37 07.818	27	19	2451164.24399132	15.4	R	OH
23 22 03.0752	-05 37 07.442	27	19	2451164.24633310	15.3	R	OH
23 22 03.1939	-05 37 06.806	27	19	2451164.25101748	15.4	R	OH
23 22 03.2491	-05 37 06.468	27	19	2451164.25336701	15.5	R	OH
23 22 03.3099	-05 37 06.117	27	19	2451164.25570775	15.4	R	OH
23 22 03.3694	-05 37 05.764	27	19	2451164.25805440	15.5	R	OH
23 22 03.4311	-05 37 05.437	27	19	2451164.26040116	15.4	R	OH
23 22 03.4871	-05 37 05.122	27	19	2451164.26273924	15.4	R	OH
23 22 03.5472	-05 37 04.750	27	19	2451164.26508403	15.5	R	OH
01 58 38.5094	+09 57 21.857	19	11	2451460.57602442	14.5	R	OH
01 58 38.4206	+09 57 21.354	19	11	2451460.57957072	14.5	R	OH
01 58 38.3800	+09 57 21.149	19	11	2451460.58121852	14.6	R	OH
01 58 38.3364	+09 57 20.915	19	11	2451460.58286319	14.4	R	OH
01 58 38.2527	+09 57 20.462	19	11	2451460.58615903	14.5	R	OH
01 58 38.1707	+09 57 20.019	19	11	2451460.58945509	14.4	R	OH
01 58 38.1291	+09 57 19.796	19	11	2451460.59109711	14.5	R	OH

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Himalia

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
01 58 38.0834	+09 57 19.549	19	11	2451460.59274537	14.4	R	OH
01 58 38.0446	+09 57 19.356	19	11	2451460.59438819	14.4	R	OH
01 57 28.3962	+09 51 02.876	16	22	2451463.38622095	14.4	R	OH
01 57 28.3262	+09 51 02.487	16	22	2451463.38902928	14.4	R	OH
01 57 28.2700	+09 51 02.223	16	22	2451463.39112870	14.2	R	OH
01 57 28.1224	+09 51 01.468	16	22	2451463.39690197	14.2	R	OH
01 57 28.0847	+09 51 01.258	16	22	2451463.39838808	14.3	R	OH
01 57 28.0432	+09 51 01.012	16	22	2451463.40003264	14.2	R	OH
01 57 28.0088	+09 51 00.875	16	22	2451463.40138576	14.2	R	OH
01 57 27.9754	+09 51 00.725	16	22	2451463.40268495	14.2	R	OH
01 57 27.9428	+09 51 00.483	16	22	2451463.40397951	14.3	R	OH
01 38 59.2857	+08 53 00.574	14	14	2451516.29178762	15.1	R	OH
01 38 59.2643	+08 53 00.609	14	14	2451516.29387373	15.1	R	OH
01 38 59.2224	+08 53 00.670	14	14	2451516.29735914	15.1	R	OH
01 38 59.2037	+08 53 00.659	14	14	2451516.29900313	15.1	R	OH
01 38 59.1844	+08 53 00.710	14	14	2451516.30065521	15.1	R	OH
01 38 59.1669	+08 53 00.696	14	14	2451516.30230405	15.2	R	OH
01 38 59.1461	+08 53 00.726	14	14	2451516.30395116	15.1	R	OH
01 38 58.7920	+08 53 01.057	14	14	2451516.33515880	15.1	R	OH
01 38 58.7723	+08 53 01.066	14	14	2451516.33682164	15.0	R	OH
01 38 37.7313	+08 53 28.507	26	22	2451518.39629734	15.1	R	OH
01 38 37.7110	+08 53 28.542	26	22	2451518.39800382	15.1	R	OH
01 38 37.7008	+08 53 28.513	26	22	2451518.39942407	15.1	R	OH
01 38 37.6852	+08 53 28.547	26	22	2451518.40107384	15.1	R	OH
01 38 37.6674	+08 53 28.568	26	22	2451518.40272546	15.1	R	OH
01 38 37.6492	+08 53 28.598	26	22	2451518.40437569	15.1	R	OH
01 38 37.6318	+08 53 28.615	26	22	2451518.40601979	15.1	R	OH
01 38 28.7640	+08 53 45.311	13	12	2451519.36051227	14.8	R	OH
01 38 28.7372	+08 53 45.385	13	12	2451519.36335984	15.0	R	OH
01 38 28.6987	+08 53 45.444	13	12	2451519.36711597	14.9	R	OH
01 38 28.6661	+08 53 45.506	13	12	2451519.37053588	14.8	R	OH
01 38 28.6389	+08 53 45.552	13	12	2451519.37337465	14.8	R	OH
01 38 28.6118	+08 53 45.596	13	12	2451519.37602234	14.8	R	OH
01 38 28.5915	+08 53 45.634	13	12	2451519.37829225	14.8	R	OH
01 38 28.5697	+08 53 45.662	13	12	2451519.38051493	15.0	R	OH
01 38 28.5481	+08 53 45.715	13	12	2451519.38278843	14.7	R	OH
01 38 28.5256	+08 53 45.759	13	12	2451519.38503530	15.0	R	OH
01 38 28.5124	+08 53 45.808	13	12	2451519.38644630	14.8	R	OH
01 38 28.4998	+08 53 45.812	13	12	2451519.38785729	14.8	R	OH
01 38 28.4697	+08 53 45.855	13	12	2451519.39077639	15.0	R	OH
01 38 12.7670	+08 54 25.820	15	22	2451521.25416470	14.8	R	OH
01 38 12.7442	+08 54 25.863	15	22	2451521.25691678	14.8	R	OH
01 38 12.7297	+08 54 25.876	15	22	2451521.25867870	14.8	R	OH
01 38 12.7166	+08 54 25.967	15	22	2451521.26043889	14.8	R	OH
01 38 12.6994	+08 54 26.007	15	22	2451521.26220069	14.9	R	OH
04 30 56.2030	+21 20 55.345	19	10	2451858.52772419	14.8	R	OH
04 30 56.0307	+21 20 54.878	19	10	2451858.53269282	14.9	R	OH
04 30 55.8677	+21 20 54.425	19	10	2451858.53746227	14.8	R	OH
04 30 55.6906	+21 20 53.915	19	10	2451858.54265081	14.8	R	OH
04 30 55.5770	+21 20 53.575	19	10	2451858.54591343	14.8	R	OH
04 30 55.4688	+21 20 53.277	19	10	2451858.54918160	14.8	R	OH
04 30 55.3563	+21 20 52.961	19	10	2451858.55244433	14.7	R	OH
04 30 55.1302	+21 20 52.336	19	10	2451858.55897581	14.8	R	OH
04 24 56.7112	+21 03 05.027	8	14	2451868.51083009	14.3	R	OH
04 24 56.5740	+21 03 04.638	8	14	2451868.51438345	14.4	R	OH
04 24 56.3576	+21 03 03.977	8	14	2451868.51993947	14.6	R	OH
04 24 18.1012	+21 01 06.067	24	22	2451869.52227812	14.5	R	OH
04 24 18.0336	+21 01 05.825	24	22	2451869.52407002	14.4	R	OH
04 24 17.9614	+21 01 05.630	24	22	2451869.52598171	14.4	R	OH
04 24 17.8515	+21 01 05.243	24	22	2451869.52878148	14.4	R	OH

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Himalia

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
04 24 17.7869	+21 01 05.085	24	22	2451869.53042558	14.4	R	OH
04 24 17.7242	+21 01 04.881	24	22	2451869.53207558	14.4	R	OH
04 24 17.6550	+21 01 04.686	24	22	2451869.53371956	14.4	R	OH
04 24 17.4483	+21 01 04.064	24	22	2451869.53912535	14.4	R	OH
04 24 17.3513	+21 01 03.762	24	22	2451869.54157454	14.4	R	OH
04 24 17.2307	+21 01 03.363	24	22	2451869.54468218	14.4	R	OH
04 24 14.8426	+21 00 55.984	24	22	2451869.60589722	14.5	R	OH
04 24 13.8840	+21 00 52.998	24	22	2451869.63062164	14.5	R	OH
04 24 13.7792	+21 00 52.723	24	22	2451869.63332037	14.4	R	OH
04 24 13.5845	+21 00 52.055	24	22	2451869.63830683	14.4	R	OH
04 24 13.4629	+21 00 51.715	24	22	2451869.64151042	14.4	R	OH
04 21 46.2683	+20 53 10.370	6	5	2451873.43963565	14.5	R	OH
04 21 46.2026	+20 53 10.164	6	5	2451873.44128160	14.5	R	OH
04 21 46.1362	+20 53 09.957	6	5	2451873.44293218	14.5	R	OH
04 21 46.0720	+20 53 09.771	6	5	2451873.44457940	14.6	R	OH
04 21 46.0063	+20 53 09.560	6	5	2451873.44622130	14.5	R	OH
04 21 45.9398	+20 53 09.357	6	5	2451873.44786829	14.4	R	OH
04 21 45.8743	+20 53 09.155	6	5	2451873.44951331	14.5	R	OH
04 21 45.8087	+20 53 08.951	6	5	2451873.45115521	14.5	R	OH
07 02 43.4537	+22 09 40.502	50	30	2452231.62693611	15.1	R	OH
07 02 43.4281	+22 09 40.581	50	30	2452231.62824618	14.8	R	OH
07 02 43.3863	+22 09 40.672	50	30	2452231.63077558	14.0	R	OH
07 02 43.3407	+22 09 40.819	50	30	2452231.63409653	14.1	R	OH
07 02 11.9102	+22 11 29.183	15	18	2452233.61417940	15.0	R	OH
07 02 11.8677	+22 11 29.351	15	18	2452233.61650150	15.1	R	OH
07 02 11.8425	+22 11 29.443	15	18	2452233.61816100	15.0	R	OH
07 02 11.8146	+22 11 29.499	15	18	2452233.61982025	15.1	R	OH
07 02 11.7841	+22 11 29.636	15	18	2452233.62147546	15.1	R	OH
07 02 11.7569	+22 11 29.695	15	18	2452233.62313056	15.1	R	OH
07 02 11.7269	+22 11 29.833	15	18	2452233.62481088	15.0	R	OH
07 02 11.6980	+22 11 29.901	15	18	2452233.62647199	15.1	R	OH
07 02 11.6703	+22 11 29.986	15	18	2452233.62813275	15.0	R	OH
07 02 11.6419	+22 11 30.093	15	18	2452233.62979734	15.1	R	OH
07 01 22.3077	+22 14 21.254	19	34	2452236.47917593	15.1	R	OH
07 01 22.2060	+22 14 21.648	19	34	2452236.48458623	15.1	R	OH
07 01 22.1543	+22 14 21.850	19	34	2452236.48728021	15.1	R	OH
07 01 22.1044	+22 14 22.033	19	34	2452236.48997847	15.0	R	OH
07 01 22.0564	+22 14 22.202	19	34	2452236.49267141	15.1	R	OH
07 01 22.0047	+22 14 22.407	19	34	2452236.49537685	15.0	R	OH
07 01 21.9012	+22 14 22.774	19	34	2452236.50076817	15.1	R	OH
06 50 29.2903	+22 52 14.691	9	11	2452263.58550359	14.7	R	OH
06 50 29.1214	+22 52 15.261	9	11	2452263.59143461	14.6	R	OH
06 50 29.0668	+22 52 15.451	9	11	2452263.59332986	14.6	R	OH
06 50 29.0124	+22 52 15.626	9	11	2452263.59522292	14.6	R	OH
06 50 28.9573	+22 52 15.804	9	11	2452263.59710880	14.6	R	OH
06 50 28.9049	+22 52 15.970	9	11	2452263.59900231	14.6	R	OH
06 50 28.8506	+22 52 16.132	9	11	2452263.60089074	14.6	R	OH
06 50 28.7957	+22 52 16.324	9	11	2452263.60277998	14.6	R	OH
06 50 28.7421	+22 52 16.491	9	11	2452263.60466609	14.6	R	OH
06 49 38.8140	+22 55 04.996	8	9	2452265.38305058	14.7	R	OH
06 49 38.7131	+22 55 05.324	8	9	2452265.38653738	14.7	R	OH
06 49 38.6655	+22 55 05.486	8	9	2452265.38819248	14.6	R	OH
06 49 38.6174	+22 55 05.649	8	9	2452265.38985220	14.7	R	OH
06 49 38.5694	+22 55 05.827	8	9	2452265.39150729	14.6	R	OH
06 49 38.5223	+22 55 05.965	8	9	2452265.39317002	14.6	R	OH
06 40 17.7258	+23 24 31.389	10	10	2452285.37628403	14.7	R	OH
06 40 16.0251	+23 24 36.240	10	10	2452285.43843137	14.7	R	OH
06 40 15.9653	+23 24 36.430	10	10	2452285.44065856	14.3	R	OH
06 40 15.9135	+23 24 36.573	10	10	2452285.44254653	14.6	R	OH
06 40 15.8611	+23 24 36.705	10	10	2452285.44443391	14.6	R	OH

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Himalia

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
06 40 15.8094	+23 24 36.861	10	10	2452285.44632431	14.6	R	OH
06 40 15.7576	+23 24 36.995	10	10	2452285.44821146	14.8	R	OH
06 40 15.7075	+23 24 37.166	10	10	2452285.45010278	13.9	R	OH
06 40 15.6023	+23 24 37.447	10	10	2452285.45388484	14.9	R	OH
06 40 15.5520	+23 24 37.601	10	10	2452285.45577569	14.6	R	OH
06 40 15.4982	+23 24 37.745	10	10	2452285.45767002	14.6	R	OH
06 30 29.2621	+23 49 27.565	10	8	2452313.24401192	15.1	R	OH
06 30 29.2322	+23 49 27.629	10	8	2452313.24612928	15.2	R	OH
06 30 29.2005	+23 49 27.691	10	8	2452313.24825231	15.2	R	OH
06 30 29.1720	+23 49 27.769	10	8	2452313.25036921	15.1	R	OH
06 30 29.1421	+23 49 27.813	10	8	2452313.25248449	15.1	R	OH
06 30 14.8883	+23 49 57.277	29	23	2452314.31349919	15.0	R	OH
06 30 14.8419	+23 49 57.355	29	23	2452314.31684502	15.0	R	OH
06 30 14.7941	+23 49 57.420	29	23	2452314.32016053	15.7	R	OH
06 30 14.7765	+23 49 57.520	29	23	2452314.32181366	15.0	R	OH
06 32 06.6629	+23 45 07.532	25	17	2452358.37302500	15.5	R	OH
06 32 06.6962	+23 45 07.511	25	17	2452358.37468681	15.5	R	OH
06 32 06.7238	+23 45 07.437	25	17	2452358.37634178	15.4	R	OH
06 32 06.7543	+23 45 07.375	25	17	2452358.37799711	15.5	R	OH
06 32 06.7832	+23 45 07.308	25	17	2452358.37966262	15.5	R	OH
06 32 06.8128	+23 45 07.260	25	17	2452358.38131539	15.4	R	OH
06 32 06.8410	+23 45 07.158	25	17	2452358.38296632	15.4	R	OH
06 32 06.8723	+23 45 07.094	25	17	2452358.38462917	15.4	R	OH
06 32 06.9035	+23 45 07.061	25	17	2452358.38628148	15.5	R	OH
06 32 06.9345	+23 45 07.009	25	17	2452358.38794410	15.5	R	OH
06 33 03.1207	+23 43 20.492	26	12	2452361.32201007	15.5	R	OH
06 33 03.1930	+23 43 20.357	26	12	2452361.32575787	15.5	R	OH
06 33 03.2224	+23 43 20.277	26	12	2452361.32742211	15.4	R	OH
06 33 03.4013	+23 43 19.951	26	12	2452361.33645278	15.5	R	OH
06 33 03.4370	+23 43 19.875	26	12	2452361.33811586	15.5	R	OH
06 33 03.4660	+23 43 19.813	26	12	2452361.33976933	15.6	R	OH
06 33 03.7761	+23 43 19.158	26	12	2452361.35563032	15.6	R	OH
06 33 03.8123	+23 43 19.102	26	12	2452361.35729097	15.6	R	OH
06 33 24.3867	+23 42 40.286	34	27	2452362.36452894	15.6	R	OH
06 33 24.4972	+23 42 40.129	34	27	2452362.37005625	15.6	R	OH
06 33 24.5399	+23 42 39.980	34	27	2452362.37194954	15.6	R	OH
06 33 24.5808	+23 42 39.916	34	27	2452362.37383935	15.7	R	OH
06 33 24.6186	+23 42 39.839	34	27	2452362.37572963	15.6	R	OH
06 33 24.6558	+23 42 39.780	34	27	2452362.37761354	15.5	R	OH
09 23 35.4748	+16 13 49.063	27	9	2452637.49886100	15.5	R	OH
09 23 35.3953	+16 13 49.353	27	9	2452637.50310428	15.4	R	OH
09 23 35.3570	+16 13 49.486	27	9	2452637.50522083	15.4	R	OH
09 23 35.3156	+16 13 49.623	27	9	2452637.50734167	15.4	R	OH
09 23 35.2797	+16 13 49.756	27	9	2452637.50946412	15.4	R	OH
09 23 35.2359	+16 13 49.876	27	9	2452637.51159375	15.4	R	OH
09 23 16.6605	+16 14 53.314	9	2	2452638.49939965	15.3	R	OH
09 23 16.5079	+16 14 53.842	9	2	2452638.50720949	15.3	R	OH
09 23 16.4599	+16 14 53.995	9	2	2452638.50956343	15.3	R	OH
09 23 16.3681	+16 14 54.314	9	2	2452638.51426725	15.3	R	OH
09 23 16.3215	+16 14 54.471	9	2	2452638.51661447	15.3	R	OH
09 23 16.2743	+16 14 54.631	9	2	2452638.51896285	15.3	R	OH
09 23 16.1824	+16 14 54.949	9	2	2452638.52367292	15.3	R	OH
09 23 16.1360	+16 14 55.104	9	2	2452638.52602419	15.3	R	OH
09 16 34.8963	+16 38 28.457	43	39	2452654.41626875	14.9	R	OH
09 16 34.8117	+16 38 28.718	43	39	2452654.41912720	15.1	R	OH
09 16 34.6827	+16 38 29.145	43	39	2452654.42339745	15.0	R	OH
09 16 34.5635	+16 38 29.573	43	39	2452654.42720671	15.0	R	OH
09 16 34.4363	+16 38 29.964	43	39	2452654.43121123	15.0	R	OH
09 16 34.3482	+16 38 30.365	43	39	2452654.43394699	15.1	R	OH
09 16 34.2126	+16 38 30.795	43	39	2452654.43830694	15.1	R	OH

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Himalia

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
09 16 34.1620	+16 38 30.989	43	39	2452654.43996285	14.9	R	OH
09 16 34.1101	+16 38 31.219	43	39	2452654.44146181	15.0	R	OH
09 16 34.0270	+16 38 31.485	43	39	2452654.44435127	15.0	R	OH
09 16 33.9586	+16 38 31.742	43	39	2452654.44660729	15.0	R	OH
09 16 33.8874	+16 38 31.987	43	39	2452654.44872187	15.1	R	OH
09 16 33.8382	+16 38 32.150	43	39	2452654.45038194	15.1	R	OH
09 16 33.7849	+16 38 32.374	43	39	2452654.45203426	15.1	R	OH
09 16 33.7311	+16 38 32.591	43	39	2452654.45368565	15.0	R	OH
09 16 01.8359	+16 40 26.126	25	21	2452655.48363646	15.2	R	OH
09 16 01.7476	+16 40 26.502	25	21	2452655.48655116	15.1	R	OH
09 16 01.6843	+16 40 26.729	25	21	2452655.48846019	15.2	R	OH
09 16 01.6160	+16 40 26.926	25	21	2452655.49066181	15.1	R	OH
09 16 01.5801	+16 40 27.045	25	21	2452655.49174468	15.1	R	OH
09 16 01.5483	+16 40 27.177	25	21	2452655.49282083	15.1	R	OH
09 16 01.5141	+16 40 27.313	25	21	2452655.49389630	15.2	R	OH
09 16 01.4768	+16 40 27.424	25	21	2452655.49497269	15.1	R	OH
09 04 17.7217	+17 22 07.182	25	19	2452675.37783160	14.8	R	OH
09 04 17.4257	+17 22 08.227	25	19	2452675.38546146	14.8	R	OH
09 04 17.3830	+17 22 08.372	25	19	2452675.38665602	14.8	R	OH
09 04 17.3346	+17 22 08.575	25	19	2452675.38784780	14.8	R	OH
09 04 17.3346	+17 22 08.575	25	19	2452675.38784780	14.8	R	OH
09 04 16.2050	+17 22 12.527	25	19	2452675.41733241	14.9	R	OH
08 39 51.3218	+18 55 42.976	17	10	2452731.29180035	15.5	R	OH
08 39 51.3074	+18 55 43.054	17	10	2452731.29421921	15.4	R	OH
08 39 51.2913	+18 55 43.200	17	10	2452731.29727361	15.3	R	OH
08 39 51.2747	+18 55 43.312	17	10	2452731.30032060	15.6	R	OH
08 39 51.2579	+18 55 43.445	17	10	2452731.30337431	15.4	R	OH
08 39 51.2423	+18 55 43.581	17	10	2452731.30642708	15.5	R	OH
08 49 23.0166	+18 42 33.296	32	38	2452772.35277685	15.8	R	OH
08 49 23.0790	+18 42 33.130	32	38	2452772.35501933	15.9	R	OH
08 49 23.1278	+18 42 32.922	32	38	2452772.35667292	15.9	R	OH
08 49 23.1767	+18 42 32.733	32	38	2452772.35832593	15.8	R	OH
08 49 23.2254	+18 42 32.578	32	38	2452772.35998032	15.9	R	OH
08 49 23.2777	+18 42 32.478	32	38	2452772.36163669	15.9	R	OH
08 49 23.3253	+18 42 32.336	32	38	2452772.36329456	15.8	R	OH
08 49 23.3759	+18 42 32.207	32	38	2452772.36495486	15.9	R	OH
08 49 23.4295	+18 42 32.084	32	38	2452772.36661667	15.9	R	OH
08 49 53.1246	+18 41 07.941	24	14	2452773.34150984	15.9	R	OH
08 49 53.2964	+18 41 07.434	24	14	2452773.34715405	15.9	R	OH
08 49 53.4374	+18 41 07.001	24	14	2452773.35185324	15.7	R	OH
08 49 53.5110	+18 41 06.802	24	14	2452773.35421030	15.9	R	OH
08 49 53.5821	+18 41 06.559	24	14	2452773.35656655	15.9	R	OH
08 49 53.6510	+18 41 06.359	24	14	2452773.35891505	15.9	R	OH
08 49 53.7220	+18 41 06.128	24	14	2452773.36126516	15.9	R	OH
08 49 53.7945	+18 41 05.953	24	14	2452773.36361563	15.9	R	OH
08 49 53.8696	+18 41 05.745	24	14	2452773.36597025	15.9	R	OH
08 49 53.9382	+18 41 05.526	24	14	2452773.36832731	15.9	R	OH
10 48 26.0300	+09 23 18.754	24	18	2453115.33396400	15.8	R	OH
10 48 25.9618	+09 23 18.838	24	18	2453115.34158495	15.5	R	OH
10 48 25.9289	+09 23 18.881	24	18	2453115.34544572	15.4	R	OH
10 48 25.8990	+09 23 18.922	24	18	2453115.34849456	15.4	R	OH
10 48 25.8423	+09 23 18.954	24	18	2453115.35459803	14.7	R	OH
10 48 25.8144	+09 23 19.025	24	18	2453115.35764896	15.3	R	OH
10 48 25.7893	+09 23 19.034	24	18	2453115.36072176	15.4	R	OH
10 48 18.0054	+09 23 25.920	28	10	2453116.31832107	15.4	R	OH
10 48 17.9337	+09 23 25.975	28	10	2453116.32709988	15.3	R	OH
10 48 17.9164	+09 23 25.999	28	10	2453116.32945579	15.3	R	OH
10 48 17.8946	+09 23 26.007	28	10	2453116.33180799	15.3	R	OH
10 48 17.8750	+09 23 26.013	28	10	2453116.33416447	15.3	R	OH
10 48 17.8556	+09 23 26.020	28	10	2453116.33651933	15.4	R	OH

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RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
10 48 17.8368	+09 23 26.044	28	10	2453116.33887153	15.3	R	OH
10 48 17.8123	+09 23 26.030	28	10	2453116.34122454	15.4	R	OH
10 48 15.4217	+09 02 48.902	18	24	2453143.33360521	15.9	R	OH
10 48 15.4438	+09 02 48.605	18	24	2453143.33672882	15.8	R	OH
10 48 15.5219	+09 02 47.622	18	24	2453143.34722720	15.9	R	OH
10 48 15.5394	+09 02 47.412	18	24	2453143.34958194	15.8	R	OH
10 48 15.5568	+09 02 47.197	18	24	2453143.35193704	15.9	R	OH
10 48 15.5736	+09 02 46.977	18	24	2453143.35429282	15.9	R	OH
10 48 15.5899	+09 02 46.750	18	24	2453143.35665359	15.9	R	OH
10 48 15.6066	+09 02 46.484	18	24	2453143.35900590	15.8	R	OH
10 48 15.6242	+09 02 46.241	18	24	2453143.36136667	15.8	R	OH
10 48 15.6431	+09 02 46.062	18	24	2453143.36371968	15.8	R	OH
10 48 15.6577	+09 02 45.791	18	24	2453143.36607558	15.8	R	OH
10 48 41.3699	+08 57 47.873	12	20	2453146.37346505	15.7	R	OH
10 48 41.3908	+08 57 47.649	12	20	2453146.37581991	15.7	R	OH
10 48 41.4099	+08 57 47.418	12	20	2453146.37818044	15.7	R	OH
10 48 41.4321	+08 57 47.126	12	20	2453146.38054178	15.8	R	OH
10 48 41.4529	+08 57 46.897	12	20	2453146.38289514	15.7	R	OH
10 48 41.4739	+08 57 46.630	12	20	2453146.38525498	15.7	R	OH
10 48 41.5167	+08 57 46.178	12	20	2453146.38996088	15.7	R	OH
10 48 41.5379	+08 57 45.884	12	20	2453146.39231389	15.8	R	OH
13 08 03.6071	-05 56 29.301	39	40	2453437.44406863	15.4	R	OH
13 08 03.4715	-05 56 28.609	39	40	2453437.44979757	15.4	R	OH
13 08 03.4220	-05 56 28.386	39	40	2453437.45192928	15.4	R	OH
13 08 03.3756	-05 56 28.139	39	40	2453437.45405139	15.4	R	OH
13 08 03.2774	-05 56 27.597	39	40	2453437.45830150	15.4	R	OH
13 08 03.2318	-05 56 27.395	39	40	2453437.46042257	15.4	R	OH
13 08 03.1754	-05 56 27.031	39	40	2453437.46254468	15.3	R	OH
13 08 03.1296	-05 56 26.787	39	40	2453437.46467118	15.3	R	OH
13 08 03.0762	-05 56 26.471	39	40	2453437.46679340	15.3	R	OH
13 08 03.0302	-05 56 26.300	39	40	2453437.46891863	15.3	R	OH
13 07 40.0318	-05 54 20.389	34	15	2453438.47192176	15.3	R	OH
13 07 39.9765	-05 54 20.100	34	15	2453438.47427789	15.4	R	OH
13 07 39.9152	-05 54 19.779	34	15	2453438.47664028	15.3	R	OH
13 07 39.8632	-05 54 19.504	34	15	2453438.47899884	15.3	R	OH
13 07 39.8041	-05 54 19.215	34	15	2453438.48135231	15.4	R	OH
13 07 39.7483	-05 54 18.885	34	15	2453438.48370556	15.3	R	OH
13 07 39.6966	-05 54 18.593	34	15	2453438.48606435	15.3	R	OH
13 07 39.6358	-05 54 18.268	34	15	2453438.48842292	15.3	R	OH
13 06 52.2514	-05 49 55.702	22	16	2453440.47511076	15.7	R	OH
13 06 52.1543	-05 49 55.162	22	16	2453440.47913519	15.4	R	OH
13 06 52.0926	-05 49 54.865	22	16	2453440.48161100	15.5	R	OH
13 06 52.0374	-05 49 54.536	22	16	2453440.48373692	15.5	R	OH
13 06 51.9868	-05 49 54.252	22	16	2453440.48589653	15.5	R	OH
13 06 51.9302	-05 49 53.954	22	16	2453440.48802211	15.5	R	OH
13 06 51.8774	-05 49 53.669	22	16	2453440.49014792	15.5	R	OH
13 06 51.8250	-05 49 53.374	22	16	2453440.49230787	15.5	R	OH
13 06 51.7696	-05 49 53.116	22	16	2453440.49443218	15.5	R	OH
13 06 51.7189	-05 49 52.821	22	16	2453440.49655787	15.5	R	OH
13 06 51.6665	-05 49 52.508	22	16	2453440.49868391	15.4	R	OH
12 55 29.3809	-04 41 17.762	21	13	2453463.51414919	15.1	V	BC
12 55 29.3394	-04 41 17.534	21	13	2453463.51538692	15.1	V	BC
12 55 29.3002	-04 41 17.280	21	13	2453463.51662442	14.9	V	BC
12 55 29.2592	-04 41 17.007	21	13	2453463.51786192	14.9	V	BC
12 55 29.2179	-04 41 16.728	21	13	2453463.51910104	14.9	V	BC
12 55 29.1737	-04 41 16.462	21	13	2453463.52033889	14.9	V	BC
12 55 29.1320	-04 41 16.201	21	13	2453463.52157662	15.0	V	BC
12 55 29.0919	-04 41 15.960	21	13	2453463.52281285	15.0	V	BC
12 55 29.0485	-04 41 15.685	21	13	2453463.52404942	15.1	V	BC
12 55 29.0056	-04 41 15.427	21	13	2453463.52529630	15.0	V	BC

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
12 54 55.4369	-04 37 39.363	17	15	2453464.53765752	14.9	C	BC
12 54 55.3950	-04 37 39.076	17	15	2453464.53890567	14.8	C	BC
12 54 55.3113	-04 37 38.524	17	15	2453464.54138044	14.8	C	BC
12 54 55.2711	-04 37 38.289	17	15	2453464.54261852	15.0	C	BC
12 54 55.2278	-04 37 38.010	17	15	2453464.54385544	14.8	C	BC
12 54 55.1866	-04 37 37.754	17	15	2453464.54509352	14.8	C	BC
12 54 55.1044	-04 37 37.213	17	15	2453464.54756690	14.6	C	BC
12 54 54.9423	-04 37 36.241	17	15	2453464.55229803	14.7	C	BC
12 54 54.9019	-04 37 35.965	17	15	2453464.55353600	14.8	C	BC
12 54 54.8165	-04 37 35.428	17	15	2453464.55600995	14.8	C	BC
12 54 54.7746	-04 37 35.169	17	15	2453464.55726227	14.8	C	BC
12 54 54.6888	-04 37 34.614	17	15	2453464.55973738	14.9	C	BC
12 54 54.6503	-04 37 34.368	17	15	2453464.56096377	14.8	C	BC
12 53 17.8448	-04 27 06.471	40	18	2453467.46438171	15.2	R	OH
12 53 17.6896	-04 27 05.466	40	18	2453467.46914271	14.5	R	OH
12 53 17.5966	-04 27 04.849	40	18	2453467.47184155	14.8	R	OH
12 53 17.5014	-04 27 04.286	40	18	2453467.47454109	14.4	R	OH
12 53 17.4116	-04 27 03.674	40	18	2453467.47724016	14.7	R	OH
12 49 27.1757	-04 01 21.563	11	18	2453474.39482234	15.0	R	OH
12 49 27.0474	-04 01 20.673	11	18	2453474.39867292	15.0	R	OH
12 49 26.8784	-04 01 19.530	11	18	2453474.40371377	15.0	R	OH
12 49 24.7794	-04 01 05.501	11	18	2453474.46626053	15.0	R	OH
12 49 24.5399	-04 01 03.869	11	18	2453474.47336030	14.6	R	OH
12 49 24.4387	-04 01 03.177	11	18	2453474.47640868	14.8	R	OH
12 48 55.2549	-03 57 42.787	50	11	2453475.36601481	15.0	R	OH
12 48 54.3845	-03 57 36.866	50	11	2453475.39241748	15.4	R	OH
12 48 54.2752	-03 57 36.166	50	11	2453475.39546852	15.0	R	OH
12 48 54.1762	-03 57 35.491	50	11	2453475.39852674	14.9	R	OH
12 48 54.0719	-03 57 34.780	50	11	2453475.40157708	14.9	R	OH
12 48 53.9679	-03 57 34.091	50	11	2453475.40463148	14.9	R	OH
12 48 53.8666	-03 57 33.424	50	11	2453475.40768403	14.9	R	OH
14 33 21.2875	-13 43 48.260	24	18	2453894.45998681	15.3	C	BC
14 33 21.2335	-13 43 48.231	24	18	2453894.46323403	15.1	C	BC
14 33 21.2239	-13 43 48.197	24	18	2453894.46396551	15.2	C	BC
14 33 21.2111	-13 43 48.150	24	18	2453894.46468727	15.3	C	BC
14 33 21.1837	-13 43 48.149	24	18	2453894.46615197	15.3	C	BC
14 33 21.1744	-13 43 48.116	24	18	2453894.46688970	15.2	C	BC
14 33 21.1479	-13 43 48.112	24	18	2453894.46835324	15.3	C	BC
14 33 21.1366	-13 43 48.093	24	18	2453894.46909456	15.2	C	BC
14 33 21.1016	-13 43 48.022	24	18	2453894.47125139	15.3	C	BC
14 33 21.0915	-13 43 48.008	24	18	2453894.47198299	15.2	C	BC
14 33 21.0790	-13 43 47.978	24	18	2453894.47271042	15.4	C	BC
14 33 21.0625	-13 43 48.012	24	18	2453894.47344190	15.3	C	BC
14 33 21.0551	-13 43 47.969	24	18	2453894.47416539	15.4	C	BC
14 33 21.0424	-13 43 47.952	24	18	2453894.47489688	15.3	C	BC
14 33 21.0299	-13 43 47.968	24	18	2453894.47562824	15.3	C	BC
14 33 21.0158	-13 43 47.932	24	18	2453894.47635984	15.3	C	BC
14 33 21.0021	-13 43 47.926	24	18	2453894.47709120	15.3	C	BC
14 29 44.5275	-13 46 53.831	14	12	2453918.45419815	15.4	C	BC
14 29 44.5258	-13 46 53.877	14	12	2453918.45505093	15.4	C	BC
14 29 44.4837	-13 46 54.523	14	12	2453918.47199931	15.5	C	BC
14 29 44.4796	-13 46 54.580	14	12	2453918.47370590	15.5	C	BC
14 29 44.4785	-13 46 54.627	14	12	2453918.47454884	15.5	C	BC
14 29 44.3649	-13 46 56.404	14	12	2453918.52129583	15.4	C	BC
14 29 44.3586	-13 46 56.492	14	12	2453918.52384468	15.5	C	BC
14 29 44.3567	-13 46 56.519	14	12	2453918.52468750	15.6	C	BC
14 29 44.3484	-13 46 56.705	14	12	2453918.52891204	15.6	C	BC
14 29 44.3438	-13 46 56.773	14	12	2453918.53059838	15.7	C	BC
14 29 44.3415	-13 46 56.782	14	12	2453918.53145116	15.5	C	BC
14 29 44.3413	-13 46 56.815	14	12	2453918.53230394	15.5	C	BC

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RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
14 29 44.3357	-13 46 56.834	14	12	2453918.53314687	15.4	C	BC
14 29 44.3286	-13 46 57.003	14	12	2453918.53653877	15.6	C	BC
14 29 44.3266	-13 46 56.997	14	12	2453918.53738171	15.5	C	BC
14 29 44.3272	-13 46 57.043	14	12	2453918.53822535	15.6	C	BC
14 29 44.3235	-13 46 57.072	14	12	2453918.53907824	15.6	C	BC
14 29 44.3203	-13 46 57.096	14	12	2453918.53992106	15.6	C	BC
14 29 44.3176	-13 46 57.182	14	12	2453918.54161725	15.5	C	BC
14 29 44.3153	-13 46 57.214	14	12	2453918.54247083	15.6	C	BC
14 29 44.3144	-13 46 57.220	14	12	2453918.54332373	15.6	C	BC
14 29 44.3114	-13 46 57.257	14	12	2453918.54416667	15.6	C	BC
14 29 44.3092	-13 46 57.299	14	12	2453918.54500949	15.7	C	BC
14 29 44.3085	-13 46 57.353	14	12	2453918.54585255	15.6	C	BC
14 29 44.3026	-13 46 57.444	14	12	2453918.54840498	15.5	C	BC
14 29 44.2988	-13 46 57.459	14	12	2453918.54959525	15.4	C	BC
14 29 44.2971	-13 46 57.514	14	12	2453918.55078542	15.4	C	BC
14 29 44.2956	-13 46 57.570	14	12	2453918.55197546	15.5	C	BC
14 29 44.2920	-13 46 57.602	14	12	2453918.55317558	15.5	C	BC
14 29 44.2889	-13 46 57.636	14	12	2453918.55437558	15.5	C	BC
14 29 44.2861	-13 46 57.680	14	12	2453918.55556505	15.6	C	BC
14 29 44.2842	-13 46 57.754	14	12	2453918.55675521	15.5	C	BC
14 29 44.2814	-13 46 57.797	14	12	2453918.55795556	15.5	C	BC
14 29 44.2789	-13 46 57.839	14	12	2453918.55914560	15.5	C	BC
14 45 32.4473	-15 23 29.597	35	34	2453978.49562431	15.9	C	BC
14 45 32.4697	-15 23 29.671	35	34	2453978.49646748	16.0	C	BC
14 45 32.4978	-15 23 29.771	35	34	2453978.49731065	15.9	C	BC
14 45 32.5282	-15 23 29.905	35	34	2453978.49815370	15.9	C	BC
14 45 32.5518	-15 23 30.053	35	34	2453978.49900660	16.0	C	BC
14 45 32.5767	-15 23 30.101	35	34	2453978.49985937	15.9	C	BC
14 45 32.6029	-15 23 30.218	35	34	2453978.50066933	16.0	C	BC
14 45 32.6337	-15 23 30.309	35	34	2453978.50151227	16.0	C	BC
14 45 32.6537	-15 23 30.401	35	34	2453978.50235544	16.0	C	BC
14 45 32.6813	-15 23 30.535	35	34	2453978.50320822	16.0	C	BC
14 45 32.7096	-15 23 30.728	35	34	2453978.50406111	16.0	C	BC
14 45 32.7310	-15 23 30.809	35	34	2453978.50490405	15.9	C	BC
14 45 32.7640	-15 23 30.843	35	34	2453978.50574722	16.2	C	BC
14 46 03.0525	-15 25 39.522	7	22	2453979.46969850	16.0	C	BC
14 46 03.1326	-15 25 39.838	7	22	2453979.47223819	16.0	C	BC
14 46 03.1589	-15 25 39.985	7	22	2453979.47309097	16.0	C	BC
14 46 03.1864	-15 25 40.089	7	22	2453979.47393391	16.1	C	BC
14 46 03.2398	-15 25 40.293	7	22	2453979.47561979	15.9	C	BC
14 46 03.2656	-15 25 40.394	7	22	2453979.47647269	16.0	C	BC
14 46 03.2924	-15 25 40.480	7	22	2453979.47731563	15.9	C	BC
14 46 03.3184	-15 25 40.642	7	22	2453979.47815868	16.0	C	BC
14 46 03.3453	-15 25 40.780	7	22	2453979.47900162	16.1	C	BC
14 46 03.3711	-15 25 40.867	7	22	2453979.47984456	16.0	C	BC
16 59 11.2816	-22 00 43.970	17	12	2454147.77243970	15.8	C	BC
16 59 11.3154	-22 00 44.059	17	12	2454147.77335312	15.9	C	BC
16 59 11.3804	-22 00 44.232	17	12	2454147.77517465	15.9	C	BC
16 59 11.4498	-22 00 44.373	17	12	2454147.77697650	16.0	C	BC
16 59 11.4825	-22 00 44.448	17	12	2454147.77788762	15.8	C	BC
16 59 11.5177	-22 00 44.545	17	12	2454147.77879884	15.9	C	BC
16 59 11.5852	-22 00 44.675	17	12	2454147.78060069	15.9	C	BC
16 59 11.6151	-22 00 44.773	17	12	2454147.78150231	15.9	C	BC
16 59 11.6508	-22 00 44.855	17	12	2454147.78241319	16.0	C	BC
16 59 11.6845	-22 00 44.932	17	12	2454147.78332384	15.8	C	BC
16 59 11.7181	-22 00 44.978	17	12	2454147.78422477	16.0	C	BC
16 59 11.7818	-22 00 45.143	17	12	2454147.78602662	15.9	C	BC
16 59 11.8188	-22 00 45.232	17	12	2454147.78693750	16.0	C	BC
17 17 11.0344	-22 47 19.415	31	25	2454205.63885463	16.1	U	BC
17 17 11.0270	-22 47 19.381	31	25	2454205.63959167	16.1	U	BC

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Himalia								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
17 17 11.0258	-22 47 19.366	31	25	2454205.64031875	16.1	U	BC
17 17 11.0192	-22 47 19.417	31	25	2454205.64104583	16.1	U	BC
17 17 11.0177	-22 47 19.397	31	25	2454205.64177303	16.1	U	BC
17 16 55.6495	-22 47 31.850	20	13	2454208.63043472	15.9	U	Z
17 16 55.6415	-22 47 31.868	20	13	2454208.63117049	15.9	U	Z
17 16 55.6366	-22 47 31.862	20	13	2454208.63190463	15.9	U	Z
17 16 55.6347	-22 47 31.866	20	13	2454208.63263900	15.9	U	Z
17 16 55.6289	-22 47 31.853	20	13	2454208.63337373	15.9	U	Z
17 16 55.6247	-22 47 31.893	20	13	2454208.63410822	15.9	U	Z
17 16 55.6157	-22 47 31.897	20	13	2454208.63484282	16.0	U	Z
17 16 55.6149	-22 47 31.883	20	13	2454208.63528356	15.9	U	Z
17 16 55.6090	-22 47 31.896	20	13	2454208.63601806	15.9	U	Z
17 16 55.6047	-22 47 31.907	20	13	2454208.63676250	15.9	U	Z
16 31 19.1984	-20 57 46.963	13	14	2454334.56437106	15.6	C	BC
16 31 19.2268	-20 57 47.067	13	14	2454334.56692245	15.7	C	BC
16 31 19.2367	-20 57 47.116	13	14	2454334.56777257	15.7	C	BC
16 31 19.2451	-20 57 47.178	13	14	2454334.56862303	15.7	C	BC
16 31 19.2577	-20 57 47.203	13	14	2454334.56947350	15.7	C	BC
16 31 19.2656	-20 57 47.264	13	14	2454334.57032407	15.7	C	BC
16 31 19.2856	-20 57 47.329	13	14	2454334.57202593	15.7	C	BC
16 31 19.2934	-20 57 47.343	13	14	2454334.57287650	15.7	C	BC
16 31 19.3037	-20 57 47.423	13	14	2454334.57372708	15.7	C	BC
16 31 19.3142	-20 57 47.435	13	14	2454334.57457697	15.8	C	BC
16 31 19.3248	-20 57 47.490	13	14	2454334.57542731	15.8	C	BC
16 31 30.7950	-20 58 35.764	40	28	2454335.52081412	15.6	C	BC
16 31 30.8040	-20 58 35.804	40	28	2454335.52155856	15.6	C	BC
16 31 30.8119	-20 58 35.884	40	28	2454335.52229317	15.6	C	BC
16 31 30.8242	-20 58 35.898	40	28	2454335.52302581	15.5	C	BC
16 31 30.8437	-20 58 36.016	40	28	2454335.52448542	15.5	C	BC
16 31 30.8545	-20 58 36.029	40	28	2454335.52521991	15.6	C	BC
16 31 30.8878	-20 58 36.192	40	28	2454335.52814815	15.6	C	BC
16 31 43.8063	-20 59 29.398	21	16	2454336.52740880	15.7	C	BC
16 31 43.8282	-20 59 29.507	21	16	2454336.52910660	15.7	C	BC
16 31 43.8403	-20 59 29.541	21	16	2454336.52995370	15.7	C	BC
16 31 43.8478	-20 59 29.586	21	16	2454336.53080069	15.7	C	BC
16 31 43.8623	-20 59 29.649	21	16	2454336.53164803	15.7	C	BC
16 31 43.8703	-20 59 29.653	21	16	2454336.53250498	15.7	C	BC
16 31 43.8789	-20 59 29.692	21	16	2454336.53335220	15.6	C	BC
16 31 43.8930	-20 59 29.738	21	16	2454336.53419919	15.6	C	BC
16 31 43.9021	-20 59 29.794	21	16	2454336.53504630	15.7	C	BC
16 31 43.9258	-20 59 29.889	21	16	2454336.53674444	15.6	C	BC
16 31 43.9348	-20 59 29.949	21	16	2454336.53759155	15.7	C	BC
16 31 43.9477	-20 59 29.982	21	16	2454336.53843900	15.7	C	BC
16 31 43.9577	-20 59 30.004	21	16	2454336.53928600	15.7	C	BC
16 31 43.9918	-20 59 30.119	21	16	2454336.54181736	15.7	C	BC
16 31 44.0015	-20 59 30.205	21	16	2454336.54266458	15.7	C	BC
16 31 56.9127	-21 00 22.466	7	10	2454337.47952384	15.7	C	BC
16 31 56.9477	-21 00 22.599	7	10	2454337.48205556	15.6	C	BC
16 31 56.9701	-21 00 22.699	7	10	2454337.48375058	15.6	C	BC
16 31 56.9814	-21 00 22.736	7	10	2454337.48460775	15.6	C	BC
16 31 56.9931	-21 00 22.771	7	10	2454337.48544780	15.7	C	BC
16 31 57.0050	-21 00 22.838	7	10	2454337.48629514	15.7	C	BC
16 31 57.0165	-21 00 22.871	7	10	2454337.48714248	15.6	C	BC
16 31 57.0270	-21 00 22.939	7	10	2454337.48798970	15.7	C	BC
16 31 57.0380	-21 00 22.971	7	10	2454337.48883727	15.6	C	BC
16 31 57.0499	-21 00 23.021	7	10	2454337.48968634	15.6	C	BC
16 31 57.0610	-21 00 23.046	7	10	2454337.49052292	15.7	C	BC
16 31 57.0729	-21 00 23.094	7	10	2454337.49137037	15.6	C	BC
16 31 57.0848	-21 00 23.158	7	10	2454337.49221794	15.6	C	BC
16 31 57.0956	-21 00 23.190	7	10	2454337.49306123	15.6	C	BC

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Himalia

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
16 31 57.1079	-21 00 23.237	7	10	2454337.49390857	15.7	C	BC
16 31 57.1198	-21 00 23.308	7	10	2454337.49474745	15.7	C	BC
16 31 57.7225	-21 00 25.730	22	10	2454337.53887500	15.7	C	Z
16 31 57.7357	-21 00 25.765	22	10	2454337.53966042	15.5	C	Z
16 31 57.7470	-21 00 25.810	22	10	2454337.54045579	15.7	C	Z
16 31 57.7578	-21 00 25.868	22	10	2454337.54125116	15.7	C	Z
16 31 57.7802	-21 00 25.960	22	10	2454337.54282199	15.7	C	Z
16 31 57.7928	-21 00 25.982	22	10	2454337.54360752	15.7	C	Z
16 31 57.8039	-21 00 26.019	22	10	2454337.54440289	15.7	C	Z
16 31 57.8112	-21 00 26.072	22	10	2454337.54519815	15.8	C	Z
16 31 57.8231	-21 00 26.141	22	10	2454337.54598357	15.8	C	Z
16 31 57.8326	-21 00 26.165	22	10	2454337.54676898	15.7	C	Z
16 31 57.8443	-21 00 26.218	22	10	2454337.54755417	15.5	C	Z
16 31 57.8552	-21 00 26.247	22	10	2454337.54834954	15.7	C	Z
16 31 57.8662	-21 00 26.288	22	10	2454337.54914479	15.7	C	Z
16 31 57.8795	-21 00 26.337	22	10	2454337.54992998	15.8	C	Z
16 31 57.8880	-21 00 26.364	22	10	2454337.55071551	15.7	C	Z
16 31 57.8984	-21 00 26.434	22	10	2454337.55150116	15.7	C	Z
16 31 57.9077	-21 00 26.462	22	10	2454337.55229641	15.8	C	Z
16 31 57.9222	-21 00 26.503	22	10	2454337.55309178	15.7	C	Z
16 31 57.9295	-21 00 26.548	22	10	2454337.55387720	15.7	C	Z
16 37 23.9333	-21 19 53.077	74	5	2454353.48345198	14.9	un	E
16 37 23.9614	-21 19 53.174	74	5	2454353.48452182	14.9	un	E
16 37 23.9894	-21 19 53.270	74	5	2454353.48559421	14.9	un	E
16 37 24.0183	-21 19 53.363	74	5	2454353.48674128	14.9	un	E
16 37 24.0481	-21 19 53.458	74	5	2454353.48786369	14.9	un	E
16 37 24.0769	-21 19 53.546	74	5	2454353.48897243	14.9	un	E
16 37 24.1056	-21 19 53.647	74	5	2454353.49009472	15.0	un	E
16 37 24.1353	-21 19 53.749	74	5	2454353.49120636	14.9	un	E
16 37 24.1631	-21 19 53.849	74	5	2454353.49233618	14.9	un	E
16 37 24.2272	-21 19 54.084	74	5	2454353.49524328	15.3	un	E
16 37 24.2567	-21 19 54.184	74	5	2454353.49635607	15.3	un	E
16 37 24.2863	-21 19 54.275	74	5	2454353.49747003	15.3	un	E
16 37 24.3159	-21 19 54.374	74	5	2454353.49859452	15.3	un	E
16 37 24.3441	-21 19 54.475	74	5	2454353.49971449	15.3	un	E
16 37 24.3742	-21 19 54.570	74	5	2454353.50085797	15.3	un	E
16 37 24.4033	-21 19 54.663	74	5	2454353.50198651	15.3	un	E
16 37 24.4334	-21 19 54.772	74	5	2454353.50311992	15.2	un	E
16 38 45.8180	-21 24 19.647	42	36	2454356.46089236	14.5	C	BC
16 38 45.9631	-21 24 20.062	42	36	2454356.46589572	14.5	C	BC
16 38 46.0814	-21 24 20.409	42	36	2454356.47014931	14.5	C	BC
16 38 46.1248	-21 24 20.592	42	36	2454356.47173380	14.6	C	BC
16 38 46.2204	-21 24 20.882	42	36	2454356.47505787	14.6	C	BC
16 38 46.2813	-21 24 21.149	42	36	2454356.47737500	14.6	C	BC
16 38 46.3146	-21 24 21.167	42	36	2454356.47857211	14.6	C	BC
16 38 46.4236	-21 24 21.464	42	36	2454356.48215532	14.6	C	BC
16 38 46.4510	-21 24 21.610	42	36	2454356.48336250	14.6	C	BC
16 38 46.4928	-21 24 21.796	42	36	2454356.48455949	14.6	C	BC
16 38 46.5230	-21 24 21.895	42	36	2454356.48575799	14.5	C	BC
16 38 46.5551	-21 24 21.944	42	36	2454356.48695498	14.6	C	BC
16 38 46.5883	-21 24 22.088	42	36	2454356.48815324	14.6	C	BC
16 38 46.6236	-21 24 22.185	42	36	2454356.48935035	14.5	C	BC
16 38 46.6570	-21 24 22.294	42	36	2454356.49054826	14.6	C	BC
16 38 46.6948	-21 24 22.362	42	36	2454356.49174525	14.6	C	BC
16 38 46.7237	-21 24 22.530	42	36	2454356.49293310	14.5	C	BC
19 30 42.5019	-21 21 13.724	8	13	2454574.72409282	15.7	R	BC
19 30 42.5192	-21 21 13.656	8	13	2454574.72551458	15.7	R	BC
19 30 42.5508	-21 21 13.593	8	13	2454574.72835810	15.7	R	BC
19 30 42.5655	-21 21 13.568	8	13	2454574.72977986	15.7	R	BC
19 30 42.5982	-21 21 13.508	8	13	2454574.73263322	15.7	R	BC

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Himalia							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 30 42.6293	-21 21 13.455	8	13	2454574.73547708	15.6	R	BC
19 30 42.6448	-21 21 13.406	8	13	2454574.73689884	15.6	R	BC
19 30 43.0921	-21 21 12.452	25	16	2454574.77724884	15.8	R	Z
19 30 43.1100	-21 21 12.421	25	16	2454574.77869294	15.7	R	Z
19 30 43.1223	-21 21 12.402	25	16	2454574.78013715	15.7	R	Z
19 30 43.1574	-21 21 12.291	25	16	2454574.78303553	15.7	R	Z
19 30 43.1716	-21 21 12.306	25	16	2454574.78447975	15.8	R	Z
19 30 43.1894	-21 21 12.234	25	16	2454574.78592315	15.8	R	Z
19 30 43.2020	-21 21 12.204	25	16	2454574.78736713	15.9	R	Z
19 30 43.2195	-21 21 12.175	25	16	2454574.78881134	15.8	R	Z
19 30 43.2374	-21 21 12.118	25	16	2454574.79025243	15.8	R	Z
19 30 43.2716	-21 21 12.053	25	16	2454574.79337882	15.0	R	Z
19 30 43.2978	-21 21 12.006	25	16	2454574.79626713	15.7	R	Z
19 31 40.8823	-21 25 02.027	56	56	2454601.64209491	15.5	R	Z
19 31 40.8408	-21 25 02.227	56	56	2454601.64714120	15.5	R	Z
19 31 40.8199	-21 25 02.354	56	56	2454601.65083333	15.7	R	Z
19 31 40.8038	-21 25 02.587	56	56	2454601.65335648	15.5	R	Z
19 31 40.7613	-21 25 02.652	56	56	2454601.65774306	15.6	R	Z
19 31 40.7648	-21 25 02.614	56	56	2454601.65831019	15.6	R	Z
19 31 40.7496	-21 25 02.858	56	56	2454601.66054398	15.4	R	Z
19 31 40.7430	-21 25 02.920	56	56	2454601.66109954	15.5	R	Z
19 31 40.7338	-21 25 02.904	56	56	2454601.66165509	15.6	R	Z
19 31 40.7262	-21 25 02.870	56	56	2454601.66277778	15.6	R	Z
19 31 40.7158	-21 25 02.980	56	56	2454601.66390046	15.7	R	Z
19 31 40.7184	-21 25 02.975	56	56	2454601.66445602	14.1	R	Z
19 31 40.7110	-21 25 03.050	56	56	2454601.66501157	15.4	R	Z
19 31 40.6945	-21 25 03.070	56	56	2454601.66613426	15.5	R	Z
19 31 40.6840	-21 25 03.049	56	56	2454601.66781250	15.5	R	Z
19 31 40.6824	-21 25 03.185	56	56	2454601.66836806	15.6	R	Z
19 30 07.5168	-21 33 00.418	18	23	2454610.74403218	15.4	I	BC
19 30 07.4784	-21 33 00.609	18	23	2454610.74697361	15.3	I	BC
19 30 07.4596	-21 33 00.713	18	23	2454610.74817095	15.3	I	BC
19 30 07.4444	-21 33 00.754	18	23	2454610.74936840	15.4	I	BC
19 30 07.4278	-21 33 00.842	18	23	2454610.75056597	15.3	I	BC
19 30 07.3780	-21 33 01.109	18	23	2454610.75416840	15.5	I	BC
19 30 07.3578	-21 33 01.161	18	23	2454610.75536609	15.4	I	BC
19 30 07.3243	-21 33 01.340	18	23	2454610.75776192	15.4	I	BC
19 30 07.3087	-21 33 01.360	18	23	2454610.75894931	15.5	I	BC
19 30 07.2919	-21 33 01.506	18	23	2454610.76014711	15.4	I	BC
19 30 07.2750	-21 33 01.528	18	23	2454610.76133484	15.3	I	BC
19 30 07.2567	-21 33 01.604	18	23	2454610.76253218	15.4	I	BC
19 30 07.2416	-21 33 01.705	18	23	2454610.76371944	15.4	I	BC
19 30 07.2243	-21 33 01.789	18	23	2454610.76491690	15.4	I	BC
19 30 07.2091	-21 33 01.875	18	23	2454610.76611470	15.4	I	BC
19 30 07.1915	-21 33 01.909	18	23	2454610.76731192	15.3	I	BC
19 30 07.1581	-21 33 02.077	18	23	2454610.76969757	15.3	I	BC
19 30 07.1430	-21 33 02.157	18	23	2454610.77089514	15.5	I	BC
19 30 07.1241	-21 33 02.216	18	23	2454610.77209236	15.4	I	BC
19 30 07.1101	-21 33 02.315	18	23	2454610.77329005	15.4	I	BC
19 30 07.0922	-21 33 02.384	18	23	2454610.77448785	15.3	I	BC
19 30 07.0739	-21 33 02.406	18	23	2454610.77567558	15.4	I	BC
19 30 07.0562	-21 33 02.531	18	23	2454610.77687292	15.4	I	BC
19 30 07.0048	-21 33 02.728	18	23	2454610.78045544	15.4	I	BC
19 30 06.9733	-21 33 02.889	18	23	2454610.78286019	15.3	I	BC
19 30 06.9556	-21 33 02.927	18	23	2454610.78405787	15.4	I	BC
19 30 06.9386	-21 33 03.029	18	23	2454610.78525521	15.4	I	BC
19 30 06.9221	-21 33 03.088	18	23	2454610.78645301	15.4	I	BC
19 29 39.1365	-21 35 12.810	13	19	2454612.79442951	15.3	I	BC
19 29 39.1150	-21 35 12.902	13	19	2454612.79584954	15.4	I	BC
19 29 39.1032	-21 35 12.955	13	19	2454612.79658438	15.3	I	BC

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Himalia

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 29 39.0919	-21 35 12.967	13	19	2454612.79731875	15.3	I	BC
19 29 39.0808	-21 35 13.041	13	19	2454612.79805093	15.3	I	BC
19 29 39.0679	-21 35 13.100	13	19	2454612.79877627	15.3	I	BC
19 29 39.0570	-21 35 13.128	13	19	2454612.79951065	15.2	I	BC
19 29 39.0460	-21 35 13.209	13	19	2454612.80023565	15.3	I	BC
19 29 39.0363	-21 35 13.231	13	19	2454612.80097002	15.3	I	BC
19 29 39.0249	-21 35 13.267	13	19	2454612.80170706	15.3	I	BC
19 29 39.0124	-21 35 13.337	13	19	2454612.80244190	15.3	I	BC
19 29 39.0016	-21 35 13.394	13	19	2454612.80317731	15.3	I	BC
19 29 38.9913	-21 35 13.443	13	19	2454612.80390278	15.3	I	BC
19 29 38.9800	-21 35 13.508	13	19	2454612.80463900	15.3	I	BC
19 29 38.9692	-21 35 13.505	13	19	2454612.80537361	15.3	I	BC
19 29 38.9564	-21 35 13.557	13	19	2454612.80611088	15.3	I	BC
19 29 38.9454	-21 35 13.611	13	19	2454612.80684549	15.3	I	BC
19 29 38.9349	-21 35 13.698	13	19	2454612.80758021	15.3	I	BC
19 29 38.9220	-21 35 13.752	13	19	2454612.80831632	15.3	I	BC
19 29 38.9110	-21 35 13.729	13	19	2454612.80905174	15.2	I	BC
19 29 38.9026	-21 35 13.776	13	19	2454612.80978576	15.3	I	BC
19 29 38.8887	-21 35 13.881	13	19	2454612.81052025	15.3	I	BC
19 29 38.8794	-21 35 13.902	13	19	2454612.81125463	15.3	I	BC
19 29 38.8663	-21 35 13.958	13	19	2454612.81199028	15.3	I	BC
19 29 38.8559	-21 35 14.011	13	19	2454612.81272512	15.3	I	BC
19 29 38.8464	-21 35 14.045	13	19	2454612.81346019	15.2	I	BC
19 03 01.9539	-23 13 04.879	14	8	2454678.44292072	15.2	I	PE
19 03 01.9337	-23 13 04.947	14	8	2454678.44385602	15.2	I	PE
19 03 01.9113	-23 13 05.017	14	8	2454678.44478993	15.3	I	PE
19 03 01.8913	-23 13 05.085	14	8	2454678.44571539	15.3	I	PE
19 03 01.8713	-23 13 05.135	14	8	2454678.44664051	15.3	I	PE
19 03 01.8516	-23 13 05.221	14	8	2454678.44756551	15.3	I	PE
19 03 01.8284	-23 13 05.283	14	8	2454678.44849051	15.3	I	PE
19 03 01.7889	-23 13 05.421	14	8	2454678.45034838	15.3	I	PE
19 03 01.7469	-23 13 05.562	14	8	2454678.45219803	15.2	I	PE
19 03 01.7256	-23 13 05.618	14	8	2454678.45312384	15.2	I	PE
19 03 01.4269	-23 13 06.578	14	8	2454678.46669063	15.2	I	PE
19 03 01.4010	-23 13 06.661	14	8	2454678.46772778	15.1	I	PE
19 03 01.3342	-23 13 06.878	14	8	2454678.47085752	15.2	I	PE
19 03 01.3094	-23 13 06.954	14	8	2454678.47189664	15.0	I	PE
19 03 01.2650	-23 13 07.111	14	8	2454678.47398241	15.4	I	PE
19 03 01.1236	-23 13 07.555	14	8	2454678.48022014	15.2	I	PE
19 03 01.1004	-23 13 07.607	14	8	2454678.48126100	15.1	I	PE
19 03 01.0788	-23 13 07.689	14	8	2454678.48230058	15.2	I	PE
19 03 01.0562	-23 13 07.772	14	8	2454678.48334063	15.2	I	PE
19 03 00.9867	-23 13 07.991	14	8	2454678.48646146	15.2	I	PE
19 03 00.9638	-23 13 08.076	14	8	2454678.48750197	15.3	I	PE
19 03 00.9404	-23 13 08.129	14	8	2454678.48853194	15.3	I	PE
19 03 00.9163	-23 13 08.204	14	8	2454678.48958414	15.1	I	PE
19 03 00.8697	-23 13 08.364	14	8	2454678.49167801	15.3	I	PE
19 03 00.8456	-23 13 08.444	14	8	2454678.49271782	15.3	I	PE
19 03 00.8009	-23 13 08.579	14	8	2454678.49479954	15.2	I	PE
19 03 00.7533	-23 13 08.718	14	8	2454678.49687963	15.2	I	PE
19 03 00.7302	-23 13 08.786	14	8	2454678.49792940	15.1	I	PE
19 03 00.7079	-23 13 08.884	14	8	2454678.49896898	15.2	I	PE
19 03 00.6853	-23 13 08.946	14	8	2454678.50000903	15.2	I	PE
19 03 00.6370	-23 13 09.084	14	8	2454678.50208819	15.2	I	PE
19 03 00.6147	-23 13 09.162	14	8	2454678.50313796	15.2	I	PE
18 59 21.2915	-23 24 39.580	5	16	2454690.46375671	15.4	I	BC
18 59 21.2359	-23 24 39.741	5	16	2454690.46731736	15.4	I	BC
18 59 21.2108	-23 24 39.836	5	16	2454690.46892766	15.4	I	BC
18 59 21.1928	-23 24 39.888	5	16	2454690.47011794	15.4	I	BC
18 59 21.1543	-23 24 39.971	5	16	2454690.47250891	15.4	I	BC

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RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
18 59 21.1363	-23 24 40.046	5	16	2454690.47370914	15.4	I	BC
18 59 20.2343	-23 24 42.771	5	16	2454690.53115417	15.5	I	BC
18 59 20.2152	-23 24 42.793	5	16	2454690.53235440	15.4	I	BC
18 59 20.1782	-23 24 42.933	5	16	2454690.53473484	15.4	I	BC
18 56 56.5665	-23 32 09.071	21	38	2454704.34217789	15.3	R	OH
18 56 56.5397	-23 32 09.099	21	38	2454704.34594919	15.2	R	OH
18 56 56.5245	-23 32 09.111	21	38	2454704.34872488	15.3	R	OH
18 58 11.1371	-23 28 33.015	12	18	2454729.47887488	16.1	I	BC
18 58 11.1468	-23 28 32.995	12	18	2454729.47983079	16.1	I	BC
18 58 11.1584	-23 28 32.945	12	18	2454729.48080127	16.1	I	BC
18 58 11.1935	-23 28 32.851	12	18	2454729.48405139	16.0	I	BC
18 58 11.2050	-23 28 32.789	12	18	2454729.48524676	16.0	I	BC
18 58 11.2191	-23 28 32.725	12	18	2454729.48644699	16.0	I	BC
18 58 11.2330	-23 28 32.672	12	18	2454729.48764502	15.9	I	BC
18 58 11.2443	-23 28 32.643	12	18	2454729.48884248	16.0	I	BC
18 58 11.3159	-23 28 32.427	12	18	2454729.49541725	15.9	I	BC
18 58 11.3281	-23 28 32.373	12	18	2454729.49661574	16.0	I	BC
18 58 11.3467	-23 28 32.293	12	18	2454729.49831227	15.9	I	BC
18 58 11.3602	-23 28 32.274	12	18	2454729.49950961	16.0	I	BC
18 58 11.3751	-23 28 32.240	12	18	2454729.50071539	15.9	I	BC
18 58 11.3863	-23 28 32.172	12	18	2454729.50190255	15.9	I	BC
18 58 11.3988	-23 28 32.107	12	18	2454729.50310012	15.9	I	BC
18 58 11.4137	-23 28 32.067	12	18	2454729.50430752	15.9	I	BC
18 58 11.4268	-23 28 32.066	12	18	2454729.50550509	16.0	I	BC
18 58 11.4371	-23 28 31.977	12	18	2454729.50669502	15.9	I	BC
18 58 11.4523	-23 28 31.953	12	18	2454729.50789259	15.9	I	BC
18 58 11.4655	-23 28 31.905	12	18	2454729.50909537	15.9	I	BC
18 58 11.5485	-23 28 31.619	12	18	2454729.51679884	15.8	I	BC
18 58 11.5673	-23 28 31.569	12	18	2454729.51857465	15.8	I	BC
18 58 11.6050	-23 28 31.455	12	18	2454729.52212685	15.8	I	BC
18 58 11.6259	-23 28 31.385	12	18	2454729.52389259	15.8	I	BC
18 58 11.6832	-23 28 31.193	12	18	2454729.52922338	15.8	I	BC
18 58 11.7034	-23 28 31.091	12	18	2454729.53100197	15.8	I	BC
18 58 11.7226	-23 28 31.053	12	18	2454729.53277824	15.9	I	BC
18 58 12.2430	-23 28 29.298	12	18	2454729.57979363	15.8	I	BC
18 58 12.2842	-23 28 29.157	12	18	2454729.58334537	15.8	I	BC
18 58 12.3031	-23 28 29.090	12	18	2454729.58512245	15.8	I	BC
18 58 12.3245	-23 28 29.005	12	18	2454729.58689815	15.7	I	BC
21 55 35.9387	-13 50 43.087	12	13	2454974.93116082	15.3	un	E
21 55 35.9625	-13 50 42.991	12	13	2454974.93231812	15.4	un	E
21 55 35.9864	-13 50 42.850	12	13	2454974.93348190	15.3	un	E
21 55 36.0253	-13 50 42.665	12	13	2454974.93523892	16.0	un	E
21 55 36.0492	-13 50 42.549	12	13	2454974.93637214	16.0	un	E
21 55 36.0725	-13 50 42.425	12	13	2454974.93755282	16.0	un	E
22 00 39.7340	-13 18 27.703	14	6	2455003.82432940	15.7	I	PE
22 00 39.7292	-13 18 27.689	14	6	2455003.82612419	15.7	I	PE
22 00 39.7236	-13 18 27.658	14	6	2455003.82797928	15.7	I	PE
22 00 39.7209	-13 18 27.618	14	6	2455003.82982755	15.7	I	PE
22 00 39.7156	-13 18 27.581	14	6	2455003.83161921	15.7	I	PE
22 00 39.7108	-13 18 27.545	14	6	2455003.83348113	15.7	I	PE
22 00 39.7068	-13 18 27.511	14	6	2455003.83527384	15.7	I	PE
22 00 39.7019	-13 18 27.478	14	6	2455003.83711458	15.7	I	PE
22 00 39.6931	-13 18 27.408	14	6	2455003.84070116	15.7	I	PE
22 00 39.6887	-13 18 27.384	14	6	2455003.84250359	15.7	I	PE
22 00 39.6840	-13 18 27.348	14	6	2455003.84429687	15.6	I	PE
22 00 39.6765	-13 18 27.290	14	6	2455003.84721678	15.6	I	PE
22 00 39.6710	-13 18 27.268	14	6	2455003.84906875	15.6	I	PE
22 00 39.6651	-13 18 27.242	14	6	2455003.85087581	15.5	I	PE
22 00 39.6611	-13 18 27.183	14	6	2455003.85353322	15.6	I	PE
22 00 39.6543	-13 18 27.148	14	6	2455003.85534306	15.5	I	PE

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
22 00 39.6497	-13 18 27.124	14	6	2455003.85714120	15.5	I	PE
22 00 37.4656	-13 18 11.819	3	8	2455004.84839062	15.4	I	PE
22 00 37.4634	-13 18 11.820	3	8	2455004.84901539	15.5	I	PE
22 00 37.4613	-13 18 11.803	3	8	2455004.84965324	15.5	I	PE
22 00 37.4566	-13 18 11.792	3	8	2455004.85092650	15.4	I	PE
22 00 37.4543	-13 18 11.778	3	8	2455004.85156331	15.5	I	PE
22 00 37.4527	-13 18 11.789	3	8	2455004.85219896	15.5	I	PE
22 00 37.4504	-13 18 11.775	3	8	2455004.85283565	15.5	I	PE
22 00 37.4421	-13 18 11.724	3	8	2455004.85538299	15.5	I	PE
22 00 37.4348	-13 18 11.697	3	8	2455004.85737697	15.5	I	PE
22 00 37.4324	-13 18 11.687	3	8	2455004.85808171	15.4	I	PE
22 00 37.4262	-13 18 11.662	3	8	2455004.86003924	15.5	I	PE
22 00 37.4235	-13 18 11.650	3	8	2455004.86068600	15.5	I	PE
22 00 37.4214	-13 18 11.641	3	8	2455004.86131898	15.5	I	PE
22 00 37.4137	-13 18 11.617	3	8	2455004.86367593	15.4	I	PE
22 00 37.4114	-13 18 11.598	3	8	2455004.86431250	15.3	I	PE
22 00 37.4091	-13 18 11.587	3	8	2455004.86494965	15.4	I	PE
22 00 37.4072	-13 18 11.594	3	8	2455004.86558727	15.4	I	PE
22 00 37.4003	-13 18 11.562	3	8	2455004.86750359	15.3	I	PE
22 00 37.3986	-13 18 11.534	3	8	2455004.86815012	15.4	I	PE
22 00 37.3967	-13 18 11.538	3	8	2455004.86878646	15.5	I	PE
22 00 37.3942	-13 18 11.525	3	8	2455004.86948507	15.4	I	PE
22 00 37.3823	-13 18 11.466	3	8	2455004.87289259	15.4	I	PE
22 00 37.3763	-13 18 11.460	3	8	2455004.87474352	15.4	I	PE
22 00 34.3899	-13 18 00.499	6	4	2455005.83898796	15.5	C	PE
22 00 34.3873	-13 18 00.486	6	4	2455005.83967211	15.5	C	PE
22 00 34.3846	-13 18 00.482	6	4	2455005.84030660	15.5	C	PE
22 00 34.3790	-13 18 00.475	6	4	2455005.84165023	15.5	C	PE
22 00 34.3699	-13 18 00.447	6	4	2455005.84362269	15.5	C	PE
22 00 34.3614	-13 18 00.422	6	4	2455005.84568183	15.5	C	PE
22 00 34.3579	-13 18 00.416	6	4	2455005.84638102	15.5	C	PE
22 00 34.3514	-13 18 00.411	6	4	2455005.84773148	15.5	C	PE
22 00 34.3400	-13 18 00.385	6	4	2455005.85051019	15.5	C	PE
22 00 34.3370	-13 18 00.371	6	4	2455005.85115104	15.5	C	PE
22 00 34.3338	-13 18 00.363	6	4	2455005.85180174	15.5	C	PE
22 00 34.3314	-13 18 00.360	6	4	2455005.85245139	15.5	C	PE
22 00 34.3261	-13 18 00.345	6	4	2455005.85381308	15.5	C	PE
22 00 34.3225	-13 18 00.341	6	4	2455005.85445185	15.5	C	PE
22 00 34.3139	-13 18 00.313	6	4	2455005.85660752	15.5	C	PE
22 00 34.3087	-13 18 00.303	6	4	2455005.85789456	15.4	C	PE
22 00 34.3059	-13 18 00.291	6	4	2455005.85857153	15.4	C	PE
22 00 34.3020	-13 18 00.285	6	4	2455005.85922130	15.4	C	PE
22 00 34.3003	-13 18 00.279	6	4	2455005.85986053	15.4	C	PE
22 00 34.2968	-13 18 00.270	6	4	2455005.86054051	15.4	C	PE
22 00 34.2941	-13 18 00.270	6	4	2455005.86117488	15.4	C	PE
22 00 34.2882	-13 18 00.258	6	4	2455005.86253345	15.4	C	PE
22 00 34.2852	-13 18 00.241	6	4	2455005.86329861	15.4	C	PE
22 00 34.2818	-13 18 00.239	6	4	2455005.86399954	15.4	C	PE
22 00 34.2789	-13 18 00.228	6	4	2455005.86464595	15.4	C	PE
22 00 34.2706	-13 18 00.205	6	4	2455005.86663738	15.4	C	PE
22 00 30.3361	-13 17 52.987	5	5	2455006.84438912	15.5	I	PE
22 00 30.3290	-13 17 52.977	5	5	2455006.84561192	15.5	I	PE
22 00 30.3239	-13 17 52.968	5	5	2455006.84656354	15.5	I	PE
22 00 30.3186	-13 17 52.951	5	5	2455006.84763623	15.5	I	PE
22 00 30.3140	-13 17 52.961	5	5	2455006.84851389	15.5	I	PE
22 00 30.3087	-13 17 52.951	5	5	2455006.84942222	15.5	I	PE
22 00 30.3049	-13 17 52.934	5	5	2455006.85030810	15.5	I	PE
22 00 30.2997	-13 17 52.941	5	5	2455006.85125266	15.5	I	PE
22 00 30.2949	-13 17 52.936	5	5	2455006.85214537	15.5	I	PE
22 00 30.2857	-13 17 52.910	5	5	2455006.85389051	15.7	I	PE

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Himalia							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
22 00 30.2811	-13 17 52.911	5	5	2455006.85475926	15.5	I	PE
22 00 30.2766	-13 17 52.906	5	5	2455006.85562743	15.7	I	PE
22 00 30.2721	-13 17 52.907	5	5	2455006.85649375	15.5	I	PE
22 00 30.2671	-13 17 52.906	5	5	2455006.85736227	15.5	I	PE
22 00 30.2630	-13 17 52.889	5	5	2455006.85822882	15.6	I	PE
22 00 30.2587	-13 17 52.882	5	5	2455006.85913727	15.5	I	PE
22 00 30.2540	-13 17 52.877	5	5	2455006.86002731	15.5	I	PE
22 00 30.2443	-13 17 52.871	5	5	2455006.86186204	15.6	I	PE
22 00 30.2392	-13 17 52.859	5	5	2455006.86274086	15.7	I	PE
22 00 30.2345	-13 17 52.854	5	5	2455006.86359896	15.7	I	PE
22 00 30.2313	-13 17 52.857	5	5	2455006.86446690	15.6	I	PE
22 00 30.2260	-13 17 52.845	5	5	2455006.86536192	15.6	I	PE
22 00 30.2207	-13 17 52.834	5	5	2455006.86628681	15.7	I	PE
22 00 30.2160	-13 17 52.827	5	5	2455006.86714444	15.7	I	PE
22 00 30.2122	-13 17 52.822	5	5	2455006.86803657	15.6	I	PE
22 00 30.1979	-13 17 52.812	5	5	2455006.87071100	15.7	I	PE
22 00 30.1841	-13 17 52.798	5	5	2455006.87348900	15.5	I	PE
21 54 27.3401	-13 35 50.695	14	7	2455030.75558275	15.2	I	BC
21 54 27.3087	-13 35 50.779	14	7	2455030.75666736	15.2	I	BC
21 54 27.2818	-13 35 50.887	14	7	2455030.75774896	15.3	I	BC
21 54 27.1964	-13 35 51.201	14	7	2455030.76100475	15.1	I	BC
21 54 27.1674	-13 35 51.296	14	7	2455030.76207662	15.2	I	BC
21 54 27.1107	-13 35 51.513	14	7	2455030.76424028	15.2	I	BC
21 54 27.0556	-13 35 51.701	14	7	2455030.76640394	15.2	I	BC
21 54 27.0269	-13 35 51.818	14	7	2455030.76748519	15.2	I	BC
21 54 26.9702	-13 35 52.014	14	7	2455030.76963877	15.1	I	BC
21 54 26.9414	-13 35 52.112	14	7	2455030.77071042	15.2	I	BC
21 54 26.9156	-13 35 52.213	14	7	2455030.77179178	15.2	I	BC
21 54 26.8865	-13 35 52.327	14	7	2455030.77288356	15.2	I	BC
21 54 26.8304	-13 35 52.521	14	7	2455030.77504745	15.1	I	BC
00 09 28.4661	-00 16 46.420	11	20	2455382.82018519	15.6	R	BC
00 09 28.4721	-00 16 46.389	11	20	2455382.82067130	15.6	R	BC
00 09 28.4750	-00 16 46.400	11	20	2455382.82115741	15.7	R	BC
00 09 28.4841	-00 16 46.394	11	20	2455382.82212963	15.7	R	BC
00 09 28.4903	-00 16 46.361	11	20	2455382.82261574	15.6	R	BC
00 09 28.4957	-00 16 46.366	11	20	2455382.82310185	15.6	R	BC
00 09 28.4982	-00 16 46.342	11	20	2455382.82358796	15.5	R	BC
00 09 28.5091	-00 16 46.386	11	20	2455382.82454861	15.7	R	BC
00 09 28.5127	-00 16 46.320	11	20	2455382.82503472	15.7	R	BC
00 09 28.5187	-00 16 46.325	11	20	2455382.82552083	15.7	R	BC
00 09 28.5239	-00 16 46.336	11	20	2455382.82600694	15.7	R	BC
00 09 28.5330	-00 16 46.306	11	20	2455382.82697917	15.6	R	BC
00 09 28.5370	-00 16 46.338	11	20	2455382.82746528	15.8	R	BC
00 09 28.5418	-00 16 46.276	11	20	2455382.82795139	15.6	R	BC
00 09 28.5465	-00 16 46.277	11	20	2455382.82843750	15.5	R	BC
00 09 28.5516	-00 16 46.276	11	20	2455382.82892361	15.7	R	BC
00 09 28.5603	-00 16 46.257	11	20	2455382.82989583	15.4	R	BC
00 09 28.5662	-00 16 46.296	11	20	2455382.83038194	15.5	R	BC
00 09 28.5699	-00 16 46.300	11	20	2455382.83085648	15.7	R	BC
00 09 28.5734	-00 16 46.263	11	20	2455382.83134259	15.6	R	BC
00 09 28.5790	-00 16 46.248	11	20	2455382.83182870	15.6	R	BC
00 09 28.5846	-00 16 46.253	11	20	2455382.83231481	15.9	R	BC
00 09 28.5893	-00 16 46.287	11	20	2455382.83280093	15.6	R	BC
00 09 28.5976	-00 16 46.242	11	20	2455382.83377315	15.8	R	BC
00 09 28.6021	-00 16 46.219	11	20	2455382.83425926	15.8	R	BC
00 09 38.8817	-00 16 37.142	30	23	2455383.84916667	15.4	C	BC
00 09 38.8932	-00 16 37.147	30	23	2455383.85052083	15.4	C	BC
00 09 38.9036	-00 16 37.161	30	23	2455383.85197917	15.4	C	BC
00 09 38.9143	-00 16 37.182	30	23	2455383.85246528	15.5	C	BC
00 09 38.9161	-00 16 37.178	30	23	2455383.85295139	15.5	C	BC

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RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
00 09 38.9216	-00 16 37.141	30	23	2455383.85343750	15.5	C	BC
00 09 38.9226	-00 16 37.129	30	23	2455383.85393519	15.3	C	BC
00 09 38.9294	-00 16 37.115	30	23	2455383.85442130	15.3	C	BC
00 09 48.3830	-00 16 32.852	21	16	2455384.84953704	15.4	C	BC
00 09 48.4010	-00 16 32.850	21	16	2455384.85131944	15.5	C	BC
00 09 48.4003	-00 16 32.890	21	16	2455384.85157407	15.5	C	BC
00 09 48.4037	-00 16 32.867	21	16	2455384.85182870	15.4	C	BC
00 09 48.4104	-00 16 32.853	21	16	2455384.85233796	15.4	C	BC
00 09 48.4120	-00 16 32.846	21	16	2455384.85261574	15.4	C	BC
00 09 48.4126	-00 16 32.877	21	16	2455384.85285880	15.5	C	BC
00 09 48.4157	-00 16 32.874	21	16	2455384.85311343	15.4	C	BC
23 44 32.4508	-03 43 59.947	12	12	2455489.62443287	15.0	I	PE
23 44 32.4383	-03 44 00.002	12	12	2455489.62531250	15.0	I	PE
23 44 32.4239	-03 44 00.049	12	12	2455489.62613426	15.0	I	PE
23 44 32.4201	-03 44 00.052	12	12	2455489.62640046	15.0	I	PE
23 44 32.4151	-03 44 00.065	12	12	2455489.62667824	15.0	I	PE
23 44 32.4118	-03 44 00.055	12	12	2455489.62694444	15.0	I	PE
23 44 32.4015	-03 44 00.090	12	12	2455489.62748843	15.0	I	PE
23 44 32.3969	-03 44 00.128	12	12	2455489.62776620	14.9	I	PE
23 44 32.3922	-03 44 00.134	12	12	2455489.62803241	15.0	I	PE
23 44 32.3867	-03 44 00.128	12	12	2455489.62831019	15.0	I	PE
23 44 32.3821	-03 44 00.133	12	12	2455489.62857639	14.9	I	PE
23 44 32.3794	-03 44 00.163	12	12	2455489.62885417	15.0	I	PE
23 44 32.3753	-03 44 00.199	12	12	2455489.62912037	15.0	I	PE
23 44 32.3703	-03 44 00.186	12	12	2455489.62939815	15.0	I	PE
23 44 32.3598	-03 44 00.208	12	12	2455489.62994213	15.0	I	PE
23 44 32.3564	-03 44 00.236	12	12	2455489.63020833	14.9	I	PE
23 44 32.3528	-03 44 00.224	12	12	2455489.63048611	15.0	I	PE
23 44 32.3478	-03 44 00.267	12	12	2455489.63075231	14.9	I	PE
23 44 32.3397	-03 44 00.282	12	12	2455489.63129630	15.0	I	PE
23 44 32.3349	-03 44 00.307	12	12	2455489.63157407	15.0	I	PE
23 44 32.3273	-03 44 00.336	12	12	2455489.63211806	15.0	I	PE
23 44 32.3211	-03 44 00.329	12	12	2455489.63238426	15.0	I	PE
23 44 32.3166	-03 44 00.339	12	12	2455489.63265046	15.0	I	PE
23 44 32.3119	-03 44 00.366	12	12	2455489.63292824	15.0	I	PE
23 44 32.3075	-03 44 00.382	12	12	2455489.63319444	15.0	I	PE
02 35 26.0609	+14 14 23.399	32	41	2455807.84625000	15.6	I	BC
02 35 26.0584	+14 14 23.492	32	41	2455807.84839120	15.6	I	BC
02 35 26.0518	+14 14 23.397	32	41	2455807.85052083	15.2	I	BC
02 35 26.0439	+14 14 23.418	32	41	2455807.85265046	15.5	I	BC
02 35 26.0445	+14 14 23.417	32	41	2455807.85478009	15.4	I	BC
02 35 24.2323	+14 14 25.044	16	28	2455808.77120370	15.5	I	BC
02 35 24.2272	+14 14 25.010	16	28	2455808.77239583	14.9	I	BC
02 35 24.2184	+14 14 25.038	16	28	2455808.77479167	15.4	I	BC
02 35 24.2092	+14 14 25.054	16	28	2455808.77836806	15.5	I	BC
02 35 24.2066	+14 14 25.008	16	28	2455808.77956019	15.5	I	BC
02 35 24.2012	+14 14 25.041	16	28	2455808.78076389	15.4	I	BC
02 35 24.1949	+14 14 25.009	16	28	2455808.78195602	15.4	I	BC
02 35 24.1906	+14 14 25.061	16	28	2455808.78434028	15.4	I	BC
02 35 24.1822	+14 14 25.060	16	28	2455808.78673611	15.4	I	BC
02 35 24.1643	+14 14 25.074	16	28	2455808.79151620	15.4	I	BC
02 35 24.1541	+14 14 25.003	16	28	2455808.79489583	15.4	I	BC
02 35 24.1491	+14 14 25.070	16	28	2455808.79608796	15.5	I	BC
02 35 24.1431	+14 14 25.005	16	28	2455808.79848380	15.4	I	BC
02 35 24.1388	+14 14 25.016	16	28	2455808.79967593	15.4	I	BC
02 35 24.1340	+14 14 25.057	16	28	2455808.80086806	15.4	I	BC
02 35 24.1289	+14 14 24.983	16	28	2455808.80206019	15.3	I	BC
02 35 24.1254	+14 14 25.059	16	28	2455808.80326389	15.4	I	BC
02 35 24.1227	+14 14 24.994	16	28	2455808.80445602	15.3	I	BC
02 35 24.1192	+14 14 25.007	16	28	2455808.80564815	15.4	I	BC

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Himalia							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
02 35 24.1143	+14 14 24.968	16	28	2455808.80685185	15.4	I	BC
02 35 24.1103	+14 14 25.045	16	28	2455808.80804398	15.4	I	BC
02 35 24.1089	+14 14 25.043	16	28	2455808.80923611	15.4	I	BC
02 35 24.1036	+14 14 25.008	16	28	2455808.81042824	15.4	I	BC
02 35 24.1005	+14 14 24.991	16	28	2455808.81163194	15.4	I	BC
02 35 24.0959	+14 14 25.029	16	28	2455808.81282407	15.4	I	BC
02 35 24.0872	+14 14 25.021	16	28	2455808.81520833	15.4	I	BC
02 35 24.0833	+14 14 25.014	16	28	2455808.81641204	15.4	I	BC
02 35 24.0815	+14 14 24.996	16	28	2455808.81760417	15.4	I	BC
02 35 24.0766	+14 14 25.022	16	28	2455808.81879630	15.4	I	BC
02 35 24.0724	+14 14 25.016	16	28	2455808.81998843	15.4	I	BC
02 35 24.0680	+14 14 24.965	16	28	2455808.82119213	15.4	I	BC
02 35 24.0601	+14 14 25.031	16	28	2455808.82357639	15.4	I	BC
02 35 24.0578	+14 14 25.036	16	28	2455808.82476852	15.4	I	BC
02 35 24.0521	+14 14 24.971	16	28	2455808.82596065	15.4	I	BC
02 35 24.0486	+14 14 24.985	16	28	2455808.82715278	15.4	I	BC
02 35 24.0449	+14 14 24.945	16	28	2455808.82835648	15.3	I	BC
02 35 24.0421	+14 14 24.985	16	28	2455808.82954861	15.4	I	BC
02 35 24.0295	+14 14 25.025	16	28	2455808.83261574	14.9	I	BC
02 35 24.0257	+14 14 24.971	16	28	2455808.83380787	15.4	I	BC
02 35 24.0215	+14 14 24.997	16	28	2455808.83500000	15.3	I	BC
02 35 24.0145	+14 14 25.004	16	28	2455808.83739583	15.3	I	BC
02 35 24.0115	+14 14 24.961	16	28	2455808.83858796	15.4	I	BC
02 35 24.0026	+14 14 24.994	16	28	2455808.84098380	15.4	I	BC
02 35 23.9975	+14 14 24.965	16	28	2455808.84336806	15.4	I	BC
02 35 23.9860	+14 14 24.957	16	28	2455808.84576389	15.4	I	BC
02 35 23.9842	+14 14 24.955	16	28	2455808.84695602	15.3	I	BC
02 35 23.9811	+14 14 24.922	16	28	2455808.84815972	15.6	I	BC
02 35 23.9753	+14 14 24.905	16	28	2455808.84935185	15.4	I	BC
02 35 23.9721	+14 14 24.959	16	28	2455808.85054398	15.4	I	BC
02 35 23.9676	+14 14 24.925	16	28	2455808.85174769	15.5	I	BC
02 35 23.9616	+14 14 24.886	16	28	2455808.85413194	15.3	I	BC
04 56 53.0667	+21 25 56.951	27	18	2456186.78288943	15.3	un	BC
04 56 53.0755	+21 25 56.926	27	18	2456186.78365153	15.4	un	BC
04 56 53.0788	+21 25 56.923	27	18	2456186.78441362	15.4	un	BC
04 56 53.0852	+21 25 56.921	27	18	2456186.78517572	15.3	un	BC
04 56 53.0980	+21 25 56.915	27	18	2456186.78593800	15.3	un	BC
04 56 53.1026	+21 25 56.887	27	18	2456186.78670028	15.4	un	BC
04 56 53.1129	+21 25 56.918	27	18	2456186.78746273	15.3	un	BC
04 56 53.1204	+21 25 56.918	27	18	2456186.78822573	15.4	un	BC
04 56 53.1284	+21 25 56.848	27	18	2456186.78898854	15.4	un	BC
04 56 53.1381	+21 25 56.881	27	18	2456186.78975082	15.4	un	BC
04 56 53.1412	+21 25 56.857	27	18	2456186.79051256	15.4	un	BC
04 56 53.1494	+21 25 56.874	27	18	2456186.79127483	15.4	un	BC
04 56 53.1593	+21 25 56.825	27	18	2456186.79203692	15.4	un	BC
04 56 53.1660	+21 25 56.817	27	18	2456186.79279920	15.4	un	BC
04 56 53.1729	+21 25 56.820	27	18	2456186.79356220	15.3	un	BC
04 56 53.1819	+21 25 56.848	27	18	2456186.79432520	15.3	un	BC
04 56 53.1921	+21 25 56.828	27	18	2456186.79508765	15.4	un	BC
04 56 53.1949	+21 25 56.786	27	18	2456186.79585010	15.4	un	BC
04 56 53.2041	+21 25 56.782	27	18	2456186.79661237	15.4	un	BC
04 56 53.2132	+21 25 56.782	27	18	2456186.79737465	15.3	un	BC
04 57 03.9399	+21 25 43.406	28	22	2456187.80746902	15.3	un	BC
04 57 03.9408	+21 25 43.373	28	22	2456187.80799963	15.4	un	BC
04 57 03.9481	+21 25 43.357	28	22	2456187.80853024	15.3	un	BC
04 57 03.9483	+21 25 43.372	28	22	2456187.80906122	15.4	un	BC
04 57 03.9541	+21 25 43.330	28	22	2456187.80959200	15.3	un	BC
04 57 03.9629	+21 25 43.378	28	22	2456187.81012369	15.3	un	BC
04 57 03.9639	+21 25 43.327	28	22	2456187.81065466	15.3	un	BC
04 57 03.9744	+21 25 43.289	28	22	2456187.81171606	15.4	un	BC

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Himalia

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
04 57 03.9814	+21 25 43.305	28	22	2456187.81224685	15.3	un	BC
04 57 03.9885	+21 25 43.280	28	22	2456187.81277747	15.4	un	BC
04 57 03.9953	+21 25 43.278	28	22	2456187.81383904	15.3	un	BC
04 57 04.0023	+21 25 43.254	28	22	2456187.81437020	15.4	un	BC
04 57 04.0041	+21 25 43.275	28	22	2456187.81490080	15.4	un	BC
04 57 04.0124	+21 25 43.258	28	22	2456187.81543159	15.4	un	BC
04 57 04.0189	+21 25 43.277	28	22	2456187.81596220	15.4	un	BC
04 57 04.0190	+21 25 43.225	28	22	2456187.81649280	15.4	un	BC
04 57 04.0267	+21 25 43.281	28	22	2456187.81702341	15.4	un	BC
04 57 04.0320	+21 25 43.250	28	22	2456187.81755475	15.3	un	BC
04 57 13.4651	+21 25 29.923	27	47	2456188.77394646	15.4	un	BC
04 57 13.4634	+21 25 29.810	27	47	2456188.77436169	15.4	un	BC
04 57 13.4691	+21 25 29.868	27	47	2456188.77477728	15.3	un	BC
04 57 13.4742	+21 25 29.808	27	47	2456188.77519251	15.3	un	BC
04 57 13.4759	+21 25 29.820	27	47	2456188.77560810	15.4	un	BC
04 57 13.4828	+21 25 29.898	27	47	2456188.77602387	15.3	un	BC
04 57 13.4849	+21 25 29.812	27	47	2456188.77643964	15.4	un	BC
04 57 13.4887	+21 25 29.792	27	47	2456188.77685505	15.3	un	BC
04 57 13.4908	+21 25 29.803	27	47	2456188.77727064	15.4	un	BC
04 57 13.4963	+21 25 29.791	27	47	2456188.77768550	15.3	un	BC
04 57 13.5021	+21 25 29.766	27	47	2456188.77810109	15.3	un	BC
04 57 13.5030	+21 25 29.867	27	47	2456188.77851632	15.3	un	BC
04 57 13.5076	+21 25 29.786	27	47	2456188.77893155	15.3	un	BC
04 57 13.5133	+21 25 29.772	27	47	2456188.77934660	15.3	un	BC
04 57 13.5113	+21 25 29.850	27	47	2456188.77976236	15.4	un	BC
04 57 13.5148	+21 25 29.732	27	47	2456188.78017850	15.4	un	BC
04 57 13.5178	+21 25 29.810	27	47	2456188.78059373	15.3	un	BC
04 57 13.5273	+21 25 29.691	27	47	2456188.78142418	15.3	un	BC
04 57 13.5327	+21 25 29.833	27	47	2456188.78183940	15.4	un	BC
04 57 22.4394	+21 25 15.371	20	12	2456189.76593168	15.4	un	BC
04 57 22.4428	+21 25 15.379	20	12	2456189.76669449	15.4	un	BC
04 57 22.4516	+21 25 15.360	20	12	2456189.76745767	15.5	un	BC
04 57 22.4555	+21 25 15.340	20	12	2456189.76821977	15.5	un	BC
04 57 22.4598	+21 25 15.340	20	12	2456189.76898241	15.4	un	BC
04 57 22.4656	+21 25 15.315	20	12	2456189.76974486	15.4	un	BC
04 57 22.4710	+21 25 15.301	20	12	2456189.77050733	15.5	un	BC
04 57 22.4791	+21 25 15.298	20	12	2456189.77126959	15.4	un	BC
04 57 22.4863	+21 25 15.292	20	12	2456189.77203223	15.5	un	BC
04 57 22.4907	+21 25 15.262	20	12	2456189.77279469	15.4	un	BC
04 57 22.4953	+21 25 15.274	20	12	2456189.77355678	15.4	un	BC
04 57 22.5038	+21 25 15.267	20	12	2456189.77431851	15.5	un	BC
04 57 22.5158	+21 25 15.234	20	12	2456189.77584360	15.5	un	BC
04 57 22.5200	+21 25 15.242	20	12	2456189.77660588	15.5	un	BC
04 57 22.5271	+21 25 15.244	20	12	2456189.77736852	15.4	un	BC
04 57 22.5344	+21 25 15.191	20	12	2456189.77813116	15.4	un	BC
04 57 22.5400	+21 25 15.181	20	12	2456189.77889433	15.4	un	BC
04 57 22.5435	+21 25 15.197	20	12	2456189.77965751	15.5	un	BC
04 55 40.6199	+21 15 27.202	69	48	2456219.67893587	15.2	un	BC
04 55 40.6014	+21 15 27.054	69	48	2456219.68068067	15.3	un	BC
04 55 40.5781	+21 15 27.102	69	48	2456219.68143228	15.1	un	BC
04 55 40.5703	+21 15 27.052	69	48	2456219.68218388	14.1	un	BC
04 55 40.5634	+21 15 27.059	69	48	2456219.68293566	14.1	un	BC
04 55 40.5387	+21 15 27.157	69	48	2456219.68368744	15.4	un	BC
04 55 40.5423	+21 15 27.075	69	48	2456219.68443922	14.8	un	BC
04 55 40.5209	+21 15 27.040	69	48	2456219.68519101	15.5	un	BC
04 55 40.5189	+21 15 27.030	69	48	2456219.68594279	15.4	un	BC
04 55 40.4941	+21 15 26.992	69	48	2456219.68669439	14.5	un	BC
04 55 40.4935	+21 15 26.944	69	48	2456219.68744617	14.4	un	BC
04 55 40.4354	+21 15 27.029	69	48	2456219.69103236	14.5	un	BC
04 55 40.4268	+21 15 27.002	69	48	2456219.69178397	14.1	un	BC

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Himalia							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
04 55 40.3612	+21 15 26.889	69	48	2456219.69554270	15.1	un	BC
04 55 40.3548	+21 15 26.781	69	48	2456219.69629375	15.2	un	BC
04 55 39.9918	+21 15 26.472	69	48	2456219.71870633	15.1	un	BC
04 55 39.9813	+21 15 26.446	69	48	2456219.71945811	15.2	un	BC
04 55 39.9634	+21 15 26.419	69	48	2456219.72020917	15.4	un	BC
04 55 39.9540	+21 15 26.413	69	48	2456219.72096095	15.2	un	BC
04 55 39.9414	+21 15 26.314	69	48	2456219.72171273	15.2	un	BC
04 55 39.9350	+21 15 26.310	69	48	2456219.72246451	15.2	un	BC
04 55 39.9183	+21 15 26.284	69	48	2456219.72321611	15.3	un	BC
04 55 39.9041	+21 15 26.313	69	48	2456219.72396771	15.2	un	BC
04 55 39.8944	+21 15 26.276	69	48	2456219.72471968	15.3	un	BC
04 55 39.8790	+21 15 26.240	69	48	2456219.72547127	15.1	un	BC
07 22 42.5636	+22 24 37.491	27	11	2456571.79947713	15.8	I	BC
07 22 42.6347	+22 24 37.398	27	11	2456571.80182287	15.8	I	BC
07 22 42.6572	+22 24 37.374	27	11	2456571.80257476	15.8	I	BC
07 22 42.6813	+22 24 37.359	27	11	2456571.80332682	15.7	I	BC
07 22 42.7258	+22 24 37.288	27	11	2456571.80483066	15.9	I	BC
07 22 42.7735	+22 24 37.202	27	11	2456571.80633483	15.9	I	BC
07 22 42.7923	+22 24 37.180	27	11	2456571.80708671	15.9	I	BC
07 22 42.8374	+22 24 37.115	27	11	2456571.80859056	15.9	I	BC
07 22 42.8601	+22 24 37.106	27	11	2456571.80934255	15.9	I	BC
07 22 42.8810	+22 24 37.064	27	11	2456571.81009446	15.9	I	BC
07 22 42.9073	+22 24 37.040	27	11	2456571.81084627	15.8	I	BC
07 22 42.9325	+22 24 37.000	27	11	2456571.81159791	15.8	I	BC
07 22 42.9515	+22 24 36.983	27	11	2456571.81234987	15.9	I	BC
07 22 42.9743	+22 24 36.937	27	11	2456571.81310148	15.9	I	BC
07 22 42.9998	+22 24 36.892	27	11	2456571.81385332	15.8	I	BC
07 22 43.0216	+22 24 36.885	27	11	2456571.81460501	15.9	I	BC
07 22 43.0424	+22 24 36.846	27	11	2456571.81535703	15.9	I	BC
07 22 43.0629	+22 24 36.804	27	11	2456571.81610894	15.9	I	BC
07 22 43.1103	+22 24 36.758	27	11	2456571.81761284	16.0	I	BC
07 22 43.1532	+22 24 36.697	27	11	2456571.81911682	15.9	I	BC
07 22 43.1747	+22 24 36.662	27	11	2456571.81986868	15.9	I	BC
07 22 43.1973	+22 24 36.622	27	11	2456571.82062059	15.9	I	BC
07 22 43.2236	+22 24 36.590	27	11	2456571.82137257	15.8	I	BC
07 22 43.4612	+22 24 36.246	27	11	2456571.82949188	15.9	I	BC
07 22 43.4858	+22 24 36.208	27	11	2456571.83024390	15.8	I	BC
07 22 43.5507	+22 24 36.136	27	11	2456571.83249975	16.0	I	BC
07 22 43.6181	+22 24 36.009	27	11	2456571.83475505	15.9	I	BC
07 22 43.6664	+22 24 35.945	27	11	2456571.83625898	16.3	I	BC
07 32 02.4741	+22 05 40.248	12	22	2456605.73660663	15.5	I	PE
07 32 02.4752	+22 05 40.205	12	22	2456605.73744330	15.5	I	PE
07 32 02.4752	+22 05 40.269	12	22	2456605.73784742	15.5	I	PE
07 32 02.4742	+22 05 40.213	12	22	2456605.73825153	15.5	I	PE
07 32 02.4739	+22 05 40.219	12	22	2456605.73865564	15.5	I	PE
07 32 02.4739	+22 05 40.224	12	22	2456605.73905969	15.5	I	PE
07 32 02.4764	+22 05 40.181	12	22	2456605.73946375	15.5	I	PE
07 32 02.4756	+22 05 40.183	12	22	2456605.74027193	15.5	I	PE
07 32 02.4768	+22 05 40.186	12	22	2456605.74067602	15.5	I	PE
07 32 02.4744	+22 05 40.188	12	22	2456605.74108010	15.5	I	PE
07 32 02.4745	+22 05 40.182	12	22	2456605.74148419	15.5	I	PE
07 32 02.4750	+22 05 40.192	12	22	2456605.74188853	15.5	I	PE
07 32 02.4757	+22 05 40.151	12	22	2456605.74229262	15.5	I	PE
07 32 02.4767	+22 05 40.190	12	22	2456605.74269668	15.5	I	PE
07 32 02.4761	+22 05 40.167	12	22	2456605.74310074	15.5	I	PE
07 32 02.4757	+22 05 40.120	12	22	2456605.74350484	15.5	I	PE
07 32 02.4774	+22 05 40.111	12	22	2456605.74431300	15.5	I	PE
07 32 02.4776	+22 05 40.160	12	22	2456605.74471708	15.4	I	PE
07 32 02.4767	+22 05 40.152	12	22	2456605.74552523	15.5	I	PE
07 32 02.4768	+22 05 40.132	12	22	2456605.74592929	15.5	I	PE

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Himalia								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
07 32 02.4766	+22 05 40.123	12	22	2456605.74673743	15.4	I	PE
07 32 02.4758	+22 05 40.096	12	22	2456605.74714150	15.5	I	PE
07 32 02.4766	+22 05 40.097	12	22	2456605.74754557	15.4	I	PE
07 32 02.4762	+22 05 40.126	12	22	2456605.74794966	15.5	I	PE
07 32 02.4774	+22 05 40.059	12	22	2456605.74835374	15.5	I	PE
07 32 02.4775	+22 05 40.097	12	22	2456605.74875789	15.5	I	PE
06 48 22.4708	+22 42 08.756	14	21	2456697.48442665	15.3	I	BC
06 48 22.4349	+22 42 08.799	14	21	2456697.48569856	15.2	I	BC
06 48 22.3837	+22 42 08.854	14	21	2456697.48760597	15.2	I	BC
06 48 22.3646	+22 42 08.843	14	21	2456697.48824183	15.1	I	BC
06 48 22.3461	+22 42 08.866	14	21	2456697.48887751	15.3	I	BC
06 48 22.3297	+22 42 08.884	14	21	2456697.48951338	15.2	I	BC
06 48 22.3124	+22 42 08.900	14	21	2456697.49014924	15.4	I	BC
06 48 22.2962	+22 42 08.968	14	21	2456697.49078510	15.2	I	BC
06 48 22.2784	+22 42 08.921	14	21	2456697.49142079	15.2	I	BC
06 48 22.2585	+22 42 08.949	14	21	2456697.49205647	15.2	I	BC
06 48 22.2423	+22 42 09.012	14	21	2456697.49269233	15.2	I	BC
06 48 22.2233	+22 42 09.011	14	21	2456697.49332801	15.2	I	BC
06 48 22.2059	+22 42 09.029	14	21	2456697.49396388	15.2	I	BC
06 48 22.1707	+22 42 09.071	14	21	2456697.49523542	15.2	I	BC
06 48 22.1540	+22 42 09.089	14	21	2456697.49587110	15.2	I	BC
06 48 22.1365	+22 42 09.066	14	21	2456697.49650697	15.1	I	BC
06 48 22.1195	+22 42 09.127	14	21	2456697.49714282	15.2	I	BC
06 48 22.0999	+22 42 09.124	14	21	2456697.49777869	15.1	I	BC
06 48 22.0648	+22 42 09.163	14	21	2456697.49905023	15.1	I	BC
06 48 22.0133	+22 42 09.232	14	21	2456697.50095782	15.2	I	BC
06 48 21.9951	+22 42 09.236	14	21	2456697.50159351	15.2	I	BC
06 48 21.9794	+22 42 09.206	14	21	2456697.50222936	15.2	I	BC
06 48 21.9603	+22 42 09.266	14	21	2456697.50286505	15.2	I	BC
06 48 21.9435	+22 42 09.280	14	21	2456697.50350091	15.2	I	BC
06 48 21.9264	+22 42 09.293	14	21	2456697.50413660	15.1	I	BC
06 48 21.9085	+22 42 09.283	14	21	2456697.50477245	15.1	I	BC
06 48 21.8882	+22 42 09.349	14	21	2456697.50540814	15.1	I	BC
06 48 21.8740	+22 42 09.350	14	21	2456697.50604400	15.2	I	BC
06 48 21.8555	+22 42 09.329	14	21	2456697.50667969	15.2	I	BC
06 48 21.8186	+22 42 09.433	14	21	2456697.50795141	15.2	I	BC
06 48 21.7828	+22 42 09.441	14	21	2456697.50922278	15.2	I	BC
06 48 21.7650	+22 42 09.430	14	21	2456697.50985863	15.1	I	BC
06 48 21.7495	+22 42 09.458	14	21	2456697.51049450	15.2	I	BC
06 48 21.7328	+22 42 09.508	14	21	2456697.51113036	15.2	I	BC
06 48 21.7133	+22 42 09.538	14	21	2456697.51176623	15.2	I	BC
06 48 21.6949	+22 42 09.553	14	21	2456697.51240191	15.2	I	BC
06 48 21.6799	+22 42 09.524	14	21	2456697.51303777	15.1	I	BC
06 48 21.6433	+22 42 09.555	14	21	2456697.51430932	15.2	I	BC
06 48 21.6245	+22 42 09.582	14	21	2456697.51494500	15.2	I	BC
06 48 21.6070	+22 42 09.646	14	21	2456697.51558068	15.2	I	BC

Table B.2. CDS data for Elara.

Elara							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 00 03.5485	-22 24 03.822	13	9	2450256.55099537	16.9	C	PE
19 00 03.4884	-22 24 04.013	13	9	2450256.55334491	16.8	C	PE
19 00 03.4569	-22 24 04.113	13	9	2450256.55458333	16.8	C	PE
19 00 03.4204	-22 24 04.232	13	9	2450256.55596065	16.8	C	PE
18 58 46.3327	-22 27 57.090	24	10	2450259.56603009	16.6	C	PE
18 58 46.2453	-22 27 57.372	24	10	2450259.56921296	16.7	C	PE
18 58 46.1808	-22 27 57.578	24	10	2450259.57179398	16.6	C	PE
18 58 46.1124	-22 27 57.795	24	10	2450259.57437500	16.6	C	PE
18 58 19.8562	-22 29 19.712	50	8	2450260.59775463	16.8	C	PE

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Elara

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
18 58 19.6074	-22 29 20.490	50	8	2450260.60706019	16.8	C	PE
18 58 19.5473	-22 29 20.686	50	8	2450260.60964120	16.8	C	PE
18 58 19.4751	-22 29 20.915	50	8	2450260.61222222	16.8	C	PE
18 46 31.8280	-23 11 57.971	12	14	2450289.51206782	17.1	un	PE
18 46 31.8069	-23 11 58.039	12	14	2450289.51308102	17.0	un	PE
18 46 31.7935	-23 11 58.095	12	14	2450289.51368241	17.0	un	PE
18 46 31.7783	-23 11 58.121	12	14	2450289.51428438	17.0	un	PE
18 46 31.7665	-23 11 58.182	12	14	2450289.51488646	17.0	un	PE
18 46 31.7511	-23 11 58.217	12	14	2450289.51548773	17.0	un	PE
18 46 31.7380	-23 11 58.303	12	14	2450289.51608981	17.1	un	PE
18 46 31.7258	-23 11 58.355	12	14	2450289.51669178	17.1	un	PE
18 46 31.7109	-23 11 58.416	12	14	2450289.51729387	17.0	un	PE
18 46 31.6986	-23 11 58.440	12	14	2450289.51789525	17.1	un	PE
18 46 31.6834	-23 11 58.500	12	14	2450289.51849722	17.1	un	PE
18 46 31.6703	-23 11 58.559	12	14	2450289.51908785	17.1	un	PE
18 46 31.6330	-23 11 58.680	12	14	2450289.52071968	17.1	un	PE
18 45 47.5102	-23 14 51.229	7	12	2450291.58577778	17.1	un	PE
18 45 47.4962	-23 14 51.258	7	12	2450291.58637917	17.0	un	PE
18 45 47.4831	-23 14 51.301	7	12	2450291.58698183	17.1	un	PE
18 45 47.4702	-23 14 51.355	7	12	2450291.58758380	17.1	un	PE
18 45 47.4187	-23 14 51.569	7	12	2450291.58999063	17.1	un	PE
18 45 47.4046	-23 14 51.620	7	12	2450291.59059271	17.1	un	PE
18 43 16.6188	-23 48 24.616	49	6	2450358.42094144	17.7	C	PE
18 43 17.0528	-23 48 24.048	49	6	2450358.44318750	17.9	C	PE
18 43 17.0623	-23 48 24.030	49	6	2450358.44380035	17.7	C	PE
21 20 33.8447	-16 51 56.673	62	50	2450674.59410880	16.2	un	PE
21 20 33.7989	-16 51 56.838	62	50	2450674.59525463	16.3	un	PE
21 20 29.7995	-16 52 11.130	62	50	2450674.70431713	16.3	un	PE
21 20 29.7044	-16 52 11.509	62	50	2450674.70685185	16.0	un	PE
21 19 57.9579	-16 54 07.818	37	68	2450675.59714120	15.9	un	PE
21 19 57.8592	-16 54 08.296	37	68	2450675.59968750	15.6	un	PE
21 19 54.3299	-16 54 20.639	37	68	2450675.69612268	16.0	un	PE
21 19 54.2347	-16 54 21.001	37	68	2450675.69866898	16.2	un	PE
23 47 10.0504	-02 40 38.492	34	12	2451040.60173819	16.7	R	OH
23 47 09.9335	-02 40 39.512	34	12	2451040.60725255	16.7	R	OH
23 47 09.8562	-02 40 40.185	34	12	2451040.61099514	16.7	R	OH
23 47 09.7761	-02 40 40.904	34	12	2451040.61472616	16.8	R	OH
23 47 09.6756	-02 40 41.825	34	12	2451040.61971725	16.6	R	OH
23 47 09.5380	-02 40 43.052	34	12	2451040.62630486	16.5	R	OH
23 47 09.4302	-02 40 43.995	34	12	2451040.63140660	16.5	R	OH
23 47 09.3666	-02 40 44.535	34	12	2451040.63444201	16.5	R	OH
23 47 09.3012	-02 40 45.128	34	12	2451040.63747986	16.5	R	OH
23 47 09.2382	-02 40 45.725	34	12	2451040.64063576	16.5	R	OH
23 45 28.0052	-02 56 10.830	15	20	2451045.42909826	16.4	R	OH
23 45 27.8800	-02 56 11.960	15	20	2451045.43463958	16.4	R	OH
23 45 27.7776	-02 56 12.869	15	20	2451045.43923056	16.4	R	OH
23 45 27.6720	-02 56 13.811	15	20	2451045.44388021	16.4	R	OH
23 45 27.6217	-02 56 14.244	15	20	2451045.44622037	16.4	R	OH
23 45 27.5673	-02 56 14.763	15	20	2451045.44856424	16.4	R	OH
23 45 27.5156	-02 56 15.211	15	20	2451045.45091123	16.4	R	OH
23 45 27.4626	-02 56 15.695	15	20	2451045.45325370	16.4	R	OH
23 45 27.4104	-02 56 16.142	15	20	2451045.45559132	16.4	R	OH
23 45 27.3588	-02 56 16.596	15	20	2451045.45793542	16.4	R	OH
23 45 27.3075	-02 56 17.125	15	20	2451045.46028194	16.3	R	OH
23 45 27.2014	-02 56 17.995	15	20	2451045.46496632	16.4	R	OH
23 29 11.6194	-05 11 41.694	18	34	2451163.32825660	17.2	R	OH
23 29 11.6917	-05 11 41.065	18	34	2451163.33152951	17.3	R	OH
23 29 11.8084	-05 11 40.171	18	34	2451163.33671979	17.2	R	OH
23 29 11.8829	-05 11 39.512	18	34	2451163.33999456	17.2	R	OH
23 29 11.9587	-05 11 38.888	18	34	2451163.34326574	17.2	R	OH

continued ...

Elara

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
23 29 12.0302	-05 11 38.367	18	34	2451163.34654086	17.3	R	OH
23 29 12.1069	-05 11 37.700	18	34	2451163.34980498	17.2	R	OH
02 05 46.9718	+10 55 46.388	28	20	2451460.41066250	16.0	R	OH
02 05 46.8565	+10 55 45.936	28	20	2451460.41467303	16.0	R	OH
02 05 46.7342	+10 55 45.460	28	20	2451460.41908113	16.2	R	OH
02 05 46.6587	+10 55 45.192	28	20	2451460.42176493	16.1	R	OH
02 05 46.5836	+10 55 44.854	28	20	2451460.42444988	16.1	R	OH
02 05 46.5097	+10 55 44.575	28	20	2451460.42714410	16.1	R	OH
02 05 46.4366	+10 55 44.294	28	20	2451460.42982569	16.2	R	OH
02 05 46.3569	+10 55 44.024	28	20	2451460.43251238	16.2	R	OH
02 05 46.2836	+10 55 43.685	28	20	2451460.43520463	16.1	R	OH
02 05 46.2309	+10 55 43.492	28	20	2451460.43723183	16.2	R	OH
02 05 46.0348	+10 55 42.690	28	20	2451460.44424074	16.1	R	OH
02 04 22.9099	+10 50 09.054	22	19	2451463.41359120	16.0	R	OH
02 04 22.8233	+10 50 08.702	22	19	2451463.41667581	16.0	R	OH
02 04 22.7025	+10 50 08.254	22	19	2451463.42071528	16.2	R	OH
02 04 22.4470	+10 50 07.250	22	19	2451463.42939630	16.0	R	OH
02 04 22.3596	+10 50 06.929	22	19	2451463.43244352	16.1	R	OH
02 04 22.2714	+10 50 06.553	22	19	2451463.43548021	16.0	R	OH
02 04 22.1836	+10 50 06.192	22	19	2451463.43851551	16.1	R	OH
02 04 22.0927	+10 50 05.828	22	19	2451463.44154965	16.1	R	OH
02 04 22.0066	+10 50 05.493	22	19	2451463.44458854	16.0	R	OH
01 48 58.3335	+09 48 20.689	40	34	2451492.55056134	16.2	R	OH
01 48 58.2287	+09 48 20.198	40	34	2451492.55394016	16.2	R	OH
01 48 58.1611	+09 48 19.912	40	34	2451492.55604838	16.2	R	OH
01 48 58.0914	+09 48 19.674	40	34	2451492.55816007	16.2	R	OH
01 48 58.0299	+09 48 19.446	40	34	2451492.56026956	16.2	R	OH
01 46 30.3227	+09 38 29.194	39	14	2451497.34833900	15.5	R	OH
01 46 30.2535	+09 38 28.914	39	14	2451497.35050625	15.6	R	OH
01 46 30.1286	+09 38 28.417	39	14	2451497.35453588	15.6	R	OH
01 46 30.0464	+09 38 28.110	39	14	2451497.35723299	15.5	R	OH
01 46 29.9703	+09 38 27.793	39	14	2451497.35992442	15.5	R	OH
01 46 29.8957	+09 38 27.533	39	14	2451497.36224815	15.6	R	OH
01 46 28.3547	+09 38 21.519	39	14	2451497.41222685	15.6	R	OH
01 46 28.2724	+09 38 21.200	39	14	2451497.41491296	15.6	R	OH
01 46 28.1666	+09 38 20.768	39	14	2451497.41845775	15.6	R	OH
01 46 28.0805	+09 38 20.433	39	14	2451497.42114583	15.6	R	OH
01 46 27.9946	+09 38 20.122	39	14	2451497.42404954	15.6	R	OH
01 46 27.9053	+09 38 19.792	39	14	2451497.42673356	15.6	R	OH
01 38 41.2782	+09 07 31.850	30	40	2451515.45262025	16.7	R	OH
01 38 41.2271	+09 07 31.635	30	40	2451515.45520845	16.5	R	OH
01 38 41.1089	+09 07 31.212	30	40	2451515.46071644	16.4	R	OH
01 38 41.0632	+09 07 31.027	30	40	2451515.46271482	16.3	R	OH
01 38 41.0220	+09 07 30.811	30	40	2451515.46471030	16.4	R	OH
01 38 40.9793	+09 07 30.653	30	40	2451515.46670289	16.4	R	OH
01 38 40.9357	+09 07 30.569	30	40	2451515.46869595	16.5	R	OH
01 38 40.8878	+09 07 30.422	30	40	2451515.47088310	16.4	R	OH
01 38 23.0264	+09 06 19.953	21	17	2451516.34870440	16.5	R	OH
01 38 22.9216	+09 06 19.538	21	17	2451516.35385579	16.6	R	OH
01 38 22.8734	+09 06 19.356	21	17	2451516.35606424	16.4	R	OH
01 38 22.8271	+09 06 19.164	21	17	2451516.35817176	16.5	R	OH
01 38 22.7857	+09 06 18.993	21	17	2451516.36028206	16.4	R	OH
01 38 22.6946	+09 06 18.650	21	17	2451516.36470440	16.4	R	OH
01 38 22.6499	+09 06 18.492	21	17	2451516.36682049	16.5	R	OH
01 37 42.1495	+09 03 39.519	16	10	2451518.45116505	16.6	R	OH
01 37 42.0579	+09 03 39.161	16	10	2451518.45598900	16.6	R	OH
01 37 42.0193	+09 03 39.018	16	10	2451518.45810266	16.5	R	OH
01 37 41.9773	+09 03 38.844	16	10	2451518.46021250	16.6	R	OH
01 37 41.8971	+09 03 38.555	16	10	2451518.46443125	16.6	R	OH
04 17 57.4049	+19 59 13.423	23	23	2451869.48693542	16.3	R	OH

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Elara

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
04 17 57.1565	+19 59 12.629	23	23	2451869.49420046	16.2	R	OH
04 17 51.9535	+19 58 55.424	23	23	2451869.64729595	16.2	R	OH
04 17 51.8362	+19 58 54.987	23	23	2451869.65075046	16.2	R	OH
04 17 51.7565	+19 58 54.753	23	23	2451869.65310312	16.2	R	OH
04 17 51.6368	+19 58 54.336	23	23	2451869.65667384	16.2	R	OH
04 17 51.5181	+19 58 53.989	23	23	2451869.66014259	16.2	R	OH
04 17 51.4368	+19 58 53.683	23	23	2451869.66258877	16.2	R	OH
04 17 51.3551	+19 58 53.419	23	23	2451869.66510278	16.2	R	OH
04 15 46.6150	+19 52 04.961	13	22	2451873.41782407	16.1	R	OH
04 15 46.5061	+19 52 04.656	13	22	2451873.42099005	16.2	R	OH
04 15 46.4357	+19 52 04.457	13	22	2451873.42309931	16.2	R	OH
04 15 46.3651	+19 52 04.228	13	22	2451873.42520463	16.1	R	OH
04 15 46.2945	+19 52 03.983	13	22	2451873.42731863	16.1	R	OH
04 15 46.2210	+19 52 03.754	13	22	2451873.42942720	16.2	R	OH
04 15 46.1515	+19 52 03.574	13	22	2451873.43153449	16.2	R	OH
04 15 46.0790	+19 52 03.356	13	22	2451873.43364028	16.2	R	OH
04 13 34.5562	+19 45 06.897	20	17	2451877.43967187	15.1	R	OH
04 13 34.4709	+19 45 06.667	20	17	2451877.44226053	15.1	R	OH
04 13 34.4016	+19 45 06.426	20	17	2451877.44436887	15.1	R	OH
04 13 34.3340	+19 45 06.215	20	17	2451877.44647222	15.1	R	OH
04 13 34.2610	+19 45 05.999	20	17	2451877.44858206	15.1	R	OH
04 13 34.1900	+19 45 05.766	20	17	2451877.45069734	15.1	R	OH
06 55 00.5669	+22 57 42.137	22	18	2452263.47157350	16.7	R	OH
06 55 00.4391	+22 57 42.488	22	18	2452263.47617662	17.0	R	OH
06 55 00.3688	+22 57 42.685	22	18	2452263.47852870	16.9	R	OH
06 55 00.3019	+22 57 42.893	22	18	2452263.48088125	16.9	R	OH
06 55 00.2330	+22 57 43.053	22	18	2452263.48323252	16.6	R	OH
06 55 00.1692	+22 57 43.302	22	18	2452263.48558090	16.6	R	OH
06 55 00.0976	+22 57 43.466	22	18	2452263.48793947	16.5	R	OH
06 55 00.0304	+22 57 43.691	22	18	2452263.49029363	15.8	R	OH
06 54 59.8963	+22 57 44.073	22	18	2452263.49499803	16.5	R	OH
06 54 59.8286	+22 57 44.271	22	18	2452263.49735590	16.6	R	OH
06 43 54.3841	+23 26 09.835	9	7	2452285.38389225	16.5	R	OH
06 43 54.2365	+23 26 10.153	9	7	2452285.38859572	16.5	R	OH
06 43 54.1597	+23 26 10.312	9	7	2452285.39095081	16.5	R	OH
06 43 54.0863	+23 26 10.480	9	7	2452285.39329977	16.5	R	OH
06 43 54.0113	+23 26 10.636	9	7	2452285.39565451	16.5	R	OH
06 43 53.9370	+23 26 10.814	9	7	2452285.39800833	16.5	R	OH
06 43 53.8613	+23 26 10.972	9	7	2452285.40036400	16.5	R	OH
06 43 53.7875	+23 26 11.147	9	7	2452285.40271458	16.6	R	OH
06 31 16.8098	+23 46 55.804	38	9	2452313.31101007	16.9	R	OH
06 31 15.5209	+23 46 56.898	38	9	2452313.37087292	17.0	R	OH
06 31 15.3762	+23 46 57.012	38	9	2452313.37762836	17.0	R	OH
06 31 15.2334	+23 46 57.128	38	9	2452313.38437627	17.1	R	OH
06 31 15.0601	+23 46 57.268	38	9	2452313.39254687	17.0	R	OH
06 31 14.9069	+23 46 57.358	38	9	2452313.39929201	17.1	R	OH
06 30 55.1576	+23 47 13.078	45	38	2452314.36196887	16.0	R	OH
06 30 55.1110	+23 47 13.039	45	38	2452314.36432106	17.3	R	OH
06 30 55.0059	+23 47 13.161	45	38	2452314.36903368	17.0	R	OH
09 01 54.8570	+17 15 44.516	57	42	2452668.47382616	16.6	R	OH
09 01 54.7688	+17 15 44.787	57	42	2452668.47617650	16.7	R	OH
09 01 54.6774	+17 15 45.206	57	42	2452668.47852558	16.7	R	OH
09 01 54.5945	+17 15 45.570	57	42	2452668.48087859	16.7	R	OH
09 01 54.5134	+17 15 45.900	57	42	2452668.48322766	16.7	R	OH
09 01 18.6695	+17 18 06.617	21	22	2452669.46310069	16.5	R	OH
09 01 18.3316	+17 18 07.988	21	22	2452669.47218090	16.1	R	OH
09 01 18.2466	+17 18 08.284	21	22	2452669.47453299	16.7	R	OH
09 01 18.1544	+17 18 08.622	21	22	2452669.47689062	16.5	R	OH
09 01 18.0686	+17 18 08.990	21	22	2452669.47923912	16.5	R	OH
09 01 17.9821	+17 18 09.326	21	22	2452669.48159074	16.5	R	OH

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Elara							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
08 39 23.1899	+18 55 20.627	31	24	2452723.29539514	16.9	R	OH
08 39 23.1602	+18 55 20.787	31	24	2452723.29951273	17.3	R	OH
08 39 23.1292	+18 55 21.050	31	24	2452723.30543900	16.9	R	OH
08 39 23.0897	+18 55 21.353	31	24	2452723.31211458	16.9	R	OH
08 39 23.0105	+18 55 21.960	31	24	2452723.32615463	17.0	R	OH
08 39 13.7352	+18 56 52.110	36	16	2452725.48138646	17.3	R	OH
08 39 13.7221	+18 56 52.214	36	16	2452725.48466620	17.3	R	OH
08 39 13.7109	+18 56 52.401	36	16	2452725.48974201	17.4	R	OH
08 39 13.6955	+18 56 52.498	36	16	2452725.49301979	17.4	R	OH
08 39 13.6847	+18 56 52.649	36	16	2452725.49629340	17.4	R	OH
08 39 13.6582	+18 56 52.863	36	16	2452725.50285023	17.1	R	OH
08 39 13.6458	+18 56 52.995	36	16	2452725.50612407	17.4	R	OH
08 39 13.6373	+18 56 53.105	36	16	2452725.50940301	17.4	R	OH
08 39 13.6271	+18 56 53.259	36	16	2452725.51267697	17.3	R	OH
08 39 13.6117	+18 56 53.327	36	16	2452725.51595093	17.4	R	OH
11 15 43.0053	+06 10 31.483	48	20	2453026.62202986	17.5	R	OH
11 15 42.9861	+06 10 31.808	48	20	2453026.62472488	17.0	R	OH
11 15 42.9580	+06 10 32.113	48	20	2453026.62742789	17.2	R	OH
11 15 42.8756	+06 10 32.983	48	20	2453026.63552118	17.1	R	OH
10 48 18.1449	+09 22 59.691	24	12	2453116.31832107	17.0	R	OH
10 48 18.0770	+09 22 59.820	24	12	2453116.32474525	16.9	R	OH
10 48 18.0484	+09 22 59.828	24	12	2453116.32709988	17.1	R	OH
10 48 17.9967	+09 22 59.920	24	12	2453116.33180799	16.9	R	OH
10 48 17.9455	+09 23 00.008	24	12	2453116.33651933	17.0	R	OH
10 48 17.9198	+09 23 00.042	24	12	2453116.33887153	17.1	R	OH
10 48 17.8897	+09 23 00.067	24	12	2453116.34122454	17.0	R	OH
12 51 40.8161	-04 21 54.310	64	32	2453464.60203148	16.6	C	BC
12 51 40.7803	-04 21 54.028	64	32	2453464.60325891	16.4	C	BC
12 51 40.6484	-04 21 53.266	64	32	2453464.60694965	15.4	C	BC
12 51 40.5983	-04 21 53.010	64	32	2453464.60818611	16.4	C	BC
12 51 40.5532	-04 21 52.741	64	32	2453464.60942303	16.4	C	BC
12 51 40.5177	-04 21 52.492	64	32	2453464.61066111	16.3	C	BC
12 51 40.4727	-04 21 52.277	64	32	2453464.61189826	16.3	C	BC
12 46 46.9237	-03 50 34.984	46	33	2453473.38537720	16.0	R	OH
12 46 46.7927	-03 50 34.177	46	33	2453473.38924144	16.2	R	OH
12 46 46.6675	-03 50 33.363	46	33	2453473.39310324	16.3	R	OH
12 46 46.5428	-03 50 32.551	46	33	2453473.39696053	16.1	R	OH
12 46 46.4139	-03 50 31.780	46	33	2453473.40082581	16.4	R	OH
12 46 46.2783	-03 50 30.982	46	33	2453473.40468947	16.3	R	OH
12 46 46.1515	-03 50 30.080	46	33	2453473.40855660	16.3	R	OH
12 36 50.7834	-02 43 54.457	52	14	2453494.40697859	16.8	R	OH
12 36 50.6427	-02 43 53.494	52	14	2453494.41315995	16.9	R	OH
12 36 50.4475	-02 43 52.114	52	14	2453494.42158171	16.8	R	OH
12 36 50.3384	-02 43 51.441	52	14	2453494.42578611	17.1	R	OH
12 36 50.2466	-02 43 50.768	52	14	2453494.42999028	16.7	R	OH
12 36 50.1491	-02 43 50.085	52	14	2453494.43420289	16.8	R	OH
12 36 50.0474	-02 43 49.434	52	14	2453494.43840845	16.7	R	OH
15 03 14.1355	-16 01 17.796	22	22	2453794.74704664	17.4	C	BC
15 03 14.1409	-16 01 17.750	22	22	2453794.74813646	17.3	C	BC
15 03 14.1385	-16 01 17.752	22	22	2453794.74921644	17.2	C	BC
15 03 14.1427	-16 01 17.659	22	22	2453794.75029236	16.9	C	BC
15 03 14.1398	-16 01 17.629	22	22	2453794.75137164	17.4	C	BC
15 03 14.1421	-16 01 17.530	22	22	2453794.75464028	17.2	C	BC
15 03 14.1430	-16 01 17.504	22	22	2453794.75571991	17.3	C	BC
15 03 14.1467	-16 01 17.466	22	22	2453794.75679954	17.2	C	BC
15 03 14.1463	-16 01 17.403	22	22	2453794.75787292	16.9	C	BC
15 03 14.1464	-16 01 17.368	22	22	2453794.75895243	17.4	C	BC
15 03 14.1457	-16 01 17.305	22	22	2453794.76004167	17.4	C	BC
15 03 14.1481	-16 01 17.333	22	22	2453794.76113113	17.4	C	BC
15 03 14.1492	-16 01 17.230	22	22	2453794.76222037	17.3	C	BC

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Elara

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
15 03 14.1521	-16 01 17.236	22	22	2453794.76330961	17.3	C	BC
15 03 14.1498	-16 01 17.168	22	22	2453794.76438970	17.3	C	BC
15 03 14.1502	-16 01 17.156	22	22	2453794.76546921	17.3	C	BC
15 03 14.1531	-16 01 17.080	22	22	2453794.76765174	17.3	C	BC
15 03 15.2038	-16 00 38.792	11	10	2453795.74559826	17.2	C	BC
15 03 15.2051	-16 00 38.718	11	10	2453795.74702998	17.2	C	BC
15 03 15.2048	-16 00 38.553	11	10	2453795.75098299	17.2	C	BC
15 03 15.2037	-16 00 38.503	11	10	2453795.75240475	17.2	C	BC
15 03 15.2042	-16 00 38.447	11	10	2453795.75382778	17.2	C	BC
15 03 15.2043	-16 00 38.408	11	10	2453795.75525926	17.2	C	BC
15 03 15.2058	-16 00 38.330	11	10	2453795.75667604	17.2	C	BC
15 03 15.2050	-16 00 38.286	11	10	2453795.75810752	17.1	C	BC
15 03 15.2057	-16 00 38.107	11	10	2453795.76237211	17.2	C	BC
15 03 15.2058	-16 00 38.041	11	10	2453795.76380370	17.2	C	BC
15 03 15.2046	-16 00 38.003	11	10	2453795.76522766	17.2	C	BC
15 03 15.2064	-16 00 37.946	11	10	2453795.76666030	17.1	C	BC
15 03 15.2056	-16 00 37.868	11	10	2453795.76808218	17.3	C	BC
15 03 15.2064	-16 00 37.761	11	10	2453795.77092523	17.2	C	BC
15 03 15.2064	-16 00 37.712	11	10	2453795.77234560	17.3	C	BC
15 03 15.2066	-16 00 37.672	11	10	2453795.77377674	17.3	C	BC
15 03 15.2559	-15 59 11.320	20	12	2453797.74673368	17.1	C	BC
15 03 15.2508	-15 59 11.239	20	12	2453797.74815544	17.2	C	BC
15 03 15.2521	-15 59 11.169	20	12	2453797.74958681	17.0	C	BC
15 03 15.2511	-15 59 11.121	20	12	2453797.75101539	17.1	C	BC
15 03 15.2479	-15 59 11.049	20	12	2453797.75244722	17.1	C	BC
15 03 15.2434	-15 59 10.963	20	12	2453797.75386887	17.1	C	BC
15 03 15.2463	-15 59 10.895	20	12	2453797.75529086	17.1	C	BC
15 03 15.2424	-15 59 10.857	20	12	2453797.75671215	17.1	C	BC
15 03 15.2389	-15 59 10.784	20	12	2453797.75813380	17.1	C	BC
15 03 15.2378	-15 59 10.730	20	12	2453797.75956539	17.2	C	BC
15 03 15.2371	-15 59 10.648	20	12	2453797.76099155	17.1	C	BC
15 03 15.2318	-15 59 10.535	20	12	2453797.76384514	17.2	C	BC
15 03 15.2285	-15 59 10.441	20	12	2453797.76526759	17.1	C	BC
15 03 15.2293	-15 59 10.406	20	12	2453797.76668715	17.2	C	BC
15 03 15.2253	-15 59 10.325	20	12	2453797.76811019	17.0	C	BC
15 03 15.2240	-15 59 10.266	20	12	2453797.76954236	17.2	C	BC
15 02 58.9545	-15 53 38.150	8	15	2453803.73087431	17.2	C	BC
15 02 58.9399	-15 53 37.971	8	15	2453803.73345208	17.0	C	BC
15 02 58.9230	-15 53 37.809	8	15	2453803.73640625	17.1	C	BC
15 02 58.9080	-15 53 37.640	8	15	2453803.73922373	17.1	C	BC
15 02 54.0135	-15 52 34.052	30	34	2453804.70536933	17.2	C	BC
15 02 53.9938	-15 52 33.806	30	34	2453804.70894873	16.0	C	BC
15 02 53.9867	-15 52 33.748	30	34	2453804.71014664	17.2	C	BC
15 02 53.9829	-15 52 33.634	30	34	2453804.71133669	16.0	C	BC
15 02 53.9713	-15 52 33.640	30	34	2453804.71252674	17.0	C	BC
15 02 53.9651	-15 52 33.518	30	34	2453804.71372685	17.3	C	BC
15 02 53.9566	-15 52 33.454	30	34	2453804.71492650	16.1	C	BC
15 02 53.9517	-15 52 33.344	30	34	2453804.71611678	17.2	C	BC
15 02 53.9392	-15 52 33.198	30	34	2453804.71850255	17.1	C	BC
15 02 53.9249	-15 52 33.155	30	34	2453804.71969294	17.0	C	BC
15 02 53.9212	-15 52 33.026	30	34	2453804.72088299	16.6	C	BC
15 02 53.9056	-15 52 32.840	30	34	2453804.72327303	17.2	C	BC
15 02 53.9005	-15 52 32.864	30	34	2453804.72446343	17.2	C	BC
15 02 53.8818	-15 52 32.716	30	34	2453804.72684387	17.1	C	BC
15 02 53.8729	-15 52 32.460	30	34	2453804.72924502	15.8	C	BC
15 02 53.8638	-15 52 32.445	30	34	2453804.73043507	17.0	C	BC
15 02 27.1870	-15 47 44.431	28	17	2453808.69527512	17.2	C	BC
15 02 27.1546	-15 47 44.120	28	17	2453808.69941852	16.9	C	BC
15 02 27.1151	-15 47 43.773	28	17	2453808.70384896	17.0	C	BC
15 02 27.0896	-15 47 43.532	28	17	2453808.70696030	17.0	C	BC

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Elara

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
15 02 27.0722	-15 47 43.411	28	17	2453808.70846736	17.1	C	BC
15 02 27.0665	-15 47 43.329	28	17	2453808.70965775	17.0	C	BC
15 02 27.0568	-15 47 43.253	28	17	2453808.71084803	17.2	C	BC
15 02 27.0325	-15 47 43.028	28	17	2453808.71323866	17.1	C	BC
15 02 27.0243	-15 47 42.949	28	17	2453808.71443877	17.0	C	BC
15 02 27.0113	-15 47 42.878	28	17	2453808.71562905	17.0	C	BC
15 02 27.0028	-15 47 42.812	28	17	2453808.71681875	17.0	C	BC
15 02 26.9949	-15 47 42.715	28	17	2453808.71800868	17.1	C	BC
14 33 54.2012	-13 32 04.103	54	22	2453894.51511319	16.9	C	BC
14 33 54.1696	-13 32 04.070	54	22	2453894.51703958	16.7	C	BC
14 33 54.1583	-13 32 04.050	54	22	2453894.51800914	16.6	C	BC
14 33 54.1152	-13 32 04.030	54	22	2453894.52091539	16.6	C	BC
14 33 54.0984	-13 32 04.051	54	22	2453894.52188310	16.2	C	BC
14 33 54.0862	-13 32 04.035	54	22	2453894.52285093	16.4	C	BC
14 33 54.0750	-13 32 04.017	54	22	2453894.52381887	16.8	C	BC
14 33 54.0648	-13 32 03.953	54	22	2453894.52428970	16.3	C	BC
14 33 54.0472	-13 32 03.962	54	22	2453894.52525822	16.7	C	BC
14 33 54.0254	-13 32 03.986	54	22	2453894.52720486	16.8	C	BC
14 33 54.0110	-13 32 03.923	54	22	2453894.52817257	16.6	C	BC
14 33 54.0017	-13 32 03.949	54	22	2453894.52913229	16.1	C	BC
14 33 53.9851	-13 32 03.954	54	22	2453894.53010000	16.6	C	BC
14 33 53.9546	-13 32 03.917	54	22	2453894.53203218	16.7	C	BC
14 33 53.8960	-13 32 03.899	54	22	2453894.53561319	16.7	C	BC
14 33 53.8842	-13 32 03.815	54	22	2453894.53657627	15.8	C	BC
14 33 53.8536	-13 32 03.833	54	22	2453894.53849375	16.8	C	BC
14 33 53.8446	-13 32 03.813	54	22	2453894.53945683	16.7	C	BC
14 33 53.8286	-13 32 03.812	54	22	2453894.54041979	16.8	C	BC
14 33 53.7771	-13 32 03.753	54	22	2453894.54331181	16.7	C	BC
14 33 53.7708	-13 32 03.803	54	22	2453894.54427488	16.6	C	BC
14 33 53.7421	-13 32 03.722	54	22	2453894.54620127	16.5	C	BC
14 33 53.6954	-13 32 03.691	54	22	2453894.54909352	16.8	C	BC
14 33 53.6627	-13 32 03.698	54	22	2453894.55100961	16.7	C	BC
14 33 53.6535	-13 32 03.681	54	22	2453894.55197257	16.5	C	BC
14 30 19.3429	-13 42 24.398	14	30	2453920.53311863	17.2	C	BC
14 30 19.3389	-13 42 24.456	14	30	2453920.53465590	17.2	C	BC
14 30 19.3348	-13 42 24.530	14	30	2453920.53619329	17.2	C	BC
14 30 19.3321	-13 42 24.620	14	30	2453920.53773090	17.1	C	BC
14 30 19.3295	-13 42 24.692	14	30	2453920.53926817	17.2	C	BC
14 30 19.3245	-13 42 24.786	14	30	2453920.54081551	17.1	C	BC
14 30 19.3222	-13 42 24.879	14	30	2453920.54235336	17.2	C	BC
14 30 19.3177	-13 42 24.951	14	30	2453920.54389074	17.2	C	BC
14 30 19.3088	-13 42 25.138	14	30	2453920.54696551	17.3	C	BC
14 30 19.3060	-13 42 25.199	14	30	2453920.54851285	17.2	C	BC
14 30 19.3027	-13 42 25.292	14	30	2453920.55006019	17.2	C	BC
14 30 19.2983	-13 42 25.388	14	30	2453920.55160775	17.2	C	BC
14 30 19.2956	-13 42 25.488	14	30	2453920.55314514	17.2	C	BC
14 30 19.2907	-13 42 25.540	14	30	2453920.55469248	17.2	C	BC
14 30 19.2892	-13 42 25.643	14	30	2453920.55622998	17.2	C	BC
14 30 19.2843	-13 42 25.753	14	30	2453920.55776725	17.2	C	BC
14 30 19.2811	-13 42 25.837	14	30	2453920.55930451	17.2	C	BC
14 30 19.2780	-13 42 25.930	14	30	2453920.56085174	17.1	C	BC
14 30 19.2609	-13 42 26.308	14	30	2453920.56814711	17.1	C	BC
14 30 19.2579	-13 42 26.388	14	30	2453920.56968449	17.0	C	BC
14 30 19.2522	-13 42 26.532	14	30	2453920.57276910	17.1	C	BC
14 30 19.2415	-13 42 26.753	14	30	2453920.57738125	17.1	C	BC
14 30 19.2372	-13 42 26.846	14	30	2453920.57892847	17.1	C	BC
14 30 19.2346	-13 42 26.877	14	30	2453920.58046586	17.0	C	BC
14 44 21.3289	-15 23 19.908	34	20	2453978.43073056	17.4	C	BC
14 44 21.3986	-15 23 20.271	34	20	2453978.43316319	17.5	C	BC
14 44 21.4445	-15 23 20.506	34	20	2453978.43459502	17.4	C	BC

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
14 44 21.5277	-15 23 20.916	34	20	2453978.43743831	17.5	C	BC
14 44 21.5693	-15 23 21.128	34	20	2453978.43885995	17.4	C	BC
14 44 21.6603	-15 23 21.545	34	20	2453978.44172384	17.6	C	BC
14 44 21.6985	-15 23 21.713	34	20	2453978.44314560	17.3	C	BC
14 44 21.7383	-15 23 21.973	34	20	2453978.44456725	17.3	C	BC
14 44 21.7829	-15 23 22.157	34	20	2453978.44598935	17.5	C	BC
14 44 21.9579	-15 23 23.019	34	20	2453978.45169583	17.4	C	BC
14 44 52.3591	-15 25 49.547	22	13	2453979.44100313	17.6	C	BC
14 44 52.4063	-15 25 49.803	22	13	2453979.44254109	17.5	C	BC
14 44 52.4566	-15 25 50.032	22	13	2453979.44408831	17.7	C	BC
14 44 52.5508	-15 25 50.473	22	13	2453979.44716308	17.7	C	BC
14 44 52.6446	-15 25 50.904	22	13	2453979.45023808	17.7	C	BC
14 44 52.6931	-15 25 51.142	22	13	2453979.45178530	17.2	C	BC
14 44 52.7402	-15 25 51.384	22	13	2453979.45333264	17.6	C	BC
14 44 52.7851	-15 25 51.607	22	13	2453979.45487002	17.6	C	BC
14 44 52.8325	-15 25 51.837	22	13	2453979.45640752	17.5	C	BC
14 44 52.8789	-15 25 52.071	22	13	2453979.45794491	17.8	C	BC
14 44 52.9256	-15 25 52.291	22	13	2453979.45949213	17.4	C	BC
17 17 42.3919	-22 45 26.849	18	23	2454208.67818241	17.7	U	BC
17 17 42.3919	-22 45 26.851	18	21	2454208.67818241	17.7	U	Z
17 17 42.3839	-22 45 26.906	18	23	2454208.67891655	17.7	U	BC
17 17 42.3842	-22 45 26.907	18	21	2454208.67891655	17.7	U	Z
17 17 42.3778	-22 45 26.923	18	21	2454208.67964225	17.7	U	Z
17 17 42.3778	-22 45 26.924	18	23	2454208.67964225	17.7	U	BC
17 17 42.3746	-22 45 26.913	18	23	2454208.68037662	17.7	U	BC
17 17 42.3747	-22 45 26.912	18	21	2454208.68037662	17.7	U	Z
17 17 42.3672	-22 45 26.982	18	21	2454208.68112176	17.7	U	Z
17 17 42.3675	-22 45 26.988	18	23	2454208.68112176	17.7	U	BC
17 17 42.3580	-22 45 27.000	18	23	2454208.68185683	17.7	U	BC
17 17 42.3581	-22 45 26.995	18	21	2454208.68185683	17.7	U	Z
17 17 42.3541	-22 45 26.984	18	23	2454208.68258194	17.7	U	BC
17 17 42.3543	-22 45 26.981	18	21	2454208.68258194	17.7	U	Z
17 17 42.3466	-22 45 27.000	18	23	2454208.68331667	17.7	U	BC
17 17 42.3469	-22 45 27.005	18	21	2454208.68331667	17.7	U	Z
17 17 42.3405	-22 45 27.041	18	21	2454208.68406146	17.7	U	Z
17 17 42.3408	-22 45 27.047	18	23	2454208.68406146	17.7	U	BC
17 17 42.3336	-22 45 27.017	18	23	2454208.68479711	17.7	U	BC
17 17 42.3338	-22 45 27.014	18	21	2454208.68479711	17.7	U	Z
16 31 16.1493	-21 14 36.254	53	23	2454334.54048322	17.7	C	BC
16 31 16.1583	-21 14 36.285	53	23	2454334.54155579	17.7	C	BC
16 31 16.1807	-21 14 36.318	53	23	2454334.54371273	17.7	C	BC
16 31 16.1853	-21 14 36.334	53	23	2454334.54478495	17.2	C	BC
16 31 16.2036	-21 14 36.315	53	23	2454334.54586389	17.7	C	BC
16 31 16.2121	-21 14 36.276	53	23	2454334.54694248	17.7	C	BC
16 31 16.2218	-21 14 36.333	53	23	2454334.54802095	17.8	C	BC
16 31 16.2445	-21 14 36.281	53	23	2454334.55016852	17.6	C	BC
16 31 16.2585	-21 14 36.284	53	23	2454334.55124711	17.8	C	BC
16 31 16.2617	-21 14 36.324	53	23	2454334.55232581	17.4	C	BC
16 31 16.2823	-21 14 36.332	53	23	2454334.55339468	17.1	C	BC
16 31 16.3039	-21 14 36.310	53	23	2454334.55663067	17.8	C	BC
16 31 16.3250	-21 14 36.293	53	23	2454334.55770926	17.1	C	BC
16 31 16.3259	-21 14 36.311	53	23	2454334.55878924	17.0	C	BC
16 31 16.3485	-21 14 36.312	53	23	2454334.55987245	17.6	C	BC
16 31 16.3549	-21 14 36.323	53	23	2454334.56096516	17.5	C	BC
16 31 26.6847	-21 14 42.011	60	22	2454335.49991748	16.2	C	BC
16 31 26.7630	-21 14 42.071	60	22	2454335.50750891	17.9	C	BC
16 31 26.8061	-21 14 42.098	60	22	2454335.51075394	17.5	C	BC
16 31 26.8315	-21 14 42.127	60	22	2454335.51400023	17.9	C	BC
16 31 38.5444	-21 14 50.038	22	36	2454336.50675556	17.7	C	BC
16 31 38.5680	-21 14 50.054	22	36	2454336.50892095	17.7	C	BC

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Elara							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
16 31 38.5828	-21 14 50.100	22	36	2454336.50999410	17.7	C	BC
16 31 38.5967	-21 14 50.023	22	36	2454336.51107743	17.7	C	BC
16 31 38.6177	-21 14 50.109	22	36	2454336.51323079	17.6	C	BC
16 31 38.6452	-21 14 50.093	22	36	2454336.51539456	17.8	C	BC
16 31 38.6831	-21 14 50.174	22	36	2454336.51862951	17.7	C	BC
16 31 38.6986	-21 14 50.165	22	36	2454336.51970914	17.8	C	BC
16 31 38.7072	-21 14 50.095	22	36	2454336.52078854	17.7	C	BC
16 31 38.7209	-21 14 50.149	22	36	2454336.52186713	17.7	C	BC
16 31 38.7317	-21 14 50.098	22	36	2454336.52294630	15.9	C	BC
16 31 51.0574	-21 15 00.020	19	7	2454337.49888518	17.5	C	BC
16 31 51.1497	-21 15 00.088	19	7	2454337.50642361	17.5	C	BC
16 31 51.1662	-21 15 00.096	19	7	2454337.50750220	17.6	C	BC
16 31 51.1778	-21 15 00.113	19	7	2454337.50858102	17.5	C	BC
16 31 51.1929	-21 15 00.125	19	7	2454337.50965486	17.5	C	BC
16 31 51.2054	-21 15 00.144	19	7	2454337.51073368	17.6	C	BC
16 31 51.2175	-21 15 00.150	19	7	2454337.51180266	17.5	C	BC
16 31 51.2424	-21 15 00.153	19	7	2454337.51396007	17.5	C	BC
16 31 51.2595	-21 15 00.170	19	7	2454337.51503924	17.6	C	BC
16 31 51.2980	-21 15 00.196	19	7	2454337.51827546	17.5	C	BC
16 37 00.5920	-21 22 09.447	70	79	2454353.48345198	17.3	un	E
16 37 00.6176	-21 22 09.496	70	79	2454353.48452182	17.4	un	E
16 37 00.6455	-21 22 09.527	70	79	2454353.48559421	17.4	un	E
16 37 00.6741	-21 22 09.582	70	79	2454353.48674128	17.4	un	E
16 37 00.7019	-21 22 09.618	70	79	2454353.48786369	17.4	un	E
16 37 00.7291	-21 22 09.679	70	79	2454353.48897243	17.4	un	E
16 37 00.7579	-21 22 09.728	70	79	2454353.49009472	17.3	un	E
16 37 00.7852	-21 22 09.770	70	79	2454353.49120636	17.3	un	E
16 37 00.8130	-21 22 09.810	70	79	2454353.49233618	17.3	un	E
16 37 00.8479	-21 22 09.780	70	79	2454353.49411346	17.0	un	E
16 37 00.8764	-21 22 09.824	70	79	2454353.49524328	17.0	un	E
16 37 00.9320	-21 22 09.915	70	79	2454353.49747003	17.0	un	E
16 37 01.0158	-21 22 10.053	70	79	2454353.50085797	17.0	un	E
16 37 01.0437	-21 22 10.099	70	79	2454353.50198651	17.0	un	E
16 37 01.0732	-21 22 10.147	70	79	2454353.50311992	16.9	un	E
16 37 03.2474	-21 22 13.763	70	79	2454353.58938916	17.6	un	E
16 37 03.3003	-21 22 13.844	70	79	2454353.59144976	17.6	un	E
16 37 03.3524	-21 22 13.927	70	79	2454353.59349936	17.6	un	E
16 37 03.4036	-21 22 14.004	70	79	2454353.59555626	17.6	un	E
16 37 03.4545	-21 22 14.064	70	79	2454353.59754010	17.6	un	E
16 37 03.5073	-21 22 14.151	70	79	2454353.59959317	17.6	un	E
16 37 03.5573	-21 22 14.242	70	79	2454353.60158303	17.5	un	E
16 37 03.6094	-21 22 14.325	70	79	2454353.60361967	17.6	un	E
16 37 03.6596	-21 22 14.406	70	79	2454353.60560721	17.6	un	E
19 33 50.0320	-21 41 40.908	33	29	2454574.75515509	17.8	I	BC
19 33 50.0602	-21 41 40.769	33	29	2454574.75796562	17.6	I	BC
19 33 50.1340	-21 41 40.495	33	29	2454574.76359664	17.5	I	BC
19 33 50.1649	-21 41 40.313	33	29	2454574.76641713	18.0	I	BC
19 33 50.2006	-21 41 40.136	33	29	2454574.76922766	17.7	I	BC
19 33 50.2306	-21 41 39.966	33	29	2454574.77203819	17.7	I	BC
19 33 50.2675	-21 41 39.892	33	29	2454574.77485208	17.5	I	BC
19 32 03.6641	-21 28 43.556	85	20	2454612.77008796	17.4	I	BC
19 32 03.6099	-21 28 43.571	85	20	2454612.77359028	15.7	I	BC
19 32 03.5473	-21 28 43.652	85	20	2454612.77644132	17.3	I	BC
19 32 03.4962	-21 28 43.679	85	20	2454612.77929965	17.4	I	BC
19 32 03.4478	-21 28 43.731	85	20	2454612.78216667	17.4	I	BC
19 32 03.4036	-21 28 43.775	85	20	2454612.78359514	17.5	I	BC
19 32 03.3844	-21 28 43.791	85	20	2454612.78502373	17.3	I	BC
19 32 03.3352	-21 28 43.858	85	20	2454612.78788137	17.5	I	BC
19 32 03.2839	-21 28 43.912	85	20	2454612.79072870	16.1	I	BC
19 32 03.2459	-21 28 43.943	85	20	2454612.79215822	17.3	I	BC

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Elara

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 30 04.8519	-21 31 00.522	78	7	2454618.74278898	17.1	un	E
19 30 04.7215	-21 31 00.697	78	7	2454618.74827064	17.2	un	E
19 30 04.6308	-21 31 00.821	78	7	2454618.75276894	17.2	un	E
19 28 54.5585	-21 32 37.748	3	7	2454621.81553304	16.9	un	E
19 28 54.4511	-21 32 37.907	3	7	2454621.81988766	17.1	un	E
18 58 00.5190	-23 28 03.618	41	34	2454729.47887488	18.0	I	BC
18 58 00.5321	-23 28 03.650	41	34	2454729.47983079	18.0	I	BC
18 58 00.5395	-23 28 03.622	41	34	2454729.48080127	18.0	I	BC
18 58 00.5850	-23 28 03.647	41	34	2454729.48405139	18.2	I	BC
18 58 00.5988	-23 28 03.611	41	34	2454729.48524676	17.9	I	BC
18 58 00.6299	-23 28 03.610	41	34	2454729.48764502	18.1	I	BC
18 58 00.6437	-23 28 03.653	41	34	2454729.48884248	18.0	I	BC
18 58 00.7184	-23 28 03.725	41	34	2454729.49541725	17.9	I	BC
18 58 00.7378	-23 28 03.694	41	34	2454729.49661574	17.9	I	BC
18 58 00.7594	-23 28 03.773	41	34	2454729.49831227	16.6	I	BC
18 58 00.7670	-23 28 03.750	41	34	2454729.49950961	17.9	I	BC
18 58 00.7830	-23 28 03.803	41	34	2454729.50071539	17.8	I	BC
18 58 00.7949	-23 28 03.845	41	34	2454729.50190255	17.8	I	BC
18 58 00.8112	-23 28 03.810	41	34	2454729.50310012	17.9	I	BC
18 58 00.8403	-23 28 03.881	41	34	2454729.50550509	17.4	I	BC
18 58 00.8630	-23 28 03.856	41	34	2454729.50669502	17.3	I	BC
18 58 00.8708	-23 28 03.890	41	34	2454729.50789259	18.1	I	BC
18 58 00.8877	-23 28 03.895	41	34	2454729.50909537	18.1	I	BC
18 58 00.9809	-23 28 03.934	41	34	2454729.51679884	18.0	I	BC
18 58 01.0013	-23 28 03.950	41	34	2454729.51857465	18.0	I	BC
18 58 01.0262	-23 28 03.953	41	34	2454729.52035081	17.8	I	BC
18 58 01.0410	-23 28 03.950	41	34	2454729.52212685	17.8	I	BC
18 58 01.0623	-23 28 04.012	41	34	2454729.52389259	18.0	I	BC
18 58 01.0883	-23 28 03.937	41	34	2454729.52567014	18.1	I	BC
18 58 01.1566	-23 28 04.000	41	34	2454729.53100197	18.1	I	BC
18 58 01.7987	-23 28 04.406	41	34	2454729.58334537	16.1	I	BC
18 58 01.8139	-23 28 04.465	41	34	2454729.58512245	17.0	I	BC
21 53 54.2166	-13 48 01.258	16	12	2454974.86827824	17.4	un	E
21 53 54.3053	-13 48 01.032	16	12	2454974.87227624	17.8	un	E
21 53 54.4248	-13 48 00.729	16	12	2454974.87754880	17.6	un	E
21 53 54.4737	-13 48 00.580	16	12	2454974.87984847	17.2	un	E
21 53 54.5459	-13 48 00.390	16	12	2454974.88311258	17.4	un	E
21 53 55.0731	-13 47 59.054	16	12	2454974.90695453	17.3	un	E
21 53 55.1226	-13 47 58.923	16	12	2454974.90923765	17.3	un	E
21 53 55.1946	-13 47 58.727	16	12	2454974.91243510	17.3	un	E
21 53 55.2352	-13 47 58.634	16	12	2454974.91426377	17.3	un	E
21 53 55.2765	-13 47 58.527	16	12	2454974.91608167	17.3	un	E
21 53 55.3163	-13 47 58.431	16	12	2454974.91791069	17.4	un	E
21 53 55.3541	-13 47 58.334	16	12	2454974.91965798	17.3	un	E
21 53 55.4023	-13 47 58.221	16	12	2454974.92193566	17.4	un	E
21 53 55.4487	-13 47 58.088	16	12	2454974.92396076	17.3	un	E
21 53 55.4877	-13 47 58.006	16	12	2454974.92577947	17.3	un	E
21 53 55.5275	-13 47 57.884	16	12	2454974.92762076	17.3	un	E
21 53 55.5662	-13 47 57.794	16	12	2454974.92936713	17.4	un	E
22 00 02.4516	-13 40 33.930	10	8	2455003.74997755	17.2	I	PE
22 00 02.4543	-13 40 34.033	10	8	2455003.75305521	17.2	I	PE
22 00 02.4581	-13 40 34.107	10	8	2455003.75657350	17.2	I	PE
22 00 02.4610	-13 40 34.179	10	8	2455003.75832245	17.2	I	PE
22 00 02.4632	-13 40 34.223	10	8	2455003.76007407	17.2	I	PE
22 00 02.4644	-13 40 34.284	10	8	2455003.76189757	17.2	I	PE
22 00 02.4664	-13 40 34.343	10	8	2455003.76385914	17.2	I	PE
22 00 02.4691	-13 40 34.375	10	8	2455003.76530000	17.2	I	PE
22 00 02.4704	-13 40 34.418	10	8	2455003.76677812	17.2	I	PE
22 00 02.4712	-13 40 34.480	10	8	2455003.76823333	17.2	I	PE
22 00 02.4723	-13 40 34.507	10	8	2455003.76967731	17.2	I	PE

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Elara

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
22 00 02.4743	-13 40 34.551	10	8	2455003.77112234	17.2	I	PE
22 00 02.4756	-13 40 34.601	10	8	2455003.77256725	17.2	I	PE
22 00 02.4768	-13 40 34.651	10	8	2455003.77401238	17.2	I	PE
22 00 03.8447	-13 41 05.061	9	11	2455004.76173125	17.1	C	PE
22 00 03.8447	-13 41 05.091	9	11	2455004.76307824	17.1	C	PE
22 00 03.8452	-13 41 05.174	9	11	2455004.76497581	17.1	C	PE
22 00 03.8459	-13 41 05.201	9	11	2455004.76561343	17.1	C	PE
22 00 03.8463	-13 41 05.220	9	11	2455004.76688669	17.2	C	PE
22 00 03.8462	-13 41 05.262	9	11	2455004.76752338	17.1	C	PE
22 00 03.8459	-13 41 05.276	9	11	2455004.76815984	17.2	C	PE
22 00 03.8457	-13 41 05.299	9	11	2455004.76879711	17.2	C	PE
22 00 03.8458	-13 41 05.307	9	11	2455004.76945891	17.2	C	PE
22 00 03.8457	-13 41 05.353	9	11	2455004.77015613	17.1	C	PE
22 00 03.8465	-13 41 05.368	9	11	2455004.77079282	17.1	C	PE
22 00 03.8478	-13 41 05.419	9	11	2455004.77206690	17.1	C	PE
22 00 03.8477	-13 41 05.439	9	11	2455004.77271319	17.1	C	PE
22 00 03.8465	-13 41 05.532	9	11	2455004.77529190	17.1	C	PE
22 00 03.8482	-13 41 05.536	9	11	2455004.77591840	17.1	C	PE
22 00 03.8475	-13 41 05.553	9	11	2455004.77660845	17.2	C	PE
22 00 03.8465	-13 41 05.561	9	11	2455004.77730231	17.1	C	PE
22 00 03.8484	-13 41 05.622	9	11	2455004.77869225	17.2	C	PE
22 00 03.8486	-13 41 05.658	9	11	2455004.77939630	17.2	C	PE
22 00 03.8476	-13 41 05.669	9	11	2455004.78003044	17.2	C	PE
22 00 03.8483	-13 41 05.696	9	11	2455004.78131007	17.2	C	PE
22 00 03.8475	-13 41 05.726	9	11	2455004.78193738	17.2	C	PE
22 00 03.8474	-13 41 05.730	9	11	2455004.78262477	17.1	C	PE
22 00 03.8485	-13 41 05.774	9	11	2455004.78332755	17.1	C	PE
22 00 03.8486	-13 41 05.793	9	11	2455004.78398333	17.2	C	PE
22 00 04.0755	-13 42 18.554	8	5	2455006.81971273	17.3	I	PE
22 00 04.0742	-13 42 18.598	8	5	2455006.82085544	17.3	I	PE
22 00 04.0733	-13 42 18.635	8	5	2455006.82195255	17.2	I	PE
22 00 04.0651	-13 42 18.808	8	5	2455006.82639884	17.2	I	PE
22 00 04.0636	-13 42 18.893	8	5	2455006.82859826	17.1	I	PE
22 00 04.0611	-13 42 18.943	8	5	2455006.82971389	17.3	I	PE
22 00 04.0571	-13 42 19.027	8	5	2455006.83200289	17.2	I	PE
22 00 04.0561	-13 42 19.071	8	5	2455006.83310220	17.3	I	PE
22 00 04.0536	-13 42 19.103	8	5	2455006.83420185	17.2	I	PE
22 00 04.0527	-13 42 19.143	8	5	2455006.83530127	17.2	I	PE
22 00 04.0510	-13 42 19.184	8	5	2455006.83640046	17.2	I	PE
22 00 04.0459	-13 42 19.338	8	5	2455006.84015498	17.2	I	PE
21 55 58.7844	-14 12 24.911	14	15	2455030.81335799	16.7	C	BC
21 55 58.7596	-14 12 25.012	14	15	2455030.81455544	16.8	C	BC
21 55 58.7351	-14 12 25.156	14	15	2455030.81575266	16.8	C	BC
21 55 58.6876	-14 12 25.428	14	15	2455030.81814792	16.8	C	BC
21 55 58.6392	-14 12 25.651	14	15	2455030.82054132	16.7	C	BC
21 55 58.6168	-14 12 25.783	14	15	2455030.82172893	16.9	C	BC
21 55 58.5938	-14 12 25.892	14	15	2455030.82292581	16.8	C	BC
21 55 58.5668	-14 12 26.053	14	15	2455030.82412245	16.7	C	BC
00 14 38.5168	+00 28 24.334	14	16	2455383.82543981	16.6	C	BC
00 14 38.5259	+00 28 24.369	14	16	2455383.82659722	16.7	C	BC
00 14 38.5305	+00 28 24.450	14	16	2455383.82719907	16.7	C	BC
00 14 38.5360	+00 28 24.491	14	16	2455383.82780093	16.7	C	BC
00 14 38.5413	+00 28 24.530	14	16	2455383.82840278	16.7	C	BC
00 14 38.5532	+00 28 24.637	14	16	2455383.83020833	16.7	C	BC
00 14 38.5600	+00 28 24.720	14	16	2455383.83081019	16.7	C	BC
00 14 38.5692	+00 28 24.769	14	16	2455383.83202546	16.6	C	BC
00 14 38.5756	+00 28 24.829	14	16	2455383.83262731	16.6	C	BC
00 14 38.5809	+00 28 24.853	14	16	2455383.83322917	16.7	C	BC
00 14 38.5836	+00 28 24.922	14	16	2455383.83383102	16.6	C	BC
00 14 38.5881	+00 28 24.954	14	16	2455383.83443287	16.6	C	BC

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Elara							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
00 14 38.5979	+00 28 25.061	14	16	2455383.83564815	16.5	C	BC
00 14 38.6102	+00 28 25.137	14	16	2455383.83685185	16.5	C	BC
00 14 38.6130	+00 28 25.152	14	16	2455383.83745370	16.5	C	BC
00 14 47.0216	+00 29 32.988	32	47	2455384.83496528	16.4	C	BC
00 14 47.0329	+00 29 32.980	32	47	2455384.83605324	17.0	C	BC
00 14 47.0333	+00 29 33.008	32	47	2455384.83665509	16.9	C	BC
00 14 47.0359	+00 29 33.144	32	47	2455384.83724537	16.9	C	BC
00 14 47.0421	+00 29 33.215	32	47	2455384.83784722	17.0	C	BC
00 14 47.0442	+00 29 33.223	32	47	2455384.83844907	16.9	C	BC
00 14 47.0596	+00 29 33.311	32	47	2455384.84025463	17.0	C	BC
00 14 47.0668	+00 29 33.310	32	47	2455384.84085648	17.1	C	BC
23 41 04.2332	-03 57 29.864	22	40	2455489.63581019	16.5	I	PE
23 41 04.1875	-03 57 30.317	22	40	2455489.63868056	16.4	I	PE
23 41 04.1797	-03 57 30.446	22	40	2455489.63918981	16.3	I	PE
23 41 04.1605	-03 57 30.522	22	40	2455489.64019676	16.6	I	PE
23 41 04.1321	-03 57 30.772	22	40	2455489.64221065	16.4	I	PE
23 41 04.1052	-03 57 31.006	22	40	2455489.64371528	16.5	I	PE
06 52 14.7958	+23 34 23.715	58	40	2456698.54518453	16.2	I	BC
06 52 14.7499	+23 34 23.830	58	40	2456698.54755707	17.1	I	BC
06 52 14.7011	+23 34 23.853	58	40	2456698.54992925	16.4	I	BC
06 52 14.6512	+23 34 23.977	58	40	2456698.55230161	17.4	I	BC
06 52 14.6066	+23 34 24.011	58	40	2456698.55467398	17.0	I	BC
06 52 14.5621	+23 34 24.145	58	40	2456698.55704634	16.7	I	BC
06 52 14.5246	+23 34 24.243	58	40	2456698.55941870	17.0	I	BC
06 52 14.4772	+23 34 24.295	58	40	2456698.56179125	16.3	I	BC
06 52 14.4290	+23 34 24.374	58	40	2456698.56416380	17.5	I	BC
06 52 14.3902	+23 34 24.528	58	40	2456698.56653597	17.0	I	BC

Table B.3. CDS data for Lysithea.

Lysithea							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 06 20.8891	-22 28 17.309	16	8	2450256.60480324	18.2	C	PE
19 06 20.7627	-22 28 17.388	16	8	2450256.60846065	18.1	C	PE
19 06 20.6615	-22 28 17.454	16	8	2450256.61138889	18.1	C	PE
19 06 20.5624	-22 28 17.498	16	8	2450256.61431713	18.1	C	PE
18 45 37.9322	-22 43 06.685	52	52	2450289.55085937	18.3	un	PE
18 45 37.8570	-22 43 06.884	52	52	2450289.55296493	18.2	un	PE
18 45 37.8354	-22 43 06.864	52	52	2450289.55356690	18.3	un	PE
18 45 37.7631	-22 43 06.961	52	52	2450289.55537234	18.3	un	PE
18 45 37.7141	-22 43 07.005	52	52	2450289.55657569	18.3	un	PE
18 44 58.4129	-22 43 45.109	63	40	2450290.64397222	17.6	un	PE
18 44 58.3957	-22 43 45.065	63	40	2450290.64457431	18.4	un	PE
18 44 58.3708	-22 43 45.052	63	40	2450290.64517627	18.3	un	PE
18 44 58.3316	-22 43 45.113	63	40	2450290.64636759	17.0	un	PE
18 44 58.3146	-22 43 45.103	63	40	2450290.64698113	18.1	un	PE
18 44 58.2901	-22 43 45.131	63	40	2450290.64758380	18.4	un	PE
18 44 58.2700	-22 43 45.126	63	40	2450290.64818519	16.7	un	PE
21 13 26.8445	-17 36 44.949	56	53	2450674.61259259	17.0	un	PE
21 13 26.7534	-17 36 45.433	56	53	2450674.61582176	17.5	un	PE
21 13 23.7013	-17 37 00.579	56	53	2450674.72437500	17.6	un	PE
21 13 23.6140	-17 37 01.005	56	53	2450674.72760417	17.8	un	PE
21 12 59.2974	-17 39 07.368	40	20	2450675.62665509	18.2	un	PE
21 12 59.1123	-17 39 08.271	40	20	2450675.63348380	18.1	un	PE
21 12 56.7964	-17 39 19.745	40	20	2450675.71663194	18.1	un	PE
21 12 56.7039	-17 39 20.203	40	20	2450675.71987269	18.0	un	PE
23 52 07.9610	-02 08 55.619	45	6	2451042.49680185	18.2	R	OH
23 52 07.8877	-02 08 55.981	45	6	2451042.50124097	18.2	R	OH
23 52 07.8113	-02 08 56.334	45	6	2451042.50568484	18.2	R	OH

continued ...

Lysithea

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
23 52 07.7348	-02 08 56.706	45	6	2451042.51012847	18.2	R	OH
23 52 07.6522	-02 08 57.073	45	6	2451042.51456655	18.2	R	OH
23 52 07.4237	-02 08 58.163	45	6	2451042.52789456	18.3	R	OH
23 52 07.3410	-02 08 58.530	45	6	2451042.53233449	18.2	R	OH
23 52 07.2618	-02 08 58.901	45	6	2451042.53677257	18.2	R	OH
23 22 41.6417	-05 42 39.409	76	42	2451163.23487407	18.7	R	OH
23 22 41.8307	-05 42 38.251	76	42	2451163.24384838	18.7	R	OH
23 22 41.9460	-05 42 37.577	76	42	2451163.24943588	18.4	R	OH
23 22 42.1792	-05 42 36.267	76	42	2451163.25987164	19.2	R	OH
23 22 42.2940	-05 42 35.627	76	42	2451163.26546076	18.5	R	OH
23 22 42.4704	-05 42 34.487	76	42	2451163.27379734	18.7	R	OH
23 22 42.5793	-05 42 33.902	76	42	2451163.27937662	18.8	R	OH
01 57 35.5431	+09 44 23.902	111	58	2451462.43208692	17.4	R	OH
01 57 35.3618	+09 44 22.880	111	58	2451462.43757477	17.8	R	OH
01 57 35.0842	+09 44 21.269	111	58	2451462.44602384	17.6	R	OH
01 57 34.8649	+09 44 19.998	111	58	2451462.45279583	17.6	R	OH
01 57 34.6153	+09 44 18.654	111	58	2451462.46023889	17.5	R	OH
01 57 34.4627	+09 44 17.761	111	58	2451462.46467037	17.0	R	OH
01 57 34.3305	+09 44 17.050	111	58	2451462.46910833	17.3	R	OH
01 57 34.1898	+09 44 16.252	111	58	2451462.47354340	16.9	R	OH
01 57 33.8714	+09 44 14.404	111	58	2451462.48240972	17.7	R	OH
01 55 23.1867	+09 31 49.254	43	66	2451466.47358275	17.8	R	OH
01 55 23.0382	+09 31 48.497	43	66	2451466.47802778	18.0	R	OH
01 55 22.8185	+09 31 47.352	43	66	2451466.48465706	18.0	R	OH
01 55 22.6309	+09 31 46.330	43	66	2451466.49019444	18.0	R	OH
01 55 22.4871	+09 31 45.476	43	66	2451466.49463241	17.9	R	OH
01 55 22.3314	+09 31 44.717	43	66	2451466.49907118	17.6	R	OH
01 55 22.0333	+09 31 43.099	43	66	2451466.50795231	18.0	R	OH
01 55 21.7353	+09 31 41.424	43	66	2451466.51682500	17.3	R	OH
01 55 21.5868	+09 31 40.515	43	66	2451466.52128993	17.9	R	OH
01 41 23.6992	+08 21 38.012	16	17	2451493.36794792	18.1	R	OH
01 41 23.5457	+08 21 37.428	16	17	2451493.37359190	18.2	R	OH
01 41 23.3816	+08 21 36.754	16	17	2451493.37962847	18.3	R	OH
01 41 23.2905	+08 21 36.390	16	17	2451493.38289884	18.3	R	OH
01 41 23.2053	+08 21 36.002	16	17	2451493.38616424	18.3	R	OH
01 41 23.1157	+08 21 35.642	16	17	2451493.38942697	18.3	R	OH
01 41 23.0257	+08 21 35.294	16	17	2451493.39269525	18.3	R	OH
01 34 29.7633	+08 00 19.452	95	76	2451514.45155382	18.2	R	OH
01 34 29.6246	+08 00 19.552	95	76	2451514.46230810	18.4	R	OH
01 34 29.5754	+08 00 19.483	95	76	2451514.46557211	18.2	R	OH
01 34 29.4984	+08 00 19.379	95	76	2451514.47211215	18.3	R	OH
04 08 51.4157	+20 13 54.800	56	21	2451901.27767396	17.6	R	OH
04 08 51.2796	+20 13 54.321	56	21	2451901.28233090	17.6	R	OH
04 08 51.0954	+20 13 53.683	56	21	2451901.28874896	17.4	R	OH
04 08 50.9725	+20 13 53.276	56	21	2451901.29318356	18.0	R	OH
04 08 50.8372	+20 13 52.822	56	21	2451901.29762431	17.8	R	OH
04 08 50.7148	+20 13 52.333	56	21	2451901.30206007	17.7	R	OH
07 07 15.3546	+21 56 26.660	27	22	2452234.56615671	18.3	R	OH
07 07 15.2549	+21 56 26.837	27	22	2452234.57059826	17.1	R	OH
07 07 15.1597	+21 56 26.943	27	22	2452234.57504514	18.0	R	OH
07 07 15.0638	+21 56 27.052	27	22	2452234.57949086	18.0	R	OH
07 06 54.7524	+21 56 54.467	39	26	2452235.53389630	18.1	R	OH
07 06 54.6403	+21 56 54.582	39	26	2452235.53897477	18.4	R	OH
07 06 54.5369	+21 56 54.776	39	26	2452235.54342870	18.1	R	OH
07 06 54.4467	+21 56 54.871	39	26	2452235.54788414	18.2	R	OH
07 06 54.3392	+21 56 55.000	39	26	2452235.55233137	18.0	R	OH
07 06 54.2425	+21 56 55.160	39	26	2452235.55678056	18.1	R	OH
07 06 54.1442	+21 56 55.266	39	26	2452235.56123333	18.2	R	OH
07 06 54.0470	+21 56 55.399	39	26	2452235.56568750	17.6	R	OH
07 06 53.9432	+21 56 55.591	39	26	2452235.57013287	18.2	R	OH

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Lysithea

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
07 06 53.8438	+21 56 55.739	39	26	2452235.57458380	18.0	R	OH
06 52 34.1578	+22 21 00.914	46	24	2452262.58399919	17.9	R	OH
06 52 34.0121	+22 21 01.150	46	24	2452262.58774699	18.2	R	OH
06 52 33.8645	+22 21 01.461	46	24	2452262.59149514	18.0	R	OH
06 51 53.3814	+22 22 14.867	28	16	2452263.61533715	16.5	R	OH
06 51 53.0795	+22 22 15.405	28	16	2452263.62283345	17.4	R	OH
06 51 52.9315	+22 22 15.629	28	16	2452263.62658021	17.6	R	OH
06 51 52.7757	+22 22 15.919	28	16	2452263.63033148	17.5	R	OH
06 38 34.1482	+22 47 21.352	47	25	2452283.37729363	17.8	R	OH
06 38 33.9604	+22 47 21.716	47	25	2452283.38210637	18.2	R	OH
06 38 33.7960	+22 47 22.115	47	25	2452283.38630741	17.9	R	OH
06 38 33.6297	+22 47 22.403	47	25	2452283.39050787	18.0	R	OH
06 38 33.4566	+22 47 22.757	47	25	2452283.39470856	18.0	R	OH
06 38 33.2860	+22 47 23.067	47	25	2452283.39891319	18.1	R	OH
06 38 32.9500	+22 47 23.755	47	25	2452283.40732141	17.9	R	OH
06 38 32.7896	+22 47 24.102	47	25	2452283.41152824	18.3	R	OH
06 38 32.6217	+22 47 24.417	47	25	2452283.41573565	17.9	R	OH
06 38 32.4533	+22 47 24.707	47	25	2452283.41994479	17.7	R	OH
08 47 01.7405	+18 28 39.201	60	26	2452723.46968935	18.3	R	OH
08 47 01.6634	+18 28 39.325	60	26	2452723.47717604	18.4	R	OH
08 47 01.5799	+18 28 39.360	60	26	2452723.48466678	18.3	R	OH
16 43 20.3817	-22 09 26.366	58	61	2454353.55469836	19.3	un	E
16 43 20.4307	-22 09 26.409	58	61	2454353.55650366	19.2	un	E
16 43 20.4745	-22 09 26.441	58	61	2454353.55832273	19.2	un	E
16 43 20.5279	-22 09 26.545	58	61	2454353.56032289	19.3	un	E
16 43 20.5735	-22 09 26.598	58	61	2454353.56207134	19.2	un	E
16 43 20.6213	-22 09 26.682	58	61	2454353.56390072	19.3	un	E
16 43 20.6668	-22 09 26.739	58	61	2454353.56567638	19.2	un	E
16 43 20.7155	-22 09 26.774	58	61	2454353.56749974	19.2	un	E
16 43 20.7596	-22 09 26.843	58	61	2454353.56923915	19.2	un	E
16 43 20.8409	-22 09 27.019	58	61	2454353.57201206	19.4	un	E
16 43 20.8929	-22 09 27.053	58	61	2454353.57384213	19.4	un	E
16 43 20.9384	-22 09 27.119	58	61	2454353.57567279	19.3	un	E
16 43 20.9845	-22 09 27.149	58	61	2454353.57753274	19.3	un	E
16 43 21.0338	-22 09 27.194	58	61	2454353.57930851	19.3	un	E
16 43 21.0830	-22 09 27.301	58	61	2454353.58114276	19.2	un	E
16 43 21.1281	-22 09 27.323	58	61	2454353.58290788	19.4	un	E
16 43 21.1788	-22 09 27.371	58	61	2454353.58475543	19.4	un	E
16 43 21.2266	-22 09 27.414	58	61	2454353.58650018	19.4	un	E
19 34 34.4687	-22 01 09.675	6	10	2454621.86793985	18.1	un	E
19 34 34.4171	-22 01 09.716	6	10	2454621.87124871	18.3	un	E
19 00 37.1522	-22 34 21.281	108	44	2454690.57121481	18.5	I	BC
19 00 36.9487	-22 34 21.607	108	44	2454690.57877361	18.5	I	BC
19 00 36.8876	-22 34 21.592	108	44	2454690.58065787	18.2	I	BC
18 52 26.1133	-22 59 20.994	20	6	2454729.49268218	18.2	I	PE
18 52 26.1228	-22 59 21.029	20	6	2454729.49422118	19.1	I	PE
18 52 26.1372	-22 59 21.119	20	6	2454729.49732037	18.9	I	PE
18 52 26.1448	-22 59 21.165	20	6	2454729.49886887	19.2	I	PE
18 52 26.1594	-22 59 21.258	20	6	2454729.50195521	18.8	I	PE
18 52 26.1673	-22 59 21.290	20	6	2454729.50349306	19.1	I	PE
18 52 26.1780	-22 59 21.391	20	6	2454729.50656875	19.1	I	PE
18 52 55.0442	-23 01 13.312	23	17	2454733.47919757	18.9	I	PE
18 52 55.0735	-23 01 13.389	23	17	2454733.48263507	17.4	I	PE
18 52 55.1027	-23 01 13.464	23	17	2454733.48604815	19.0	I	PE
18 52 55.1343	-23 01 13.559	23	17	2454733.48946065	19.4	I	PE
18 52 55.1638	-23 01 13.601	23	17	2454733.49288507	17.5	I	PE
21 54 23.5678	-13 10 49.722	24	24	2454971.91773082	18.9	un	E
21 54 23.5820	-13 10 49.678	24	24	2454971.91888314	18.7	un	E
21 54 23.5983	-13 10 49.606	24	24	2454971.92004507	18.8	un	E
21 54 23.6326	-13 10 49.517	24	24	2454971.92234266	18.8	un	E

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Lysithea							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 54 23.6497	-13 10 49.441	24	24	2454971.92347137	18.6	un	E
21 54 23.6782	-13 10 49.285	24	24	2454971.92578064	18.8	un	E
21 54 23.6974	-13 10 49.274	24	24	2454971.92694095	18.6	un	E
21 54 23.7383	-13 10 49.117	24	24	2454971.92966440	18.6	un	E
21 54 23.7530	-13 10 49.082	24	24	2454971.93081788	18.6	un	E
21 54 23.7689	-13 10 48.985	24	24	2454971.93196581	18.7	un	E
21 54 23.8040	-13 10 48.948	24	24	2454971.93427231	18.7	un	E
21 54 50.3399	-13 09 26.275	31	20	2454973.76546379	19.4	un	E
21 54 50.3609	-13 09 26.211	31	20	2454973.76663197	19.2	un	E
21 54 50.3743	-13 09 26.179	31	20	2454973.76779136	19.3	un	E
21 54 50.3928	-13 09 26.123	31	20	2454973.76894426	19.2	un	E
21 54 50.4075	-13 09 26.077	31	20	2454973.77006880	19.3	un	E
21 54 50.4180	-13 09 26.068	31	20	2454973.77122946	19.2	un	E
21 54 50.4565	-13 09 25.991	31	20	2454973.77377140	18.6	un	E
21 54 50.4725	-13 09 25.945	31	20	2454973.77492164	18.6	un	E
21 54 50.4878	-13 09 25.873	31	20	2454973.77605116	18.5	un	E
21 54 50.5016	-13 09 25.828	31	20	2454973.77720811	18.5	un	E
21 54 50.5163	-13 09 25.779	31	20	2454973.77836414	18.5	un	E
21 54 50.5362	-13 09 25.775	31	20	2454973.77951368	18.6	un	E
21 54 50.5479	-13 09 25.705	31	20	2454973.78067943	18.5	un	E
21 55 03.7116	-13 08 48.694	18	17	2454974.76236432	18.4	un	E
21 55 03.7268	-13 08 48.670	18	17	2454974.76353377	18.4	un	E
21 55 03.7557	-13 08 48.603	18	17	2454974.76584398	18.8	un	E
21 55 03.7840	-13 08 48.487	18	17	2454974.76815754	18.6	un	E
21 55 03.7985	-13 08 48.464	18	17	2454974.76928034	18.5	un	E
21 55 03.8123	-13 08 48.414	18	17	2454974.77042884	18.5	un	E
21 55 03.8304	-13 08 48.363	18	17	2454974.77158510	18.6	un	E
21 55 03.8446	-13 08 48.339	18	17	2454974.77274506	18.5	un	E
21 55 03.8601	-13 08 48.260	18	17	2454974.77422115	18.6	un	E
21 55 03.8754	-13 08 48.259	18	17	2454974.77538273	18.7	un	E
21 55 03.8922	-13 08 48.191	18	17	2454974.77653853	18.7	un	E
21 55 03.9043	-13 08 48.181	18	17	2454974.77769641	18.6	un	E
21 55 03.9179	-13 08 48.116	18	17	2454974.77884966	18.6	un	E
21 55 03.9361	-13 08 48.108	18	17	2454974.78000997	19.0	un	E
21 55 03.9504	-13 08 48.080	18	17	2454974.78116854	18.8	un	E
21 55 03.9636	-13 08 48.020	18	17	2454974.78232723	18.6	un	E
21 55 03.9787	-13 08 47.980	18	17	2454974.78348279	18.9	un	E
21 55 16.3896	-13 08 15.921	36	16	2454975.76499427	19.2	un	E
21 55 16.4397	-13 08 15.832	36	16	2454975.76906311	18.6	un	E
21 55 16.4616	-13 08 15.796	36	16	2454975.77134033	18.5	un	E
21 55 16.5100	-13 08 15.642	36	16	2454975.77505867	18.7	un	E
21 55 16.5480	-13 08 15.539	36	16	2454975.77861831	19.0	un	E
21 55 16.5669	-13 08 15.498	36	16	2454975.77989715	18.2	un	E
21 55 16.6026	-13 08 15.444	36	16	2454975.78327195	18.5	un	E
21 55 16.6422	-13 08 15.344	36	16	2454975.78656210	18.6	un	E
21 55 16.6588	-13 08 15.307	36	16	2454975.78807904	18.4	un	E
21 55 16.6724	-13 08 15.268	36	16	2454975.78922419	18.5	un	E
21 55 16.6887	-13 08 15.240	36	16	2454975.79035301	18.4	un	E
21 55 16.7016	-13 08 15.212	36	16	2454975.79150881	18.4	un	E
21 55 16.7175	-13 08 15.186	36	16	2454975.79263613	18.5	un	E
21 55 16.7687	-13 08 15.036	36	16	2454975.79721891	18.5	un	E
21 55 16.8090	-13 08 14.947	36	16	2454975.80092359	18.8	un	E
21 55 16.8375	-13 08 14.892	36	16	2454975.80305252	18.3	un	E
21 55 16.8506	-13 08 14.839	36	16	2454975.80417822	18.5	un	E
21 55 16.8640	-13 08 14.799	36	16	2454975.80530786	18.4	un	E
21 55 16.8787	-13 08 14.786	36	16	2454975.80645544	18.3	un	E
21 55 16.8892	-13 08 14.739	36	16	2454975.80757639	18.3	un	E
21 55 16.9032	-13 08 14.698	36	16	2454975.80872188	18.4	un	E
21 55 16.9169	-13 08 14.679	36	16	2454975.80984458	18.4	un	E
21 55 16.9299	-13 08 14.643	36	16	2454975.81099228	18.3	un	E

continued ...

Lysithea								
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 55 16.9434	-13 08 14.613	36	16	2454975.81214969	18.4	un	E
21 55 16.9569	-13 08 14.605	36	16	2454975.81330803	18.4	un	E
21 55 17.3823	-13 08 13.533	36	16	2454975.84930392	18.6	un	E
21 55 17.4505	-13 08 13.384	36	16	2454975.85504308	18.8	un	E
21 55 17.4838	-13 08 13.326	36	16	2454975.85788484	18.7	un	E
21 55 17.4996	-13 08 13.254	36	16	2454975.85925360	18.7	un	E
21 48 04.5755	-14 35 29.223	85	23	2455030.85642338	17.9	C	BC
21 48 04.5097	-14 35 29.785	85	23	2455030.85928322	18.2	C	BC
21 48 04.4414	-14 35 30.256	85	23	2455030.86214213	18.2	C	BC
21 48 04.2868	-14 35 31.338	85	23	2455030.86783819	16.8	C	BC
00 05 04.4291	-01 15 04.383	14	16	2455367.78717593	18.7	R	PE
00 05 04.4831	-01 15 04.057	14	16	2455367.78953704	18.8	R	PE
00 05 04.5076	-01 15 03.874	14	16	2455367.79071759	18.8	R	PE
00 05 04.5346	-01 15 03.709	14	16	2455367.79189815	18.7	R	PE
00 05 04.5599	-01 15 03.541	14	16	2455367.79309028	18.6	R	PE
00 05 04.6146	-01 15 03.218	14	16	2455367.79545139	18.7	R	PE
00 05 04.6681	-01 15 02.831	14	16	2455367.79781250	18.8	R	PE
00 05 04.6931	-01 15 02.655	14	16	2455367.79900463	18.7	R	PE
00 05 04.7193	-01 15 02.506	14	16	2455367.80018519	18.7	R	PE
00 05 04.7456	-01 15 02.359	14	16	2455367.80136574	18.6	R	PE
00 05 04.7729	-01 15 02.163	14	16	2455367.80255787	18.7	R	PE
00 05 04.7997	-01 15 01.994	14	16	2455367.80373843	18.8	R	PE
00 05 04.8266	-01 15 01.850	14	16	2455367.80491898	18.8	R	PE
00 05 04.8510	-01 15 01.671	14	16	2455367.80609954	18.9	R	PE
00 05 04.8793	-01 15 01.482	14	16	2455367.80728009	18.7	R	PE
00 05 04.9040	-01 15 01.346	14	16	2455367.80847222	18.7	R	PE
00 05 04.9301	-01 15 01.144	14	16	2455367.80965278	18.6	R	PE

Table B.4. CDS data for Leda.

Leda							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
18 58 49.9869	-22 31 07.777	39	26	2450258.64486111	19.8	C	PE
18 58 49.8719	-22 31 07.787	39	26	2450258.64883102	19.6	C	PE
01 56 55.6191	+10 37 51.016	97	79	2451462.52513229	19.3	R	OH
01 56 54.6068	+10 37 46.721	97	79	2451462.55286782	18.7	R	OH
01 56 54.4347	+10 37 45.992	97	79	2451462.55800208	19.6	R	OH
01 56 54.2485	+10 37 45.202	97	79	2451462.56314028	19.6	R	OH
01 56 54.0679	+10 37 44.591	97	79	2451462.56827847	19.3	R	OH
01 39 41.1514	+09 19 25.314	90	84	2451493.40137674	19.1	R	OH
01 39 40.9804	+09 19 24.444	90	84	2451493.40785255	19.5	R	OH
01 39 40.7693	+09 19 23.483	90	84	2451493.41458762	19.5	R	OH
01 39 40.3944	+09 19 21.567	90	84	2451493.42806852	20.2	R	OH
01 39 40.0034	+09 19 19.678	90	84	2451493.44171817	19.2	R	OH
01 39 39.8375	+09 19 18.961	90	84	2451493.44729873	19.4	R	OH
01 39 39.6888	+09 19 18.280	90	84	2451493.45288530	18.3	R	OH
01 39 39.5283	+09 19 17.511	90	84	2451493.45846817	19.3	R	OH
01 32 57.4458	+08 46 16.670	59	95	2451512.33279676	19.8	R	OH
01 32 57.3568	+08 46 16.171	59	95	2451512.33838275	19.6	R	OH
01 32 57.2762	+08 46 15.863	59	95	2451512.34396100	20.3	R	OH
01 32 57.1913	+08 46 15.401	59	95	2451512.34953692	20.2	R	OH
01 32 56.8741	+08 46 13.685	59	95	2451512.37155359	20.0	R	OH
01 32 56.7143	+08 46 13.005	59	95	2451512.38251331	20.0	R	OH
01 32 56.6234	+08 46 12.439	59	95	2451512.38809120	19.9	R	OH
01 32 56.4709	+08 46 11.876	59	95	2451512.39849144	19.7	R	OH
01 32 56.3951	+08 46 11.389	59	95	2451512.40407836	20.0	R	OH
01 32 56.3063	+08 46 10.975	59	95	2451512.40965706	19.9	R	OH
01 32 44.3213	+08 45 09.831	34	60	2451513.29366389	19.8	R	OH
01 32 44.2820	+08 45 09.633	34	60	2451513.29669016	20.1	R	OH
01 32 44.1733	+08 45 08.983	34	60	2451513.30424271	19.8	R	OH

continued ...

Leda

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
01 32 44.0820	+08 45 08.731	34	60	2451513.31097917	19.6	R	OH
01 32 43.9821	+08 45 08.133	34	60	2451513.31771910	19.3	R	OH
01 32 43.8911	+08 45 07.649	34	60	2451513.32446435	19.3	R	OH
01 32 43.7988	+08 45 07.230	34	60	2451513.33119896	19.9	R	OH
01 32 43.7027	+08 45 06.848	34	60	2451513.33793542	19.9	R	OH
01 32 43.6137	+08 45 06.345	34	60	2451513.34467535	19.4	R	OH
01 32 42.0393	+08 44 58.720	34	60	2451513.45851921	20.1	R	OH
01 32 41.9322	+08 44 58.152	34	60	2451513.46641262	19.8	R	OH
01 32 31.1951	+08 44 03.177	76	73	2451514.31280058	20.0	R	OH
01 32 31.0993	+08 44 02.739	76	73	2451514.31954595	18.7	R	OH
01 32 31.0066	+08 44 02.203	76	73	2451514.32628206	20.1	R	OH
01 32 30.1654	+08 43 58.072	76	73	2451514.39125104	20.4	R	OH
01 32 18.8543	+08 43 00.134	44	54	2451515.33889421	19.6	R	OH
01 32 18.7528	+08 42 59.580	44	54	2451515.34679306	20.4	R	OH
01 32 18.6571	+08 42 59.214	44	54	2451515.35469502	19.8	R	OH
01 32 18.5618	+08 42 58.679	44	54	2451515.36259236	19.9	R	OH
01 32 18.4708	+08 42 58.312	44	54	2451515.37049329	19.8	R	OH
01 31 31.3099	+08 38 54.351	89	50	2451520.37451921	19.9	R	OH
01 31 31.2441	+08 38 53.979	89	50	2451520.38364954	20.0	R	OH
01 31 31.1426	+08 38 53.509	89	50	2451520.39688090	19.4	R	OH
01 31 31.0798	+08 38 53.235	89	50	2451520.40594317	19.6	R	OH
01 31 30.7406	+08 38 51.558	89	50	2451520.44878889	19.4	R	OH
19 31 06.8557	-21 23 15.225	19	18	2454621.82626131	19.0	un	E
19 31 06.6410	-21 23 15.580	19	18	2454621.84082848	18.5	un	E
19 18 02.3446	-21 56 12.220	46	56	2454656.76664294	19.8	I	PE
19 18 02.2470	-21 56 12.490	46	56	2454656.76988472	19.8	I	PE
19 18 02.0472	-21 56 12.948	46	56	2454656.77713970	19.3	I	PE
19 18 01.9496	-21 56 13.323	46	56	2454656.78037037	19.5	I	PE
21 57 13.8315	-13 31 28.470	42	49	2454973.82829289	18.8	un	E
21 57 13.8500	-13 31 28.411	42	49	2454973.82945459	20.1	un	E
21 57 13.8693	-13 31 28.357	42	49	2454973.83061247	20.2	un	E
21 57 13.8882	-13 31 28.357	42	49	2454973.83177312	20.3	un	E
21 57 13.9047	-13 31 28.254	42	49	2454973.83292533	20.3	un	E
21 57 14.0905	-13 31 27.881	42	49	2454973.84461827	20.1	un	E
21 57 14.1242	-13 31 27.814	42	49	2454973.84656987	20.2	un	E
21 57 14.1572	-13 31 27.753	42	49	2454973.84850306	20.4	un	E
21 57 14.1878	-13 31 27.665	42	49	2454973.85044239	20.0	un	E
21 57 14.2163	-13 31 27.589	42	49	2454973.85230463	20.1	un	E
21 57 14.2501	-13 31 27.525	42	49	2454973.85423852	20.3	un	E
21 57 14.2804	-13 31 27.429	42	49	2454973.85611673	19.9	un	E
21 57 14.3154	-13 31 27.360	42	49	2454973.85825214	20.1	un	E
21 57 14.3595	-13 31 27.283	42	49	2454973.86085995	19.7	un	E
21 57 14.3911	-13 31 27.201	42	49	2454973.86280657	19.6	un	E
21 57 14.4219	-13 31 27.133	42	49	2454973.86474092	19.6	un	E
21 57 14.4555	-13 31 27.068	42	49	2454973.86667956	19.7	un	E
21 57 14.4841	-13 31 26.986	42	49	2454973.86854492	19.6	un	E
21 57 14.5763	-13 31 26.764	42	49	2454973.87428731	19.8	un	E
21 57 45.8749	-13 30 14.533	17	97	2454975.81946680	19.8	un	E
21 57 45.9379	-13 30 14.348	17	97	2454975.82367466	20.1	un	E
21 57 45.9521	-13 30 14.310	17	97	2454975.82480094	19.7	un	E
21 57 45.9713	-13 30 14.270	17	97	2454975.82592872	18.9	un	E
21 57 46.0250	-13 30 14.222	17	97	2454975.82960400	20.4	un	E
21 57 46.0756	-13 30 14.084	17	97	2454975.83302856	19.8	un	E
21 57 46.1148	-13 30 14.108	17	97	2454975.83557779	19.9	un	E
21 57 46.1299	-13 30 14.030	17	97	2454975.83673787	20.1	un	E
21 57 46.1654	-13 30 13.945	17	97	2454975.83904680	19.3	un	E
21 57 46.1820	-13 30 13.903	17	97	2454975.84018153	18.2	un	E
21 57 46.1980	-13 30 13.800	17	97	2454975.84134531	19.7	un	E
21 57 46.2137	-13 30 13.738	17	97	2454975.84249590	19.4	un	E
21 57 46.2467	-13 30 13.721	17	97	2454975.84476570	20.4	un	E

continued ...

Leda								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope	
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 57 46.6778	-13 30 12.922	17	97	2454975.87414178	20.2	un	E
21 57 46.6919	-13 30 12.931	17	97	2454975.87529919	20.3	un	E
21 57 46.7109	-13 30 12.908	17	97	2454975.87645534	20.2	un	E
21 57 46.7257	-13 30 12.892	17	97	2454975.87761576	20.2	un	E
21 57 46.7431	-13 30 12.810	17	97	2454975.87871918	18.7	un	E
21 57 46.7890	-13 30 12.697	17	97	2454975.88185140	20.2	un	E
21 57 46.8041	-13 30 12.699	17	97	2454975.88300789	20.1	un	E
21 57 46.8402	-13 30 12.568	17	97	2454975.88528811	18.8	un	E
21 57 46.8731	-13 30 12.476	17	97	2454975.88761313	21.2	un	E
21 57 46.8899	-13 30 12.534	17	97	2454975.88876952	19.3	un	E

Table B.5. CDS data for Pasiphae.

Pasiphae							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 04 30.0789	-23 15 46.759	32	9	2450255.57457176	17.2	C	PE
19 04 30.0122	-23 15 47.009	32	9	2450255.57703704	17.2	C	PE
19 04 29.8842	-23 15 47.471	32	9	2450255.58159722	17.2	C	PE
19 04 29.8188	-23 15 47.708	32	9	2450255.58402778	17.2	C	PE
19 04 03.8762	-23 17 21.169	24	6	2450256.56313657	16.9	C	PE
19 04 03.8139	-23 17 21.378	24	6	2450256.56530093	16.9	C	PE
19 04 03.7609	-23 17 21.571	24	6	2450256.56733796	17.0	C	PE
19 04 03.7045	-23 17 21.762	24	6	2450256.56928241	17.0	C	PE
19 02 13.1641	-23 23 46.216	66	16	2450260.61912037	16.7	C	PE
19 02 13.0264	-23 23 46.671	66	16	2450260.62427083	16.9	C	PE
19 02 12.9221	-23 23 47.016	66	16	2450260.62754630	16.8	C	PE
19 02 12.8311	-23 23 47.321	66	16	2450260.63082176	16.9	C	PE
18 47 51.8209	-24 05 12.414	8	11	2450291.59537257	17.1	un	PE
18 47 51.8053	-24 05 12.431	8	11	2450291.59597396	17.1	un	PE
18 47 51.7898	-24 05 12.488	8	11	2450291.59657604	17.1	un	PE
18 47 51.7766	-24 05 12.498	8	11	2450291.59717870	17.1	un	PE
18 47 51.7611	-24 05 12.558	8	11	2450291.59777940	17.1	un	PE
18 47 51.7465	-24 05 12.599	8	11	2450291.59837002	17.1	un	PE
18 47 51.7154	-24 05 12.667	8	11	2450291.59958542	17.1	un	PE
18 47 51.7003	-24 05 12.698	8	11	2450291.60018750	17.1	un	PE
18 40 18.9146	-24 24 45.779	4	22	2450321.52970949	17.8	un	PE
18 40 18.9112	-24 24 45.789	4	22	2450321.53038009	17.8	un	PE
18 40 18.8359	-24 24 46.019	4	22	2450321.54483681	17.8	un	PE
18 40 18.7367	-24 24 46.387	4	22	2450321.56433924	17.7	un	PE
18 40 18.7337	-24 24 46.354	4	22	2450321.56502130	17.7	un	PE
21 14 55.2239	-16 52 42.769	50	15	2450674.59864583	17.1	un	PE
21 14 55.1403	-16 52 43.081	50	15	2450674.60118056	17.1	un	PE
21 14 51.4482	-16 52 56.461	50	15	2450674.71082176	16.8	un	PE
21 14 51.3568	-16 52 56.797	50	15	2450674.71335648	16.9	un	PE
23 58 05.8733	-02 32 15.532	26	43	2451039.47498553	17.1	R	OH
23 58 05.7825	-02 32 16.463	26	43	2451039.48057627	17.1	R	OH
23 58 05.7322	-02 32 16.993	26	43	2451039.48384884	17.1	R	OH
23 58 05.6777	-02 32 17.565	26	43	2451039.48711088	17.1	R	OH
23 58 05.6260	-02 32 17.977	26	43	2451039.49037488	17.2	R	OH
23 58 05.5226	-02 32 19.064	26	43	2451039.49691111	17.3	R	OH
23 58 05.4670	-02 32 19.667	26	43	2451039.50017280	17.1	R	OH
23 58 05.4137	-02 32 20.202	26	43	2451039.50344525	17.3	R	OH
23 58 05.3597	-02 32 20.749	26	43	2451039.50670914	17.2	R	OH
23 58 05.3096	-02 32 21.299	26	43	2451039.50997315	17.3	R	OH
23 58 05.1009	-02 32 23.317	26	43	2451039.52249363	17.3	R	OH
01 49 27.7332	+10 21 41.510	115	39	2451460.52286238	16.1	R	OH
01 49 27.2344	+10 21 39.208	115	39	2451460.53973160	16.7	R	OH
01 49 27.1272	+10 21 38.795	115	39	2451460.54346400	16.5	R	OH
01 49 26.9563	+10 21 38.013	115	39	2451460.54875683	16.0	R	OH

continued ...

Pasiphae

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
01 49 26.8529	+10 21 37.527	115	39	2451460.55249282	16.4	R	OH
01 49 26.7625	+10 21 37.060	115	39	2451460.55623681	16.5	R	OH
01 49 26.6427	+10 21 36.585	115	39	2451460.55998241	16.5	R	OH
01 49 26.5351	+10 21 36.094	115	39	2451460.56372245	16.5	R	OH
01 48 02.9821	+10 15 12.473	55	17	2451463.45505139	16.3	R	OH
01 48 02.8595	+10 15 11.935	55	17	2451463.45923183	16.2	R	OH
01 48 02.7047	+10 15 11.215	55	17	2451463.46441921	16.3	R	OH
01 48 02.5919	+10 15 10.725	55	17	2451463.46815266	16.2	R	OH
01 48 02.4872	+10 15 10.236	55	17	2451463.47189144	16.4	R	OH
01 48 02.3715	+10 15 09.706	55	17	2451463.47562442	16.4	R	OH
01 48 02.2624	+10 15 09.222	55	17	2451463.47936331	16.3	R	OH
01 48 01.5837	+10 15 06.193	55	17	2451463.50168310	16.4	R	OH
01 48 01.4417	+10 15 05.533	55	17	2451463.50652222	16.4	R	OH
01 48 01.3084	+10 15 04.915	55	17	2451463.51118576	16.4	R	OH
01 34 08.1286	+09 10 46.926	30	29	2451492.33885671	16.7	R	OH
01 34 08.0365	+09 10 46.463	30	29	2451492.34227488	16.7	R	OH
01 34 07.9067	+09 10 45.845	30	29	2451492.34732975	16.8	R	OH
01 34 07.7517	+09 10 45.176	30	29	2451492.35343148	16.8	R	OH
01 34 07.6388	+09 10 44.724	30	29	2451492.35768634	16.8	R	OH
01 34 07.5238	+09 10 44.230	30	29	2451492.36209167	16.8	R	OH
01 34 07.4167	+09 10 43.730	30	29	2451492.36611921	16.8	R	OH
01 34 07.3033	+09 10 43.211	30	29	2451492.37064387	16.8	R	OH
01 34 07.1757	+09 10 42.618	30	29	2451492.37553252	16.8	R	OH
01 34 07.0932	+09 10 42.284	30	29	2451492.37879826	16.8	R	OH
01 34 07.0045	+09 10 41.904	30	29	2451492.38206042	16.8	R	OH
01 34 06.9217	+09 10 41.534	30	29	2451492.38532986	16.8	R	OH
01 27 08.9700	+08 41 01.179	101	58	2451514.39978495	16.9	R	OH
01 27 08.9249	+08 41 00.839	101	58	2451514.40476215	16.9	R	OH
01 27 08.8736	+08 41 00.673	101	58	2451514.40897975	16.9	R	OH
01 27 08.8474	+08 41 00.609	101	58	2451514.41109016	16.9	R	OH
01 27 08.8227	+08 41 00.520	101	58	2451514.41320428	16.9	R	OH
01 26 46.8194	+08 39 48.005	28	88	2451516.45590868	17.0	R	OH
01 26 46.8009	+08 39 47.980	28	88	2451516.45824896	16.9	R	OH
01 26 46.7479	+08 39 47.993	28	88	2451516.46299144	16.8	R	OH
01 26 46.7253	+08 39 47.829	28	88	2451516.46533403	16.7	R	OH
01 26 46.7018	+08 39 47.583	28	88	2451516.46767257	16.7	R	OH
01 26 46.6756	+08 39 47.553	28	88	2451516.47000833	16.7	R	OH
01 26 46.6498	+08 39 47.583	28	88	2451516.47235683	16.6	R	OH
01 26 46.6267	+08 39 47.409	28	88	2451516.47470104	16.6	R	OH
01 26 46.6030	+08 39 47.272	28	88	2451516.47717917	16.7	R	OH
01 26 37.3268	+08 39 19.185	27	39	2451517.44712245	16.9	R	OH
01 26 37.3051	+08 39 19.243	27	39	2451517.44971667	16.7	R	OH
01 26 37.2509	+08 39 19.027	27	39	2451517.45494282	16.9	R	OH
01 26 37.2271	+08 39 18.971	27	39	2451517.45762535	16.9	R	OH
01 26 37.1998	+08 39 18.874	27	39	2451517.46031123	16.9	R	OH
01 26 37.1711	+08 39 18.789	27	39	2451517.46299329	17.0	R	OH
01 26 37.1473	+08 39 18.699	27	39	2451517.46567720	16.9	R	OH
01 26 37.1204	+08 39 18.702	27	39	2451517.46837361	17.0	R	OH
01 26 37.0937	+08 39 18.585	27	39	2451517.47106505	17.0	R	OH
01 26 07.8509	+08 38 08.022	29	11	2451521.29544363	16.9	R	OH
01 26 07.8011	+08 38 07.955	29	11	2451521.30274884	16.9	R	OH
01 26 07.7574	+08 38 07.875	29	11	2451521.30919051	16.9	R	OH
01 26 07.7067	+08 38 07.799	29	11	2451521.31625324	16.9	R	OH
01 26 07.6615	+08 38 07.749	29	11	2451521.32373982	16.8	R	OH
04 14 42.2306	+18 57 40.558	23	11	2451873.45415625	16.9	R	OH
04 14 42.1431	+18 57 40.375	23	11	2451873.45650035	16.9	R	OH
04 14 42.0501	+18 57 40.165	23	11	2451873.45884583	16.9	R	OH
04 14 41.9597	+18 57 39.968	23	11	2451873.46119491	16.9	R	OH
04 14 41.8716	+18 57 39.775	23	11	2451873.46353518	16.9	R	OH
07 05 28.8191	+23 26 53.293	16	10	2452235.50563183	17.3	R	OH

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Pasiphae

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
07 05 28.7589	+23 26 53.546	16	10	2452235.51003079	17.3	R	OH
07 05 28.7265	+23 26 53.682	16	10	2452235.51239306	17.3	R	OH
07 05 28.6922	+23 26 53.803	16	10	2452235.51474873	17.3	R	OH
07 05 28.6607	+23 26 53.933	16	10	2452235.51710579	17.3	R	OH
07 05 28.6283	+23 26 54.063	16	10	2452235.51946146	17.3	R	OH
07 05 28.5949	+23 26 54.219	16	10	2452235.52181400	17.3	R	OH
07 05 28.5652	+23 26 54.343	16	10	2452235.52417049	17.3	R	OH
07 05 28.5339	+23 26 54.455	16	10	2452235.52652627	17.3	R	OH
07 05 28.5001	+23 26 54.577	16	10	2452235.52887662	17.3	R	OH
06 55 50.7770	+23 53 23.174	13	12	2452261.42368484	17.0	R	OH
06 55 50.6799	+23 53 23.375	13	12	2452261.42696817	16.9	R	OH
06 55 50.5808	+23 53 23.620	13	12	2452261.43024375	16.9	R	OH
06 55 50.4795	+23 53 23.816	13	12	2452261.43352650	17.0	R	OH
06 55 50.3813	+23 53 24.053	13	12	2452261.43680208	16.9	R	OH
06 55 50.2338	+23 53 24.359	13	12	2452261.44168148	17.0	R	OH
06 55 50.1358	+23 53 24.569	13	12	2452261.44495498	16.9	R	OH
06 55 50.0354	+23 53 24.784	13	12	2452261.44822812	17.0	R	OH
06 55 49.9353	+23 53 25.013	13	12	2452261.45151007	17.0	R	OH
06 55 49.8386	+23 53 25.222	13	12	2452261.45478333	17.0	R	OH
06 54 14.8324	+23 56 40.972	37	13	2452264.59511053	16.8	R	OH
06 54 14.6925	+23 56 41.227	37	13	2452264.59938333	16.7	R	OH
06 54 14.6199	+23 56 41.355	37	13	2452264.60173368	16.7	R	OH
06 54 14.5442	+23 56 41.493	37	13	2452264.60408854	16.8	R	OH
06 54 14.4726	+23 56 41.626	37	13	2452264.60644039	16.8	R	OH
06 54 14.3956	+23 56 41.755	37	13	2452264.60879271	16.8	R	OH
06 43 08.6300	+24 14 54.721	25	18	2452285.41196088	16.8	R	OH
06 43 08.5308	+24 14 54.880	25	18	2452285.41495231	16.9	R	OH
06 43 08.4607	+24 14 54.972	25	18	2452285.41730660	16.8	R	OH
06 43 08.3858	+24 14 55.080	25	18	2452285.41966100	16.8	R	OH
06 43 08.3087	+24 14 55.169	25	18	2452285.42201863	16.9	R	OH
06 43 08.2332	+24 14 55.282	25	18	2452285.42437685	16.8	R	OH
06 43 08.1548	+24 14 55.381	25	18	2452285.42672384	16.9	R	OH
06 43 08.0805	+24 14 55.488	25	18	2452285.42907639	16.8	R	OH
06 43 08.0063	+24 14 55.601	25	18	2452285.43143449	16.8	R	OH
06 43 07.9304	+24 14 55.657	25	18	2452285.43378854	16.8	R	OH
06 31 30.8218	+24 24 51.920	31	56	2452313.48213079	17.3	R	OH
06 31 30.7508	+24 24 52.024	31	56	2452313.48668796	17.2	R	OH
06 31 30.6956	+24 24 52.028	31	56	2452313.48996863	17.2	R	OH
06 31 30.6446	+24 24 52.044	31	56	2452313.49325243	17.2	R	OH
06 31 30.5861	+24 24 52.061	31	56	2452313.49652847	17.2	R	OH
06 31 16.4136	+24 24 53.753	16	35	2452314.40899676	17.0	R	OH
06 31 16.3544	+24 24 53.818	16	35	2452314.41267824	17.0	R	OH
06 31 16.2408	+24 24 53.762	16	35	2452314.41973322	17.1	R	OH
06 34 39.4459	+24 06 06.334	64	22	2452362.34777431	17.6	R	OH
06 34 39.5208	+24 06 06.232	64	22	2452362.35082072	18.2	R	OH
06 34 39.5787	+24 06 06.043	64	22	2452362.35387083	16.5	R	OH
06 34 39.7138	+24 06 05.745	64	22	2452362.35998345	17.7	R	OH
09 10 38.2761	+15 56 38.805	32	25	2452637.62589803	17.0	R	OH
09 10 38.1615	+15 56 39.440	32	25	2452637.63178437	17.0	R	OH
09 10 38.1016	+15 56 39.709	32	25	2452637.63483542	17.0	R	OH
09 10 38.0421	+15 56 39.982	32	25	2452637.63788484	17.1	R	OH
09 10 37.9761	+15 56 40.326	32	25	2452637.64093414	17.0	R	OH
09 10 18.1560	+15 58 23.492	38	18	2452638.64887315	16.9	R	OH
09 10 18.0760	+15 58 23.907	38	18	2452638.65294792	17.0	R	OH
09 10 18.0045	+15 58 24.274	38	18	2452638.65622106	17.0	R	OH
09 10 17.8719	+15 58 24.921	38	18	2452638.66277998	16.9	R	OH
09 10 17.8063	+15 58 25.245	38	18	2452638.66606042	17.0	R	OH
09 10 17.7361	+15 58 25.584	38	18	2452638.66933403	16.9	R	OH
09 10 17.6681	+15 58 25.929	38	18	2452638.67261065	16.9	R	OH
09 10 17.6031	+15 58 26.242	38	18	2452638.67589248	16.9	R	OH

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Pasiphae								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
09 10 17.5396	+15 58 26.624	38	18	2452638.67916736	16.9	R	OH
09 10 17.4629	+15 58 26.969	38	18	2452638.68244063	16.9	R	OH
09 03 51.1699	+16 31 18.398	24	27	2452654.46125324	17.4	R	OH
09 03 51.0580	+16 31 19.006	24	27	2452654.46520868	17.4	R	OH
09 03 51.0056	+16 31 19.211	24	27	2452654.46689850	17.4	R	OH
09 03 50.9619	+16 31 19.451	24	27	2452654.46855069	17.4	R	OH
09 03 50.9131	+16 31 19.648	24	27	2452654.47020521	17.4	R	OH
09 03 50.8629	+16 31 19.902	24	27	2452654.47186204	17.5	R	OH
09 03 50.8150	+16 31 20.194	24	27	2452654.47352176	17.4	R	OH
08 36 03.7110	+18 53 08.527	12	14	2452724.31175301	17.5	R	OH
08 36 03.6786	+18 53 08.784	12	14	2452724.31796725	17.3	R	OH
08 36 03.3362	+18 53 11.745	12	14	2452724.38682685	17.3	R	OH
08 36 03.3186	+18 53 11.893	12	14	2452724.39068738	17.3	R	OH
08 36 03.2980	+18 53 12.073	12	14	2452724.39454190	17.3	R	OH
08 36 03.2788	+18 53 12.243	12	14	2452724.39839803	17.2	R	OH
08 35 56.2545	+18 54 32.207	20	53	2452726.38473900	17.3	R	OH
08 35 56.2417	+18 54 32.398	20	53	2452726.38859931	17.4	R	OH
08 35 56.2072	+18 54 32.701	20	53	2452726.40016215	16.9	R	OH
08 35 56.1949	+18 54 33.020	20	53	2452726.40401366	17.2	R	OH
08 35 56.1462	+18 54 33.379	20	53	2452726.41822650	16.3	R	OH
08 35 56.1339	+18 54 33.545	20	53	2452726.42207905	17.3	R	OH
08 35 56.1212	+18 54 33.646	20	53	2452726.42593970	17.9	R	OH
08 35 56.1101	+18 54 33.829	20	53	2452726.42979329	17.4	R	OH
08 35 56.0975	+18 54 33.984	20	53	2452726.43364572	17.3	R	OH
08 35 56.0830	+18 54 34.151	20	53	2452726.43750336	16.9	R	OH
11 00 17.7422	+09 05 19.426	58	77	2453090.55997801	17.4	R	OH
11 00 17.5168	+09 05 20.651	58	77	2453090.56792558	17.5	R	OH
11 00 17.3791	+09 05 21.223	58	77	2453090.57292326	17.6	R	OH
11 00 17.2722	+09 05 21.744	58	77	2453090.57666620	17.3	R	OH
11 00 17.1666	+09 05 22.182	58	77	2453090.58041088	17.4	R	OH
11 00 17.0611	+09 05 22.928	58	77	2453090.58416123	17.7	R	OH
11 00 16.8541	+09 05 23.958	58	77	2453090.59165243	17.6	R	OH
11 00 16.7599	+09 05 24.435	58	77	2453090.59540486	17.5	R	OH
10 51 24.0440	+09 45 32.625	25	14	2453115.36683299	16.5	R	OH
10 51 23.9253	+09 45 33.018	25	14	2453115.37462535	16.4	R	OH
10 51 23.8829	+09 45 33.150	25	14	2453115.37767095	16.4	R	OH
10 51 23.8390	+09 45 33.264	25	14	2453115.38072269	16.4	R	OH
10 51 23.7916	+09 45 33.441	25	14	2453115.38377083	16.3	R	OH
10 51 23.7437	+09 45 33.553	25	14	2453115.38682222	16.3	R	OH
10 51 23.6992	+09 45 33.706	25	14	2453115.38987407	16.4	R	OH
10 51 23.6520	+09 45 33.836	25	14	2453115.39292685	16.3	R	OH
10 51 10.1796	+09 46 15.948	19	35	2453116.34490648	16.0	R	OH
10 51 10.0769	+09 46 16.122	19	35	2453116.35188576	16.5	R	OH
10 51 10.0305	+09 46 16.320	19	35	2453116.35517234	16.6	R	OH
10 51 09.9843	+09 46 16.446	19	35	2453116.35845972	16.6	R	OH
10 51 09.9339	+09 46 16.603	19	35	2453116.36174387	16.6	R	OH
10 51 09.8897	+09 46 16.708	19	35	2453116.36502697	16.8	R	OH
10 51 09.8413	+09 46 16.869	19	35	2453116.36831042	16.6	R	OH
10 51 09.7935	+09 46 17.015	19	35	2453116.37159606	16.6	R	OH
10 51 09.7486	+09 46 17.101	19	35	2453116.37488137	16.6	R	OH
10 48 55.2409	+09 38 57.588	54	74	2453143.40866238	17.7	R	OH
10 48 55.2667	+09 38 57.197	54	74	2453143.41269549	17.5	R	OH
10 48 55.2713	+09 38 56.942	54	74	2453143.41575197	17.7	R	OH
10 48 55.2829	+09 38 56.794	54	74	2453143.41880023	17.6	R	OH
10 48 55.2955	+09 38 56.492	54	74	2453143.42184907	17.4	R	OH
10 48 55.3045	+09 38 56.327	54	74	2453143.42489977	16.8	R	OH
10 48 55.3123	+09 38 56.209	54	74	2453143.42794734	17.6	R	OH
10 48 55.3308	+09 38 55.889	54	74	2453143.43099792	17.4	R	OH
10 48 55.3319	+09 38 55.792	54	74	2453143.43404641	17.7	R	OH
10 48 55.3475	+09 38 55.362	54	74	2453143.43710336	17.6	R	OH

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Pasiphae							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
10 48 55.3613	+09 38 55.116	54	74	2453143.44015266	16.9	R	OH
10 49 15.4042	+09 33 42.555	92	77	2453147.33850660	17.6	R	OH
10 49 15.4144	+09 33 41.929	92	77	2453147.34346227	18.0	R	OH
10 49 15.5809	+09 33 39.645	92	77	2453147.36987407	17.2	R	OH
10 49 15.6001	+09 33 39.353	92	77	2453147.37292280	17.4	R	OH
10 49 15.6155	+09 33 39.136	92	77	2453147.37597338	17.3	R	OH
10 49 15.6373	+09 33 38.809	92	77	2453147.37902639	17.2	R	OH
10 49 15.6575	+09 33 38.505	92	77	2453147.38207581	17.6	R	OH
10 49 15.7007	+09 33 37.884	92	77	2453147.39123113	16.2	R	OH
13 07 22.1707	-06 07 34.864	40	26	2453437.52715590	17.6	R	OH
13 07 22.0960	-06 07 34.260	40	26	2453437.53137338	17.6	R	OH
13 07 22.0395	-06 07 33.818	40	26	2453437.53441968	17.5	R	OH
13 07 21.9793	-06 07 33.399	40	26	2453437.53747049	17.6	R	OH
13 07 21.9180	-06 07 32.967	40	26	2453437.54052373	17.4	R	OH
13 07 21.8663	-06 07 32.515	40	26	2453437.54357662	17.6	R	OH
13 07 21.8040	-06 07 32.018	40	26	2453437.54663090	17.5	R	OH
13 07 21.7518	-06 07 31.592	40	26	2453437.54967778	17.5	R	OH
13 07 21.6897	-06 07 31.180	40	26	2453437.55272731	17.5	R	OH
13 06 24.7829	-06 00 08.927	38	32	2453440.54013611	17.5	R	OH
13 06 24.6804	-06 00 08.171	38	32	2453440.54510185	17.5	R	OH
13 06 24.6187	-06 00 07.660	38	32	2453440.54815405	17.5	R	OH
13 06 24.5533	-06 00 07.236	38	32	2453440.55120093	17.5	R	OH
13 06 24.4915	-06 00 06.696	38	32	2453440.55425104	17.5	R	OH
13 06 24.4264	-06 00 06.268	38	32	2453440.55729954	17.4	R	OH
13 06 24.3696	-06 00 05.797	38	32	2453440.56035255	17.3	R	OH
13 06 24.3051	-06 00 05.291	38	32	2453440.56340394	17.5	R	OH
13 06 24.2389	-06 00 04.894	38	32	2453440.56645231	17.5	R	OH
12 57 19.3756	-04 52 18.916	20	16	2453463.56013727	16.9	C	BC
12 57 19.3133	-04 52 18.501	20	16	2453463.56240475	16.9	C	BC
12 57 19.2795	-04 52 18.232	20	16	2453463.56364144	17.0	C	BC
12 57 19.2451	-04 52 18.021	20	16	2453463.56487893	16.9	C	BC
12 57 19.2127	-04 52 17.758	20	16	2453463.56611678	16.9	C	BC
12 57 19.1465	-04 52 17.298	20	16	2453463.56859178	16.9	C	BC
12 57 19.1139	-04 52 17.055	20	16	2453463.56982940	17.0	C	BC
12 57 19.0793	-04 52 16.856	20	16	2453463.57106736	16.8	C	BC
12 56 51.8680	-04 48 58.116	16	23	2453464.61584988	16.9	C	BC
12 56 51.8367	-04 48 57.845	16	23	2453464.61708623	16.9	C	BC
12 56 51.8021	-04 48 57.619	16	23	2453464.61832350	17.0	C	BC
12 56 51.7695	-04 48 57.423	16	23	2453464.61956169	16.9	C	BC
12 56 51.7024	-04 48 56.943	16	23	2453464.62203461	17.0	C	BC
12 56 51.6679	-04 48 56.657	16	23	2453464.62328113	16.9	C	BC
12 56 51.6356	-04 48 56.439	16	23	2453464.62451840	17.0	C	BC
12 56 51.6046	-04 48 56.193	16	23	2453464.62575694	16.8	C	BC
12 56 51.5710	-04 48 55.941	16	23	2453464.62699907	17.0	C	BC
12 53 00.6447	-04 20 55.683	100	45	2453473.54714213	16.5	R	OH
12 53 00.5240	-04 20 54.702	100	45	2453473.55226713	16.0	R	OH
12 53 00.4160	-04 20 53.863	100	45	2453473.55647280	16.1	R	OH
12 53 00.2937	-04 20 53.069	100	45	2453473.56068576	16.1	R	OH
12 53 00.1956	-04 20 52.299	100	45	2453473.56489062	16.3	R	OH
12 45 10.0856	-03 23 50.196	32	16	2453494.44561319	17.0	R	OH
12 45 09.9533	-03 23 49.287	32	16	2453494.45229259	17.0	R	OH
12 45 09.8759	-03 23 48.759	32	16	2453494.45649861	17.0	R	OH
12 45 09.7960	-03 23 48.163	32	16	2453494.46071331	17.0	R	OH
12 45 09.7153	-03 23 47.616	32	16	2453494.46492546	17.0	R	OH
12 45 09.6367	-03 23 47.028	32	16	2453494.46913935	17.0	R	OH
12 45 09.5532	-03 23 46.459	32	16	2453494.47335104	17.0	R	OH
12 45 09.4723	-03 23 45.899	32	16	2453494.47756678	17.0	R	OH
12 42 45.9309	-03 06 04.554	29	29	2453503.39954653	17.7	R	OH
12 42 45.8481	-03 06 03.990	29	29	2453503.40531227	17.7	R	OH
12 42 45.7868	-03 06 03.475	29	29	2453503.40976574	17.6	R	OH

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Pasiphae

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
12 42 45.7264	-03 06 03.102	29	29	2453503.41422176	17.7	R	OH
12 42 45.6645	-03 06 02.651	29	29	2453503.41868067	17.7	R	OH
12 42 45.5992	-03 06 02.171	29	29	2453503.42313426	17.7	R	OH
12 42 45.5347	-03 06 01.739	29	29	2453503.42758171	17.7	R	OH
12 42 45.4723	-03 06 01.246	29	29	2453503.43202928	17.6	R	OH
15 11 14.0144	-15 22 55.197	21	12	2453796.73934016	17.9	C	BC
15 11 14.0102	-15 22 55.144	21	12	2453796.74219387	18.0	C	BC
15 11 14.0094	-15 22 55.101	21	12	2453796.74504734	17.9	C	BC
15 11 14.0042	-15 22 55.065	21	12	2453796.74646863	18.0	C	BC
15 11 14.0043	-15 22 55.015	21	12	2453796.74790012	17.9	C	BC
15 11 14.0019	-15 22 54.995	21	12	2453796.75074988	18.0	C	BC
15 11 13.9919	-15 22 54.855	21	12	2453796.75667986	18.0	C	BC
15 11 13.9901	-15 22 54.812	21	12	2453796.75952373	18.0	C	BC
15 11 13.9900	-15 22 54.786	21	12	2453796.76094560	17.9	C	BC
15 11 13.9875	-15 22 54.734	21	12	2453796.76237708	17.9	C	BC
15 10 44.3579	-15 18 40.124	24	32	2453804.73402870	18.2	C	BC
15 10 44.3162	-15 18 39.811	24	32	2453804.73980914	18.3	C	BC
15 10 44.2982	-15 18 39.730	24	32	2453804.74236736	18.0	C	BC
15 10 44.2642	-15 18 39.615	24	32	2453804.74697523	17.5	C	BC
15 10 44.2531	-15 18 39.491	24	32	2453804.74851470	17.6	C	BC
15 10 44.2388	-15 18 39.374	24	32	2453804.75005197	18.1	C	BC
15 10 44.2189	-15 18 39.305	24	32	2453804.75314653	16.7	C	BC
15 10 44.2039	-15 18 39.241	24	32	2453804.75468391	16.7	C	BC
15 10 44.1910	-15 18 39.189	24	32	2453804.75622130	17.5	C	BC
15 10 44.1848	-15 18 39.076	24	32	2453804.75775880	18.2	C	BC
15 10 44.1469	-15 18 38.899	24	32	2453804.76239051	17.5	C	BC
15 10 44.1243	-15 18 38.790	24	32	2453804.76546100	18.1	C	BC
15 10 11.1900	-15 15 28.681	29	17	2453808.72073900	17.8	C	BC
15 10 11.1669	-15 15 28.563	29	17	2453808.72312234	17.8	C	BC
15 10 11.1248	-15 15 28.315	29	17	2453808.72726609	17.8	C	BC
15 10 11.1108	-15 15 28.255	29	17	2453808.72881354	17.7	C	BC
15 10 11.0924	-15 15 28.182	29	17	2453808.73035081	17.8	C	BC
15 10 11.0276	-15 15 27.824	29	17	2453808.73651042	17.8	C	BC
15 10 11.0112	-15 15 27.768	29	17	2453808.73804734	17.7	C	BC
15 10 10.9912	-15 15 27.658	29	17	2453808.73958484	17.8	C	BC
14 37 21.5120	-13 10 16.628	119	57	2453880.40388056	16.3	R	OH
14 37 21.3870	-13 10 16.174	119	57	2453880.40796470	16.4	R	OH
14 37 20.6414	-13 10 13.996	119	57	2453880.43208704	16.2	R	OH
14 37 20.5218	-13 10 13.643	119	57	2453880.43594456	16.4	R	OH
14 37 20.3836	-13 10 13.359	119	57	2453880.43980150	15.9	R	OH
14 24 38.5528	-12 49 55.650	19	11	2453920.45846354	17.9	C	BC
14 24 38.5446	-12 49 55.719	19	11	2453920.46000104	17.9	C	BC
14 24 38.5335	-12 49 55.772	19	11	2453920.46153843	17.9	C	BC
14 24 38.5246	-12 49 55.836	19	11	2453920.46308576	17.9	C	BC
14 24 38.5185	-12 49 55.920	19	11	2453920.46463310	17.9	C	BC
14 24 38.4879	-12 49 56.088	19	11	2453920.46924560	17.9	C	BC
14 24 38.4592	-12 49 56.291	19	11	2453920.47387731	17.8	C	BC
14 24 38.4534	-12 49 56.352	19	11	2453920.47541458	17.9	C	BC
14 24 38.4433	-12 49 56.421	19	11	2453920.47696181	17.8	C	BC
14 24 38.4339	-12 49 56.482	19	11	2453920.47850903	17.8	C	BC
14 24 38.4169	-12 49 56.614	19	11	2453920.48159363	17.9	C	BC
14 24 38.3898	-12 49 56.788	19	11	2453920.48621574	17.9	C	BC
14 24 38.3023	-12 49 57.394	19	11	2453920.50069491	17.8	C	BC
14 24 38.2920	-12 49 57.481	19	11	2453920.50223472	17.8	C	BC
14 24 38.2564	-12 49 57.711	19	11	2453920.50840428	17.8	C	BC
14 24 38.2357	-12 49 57.831	19	11	2453920.51147882	17.8	C	BC
14 24 38.2182	-12 49 57.976	19	11	2453920.51456331	17.9	C	BC
14 24 38.2100	-12 49 58.052	19	11	2453920.51610139	17.8	C	BC
14 24 38.1928	-12 49 58.151	19	11	2453920.51917604	17.8	C	BC
14 24 38.1733	-12 49 58.297	19	11	2453920.52227049	17.9	C	BC

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
14 24 38.1656	-12 49 58.362	19	11	2453920.52380787	17.8	C	BC
14 39 53.2363	-15 02 02.405	109	46	2453978.45940938	17.4	C	BC
14 39 53.2926	-15 02 02.819	109	46	2453978.46083137	17.6	C	BC
14 39 53.3766	-15 02 03.319	109	46	2453978.46367593	17.0	C	BC
14 39 53.4365	-15 02 03.618	109	46	2453978.46509803	17.3	C	BC
14 39 53.5454	-15 02 04.181	109	46	2453978.46796146	15.9	C	BC
14 39 53.5820	-15 02 04.580	109	46	2453978.46938310	17.5	C	BC
14 39 53.6910	-15 02 05.134	109	46	2453978.47222708	16.2	C	BC
14 39 53.7358	-15 02 05.466	109	46	2453978.47365868	17.3	C	BC
14 39 53.7803	-15 02 05.712	109	46	2453978.47508032	16.4	C	BC
14 39 53.8155	-15 02 05.946	109	46	2453978.47650197	16.8	C	BC
14 39 53.8828	-15 02 06.260	109	46	2453978.47792361	17.4	C	BC
14 40 26.8017	-15 05 21.899	56	40	2453979.41392106	17.4	C	BC
14 40 26.8577	-15 05 22.347	56	40	2453979.41583472	16.8	C	BC
14 40 26.9070	-15 05 22.462	56	40	2453979.41702488	17.3	C	BC
14 40 27.0253	-15 05 23.249	56	40	2453979.42060521	16.4	C	BC
14 40 27.0735	-15 05 23.571	56	40	2453979.42180521	16.5	C	BC
14 40 27.1992	-15 05 24.271	56	40	2453979.42537569	17.4	C	BC
14 40 27.2347	-15 05 24.519	56	40	2453979.42657569	17.2	C	BC
14 40 27.4023	-15 05 25.541	56	40	2453979.43133634	17.0	C	BC
14 40 27.4481	-15 05 25.740	56	40	2453979.43253634	17.4	C	BC
17 24 49.2276	-22 47 25.422	25	25	2454208.64438137	18.2	U	Z
17 24 49.2195	-22 47 25.370	25	25	2454208.64547326	18.1	U	Z
17 24 49.2085	-22 47 25.350	25	25	2454208.64655509	18.2	U	Z
17 24 49.2010	-22 47 25.296	25	25	2454208.64763750	18.2	U	Z
17 24 49.1929	-22 47 25.336	25	25	2454208.64871910	18.3	U	Z
17 24 49.1865	-22 47 25.247	25	25	2454208.64980046	18.2	U	Z
17 24 49.1751	-22 47 25.274	25	25	2454208.65088229	18.4	U	Z
17 24 49.1654	-22 47 25.238	25	25	2454208.65196377	18.4	U	Z
17 24 49.1633	-22 47 25.163	25	25	2454208.65304560	18.4	U	Z
17 24 49.1502	-22 47 25.167	25	25	2454208.65412743	18.2	U	Z
17 24 49.1347	-22 47 25.077	25	25	2454208.65631065	18.1	U	Z
16 43 38.1868	-21 19 25.816	24	11	2454330.57369271	17.7	C	PE
16 43 38.1849	-21 19 25.818	24	11	2454330.57398032	17.7	C	PE
16 43 38.1880	-21 19 25.848	24	11	2454330.57447731	17.7	C	PE
16 43 38.1984	-21 19 25.835	24	11	2454330.57643090	17.6	C	PE
16 43 38.2004	-21 19 25.849	24	11	2454330.57670845	17.7	C	PE
16 43 38.2012	-21 19 25.837	24	11	2454330.57698611	17.6	C	PE
16 43 38.2040	-21 19 25.834	24	11	2454330.57754120	17.7	C	PE
16 43 38.2055	-21 19 25.840	24	11	2454330.57781875	17.6	C	PE
16 43 38.2114	-21 19 25.842	24	11	2454330.57866516	17.6	C	PE
16 43 38.2110	-21 19 25.836	24	11	2454330.57894317	17.6	C	PE
16 43 38.2137	-21 19 25.835	24	11	2454330.57922072	17.7	C	PE
16 43 38.2136	-21 19 25.827	24	11	2454330.57949826	17.6	C	PE
16 43 38.2166	-21 19 25.842	24	11	2454330.58005370	17.6	C	PE
16 43 38.2200	-21 19 25.859	24	11	2454330.58033183	17.6	C	PE
16 43 38.2225	-21 19 25.822	24	11	2454330.58060938	17.7	C	PE
16 43 38.2249	-21 19 25.861	24	11	2454330.58116690	17.7	C	PE
16 43 38.2275	-21 19 25.860	24	11	2454330.58144468	17.7	C	PE
16 43 38.2288	-21 19 25.849	24	11	2454330.58173264	17.7	C	PE
16 43 38.2273	-21 19 25.858	24	11	2454330.58202037	17.8	C	PE
16 43 38.2327	-21 19 25.840	24	11	2454330.58229792	17.7	C	PE
16 43 38.2297	-21 19 25.858	24	11	2454330.58257546	17.7	C	PE
16 43 38.2361	-21 19 25.846	24	11	2454330.58314433	17.7	C	PE
16 43 38.2388	-21 19 25.846	24	11	2454330.58342187	17.7	C	PE
16 43 38.2380	-21 19 25.835	24	11	2454330.58369942	17.7	C	PE
16 43 38.2402	-21 19 25.829	24	11	2454330.58397743	17.7	C	PE
16 43 38.2410	-21 19 25.859	24	11	2454330.58425498	17.8	C	PE
16 43 38.2439	-21 19 25.843	24	11	2454330.58453252	17.6	C	PE
16 43 38.2461	-21 19 25.842	24	11	2454330.58481007	17.8	C	PE

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RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
16 43 38.2451	-21 19 25.851	24	11	2454330.58508773	17.8	C	PE
16 43 38.2482	-21 19 25.845	24	11	2454330.58536528	17.7	C	PE
16 43 38.2501	-21 19 25.850	24	11	2454330.58564282	17.8	C	PE
16 43 50.4253	-21 19 39.589	12	9	2454332.51822384	18.0	C	PE
16 43 50.4317	-21 19 39.594	12	9	2454332.51909572	18.1	C	PE
16 43 50.4412	-21 19 39.591	12	9	2454332.52039896	17.9	C	PE
16 43 50.4435	-21 19 39.599	12	9	2454332.52093900	18.0	C	PE
16 43 50.4468	-21 19 39.609	12	9	2454332.52137002	18.0	C	PE
16 43 50.4495	-21 19 39.607	12	9	2454332.52180116	18.0	C	PE
16 43 50.4522	-21 19 39.628	12	9	2454332.52223229	18.0	C	PE
16 43 50.4593	-21 19 39.623	12	9	2454332.52354560	17.9	C	PE
16 43 50.4650	-21 19 39.614	12	9	2454332.52430914	17.9	C	PE
16 43 50.4708	-21 19 39.634	12	9	2454332.52517951	18.0	C	PE
16 43 50.4743	-21 19 39.626	12	9	2454332.52561065	18.0	C	PE
16 43 50.4784	-21 19 39.635	12	9	2454332.52605162	18.0	C	PE
16 43 50.4819	-21 19 39.635	12	9	2454332.52692396	17.9	C	PE
16 43 50.4853	-21 19 39.657	12	9	2454332.52735208	17.9	C	PE
16 43 50.4924	-21 19 39.661	12	9	2454332.52821435	17.9	C	PE
16 43 50.4923	-21 19 39.658	12	9	2454332.52865521	17.9	C	PE
16 43 50.4974	-21 19 39.649	12	9	2454332.52909606	17.9	C	PE
16 43 50.5005	-21 19 39.673	12	9	2454332.52952697	17.9	C	PE
16 43 50.5009	-21 19 39.652	12	9	2454332.52995787	17.9	C	PE
16 43 50.5050	-21 19 39.675	12	9	2454332.53038877	17.9	C	PE
16 43 50.5079	-21 19 39.671	12	9	2454332.53081979	17.9	C	PE
16 43 50.5118	-21 19 39.681	12	9	2454332.53126065	17.9	C	PE
16 43 50.5172	-21 19 39.681	12	9	2454332.53214225	17.9	C	PE
16 43 50.5225	-21 19 39.680	12	9	2454332.53300451	17.9	C	PE
16 43 50.5284	-21 19 39.680	12	9	2454332.53386655	17.9	C	PE
16 43 50.5359	-21 19 39.688	12	9	2454332.53515938	18.0	C	PE
16 43 50.5428	-21 19 39.697	12	9	2454332.53604120	18.0	C	PE
16 43 50.5488	-21 19 39.697	12	9	2454332.53690336	18.0	C	PE
16 43 50.5508	-21 19 39.690	12	9	2454332.53733426	17.9	C	PE
16 43 50.5569	-21 19 39.696	12	9	2454332.53821644	17.9	C	PE
16 43 50.5589	-21 19 39.721	12	9	2454332.53865729	17.9	C	PE
16 43 50.5667	-21 19 39.729	12	9	2454332.53995035	17.9	C	PE
16 43 50.5716	-21 19 39.736	12	9	2454332.54039120	17.9	C	PE
16 43 50.5725	-21 19 39.735	12	9	2454332.54083206	18.0	C	PE
16 43 50.5820	-21 19 39.728	12	9	2454332.54211435	18.0	C	PE
16 48 12.2928	-21 26 22.068	23	16	2454351.48667060	17.2	C	PE
16 48 12.3147	-21 26 22.102	23	16	2454351.48784664	17.4	C	PE
16 48 12.3315	-21 26 22.157	23	16	2454351.48862627	17.3	C	PE
16 48 12.3660	-21 26 22.191	23	16	2454351.49018634	17.3	C	PE
16 48 12.3979	-21 26 22.253	23	16	2454351.49175428	17.3	C	PE
16 48 12.4104	-21 26 22.290	23	16	2454351.49254410	17.2	C	PE
16 48 12.4865	-21 26 22.364	23	16	2454351.49645579	17.2	C	PE
16 48 12.5032	-21 26 22.426	23	16	2454351.49724537	17.4	C	PE
16 48 12.5193	-21 26 22.444	23	16	2454351.49802500	17.2	C	PE
16 48 12.5352	-21 26 22.452	23	16	2454351.49881447	17.3	C	PE
16 48 12.5988	-21 26 22.550	23	16	2454351.50195278	17.3	C	PE
16 48 12.6992	-21 26 22.716	23	16	2454351.50697917	17.3	C	PE
16 48 54.7173	-21 27 30.046	16	15	2454353.50485505	18.0	un	E
16 48 54.7405	-21 27 30.072	16	15	2454353.50599227	18.0	un	E
16 48 54.7638	-21 27 30.111	16	15	2454353.50712475	18.0	un	E
16 48 54.7860	-21 27 30.144	16	15	2454353.50826001	18.0	un	E
16 48 54.8105	-21 27 30.195	16	15	2454353.50938890	18.0	un	E
16 48 54.8329	-21 27 30.246	16	15	2454353.51051327	18.0	un	E
16 48 54.8591	-21 27 30.289	16	15	2454353.51164703	18.0	un	E
16 48 54.8859	-21 27 30.335	16	15	2454353.51293327	18.0	un	E
16 48 54.9107	-21 27 30.377	16	15	2454353.51406459	18.0	un	E
19 27 25.6517	-21 05 24.882	41	24	2454574.78289271	18.0	I	BC

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RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 27 25.6937	-21 05 24.841	41	24	2454574.78571331	17.9	I	BC
19 27 25.8105	-21 05 24.743	41	24	2454574.79414514	17.9	I	BC
19 27 25.8426	-21 05 24.726	41	24	2454574.79695625	17.9	I	BC
19 27 25.8851	-21 05 24.685	41	24	2454574.79977674	17.8	I	BC
19 27 25.9219	-21 05 24.716	41	24	2454574.80258727	17.8	I	BC
19 27 25.9937	-21 05 24.650	41	24	2454574.80821308	17.9	I	BC
19 27 43.5876	-21 24 51.303	91	21	2454612.73134583	17.7	I	BC
19 27 43.5422	-21 24 51.512	91	21	2454612.73444016	17.8	I	BC
19 27 43.4987	-21 24 51.770	91	21	2454612.73819387	17.7	I	BC
19 27 43.4654	-21 24 51.958	91	21	2454612.74066493	17.5	I	BC
19 27 43.4198	-21 24 52.145	91	21	2454612.74313530	17.5	I	BC
19 27 43.3859	-21 24 52.344	91	21	2454612.74560625	16.0	I	BC
19 27 43.3557	-21 24 52.509	91	21	2454612.74807697	17.6	I	BC
19 27 43.3093	-21 24 52.644	91	21	2454612.75055741	17.5	I	BC
19 27 43.2509	-21 24 53.034	91	21	2454612.75549907	17.6	I	BC
19 27 43.1991	-21 24 53.167	91	21	2454612.75796979	16.8	I	BC
19 25 36.0063	-21 35 26.486	25	29	2454620.70732523	16.7	un	E
19 25 35.9223	-21 35 26.823	25	29	2454620.71154717	17.1	un	E
19 25 35.8640	-21 35 27.167	25	29	2454620.71475645	17.0	un	E
18 55 50.9190	-23 32 42.301	33	30	2454690.49973229	17.1	I	BC
18 55 50.8724	-23 32 42.493	33	30	2454690.50258576	17.1	I	BC
18 55 50.8506	-23 32 42.669	33	30	2454690.50400764	15.6	I	BC
18 55 50.7267	-23 32 43.117	33	30	2454690.51128113	17.1	I	BC
18 55 50.6389	-23 32 43.507	33	30	2454690.51625995	17.0	I	BC
18 55 49.1919	-23 32 49.425	33	30	2454690.60335544	17.2	I	BC
18 55 49.1446	-23 32 49.653	33	30	2454690.60625417	17.2	I	BC
18 55 49.0694	-23 32 49.961	33	30	2454690.61051979	17.1	I	BC
18 55 31.0825	-23 55 07.924	53	52	2454729.54704803	18.1	I	BC
18 55 31.1075	-23 55 07.913	53	52	2454729.54898252	18.0	I	BC
18 55 31.1284	-23 55 07.957	53	52	2454729.55075833	17.5	I	BC
18 55 31.1525	-23 55 07.917	53	52	2454729.55253461	18.4	I	BC
18 55 31.1851	-23 55 07.976	53	52	2454729.55431053	18.0	I	BC
18 55 31.2438	-23 55 07.930	53	52	2454729.55786238	17.8	I	BC
18 55 31.2650	-23 55 07.933	53	52	2454729.55963819	17.1	I	BC
18 55 31.2903	-23 55 07.868	53	52	2454729.56141412	18.3	I	BC
18 55 31.3201	-23 55 07.885	53	52	2454729.56318912	16.2	I	BC
18 55 31.3746	-23 55 07.970	53	52	2454729.56688356	18.5	I	BC
18 55 31.4013	-23 55 07.958	53	52	2454729.56865764	18.1	I	BC
18 55 31.4325	-23 55 07.909	53	52	2454729.57043183	18.0	I	BC
18 55 31.4491	-23 55 07.775	53	52	2454729.57220579	16.9	I	BC
21 56 02.3381	-13 20 21.502	18	18	2454971.91656241	17.7	un	E
21 56 02.3549	-13 20 21.365	18	18	2454971.91773082	17.8	un	E
21 56 02.3735	-13 20 21.265	18	18	2454971.91888314	17.7	un	E
21 56 02.3886	-13 20 21.143	18	18	2454971.92004507	17.7	un	E
21 56 02.4235	-13 20 20.896	18	18	2454971.92234266	17.8	un	E
21 56 02.4413	-13 20 20.817	18	18	2454971.92347137	17.7	un	E
21 56 02.4784	-13 20 20.622	18	18	2454971.92578064	17.7	un	E
21 56 02.4966	-13 20 20.480	18	18	2454971.92694095	17.7	un	E
21 56 31.5001	-13 17 25.182	15	12	2454973.82595317	17.7	un	E
21 56 31.5326	-13 17 24.963	15	12	2454973.82829289	17.7	un	E
21 56 31.5496	-13 17 24.854	15	12	2454973.82945459	17.7	un	E
21 56 31.6183	-13 17 24.455	15	12	2454973.83430395	17.8	un	E
21 56 31.6353	-13 17 24.357	15	12	2454973.83547306	17.8	un	E
21 56 31.6512	-13 17 24.266	15	12	2454973.83662874	17.7	un	E
21 56 31.6676	-13 17 24.149	15	12	2454973.83778396	17.8	un	E
21 56 31.6839	-13 17 24.053	15	12	2454973.83890930	17.9	un	E
21 56 31.6999	-13 17 23.935	15	12	2454973.84005433	17.7	un	E
21 56 31.7161	-13 17 23.834	15	12	2454973.84121349	17.9	un	E
21 56 31.7654	-13 17 23.562	15	12	2454973.84461827	17.8	un	E
21 56 31.7933	-13 17 23.390	15	12	2454973.84656987	17.7	un	E

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 56 31.8206	-13 17 23.223	15	12	2454973.84850306	17.8	un	E
21 56 31.8460	-13 17 23.054	15	12	2454973.85044239	17.7	un	E
21 56 31.8738	-13 17 22.895	15	12	2454973.85230463	17.8	un	E
21 56 31.8997	-13 17 22.713	15	12	2454973.85423852	17.7	un	E
21 56 31.9254	-13 17 22.544	15	12	2454973.85611673	17.7	un	E
21 56 31.9557	-13 17 22.362	15	12	2454973.85825214	17.7	un	E
21 56 31.9936	-13 17 22.103	15	12	2454973.86085995	17.8	un	E
21 56 32.0205	-13 17 21.963	15	12	2454973.86280657	17.7	un	E
21 56 32.0482	-13 17 21.782	15	12	2454973.86474092	17.6	un	E
21 56 32.0742	-13 17 21.622	15	12	2454973.86667956	17.7	un	E
21 56 32.1012	-13 17 21.441	15	12	2454973.86854492	17.8	un	E
21 56 32.1286	-13 17 21.273	15	12	2454973.87047765	17.7	un	E
21 56 32.1555	-13 17 21.101	15	12	2454973.87235355	17.6	un	E
21 56 32.1819	-13 17 20.938	15	12	2454973.87428731	17.6	un	E
21 56 59.5004	-13 14 33.336	73	26	2454975.83673787	17.7	un	E
21 56 59.5287	-13 14 33.160	73	26	2454975.83904680	18.3	un	E
21 56 59.5430	-13 14 33.033	73	26	2454975.84018153	17.9	un	E
21 56 59.5583	-13 14 32.973	73	26	2454975.84134531	17.8	un	E
21 56 59.5679	-13 14 32.856	73	26	2454975.84249590	17.6	un	E
21 56 59.5893	-13 14 32.774	73	26	2454975.84361928	17.8	un	E
21 56 59.6042	-13 14 32.707	73	26	2454975.84476570	17.9	un	E
21 56 59.8919	-13 14 30.823	73	26	2454975.86863389	18.2	un	E
21 56 59.9490	-13 14 30.449	73	26	2454975.87298587	17.9	un	E
21 56 59.9628	-13 14 30.327	73	26	2454975.87414178	18.0	un	E
21 56 59.9801	-13 14 30.274	73	26	2454975.87529919	18.1	un	E
21 57 00.0214	-13 14 30.001	73	26	2454975.87871918	17.9	un	E
21 57 00.0480	-13 14 29.792	73	26	2454975.88068797	18.0	un	E
21 57 00.0605	-13 14 29.720	73	26	2454975.88185140	17.9	un	E
21 57 00.0751	-13 14 29.619	73	26	2454975.88300789	17.9	un	E
21 57 00.0887	-13 14 29.480	73	26	2454975.88416334	17.9	un	E
21 57 00.1049	-13 14 29.445	73	26	2454975.88528811	17.8	un	E
21 57 00.1170	-13 14 29.359	73	26	2454975.88645965	17.1	un	E
21 57 00.1339	-13 14 29.217	73	26	2454975.88761313	17.9	un	E
21 57 00.1494	-13 14 29.165	73	26	2454975.88876952	17.9	un	E
21 58 32.4511	-13 00 16.035	24	8	2455003.78317211	17.9	I	PE
21 58 32.4380	-13 00 16.081	24	8	2455003.78497894	18.0	I	PE
21 58 32.4243	-13 00 16.117	24	8	2455003.78678056	18.0	I	PE
21 58 32.3971	-13 00 16.182	24	8	2455003.79036956	17.9	I	PE
21 58 32.3801	-13 00 16.221	24	8	2455003.79216470	18.1	I	PE
21 58 32.3386	-13 00 16.341	24	8	2455003.79754630	17.9	I	PE
21 58 32.3147	-13 00 16.419	24	8	2455003.80113380	18.0	I	PE
21 58 32.3020	-13 00 16.456	24	8	2455003.80292674	18.0	I	PE
21 58 08.4724	-13 01 39.775	21	17	2455006.80057049	17.6	I	PE
21 58 08.4629	-13 01 39.771	21	17	2455006.80168032	17.7	I	PE
21 58 08.4521	-13 01 39.839	21	17	2455006.80277812	17.7	I	PE
21 58 08.4389	-13 01 39.865	21	17	2455006.80387755	16.0	I	PE
21 58 08.4324	-13 01 39.894	21	17	2455006.80497743	17.7	I	PE
21 58 08.4177	-13 01 39.978	21	17	2455006.80607685	17.7	I	PE
21 58 08.4083	-13 01 39.991	21	17	2455006.80717477	17.6	I	PE
21 58 08.3960	-13 01 40.017	21	17	2455006.80827431	17.7	I	PE
21 58 08.3863	-13 01 40.061	21	17	2455006.80937303	17.7	I	PE
21 58 08.3777	-13 01 40.098	21	17	2455006.81047164	17.7	I	PE
21 51 16.4196	-13 31 20.145	107	45	2455030.79565035	17.1	C	BC
21 51 16.3820	-13 31 20.251	107	45	2455030.79696204	17.2	C	BC
21 51 16.3480	-13 31 20.523	107	45	2455030.79827535	17.1	C	BC
21 51 16.2833	-13 31 20.765	107	45	2455030.80089479	16.9	C	BC
21 51 16.2019	-13 31 21.146	107	45	2455030.80483484	17.5	C	BC
21 51 16.1529	-13 31 21.318	107	45	2455030.80614792	17.1	C	BC
00 09 17.4638	+00 09 14.491	31	48	2455383.84000000	17.3	C	BC
00 09 17.4853	+00 09 14.577	31	48	2455383.84120370	17.2	C	BC

continued ...

Pasiphae							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
00 09 17.4943	+00 09 14.624	31	48	2455383.84180556	17.0	C	BC
00 09 17.5064	+00 09 14.623	31	48	2455383.84241898	17.3	C	BC
00 09 17.5215	+00 09 14.632	31	48	2455383.84362269	17.4	C	BC
00 09 17.5333	+00 09 14.788	31	48	2455383.84423611	16.9	C	BC
00 09 17.5414	+00 09 14.807	31	48	2455383.84483796	16.9	C	BC
00 09 17.5570	+00 09 14.729	31	48	2455383.84543981	17.1	C	BC
23 48 33.9226	-03 39 24.338	26	20	2455489.64674769	17.3	I	PE
23 48 33.8705	-03 39 24.730	26	20	2455489.64946759	17.3	I	PE
23 48 33.8228	-03 39 25.004	26	20	2455489.65167824	17.2	I	PE
23 48 33.8111	-03 39 25.153	26	20	2455489.65240741	17.1	I	PE
23 48 33.7967	-03 39 25.219	26	20	2455489.65314815	17.2	I	PE
23 48 33.7668	-03 39 25.424	26	20	2455489.65461806	17.3	I	PE
23 48 33.7561	-03 39 25.496	26	20	2455489.65534722	17.1	I	PE
07 24 18.4726	+23 11 13.112	26	12	2456606.71500487	17.1	I	PE
07 24 18.4707	+23 11 13.224	26	12	2456606.71736017	17.1	I	PE
07 24 18.4661	+23 11 13.306	26	12	2456606.72025150	17.1	I	PE
07 24 18.4654	+23 11 13.364	26	12	2456606.72169740	17.1	I	PE
07 24 18.4666	+23 11 13.405	26	12	2456606.72314309	17.1	I	PE
07 24 18.4654	+23 11 13.469	26	12	2456606.72458892	17.1	I	PE
07 24 18.4656	+23 11 13.501	26	12	2456606.72603462	17.1	I	PE
07 24 18.4646	+23 11 13.534	26	12	2456606.72748023	17.1	I	PE
07 24 18.4607	+23 11 13.585	26	12	2456606.72892604	17.1	I	PE
07 24 18.4528	+23 11 13.746	26	12	2456606.73326324	17.1	I	PE
07 24 18.4564	+23 11 13.791	26	12	2456606.73470890	17.1	I	PE
07 24 18.4546	+23 11 13.859	26	12	2456606.73615470	17.1	I	PE

Table B.6. CDS data for Callirrhoe.

Callirrhoe							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 59 02.2088	-14 05 25.020	29	34	2454973.78341954	21.1	un	E
21 59 02.2260	-14 05 24.945	29	34	2454973.78456874	21.0	un	E
21 59 02.3890	-14 05 24.081	29	34	2454973.79609720	20.9	un	E
21 59 02.4164	-14 05 23.909	29	34	2454973.79803618	20.7	un	E
21 59 02.4472	-14 05 23.729	29	34	2454973.79997574	20.2	un	E
21 59 02.4751	-14 05 23.577	29	34	2454973.80191379	21.2	un	E
21 59 02.5256	-14 05 23.309	29	34	2454973.80569881	21.1	un	E
21 59 02.5524	-14 05 23.160	29	34	2454973.80757413	21.1	un	E
21 59 02.5842	-14 05 23.076	29	34	2454973.80950663	21.2	un	E
21 59 02.6841	-14 05 22.561	29	34	2454973.81636361	20.8	un	E
21 59 02.7367	-14 05 22.224	29	34	2454973.82023486	20.9	un	E
21 59 02.7922	-14 05 21.994	29	34	2454973.82404881	20.7	un	E
21 59 03.6467	-14 05 17.438	29	34	2454973.88453310	20.7	un	E
21 59 03.6730	-14 05 17.257	29	34	2454973.88645877	20.7	un	E
21 59 03.7945	-14 05 16.596	29	34	2454973.89502439	21.7	un	E
21 59 03.8191	-14 05 16.377	29	34	2454973.89694867	19.8	un	E
00 16 23.4853	-00 06 36.433	67	35	2455367.82969907	21.5	R	PE
00 16 23.5315	-00 06 36.212	67	35	2455367.83145833	21.9	R	PE
00 16 23.5749	-00 06 35.989	67	35	2455367.83322917	21.5	R	PE
00 16 23.6216	-00 06 35.782	67	35	2455367.83498843	19.9	R	PE
00 16 23.6687	-00 06 35.639	67	35	2455367.83674768	21.6	R	PE
00 16 23.7053	-00 06 35.449	67	35	2455367.83850694	21.5	R	PE
00 16 23.8100	-00 06 35.005	67	35	2455367.84203704	21.9	R	PE
00 16 23.8409	-00 06 34.756	67	35	2455367.84379630	21.8	R	PE
00 16 23.8901	-00 06 34.548	67	35	2455367.84555556	21.6	R	PE

Table B.7. CDS data for Megaclite.

Megaclite							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 57 35.0268	-13 41 58.103	53	35	2454973.84656987	20.3	un	E
21 57 35.1088	-13 41 57.671	53	35	2454973.85230463	22.0	un	E
21 57 35.1345	-13 41 57.472	53	35	2454973.85423852	22.4	un	E
21 57 35.1675	-13 41 57.349	53	35	2454973.85611673	22.3	un	E
21 57 35.1842	-13 41 57.072	53	35	2454973.85825214	22.4	un	E
21 57 35.2291	-13 41 56.956	53	35	2454973.86085995	22.1	un	E
21 57 35.2540	-13 41 56.718	53	35	2454973.86280657	21.2	un	E
21 57 35.2803	-13 41 56.549	53	35	2454973.86474092	22.2	un	E
21 57 35.3311	-13 41 56.254	53	35	2454973.86854492	22.1	un	E
21 57 35.3611	-13 41 56.044	53	35	2454973.87047765	22.0	un	E

Table B.8. CDS data for Ananke.

Ananke							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 09 32.3569	-23 35 13.116	63	48	2450256.63831019	18.6	C	PE
19 09 32.2345	-23 35 13.203	63	48	2450256.64200231	17.5	C	PE
19 09 32.1379	-23 35 13.303	63	48	2450256.64527778	17.9	C	PE
19 09 32.0425	-23 35 13.522	63	48	2450256.64855324	18.5	C	PE
18 52 35.3609	-23 51 38.759	98	111	2450289.57921169	18.4	un	PE
18 52 35.2885	-23 51 38.572	98	111	2450289.58112442	20.2	un	PE
18 52 35.2721	-23 51 38.714	98	111	2450289.58171690	18.5	un	PE
18 52 35.2382	-23 51 38.561	98	111	2450289.58291273	18.4	un	PE
18 52 35.2207	-23 51 38.571	98	111	2450289.58350521	18.2	un	PE
18 46 41.7754	-23 26 38.328	60	8	2450358.43130787	20.1	C	PE
18 46 42.4578	-23 26 36.550	60	8	2450358.46540509	19.8	C	PE
18 46 42.4926	-23 26 36.467	60	8	2450358.46690972	20.0	C	PE
23 48 01.8308	-02 34 43.230	73	35	2451045.47784109	18.6	R	OH
23 48 01.5183	-02 34 44.933	73	35	2451045.48982882	19.0	R	OH
23 48 01.4285	-02 34 45.491	73	35	2451045.49309144	19.2	R	OH
23 48 01.3449	-02 34 45.973	73	35	2451045.49635984	19.6	R	OH
23 48 01.2556	-02 34 46.476	73	35	2451045.49964005	18.8	R	OH
23 41 03.7197	-03 14 25.463	30	6	2451059.64993056	18.4	C	PE
23 41 03.6083	-03 14 26.081	30	6	2451059.65324074	17.4	C	PE
23 41 03.4981	-03 14 26.696	30	6	2451059.65655093	18.2	C	PE
23 25 55.2338	-04 43 12.443	52	50	2451087.41043681	18.6	V	OH
23 25 54.8858	-04 43 14.536	52	50	2451087.42170995	18.3	V	OH
23 25 54.7868	-04 43 15.125	52	50	2451087.42498090	18.5	V	OH
23 25 54.6853	-04 43 15.733	52	50	2451087.42825058	18.2	V	OH
23 25 54.5825	-04 43 16.309	52	50	2451087.43152269	18.5	V	OH
23 25 54.3856	-04 43 17.408	52	50	2451087.43805428	18.5	V	OH
23 25 54.2754	-04 43 18.030	52	50	2451087.44131956	18.6	V	OH
23 25 54.1733	-04 43 18.730	52	50	2451087.44492500	18.5	V	OH
23 25 54.0742	-04 43 19.297	52	50	2451087.44818958	18.4	V	OH
23 25 53.9661	-04 43 19.954	52	50	2451087.45145197	18.4	V	OH
23 25 53.8631	-04 43 20.403	52	50	2451087.45472095	18.2	V	OH
23 25 53.7667	-04 43 21.181	52	50	2451087.45798333	18.2	V	OH
23 25 53.6577	-04 43 21.711	52	50	2451087.46125556	18.4	V	OH
23 25 53.5620	-04 43 22.224	52	50	2451087.46452743	18.5	V	OH
02 09 51.1824	+10 11 10.159	51	14	2451461.63506701	18.6	R	OH
02 09 51.0076	+10 11 09.244	51	14	2451461.64083021	18.6	R	OH
02 09 50.7808	+10 11 08.109	51	14	2451461.64828993	18.6	R	OH
02 09 50.6370	+10 11 07.351	51	14	2451461.65311794	18.6	R	OH
02 09 50.3330	+10 11 05.789	51	14	2451461.66313935	18.6	R	OH
02 09 50.1397	+10 11 04.852	51	14	2451461.66914491	18.5	R	OH
02 09 49.9837	+10 11 04.001	51	14	2451461.67446574	18.5	R	OH
02 09 21.6153	+10 08 38.948	42	57	2451462.61343299	18.7	R	OH

continued ...

Ananke								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
02 09 21.4755	+10 08 38.145	42	57	2451462.61809873	18.5	R	OH
02 09 21.2118	+10 08 36.817	42	57	2451462.62656933	18.6	R	OH
02 09 21.0683	+10 08 36.089	42	57	2451462.63105208	18.7	R	OH
02 09 20.7929	+10 08 34.688	42	57	2451462.64014028	18.4	R	OH
02 09 20.6845	+10 08 34.112	42	57	2451462.64362292	18.4	R	OH
02 09 20.5474	+10 08 33.375	42	57	2451462.64795949	18.5	R	OH
02 09 20.4490	+10 08 32.863	42	57	2451462.65137442	18.4	R	OH
02 09 20.3741	+10 08 32.463	42	57	2451462.65374653	18.3	R	OH
02 06 50.9179	+09 55 56.510	97	42	2451467.45583310	18.5	R	OH
02 06 50.7847	+09 55 55.915	97	42	2451467.45958090	18.5	R	OH
02 06 50.5760	+09 55 54.807	97	42	2451467.46607049	18.7	R	OH
02 06 49.6562	+09 55 50.349	97	42	2451467.49450833	18.5	R	OH
02 06 49.4550	+09 55 49.381	97	42	2451467.50062986	18.4	R	OH
02 06 49.2567	+09 55 48.391	97	42	2451467.50666296	18.4	R	OH
02 06 49.1060	+09 55 47.676	97	42	2451467.51180694	18.3	R	OH
02 06 48.5113	+09 55 44.742	97	42	2451467.52951736	18.5	R	OH
01 53 25.8715	+08 52 17.056	114	86	2451492.39313912	18.6	R	OH
01 53 25.6170	+08 52 15.768	114	86	2451492.40155440	18.7	R	OH
01 53 25.3082	+08 52 14.426	114	86	2451492.41118414	18.7	R	OH
01 53 25.0015	+08 52 13.131	114	86	2451492.42081331	18.7	R	OH
01 53 24.7215	+08 52 11.884	114	86	2451492.43044039	18.7	R	OH
01 52 52.4565	+08 49 49.737	28	40	2451493.49815440	18.0	R	OH
01 52 52.3494	+08 49 49.308	28	40	2451493.50165891	18.2	R	OH
01 52 52.1572	+08 49 48.496	28	40	2451493.50794653	18.0	R	OH
01 52 52.0256	+08 49 47.912	28	40	2451493.51238623	18.1	R	OH
01 52 51.8839	+08 49 47.263	28	40	2451493.51682350	18.0	R	OH
01 52 51.7495	+08 49 46.791	28	40	2451493.52125671	18.1	R	OH
01 52 51.6149	+08 49 46.102	28	40	2451493.52569873	18.1	R	OH
01 52 51.4819	+08 49 45.584	28	40	2451493.53014525	18.0	R	OH
01 52 51.3467	+08 49 45.015	28	40	2451493.53458542	18.0	R	OH
01 52 51.0730	+08 49 43.795	28	40	2451493.54346424	18.1	R	OH
01 52 50.9407	+08 49 43.234	28	40	2451493.54790255	18.0	R	OH
01 44 50.2028	+08 17 47.723	37	40	2451512.45574537	19.2	R	OH
01 44 50.1392	+08 17 47.431	37	40	2451512.45867176	19.0	R	OH
01 44 49.9867	+08 17 47.014	37	40	2451512.46590961	18.9	R	OH
01 44 49.9001	+08 17 46.659	37	40	2451512.47035046	18.9	R	OH
01 44 49.8093	+08 17 46.371	37	40	2451512.47478495	18.8	R	OH
01 44 49.7164	+08 17 46.149	37	40	2451512.47921458	18.9	R	OH
01 44 49.6268	+08 17 45.763	37	40	2451512.48365208	18.9	R	OH
01 44 49.5327	+08 17 45.519	37	40	2451512.48809572	19.0	R	OH
01 44 32.6017	+08 16 49.802	49	49	2451513.35188576	18.6	R	OH
01 44 32.5443	+08 16 49.488	49	49	2451513.35461991	17.5	R	OH
01 44 32.4213	+08 16 49.179	49	49	2451513.36072187	18.4	R	OH
01 44 32.2058	+08 16 48.520	49	49	2451513.37188611	18.6	R	OH
01 44 32.0924	+08 16 48.144	49	49	2451513.37746435	18.6	R	OH
01 44 31.9810	+08 16 47.813	49	49	2451513.38304201	18.6	R	OH
01 44 13.7643	+08 15 49.739	80	55	2451514.33936817	18.7	R	OH
01 44 13.7184	+08 15 49.487	80	55	2451514.34211146	18.7	R	OH
01 44 13.5988	+08 15 49.243	80	55	2451514.34819479	18.8	R	OH
01 44 13.4954	+08 15 48.945	80	55	2451514.35377419	18.8	R	OH
01 44 13.3951	+08 15 48.635	80	55	2451514.35936007	18.8	R	OH
01 44 13.2756	+08 15 48.306	80	55	2451514.36493924	18.8	R	OH
01 44 13.1680	+08 15 47.921	80	55	2451514.37052130	18.9	R	OH
01 42 46.4135	+08 11 43.821	73	31	2451519.48416435	18.9	R	OH
01 42 46.3420	+08 11 43.699	73	31	2451519.48929734	18.9	R	OH
01 42 46.2617	+08 11 43.447	73	31	2451519.49441470	18.8	R	OH
01 42 46.0941	+08 11 43.076	73	31	2451519.50468380	18.9	R	OH
01 42 34.3338	+08 11 15.296	31	6	2451520.30514259	18.7	R	OH
01 42 34.1697	+08 11 14.958	31	6	2451520.31585093	18.9	R	OH
01 42 34.0543	+08 11 14.698	31	6	2451520.32375694	18.8	R	OH

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Ananke

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
01 42 33.9340	+08 11 14.428	31	6	2451520.33169062	18.8	R	OH
01 42 33.8133	+08 11 14.178	31	6	2451520.33962419	18.9	R	OH
01 42 33.5728	+08 11 13.652	31	6	2451520.35542049	18.7	R	OH
01 42 33.4577	+08 11 13.400	31	6	2451520.36332986	18.8	R	OH
06 58 11.4517	+22 37 41.476	33	18	2452234.51151586	19.2	R	OH
06 58 11.3090	+22 37 42.016	33	18	2452234.52027002	18.9	R	OH
06 58 11.2124	+22 37 42.418	33	18	2452234.52586701	18.9	R	OH
06 58 11.1161	+22 37 42.787	33	18	2452234.53146227	18.9	R	OH
06 58 11.0253	+22 37 43.147	33	18	2452234.53706076	19.0	R	OH
06 58 10.9313	+22 37 43.489	33	18	2452234.54265799	18.9	R	OH
06 58 10.8027	+22 37 43.994	33	18	2452234.55062674	18.9	R	OH
06 57 53.2350	+22 38 52.439	32	10	2452235.61240961	18.9	R	OH
06 57 53.1340	+22 38 52.765	32	10	2452235.61785532	18.9	R	OH
06 57 53.0357	+22 38 53.143	32	10	2452235.62369861	18.9	R	OH
06 57 52.9333	+22 38 53.522	32	10	2452235.62951921	18.8	R	OH
06 57 52.8288	+22 38 53.907	32	10	2452235.63536597	18.9	R	OH
06 57 52.7270	+22 38 54.290	32	10	2452235.64122546	18.9	R	OH
06 57 52.6207	+22 38 54.649	32	10	2452235.64707361	18.9	R	OH
06 57 52.5189	+22 38 55.026	32	10	2452235.65291852	18.9	R	OH
06 57 52.4213	+22 38 55.413	32	10	2452235.65876944	19.0	R	OH
06 47 05.7034	+23 11 23.299	54	17	2452261.55889225	18.4	R	OH
06 47 05.5399	+23 11 23.677	54	17	2452261.56443900	18.5	R	OH
06 47 05.3507	+23 11 24.145	54	17	2452261.57027905	18.8	R	OH
06 47 05.1621	+23 11 24.618	54	17	2452261.57613160	18.8	R	OH
06 47 04.9805	+23 11 25.084	54	17	2452261.58196944	18.7	R	OH
06 47 04.7897	+23 11 25.556	54	17	2452261.58782257	18.7	R	OH
06 47 04.5967	+23 11 26.007	54	17	2452261.59379213	18.8	R	OH
06 47 04.4187	+23 11 26.458	54	17	2452261.59963333	18.7	R	OH
06 47 04.2290	+23 11 26.929	54	17	2452261.60548160	18.7	R	OH
06 47 04.0469	+23 11 27.367	54	17	2452261.61133160	18.7	R	OH
06 45 30.8610	+23 15 22.036	88	71	2452264.56604387	18.5	R	OH
06 45 30.6609	+23 15 22.591	88	71	2452264.57210301	18.6	R	OH
06 45 30.4775	+23 15 22.905	88	71	2452264.57815880	18.8	R	OH
06 45 30.2672	+23 15 23.389	88	71	2452264.58421968	18.6	R	OH
06 45 03.0855	+23 16 30.810	46	27	2452265.43724641	18.8	R	OH
06 45 02.9024	+23 16 31.253	46	27	2452265.44284630	18.6	R	OH
06 45 02.7264	+23 16 31.650	46	27	2452265.44844248	18.4	R	OH
06 45 02.5400	+23 16 32.135	46	27	2452265.45403009	18.6	R	OH
06 34 45.9685	+23 39 39.886	78	22	2452284.52404815	18.3	R	OH
06 34 45.7814	+23 39 40.230	78	22	2452284.53019340	18.7	R	OH
06 34 45.6039	+23 39 40.610	78	22	2452284.53578681	18.6	R	OH
06 34 45.4234	+23 39 40.948	78	22	2452284.54138623	18.6	R	OH
06 34 45.2377	+23 39 41.265	78	22	2452284.54698113	18.7	R	OH
06 34 45.0764	+23 39 41.615	78	22	2452284.55257882	18.6	R	OH
06 33 48.7379	+23 41 37.969	102	53	2452286.39199028	18.2	R	OH
06 33 48.5612	+23 41 38.283	102	53	2452286.39796377	18.7	R	OH
06 33 48.3354	+23 41 38.842	102	53	2452286.40472164	18.6	R	OH
06 33 48.1257	+23 41 39.246	102	53	2452286.41147650	18.7	R	OH
06 33 47.9131	+23 41 39.678	102	53	2452286.41822500	18.5	R	OH
06 33 47.7042	+23 41 40.128	102	53	2452286.42497604	18.5	R	OH
06 23 31.1166	+24 01 59.162	76	92	2452313.43897442	19.0	R	OH
06 23 31.0286	+24 01 59.505	76	92	2452313.44457211	19.0	R	OH
06 23 30.9582	+24 01 59.534	76	92	2452313.45016933	18.9	R	OH
06 23 30.8873	+24 01 59.601	76	92	2452313.45575972	18.9	R	OH
16 34 17.9246	-22 00 00.480	18	16	2454353.51716085	19.4	un	E
16 34 17.9903	-22 00 00.728	18	16	2454353.52011600	19.5	un	E
16 34 18.0348	-22 00 00.841	18	16	2454353.52196182	19.4	un	E
16 34 18.0764	-22 00 00.974	18	16	2454353.52378634	19.6	un	E
16 34 18.1198	-22 00 01.154	18	16	2454353.52562325	19.3	un	E
16 34 18.1577	-22 00 01.255	18	16	2454353.52736915	19.4	un	E

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Ananke							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
16 34 18.2390	-22 00 01.564	18	16	2454353.53097569	19.3	un	E
16 34 18.2813	-22 00 01.685	18	16	2454353.53279349	19.5	un	E
16 34 18.3193	-22 00 01.809	18	16	2454353.53454147	19.4	un	E
19 21 20.9837	-22 50 36.341	26	10	2454656.78896609	18.6	I	PE
19 21 20.8851	-22 50 36.454	26	10	2454656.79216343	18.6	I	PE
19 21 20.7784	-22 50 36.536	26	10	2454656.79537662	18.7	I	PE
19 21 20.6791	-22 50 36.659	26	10	2454656.79856620	18.6	I	PE
19 21 20.5744	-22 50 36.772	26	10	2454656.80174711	18.6	I	PE
19 02 06.8329	-22 48 00.815	53	36	2454733.55182766	19.7	I	PE
19 02 06.8968	-22 48 00.589	53	36	2454733.55777396	20.0	I	PE
19 02 06.9577	-22 48 00.386	53	36	2454733.56326910	19.9	I	PE
19 02 07.0290	-22 48 00.118	53	36	2454733.56876505	19.8	I	PE
21 49 09.1485	-14 26 50.110	13	13	2454972.85907026	19.3	un	E
21 49 09.1728	-14 26 50.070	13	13	2454972.86022374	19.3	un	E
21 49 09.1950	-14 26 50.030	13	13	2454972.86135118	19.4	un	E
21 49 09.2155	-14 26 49.965	13	13	2454972.86250791	19.2	un	E
21 49 09.2596	-14 26 49.865	13	13	2454972.86482459	19.2	un	E
21 49 09.2816	-14 26 49.806	13	13	2454972.86598108	19.4	un	E
21 49 09.3057	-14 26 49.771	13	13	2454972.86714081	19.5	un	E
21 49 09.3264	-14 26 49.711	13	13	2454972.86828943	19.3	un	E
21 49 09.3487	-14 26 49.639	13	13	2454972.86945217	19.4	un	E
21 49 09.3755	-14 26 49.604	13	13	2454972.87085881	19.3	un	E
21 49 09.3971	-14 26 49.517	13	13	2454972.87202733	19.3	un	E
21 49 09.4195	-14 26 49.468	13	13	2454972.87317155	19.3	un	E
21 49 09.4428	-14 26 49.413	13	13	2454972.87434286	19.4	un	E
21 49 09.4879	-14 26 49.326	13	13	2454972.87665480	19.4	un	E
21 49 09.5314	-14 26 49.219	13	13	2454972.87897426	19.3	un	E
21 49 09.5534	-14 26 49.163	13	13	2454972.88012612	19.4	un	E
21 49 09.5746	-14 26 49.103	13	13	2454972.88128134	19.3	un	E
21 49 09.6045	-14 26 49.029	13	13	2454972.88285350	19.4	un	E
21 49 09.6262	-14 26 48.975	13	13	2454972.88401855	19.6	un	E
21 49 09.6539	-14 26 48.918	13	13	2454972.88535110	19.5	un	E
21 49 09.7006	-14 26 48.806	13	13	2454972.88788286	19.4	un	E
21 49 09.7243	-14 26 48.783	13	13	2454972.88901574	19.4	un	E
21 49 46.2005	-14 25 27.344	18	22	2454974.78845786	19.3	un	E
21 49 46.2211	-14 25 27.272	18	22	2454974.78961459	19.4	un	E
21 49 46.2419	-14 25 27.230	18	22	2454974.79073681	19.6	un	E
21 49 46.2821	-14 25 27.139	18	22	2454974.79302004	19.3	un	E
21 49 46.3039	-14 25 27.121	18	22	2454974.79413961	19.5	un	E
21 49 46.3239	-14 25 27.090	18	22	2454974.79528719	19.4	un	E
21 49 46.3464	-14 25 27.043	18	22	2454974.79644287	19.5	un	E
21 49 46.3666	-14 25 26.988	18	22	2454974.79756660	19.5	un	E
21 49 46.3858	-14 25 26.923	18	22	2454974.79871221	19.5	un	E
21 49 46.4458	-14 25 26.847	18	22	2454974.80202344	19.4	un	E
21 49 46.4662	-14 25 26.782	18	22	2454974.80315852	19.4	un	E
21 49 46.4885	-14 25 26.749	18	22	2454974.80431269	19.3	un	E
21 49 46.5148	-14 25 26.721	18	22	2454974.80567083	19.4	un	E
21 49 46.5344	-14 25 26.671	18	22	2454974.80680324	19.4	un	E
21 49 46.5552	-14 25 26.641	18	22	2454974.80794885	19.3	un	E
21 49 46.5757	-14 25 26.595	18	22	2454974.80907235	19.4	un	E
21 49 46.5965	-14 25 26.550	18	22	2454974.81020592	19.4	un	E
21 49 46.6173	-14 25 26.511	18	22	2454974.81135338	19.4	un	E
21 49 46.6381	-14 25 26.460	18	22	2454974.81251103	19.3	un	E
21 49 46.6582	-14 25 26.427	18	22	2454974.81362990	19.3	un	E
21 49 46.7008	-14 25 26.335	18	22	2454974.81593674	19.3	un	E
21 49 46.7205	-14 25 26.301	18	22	2454974.81709023	19.3	un	E
21 49 46.7391	-14 25 26.250	18	22	2454974.81812054	19.2	un	E
21 49 46.7599	-14 25 26.199	18	22	2454974.81926893	19.3	un	E
21 49 46.7811	-14 25 26.163	18	22	2454974.82039289	19.3	un	E
21 49 46.8013	-14 25 26.104	18	22	2454974.82153804	19.2	un	E

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Ananke								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope	
h m s	° ′ ″	(mas)	(mas)	(jd)			
00 10 01.1765	+00 06 59.597	83	65	2455366.79181713	18.0	R	PE
00 10 01.2003	+00 06 59.877	83	65	2455366.79299769	19.0	R	PE
00 10 01.2216	+00 06 59.961	83	65	2455366.79416667	18.0	R	PE
00 10 01.2677	+00 07 00.284	83	65	2455366.79652778	19.0	R	PE
00 10 01.2878	+00 07 00.492	83	65	2455366.79770833	17.6	R	PE
00 10 01.3104	+00 07 00.700	83	65	2455366.79888889	18.8	R	PE
00 10 01.3365	+00 07 00.845	83	65	2455366.80006944	19.1	R	PE
00 10 01.3620	+00 07 01.055	83	65	2455366.80125000	19.1	R	PE
00 10 01.4031	+00 07 01.275	83	65	2455366.80361111	17.6	R	PE
00 10 01.4497	+00 07 01.667	83	65	2455366.80597222	18.9	R	PE
00 10 01.4835	+00 07 01.938	83	65	2455366.80833333	19.1	R	PE
00 10 01.5820	+00 07 02.639	83	65	2455366.81304398	19.0	R	PE
00 10 01.5935	+00 07 02.746	83	65	2455366.81422454	19.0	R	PE
00 10 01.8428	+00 07 04.595	83	65	2455366.82646991	18.4	R	PE
00 10 01.9507	+00 07 05.444	83	65	2455366.83278935	18.5	R	PE
00 10 01.9937	+00 07 05.761	83	65	2455366.83489583	18.5	R	PE
00 10 02.0324	+00 07 06.127	83	65	2455366.83700231	17.9	R	PE
00 10 02.0738	+00 07 06.369	83	65	2455366.83910880	18.6	R	PE
00 10 02.1064	+00 07 06.599	83	65	2455366.84121528	18.0	R	PE
00 10 02.1518	+00 07 06.940	83	65	2455366.84332176	18.7	R	PE
00 10 02.1934	+00 07 07.199	83	65	2455366.84542824	18.5	R	PE
00 10 02.3075	+00 07 08.087	83	65	2455366.85163194	18.5	R	PE
00 10 02.3445	+00 07 08.402	83	65	2455366.85373843	17.8	R	PE
00 10 02.3786	+00 07 08.626	83	65	2455366.85584491	18.6	R	PE
00 10 02.4193	+00 07 08.919	83	65	2455366.85795139	18.4	R	PE
00 10 02.4609	+00 07 09.245	83	65	2455366.86005787	18.3	R	PE
00 10 02.4959	+00 07 09.495	83	65	2455366.86216435	18.1	R	PE
00 10 02.5365	+00 07 09.839	83	65	2455366.86427083	17.0	R	PE

Table B.9. CDS data for Praxidike.

Praxidike							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 37 09.6051	-22 15 57.730	8	38	2454621.87608304	20.0	un	E
19 37 09.5154	-22 15 57.924	8	38	2454621.88016730	20.9	un	E

Table B.10. CDS data for Carme.

Carme							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
18 57 16.2628	-23 09 10.634	42	12	2450256.62115741	17.4	C	PE
18 57 16.0492	-23 09 10.875	42	12	2450256.62865741	17.3	C	PE
18 57 15.9668	-23 09 10.974	42	12	2450256.63158565	17.4	C	PE
18 41 27.1476	-23 23 05.007	31	70	2450290.65199167	17.8	un	PE
18 41 27.1302	-23 23 04.871	31	70	2450290.65288437	17.8	un	PE
18 41 27.1130	-23 23 04.891	31	70	2450290.65349780	17.8	un	PE
18 41 27.0982	-23 23 04.812	31	70	2450290.65409977	16.4	un	PE
18 41 27.0797	-23 23 04.948	31	70	2450290.65470116	18.1	un	PE
18 41 27.0548	-23 23 04.864	31	70	2450290.65590521	17.3	un	PE
18 41 27.0236	-23 23 04.899	31	70	2450290.65710856	17.7	un	PE
18 41 27.0133	-23 23 04.858	31	70	2450290.65771065	17.2	un	PE
18 42 30.7107	-23 09 04.434	69	51	2450358.42901620	18.4	C	PE
18 42 31.5908	-23 09 03.076	69	51	2450358.46319444	18.3	C	PE
18 42 31.6160	-23 09 03.027	69	51	2450358.46401620	18.3	C	PE
23 56 27.5601	-02 05 11.073	39	6	2451039.60880266	17.3	R	OH
23 56 27.3706	-02 05 12.146	39	6	2451039.61998912	17.5	R	OH
23 56 27.2438	-02 05 12.853	39	6	2451039.62746678	17.5	R	OH
23 56 27.1474	-02 05 13.405	39	6	2451039.63319664	17.6	R	OH

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Carme

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
23 56 27.0734	-02 05 13.844	39	6	2451039.63762685	17.5	R	OH
23 56 26.9977	-02 05 14.260	39	6	2451039.64206123	17.6	R	OH
23 55 00.9605	-02 13 35.227	53	57	2451044.41546817	17.4	R	OH
23 55 00.8306	-02 13 35.844	53	57	2451044.42175775	17.4	R	OH
23 55 00.7397	-02 13 36.391	53	57	2451044.42653576	17.4	R	OH
23 55 00.6493	-02 13 36.937	53	57	2451044.43130324	17.4	R	OH
23 55 00.5477	-02 13 37.522	53	57	2451044.43608484	17.4	R	OH
23 55 00.4522	-02 13 37.996	53	57	2451044.44086632	17.5	R	OH
23 55 00.3630	-02 13 38.512	53	57	2451044.44563322	17.5	R	OH
23 55 00.2654	-02 13 39.234	53	57	2451044.45040833	17.4	R	OH
23 55 00.1316	-02 13 39.903	53	57	2451044.45714387	17.4	R	OH
01 53 00.4086	+09 28 40.380	51	14	2451460.60077188	17.4	R	OH
01 53 00.2487	+09 28 39.418	51	14	2451460.60660938	17.4	R	OH
01 53 00.0364	+09 28 38.144	51	14	2451460.61402222	17.5	R	OH
01 52 59.7192	+09 28 36.165	51	14	2451460.62562419	17.3	R	OH
01 52 59.6310	+09 28 35.642	51	14	2451460.62889641	17.3	R	OH
01 52 59.5426	+09 28 35.090	51	14	2451460.63215856	17.5	R	OH
01 52 59.4471	+09 28 34.546	51	14	2451460.63542338	17.3	R	OH
01 52 59.3643	+09 28 33.975	51	14	2451460.63868738	17.3	R	OH
01 52 59.2704	+09 28 33.429	51	14	2451460.64195301	17.3	R	OH
01 52 59.0980	+09 28 32.347	51	14	2451460.64849977	17.4	R	OH
01 51 39.1112	+09 20 17.165	74	28	2451463.56840567	17.2	R	OH
01 51 39.0201	+09 20 16.654	74	28	2451463.57174977	17.2	R	OH
01 51 38.8368	+09 20 15.540	74	28	2451463.57796123	17.3	R	OH
01 51 38.6535	+09 20 14.384	74	28	2451463.58476586	17.2	R	OH
01 51 38.5588	+09 20 13.832	74	28	2451463.58818727	17.2	R	OH
01 37 53.3708	+07 59 12.066	20	31	2451493.46463102	17.1	R	OH
01 37 53.2264	+07 59 11.350	20	31	2451493.47037824	17.2	R	OH
01 37 53.1194	+07 59 10.722	20	31	2451493.47481574	17.2	R	OH
01 37 53.0095	+07 59 10.061	20	31	2451493.47924850	17.2	R	OH
01 37 52.9004	+07 59 09.481	20	31	2451493.48369259	17.1	R	OH
01 37 52.7931	+07 59 08.911	20	31	2451493.48813102	17.2	R	OH
01 37 52.6817	+07 59 08.327	20	31	2451493.49256181	17.2	R	OH
01 31 47.7726	+07 27 11.551	18	23	2451513.38859398	17.6	R	OH
01 31 47.7387	+07 27 11.374	18	23	2451513.39130926	17.6	R	OH
01 31 47.6748	+07 27 11.136	18	23	2451513.39654884	17.5	R	OH
01 31 47.6276	+07 27 10.956	18	23	2451513.40039630	17.5	R	OH
01 31 47.5782	+07 27 10.735	18	23	2451513.40424016	17.5	R	OH
01 31 47.5288	+07 27 10.494	18	23	2451513.40808171	17.5	R	OH
01 31 47.4821	+07 27 10.301	18	23	2451513.41192616	17.5	R	OH
01 31 26.7453	+07 25 38.392	24	4	2451515.29315359	17.6	R	OH
01 31 26.7154	+07 25 38.256	24	4	2451515.29600602	17.6	R	OH
01 31 26.6503	+07 25 37.997	24	4	2451515.30205810	17.6	R	OH
01 31 26.6020	+07 25 37.802	24	4	2451515.30649537	17.5	R	OH
01 31 26.5055	+07 25 37.409	24	4	2451515.31535995	17.5	R	OH
01 31 26.4569	+07 25 37.221	24	4	2451515.31980046	17.5	R	OH
01 30 59.1716	+07 23 47.282	44	32	2451518.28283981	17.6	R	OH
01 30 59.1401	+07 23 47.107	44	32	2451518.28582535	17.6	R	OH
01 30 59.1033	+07 23 46.960	44	32	2451518.29072419	17.7	R	OH
01 30 59.0660	+07 23 46.861	44	32	2451518.29457014	17.6	R	OH
01 30 59.0286	+07 23 46.764	44	32	2451518.29840880	17.6	R	OH
01 30 59.0015	+07 23 46.673	44	32	2451518.30225833	17.6	R	OH
01 30 58.9659	+07 23 46.523	44	32	2451518.30610139	17.7	R	OH
01 30 38.5220	+07 22 39.906	5	17	2451521.26939190	17.3	R	OH
01 30 38.4788	+07 22 39.780	5	17	2451521.27624144	17.3	R	OH
01 30 38.4304	+07 22 39.698	5	17	2451521.28381736	17.4	R	OH
01 30 38.1059	+07 22 38.951	5	17	2451521.33505938	17.4	R	OH
04 12 42.8392	+20 43 52.363	83	69	2451876.59493264	17.4	R	OH
04 12 42.6717	+20 43 51.828	83	69	2451876.59923924	16.8	R	OH
04 12 42.5102	+20 43 51.481	83	69	2451876.60367141	17.1	R	OH

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Carme

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
04 12 42.3255	+20 43 51.006	83	69	2451876.60810579	16.7	R	OH
07 12 19.6776	+21 46 59.728	13	9	2452233.63736157	17.7	R	OH
07 12 19.6442	+21 46 59.794	13	9	2452233.64011563	17.8	R	OH
07 12 19.6045	+21 46 59.817	13	9	2452233.64338924	17.7	R	OH
07 12 19.5624	+21 46 59.890	13	9	2452233.64667338	17.7	R	OH
07 12 19.5225	+21 46 59.939	13	9	2452233.64995475	17.7	R	OH
07 12 19.4831	+21 46 59.997	13	9	2452233.65323843	17.7	R	OH
07 12 19.4237	+21 47 00.075	13	9	2452233.65824896	17.8	R	OH
07 12 19.3826	+21 47 00.133	13	9	2452233.66152639	17.8	R	OH
07 12 19.3415	+21 47 00.202	13	9	2452233.66480069	17.8	R	OH
07 12 19.3010	+21 47 00.237	13	9	2452233.66808380	17.8	R	OH
07 11 42.7757	+21 47 56.727	85	37	2452236.53414433	17.7	R	OH
07 11 42.6474	+21 47 56.961	85	37	2452236.54303854	17.7	R	OH
07 11 42.3867	+21 47 57.376	85	37	2452236.56084456	17.9	R	OH
07 11 42.3099	+21 47 57.497	85	37	2452236.56529387	18.0	R	OH
07 11 42.2611	+21 47 57.503	85	37	2452236.56974468	17.9	R	OH
07 01 09.3211	+22 05 11.290	37	7	2452263.43714062	17.3	R	OH
07 01 09.1957	+22 05 11.480	37	7	2452263.44088576	17.3	R	OH
07 01 09.0812	+22 05 11.667	37	7	2452263.44463380	17.3	R	OH
07 01 08.9625	+22 05 11.874	37	7	2452263.44838252	17.3	R	OH
07 01 08.8444	+22 05 12.055	37	7	2452263.45213160	17.2	R	OH
07 01 08.7263	+22 05 12.261	37	7	2452263.45587998	17.2	R	OH
07 01 08.6083	+22 05 12.457	37	7	2452263.45962870	17.3	R	OH
07 01 08.4841	+22 05 12.641	37	7	2452263.46338252	17.3	R	OH
07 01 08.3712	+22 05 12.824	37	7	2452263.46712940	17.3	R	OH
07 00 07.0740	+22 06 50.743	94	17	2452265.41567627	17.3	R	OH
07 00 06.9577	+22 06 50.975	94	17	2452265.41941887	17.4	R	OH
07 00 06.8237	+22 06 51.162	94	17	2452265.42316250	17.3	R	OH
07 00 06.7010	+22 06 51.375	94	17	2452265.42690521	17.3	R	OH
06 50 04.2564	+22 22 18.208	20	9	2452283.52496516	17.3	R	OH
06 50 03.9920	+22 22 18.597	20	9	2452283.53269051	17.4	R	OH
06 50 03.8652	+22 22 18.773	20	9	2452283.53644421	17.4	R	OH
06 50 03.7384	+22 22 18.959	20	9	2452283.54019213	17.4	R	OH
06 50 03.6110	+22 22 19.113	20	9	2452283.54394433	17.5	R	OH
06 50 03.4866	+22 22 19.291	20	9	2452283.54768993	17.4	R	OH
06 50 03.3590	+22 22 19.478	20	9	2452283.55143900	17.5	R	OH
06 50 03.2300	+22 22 19.671	20	9	2452283.55518981	17.5	R	OH
06 50 03.1007	+22 22 19.841	20	9	2452283.55894664	17.5	R	OH
06 50 02.9734	+22 22 20.022	20	9	2452283.56269896	17.5	R	OH
06 36 25.8552	+22 42 41.876	23	27	2452313.41060440	17.6	R	OH
06 36 25.7532	+22 42 41.970	23	27	2452313.41589282	17.7	R	OH
06 36 25.6842	+22 42 42.088	23	27	2452313.41964329	17.6	R	OH
06 36 25.6104	+22 42 42.215	23	27	2452313.42339826	17.7	R	OH
06 36 25.5359	+22 42 42.313	23	27	2452313.42714780	17.7	R	OH
06 36 05.8367	+22 43 15.360	25	26	2452314.51343229	17.5	R	OH
06 36 05.7389	+22 43 15.472	25	26	2452314.51893704	17.8	R	OH
06 36 05.6703	+22 43 15.631	25	26	2452314.52291863	17.8	R	OH
06 36 05.5952	+22 43 15.719	25	26	2452314.52688553	17.8	R	OH
06 36 05.5234	+22 43 15.879	25	26	2452314.53085937	17.7	R	OH
06 36 05.4506	+22 43 15.943	25	26	2452314.53483715	17.8	R	OH
09 13 54.1133	+17 12 50.449	17	26	2452637.55366933	18.0	R	OH
09 13 54.0433	+17 12 50.749	17	26	2452637.55752176	17.9	R	OH
09 13 53.9696	+17 12 51.178	17	26	2452637.56137187	18.0	R	OH
09 13 53.9011	+17 12 51.501	17	26	2452637.56522685	18.0	R	OH
09 13 53.8275	+17 12 51.914	17	26	2452637.56908472	18.0	R	OH
09 13 53.7570	+17 12 52.263	17	26	2452637.57303495	18.2	R	OH
09 13 53.6838	+17 12 52.633	17	26	2452637.57688796	18.1	R	OH
09 00 13.2562	+18 16 21.434	50	61	2452669.49192014	17.9	R	OH
09 00 13.1560	+18 16 21.960	50	61	2452669.49540567	17.7	R	OH
09 00 12.8253	+18 16 23.279	50	61	2452669.50587454	17.8	R	OH

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Carme

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
09 00 12.7025	+18 16 23.736	50	61	2452669.50972720	17.9	R	OH
09 00 12.5878	+18 16 24.126	50	61	2452669.51358252	17.5	R	OH
10 58 13.7927	+07 32 43.700	42	29	2453089.33985903	18.1	R	OH
10 58 13.5849	+07 32 45.042	42	29	2453089.34736285	18.0	R	OH
10 58 13.4174	+07 32 46.104	42	29	2453089.35320509	18.0	R	OH
10 58 13.2524	+07 32 47.117	42	29	2453089.35905532	17.9	R	OH
10 58 13.0863	+07 32 48.159	42	29	2453089.36490486	17.9	R	OH
10 58 12.9232	+07 32 49.151	42	29	2453089.37074572	17.9	R	OH
10 58 12.7575	+07 32 50.155	42	29	2453089.37657836	17.9	R	OH
10 58 12.5958	+07 32 51.164	42	29	2453089.38240208	17.9	R	OH
10 58 12.4357	+07 32 52.208	42	29	2453089.38824595	17.9	R	OH
10 58 12.2616	+07 32 53.294	42	29	2453089.39408796	17.9	R	OH
10 48 05.8751	+08 36 42.223	81	33	2453119.38709896	17.2	R	OH
10 48 05.7793	+08 36 42.779	81	33	2453119.39439479	18.1	R	OH
10 48 05.7244	+08 36 43.082	81	33	2453119.39884653	17.9	R	OH
10 48 05.6839	+08 36 43.384	81	33	2453119.40329086	18.0	R	OH
10 48 05.6225	+08 36 43.715	81	33	2453119.40774421	18.1	R	OH
10 48 05.5713	+08 36 44.106	81	33	2453119.41219097	18.2	R	OH
10 48 05.5226	+08 36 44.384	81	33	2453119.41663657	18.1	R	OH
10 48 05.4623	+08 36 44.673	81	33	2453119.42108738	18.0	R	OH
10 48 05.4047	+08 36 45.045	81	33	2453119.42553854	18.0	R	OH
13 10 58.8333	-05 37 38.494	74	41	2453437.63321933	18.2	R	OH
13 10 58.7579	-05 37 38.012	74	41	2453437.63685336	18.2	R	OH
13 10 58.6911	-05 37 37.659	74	41	2453437.64048565	18.2	R	OH
13 10 58.6241	-05 37 37.335	74	41	2453437.64411088	18.2	R	OH
13 10 58.5486	-05 37 36.902	74	41	2453437.64774398	18.4	R	OH
13 10 58.4813	-05 37 36.446	74	41	2453437.65137778	18.2	R	OH
13 10 58.4020	-05 37 36.050	74	41	2453437.65501181	18.2	R	OH
13 10 58.3368	-05 37 35.643	74	41	2453437.65864294	18.2	R	OH
13 10 22.8040	-05 34 01.583	22	38	2453439.52603171	17.8	R	OH
13 10 22.7301	-05 34 01.145	22	38	2453439.52954549	17.9	R	OH
13 10 22.6580	-05 34 00.662	22	38	2453439.53305521	17.9	R	OH
13 10 22.5896	-05 34 00.283	22	38	2453439.53657268	17.9	R	OH
13 10 22.5173	-05 33 59.890	22	38	2453439.54008021	17.9	R	OH
13 10 22.4497	-05 33 59.439	22	38	2453439.54359340	17.9	R	OH
13 10 22.3750	-05 33 59.005	22	38	2453439.54711065	17.8	R	OH
13 10 22.3042	-05 33 58.570	22	38	2453439.55062731	17.9	R	OH
13 10 22.2349	-05 33 58.198	22	38	2453439.55413877	17.9	R	OH
13 10 22.1638	-05 33 57.832	22	38	2453439.55765023	17.9	R	OH
13 10 22.0934	-05 33 57.393	22	38	2453439.56116215	17.9	R	OH
13 00 44.3435	-04 37 55.410	10	14	2453463.58189456	17.5	C	BC
13 00 44.2126	-04 37 54.670	10	14	2453463.58660845	17.5	C	BC
13 00 44.0999	-04 37 54.051	10	14	2453463.59073854	17.5	C	BC
13 00 16.1674	-04 35 16.091	15	9	2453464.63098611	17.6	C	BC
13 00 16.1065	-04 35 15.763	15	9	2453464.63319433	17.7	C	BC
13 00 16.0646	-04 35 15.528	15	9	2453464.63477836	17.8	C	BC
13 00 16.0179	-04 35 15.277	15	9	2453464.63637315	17.8	C	BC
13 00 15.9769	-04 35 15.029	15	9	2453464.63795718	17.9	C	BC
13 00 15.9322	-04 35 14.789	15	9	2453464.63954201	17.8	C	BC
13 00 15.8445	-04 35 14.331	15	9	2453464.64271273	17.7	C	BC
13 00 15.8008	-04 35 14.076	15	9	2453464.64429676	17.8	C	BC
13 00 15.7577	-04 35 13.819	15	9	2453464.64588264	17.9	C	BC
12 55 52.4789	-04 10 45.587	79	21	2453474.48598750	17.3	R	OH
12 55 52.3585	-04 10 44.935	79	21	2453474.49051169	17.7	R	OH
12 55 52.2104	-04 10 44.121	79	21	2453474.49611412	17.7	R	OH
12 55 52.0636	-04 10 43.301	79	21	2453474.50171181	17.6	R	OH
12 55 51.9034	-04 10 42.482	79	21	2453474.50731192	17.7	R	OH
12 55 51.7535	-04 10 41.718	79	21	2453474.51291308	17.7	R	OH
12 55 51.6133	-04 10 40.899	79	21	2453474.51851343	17.6	R	OH
12 55 51.4469	-04 10 40.032	79	21	2453474.52410891	17.6	R	OH

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Carme

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
12 47 42.9441	-03 27 40.470	104	64	2453495.36744861	17.1	R	OH
12 47 42.8473	-03 27 40.022	104	64	2453495.37230567	17.6	R	OH
12 47 42.7529	-03 27 39.492	104	64	2453495.37731979	17.5	R	OH
12 47 42.6347	-03 27 38.919	104	64	2453495.38233287	17.6	R	OH
12 47 42.5359	-03 27 38.420	104	64	2453495.38734977	17.6	R	OH
12 47 42.3397	-03 27 37.607	104	64	2453495.39738935	17.7	R	OH
12 47 42.2327	-03 27 37.072	104	64	2453495.40240451	17.6	R	OH
12 47 03.6368	-03 24 28.340	29	34	2453497.44189444	17.5	R	OH
12 47 03.5382	-03 24 27.870	29	34	2453497.44691215	17.6	R	OH
12 47 03.3521	-03 24 26.914	29	34	2453497.45695486	17.5	R	OH
12 47 03.1610	-03 24 26.061	29	34	2453497.46700058	17.7	R	OH
12 46 27.9339	-03 21 37.119	23	19	2453499.43653113	18.0	R	OH
12 46 27.8410	-03 21 36.740	23	19	2453499.44154780	18.0	R	OH
12 46 27.7504	-03 21 36.328	23	19	2453499.44657060	18.0	R	OH
12 46 27.6618	-03 21 35.868	23	19	2453499.45158472	18.1	R	OH
12 46 27.5743	-03 21 35.477	23	19	2453499.45659942	18.1	R	OH
12 46 27.4819	-03 21 35.050	23	19	2453499.46162049	18.0	R	OH
12 44 54.2286	-03 14 31.129	50	25	2453505.39095764	18.2	R	OH
12 44 54.0381	-03 14 30.405	50	25	2453505.40353738	18.1	R	OH
12 44 53.9647	-03 14 30.056	50	25	2453505.40855428	18.1	R	OH
12 44 53.8954	-03 14 29.780	50	25	2453505.41357778	18.1	R	OH
12 44 53.8248	-03 14 29.432	50	25	2453505.41859456	18.0	R	OH
12 44 53.7537	-03 14 29.166	50	25	2453505.42360891	18.0	R	OH
12 44 53.6782	-03 14 28.820	50	25	2453505.42863113	18.1	R	OH
12 44 53.6063	-03 14 28.512	50	25	2453505.43365266	17.9	R	OH
14 31 39.0045	-13 49 36.359	93	68	2453881.37534294	18.8	R	OH
14 31 38.7687	-13 49 35.101	93	68	2453881.38423750	17.9	R	OH
14 31 38.6566	-13 49 34.468	93	68	2453881.38867697	17.9	R	OH
14 31 38.5301	-13 49 33.838	93	68	2453881.39311991	17.9	R	OH
14 31 38.4164	-13 49 33.361	93	68	2453881.39757153	17.9	R	OH
14 31 38.2949	-13 49 32.662	93	68	2453881.40201238	18.0	R	OH
14 31 38.1687	-13 49 31.940	93	68	2453881.40646169	18.1	R	OH
16 37 55.4049	-22 01 51.927	26	26	2454331.52455891	17.8	C	PE
16 37 55.4022	-22 01 52.027	26	26	2454331.52481644	17.5	C	PE
16 37 55.4083	-22 01 51.998	26	26	2454331.52558704	17.9	C	PE
16 37 55.4107	-22 01 52.027	26	26	2454331.52637905	17.2	C	PE
16 37 55.4136	-22 01 51.988	26	26	2454331.52663646	17.4	C	PE
16 37 55.4174	-22 01 52.000	26	26	2454331.52768403	17.5	C	PE
16 37 55.4225	-22 01 52.054	26	26	2454331.52820995	17.4	C	PE
16 37 55.4232	-22 01 52.072	26	26	2454331.52899236	17.4	C	PE
16 37 55.4256	-22 01 52.063	26	26	2454331.52925972	17.5	C	PE
16 37 55.4287	-22 01 52.097	26	26	2454331.52977442	17.9	C	PE
16 37 55.4266	-22 01 52.126	26	26	2454331.53003183	17.5	C	PE
16 37 55.4365	-22 01 52.166	26	26	2454331.53134873	17.5	C	PE
16 37 55.4382	-22 01 52.144	26	26	2454331.53186007	17.5	C	PE
16 37 55.4382	-22 01 52.125	26	26	2454331.53211481	17.5	C	PE
16 37 55.4397	-22 01 52.185	26	26	2454331.53238206	17.5	C	PE
16 37 55.4494	-22 01 52.141	26	26	2454331.53344109	17.6	C	PE
16 37 55.4507	-22 01 52.174	26	26	2454331.53422789	17.9	C	PE
16 37 55.4539	-22 01 52.243	26	26	2454331.53553403	17.4	C	PE
16 37 55.4613	-22 01 52.267	26	26	2454331.53686539	17.6	C	PE
16 37 55.4764	-22 01 52.329	26	26	2454331.53978241	17.5	C	PE
16 37 55.4847	-22 01 52.390	26	26	2454331.54161829	17.3	C	PE
16 37 55.4922	-22 01 52.391	26	26	2454331.54215324	17.7	C	PE
16 37 55.4981	-22 01 52.448	26	26	2454331.54373623	17.3	C	PE
16 37 55.5068	-22 01 52.414	26	26	2454331.54506748	17.7	C	PE
16 37 55.5115	-22 01 52.458	26	26	2454331.54612708	17.6	C	PE
16 37 55.5142	-22 01 52.493	26	26	2454331.54718611	17.5	C	PE
16 42 49.9875	-22 16 05.265	14	8	2454353.55469836	18.9	un	E
16 42 50.0272	-22 16 05.363	14	8	2454353.55650366	18.9	un	E

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Carme							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
16 42 50.0630	-22 16 05.437	14	8	2454353.55832273	18.9	un	E
16 42 50.1047	-22 16 05.545	14	8	2454353.56032289	18.9	un	E
16 42 50.1406	-22 16 05.608	14	8	2454353.56207134	18.9	un	E
16 42 50.1794	-22 16 05.720	14	8	2454353.56390072	18.8	un	E
16 42 50.2156	-22 16 05.799	14	8	2454353.56567638	18.9	un	E
16 42 50.2518	-22 16 05.890	14	8	2454353.56749974	18.8	un	E
16 42 50.2867	-22 16 05.970	14	8	2454353.56923915	18.8	un	E
19 24 14.3511	-22 16 57.318	7	3	2454621.80637684	17.7	un	E
19 24 14.2725	-22 16 57.442	7	3	2454621.81045124	17.5	un	E
19 08 04.9720	-22 41 51.400	20	23	2454658.77027141	17.6	I	PE
19 08 04.8591	-22 41 51.539	20	23	2454658.77393472	17.6	I	PE
19 08 04.8056	-22 41 51.620	20	23	2454658.77572500	17.9	I	PE
19 08 04.7002	-22 41 51.716	20	23	2454658.77931308	17.7	I	PE
19 08 04.6466	-22 41 51.752	20	23	2454658.78110116	17.6	I	PE
19 08 04.5347	-22 41 51.902	20	23	2454658.78473762	17.7	I	PE
19 08 04.4817	-22 41 51.954	20	23	2454658.78658854	17.6	I	PE
19 08 04.4163	-22 41 52.017	20	23	2454658.78876620	17.6	I	PE
19 08 04.3617	-22 41 52.091	20	23	2454658.79055926	17.6	I	PE
19 08 04.3083	-22 41 52.131	20	23	2454658.79235266	17.6	I	PE
19 08 04.2557	-22 41 52.258	20	23	2454658.79414387	17.6	I	PE
19 08 04.1989	-22 41 52.274	20	23	2454658.79593715	17.8	I	PE
18 55 08.7977	-22 56 19.602	25	34	2454690.53993079	17.7	I	BC
18 55 08.7548	-22 56 19.651	25	34	2454690.54278414	17.8	I	BC
18 55 08.7262	-22 56 19.601	25	34	2454690.54421609	17.7	I	BC
18 55 08.6549	-22 56 19.756	25	34	2454690.54849109	17.6	I	BC
18 55 08.5094	-22 56 19.833	25	34	2454690.55721007	17.7	I	BC
18 55 08.4852	-22 56 19.850	25	34	2454690.55863229	17.9	I	BC
18 54 45.6006	-22 53 19.536	30	16	2454729.47467292	16.7	I	PE
18 54 45.6163	-22 53 19.511	30	16	2454729.47586447	18.2	I	PE
18 54 45.6348	-22 53 19.454	30	16	2454729.47705544	18.6	I	PE
18 54 45.6524	-22 53 19.428	30	16	2454729.47824699	18.2	I	PE
18 54 45.6669	-22 53 19.423	30	16	2454729.47944815	18.1	I	PE
18 54 45.6900	-22 53 19.387	30	16	2454729.48065845	18.3	I	PE
18 54 45.7084	-22 53 19.348	30	16	2454729.48185984	18.3	I	PE
18 54 45.7222	-22 53 19.303	30	16	2454729.48306053	18.6	I	PE
18 54 45.7380	-22 53 19.305	30	16	2454729.48426076	18.4	I	PE
18 54 45.7541	-22 53 19.300	30	16	2454729.48545093	18.4	I	PE
21 51 19.2997	-14 01 46.326	13	18	2454972.89199661	18.3	un	E
21 51 19.3146	-14 01 46.273	13	18	2454972.89315912	18.4	un	E
21 51 19.3312	-14 01 46.234	13	18	2454972.89429327	18.3	un	E
21 51 19.3447	-14 01 46.139	13	18	2454972.89545092	18.4	un	E
21 51 19.3606	-14 01 46.126	13	18	2454972.89657419	18.4	un	E
21 51 19.3764	-14 01 46.048	13	18	2454972.89774214	18.3	un	E
21 51 45.5520	-14 00 27.137	22	22	2454974.82385310	18.4	un	E
21 51 45.5639	-14 00 27.087	22	22	2454974.82497799	18.3	un	E
21 51 45.5783	-14 00 27.045	22	22	2454974.82615267	18.3	un	E
21 51 45.5923	-14 00 27.005	22	22	2454974.82729873	18.4	un	E
21 51 45.6087	-14 00 26.979	22	22	2454974.82842419	18.2	un	E
21 51 45.6208	-14 00 26.922	22	22	2454974.82955846	18.4	un	E
21 51 45.6357	-14 00 26.890	22	22	2454974.83070511	18.2	un	E
21 51 45.6504	-14 00 26.848	22	22	2454974.83182560	18.1	un	E
21 51 45.6661	-14 00 26.795	22	22	2454974.83297063	18.4	un	E
21 51 45.6810	-14 00 26.770	22	22	2454974.83413268	18.3	un	E
21 51 45.7103	-14 00 26.708	22	22	2454974.83644508	18.3	un	E
21 51 45.7238	-14 00 26.689	22	22	2454974.83762368	18.4	un	E
21 51 45.7391	-14 00 26.620	22	22	2454974.83878353	18.3	un	E
21 51 45.7528	-14 00 26.593	22	22	2454974.83994140	18.4	un	E
21 51 45.7666	-14 00 26.530	22	22	2454974.84107266	18.4	un	E
21 51 45.7812	-14 00 26.507	22	22	2454974.84219477	18.3	un	E
21 51 45.7931	-14 00 26.467	22	22	2454974.84334177	18.4	un	E

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Carme							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 51 45.8094	-14 00 26.429	22	22	2454974.84450023	18.3	un	E
21 51 45.8240	-14 00 26.394	22	22	2454974.84565429	18.4	un	E
21 51 45.8375	-14 00 26.357	22	22	2454974.84681472	18.4	un	E
21 44 38.8650	-15 06 07.936	57	24	2455032.82666968	17.7	C	BC
21 44 38.8099	-15 06 08.203	57	24	2455032.82844641	17.7	C	BC
21 44 38.7716	-15 06 08.513	57	24	2455032.83021296	17.6	C	BC
21 44 38.7211	-15 06 08.812	57	24	2455032.83199028	17.7	C	BC
07 33 28.0135	+21 07 13.402	6	6	2456606.74360280	18.1	I	PE
07 33 28.0215	+21 07 13.470	6	6	2456606.75843477	18.0	I	PE
07 33 28.0235	+21 07 13.470	6	6	2456606.76057490	18.0	I	PE
07 33 28.0244	+21 07 13.473	6	6	2456606.76271503	18.0	I	PE
07 33 28.0255	+21 07 13.477	6	6	2456606.76485527	18.0	I	PE
07 33 28.0260	+21 07 13.486	6	6	2456606.76699539	18.0	I	PE

Table B.11. CDS data for Sinope.

Sinope							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 07 56.7064	-23 10 30.287	35	17	2450256.57614583	18.1	C	PE
19 07 56.6168	-23 10 30.506	35	17	2450256.57935185	17.8	C	PE
19 07 56.1482	-23 10 31.647	35	17	2450256.59511574	17.8	C	PE
19 07 56.0588	-23 10 31.864	35	17	2450256.59803241	17.7	C	PE
18 50 49.6367	-23 44 45.951	56	22	2450290.63438831	16.3	un	PE
18 50 49.5858	-23 44 46.087	56	22	2450290.63620637	16.4	un	PE
18 50 49.5648	-23 44 46.103	56	22	2450290.63679572	17.6	un	PE
18 50 49.5560	-23 44 46.087	56	22	2450290.63740984	17.2	un	PE
18 50 49.5342	-23 44 46.130	56	22	2450290.63801123	16.4	un	PE
18 50 49.5138	-23 44 46.143	56	22	2450290.63861389	17.7	un	PE
18 50 49.4934	-23 44 46.185	56	22	2450290.63921458	18.1	un	PE
18 50 23.6050	-23 45 26.873	20	37	2450291.60477037	18.3	un	PE
18 50 23.5904	-23 45 26.906	20	37	2450291.60537234	18.3	un	PE
18 50 23.5704	-23 45 26.949	20	37	2450291.60597431	18.1	un	PE
18 50 23.5381	-23 45 27.053	20	37	2450291.60716632	18.3	un	PE
18 42 05.8901	-23 56 07.903	17	29	2450317.57435475	18.6	un	PE
18 42 05.8802	-23 56 07.889	17	29	2450317.57510949	18.7	un	PE
18 42 05.6591	-23 56 07.955	17	29	2450317.59525822	18.8	un	PE
18 42 05.6536	-23 56 08.011	17	29	2450317.59598796	18.8	un	PE
21 08 02.2146	-16 29 15.729	61	19	2450674.60453704	17.1	un	PE
21 08 02.1244	-16 29 16.187	61	19	2450674.60776620	17.1	un	PE
21 07 58.8166	-16 29 31.476	61	19	2450674.71699074	17.3	un	PE
21 07 58.7139	-16 29 31.931	61	19	2450674.72021991	17.2	un	PE
21 07 32.4680	-16 31 38.197	92	19	2450675.61828704	17.4	un	PE
21 07 32.3596	-16 31 38.664	92	19	2450675.62152778	17.2	un	PE
21 07 29.7117	-16 31 50.854	92	19	2450675.70939815	17.4	un	PE
21 07 29.6232	-16 31 51.261	92	19	2450675.71262731	17.4	un	PE
23 58 48.0683	-02 37 17.871	44	25	2451040.43724421	18.1	R	OH
23 58 47.7407	-02 37 20.454	44	25	2451040.45327465	18.1	R	OH
23 58 47.5857	-02 37 21.668	44	25	2451040.46075046	18.1	R	OH
23 58 47.5166	-02 37 22.229	44	25	2451040.46449444	18.1	R	OH
23 58 47.1021	-02 37 25.406	44	25	2451040.48468484	18.2	R	OH
23 58 47.0206	-02 37 26.041	44	25	2451040.48841609	18.6	R	OH
23 58 46.9505	-02 37 26.594	44	25	2451040.49215590	18.3	R	OH
23 58 46.8676	-02 37 27.223	44	25	2451040.49589468	18.2	R	OH
23 58 46.5168	-02 37 29.939	44	25	2451040.51330880	18.2	R	OH
23 58 46.4396	-02 37 30.557	44	25	2451040.51704838	18.2	R	OH
02 06 11.1534	+12 01 06.129	33	17	2451461.44098414	17.8	R	OH
02 06 11.0607	+12 01 05.592	33	17	2451461.44458009	17.7	R	OH
02 06 10.9373	+12 01 04.920	33	17	2451461.44900035	17.7	R	OH
02 06 10.7899	+12 01 04.088	33	17	2451461.45469120	17.7	R	OH

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Sinope

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
02 06 10.6699	+12 01 03.442	33	17	2451461.45905694	17.6	R	OH
02 06 10.5583	+12 01 02.782	33	17	2451461.46343241	17.6	R	OH
02 06 10.4698	+12 01 02.290	33	17	2451461.46669919	17.6	R	OH
02 06 10.3801	+12 01 01.798	33	17	2451461.46996644	17.6	R	OH
02 06 10.2973	+12 01 01.305	33	17	2451461.47322847	17.5	R	OH
02 06 10.2086	+12 01 00.820	33	17	2451461.47649826	17.6	R	OH
02 06 10.1238	+12 01 00.324	33	17	2451461.47976875	17.5	R	OH
02 06 10.0392	+12 00 59.844	33	17	2451461.48303669	17.6	R	OH
02 04 24.4334	+11 50 42.051	66	45	2451465.46054398	17.6	R	OH
02 04 24.3330	+11 50 41.354	66	45	2451465.46440972	17.5	R	OH
02 04 24.2134	+11 50 40.859	66	45	2451465.46817662	17.7	R	OH
02 04 24.1056	+11 50 40.208	66	45	2451465.47217338	17.5	R	OH
02 04 24.0009	+11 50 39.599	66	45	2451465.47605266	17.6	R	OH
02 04 23.8980	+11 50 39.058	66	45	2451465.47978738	17.7	R	OH
02 04 23.7939	+11 50 38.457	66	45	2451465.48352130	17.6	R	OH
02 03 27.4662	+11 45 09.126	44	30	2451467.53657315	17.8	R	OH
02 03 27.3618	+11 45 08.571	44	30	2451467.54032488	17.9	R	OH
02 03 27.2554	+11 45 07.956	44	30	2451467.54407269	17.9	R	OH
02 03 27.1552	+11 45 07.378	44	30	2451467.54782512	17.8	R	OH
02 03 27.0131	+11 45 06.591	44	30	2451467.55255289	17.7	R	OH
02 03 26.9060	+11 45 05.980	44	30	2451467.55647535	17.7	R	OH
01 51 28.6492	+10 34 29.178	35	50	2451493.33188021	17.6	R	OH
01 51 28.5568	+10 34 28.689	35	50	2451493.33540359	17.6	R	OH
01 51 28.4633	+10 34 27.976	35	50	2451493.33919954	17.8	R	OH
01 51 28.3658	+10 34 27.578	35	50	2451493.34272512	17.7	R	OH
01 51 28.2564	+10 34 26.922	35	50	2451493.34695509	17.6	R	OH
01 51 28.1746	+10 34 26.450	35	50	2451493.35022095	17.7	R	OH
01 51 28.0884	+10 34 25.880	35	50	2451493.35349063	17.8	R	OH
01 51 28.0007	+10 34 25.362	35	50	2451493.35676644	17.7	R	OH
01 51 27.9169	+10 34 24.880	35	50	2451493.36003900	17.7	R	OH
01 51 27.8351	+10 34 24.370	35	50	2451493.36330891	17.8	R	OH
01 44 11.4123	+09 50 22.518	19	20	2451515.37840613	18.1	R	OH
01 44 11.3661	+09 50 22.238	19	20	2451515.38168333	18.1	R	OH
01 44 11.2842	+09 50 21.804	19	20	2451515.38776400	18.3	R	OH
01 44 11.2374	+09 50 21.532	19	20	2451515.39103333	18.1	R	OH
01 44 11.1936	+09 50 21.230	19	20	2451515.39431019	18.1	R	OH
01 44 11.1517	+09 50 20.987	19	20	2451515.39758449	18.2	R	OH
01 44 11.1065	+09 50 20.712	19	20	2451515.40085671	18.1	R	OH
01 44 11.0600	+09 50 20.455	19	20	2451515.40412107	18.1	R	OH
01 43 14.0846	+09 44 22.829	38	14	2451520.49376829	18.4	R	OH
01 43 14.0322	+09 44 22.540	38	14	2451520.49872639	18.2	R	OH
01 43 13.9376	+09 44 21.926	38	14	2451520.50840718	17.9	R	OH
01 43 13.8974	+09 44 21.654	38	14	2451520.51317789	18.0	R	OH
01 43 13.8366	+09 44 21.253	38	14	2451520.51934167	17.9	R	OH
01 43 06.2308	+09 43 32.263	92	57	2451521.37277176	18.0	R	OH
01 43 06.1351	+09 43 31.824	92	57	2451521.38318472	18.0	R	OH
01 43 06.0318	+09 43 31.171	92	57	2451521.39467813	17.9	R	OH
01 43 05.9397	+09 43 30.536	92	57	2451521.40547604	17.9	R	OH
01 43 05.8494	+09 43 29.970	92	57	2451521.41539815	18.0	R	OH
03 58 59.4309	+19 11 47.955	48	44	2451900.29818704	18.1	R	OH
03 58 59.3015	+19 11 47.775	48	44	2451900.30295567	19.1	R	OH
03 58 59.0237	+19 11 47.516	48	44	2451900.31250903	18.2	R	OH
03 58 58.8901	+19 11 47.304	48	44	2451900.31728611	19.2	R	OH
03 58 58.7490	+19 11 47.078	48	44	2451900.32206343	17.6	R	OH
03 58 58.4699	+19 11 46.739	48	44	2451900.33160150	18.5	R	OH
03 58 58.3358	+19 11 46.671	48	44	2451900.33649595	18.5	R	OH
03 58 25.8613	+19 11 05.323	52	44	2451901.50208079	18.5	R	OH
03 58 25.7264	+19 11 05.186	52	44	2451901.50663519	18.6	R	OH
03 58 25.6039	+19 11 04.985	52	44	2451901.51117824	18.8	R	OH
03 58 25.4763	+19 11 04.774	52	44	2451901.51560856	18.7	R	OH

continued ...

Sinope

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
03 58 25.3580	+19 11 04.646	52	44	2451901.52004896	19.0	R	OH
03 58 25.2273	+19 11 04.415	52	44	2451901.52448530	18.2	R	OH
07 15 05.4722	+22 50 28.958	49	79	2452234.66903056	18.3	R	OH
07 15 05.4201	+22 50 28.792	49	79	2452234.67180162	17.9	R	OH
07 15 05.3718	+22 50 28.893	49	79	2452234.67542407	18.6	R	OH
07 15 05.3044	+22 50 29.064	49	79	2452234.67927789	18.6	R	OH
07 15 05.2423	+22 50 29.230	49	79	2452234.68313935	18.4	R	OH
07 15 05.1890	+22 50 29.221	49	79	2452234.68699132	18.6	R	OH
07 15 05.1261	+22 50 29.250	49	79	2452234.69084676	18.6	R	OH
07 15 05.0637	+22 50 29.396	49	79	2452234.69474502	18.5	R	OH
07 14 34.1176	+22 51 16.939	23	36	2452236.63305428	18.8	R	OH
07 14 33.9435	+22 51 17.242	23	36	2452236.64308727	18.4	R	OH
07 14 33.8584	+22 51 17.386	23	36	2452236.64810938	18.5	R	OH
07 03 19.6899	+23 06 47.694	29	17	2452262.60343287	18.3	R	OH
07 03 19.5603	+23 06 47.853	29	17	2452262.60717500	18.4	R	OH
07 03 19.4328	+23 06 47.975	29	17	2452262.61091690	18.3	R	OH
07 03 19.3086	+23 06 48.165	29	17	2452262.61466539	18.4	R	OH
07 03 19.1803	+23 06 48.275	29	17	2452262.61840799	18.4	R	OH
07 03 19.0567	+23 06 48.445	29	17	2452262.62215972	18.4	R	OH
07 03 18.9218	+23 06 48.585	29	17	2452262.62591748	18.4	R	OH
07 03 18.8007	+23 06 48.730	29	17	2452262.62966516	18.4	R	OH
07 03 18.6724	+23 06 48.908	29	17	2452262.63340544	18.4	R	OH
07 03 18.5451	+23 06 49.028	29	17	2452262.63715752	18.3	R	OH
07 02 18.3912	+23 08 01.803	66	42	2452264.42753183	18.1	R	OH
07 02 18.1831	+23 08 02.086	66	42	2452264.43332801	18.1	R	OH
07 02 18.0513	+23 08 02.281	66	42	2452264.43707975	18.1	R	OH
07 02 17.9181	+23 08 02.472	66	42	2452264.44082812	18.1	R	OH
07 02 17.7967	+23 08 02.612	66	42	2452264.44456991	18.1	R	OH
07 02 17.6619	+23 08 02.799	66	42	2452264.44831435	18.1	R	OH
06 50 25.4902	+23 20 06.378	28	16	2452284.38355810	17.8	R	OH
06 50 25.3546	+23 20 06.503	28	16	2452284.38742454	17.9	R	OH
06 50 25.2002	+23 20 06.619	28	16	2452284.39163218	17.9	R	OH
06 50 25.0457	+23 20 06.762	28	16	2452284.39583032	18.0	R	OH
06 50 24.8965	+23 20 06.871	28	16	2452284.40003611	18.0	R	OH
06 50 24.7387	+23 20 06.999	28	16	2452284.40423600	18.0	R	OH
06 50 24.5888	+23 20 07.137	28	16	2452284.40843796	18.0	R	OH
06 50 24.4379	+23 20 07.292	28	16	2452284.41263785	18.0	R	OH
06 50 24.2822	+23 20 07.437	28	16	2452284.41683981	18.0	R	OH
06 35 55.8849	+23 27 56.301	56	33	2452313.46935729	19.1	R	OH
06 35 55.0994	+23 27 56.393	56	33	2452313.50573160	18.7	R	OH
06 35 54.9927	+23 27 56.418	56	33	2452313.51051655	18.7	R	OH
06 35 54.8866	+23 27 56.351	56	33	2452313.51529363	18.6	R	OH
06 35 54.7801	+23 27 56.380	56	33	2452313.52008044	18.6	R	OH
06 35 54.6726	+23 27 56.352	56	33	2452313.52485822	18.5	R	OH
06 35 35.8002	+23 27 58.874	25	20	2452314.42837014	18.3	R	OH
06 35 35.7109	+23 27 58.850	25	20	2452314.43281146	18.3	R	OH
06 35 35.6131	+23 27 58.882	25	20	2452314.43725972	18.3	R	OH
06 35 35.5193	+23 27 58.867	25	20	2452314.44170810	18.3	R	OH
06 35 35.4253	+23 27 58.841	25	20	2452314.44615914	18.1	R	OH
09 01 18.7003	+17 29 57.443	35	47	2452668.49292095	18.5	R	OH
09 01 18.5956	+17 29 58.002	35	47	2452668.49642882	18.3	R	OH
09 01 18.4982	+17 29 58.588	35	47	2452668.49994016	18.1	R	OH
09 01 18.3993	+17 29 59.111	35	47	2452668.50345231	18.2	R	OH
09 01 18.2992	+17 29 59.746	35	47	2452668.50695498	18.3	R	OH
10 39 27.7872	+09 30 28.227	27	65	2453144.34446088	19.1	R	OH
10 39 27.8176	+09 30 27.929	27	65	2453144.34890428	18.9	R	OH
10 39 27.8500	+09 30 27.675	27	65	2453144.35334896	18.8	R	OH
10 39 27.8775	+09 30 27.456	27	65	2453144.35780370	18.8	R	OH
10 39 27.9446	+09 30 26.700	27	65	2453144.36670486	19.3	R	OH
10 39 27.9766	+09 30 26.429	27	65	2453144.37115463	18.8	R	OH

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Sinope

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
10 39 28.0072	+09 30 26.007	27	65	2453144.37559896	17.7	R	OH
13 06 46.7345	-05 42 16.469	68	38	2453440.57843484	18.5	R	OH
13 06 46.5973	-05 42 15.329	68	38	2453440.58546644	18.5	R	OH
13 06 46.5301	-05 42 14.847	68	38	2453440.58898449	18.6	R	OH
13 06 46.4650	-05 42 14.258	68	38	2453440.59250116	18.5	R	OH
13 06 46.3963	-05 42 13.756	68	38	2453440.59602303	18.5	R	OH
13 06 46.3174	-05 42 13.139	68	38	2453440.59953356	18.8	R	OH
13 06 46.2596	-05 42 12.579	68	38	2453440.60304942	18.8	R	OH
13 06 46.1847	-05 42 12.096	68	38	2453440.60656435	18.6	R	OH
13 06 46.1087	-05 42 11.579	68	38	2453440.61007905	18.5	R	OH
12 53 48.0700	-04 01 35.804	79	80	2453473.48527581	17.1	R	OH
12 53 47.9254	-04 01 34.905	79	80	2453473.49134525	18.0	R	OH
12 53 47.7236	-04 01 33.396	79	80	2453473.49867940	18.0	R	OH
12 53 47.5385	-04 01 31.994	79	80	2453473.50600880	18.1	R	OH
12 53 47.3500	-04 01 30.587	79	80	2453473.51333727	18.0	R	OH
12 53 47.1694	-04 01 29.268	79	80	2453473.52066887	17.9	R	OH
12 53 21.6958	-03 58 18.477	93	28	2453474.54076852	17.5	R	OH
12 53 21.5503	-03 58 17.418	93	28	2453474.54636424	17.4	R	OH
12 53 21.4162	-03 58 16.434	93	28	2453474.55195787	17.6	R	OH
12 53 21.2683	-03 58 15.342	93	28	2453474.55755613	17.5	R	OH
12 53 21.1152	-03 58 14.267	93	28	2453474.56315127	17.4	R	OH
12 45 56.8657	-03 03 18.574	30	48	2453494.49182951	18.2	R	OH
12 45 56.6507	-03 03 17.121	30	48	2453494.50302616	18.4	R	OH
12 45 56.5442	-03 03 16.340	30	48	2453494.50862049	18.4	R	OH
12 45 56.4324	-03 03 15.589	30	48	2453494.51422014	18.0	R	OH
12 44 29.2806	-02 52 34.790	43	54	2453499.47801308	18.4	R	OH
12 44 29.1812	-02 52 34.041	43	54	2453499.48360961	18.6	R	OH
12 44 28.9038	-02 52 32.128	43	54	2453499.50039387	18.4	R	OH
14 27 11.7118	-13 33 12.368	52	21	2453880.44972581	18.3	R	OH
14 27 11.5923	-13 33 11.940	52	21	2453880.45416794	18.5	R	OH
14 27 11.4784	-13 33 11.516	52	21	2453880.45861725	18.3	R	OH
14 27 11.3595	-13 33 11.065	52	21	2453880.46305648	18.3	R	OH
14 27 11.2462	-13 33 10.640	52	21	2453880.46750613	18.6	R	OH
14 27 11.0142	-13 33 09.808	52	21	2453880.47639387	18.4	R	OH
14 27 10.9083	-13 33 09.425	52	21	2453880.48084340	18.5	R	OH
16 38 05.6133	-21 01 06.868	19	20	2454353.53757570	19.1	un	E
16 38 05.6492	-21 01 06.987	19	20	2454353.53943321	19.0	un	E
16 38 05.6868	-21 01 07.087	19	20	2454353.54123585	19.0	un	E
16 38 05.7263	-21 01 07.176	19	20	2454353.54309522	19.0	un	E
16 38 05.7623	-21 01 07.296	19	20	2454353.54484182	18.9	un	E
16 38 05.7994	-21 01 07.376	19	20	2454353.54667131	19.0	un	E
16 38 05.8335	-21 01 07.438	19	20	2454353.54839556	19.0	un	E
16 38 05.8684	-21 01 07.544	19	20	2454353.55021429	18.9	un	E
16 38 05.9059	-21 01 07.681	19	20	2454353.55195000	18.9	un	E
19 27 49.2622	-22 24 13.213	104	61	2454620.71855566	18.3	un	E
19 27 49.2231	-22 24 13.502	104	61	2454620.72141134	17.5	un	E
18 56 14.7819	-23 54 30.392	88	40	2454729.52290208	18.8	I	PE
18 56 14.8240	-23 54 30.301	88	40	2454729.52687025	19.4	I	PE
18 56 14.8711	-23 54 30.194	88	40	2454729.53084861	18.1	I	PE
18 56 14.9504	-23 54 30.166	88	40	2454729.53579074	18.3	I	PE
18 56 14.9942	-23 54 30.126	88	40	2454729.53976898	18.8	I	PE
18 57 15.8568	-23 53 13.980	43	18	2454733.50266019	19.2	I	PE
18 57 15.9089	-23 53 13.918	43	18	2454733.50607350	19.2	I	PE
18 57 15.9601	-23 53 13.813	43	18	2454733.50948588	18.8	I	PE
18 57 16.0166	-23 53 13.771	43	18	2454733.51289861	19.0	I	PE
18 57 16.0735	-23 53 13.669	43	18	2454733.51631192	19.0	I	PE
21 45 43.2845	-13 55 41.538	60	17	2455032.80295741	18.1	C	BC
21 45 43.1532	-13 55 42.131	60	17	2455032.80728218	18.3	C	BC
21 45 43.1114	-13 55 42.337	60	17	2455032.80905799	18.2	C	BC
21 45 43.0564	-13 55 42.594	60	17	2455032.81083391	18.1	C	BC

Table B.12. CDS data for Themisto.

Themisto							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 30 12.0692	-21 30 18.703	73	26	2454618.73831187	19.8	un	E
19 30 11.9919	-21 30 18.677	73	26	2454618.74278898	18.3	un	E
19 30 11.9217	-21 30 18.641	73	26	2454618.74827064	20.1	un	E
19 30 11.8528	-21 30 18.543	73	26	2454618.75276894	19.5	un	E
21 53 28.1065	-13 49 06.689	20	15	2454974.85027828	20.6	un	E
21 53 28.6161	-13 49 01.373	20	15	2454974.90695453	20.2	un	E
21 53 28.6374	-13 49 01.132	20	15	2454974.90923765	20.2	un	E
21 53 28.6651	-13 49 00.839	20	15	2454974.91243510	20.4	un	E
21 53 28.6818	-13 49 00.659	20	15	2454974.91426377	19.7	un	E
21 53 28.7128	-13 49 00.338	20	15	2454974.91791069	20.4	un	E
21 53 28.7291	-13 49 00.145	20	15	2454974.91965798	20.4	un	E
21 53 28.7470	-13 48 59.929	20	15	2454974.92193566	20.6	un	E
21 53 28.7660	-13 48 59.764	20	15	2454974.92396076	20.6	un	E
21 53 28.7841	-13 48 59.598	20	15	2454974.92577947	20.2	un	E
21 53 28.7978	-13 48 59.391	20	15	2454974.92762076	20.3	un	E
21 53 28.8130	-13 48 59.266	20	15	2454974.92936713	19.3	un	E

Appendix B.2: Satellites of Saturn

Table B.13. CDS data for Phoebe.

Phoebe							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
00 15 51.7723	-01 08 36.212	10	7	2450357.66964120	16.3	C	PE
00 15 51.7450	-01 08 36.387	10	7	2450357.67126157	16.3	C	PE
00 15 51.7316	-01 08 36.471	10	7	2450357.67208333	16.3	C	PE
00 15 51.7023	-01 08 36.648	10	7	2450357.67369213	16.3	C	PE
00 15 51.6887	-01 08 36.724	10	7	2450357.67451389	16.3	C	PE
00 15 51.6887	-01 08 36.724	10	7	2450357.67451389	16.3	C	PE
00 15 51.6605	-01 08 36.910	10	7	2450357.67613426	16.3	C	PE
00 15 51.6478	-01 08 36.984	10	7	2450357.67693287	16.3	C	PE
01 20 42.1124	+05 41 49.536	24	7	2450672.81245370	16.7	C	PE
01 20 42.1029	+05 41 49.448	24	7	2450672.81434028	16.7	C	PE
01 20 42.0953	+05 41 49.365	24	7	2450672.81621528	16.6	C	PE
01 20 42.0844	+05 41 49.285	24	7	2450672.81811343	16.7	C	PE
01 20 42.0797	+05 41 49.211	24	7	2450672.82000000	16.6	C	PE
02 10 44.4602	+10 30 15.309	21	25	2451037.52920475	16.7	R	OH
02 10 44.4672	+10 30 15.300	21	25	2451037.53224236	16.3	R	OH
02 10 44.4772	+10 30 15.272	21	25	2451037.53528646	16.3	R	OH
02 10 44.4867	+10 30 15.266	21	25	2451037.53832199	16.7	R	OH
02 10 44.5141	+10 30 15.267	21	25	2451037.54743692	16.6	R	OH
02 10 44.5240	+10 30 15.316	21	25	2451037.55047535	16.6	R	OH
02 10 44.5292	+10 30 15.339	21	25	2451037.55350984	16.4	R	OH
02 10 44.5372	+10 30 15.329	21	25	2451037.55654456	16.6	R	OH
02 10 51.8586	+10 30 06.744	21	36	2451040.52335799	16.7	R	OH
02 10 51.8678	+10 30 06.739	21	36	2451040.53020752	16.6	R	OH
02 10 51.8766	+10 30 06.728	21	36	2451040.53496065	16.7	R	OH
02 10 51.8813	+10 30 06.658	21	36	2451040.53800405	16.7	R	OH
02 10 51.8850	+10 30 06.695	21	36	2451040.54104120	16.6	R	OH
02 10 51.8926	+10 30 06.627	21	36	2451040.54408137	16.6	R	OH
02 10 51.8993	+10 30 06.566	21	36	2451040.55015752	16.7	R	OH
02 10 51.9084	+10 30 06.569	21	36	2451040.55319375	16.7	R	OH
02 10 51.9095	+10 30 06.498	21	36	2451040.55623044	16.7	R	OH
02 10 51.9315	+10 30 06.523	21	36	2451040.56922639	16.6	R	OH
02 10 53.5756	+10 29 59.085	16	34	2451041.58741146	16.6	R	OH
02 10 53.5851	+10 29 59.046	16	34	2451041.59294850	16.6	R	OH
02 10 53.5941	+10 29 59.065	16	34	2451041.60275301	16.8	R	OH
02 10 53.5981	+10 29 58.951	16	34	2451041.60601748	16.6	R	OH

continued ...

Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
02 10 53.6031	+10 29 58.967	16	34	2451041.60929282	16.6	R	OH
02 10 53.6069	+10 29 58.912	16	34	2451041.61255405	16.6	R	OH
02 10 53.6148	+10 29 58.844	16	34	2451041.61908241	16.6	R	OH
02 10 53.6173	+10 29 58.845	16	34	2451041.62235197	16.6	R	OH
02 10 53.6226	+10 29 58.827	16	34	2451041.62727905	16.6	R	OH
02 10 54.7833	+10 29 49.693	5	22	2451042.58378079	16.5	R	OH
02 10 54.7876	+10 29 49.659	5	22	2451042.59001690	16.4	R	OH
02 10 54.7928	+10 29 49.583	5	22	2451042.59781181	16.5	R	OH
02 10 54.7950	+10 29 49.572	5	22	2451042.60015093	16.4	R	OH
02 10 54.7969	+10 29 49.551	5	22	2451042.60249583	16.5	R	OH
02 10 54.7977	+10 29 49.522	5	22	2451042.60484155	16.5	R	OH
02 10 54.7998	+10 29 49.509	5	22	2451042.60718947	16.5	R	OH
02 10 54.8018	+10 29 49.506	5	22	2451042.60952836	16.5	R	OH
02 10 55.9140	+10 29 23.859	27	15	2451044.61656898	16.6	R	OH
02 10 55.9141	+10 29 23.836	27	15	2451044.62048067	16.5	R	OH
02 10 55.9156	+10 29 23.714	27	15	2451044.62770984	16.5	R	OH
02 10 55.9171	+10 29 23.648	27	15	2451044.63075116	16.5	R	OH
02 10 55.9167	+10 29 23.612	27	15	2451044.63379144	16.5	R	OH
02 10 55.9130	+10 29 23.554	27	15	2451044.63739352	16.5	R	OH
02 10 55.9151	+10 29 23.544	27	15	2451044.63973750	16.5	R	OH
02 10 55.9140	+10 29 23.491	27	15	2451044.64207488	16.5	R	OH
02 10 55.9129	+10 29 23.431	27	15	2451044.64441944	16.5	R	OH
02 10 55.9117	+10 29 23.418	27	15	2451044.64676111	16.5	R	OH
02 10 55.8440	+10 29 07.533	18	14	2451045.63844583	16.5	R	OH
02 10 55.8412	+10 29 07.406	18	14	2451045.64453252	16.5	R	OH
02 10 55.8391	+10 29 07.359	18	14	2451045.64758843	16.6	R	OH
02 10 55.8397	+10 29 07.287	18	14	2451045.65062373	16.6	R	OH
02 10 55.8349	+10 29 07.269	18	14	2451045.65366736	16.5	R	OH
02 10 55.8327	+10 29 07.222	18	14	2451045.65670451	16.5	R	OH
02 10 55.8333	+10 29 07.162	18	14	2451045.65973958	16.5	R	OH
02 09 52.5972	+10 19 23.076	12	22	2451062.57259630	16.5	R	OH
02 09 52.5420	+10 19 22.658	12	22	2451062.58012986	16.5	R	OH
02 09 52.5094	+10 19 22.473	12	22	2451062.58456296	16.5	R	OH
02 09 52.4765	+10 19 22.220	12	22	2451062.58899537	16.5	R	OH
02 09 52.4455	+10 19 21.990	12	22	2451062.59344016	16.5	R	OH
02 09 52.4107	+10 19 21.733	12	22	2451062.59787431	16.5	R	OH
02 09 29.3491	+10 16 39.273	48	34	2451065.60899063	16.3	R	OH
02 09 29.3189	+10 16 39.067	48	34	2451065.61254410	16.3	R	OH
02 09 29.2908	+10 16 38.852	48	34	2451065.61607523	16.4	R	OH
02 09 29.2546	+10 16 38.631	48	34	2451065.61971609	16.4	R	OH
02 09 29.2186	+10 16 38.502	48	34	2451065.62354282	16.4	R	OH
02 09 20.9131	+10 15 41.417	22	10	2451066.61285972	16.2	R	OH
02 09 20.8633	+10 15 41.064	22	10	2451066.61857812	16.3	R	OH
02 09 20.8327	+10 15 40.868	22	10	2451066.62207222	16.5	R	OH
02 09 20.7980	+10 15 40.673	22	10	2451066.62557535	16.3	R	OH
02 09 20.7676	+10 15 40.475	22	10	2451066.62907407	16.1	R	OH
01 46 10.8176	+08 11 30.630	36	22	2451163.38201481	16.6	R	OH
01 46 10.7708	+08 11 30.507	36	22	2451163.38812998	16.8	R	OH
01 46 10.7325	+08 11 30.374	36	22	2451163.39352095	16.8	R	OH
01 46 10.7119	+08 11 30.332	36	22	2451163.39655775	16.8	R	OH
01 46 10.6898	+08 11 30.253	36	22	2451163.39959595	16.8	R	OH
01 46 10.6696	+08 11 30.204	36	22	2451163.40263935	16.8	R	OH
01 46 10.6485	+08 11 30.112	36	22	2451163.40568183	16.8	R	OH
01 46 10.6307	+08 11 30.088	36	22	2451163.40871296	16.5	R	OH
01 46 10.6100	+08 11 29.992	36	22	2451163.41175694	16.6	R	OH
01 46 10.5905	+08 11 29.949	36	22	2451163.41479606	16.5	R	OH
01 46 10.5702	+08 11 29.897	36	22	2451163.41783264	16.8	R	OH
01 46 10.5437	+08 11 29.782	36	22	2451163.42087778	16.7	R	OH
01 46 04.5306	+08 11 10.197	47	16	2451164.35579294	16.7	R	OH
01 46 04.4988	+08 11 10.070	47	16	2451164.35991551	16.4	R	OH

continued ...

Phoebe

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
01 46 04.4752	+08 11 10.024	47	16	2451164.36317789	16.4	R	OH
01 46 04.4616	+08 11 09.973	47	16	2451164.36644537	16.7	R	OH
01 46 04.4335	+08 11 09.881	47	16	2451164.36971019	16.8	R	OH
01 46 04.4127	+08 11 09.817	47	16	2451164.37298368	16.7	R	OH
01 46 04.3895	+08 11 09.755	47	16	2451164.37625266	16.4	R	OH
01 45 58.3503	+08 10 51.217	21	30	2451165.37059722	16.4	R	OH
01 45 58.3179	+08 10 51.115	21	30	2451165.37550567	16.3	R	OH
01 45 58.3094	+08 10 51.109	21	30	2451165.37715023	16.4	R	OH
01 45 58.2913	+08 10 51.042	21	30	2451165.38044595	16.4	R	OH
01 45 58.2677	+08 10 50.932	21	30	2451165.38374850	16.4	R	OH
01 45 58.2569	+08 10 50.912	21	30	2451165.38539815	16.4	R	OH
01 45 58.2503	+08 10 50.903	21	30	2451165.38704514	16.5	R	OH
01 45 58.2381	+08 10 50.830	21	30	2451165.38868600	16.3	R	OH
01 45 58.2287	+08 10 50.798	21	30	2451165.39034120	16.4	R	OH
02 59 38.8134	+14 26 03.927	10	15	2451411.78801146	16.7	un	PE
02 59 38.8737	+14 26 03.961	10	15	2451411.80385301	16.7	un	PE
02 59 38.8825	+14 26 03.984	10	15	2451411.80651794	16.7	un	PE
02 59 38.8925	+14 26 03.988	10	15	2451411.80918553	16.7	un	PE
02 59 38.9947	+14 26 04.119	10	15	2451411.83664097	16.7	un	PE
02 59 39.0029	+14 26 04.099	10	15	2451411.83930775	16.8	un	PE
02 55 20.0766	+13 58 57.638	12	24	2451460.65478831	16.1	R	OH
02 55 20.0088	+13 58 57.305	12	24	2451460.65966458	16.3	R	OH
02 55 19.9298	+13 58 56.980	12	24	2451460.66518970	16.2	R	OH
02 55 19.8698	+13 58 56.693	12	24	2451460.66956910	16.1	R	OH
02 55 19.8207	+13 58 56.469	12	24	2451460.67315440	16.2	R	OH
02 55 19.7748	+13 58 56.267	12	24	2451460.67649606	16.2	R	OH
02 55 19.7294	+13 58 56.067	12	24	2451460.67975463	16.2	R	OH
02 54 52.2193	+13 56 46.841	13	9	2451462.65798264	16.1	R	OH
02 54 52.1630	+13 56 46.581	13	9	2451462.66180891	16.1	R	OH
02 54 52.0771	+13 56 46.189	13	9	2451462.66776574	16.2	R	OH
02 54 52.0340	+13 56 45.991	13	9	2451462.67071875	16.1	R	OH
02 54 52.0021	+13 56 45.837	13	9	2451462.67308588	16.1	R	OH
02 54 51.9652	+13 56 45.685	13	9	2451462.67550648	16.1	R	OH
02 54 51.9310	+13 56 45.519	13	9	2451462.67796400	16.1	R	OH
02 54 51.8596	+13 56 45.201	13	9	2451462.68281644	16.2	R	OH
02 54 10.8403	+13 53 34.845	38	25	2451465.51455023	15.1	R	OH
02 54 10.7931	+13 53 34.609	38	25	2451465.51782072	16.3	R	OH
02 54 10.7293	+13 53 34.269	38	25	2451465.52207106	16.2	R	OH
02 54 10.6779	+13 53 34.067	38	25	2451465.52562558	16.2	R	OH
02 54 10.6327	+13 53 33.870	38	25	2451465.52867431	16.1	R	OH
02 46 21.0059	+13 19 26.744	32	37	2451493.55577662	16.0	R	OH
02 46 20.9792	+13 19 26.695	32	37	2451493.55696262	16.0	R	OH
02 46 20.9626	+13 19 26.549	32	37	2451493.55814352	15.9	R	OH
02 46 20.9414	+13 19 26.550	32	37	2451493.55932477	15.8	R	OH
02 46 20.9191	+13 19 26.383	32	37	2451493.56050729	15.9	R	OH
03 39 32.8220	+17 06 16.209	12	8	2451873.39471875	16.0	R	OH
03 39 32.7768	+17 06 16.054	12	8	2451873.39683646	15.9	R	OH
03 39 32.7306	+17 06 15.916	12	8	2451873.39894618	16.0	R	OH
03 39 32.6867	+17 06 15.785	12	8	2451873.40105995	15.9	R	OH
03 39 32.6428	+17 06 15.655	12	8	2451873.40316493	15.9	R	OH
03 39 32.5991	+17 06 15.527	12	8	2451873.40527512	15.9	R	OH
03 39 32.5544	+17 06 15.376	12	8	2451873.40738819	15.8	R	OH
03 38 29.9087	+17 02 58.334	49	29	2451876.45309132	16.1	R	OH
03 38 29.8460	+17 02 58.121	49	29	2451876.45614086	16.1	R	OH
03 38 29.8092	+17 02 58.038	49	29	2451876.45824549	16.1	R	OH
03 38 29.3931	+17 02 56.782	49	29	2451876.47801100	16.2	R	OH
03 38 10.5603	+17 01 57.828	37	39	2451877.40401528	16.0	R	OH
03 38 10.3092	+17 01 57.130	37	39	2451877.41647083	16.2	R	OH
03 38 10.2004	+17 01 56.698	37	39	2451877.42157523	16.6	R	OH
03 38 10.1609	+17 01 56.659	37	39	2451877.42368403	16.2	R	OH

continued ...

Phoebe

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
03 38 10.1157	+17 01 56.490	37	39	2451877.42579410	16.2	R	OH
03 38 10.0747	+17 01 56.331	37	39	2451877.42790648	16.2	R	OH
03 38 10.0295	+17 01 56.216	37	39	2451877.43001435	16.2	R	OH
03 31 18.7744	+16 41 43.459	22	45	2451900.27432245	15.5	R	OH
03 31 18.7404	+16 41 43.312	22	45	2451900.27667037	15.9	R	OH
03 31 18.7026	+16 41 43.217	22	45	2451900.27901331	16.0	R	OH
03 31 18.6714	+16 41 43.203	22	45	2451900.28135856	15.9	R	OH
03 31 18.6319	+16 41 43.141	22	45	2451900.28370035	16.0	R	OH
03 31 18.5991	+16 41 42.932	22	45	2451900.28603981	16.1	R	OH
03 31 18.5612	+16 41 42.838	22	45	2451900.28838356	16.0	R	OH
03 31 18.5277	+16 41 42.793	22	45	2451900.29072211	15.8	R	OH
04 53 27.0014	+20 51 25.960	12	21	2452145.61318553	16.8	R	OH
04 53 27.0495	+20 51 25.972	12	21	2452145.61637315	16.7	R	OH
04 53 27.1070	+20 51 26.090	12	21	2452145.62008160	16.8	R	OH
04 53 27.1575	+20 51 26.144	12	21	2452145.62345972	16.7	R	OH
04 53 27.1925	+20 51 26.213	12	21	2452145.62580231	16.7	R	OH
04 53 27.2295	+20 51 26.273	12	21	2452145.62814387	16.8	R	OH
04 53 27.2637	+20 51 26.288	12	21	2452145.63048287	16.8	R	OH
04 53 27.2997	+20 51 26.317	12	21	2452145.63282153	16.8	R	OH
04 53 27.3354	+20 51 26.333	12	21	2452145.63515822	16.8	R	OH
04 53 27.3699	+20 51 26.419	12	21	2452145.63749907	16.8	R	OH
04 53 27.4049	+20 51 26.465	12	21	2452145.63983611	16.8	R	OH
04 53 27.4391	+20 51 26.504	12	21	2452145.64217847	16.8	R	OH
04 53 27.4769	+20 51 26.572	12	21	2452145.64452812	16.8	R	OH
04 53 41.4734	+20 51 43.170	34	23	2452146.57056944	16.7	R	OH
04 53 41.5042	+20 51 43.214	34	23	2452146.57268519	16.7	R	OH
04 53 41.5503	+20 51 43.321	34	23	2452146.57616759	16.7	R	OH
04 53 41.5880	+20 51 43.341	34	23	2452146.57850880	16.7	R	OH
04 53 41.6241	+20 51 43.432	34	23	2452146.58085370	16.7	R	OH
04 53 41.6553	+20 51 43.446	34	23	2452146.58319977	16.8	R	OH
04 53 41.6948	+20 51 43.477	34	23	2452146.58554815	16.8	R	OH
04 53 59.4001	+20 52 05.327	11	16	2452147.79456227	16.9	B	BC
04 53 59.4691	+20 52 05.419	11	16	2452147.79936910	16.8	B	BC
04 53 59.4848	+20 52 05.438	11	16	2452147.80052500	16.9	B	BC
04 53 59.5013	+20 52 05.452	11	16	2452147.80167188	16.8	B	BC
04 53 59.5163	+20 52 05.439	11	16	2452147.80281875	16.8	B	BC
04 53 59.5496	+20 52 05.484	11	16	2452147.80511215	16.8	B	BC
04 53 59.5661	+20 52 05.527	11	16	2452147.80625926	16.8	B	BC
04 53 59.5987	+20 52 05.553	11	16	2452147.80855139	16.8	B	BC
04 53 59.6147	+20 52 05.564	11	16	2452147.80969734	16.8	B	BC
04 53 59.6306	+20 52 05.591	11	16	2452147.81083472	16.8	B	BC
04 53 59.6472	+20 52 05.644	11	16	2452147.81196979	16.8	B	BC
04 53 59.6637	+20 52 05.638	11	16	2452147.81312581	16.8	B	BC
04 53 59.6782	+20 52 05.681	11	16	2452147.81426991	16.8	B	BC
04 53 59.7103	+20 52 05.699	11	16	2452147.81656250	16.8	B	BC
04 53 59.7263	+20 52 05.718	11	16	2452147.81770787	16.8	B	BC
04 53 59.7439	+20 52 05.724	11	16	2452147.81887755	16.8	B	BC
04 53 59.7580	+20 52 05.784	11	16	2452147.82002211	16.8	B	BC
04 54 39.3095	+20 46 15.142	12	15	2452207.69201701	16.3	C	PE
04 54 39.2757	+20 46 15.046	12	15	2452207.69451481	16.4	C	PE
04 54 39.2636	+20 46 15.035	12	15	2452207.69548704	16.3	C	PE
04 54 39.2532	+20 46 15.029	12	15	2452207.69615880	16.2	C	PE
04 54 39.2434	+20 46 15.011	12	15	2452207.69683808	16.3	C	PE
04 54 39.2255	+20 46 14.969	12	15	2452207.69819097	16.4	C	PE
04 54 39.2170	+20 46 14.976	12	15	2452207.69886204	16.3	C	PE
04 54 39.2080	+20 46 14.974	12	15	2452207.69953067	16.3	C	PE
04 54 39.1770	+20 46 14.902	12	15	2452207.70186956	16.3	C	PE
04 54 39.1599	+20 46 14.850	12	15	2452207.70314271	16.2	C	PE
04 54 39.1492	+20 46 14.830	12	15	2452207.70388333	16.3	C	PE
04 54 39.1395	+20 46 14.812	12	15	2452207.70465579	16.3	C	PE

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
04 54 39.1292	+20 46 14.809	12	15	2452207.70538553	16.3	C	PE
04 54 39.1201	+20 46 14.768	12	15	2452207.70610278	16.3	C	PE
04 54 39.1107	+20 46 14.758	12	15	2452207.70682986	16.3	C	PE
04 54 39.1001	+20 46 14.766	12	15	2452207.70755729	16.3	C	PE
04 54 39.0902	+20 46 14.696	12	15	2452207.70828542	16.2	C	PE
04 54 39.0809	+20 46 14.727	12	15	2452207.70901007	16.3	C	PE
04 54 38.3890	+20 46 13.379	12	15	2452207.76034560	16.2	C	PE
04 54 38.3770	+20 46 13.345	12	15	2452207.76128380	16.2	C	PE
04 54 38.3678	+20 46 13.315	12	15	2452207.76201227	16.2	C	PE
04 54 38.3577	+20 46 13.324	12	15	2452207.76275000	16.2	C	PE
04 54 38.3373	+20 46 13.293	12	15	2452207.76421655	16.2	C	PE
04 54 38.3282	+20 46 13.257	12	15	2452207.76494560	16.3	C	PE
04 54 38.3169	+20 46 13.251	12	15	2452207.76569306	16.3	C	PE
04 54 38.3081	+20 46 13.229	12	15	2452207.76643542	16.3	C	PE
04 54 26.2217	+20 45 49.331	22	30	2452208.68160729	16.5	C	PE
04 54 26.2029	+20 45 49.288	22	30	2452208.68281377	16.4	C	PE
04 54 26.1539	+20 45 49.131	22	30	2452208.68631817	16.4	C	PE
04 54 26.1458	+20 45 49.129	22	30	2452208.68703275	16.4	C	PE
04 54 26.1357	+20 45 49.117	22	30	2452208.68772616	16.4	C	PE
04 54 26.1250	+20 45 49.044	22	30	2452208.68844745	16.4	C	PE
04 54 26.1195	+20 45 49.111	22	30	2452208.68915058	16.3	C	PE
04 54 26.1070	+20 45 49.071	22	30	2452208.68984317	16.4	C	PE
04 54 26.0978	+20 45 49.041	22	30	2452208.69053704	16.4	C	PE
04 54 26.0856	+20 45 48.997	22	30	2452208.69123056	16.4	C	PE
04 54 26.0707	+20 45 48.968	22	30	2452208.69266273	16.4	C	PE
04 54 26.0573	+20 45 48.971	22	30	2452208.69335741	16.3	C	PE
04 54 26.0471	+20 45 48.999	22	30	2452208.69405428	16.4	C	PE
04 54 25.8872	+20 45 48.690	22	30	2452208.70570174	16.5	C	PE
04 54 25.8651	+20 45 48.609	22	30	2452208.70741447	16.4	C	PE
04 54 25.8522	+20 45 48.575	22	30	2452208.70812523	16.4	C	PE
04 54 25.8414	+20 45 48.608	22	30	2452208.70882778	16.5	C	PE
04 54 25.8342	+20 45 48.545	22	30	2452208.70953113	16.4	C	PE
04 54 25.8237	+20 45 48.533	22	30	2452208.71022384	16.4	C	PE
04 54 25.8155	+20 45 48.491	22	30	2452208.71091759	16.5	C	PE
04 54 25.8044	+20 45 48.533	22	30	2452208.71161736	16.4	C	PE
04 54 25.7981	+20 45 48.438	22	30	2452208.71232106	16.4	C	PE
04 54 25.7872	+20 45 48.453	22	30	2452208.71301493	16.4	C	PE
04 54 12.9820	+20 45 23.273	21	18	2452209.65458380	16.4	C	PE
04 54 12.9611	+20 45 23.244	21	18	2452209.65603634	16.4	C	PE
04 54 12.9498	+20 45 23.201	21	18	2452209.65675405	16.4	C	PE
04 54 12.9430	+20 45 23.170	21	18	2452209.65747164	16.4	C	PE
04 54 12.9293	+20 45 23.153	21	18	2452209.65818808	16.4	C	PE
04 54 12.9191	+20 45 23.179	21	18	2452209.65890775	16.4	C	PE
04 54 12.9128	+20 45 23.141	21	18	2452209.65963576	16.4	C	PE
04 54 12.9003	+20 45 23.125	21	18	2452209.66036354	16.4	C	PE
04 54 12.8897	+20 45 23.095	21	18	2452209.66109190	16.3	C	PE
04 54 12.8815	+20 45 23.075	21	18	2452209.66182130	16.4	C	PE
04 54 12.8711	+20 45 23.086	21	18	2452209.66255185	16.3	C	PE
04 54 12.8559	+20 45 23.023	21	18	2452209.66328218	16.4	C	PE
04 54 12.8474	+20 45 22.996	21	18	2452209.66400938	16.4	C	PE
04 54 12.8391	+20 45 23.002	21	18	2452209.66473843	16.4	C	PE
04 54 12.8258	+20 45 22.962	21	18	2452209.66546701	16.4	C	PE
04 54 12.8176	+20 45 22.978	21	18	2452209.66619630	16.4	C	PE
04 54 12.8076	+20 45 22.947	21	18	2452209.66692407	16.4	C	PE
04 54 12.7686	+20 45 22.853	21	18	2452209.66956053	16.4	C	PE
04 54 12.7577	+20 45 22.893	21	18	2452209.67029931	16.4	C	PE
04 53 59.3771	+20 44 56.731	27	26	2452210.62820336	16.4	C	PE
04 53 59.3625	+20 44 56.669	27	26	2452210.62894479	16.4	C	PE
04 53 59.3558	+20 44 56.745	27	26	2452210.62968484	16.5	C	PE
04 53 59.3416	+20 44 56.661	27	26	2452210.63042361	16.5	C	PE

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
04 53 59.3311	+20 44 56.630	27	26	2452210.63115266	16.4	C	PE
04 53 59.3083	+20 44 56.577	27	26	2452210.63259988	16.5	C	PE
04 53 59.2971	+20 44 56.597	27	26	2452210.63333935	16.5	C	PE
04 53 59.2870	+20 44 56.565	27	26	2452210.63408414	16.4	C	PE
04 53 59.2642	+20 44 56.529	27	26	2452210.63555150	16.4	C	PE
04 53 59.2595	+20 44 56.546	27	26	2452210.63628785	16.4	C	PE
04 53 59.2433	+20 44 56.507	27	26	2452210.63701516	16.5	C	PE
04 53 59.2343	+20 44 56.473	27	26	2452210.63775405	16.4	C	PE
04 53 59.2275	+20 44 56.490	27	26	2452210.63849178	16.5	C	PE
04 53 59.2151	+20 44 56.416	27	26	2452210.63922060	16.4	C	PE
04 53 59.2051	+20 44 56.466	27	26	2452210.63996238	16.4	C	PE
04 53 59.1940	+20 44 56.381	27	26	2452210.64069259	16.4	C	PE
04 53 59.1808	+20 44 56.367	27	26	2452210.64143287	16.4	C	PE
04 53 59.1694	+20 44 56.350	27	26	2452210.64216366	16.5	C	PE
04 53 59.1609	+20 44 56.341	27	26	2452210.64290081	16.4	C	PE
04 53 59.1485	+20 44 56.350	27	26	2452210.64362836	16.4	C	PE
04 53 59.1412	+20 44 56.347	27	26	2452210.64435637	16.5	C	PE
04 53 59.1258	+20 44 56.307	27	26	2452210.64509502	16.5	C	PE
04 53 59.1065	+20 44 56.281	27	26	2452210.64655671	16.4	C	PE
04 53 59.0960	+20 44 56.236	27	26	2452210.64729792	16.4	C	PE
04 53 59.0868	+20 44 56.197	27	26	2452210.64802581	16.4	C	PE
04 53 59.0755	+20 44 56.223	27	26	2452210.64875556	16.4	C	PE
04 53 59.0652	+20 44 56.172	27	26	2452210.64948507	16.4	C	PE
04 48 11.7316	+20 34 16.255	20	26	2452230.55556748	16.2	R	OH
04 48 11.6444	+20 34 16.063	20	26	2452230.55974826	16.2	R	OH
04 48 11.6184	+20 34 16.015	20	26	2452230.56106528	16.1	R	OH
04 48 11.5909	+20 34 15.988	20	26	2452230.56237685	16.1	R	OH
04 48 11.5654	+20 34 15.930	20	26	2452230.56368646	16.2	R	OH
04 48 11.5377	+20 34 15.879	20	26	2452230.56499363	16.2	R	OH
04 48 11.5049	+20 34 15.779	20	26	2452230.56652384	16.2	R	OH
04 48 11.4667	+20 34 15.710	20	26	2452230.56845868	16.1	R	OH
04 48 11.4310	+20 34 15.681	20	26	2452230.57022604	16.2	R	OH
04 48 11.4101	+20 34 15.663	20	26	2452230.57128843	16.2	R	OH
04 48 11.3841	+20 34 15.599	20	26	2452230.57234803	16.2	R	OH
04 48 11.3640	+20 34 15.513	20	26	2452230.57340799	16.1	R	OH
04 48 11.3295	+20 34 15.496	20	26	2452230.57500058	16.2	R	OH
04 48 11.3096	+20 34 15.496	20	26	2452230.57607373	16.2	R	OH
04 48 11.2882	+20 34 15.397	20	26	2452230.57714398	16.2	R	OH
04 48 11.2251	+20 34 15.333	20	26	2452230.58012060	16.2	R	OH
04 47 51.2874	+20 33 39.772	10	10	2452231.56556655	16.2	R	OH
04 47 51.2125	+20 33 39.653	10	10	2452231.56910544	16.2	R	OH
04 47 51.1422	+20 33 39.521	10	10	2452231.57256736	16.1	R	OH
04 47 51.0978	+20 33 39.447	10	10	2452231.57468924	16.1	R	OH
04 47 51.0543	+20 33 39.366	10	10	2452231.57680880	16.1	R	OH
04 47 51.0105	+20 33 39.290	10	10	2452231.57892558	16.1	R	OH
04 47 50.9679	+20 33 39.197	10	10	2452231.58104236	16.1	R	OH
04 47 50.9228	+20 33 39.115	10	10	2452231.58315903	16.1	R	OH
04 47 50.8806	+20 33 39.036	10	10	2452231.58528796	16.1	R	OH
04 47 50.8361	+20 33 38.951	10	10	2452231.58740671	16.1	R	OH
04 47 09.6708	+20 32 25.663	24	30	2452233.59348947	15.3	R	OH
04 47 09.5184	+20 32 25.373	24	30	2452233.60056215	16.3	R	OH
04 47 09.4834	+20 32 25.357	24	30	2452233.60239201	16.0	R	OH
04 47 09.4489	+20 32 25.282	24	30	2452233.60405417	16.1	R	OH
04 47 09.4147	+20 32 25.181	24	30	2452233.60571991	16.1	R	OH
04 47 09.3769	+20 32 25.149	24	30	2452233.60737269	16.1	R	OH
04 47 09.3066	+20 32 25.072	24	30	2452233.61084329	16.5	R	OH
04 46 53.6960	+20 31 57.105	8	12	2452234.36635856	16.1	R	OH
04 46 53.6462	+20 31 57.039	8	12	2452234.36871458	16.2	R	OH
04 46 53.5975	+20 31 56.952	8	12	2452234.37107049	16.1	R	OH
04 46 53.5470	+20 31 56.854	8	12	2452234.37342488	16.1	R	OH

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
04 46 53.4484	+20 31 56.707	8	12	2452234.37813102	16.1	R	OH
04 46 53.3987	+20 31 56.605	8	12	2452234.38048785	16.1	R	OH
04 46 53.2993	+20 31 56.451	8	12	2452234.38519630	16.2	R	OH
04 46 52.2941	+20 31 54.739	8	12	2452234.43283935	16.0	R	OH
04 46 52.2457	+20 31 54.659	8	12	2452234.43518866	16.1	R	OH
04 46 52.1961	+20 31 54.582	8	12	2452234.43753889	16.1	R	OH
04 46 52.1444	+20 31 54.497	8	12	2452234.43989745	16.1	R	OH
04 46 52.0961	+20 31 54.387	8	12	2452234.44225255	16.1	R	OH
04 46 52.0456	+20 31 54.335	8	12	2452234.44460741	16.1	R	OH
04 46 51.8967	+20 31 54.081	8	12	2452234.45166493	16.1	R	OH
04 46 32.2707	+20 31 19.169	20	8	2452235.39126030	16.1	R	OH
04 46 32.2035	+20 31 19.044	20	8	2452235.39454086	16.1	R	OH
04 46 32.1331	+20 31 18.947	20	8	2452235.39781829	16.2	R	OH
04 46 32.0617	+20 31 18.818	20	8	2452235.40109317	16.2	R	OH
04 46 31.9932	+20 31 18.710	20	8	2452235.40437674	16.2	R	OH
04 46 31.9256	+20 31 18.579	20	8	2452235.40765243	16.2	R	OH
04 46 31.8524	+20 31 18.480	20	8	2452235.41093287	16.2	R	OH
04 46 31.7866	+20 31 18.351	20	8	2452235.41420903	16.1	R	OH
04 46 31.7134	+20 31 18.223	20	8	2452235.41749016	16.2	R	OH
04 46 31.6445	+20 31 18.119	20	8	2452235.42076354	16.2	R	OH
04 46 10.3811	+20 30 40.504	34	6	2452236.43073634	16.2	R	OH
04 46 10.3060	+20 30 40.377	34	6	2452236.43401493	16.1	R	OH
04 46 10.2356	+20 30 40.252	34	6	2452236.43729664	16.2	R	OH
04 46 10.1675	+20 30 40.140	34	6	2452236.44058009	16.2	R	OH
04 46 10.0962	+20 30 40.010	34	6	2452236.44385486	16.2	R	OH
04 46 10.0312	+20 30 39.906	34	6	2452236.44713750	16.3	R	OH
04 46 09.9565	+20 30 39.777	34	6	2452236.45041551	16.2	R	OH
04 46 09.8887	+20 30 39.663	34	6	2452236.45370012	16.2	R	OH
04 45 50.1395	+20 30 04.717	16	19	2452237.38668252	16.2	R	OH
04 45 50.0842	+20 30 04.581	16	19	2452237.38938264	16.2	R	OH
04 45 50.0250	+20 30 04.501	16	19	2452237.39207685	16.2	R	OH
04 45 49.9646	+20 30 04.390	16	19	2452237.39476979	16.2	R	OH
04 45 49.7335	+20 30 04.028	16	19	2452237.40558090	16.2	R	OH
04 45 49.6752	+20 30 03.942	16	19	2452237.40828553	16.2	R	OH
04 45 49.4385	+20 30 03.516	16	19	2452237.41934780	16.1	R	OH
04 45 49.3806	+20 30 03.396	16	19	2452237.42204988	16.1	R	OH
04 45 49.3215	+20 30 03.348	16	19	2452237.42475208	16.1	R	OH
04 45 49.2636	+20 30 03.194	16	19	2452237.42745451	16.1	R	OH
04 45 49.2047	+20 30 03.098	16	19	2452237.43015579	16.1	R	OH
04 45 49.1469	+20 30 03.024	16	19	2452237.43285613	16.1	R	OH
04 45 49.0866	+20 30 02.930	16	19	2452237.43555868	16.1	R	OH
04 45 49.0320	+20 30 02.841	16	19	2452237.43826273	16.1	R	OH
04 45 48.9711	+20 30 02.741	16	19	2452237.44096262	16.1	R	OH
04 45 48.9133	+20 30 02.642	16	19	2452237.44366609	16.1	R	OH
04 36 52.0402	+20 14 32.535	23	17	2452262.34624317	16.0	R	OH
04 36 51.9392	+20 14 32.372	23	17	2452262.35087130	16.1	R	OH
04 36 51.8852	+20 14 32.312	23	17	2452262.35356551	16.0	R	OH
04 36 51.8276	+20 14 32.195	23	17	2452262.35626632	16.0	R	OH
04 36 51.7738	+20 14 32.075	23	17	2452262.35897164	16.0	R	OH
04 36 51.7171	+20 14 32.002	23	17	2452262.36167002	16.0	R	OH
04 36 51.6600	+20 14 31.901	23	17	2452262.36436944	16.1	R	OH
04 36 51.6036	+20 14 31.799	23	17	2452262.36706725	16.0	R	OH
04 36 51.5460	+20 14 31.709	23	17	2452262.36976470	16.0	R	OH
04 36 51.4897	+20 14 31.649	23	17	2452262.37246065	16.1	R	OH
04 36 51.4309	+20 14 31.570	23	17	2452262.37516285	16.0	R	OH
04 36 51.3098	+20 14 31.346	23	17	2452262.38100359	16.1	R	OH
04 36 51.2545	+20 14 31.236	23	17	2452262.38370637	16.1	R	OH
04 36 51.1946	+20 14 31.166	23	17	2452262.38640370	16.1	R	OH
04 36 51.1433	+20 14 31.080	23	17	2452262.38910394	16.2	R	OH
04 36 31.9027	+20 13 58.610	24	6	2452263.32643981	16.2	R	OH

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Phoebe

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
04 36 31.8175	+20 13 58.488	24	6	2452263.33062708	16.2	R	OH
04 36 30.5331	+20 13 56.390	24	6	2452263.39234433	16.1	R	OH
04 36 30.4744	+20 13 56.305	24	6	2452263.39504803	16.1	R	OH
04 36 30.4203	+20 13 56.212	24	6	2452263.39775752	16.1	R	OH
04 36 30.3642	+20 13 56.122	24	6	2452263.40045278	16.1	R	OH
04 36 30.3073	+20 13 56.033	24	6	2452263.40315544	16.1	R	OH
04 36 11.8217	+20 13 24.841	15	8	2452264.31243056	16.2	R	OH
04 36 11.7345	+20 13 24.722	15	8	2452264.31676956	16.2	R	OH
04 36 11.6797	+20 13 24.621	15	8	2452264.31947477	16.2	R	OH
04 36 11.6240	+20 13 24.539	15	8	2452264.32218021	16.2	R	OH
04 36 11.5679	+20 13 24.451	15	8	2452264.32487523	16.2	R	OH
04 36 11.5111	+20 13 24.361	15	8	2452264.32757512	16.3	R	OH
04 36 11.4580	+20 13 24.264	15	8	2452264.33027373	16.3	R	OH
04 36 11.4002	+20 13 24.167	15	8	2452264.33296898	16.3	R	OH
04 36 11.3453	+20 13 24.091	15	8	2452264.33566632	16.2	R	OH
04 36 11.2915	+20 13 24.000	15	8	2452264.33836204	16.3	R	OH
04 36 11.2345	+20 13 23.923	15	8	2452264.34105822	16.3	R	OH
04 35 51.6024	+20 12 51.076	26	14	2452265.31486088	16.2	R	OH
04 35 51.5416	+20 12 50.950	26	14	2452265.31782859	16.1	R	OH
04 35 51.4898	+20 12 50.865	26	14	2452265.32053137	16.2	R	OH
04 35 51.4325	+20 12 50.769	26	14	2452265.32323021	16.2	R	OH
04 35 51.3808	+20 12 50.704	26	14	2452265.32593137	16.2	R	OH
04 30 34.1172	+20 04 28.594	21	23	2452283.25438171	16.4	R	OH
04 30 34.0852	+20 04 28.509	21	23	2452283.25673565	16.3	R	OH
04 30 34.0491	+20 04 28.489	21	23	2452283.25908461	16.4	R	OH
04 30 34.0121	+20 04 28.447	21	23	2452283.26144039	16.4	R	OH
04 30 33.9772	+20 04 28.344	21	23	2452283.26379259	16.6	R	OH
04 30 33.9436	+20 04 28.338	21	23	2452283.26615058	16.4	R	OH
04 30 33.9072	+20 04 28.286	21	23	2452283.26849838	16.3	R	OH
04 30 33.8700	+20 04 28.225	21	23	2452283.27084838	16.4	R	OH
04 30 33.8360	+20 04 28.158	21	23	2452283.27320637	16.4	R	OH
04 30 33.8023	+20 04 28.097	21	23	2452283.27555880	16.5	R	OH
04 30 18.8788	+20 04 06.763	30	17	2452284.29253924	15.5	R	OH
04 30 18.8277	+20 04 06.705	30	17	2452284.29641030	16.3	R	OH
04 30 18.7908	+20 04 06.670	30	17	2452284.29876620	16.3	R	OH
04 30 18.7564	+20 04 06.615	30	17	2452284.30112049	16.3	R	OH
04 30 18.7202	+20 04 06.594	30	17	2452284.30347326	16.4	R	OH
04 30 18.6871	+20 04 06.505	30	17	2452284.30582894	16.5	R	OH
04 30 04.7969	+20 03 46.995	16	10	2452285.27872234	16.3	R	OH
04 30 04.7290	+20 03 46.934	16	10	2452285.28321354	16.4	R	OH
04 30 04.6973	+20 03 46.867	16	10	2452285.28557234	16.3	R	OH
04 30 04.6626	+20 03 46.827	16	10	2452285.28792766	16.4	R	OH
04 30 04.6292	+20 03 46.778	16	10	2452285.29027905	16.4	R	OH
04 29 51.0047	+20 03 27.903	28	13	2452286.26997755	16.4	R	OH
04 29 50.9738	+20 03 27.862	28	13	2452286.27233588	16.4	R	OH
04 29 50.9397	+20 03 27.846	28	13	2452286.27468438	16.4	R	OH
04 29 50.9105	+20 03 27.792	28	13	2452286.27703137	16.4	R	OH
05 44 19.5259	+22 06 37.642	10	14	2452621.55792824	15.8	R	OH
05 44 19.4418	+22 06 37.678	10	14	2452621.56205833	15.8	R	OH
05 44 19.4043	+22 06 37.646	10	14	2452621.56391505	15.8	R	OH
05 44 19.3708	+22 06 37.649	10	14	2452621.56557789	15.8	R	OH
05 44 19.3360	+22 06 37.654	10	14	2452621.56723148	15.9	R	OH
05 44 19.3048	+22 06 37.661	10	14	2452621.56888611	15.8	R	OH
05 43 21.5957	+22 06 38.494	51	14	2452624.45068160	15.9	R	OH
05 43 21.5249	+22 06 38.503	51	14	2452624.45419549	15.9	R	OH
05 43 21.4585	+22 06 38.509	51	14	2452624.45770324	15.9	R	OH
05 43 21.3772	+22 06 38.518	51	14	2452624.46120822	16.0	R	OH
05 43 21.3043	+22 06 38.518	51	14	2452624.46471794	15.8	R	OH
05 43 21.1644	+22 06 38.531	51	14	2452624.47174687	15.8	R	OH
05 43 21.0261	+22 06 38.489	51	14	2452624.47876655	15.9	R	OH

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Phoebe								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
05 43 20.9505	+22 06 38.504	51	14	2452624.48228032	15.9	R	OH
05 39 01.5550	+22 06 40.418	23	16	2452637.41641794	16.1	R	OH
05 39 01.4721	+22 06 40.458	23	16	2452637.42051169	16.1	R	OH
05 39 01.4237	+22 06 40.443	23	16	2452637.42286852	16.1	R	OH
05 39 01.3786	+22 06 40.468	23	16	2452637.42522558	16.1	R	OH
05 39 01.3271	+22 06 40.459	23	16	2452637.42758009	16.1	R	OH
05 39 01.2829	+22 06 40.461	23	16	2452637.42993125	16.1	R	OH
05 38 41.4065	+22 06 40.632	10	16	2452638.44318924	16.2	R	OH
05 38 41.3478	+22 06 40.655	10	16	2452638.44608773	16.1	R	OH
05 38 41.2562	+22 06 40.679	10	16	2452638.45070718	16.0	R	OH
05 38 41.1611	+22 06 40.650	10	16	2452638.45547882	16.1	R	OH
05 38 41.1015	+22 06 40.667	10	16	2452638.45852778	16.1	R	OH
05 38 41.0391	+22 06 40.676	10	16	2452638.46157176	16.1	R	OH
05 38 40.9785	+22 06 40.675	10	16	2452638.46461713	16.1	R	OH
05 30 40.9582	+22 07 39.471	12	20	2452668.34700729	16.3	R	OH
05 30 40.9295	+22 07 39.459	12	20	2452668.34936227	16.3	R	OH
05 30 40.9031	+22 07 39.508	12	20	2452668.35171192	16.3	R	OH
05 30 40.8750	+22 07 39.477	12	20	2452668.35406215	16.3	R	OH
05 30 40.5306	+22 07 39.637	12	20	2452668.38380590	16.2	R	OH
05 30 40.4784	+22 07 39.682	12	20	2452668.38844039	16.3	R	OH
05 30 40.4516	+22 07 39.680	12	20	2452668.39079664	16.3	R	OH
05 30 40.4219	+22 07 39.688	12	20	2452668.39315000	16.3	R	OH
05 30 40.3697	+22 07 39.743	12	20	2452668.39784931	16.3	R	OH
05 28 23.6905	+22 12 34.970	23	16	2452699.26298472	16.6	R	OH
05 28 23.7294	+22 12 35.222	23	16	2452699.28026979	16.3	R	OH
05 28 23.7384	+22 12 35.298	23	16	2452699.28449757	16.2	R	OH
05 28 23.7466	+22 12 35.313	23	16	2452699.28685093	16.4	R	OH
05 28 23.7481	+22 12 35.371	23	16	2452699.28919919	16.4	R	OH
05 28 23.7546	+22 12 35.358	23	16	2452699.29155197	16.4	R	OH
05 28 23.7606	+22 12 35.434	23	16	2452699.29390660	16.3	R	OH
05 32 21.3097	+22 20 36.419	15	19	2452726.31243194	16.6	R	OH
05 32 21.3785	+22 20 36.495	15	19	2452726.31726111	16.6	R	OH
05 32 21.4268	+22 20 36.548	15	19	2452726.32053657	16.5	R	OH
05 32 21.4734	+22 20 36.621	15	19	2452726.32381285	16.6	R	OH
05 32 21.5194	+22 20 36.719	15	19	2452726.32708681	16.6	R	OH
05 32 21.5668	+22 20 36.761	15	19	2452726.33036852	16.5	R	OH
05 32 21.6114	+22 20 36.784	15	19	2452726.33364282	16.6	R	OH
06 33 15.5911	+22 30 50.598	18	12	2453024.32531343	15.9	R	OH
06 33 15.0186	+22 30 51.353	18	12	2453024.35656331	15.8	R	OH
06 33 14.9757	+22 30 51.424	18	12	2453024.35891100	15.8	R	OH
06 33 14.9286	+22 30 51.453	18	12	2453024.36125880	15.9	R	OH
06 33 14.8868	+22 30 51.549	18	12	2453024.36360694	15.9	R	OH
06 33 14.8012	+22 30 51.641	18	12	2453024.36830683	15.9	R	OH
06 33 14.7579	+22 30 51.700	18	12	2453024.37065463	15.9	R	OH
06 33 14.7135	+22 30 51.765	18	12	2453024.37300243	15.8	R	OH
06 32 57.6057	+22 31 14.019	47	36	2453025.32682164	15.9	R	OH
06 32 57.4910	+22 31 14.187	47	36	2453025.33266111	15.9	R	OH
06 32 56.7929	+22 31 15.108	47	36	2453025.37177766	15.9	R	OH
06 32 56.6119	+22 31 15.413	47	36	2453025.38142708	16.0	R	OH
06 32 56.5557	+22 31 15.489	47	36	2453025.38447350	15.9	R	OH
06 32 56.5039	+22 31 15.534	47	36	2453025.38752384	15.9	R	OH
06 32 56.4502	+22 31 15.632	47	36	2453025.39056933	15.8	R	OH
06 32 56.1704	+22 31 15.984	47	36	2453025.40583368	15.8	R	OH
06 32 56.1158	+22 31 16.102	47	36	2453025.40888889	15.9	R	OH
06 32 55.8144	+22 31 16.465	47	36	2453025.42543588	15.8	R	OH
06 32 55.7572	+22 31 16.559	47	36	2453025.42848368	15.9	R	OH
06 32 55.6442	+22 31 16.684	47	36	2453025.43458438	15.7	R	OH
06 32 55.5860	+22 31 16.731	47	36	2453025.43763866	15.9	R	OH
06 32 55.4779	+22 31 16.888	47	36	2453025.44373171	15.8	R	OH
06 32 40.0079	+22 31 37.220	32	42	2453026.32060150	16.0	R	OH

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Phoebe

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
06 32 39.9139	+22 31 37.341	32	42	2453026.32599838	16.0	R	OH
06 32 38.9894	+22 31 38.612	32	42	2453026.37801308	16.0	R	OH
06 32 37.7827	+22 31 40.117	32	42	2453026.44514769	16.0	R	OH
06 32 37.6886	+22 31 40.228	32	42	2453026.45054039	16.0	R	OH
06 32 37.6406	+22 31 40.245	32	42	2453026.45324167	16.0	R	OH
06 32 37.5918	+22 31 40.377	32	42	2453026.45593681	16.0	R	OH
06 32 37.5435	+22 31 40.420	32	42	2453026.45863218	16.0	R	OH
06 32 37.4478	+22 31 40.533	32	42	2453026.46402350	16.1	R	OH
06 32 37.3505	+22 31 40.712	32	42	2453026.46941597	16.1	R	OH
06 32 37.0399	+22 31 41.148	32	42	2453026.48667060	16.0	R	OH
06 32 36.7985	+22 31 41.426	32	42	2453026.50015174	16.0	R	OH
06 32 21.7992	+22 32 01.255	13	16	2453027.36449398	15.9	R	OH
06 32 21.7639	+22 32 01.317	13	16	2453027.36661806	15.8	R	OH
06 32 21.7270	+22 32 01.332	13	16	2453027.36873542	15.8	R	OH
06 32 21.6874	+22 32 01.413	13	16	2453027.37085706	15.8	R	OH
06 32 21.6522	+22 32 01.471	13	16	2453027.37298287	15.8	R	OH
06 32 21.6138	+22 32 01.530	13	16	2453027.37510590	15.9	R	OH
06 32 21.5763	+22 32 01.541	13	16	2453027.37722685	15.8	R	OH
06 32 21.5392	+22 32 01.613	13	16	2453027.37934213	15.8	R	OH
07 54 35.4110	+20 44 17.227	24	29	2453287.79802512	16.8	V	BC
07 54 35.5435	+20 44 16.882	24	29	2453287.80923183	16.6	V	BC
07 54 35.5751	+20 44 16.789	24	29	2453287.81211678	16.5	V	BC
07 54 35.6071	+20 44 16.731	24	29	2453287.81482106	16.0	V	BC
07 54 35.7021	+20 44 16.449	24	29	2453287.82270938	16.7	V	BC
07 26 34.5298	+22 00 55.986	21	16	2453437.31752477	16.1	R	OH
07 26 34.5104	+22 00 56.010	21	16	2453437.32014259	16.4	R	OH
07 26 34.4628	+22 00 56.159	21	16	2453437.32628646	16.4	R	OH
07 26 34.4434	+22 00 56.174	21	16	2453437.32864479	16.4	R	OH
07 26 34.4278	+22 00 56.225	21	16	2453437.33099861	16.4	R	OH
07 26 34.4106	+22 00 56.278	21	16	2453437.33335532	16.3	R	OH
07 26 34.1094	+22 00 56.976	21	16	2453437.37247488	16.4	R	OH
07 26 34.0928	+22 00 57.066	21	16	2453437.37483449	16.4	R	OH
07 26 34.0741	+22 00 57.069	21	16	2453437.37719120	16.5	R	OH
07 26 27.5711	+22 01 13.882	16	9	2453438.30516042	16.4	R	OH
07 26 27.5549	+22 01 13.908	16	9	2453438.30751875	16.4	R	OH
07 26 27.5406	+22 01 13.969	16	9	2453438.30987396	16.5	R	OH
07 26 27.5223	+22 01 14.002	16	9	2453438.31223299	16.4	R	OH
07 26 27.5058	+22 01 14.057	16	9	2453438.31459201	16.4	R	OH
07 26 27.4886	+22 01 14.091	16	9	2453438.31695405	16.4	R	OH
07 26 27.4702	+22 01 14.118	16	9	2453438.31930799	16.4	R	OH
07 26 27.4368	+22 01 14.221	16	9	2453438.32402292	16.4	R	OH
07 26 20.9487	+22 01 31.215	13	30	2453439.31218437	16.4	R	OH
07 26 20.9029	+22 01 31.291	13	30	2453439.31897755	16.4	R	OH
07 26 20.8861	+22 01 31.307	13	30	2453439.32133796	16.3	R	OH
07 26 20.8703	+22 01 31.322	13	30	2453439.32369560	16.4	R	OH
07 26 20.8562	+22 01 31.396	13	30	2453439.32604734	16.4	R	OH
07 26 20.8398	+22 01 31.436	13	30	2453439.32840208	16.5	R	OH
07 26 20.8238	+22 01 31.452	13	30	2453439.33075683	16.4	R	OH
07 26 20.7928	+22 01 31.566	13	30	2453439.33547720	16.3	R	OH
07 26 20.7753	+22 01 31.545	13	30	2453439.33783252	16.4	R	OH
07 26 20.7590	+22 01 31.589	13	30	2453439.34019120	16.3	R	OH
07 26 14.9781	+22 01 46.959	9	15	2453440.29098935	16.3	R	OH
07 26 14.9507	+22 01 47.050	9	15	2453440.29516262	16.4	R	OH
07 26 14.9360	+22 01 47.059	9	15	2453440.29751968	16.4	R	OH
07 26 14.9218	+22 01 47.132	9	15	2453440.29988310	16.4	R	OH
07 26 14.8926	+22 01 47.193	9	15	2453440.30460081	16.4	R	OH
07 26 14.8780	+22 01 47.220	9	15	2453440.30696076	16.4	R	OH
07 26 14.8644	+22 01 47.246	9	15	2453440.30932141	16.4	R	OH
07 26 14.8340	+22 01 47.361	9	15	2453440.31403993	16.4	R	OH
07 26 14.8187	+22 01 47.382	9	15	2453440.31639711	16.4	R	OH

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Phoebe							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
07 26 03.3431	+22 03 29.428	27	15	2453462.37171748	16.6	R	OH
07 26 03.3533	+22 03 29.409	27	15	2453462.37506979	16.4	R	OH
07 26 03.4622	+22 03 29.261	27	15	2453462.39822315	16.5	R	OH
07 26 03.4748	+22 03 29.197	27	15	2453462.40150579	16.4	R	OH
07 26 03.4898	+22 03 29.193	27	15	2453462.40478762	16.4	R	OH
07 26 03.5064	+22 03 29.181	27	15	2453462.40806979	16.5	R	OH
07 26 03.5198	+22 03 29.154	27	15	2453462.41135301	16.5	R	OH
07 26 03.8868	+22 03 29.762	29	28	2453462.48498692	16.6	C	BC
07 26 03.8964	+22 03 29.704	29	28	2453462.48621447	16.6	C	BC
07 26 03.9025	+22 03 29.669	29	28	2453462.48745150	16.7	C	BC
07 26 03.9044	+22 03 29.720	29	28	2453462.48867836	16.5	C	BC
07 26 03.9119	+22 03 29.696	29	28	2453462.48990486	16.5	C	BC
07 26 03.9186	+22 03 29.686	29	28	2453462.49113160	16.6	C	BC
07 26 03.9234	+22 03 29.672	29	28	2453462.49235868	16.6	C	BC
07 26 03.9262	+22 03 29.715	29	28	2453462.49358611	16.5	C	BC
07 26 03.9324	+22 03 29.675	29	28	2453462.49481343	16.6	C	BC
07 26 03.9392	+22 03 29.625	29	28	2453462.49604109	16.6	C	BC
07 26 03.9452	+22 03 29.666	29	28	2453462.49782766	16.4	C	BC
07 26 03.9486	+22 03 29.638	29	28	2453462.49871736	16.6	C	BC
07 26 03.9509	+22 03 29.682	29	28	2453462.49960752	16.6	C	BC
07 26 03.9577	+22 03 29.593	29	28	2453462.50050833	16.7	C	BC
07 26 03.9620	+22 03 29.638	29	28	2453462.50140891	16.6	C	BC
07 26 03.9696	+22 03 29.619	29	28	2453462.50318750	16.6	C	BC
07 26 03.9720	+22 03 29.627	29	28	2453462.50407766	16.3	C	BC
07 26 03.9828	+22 03 29.569	29	28	2453462.50496725	16.6	C	BC
07 26 08.1845	+22 03 22.947	28	23	2453463.33131852	16.7	R	OH
07 26 08.2218	+22 03 22.850	28	23	2453463.33876076	16.6	R	OH
07 26 08.2571	+22 03 22.836	28	23	2453463.34532118	16.6	R	OH
07 26 08.2710	+22 03 22.787	28	23	2453463.34859954	16.6	R	OH
07 26 08.3136	+22 03 22.757	28	23	2453463.35618067	16.7	R	OH
07 26 08.3254	+22 03 22.672	28	23	2453463.35946227	16.6	R	OH
07 26 08.3433	+22 03 22.711	28	23	2453463.36274039	17.3	R	OH
07 26 08.3772	+22 03 22.612	28	23	2453463.37013738	16.1	R	OH
07 26 14.2839	+22 03 15.380	25	36	2453464.43245683	16.5	C	BC
07 26 14.2905	+22 03 15.367	25	36	2453464.43369398	16.5	C	BC
07 26 14.3035	+22 03 15.360	25	36	2453464.43617014	16.5	C	BC
07 26 14.3118	+22 03 15.384	25	36	2453464.43740729	16.5	C	BC
07 26 14.3181	+22 03 15.331	25	36	2453464.43864468	16.6	C	BC
07 26 14.3315	+22 03 15.282	25	36	2453464.44111875	16.5	C	BC
07 26 14.3361	+22 03 15.281	25	36	2453464.44236644	16.5	C	BC
07 26 14.3643	+22 03 15.295	25	36	2453464.44730567	16.4	C	BC
07 26 14.3869	+22 03 15.215	25	36	2453464.45116921	16.5	C	BC
07 26 14.3976	+22 03 15.209	25	36	2453464.45310081	16.5	C	BC
07 26 14.4085	+22 03 15.199	25	36	2453464.45603241	15.5	V	BC
07 26 14.4569	+22 03 15.085	25	36	2453464.46427477	16.7	V	BC
07 26 14.4678	+22 03 15.010	25	36	2453464.46674769	16.8	V	BC
07 26 14.4752	+22 03 15.012	25	36	2453464.46798484	16.7	V	BC
07 26 14.4807	+22 03 14.975	25	36	2453464.46922326	16.8	V	BC
07 26 14.4888	+22 03 14.964	25	36	2453464.47045972	16.7	V	BC
07 26 14.4950	+22 03 15.011	25	36	2453464.47170637	16.7	V	BC
07 26 14.5003	+22 03 14.937	25	36	2453464.47294352	16.7	V	BC
07 26 14.5132	+22 03 14.932	25	36	2453464.47418021	16.8	V	BC
07 26 14.5171	+22 03 14.947	25	36	2453464.47541725	16.7	V	BC
07 26 14.5852	+22 03 14.871	25	36	2453464.48757419	16.7	C	BC
07 26 14.5977	+22 03 14.854	25	36	2453464.49004988	16.7	C	BC
07 26 14.6064	+22 03 14.833	25	36	2453464.49128715	16.6	C	BC
07 26 14.6070	+22 03 14.847	25	36	2453464.49252465	16.6	C	BC
07 26 14.6184	+22 03 14.834	25	36	2453464.49376273	16.7	C	BC
07 26 14.6317	+22 03 14.774	25	36	2453464.49623877	16.6	C	BC
07 26 14.6361	+22 03 14.832	25	36	2453464.49749479	16.6	C	BC

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
07 26 14.6868	+22 03 14.672	25	36	2453464.50621528	16.7	R	BC
07 26 14.7000	+22 03 14.666	25	36	2453464.50869988	16.7	R	BC
07 26 14.7060	+22 03 14.644	25	36	2453464.50995116	16.5	R	BC
07 26 14.7161	+22 03 14.583	25	36	2453464.51120243	16.2	R	BC
07 26 20.3133	+22 03 06.558	17	46	2453465.43249861	16.7	C	BC
07 26 20.3262	+22 03 06.476	17	46	2453465.43446863	16.6	C	BC
07 26 20.3403	+22 03 06.503	17	46	2453465.43693241	16.6	C	BC
07 26 20.3482	+22 03 06.491	17	46	2453465.43817060	16.7	C	BC
07 26 20.3546	+22 03 06.427	17	46	2453465.43940856	16.7	C	BC
07 26 20.3688	+22 03 06.393	17	46	2453465.44187454	16.7	C	BC
07 26 20.3789	+22 03 06.388	17	46	2453465.44311285	16.8	C	BC
07 26 20.4274	+22 03 06.362	17	46	2453465.45180706	16.6	C	BC
07 26 20.4401	+22 03 06.306	17	46	2453465.45381725	16.6	C	BC
07 26 20.4494	+22 03 06.330	17	46	2453465.45541181	16.6	C	BC
07 26 20.4570	+22 03 06.306	17	46	2453465.45700532	16.6	C	BC
07 26 20.4693	+22 03 06.341	17	46	2453465.45858912	16.6	C	BC
07 26 20.4779	+22 03 06.255	17	46	2453465.46017373	16.6	C	BC
07 26 20.5061	+22 03 06.268	17	46	2453465.46492917	16.6	C	BC
07 26 20.5171	+22 03 06.255	17	46	2453465.46651574	16.6	C	BC
07 26 20.6205	+22 03 06.059	17	46	2453465.48418287	16.6	V	BC
07 26 20.6363	+22 03 05.916	17	46	2453465.48704537	16.6	V	BC
07 26 20.6462	+22 03 06.062	17	46	2453465.48898681	16.6	V	BC
07 26 20.6816	+22 03 05.859	17	46	2453465.49478264	16.5	V	BC
07 26 20.7146	+22 03 05.890	17	46	2453465.50057940	15.0	V	BC
07 26 32.8440	+22 02 46.342	23	16	2453467.30044653	16.5	R	OH
07 26 32.8811	+22 02 46.327	23	16	2453467.30526470	16.4	R	OH
07 26 32.9028	+22 02 46.284	23	16	2453467.30854780	16.4	R	OH
07 26 32.9257	+22 02 46.251	23	16	2453467.31183507	16.4	R	OH
07 26 32.9486	+22 02 46.207	23	16	2453467.31512176	16.4	R	OH
07 26 32.9717	+22 02 46.156	23	16	2453467.31840451	16.5	R	OH
07 26 48.2998	+22 02 21.679	16	6	2453469.32781713	16.5	R	OH
07 26 48.4071	+22 02 21.483	16	6	2453469.34110637	16.5	R	OH
07 26 48.4415	+22 02 21.420	16	6	2453469.34555116	16.5	R	OH
07 26 48.4762	+22 02 21.369	16	6	2453469.35000532	16.5	R	OH
07 26 48.5117	+22 02 21.303	16	6	2453469.35445544	16.5	R	OH
07 26 48.5457	+22 02 21.230	16	6	2453469.35890231	16.5	R	OH
07 27 24.2140	+22 01 21.430	18	9	2453473.30765660	16.6	R	OH
07 27 24.2643	+22 01 21.336	18	9	2453473.31271481	16.5	R	OH
07 27 24.3043	+22 01 21.250	18	9	2453473.31686863	16.5	R	OH
07 27 24.3376	+22 01 21.187	18	9	2453473.32014769	16.5	R	OH
07 27 24.3681	+22 01 21.143	18	9	2453473.32342743	16.5	R	OH
07 27 24.3991	+22 01 21.088	18	9	2453473.32670984	16.6	R	OH
07 27 24.4340	+22 01 21.037	18	9	2453473.32999653	16.6	R	OH
07 27 34.2984	+22 01 03.899	33	26	2453474.30047812	16.8	R	OH
07 27 34.4792	+22 01 03.648	33	26	2453474.31776667	16.5	R	OH
07 27 34.5098	+22 01 03.571	33	26	2453474.32104398	16.6	R	OH
07 27 34.5439	+22 01 03.507	33	26	2453474.32432419	16.6	R	OH
07 27 34.6097	+22 01 03.383	33	26	2453474.33088426	16.6	R	OH
07 27 34.6458	+22 01 03.316	33	26	2453474.33416262	16.6	R	OH
07 27 44.9072	+22 00 45.425	23	13	2453475.30039433	16.5	R	OH
07 27 44.9790	+22 00 45.252	23	13	2453475.30704479	16.6	R	OH
07 27 45.0154	+22 00 45.208	23	13	2453475.31032743	16.5	R	OH
07 27 45.0488	+22 00 45.135	23	13	2453475.31360579	16.5	R	OH
07 27 45.0849	+22 00 45.067	23	13	2453475.31688912	16.6	R	OH
07 27 45.1205	+22 00 45.015	23	13	2453475.32017002	16.6	R	OH
07 27 45.1554	+22 00 44.952	23	13	2453475.32344757	16.6	R	OH
07 32 46.6242	+21 51 10.386	11	34	2453495.33959421	16.6	R	OH
07 32 46.6869	+21 51 10.247	11	34	2453495.34287419	16.6	R	OH
07 32 46.7474	+21 51 10.078	11	34	2453495.34615984	16.6	R	OH
07 32 46.8101	+21 51 09.913	11	34	2453495.34944491	16.6	R	OH

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Phoebe

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
07 32 46.8714	+21 51 09.836	11	34	2453495.35273032	16.6	R	OH
07 32 46.9330	+21 51 09.662	11	34	2453495.35601157	16.7	R	OH
07 33 05.9539	+21 50 31.324	38	37	2453496.34549410	16.8	R	OH
07 33 06.0149	+21 50 31.211	38	37	2453496.34877523	16.8	R	OH
07 33 06.0867	+21 50 31.100	38	37	2453496.35205475	16.8	R	OH
07 33 06.1450	+21 50 30.945	38	37	2453496.35534097	16.8	R	OH
07 33 06.2100	+21 50 30.876	38	37	2453496.35862176	16.7	R	OH
07 33 06.2714	+21 50 30.698	38	37	2453496.36190220	16.8	R	OH
07 33 06.3347	+21 50 30.628	38	37	2453496.36518796	16.8	R	OH
07 34 05.5734	+21 48 30.003	36	23	2453499.33444456	16.8	R	OH
07 34 05.6450	+21 48 29.884	36	23	2453499.33772569	16.7	R	OH
07 34 05.7096	+21 48 29.774	36	23	2453499.34100868	16.7	R	OH
07 34 05.7751	+21 48 29.643	36	23	2453499.34429653	16.7	R	OH
07 34 05.8387	+21 48 29.476	36	23	2453499.34757731	16.8	R	OH
07 34 05.9080	+21 48 29.316	36	23	2453499.35086018	16.7	R	OH
07 34 05.9715	+21 48 29.178	36	23	2453499.35414525	16.7	R	OH
07 34 06.0386	+21 48 29.000	36	23	2453499.35743021	16.7	R	OH
07 34 06.1068	+21 48 28.894	36	23	2453499.36071562	16.7	R	OH
08 33 11.7849	+19 36 07.352	25	22	2453795.54970868	16.4	C	BC
08 33 11.7616	+19 36 07.389	25	22	2453795.55113032	16.3	C	BC
08 33 11.7129	+19 36 07.555	25	22	2453795.55398356	16.3	C	BC
08 33 11.6872	+19 36 07.687	25	22	2453795.55540301	16.3	C	BC
08 33 11.6667	+19 36 07.716	25	22	2453795.55682442	16.3	C	BC
08 33 11.6433	+19 36 07.805	25	22	2453795.55824630	16.3	C	BC
08 33 11.6188	+19 36 07.912	25	22	2453795.55967778	16.3	C	BC
08 33 11.5965	+19 36 07.975	25	22	2453795.56110926	16.2	C	BC
08 33 11.5742	+19 36 08.059	25	22	2453795.56253090	16.2	C	BC
08 30 05.8765	+19 47 32.087	15	23	2453809.45344178	16.3	C	BC
08 30 05.8392	+19 47 32.234	15	23	2453809.45671030	16.3	C	BC
08 30 05.8238	+19 47 32.280	15	23	2453809.45802593	16.3	C	BC
08 30 05.8090	+19 47 32.305	15	23	2453809.45933183	16.3	C	BC
08 30 05.7933	+19 47 32.339	15	23	2453809.46065116	16.3	C	BC
08 30 05.7790	+19 47 32.388	15	23	2453809.46195660	16.3	C	BC
08 30 05.7636	+19 47 32.486	15	23	2453809.46326273	16.3	C	BC
08 30 05.7491	+19 47 32.506	15	23	2453809.46456852	16.3	C	BC
08 30 05.7357	+19 47 32.609	15	23	2453809.46588449	16.3	C	BC
08 30 05.7195	+19 47 32.648	15	23	2453809.46719051	16.3	C	BC
09 35 11.5788	+15 42 07.581	62	28	2454148.55179468	16.6	B	PE
09 35 11.4495	+15 42 08.259	62	28	2454148.55918762	16.3	B	PE
09 35 11.4145	+15 42 08.458	62	28	2454148.56165208	16.4	B	PE
09 35 11.3588	+15 42 08.653	62	28	2454148.56416655	15.4	B	PE
09 35 11.3235	+15 42 08.869	62	28	2454148.56663079	16.3	B	PE
09 35 11.2746	+15 42 09.142	62	28	2454148.56908438	16.4	B	PE
09 35 11.2379	+15 42 09.364	62	28	2454148.57155868	16.2	B	PE
09 35 11.0530	+15 42 10.275	62	28	2454148.58197187	16.5	B	PE
09 35 11.0090	+15 42 10.530	62	28	2454148.58449641	15.9	B	PE
09 35 10.8201	+15 42 11.549	62	28	2454148.59517708	16.4	B	PE
09 35 10.7347	+15 42 11.969	62	28	2454148.60010556	16.3	B	PE
09 25 03.7831	+16 33 26.654	28	14	2454202.62106132	16.4	un	E
09 25 03.7813	+16 33 26.655	28	14	2454202.62303681	16.4	un	E
09 25 03.7691	+16 33 26.710	28	14	2454202.62705844	16.4	un	E
09 25 03.7621	+16 33 26.743	28	14	2454202.62903301	16.4	un	E
09 24 59.3280	+16 33 47.257	30	19	2454205.52976319	16.4	B	BC
09 24 59.3241	+16 33 47.277	30	19	2454205.53072176	16.4	B	BC
09 24 59.3243	+16 33 47.253	30	19	2454205.53264931	16.4	B	BC
09 24 59.3238	+16 33 47.254	30	19	2454205.53361782	16.4	B	BC
09 24 59.3215	+16 33 47.290	30	19	2454205.53457928	16.5	B	BC
09 24 59.3218	+16 33 47.254	30	19	2454205.53553796	16.4	B	BC
09 24 59.3186	+16 33 47.269	30	19	2454205.53649664	16.4	B	BC
09 24 59.3168	+16 33 47.254	30	19	2454205.53745521	16.4	B	BC

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
09 24 59.3129	+16 33 47.329	30	19	2454205.53842373	16.4	B	BC
09 24 59.3151	+16 33 47.309	30	19	2454205.54035093	16.5	B	BC
09 24 59.3166	+16 33 47.305	30	19	2454205.54130984	16.4	B	BC
09 24 59.3114	+16 33 47.314	30	19	2454205.54323738	16.5	B	BC
09 24 59.3106	+16 33 47.300	30	19	2454205.54419618	16.5	B	BC
09 24 59.3059	+16 33 47.349	30	19	2454205.54515486	16.5	B	BC
09 24 59.3104	+16 33 47.337	30	19	2454205.54611354	16.4	B	BC
09 24 59.3087	+16 33 47.323	30	19	2454205.54708218	16.4	B	BC
09 24 59.3075	+16 33 47.329	30	19	2454205.54805081	16.4	B	BC
09 24 59.3044	+16 33 47.346	30	19	2454205.54900949	16.5	B	BC
09 24 59.2985	+16 33 47.354	30	19	2454205.54996829	16.5	B	BC
09 24 59.3012	+16 33 47.338	30	19	2454205.55092743	16.5	B	BC
09 24 59.2968	+16 33 47.360	30	19	2454205.55286481	16.4	B	BC
09 24 59.3002	+16 33 47.342	30	19	2454205.55382350	16.5	B	BC
09 24 59.2982	+16 33 47.325	30	19	2454205.55478218	16.5	B	BC
09 24 59.2930	+16 33 47.363	30	19	2454205.55574074	16.5	B	BC
09 24 59.2917	+16 33 47.357	30	19	2454205.55670926	16.4	B	BC
09 24 59.2894	+16 33 47.338	30	19	2454205.55766806	16.4	B	BC
09 24 59.2883	+16 33 47.340	30	19	2454205.55862685	16.4	B	BC
09 24 59.2864	+16 33 47.363	30	19	2454205.55958542	16.5	B	BC
09 24 59.2877	+16 33 47.402	30	19	2454205.56054398	16.5	B	BC
09 24 59.2874	+16 33 47.332	30	19	2454205.56151250	16.4	B	BC
09 24 59.2853	+16 33 47.389	30	19	2454205.56247118	16.4	B	BC
09 24 59.2843	+16 33 47.369	30	19	2454205.56342986	16.4	B	BC
09 24 59.2800	+16 33 47.387	30	19	2454205.56631620	16.4	B	BC
09 24 59.2810	+16 33 47.399	30	19	2454205.56727488	16.4	B	BC
09 24 58.5719	+16 33 50.539	19	8	2454206.54875208	16.6	U	BC
09 24 58.5703	+16 33 50.542	19	8	2454206.54972060	16.6	U	BC
09 24 58.5724	+16 33 50.541	19	8	2454206.55067917	16.6	U	BC
09 24 58.5679	+16 33 50.533	19	8	2454206.55163866	16.5	U	BC
09 24 58.5677	+16 33 50.531	19	8	2454206.55355625	16.5	U	BC
09 24 58.5675	+16 33 50.528	19	8	2454206.55451493	16.6	U	BC
09 24 58.5659	+16 33 50.552	19	8	2454206.55645370	16.6	U	BC
09 24 58.5576	+16 33 50.559	19	8	2454206.56326725	16.6	U	BC
09 24 58.3380	+16 33 50.997	37	28	2454208.58265625	16.6	U	BC
09 24 58.3386	+16 33 50.973	37	31	2454208.58265625	16.7	U	Z
09 24 58.3327	+16 33 50.959	37	28	2454208.59138831	16.6	U	BC
09 24 58.3343	+16 33 50.952	37	31	2454208.59138831	16.6	U	Z
09 24 58.3343	+16 33 50.940	37	28	2454208.59223866	16.6	U	BC
09 24 58.3363	+16 33 50.941	37	31	2454208.59223866	16.6	U	Z
09 24 58.3345	+16 33 50.994	37	31	2454208.59309942	16.6	U	Z
09 24 58.3357	+16 33 50.989	37	28	2454208.59309942	16.6	U	BC
09 24 58.3311	+16 33 50.960	37	28	2454208.59395197	16.6	U	BC
09 24 58.3314	+16 33 50.959	37	31	2454208.59395197	16.6	U	Z
09 24 58.3342	+16 33 50.939	37	28	2454208.59480278	16.6	U	BC
09 24 58.3342	+16 33 50.939	37	31	2454208.59480278	16.6	U	Z
09 24 58.3350	+16 33 51.009	37	28	2454208.59565347	16.6	U	BC
09 24 58.3350	+16 33 51.010	37	31	2454208.59565347	16.6	U	Z
09 24 58.3320	+16 33 50.939	37	31	2454208.59649398	16.6	U	Z
09 24 58.3330	+16 33 50.933	37	28	2454208.59649398	16.6	U	BC
09 24 58.3297	+16 33 51.009	37	31	2454208.59734433	16.7	U	Z
09 24 58.3373	+16 33 50.957	37	28	2454208.59819491	16.6	U	BC
09 24 58.3380	+16 33 50.954	37	31	2454208.59819491	16.6	U	Z
09 24 58.3328	+16 33 50.941	37	31	2454208.59904514	16.6	U	Z
09 24 58.3340	+16 33 50.941	37	28	2454208.59904514	16.6	U	BC
09 24 58.3309	+16 33 50.944	37	28	2454208.60134132	16.6	U	BC
09 24 58.3315	+16 33 50.938	37	31	2454208.60134132	16.6	U	Z
09 24 58.3352	+16 33 50.962	37	28	2454208.60241238	16.6	U	BC
09 24 58.3353	+16 33 50.958	37	31	2454208.60241238	16.6	U	Z
09 24 58.3372	+16 33 50.888	37	28	2454208.60349375	16.6	U	BC

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
09 24 58.3386	+16 33 50.888	37	31	2454208.60349375	16.6	U	Z
09 24 58.3329	+16 33 50.961	37	28	2454208.60457535	16.5	U	BC
09 24 58.3334	+16 33 50.964	37	31	2454208.60457535	16.6	U	Z
09 24 58.3343	+16 33 50.927	37	31	2454208.60566910	16.6	U	Z
09 24 58.3395	+16 33 50.871	37	28	2454208.60566910	16.5	U	BC
09 24 58.3401	+16 33 50.902	37	28	2454208.60675081	16.6	U	BC
09 24 58.3364	+16 33 50.895	37	31	2454208.60783229	16.6	U	Z
09 24 58.3368	+16 33 50.900	37	28	2454208.60783229	16.6	U	BC
09 24 58.3374	+16 33 50.891	37	31	2454208.60890405	16.7	U	Z
09 24 58.3377	+16 33 50.904	37	28	2454208.60890405	16.7	U	BC
09 24 58.3331	+16 33 50.956	37	28	2454208.60997569	16.6	U	BC
09 24 58.3332	+16 33 50.965	37	31	2454208.60997569	16.6	U	Z
09 24 58.8283	+16 33 48.335	33	40	2454209.54749086	16.8	U	BC
09 24 58.8259	+16 33 48.392	33	40	2454209.54845278	16.7	U	BC
09 24 58.8309	+16 33 48.314	33	40	2454209.54941829	16.7	U	BC
09 24 58.8299	+16 33 48.364	33	40	2454209.55038669	16.7	U	BC
09 24 58.8293	+16 33 48.290	33	40	2454209.55134479	16.8	U	BC
09 24 58.8322	+16 33 48.375	33	40	2454209.55232234	16.7	U	BC
09 24 58.8309	+16 33 48.362	33	40	2454209.55328808	16.7	U	BC
09 24 58.8326	+16 33 48.323	33	40	2454209.56198287	16.7	U	BC
09 24 58.8373	+16 33 48.322	33	40	2454209.56294861	16.8	U	BC
09 24 58.8338	+16 33 48.358	33	40	2454209.56391435	16.7	U	BC
09 24 58.8308	+16 33 48.310	33	40	2454209.56488079	16.7	U	BC
09 24 58.8366	+16 33 48.236	33	40	2454209.56584641	16.8	U	BC
09 24 58.8340	+16 33 48.192	33	40	2454209.56902350	16.7	U	BC
09 24 58.8350	+16 33 48.253	33	40	2454209.57156354	16.4	U	BC
09 24 58.8426	+16 33 48.230	33	40	2454209.57497361	16.7	U	BC
09 24 59.6548	+16 33 44.345	26	32	2454210.44375891	16.8	U	BC
09 24 59.6568	+16 33 44.257	26	32	2454210.44442384	16.6	U	BC
09 24 59.6622	+16 33 44.279	26	32	2454210.44635718	16.6	U	BC
09 24 59.6571	+16 33 44.344	26	32	2454210.44734259	16.6	U	BC
09 24 59.6614	+16 33 44.334	26	32	2454210.44830590	16.6	U	BC
09 24 59.6621	+16 33 44.230	26	32	2454210.44926053	16.7	U	BC
09 24 59.6612	+16 33 44.241	26	32	2454210.45215278	16.6	U	BC
09 24 59.6629	+16 33 44.286	26	32	2454210.45312373	16.6	U	BC
09 24 59.6632	+16 33 44.251	26	32	2454210.45506030	16.7	U	BC
09 24 59.6670	+16 33 44.251	26	32	2454210.45602639	16.7	U	BC
09 24 59.6676	+16 33 44.232	26	32	2454210.45698264	16.6	U	BC
09 24 59.6666	+16 33 44.262	26	32	2454210.45794676	16.6	U	BC
09 24 59.6698	+16 33 44.228	26	32	2454210.45970278	16.6	U	BC
09 24 59.6674	+16 33 44.243	26	32	2454210.46066701	16.7	U	BC
09 24 59.6678	+16 33 44.285	26	32	2454210.46162187	16.7	U	BC
09 24 59.6721	+16 33 44.220	26	32	2454210.46850602	16.7	U	BC
09 24 59.6819	+16 33 44.135	26	32	2454210.48037303	16.5	U	BC
09 24 59.6821	+16 33 44.135	26	32	2454210.48122072	16.7	U	BC
09 24 59.6822	+16 33 44.133	26	32	2454210.48206910	16.7	U	BC
09 24 59.6839	+16 33 44.078	26	32	2454210.48290764	16.7	U	BC
09 24 59.6842	+16 33 44.086	26	32	2454210.48375544	16.6	U	BC
09 24 59.6833	+16 33 44.135	26	32	2454210.48460370	16.7	U	BC
09 24 59.6881	+16 33 44.128	26	32	2454210.48544132	16.7	U	BC
09 24 59.6863	+16 33 44.118	26	32	2454210.48713889	16.6	U	BC
09 24 59.6860	+16 33 44.083	26	32	2454210.48797650	16.6	U	BC
09 24 59.6900	+16 33 44.034	26	32	2454210.48882465	16.6	U	BC
09 24 59.6901	+16 33 44.054	26	32	2454210.48967211	16.6	U	BC
09 24 59.6916	+16 33 44.020	26	32	2454210.49051956	16.6	U	BC
09 24 59.6898	+16 33 44.012	26	32	2454210.49135718	16.6	U	BC
09 24 59.6886	+16 33 44.071	26	32	2454210.49220509	16.6	U	BC
09 24 59.6883	+16 33 44.046	26	32	2454210.49366794	16.6	U	BC
09 24 59.7005	+16 33 43.928	26	32	2454210.50467014	16.6	U	BC
09 24 59.7021	+16 33 43.913	26	32	2454210.50551042	16.6	U	BC

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
09 24 59.7035	+16 33 43.927	26	32	2454210.50635810	16.6	U	BC
09 24 59.7035	+16 33 43.956	26	32	2454210.50720718	16.6	U	BC
09 24 59.7028	+16 33 43.919	26	32	2454210.50806829	16.6	U	BC
09 24 59.7035	+16 33 43.934	26	32	2454210.50891933	16.6	U	BC
09 24 59.6997	+16 33 43.929	26	32	2454210.50977222	16.7	U	BC
09 24 59.7036	+16 33 43.971	26	32	2454210.51062500	16.6	U	BC
09 24 59.7072	+16 33 43.895	26	32	2454210.51147303	16.6	U	BC
09 25 06.9426	+16 33 06.730	30	4	2454214.36048160	16.2	R	OH
09 25 06.9672	+16 33 06.592	30	4	2454214.37010359	16.5	R	OH
09 25 06.9829	+16 33 06.531	30	4	2454214.37498796	16.7	I	OH
09 25 06.9962	+16 33 06.443	30	4	2454214.38087141	16.7	I	OH
09 25 07.0000	+16 33 06.408	30	4	2454214.38399421	16.4	R	OH
09 25 07.0087	+16 33 06.368	30	4	2454214.38677153	16.8	I	OH
09 25 07.0153	+16 33 06.327	30	4	2454214.38989282	16.4	R	OH
09 25 07.0249	+16 33 06.280	30	4	2454214.39266192	16.9	I	OH
10 16 39.8740	+12 31 07.533	24	28	2454611.46640359	17.1	I	BC
10 16 39.8900	+12 31 07.407	24	28	2454611.46797384	16.8	I	BC
10 16 39.9134	+12 31 07.294	24	28	2454611.47014757	16.9	I	BC
10 16 39.9319	+12 31 07.162	24	28	2454611.47246875	17.0	I	BC
10 16 39.9533	+12 31 06.970	24	28	2454611.47482928	16.9	I	BC
10 16 39.9696	+12 31 06.896	24	28	2454611.47625833	16.8	I	BC
10 16 39.9802	+12 31 06.831	24	28	2454611.47767755	16.9	I	BC
10 16 39.9918	+12 31 06.780	24	28	2454611.47868600	16.9	I	BC
10 16 40.0047	+12 31 06.677	24	28	2454611.48011516	17.0	I	BC
10 16 40.0208	+12 31 06.556	24	28	2454611.48153333	16.8	I	BC
10 16 40.0458	+12 31 06.338	24	28	2454611.48439086	17.0	I	BC
10 16 40.0726	+12 31 06.247	24	28	2454611.48723819	16.8	I	BC
10 16 40.0841	+12 31 06.109	24	28	2454611.48866748	17.0	I	BC
10 16 40.1097	+12 31 05.903	24	28	2454611.49152535	17.0	I	BC
10 16 40.1273	+12 31 05.842	24	28	2454611.49295463	17.0	I	BC
10 16 40.1412	+12 31 05.771	24	28	2454611.49438356	16.9	I	BC
10 16 40.1500	+12 31 05.722	24	28	2454611.49580243	17.0	I	BC
10 16 40.1651	+12 31 05.526	24	28	2454611.49723160	17.0	I	BC
10 16 40.1794	+12 31 05.488	24	28	2454611.49866065	16.9	I	BC
10 16 40.1925	+12 31 05.383	24	28	2454611.50008924	16.8	I	BC
10 16 40.2135	+12 31 05.268	24	28	2454611.50233669	17.0	I	BC
10 16 40.2298	+12 31 05.170	24	28	2454611.50376539	17.0	I	BC
10 16 40.2382	+12 31 05.026	24	28	2454611.50519410	17.0	I	BC
10 16 40.2525	+12 31 05.012	24	28	2454611.50662303	17.2	I	BC
10 16 59.7182	+12 29 00.885	16	28	2454613.43730891	17.2	I	BC
10 16 59.7507	+12 29 00.698	16	28	2454613.44048808	17.1	I	BC
10 16 59.8240	+12 29 00.233	16	28	2454613.44786296	17.2	I	BC
10 16 59.8443	+12 29 00.049	16	28	2454613.44987153	17.2	I	BC
10 16 59.8876	+12 28 59.797	16	28	2454613.45389884	17.2	I	BC
10 16 59.9068	+12 28 59.698	16	28	2454613.45590718	17.2	I	BC
10 16 59.9259	+12 28 59.517	16	28	2454613.45791470	17.2	I	BC
10 16 59.9457	+12 28 59.435	16	28	2454613.45993229	17.1	I	BC
10 16 59.9667	+12 28 59.305	16	28	2454613.46193970	17.2	I	BC
10 16 59.9877	+12 28 59.157	16	28	2454613.46394745	17.2	I	BC
10 17 00.0098	+12 28 58.996	16	28	2454613.46595521	17.1	I	BC
10 17 00.0284	+12 28 58.920	16	28	2454613.46796319	17.2	I	BC
10 17 00.0506	+12 28 58.775	16	28	2454613.46997141	17.2	I	BC
10 17 00.0680	+12 28 58.610	16	28	2454613.47197917	17.3	I	BC
10 17 00.0889	+12 28 58.508	16	28	2454613.47398715	17.1	I	BC
10 17 00.1081	+12 28 58.388	16	28	2454613.47599468	17.2	I	BC
10 17 00.1322	+12 28 58.245	16	28	2454613.47800289	17.3	I	BC
10 17 00.1502	+12 28 58.088	16	28	2454613.48001493	17.2	I	BC
10 17 00.1707	+12 28 57.951	16	28	2454613.48202280	17.2	I	BC
10 17 00.1913	+12 28 57.800	16	28	2454613.48402546	17.3	I	BC
10 17 10.0611	+12 27 55.364	75	22	2454614.40989850	17.2	I	BC

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Phoebe								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
10 17 10.0875	+12 27 55.195	75	22	2454614.41278553	17.1	I	BC
10 17 10.1121	+12 27 54.972	75	22	2454614.41551424	17.1	I	BC
10 17 10.1392	+12 27 54.776	75	22	2454614.41834132	17.1	I	BC
10 17 10.1650	+12 27 54.609	75	22	2454614.42108993	17.1	I	BC
10 17 10.2295	+12 27 54.242	75	22	2454614.42588738	17.2	I	BC
10 17 10.2608	+12 27 54.087	75	22	2454614.42869468	17.2	I	BC
10 17 10.2856	+12 27 53.814	75	22	2454614.43206690	17.1	I	BC
10 17 10.3336	+12 27 53.628	75	22	2454614.43576690	17.2	I	BC
10 17 10.3584	+12 27 53.428	75	22	2454614.43854479	17.2	I	BC
10 17 10.3891	+12 27 53.202	75	22	2454614.44138299	17.1	I	BC
10 17 10.4188	+12 27 53.013	75	22	2454614.44417095	17.2	I	BC
10 18 23.5493	+12 20 15.755	78	48	2454620.55612941	16.9	un	E
10 18 23.5678	+12 20 15.497	78	48	2454620.55812598	16.8	un	E
10 18 23.6371	+12 20 15.099	78	48	2454620.56375852	16.7	un	E
10 19 03.1790	+12 16 11.394	35	32	2454623.46532162	16.9	un	E
10 19 03.2020	+12 16 11.273	35	32	2454623.46685112	17.1	un	E
10 19 03.2907	+12 16 10.619	35	32	2454623.47355226	16.5	un	E
10 19 03.4111	+12 16 09.856	35	32	2454623.48235249	16.3	un	E
10 19 03.5096	+12 16 09.272	35	32	2454623.48907434	16.4	un	E
11 05 40.0935	+08 10 39.140	16	22	2454973.58254782	15.7	un	E
11 05 40.0954	+08 10 39.114	16	22	2454973.58387412	15.6	un	E
11 05 40.0973	+08 10 39.077	16	22	2454973.58503768	15.7	un	E
11 05 40.0958	+08 10 39.073	16	22	2454973.58619197	15.7	un	E
11 05 40.0986	+08 10 39.054	16	22	2454973.58734880	15.7	un	E
11 05 40.0997	+08 10 39.005	16	22	2454973.58872881	16.5	un	E
11 05 40.1010	+08 10 38.944	16	22	2454973.58987083	16.4	un	E
11 05 40.1016	+08 10 38.940	16	22	2454973.59102894	16.6	un	E
11 05 40.1016	+08 10 38.916	16	22	2454973.59218740	16.5	un	E
11 05 40.1026	+08 10 38.898	16	22	2454973.59331831	16.5	un	E
11 05 42.7025	+08 09 56.750	20	29	2454975.57925160	15.6	un	E
11 05 42.7040	+08 09 56.764	20	29	2454975.58038448	15.6	un	E
11 05 42.7077	+08 09 56.731	20	29	2454975.58154768	15.6	un	E
11 05 42.7092	+08 09 56.655	20	29	2454975.58266910	15.6	un	E
11 05 42.7121	+08 09 56.671	20	29	2454975.58380394	15.6	un	E
11 05 42.7146	+08 09 56.567	20	29	2454975.58611171	16.9	un	E
11 05 42.7179	+08 09 56.539	20	29	2454975.58726728	16.9	un	E
11 05 42.7188	+08 09 56.516	20	29	2454975.58842666	17.0	un	E
11 05 42.7200	+08 09 56.478	20	29	2454975.58958026	16.9	un	E
11 05 42.7210	+08 09 56.427	20	29	2454975.59070144	16.9	un	E
11 09 10.5644	+07 42 11.643	33	20	2455004.43529595	17.0	I	PE
11 09 10.6148	+07 42 11.262	33	20	2455004.43971065	17.0	I	PE
11 09 10.6585	+07 42 10.918	33	20	2455004.44301192	17.0	I	PE
11 09 10.6982	+07 42 10.631	33	20	2455004.44631100	17.0	I	PE
11 09 10.7379	+07 42 10.327	33	20	2455004.44960868	16.9	I	PE
11 09 10.7769	+07 42 10.042	33	20	2455004.45290637	17.0	I	PE
11 09 10.8124	+07 42 09.779	33	20	2455004.45620486	16.9	I	PE
11 09 10.8576	+07 42 09.481	33	20	2455004.45950301	17.0	I	PE
11 09 10.8999	+07 42 09.174	33	20	2455004.46280139	17.0	I	PE
11 09 10.9743	+07 42 08.544	33	20	2455004.46939757	17.0	I	PE
11 09 11.1509	+07 42 07.291	33	20	2455004.48370822	16.9	I	PE
11 09 11.2045	+07 42 06.897	33	20	2455004.48793785	17.0	I	PE
11 09 11.3321	+07 42 05.928	33	20	2455004.49841991	17.0	I	PE
11 09 11.5646	+07 42 04.172	33	20	2455004.51772060	16.9	I	PE
11 17 39.2935	+06 43 41.733	70	32	2455034.42774653	17.1	I	BC
11 17 39.3276	+06 43 41.541	70	32	2455034.42911354	16.7	I	BC
11 17 39.3558	+06 43 41.301	70	32	2455034.43063356	17.3	I	BC
11 17 39.3764	+06 43 41.109	70	32	2455034.43171829	17.2	I	BC
11 17 39.3915	+06 43 40.951	70	32	2455034.43280046	17.2	I	BC
12 16 59.5903	+00 51 19.929	51	11	2455248.64826817	16.5	C	BC
12 16 59.4740	+00 51 20.836	51	11	2455248.65780035	16.5	C	BC

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Phoebe								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
12 16 59.4583	+00 51 20.938	51	11	2455248.65899051	16.4	C	BC
12 16 59.4431	+00 51 21.021	51	11	2455248.66019051	16.5	C	BC
12 16 59.4272	+00 51 21.143	51	11	2455248.66138067	16.4	C	BC
12 16 59.4136	+00 51 21.242	51	11	2455248.66257083	16.4	C	BC
12 16 57.9014	+00 51 32.486	51	11	2455248.78395116	16.3	C	BC
12 16 57.8850	+00 51 32.579	51	11	2455248.78514132	16.5	C	BC
12 16 57.8689	+00 51 32.701	51	11	2455248.78633148	16.4	C	BC
12 16 57.8528	+00 51 32.804	51	11	2455248.78752176	16.4	C	BC
12 16 57.8454	+00 51 32.909	51	11	2455248.78871204	16.3	C	BC
12 16 57.8273	+00 51 33.051	51	11	2455248.78991215	16.3	C	BC
12 16 57.7952	+00 51 33.265	51	11	2455248.79229259	16.4	C	BC
12 16 57.7841	+00 51 33.363	51	11	2455248.79348275	16.3	C	BC
12 16 57.7359	+00 51 33.710	51	11	2455248.79706343	16.3	C	BC
12 16 57.7216	+00 51 33.786	51	11	2455248.79825359	16.4	C	BC
12 16 57.7066	+00 51 33.911	51	11	2455248.79944375	16.3	C	BC
12 16 57.6904	+00 51 34.025	51	11	2455248.80063403	16.5	C	BC
12 16 57.6038	+00 51 34.675	51	11	2455248.80781516	16.4	C	BC
12 16 57.5913	+00 51 34.792	51	11	2455248.80900544	16.2	C	BC
12 16 57.5764	+00 51 34.901	51	11	2455248.81019595	16.2	C	BC
12 16 57.5479	+00 51 35.126	51	11	2455248.81258623	16.2	C	BC
12 16 57.5315	+00 51 35.254	51	11	2455248.81377639	16.3	C	BC
12 16 57.5034	+00 51 35.465	51	11	2455248.81615671	16.2	C	BC
12 16 57.4866	+00 51 35.560	51	11	2455248.81734699	16.3	C	BC
12 16 57.4745	+00 51 35.672	51	11	2455248.81854711	16.2	C	BC
12 16 46.7221	+00 52 57.835	26	28	2455249.69897940	16.4	C	BC
12 16 46.7034	+00 52 57.906	26	28	2455249.70018449	16.4	C	BC
12 16 46.6876	+00 52 58.034	26	28	2455249.70137523	16.5	C	BC
12 16 46.6736	+00 52 58.177	26	28	2455249.70257546	16.5	C	BC
12 16 46.6598	+00 52 58.308	26	28	2455249.70377569	16.3	C	BC
12 16 46.6286	+00 52 58.484	26	28	2455249.70615613	16.3	C	BC
12 16 46.5980	+00 52 58.766	26	28	2455249.70854664	16.5	C	BC
12 16 46.5807	+00 52 58.799	26	28	2455249.70973681	16.5	C	BC
12 16 46.5541	+00 52 59.085	26	28	2455249.71211759	16.5	C	BC
12 16 46.5074	+00 52 59.404	26	28	2455249.71570833	16.3	C	BC
12 16 46.4941	+00 52 59.490	26	28	2455249.71689861	16.4	C	BC
12 16 46.4742	+00 52 59.603	26	28	2455249.71808877	16.3	C	BC
12 16 46.4614	+00 52 59.699	26	28	2455249.71928889	16.3	C	BC
12 16 46.4472	+00 52 59.858	26	28	2455249.72048889	16.5	C	BC
12 16 46.3984	+00 53 00.146	26	28	2455249.72406007	16.5	C	BC
12 16 46.3870	+00 53 00.314	26	28	2455249.72526007	16.3	C	BC
12 16 46.3547	+00 53 00.526	26	28	2455249.72764039	16.3	C	BC
12 16 46.3403	+00 53 00.648	26	28	2455249.72883056	16.4	C	BC
12 16 46.3104	+00 53 00.855	26	28	2455249.73122095	16.3	C	BC
12 16 46.2971	+00 53 00.944	26	28	2455249.73242106	16.2	C	BC
12 16 46.2350	+00 53 01.367	26	28	2455249.73686215	16.5	C	BC
12 16 46.2212	+00 53 01.533	26	28	2455249.73806250	16.3	C	BC
12 16 46.2066	+00 53 01.611	26	28	2455249.73926262	16.3	C	BC
12 16 46.1946	+00 53 01.753	26	28	2455249.74045278	16.2	C	BC
12 16 46.1594	+00 53 01.903	26	28	2455249.74283333	16.4	C	BC
12 16 46.1297	+00 53 02.128	26	28	2455249.74523368	16.3	C	BC
12 16 46.1144	+00 53 02.221	26	28	2455249.74642407	16.3	C	BC
12 16 46.1000	+00 53 02.378	26	28	2455249.74761424	16.6	C	BC
12 16 46.0851	+00 53 02.520	26	28	2455249.74880440	16.4	C	BC
12 16 46.0704	+00 53 02.592	26	28	2455249.75000463	16.2	C	BC
12 16 46.0520	+00 53 02.705	26	28	2455249.75119479	16.4	C	BC
12 16 46.0382	+00 53 02.845	26	28	2455249.75238495	16.3	C	BC
12 16 46.0257	+00 53 02.951	26	28	2455249.75357523	16.4	C	BC
12 16 46.0092	+00 53 03.063	26	28	2455249.75476563	16.3	C	BC
12 16 45.9939	+00 53 03.177	26	28	2455249.75596574	16.4	C	BC
12 16 45.9787	+00 53 03.242	26	28	2455249.75715602	16.2	C	BC

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Phoebe								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
12 16 45.9649	+00 53 03.381	26	28	2455249.75834618	16.5	C	BC
12 16 45.9507	+00 53 03.517	26	28	2455249.75953657	16.4	C	BC
12 16 45.9316	+00 53 03.609	26	28	2455249.76072836	16.3	C	BC
12 16 45.9201	+00 53 03.727	26	28	2455249.76191898	16.4	C	BC
12 16 45.9011	+00 53 03.787	26	28	2455249.76311910	16.3	C	BC
12 16 45.8874	+00 53 03.904	26	28	2455249.76430926	16.5	C	BC
12 16 45.8722	+00 53 04.072	26	28	2455249.76549942	16.4	C	BC
12 16 45.8589	+00 53 04.221	26	28	2455249.76668958	16.4	C	BC
12 16 45.8401	+00 53 04.288	26	28	2455249.76787975	16.6	C	BC
12 16 45.8244	+00 53 04.355	26	28	2455249.76907986	16.5	C	BC
12 16 45.5549	+00 53 06.374	26	28	2455249.79006944	16.4	C	BC
12 16 45.5101	+00 53 06.718	26	28	2455249.79367986	16.4	C	BC
12 16 45.4839	+00 53 06.989	26	28	2455249.79607986	16.4	C	BC
12 16 45.4513	+00 53 07.124	26	28	2455249.79846030	16.4	C	BC
12 16 45.4068	+00 53 07.485	26	28	2455249.80205069	16.6	C	BC
12 16 45.3757	+00 53 07.719	26	28	2455249.80443137	16.3	C	BC
12 16 45.2772	+00 53 08.411	26	28	2455249.81215567	16.4	C	BC
12 16 45.1272	+00 53 09.534	26	28	2455249.82408750	16.4	C	BC
12 16 33.8710	+00 54 34.959	22	18	2455250.72535903	16.3	C	BC
12 16 33.8603	+00 54 34.991	22	18	2455250.72620197	16.0	C	BC
12 16 33.7945	+00 54 35.534	22	18	2455250.73129109	16.1	C	BC
12 16 33.7831	+00 54 35.607	22	18	2455250.73214398	16.1	C	BC
12 16 33.7524	+00 54 35.796	22	18	2455250.73467373	16.2	C	BC
12 16 33.7181	+00 54 36.059	22	18	2455250.73722234	16.3	C	BC
12 16 33.6944	+00 54 36.254	22	18	2455250.73891817	16.4	C	BC
12 16 33.6610	+00 54 36.469	22	18	2455250.74145694	16.1	C	BC
12 16 33.6279	+00 54 36.687	22	18	2455250.74401655	16.0	C	BC
12 16 33.6184	+00 54 36.776	22	18	2455250.74485972	16.1	C	BC
12 16 33.6076	+00 54 36.879	22	18	2455250.74570289	16.0	C	BC
12 16 33.5830	+00 54 37.031	22	18	2455250.74739919	16.0	C	BC
12 16 33.5740	+00 54 37.092	22	18	2455250.74824213	16.2	C	BC
12 16 33.5540	+00 54 37.266	22	18	2455250.74992824	16.1	C	BC
12 16 33.3299	+00 54 38.908	22	18	2455250.76696343	16.1	C	BC
12 16 33.3099	+00 54 39.062	22	18	2455250.76865938	16.1	C	BC
12 16 33.2864	+00 54 39.234	22	18	2455250.77034595	16.1	C	BC
12 16 33.2762	+00 54 39.322	22	18	2455250.77118889	16.1	C	BC
12 16 33.2663	+00 54 39.364	22	18	2455250.77204178	16.2	C	BC
12 16 33.2427	+00 54 39.571	22	18	2455250.77372766	16.0	C	BC
12 16 33.2221	+00 54 39.733	22	18	2455250.77541481	16.1	C	BC
12 16 33.1565	+00 54 40.193	22	18	2455250.78050347	16.1	C	BC
12 16 33.1202	+00 54 40.460	22	18	2455250.78304271	16.2	C	BC
12 16 33.1107	+00 54 40.534	22	18	2455250.78388565	16.3	C	BC
12 16 33.0994	+00 54 40.613	22	18	2455250.78473843	16.1	C	BC
12 16 33.0690	+00 54 40.828	22	18	2455250.78726771	16.2	C	BC
12 16 33.0421	+00 54 41.023	22	18	2455250.78897361	16.2	C	BC
12 16 33.0326	+00 54 41.099	22	18	2455250.78981690	16.1	C	BC
12 16 33.0253	+00 54 41.156	22	18	2455250.79066088	16.1	C	BC
12 16 32.9106	+00 54 42.007	22	18	2455250.79935868	16.0	C	BC
12 16 32.8888	+00 54 42.146	22	18	2455250.80105463	16.2	C	BC
12 16 32.8761	+00 54 42.207	22	18	2455250.80189757	16.1	C	BC
12 16 32.8649	+00 54 42.313	22	18	2455250.80275046	16.3	C	BC
12 16 32.8557	+00 54 42.394	22	18	2455250.80360336	16.2	C	BC
12 16 32.8119	+00 54 42.736	22	18	2455250.80698507	16.2	C	BC
12 16 32.7949	+00 54 42.843	22	18	2455250.80825440	16.0	C	BC
12 16 32.7727	+00 54 42.998	22	18	2455250.80994028	16.1	C	BC
12 16 32.7505	+00 54 43.163	22	18	2455250.81164595	16.0	C	BC
11 59 24.1828	+02 48 44.124	27	19	2455320.42841435	16.7	C	BC
11 59 24.1607	+02 48 44.260	27	19	2455320.43056713	16.6	C	BC
11 59 24.1565	+02 48 44.300	27	19	2455320.43128472	16.7	C	BC
11 59 24.1496	+02 48 44.350	27	19	2455320.43200231	16.6	C	BC

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Phoebe

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
11 59 24.1270	+02 48 44.486	27	19	2455320.43414352	16.7	C	BC
11 59 24.1029	+02 48 44.604	27	19	2455320.43629630	16.6	C	BC
11 59 24.0933	+02 48 44.611	27	19	2455320.43700231	16.7	C	BC
11 59 24.0888	+02 48 44.713	27	19	2455320.43771991	16.6	C	BC
11 59 24.0805	+02 48 44.699	27	19	2455320.43843750	16.6	C	BC
11 59 24.0649	+02 48 44.779	27	19	2455320.43987269	16.7	C	BC
11 59 24.0554	+02 48 44.825	27	19	2455320.44057870	16.6	C	BC
11 59 24.0402	+02 48 44.937	27	19	2455320.44201389	16.8	C	BC
11 59 23.4165	+02 48 48.365	27	19	2455320.50120370	16.8	C	BC
11 59 23.4131	+02 48 48.373	27	19	2455320.50192130	16.8	C	BC
11 59 23.4079	+02 48 48.434	27	19	2455320.50263889	16.7	C	BC
11 59 23.3967	+02 48 48.463	27	19	2455320.50334491	16.8	C	BC
11 59 23.3875	+02 48 48.530	27	19	2455320.50406250	16.8	C	BC
11 59 23.3832	+02 48 48.550	27	19	2455320.50478009	16.6	C	BC
11 59 23.3721	+02 48 48.595	27	19	2455320.50549769	16.8	C	BC
11 59 23.3614	+02 48 48.669	27	19	2455320.50693287	16.7	C	BC
11 59 23.3511	+02 48 48.714	27	19	2455320.50763889	16.8	C	BC
11 59 22.7090	+02 48 52.278	27	19	2455320.56891204	16.6	C	BC
11 59 22.7001	+02 48 52.302	27	19	2455320.56962963	16.6	C	BC
11 59 22.6940	+02 48 52.361	27	19	2455320.57034722	16.7	C	BC
11 59 22.6865	+02 48 52.374	27	19	2455320.57105324	16.6	C	BC
11 59 22.6780	+02 48 52.423	27	19	2455320.57177083	16.7	C	BC
11 59 22.6743	+02 48 52.461	27	19	2455320.57248843	16.7	C	BC
11 59 22.6610	+02 48 52.523	27	19	2455320.57320602	16.6	C	BC
11 59 22.6542	+02 48 52.517	27	19	2455320.57392361	16.6	C	BC
11 59 22.6463	+02 48 52.560	27	19	2455320.57464120	16.7	C	BC
11 59 14.3784	+02 49 39.720	40	14	2455321.40833333	16.9	C	BC
11 59 14.3653	+02 49 39.766	40	14	2455321.40940972	16.9	C	BC
11 59 14.3556	+02 49 39.836	40	14	2455321.41048611	16.9	C	BC
11 59 14.3446	+02 49 39.908	40	14	2455321.41156250	16.9	C	BC
11 59 14.3341	+02 49 39.974	40	14	2455321.41263889	16.9	C	BC
11 59 14.3217	+02 49 40.006	40	14	2455321.41371528	16.9	C	BC
11 59 14.3105	+02 49 40.072	40	14	2455321.41479167	16.9	C	BC
11 59 14.2997	+02 49 40.138	40	14	2455321.41586806	16.8	C	BC
11 59 14.2889	+02 49 40.192	40	14	2455321.41694444	16.9	C	BC
11 59 14.2787	+02 49 40.262	40	14	2455321.41802083	16.9	C	BC
11 59 13.9481	+02 49 42.054	40	14	2455321.44969907	16.7	C	BC
11 59 13.9415	+02 49 42.077	40	14	2455321.45041667	16.8	C	BC
11 59 13.9354	+02 49 42.124	40	14	2455321.45112269	16.8	C	BC
11 59 13.9288	+02 49 42.171	40	14	2455321.45184028	16.7	C	BC
11 59 13.9220	+02 49 42.189	40	14	2455321.45255787	16.7	C	BC
11 59 13.9024	+02 49 42.331	40	14	2455321.45471065	16.7	C	BC
11 58 54.7384	+02 51 29.475	10	24	2455323.46001157	16.8	C	BC
11 58 54.7251	+02 51 29.579	10	24	2455323.46144676	16.7	C	BC
11 58 54.7176	+02 51 29.588	10	24	2455323.46215278	16.8	C	BC
11 58 54.7102	+02 51 29.619	10	24	2455323.46287037	16.8	C	BC
11 58 54.7036	+02 51 29.612	10	24	2455323.46358796	16.8	C	BC
11 58 54.6901	+02 51 29.700	10	24	2455323.46502315	16.8	C	BC
11 58 54.1729	+02 51 32.464	10	24	2455323.51870370	16.9	C	BC
11 58 54.1582	+02 51 32.570	10	24	2455323.52012731	16.8	C	BC
11 58 54.1532	+02 51 32.597	10	24	2455323.52084491	16.8	C	BC
11 58 54.1463	+02 51 32.597	10	24	2455323.52156250	16.7	C	BC
11 58 54.1308	+02 51 32.676	10	24	2455323.52299769	16.9	C	BC
11 58 54.1241	+02 51 32.727	10	24	2455323.52371528	16.8	C	BC
11 58 53.4302	+02 51 36.438	10	24	2455323.59612269	17.0	C	BC
11 58 53.4240	+02 51 36.491	10	24	2455323.59682870	17.0	C	BC
11 58 53.4183	+02 51 36.491	10	24	2455323.59754630	17.0	C	BC
11 58 53.4100	+02 51 36.545	10	24	2455323.59826389	17.0	C	BC
11 58 53.4025	+02 51 36.522	10	24	2455323.59898148	17.0	C	BC
11 58 53.3894	+02 51 36.653	10	24	2455323.60041667	17.0	C	BC

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Phoebe

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
11 58 53.3754	+02 51 36.678	10	24	2455323.60185185	17.1	C	BC
11 58 45.2663	+02 52 21.633	67	11	2455324.50057870	16.7	C	BC
11 58 45.2248	+02 52 21.840	67	11	2455324.50436343	16.7	C	BC
11 58 45.2173	+02 52 21.873	67	11	2455324.50531250	16.7	C	BC
11 58 45.2032	+02 52 21.941	67	11	2455324.50626157	16.8	C	BC
11 58 45.2009	+02 52 21.964	67	11	2455324.50719907	16.6	C	BC
11 58 44.1442	+02 52 27.547	67	11	2455324.62166667	16.7	C	BC
11 58 44.1277	+02 52 27.617	67	11	2455324.62273148	16.8	C	BC
11 58 44.1182	+02 52 27.707	67	11	2455324.62484954	16.9	C	BC
11 58 44.1057	+02 52 27.749	67	11	2455324.62591435	16.8	C	BC
11 58 44.0989	+02 52 27.805	67	11	2455324.62697917	16.8	C	BC
11 58 44.0880	+02 52 27.870	67	11	2455324.62804398	16.8	C	BC
11 58 44.0797	+02 52 27.920	67	11	2455324.62910880	16.9	C	BC
11 58 44.0693	+02 52 27.955	67	11	2455324.63017361	16.9	C	BC
11 58 44.0511	+02 52 27.992	67	11	2455324.63122685	16.8	C	BC
11 56 48.8122	+02 59 23.185	4	25	2455354.42980324	16.9	C	PE
11 56 48.8127	+02 59 23.177	4	25	2455354.43030093	16.9	C	PE
11 56 48.8133	+02 59 23.148	4	25	2455354.43130787	16.9	C	PE
11 56 48.8142	+02 59 23.154	4	25	2455354.43180556	16.9	C	PE
11 56 48.8150	+02 59 23.184	4	25	2455354.43280093	16.8	C	PE
11 56 48.8155	+02 59 23.108	4	25	2455354.43329861	16.9	C	PE
11 56 48.8158	+02 59 23.109	4	25	2455354.43379630	16.9	C	PE
11 56 48.8177	+02 59 23.107	4	25	2455354.43528935	16.8	C	PE
11 56 48.8185	+02 59 23.123	4	25	2455354.43578704	16.8	C	PE
11 56 48.8191	+02 59 23.079	4	25	2455354.43628472	16.8	C	PE
11 56 48.8207	+02 59 23.042	4	25	2455354.43777778	16.8	C	PE
11 56 48.8207	+02 59 23.057	4	25	2455354.43827546	16.8	C	PE
11 56 48.8210	+02 59 23.039	4	25	2455354.43878472	16.8	C	PE
11 56 48.8215	+02 59 23.001	4	25	2455354.43928241	16.8	C	PE
11 56 48.8225	+02 59 23.038	4	25	2455354.43978009	16.8	C	PE
11 56 48.8225	+02 59 23.014	4	25	2455354.44027778	16.8	C	PE
11 56 48.8232	+02 59 23.004	4	25	2455354.44077546	16.8	C	PE
11 56 48.8236	+02 59 22.993	4	25	2455354.44127315	16.8	C	PE
11 56 48.8242	+02 59 22.976	4	25	2455354.44177083	16.8	C	PE
11 56 48.8248	+02 59 22.954	4	25	2455354.44226852	16.8	C	PE
11 56 48.8252	+02 59 22.977	4	25	2455354.44276620	16.8	C	PE
11 56 48.8261	+02 59 22.948	4	25	2455354.44326389	16.8	C	PE
11 56 48.8265	+02 59 22.945	4	25	2455354.44376157	16.8	C	PE
11 56 48.8267	+02 59 22.934	4	25	2455354.44425926	16.8	C	PE
11 56 48.8269	+02 59 22.922	4	25	2455354.44475694	16.8	C	PE
11 56 48.8279	+02 59 22.897	4	25	2455354.44576389	16.8	C	PE
11 56 48.8290	+02 59 22.884	4	25	2455354.44626157	16.8	C	PE
11 56 48.8294	+02 59 22.854	4	25	2455354.44675926	16.8	C	PE
11 56 48.8326	+02 59 22.750	4	25	2455354.45024306	16.9	C	PE
11 56 48.8335	+02 59 22.798	4	25	2455354.45074074	16.8	C	PE
11 56 48.8345	+02 59 22.715	4	25	2455354.45174769	16.9	C	PE
11 56 48.8349	+02 59 22.715	4	25	2455354.45224537	16.9	C	PE
11 56 48.8355	+02 59 22.696	4	25	2455354.45274306	16.9	C	PE
11 56 48.8362	+02 59 22.684	4	25	2455354.45324074	16.9	C	PE
11 56 48.8362	+02 59 22.672	4	25	2455354.45373843	16.9	C	PE
11 57 11.1730	+02 55 16.977	14	9	2455362.44004630	16.9	I	PE
11 57 11.1767	+02 55 16.968	14	9	2455362.44076389	17.0	I	PE
11 57 11.1811	+02 55 16.915	14	9	2455362.44148148	16.9	I	PE
11 57 11.1828	+02 55 16.890	14	9	2455362.44219907	17.0	I	PE
11 57 11.1865	+02 55 16.883	14	9	2455362.44291667	17.0	I	PE
11 57 11.1875	+02 55 16.841	14	9	2455362.44363426	17.0	I	PE
11 57 11.1908	+02 55 16.806	14	9	2455362.44435185	16.9	I	PE
11 57 11.1953	+02 55 16.766	14	9	2455362.44506944	17.0	I	PE
11 57 11.1961	+02 55 16.746	14	9	2455362.44577546	16.9	I	PE
11 57 11.1997	+02 55 16.729	14	9	2455362.44649306	17.0	I	PE

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
11 57 11.2026	+02 55 16.684	14	9	2455362.44721065	17.0	I	PE
11 57 11.2038	+02 55 16.665	14	9	2455362.44792824	16.9	I	PE
11 57 11.2074	+02 55 16.634	14	9	2455362.44864583	16.9	I	PE
11 57 11.2105	+02 55 16.619	14	9	2455362.44936343	17.0	I	PE
11 57 11.2128	+02 55 16.576	14	9	2455362.45008102	17.0	I	PE
11 57 11.2150	+02 55 16.564	14	9	2455362.45079861	17.0	I	PE
11 57 11.2205	+02 55 16.503	14	9	2455362.45223380	16.9	I	PE
11 57 11.2244	+02 55 16.457	14	9	2455362.45295139	17.0	I	PE
11 57 11.2315	+02 55 16.370	14	9	2455362.45510417	17.0	I	PE
11 57 11.2359	+02 55 16.349	14	9	2455362.45581019	16.9	I	PE
11 57 11.2385	+02 55 16.330	14	9	2455362.45652778	16.9	I	PE
11 57 11.2402	+02 55 16.290	14	9	2455362.45724537	17.0	I	PE
11 57 11.2421	+02 55 16.267	14	9	2455362.45796296	16.9	I	PE
11 57 11.2530	+02 55 16.169	14	9	2455362.46011574	17.0	I	PE
11 57 11.2583	+02 55 16.113	14	9	2455362.46155093	17.0	I	PE
11 57 11.2643	+02 55 16.070	14	9	2455362.46298611	16.9	I	PE
11 57 11.2666	+02 55 16.021	14	9	2455362.46370370	16.9	I	PE
11 57 11.2703	+02 55 15.986	14	9	2455362.46442130	17.0	I	PE
11 57 11.2756	+02 55 15.949	14	9	2455362.46585648	17.0	I	PE
11 57 11.2773	+02 55 15.900	14	9	2455362.46657407	16.9	I	PE
11 57 11.2835	+02 55 15.856	14	9	2455362.46799769	16.9	I	PE
11 57 11.2840	+02 55 15.832	14	9	2455362.46871528	17.0	I	PE
11 57 11.2898	+02 55 15.806	14	9	2455362.46943287	17.0	I	PE
11 57 11.2916	+02 55 15.785	14	9	2455362.47015046	16.9	I	PE
11 57 11.2924	+02 55 15.736	14	9	2455362.47086806	17.0	I	PE
11 57 11.2989	+02 55 15.693	14	9	2455362.47230324	17.0	I	PE
11 57 11.3023	+02 55 15.652	14	9	2455362.47302083	16.9	I	PE
11 57 11.3071	+02 55 15.613	14	9	2455362.47445602	16.9	I	PE
11 57 15.7542	+02 54 33.941	4	4	2455363.48445602	16.9	R	PE
11 57 15.7578	+02 54 33.903	4	4	2455363.48540509	17.0	R	PE
11 57 15.7662	+02 54 33.821	4	4	2455363.48729167	17.0	R	PE
11 57 15.7701	+02 54 33.779	4	4	2455363.48824074	16.9	R	PE
11 57 15.7744	+02 54 33.736	4	4	2455363.48918981	17.0	R	PE
11 57 15.7784	+02 54 33.695	4	4	2455363.49013889	17.0	R	PE
11 57 15.7861	+02 54 33.611	4	4	2455363.49203704	17.0	R	PE
11 57 15.7905	+02 54 33.577	4	4	2455363.49298611	16.9	R	PE
11 57 15.7942	+02 54 33.541	4	4	2455363.49392361	17.0	R	PE
11 57 15.7987	+02 54 33.500	4	4	2455363.49487269	16.9	R	PE
11 57 15.8022	+02 54 33.464	4	4	2455363.49582176	17.0	R	PE
11 57 15.8070	+02 54 33.425	4	4	2455363.49677083	16.9	R	PE
11 57 15.8113	+02 54 33.374	4	4	2455363.49771991	17.0	R	PE
11 57 15.8236	+02 54 33.248	4	4	2455363.50056713	16.9	R	PE
11 57 15.8273	+02 54 33.220	4	4	2455363.50151620	17.0	R	PE
11 57 15.8313	+02 54 33.176	4	4	2455363.50246528	17.0	R	PE
11 57 15.8356	+02 54 33.137	4	4	2455363.50341435	16.9	R	PE
11 57 15.8399	+02 54 33.095	4	4	2455363.50435185	17.0	R	PE
11 57 25.1551	+02 53 09.022	7	4	2455365.39039352	17.0	R	PE
11 57 25.1590	+02 53 08.994	7	4	2455365.39111111	17.0	R	PE
11 57 25.1658	+02 53 08.923	7	4	2455365.39254630	17.0	R	PE
11 57 25.1690	+02 53 08.892	7	4	2455365.39326389	17.0	R	PE
11 57 25.1726	+02 53 08.855	7	4	2455365.39398148	17.0	R	PE
11 57 25.1765	+02 53 08.826	7	4	2455365.39469907	17.0	R	PE
11 57 25.1794	+02 53 08.793	7	4	2455365.39541667	17.1	R	PE
11 57 25.1839	+02 53 08.754	7	4	2455365.39613426	17.0	R	PE
11 57 25.1875	+02 53 08.716	7	4	2455365.39685185	17.0	R	PE
11 57 25.1896	+02 53 08.685	7	4	2455365.39755787	17.0	R	PE
11 57 25.1939	+02 53 08.652	7	4	2455365.39827546	17.0	R	PE
11 57 25.1977	+02 53 08.622	7	4	2455365.39899306	17.0	R	PE
11 57 25.2009	+02 53 08.585	7	4	2455365.39971065	17.0	R	PE
11 57 25.2051	+02 53 08.558	7	4	2455365.40042824	17.0	R	PE

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Phoebe

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
11 57 25.2081	+02 53 08.516	7	4	2455365.40114583	17.0	R	PE
11 57 25.2106	+02 53 08.481	7	4	2455365.40186343	17.0	R	PE
11 57 25.2157	+02 53 08.461	7	4	2455365.40258102	16.9	R	PE
11 57 25.2182	+02 53 08.429	7	4	2455365.40329861	17.0	R	PE
11 57 25.2223	+02 53 08.391	7	4	2455365.40401620	17.0	R	PE
11 57 30.7891	+02 52 19.229	8	7	2455366.43046296	16.8	R	PE
11 57 30.9301	+02 52 17.900	8	7	2455366.45726852	16.8	R	PE
11 57 30.9378	+02 52 17.835	8	7	2455366.45866898	16.9	R	PE
11 57 30.9741	+02 52 17.502	8	7	2455366.46572917	16.9	R	PE
11 57 30.9981	+02 52 17.281	8	7	2455366.46996528	16.9	R	PE
11 59 43.0465	+02 34 43.819	23	12	2455382.39825231	17.0	R	BC
11 59 43.0524	+02 34 43.750	23	12	2455382.39920139	17.1	R	BC
11 59 43.0654	+02 34 43.669	23	12	2455382.40015046	17.0	R	BC
11 59 43.0847	+02 34 43.512	23	12	2455382.40203704	17.0	R	BC
11 59 43.0964	+02 34 43.421	23	12	2455382.40298611	17.0	R	BC
11 59 43.1049	+02 34 43.371	23	12	2455382.40393519	17.0	R	BC
11 59 43.1156	+02 34 43.293	23	12	2455382.40488426	17.0	R	BC
11 59 43.1239	+02 34 43.209	23	12	2455382.40583333	17.1	R	BC
11 59 43.1323	+02 34 43.138	23	12	2455382.40678241	17.0	R	BC
11 59 43.1457	+02 34 43.041	23	12	2455382.40773148	17.0	R	BC
11 59 43.1551	+02 34 42.971	23	12	2455382.40866898	17.0	R	BC
11 59 43.1753	+02 34 42.799	23	12	2455382.41056713	17.1	R	BC
11 59 43.1861	+02 34 42.746	23	12	2455382.41151620	17.0	R	BC
11 59 43.1933	+02 34 42.656	23	12	2455382.41246528	17.0	R	BC
11 59 43.2048	+02 34 42.560	23	12	2455382.41341435	17.0	R	BC
11 59 43.2227	+02 34 42.397	23	12	2455382.41530093	16.9	R	BC
11 59 43.2324	+02 34 42.362	23	12	2455382.41625000	17.0	R	BC
11 59 43.2447	+02 34 42.255	23	12	2455382.41719907	17.0	R	BC
11 59 43.2568	+02 34 42.177	23	12	2455382.41814815	17.0	R	BC
11 59 43.2675	+02 34 42.125	23	12	2455382.41908565	17.2	R	BC
11 59 43.2833	+02 34 41.963	23	12	2455382.42098380	17.0	R	BC
11 59 43.3060	+02 34 41.783	23	12	2455382.42288194	17.0	R	BC
11 59 43.3123	+02 34 41.697	23	12	2455382.42383102	17.0	R	BC
11 59 43.3251	+02 34 41.624	23	12	2455382.42476852	17.0	R	BC
11 59 43.3341	+02 34 41.564	23	12	2455382.42571759	17.1	R	BC
11 59 55.0356	+02 33 12.868	28	19	2455383.48650463	17.2	R	BC
11 59 55.0833	+02 33 12.539	28	19	2455383.49064815	17.1	R	BC
11 59 55.0964	+02 33 12.395	28	19	2455383.49208333	17.1	R	BC
11 59 55.1133	+02 33 12.266	28	19	2455383.49350694	17.3	R	BC
11 59 55.1205	+02 33 12.238	28	19	2455383.49422454	17.1	R	BC
11 59 55.1253	+02 33 12.161	28	19	2455383.49494213	17.2	R	BC
11 59 55.1334	+02 33 12.104	28	19	2455383.49565972	17.2	R	BC
11 59 55.1468	+02 33 12.007	28	19	2455383.49637731	17.2	R	BC
11 59 55.1548	+02 33 11.961	28	19	2455383.49709491	17.2	R	BC
11 59 55.1597	+02 33 11.897	28	19	2455383.49781250	17.2	R	BC
11 59 55.1655	+02 33 11.856	28	19	2455383.49853009	17.2	R	BC
11 59 55.1830	+02 33 11.711	28	19	2455383.49996528	17.2	R	BC
11 59 55.1999	+02 33 11.577	28	19	2455383.50140046	17.2	R	BC
11 59 55.2101	+02 33 11.527	28	19	2455383.50211806	17.3	R	BC
11 59 55.2166	+02 33 11.494	28	19	2455383.50283565	17.2	R	BC
11 59 55.2225	+02 33 11.460	28	19	2455383.50355324	17.2	R	BC
11 59 55.2406	+02 33 11.327	28	19	2455383.50498843	17.2	R	BC
11 59 55.2497	+02 33 11.209	28	19	2455383.50570602	17.2	R	BC
11 59 55.2584	+02 33 11.178	28	19	2455383.50642361	17.2	R	BC
11 59 55.2653	+02 33 11.113	28	19	2455383.50714120	17.3	R	BC
11 59 55.2803	+02 33 11.008	28	19	2455383.50857639	17.2	R	BC
11 59 55.2849	+02 33 10.939	28	19	2455383.50929398	17.2	R	BC
11 59 55.2936	+02 33 10.871	28	19	2455383.51001157	17.1	R	BC
11 59 55.3038	+02 33 10.851	28	19	2455383.51072917	17.2	R	BC
12 00 06.4212	+02 31 47.121	26	27	2455384.48842593	17.1	R	BC

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
12 00 06.4768	+02 31 46.626	26	27	2455384.49340278	17.1	R	BC
12 00 06.4873	+02 31 46.559	26	27	2455384.49412037	17.2	R	BC
12 00 06.4933	+02 31 46.548	26	27	2455384.49482639	17.1	R	BC
12 00 06.4991	+02 31 46.520	26	27	2455384.49554398	17.0	R	BC
12 00 06.5132	+02 31 46.377	26	27	2455384.49626157	17.1	R	BC
12 00 06.5211	+02 31 46.353	26	27	2455384.49697917	17.1	R	BC
12 00 06.5267	+02 31 46.274	26	27	2455384.49769676	17.1	R	BC
12 00 06.5350	+02 31 46.223	26	27	2455384.49840278	17.1	R	BC
12 00 06.5453	+02 31 46.150	26	27	2455384.49912037	17.2	R	BC
12 00 06.5509	+02 31 46.084	26	27	2455384.49983796	17.2	R	BC
12 00 06.5561	+02 31 46.084	26	27	2455384.50055556	17.0	R	BC
12 00 06.5681	+02 31 45.934	26	27	2455384.50126157	17.0	R	BC
12 00 06.5734	+02 31 45.935	26	27	2455384.50197917	17.1	R	BC
12 00 06.5851	+02 31 45.829	26	27	2455384.50269676	17.1	R	BC
12 00 06.5909	+02 31 45.804	26	27	2455384.50341435	17.1	R	BC
12 00 06.6002	+02 31 45.756	26	27	2455384.50413194	17.0	R	BC
12 00 06.6172	+02 31 45.612	26	27	2455384.50555556	17.1	R	BC
12 00 06.6228	+02 31 45.539	26	27	2455384.50627315	17.1	R	BC
12 42 29.5245	-01 44 14.363	56	46	2455705.41027778	17.1	I	BC
12 42 29.5052	-01 44 14.434	56	46	2455705.41276620	15.4	I	BC
12 42 29.4916	-01 44 14.317	56	46	2455705.41491898	16.3	I	BC
12 42 29.4940	-01 44 14.320	56	46	2455705.41563657	17.0	I	BC
12 42 29.4830	-01 44 14.204	56	46	2455705.41778935	17.2	I	BC
12 42 29.4750	-01 44 14.256	56	46	2455705.41850694	17.1	I	BC
12 42 29.4514	-01 44 14.084	56	46	2455705.42208333	16.9	I	BC
12 42 29.4448	-01 44 14.026	56	46	2455705.42280093	15.9	I	BC
12 42 29.4438	-01 44 14.122	56	46	2455705.42351852	16.8	I	BC
12 42 29.3407	-01 44 13.654	56	46	2455705.43912037	17.0	I	BC
12 42 29.2679	-01 44 13.422	56	46	2455705.44885417	17.0	I	BC
12 42 29.2537	-01 44 13.332	56	46	2455705.45067130	16.9	I	BC
12 42 29.2425	-01 44 13.243	56	46	2455705.45283565	17.0	I	BC
12 42 29.1750	-01 44 13.095	56	46	2455705.46269676	17.1	I	BC
12 42 29.1772	-01 44 12.982	56	46	2455705.46341435	16.8	I	BC
12 42 29.1588	-01 44 13.085	56	46	2455705.46484954	17.0	I	BC
12 42 29.1554	-01 44 12.983	56	46	2455705.46556713	16.9	I	BC
12 42 29.1458	-01 44 13.045	56	46	2455705.46628472	16.7	I	BC
12 42 29.1257	-01 44 12.881	56	46	2455705.46986111	16.9	I	BC
12 42 29.1208	-01 44 12.851	56	46	2455705.47057870	17.1	I	BC
12 42 29.1238	-01 44 12.819	56	46	2455705.47129630	16.4	I	BC
12 42 29.1113	-01 44 12.761	56	46	2455705.47201389	15.8	I	BC
12 42 29.1032	-01 44 12.802	56	46	2455705.47273148	17.0	I	BC
12 42 29.0915	-01 44 12.789	56	46	2455705.47415509	17.0	I	BC
12 42 29.0925	-01 44 12.789	56	46	2455705.47487269	16.9	I	BC
12 42 29.0889	-01 44 12.716	56	46	2455705.47559028	16.9	I	BC
12 42 29.0807	-01 44 12.686	56	46	2455705.47630787	17.0	I	BC
12 42 29.0779	-01 44 12.759	56	46	2455705.47702546	17.0	I	BC
12 42 29.0726	-01 44 12.638	56	46	2455705.47774306	16.2	I	BC
12 41 36.2289	-01 41 56.830	20	9	2455718.46211806	16.8	I	PE
12 41 36.2253	-01 41 56.845	20	9	2455718.46548611	16.9	I	PE
12 41 36.2212	-01 41 56.855	20	9	2455718.46623843	16.8	I	PE
12 41 36.2152	-01 41 56.888	20	9	2455718.46923611	16.8	I	PE
12 41 36.1729	-01 41 56.977	20	9	2455718.48969907	16.8	I	PE
13 28 24.8415	-06 18 59.615	20	15	2456071.55311343	16.6	C	BC
13 28 24.8280	-06 18 59.489	20	15	2456071.55453704	16.6	C	BC
13 28 24.7906	-06 18 59.347	20	15	2456071.55741898	16.6	C	BC
13 28 24.7736	-06 18 59.298	20	15	2456071.55884259	16.7	C	BC
13 28 24.7596	-06 18 59.176	20	15	2456071.56026620	16.6	C	BC
13 28 24.7396	-06 18 59.145	20	15	2456071.56168982	16.7	C	BC
13 28 24.7224	-06 18 59.051	20	15	2456071.56311343	16.6	C	BC
13 28 24.6746	-06 18 58.825	20	15	2456071.56738426	16.7	C	BC

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
13 28 24.6573	-06 18 58.730	20	15	2456071.56880787	16.6	C	BC
13 28 24.6414	-06 18 58.668	20	15	2456071.57023148	16.7	C	BC
13 28 24.6234	-06 18 58.591	20	15	2456071.57165509	16.6	C	BC
13 28 24.6062	-06 18 58.484	20	15	2456071.57307870	16.8	C	BC
13 28 24.5893	-06 18 58.422	20	15	2456071.57450231	16.6	C	BC
13 28 24.5553	-06 18 58.273	20	15	2456071.57734954	16.6	C	BC
13 28 24.5196	-06 18 58.113	20	15	2456071.58019676	16.6	C	BC
13 28 24.5035	-06 18 58.049	20	15	2456071.58162037	16.7	C	BC
13 28 24.4697	-06 18 57.867	20	15	2456071.58446759	16.7	C	BC
13 28 24.4550	-06 18 57.800	20	15	2456071.58589120	16.6	C	BC
13 28 24.4345	-06 18 57.720	20	15	2456071.58731481	16.7	C	BC
13 28 24.4212	-06 18 57.638	20	15	2456071.58873843	16.6	C	BC
13 28 24.4018	-06 18 57.568	20	15	2456071.59016204	16.7	C	BC
13 28 24.3882	-06 18 57.512	20	15	2456071.59158565	16.6	C	BC
13 28 24.3691	-06 18 57.400	20	15	2456071.59300926	16.7	C	BC
13 28 24.3514	-06 18 57.368	20	15	2456071.59443287	16.6	C	BC
13 28 24.3356	-06 18 57.254	20	15	2456071.59585648	16.7	C	BC
13 28 14.8112	-06 18 12.356	58	19	2456072.43700231	16.9	I	BC
13 28 14.7851	-06 18 12.170	58	19	2456072.43984954	16.9	I	BC
13 28 14.7494	-06 18 12.059	58	19	2456072.44269676	16.9	I	BC
13 28 14.7259	-06 18 11.947	58	19	2456072.44412037	16.8	I	BC
13 28 14.6953	-06 18 11.825	58	19	2456072.44696759	16.8	I	BC
13 27 52.4753	-06 16 29.445	16	24	2456074.47720486	17.0	I	BC
13 27 52.4560	-06 16 29.403	16	24	2456074.47901042	17.0	I	BC
13 27 52.4478	-06 16 29.348	16	24	2456074.47991319	16.4	I	BC
13 27 52.4373	-06 16 29.308	16	24	2456074.48081597	17.0	I	BC
13 27 52.4140	-06 16 29.186	16	24	2456074.48262153	16.6	I	BC
13 27 52.4073	-06 16 29.171	16	24	2456074.48352431	17.0	I	BC
13 27 52.3561	-06 16 28.918	16	24	2456074.48803819	17.0	I	BC
13 27 52.3465	-06 16 28.905	16	24	2456074.48894097	16.9	I	BC
13 27 52.3386	-06 16 28.842	16	24	2456074.48984375	17.1	I	BC
13 27 52.2964	-06 16 28.716	16	24	2456074.49343750	16.6	C	BC
13 27 52.2910	-06 16 28.697	16	24	2456074.49393519	16.6	C	BC
13 27 52.2855	-06 16 28.665	16	24	2456074.49443287	16.6	C	BC
13 27 52.2808	-06 16 28.640	16	24	2456074.49493056	16.6	C	BC
13 27 52.2765	-06 16 28.609	16	24	2456074.49542824	16.7	C	BC
13 27 52.2700	-06 16 28.613	16	24	2456074.49592593	16.7	C	BC
13 27 52.2632	-06 16 28.584	16	24	2456074.49642361	16.6	C	BC
13 27 52.2579	-06 16 28.518	16	24	2456074.49692130	16.6	C	BC
13 27 52.2520	-06 16 28.504	16	24	2456074.49741898	16.6	C	BC
13 27 52.2475	-06 16 28.500	16	24	2456074.49791667	16.7	C	BC
13 27 52.2409	-06 16 28.472	16	24	2456074.49841435	16.7	C	BC
13 27 52.2368	-06 16 28.467	16	24	2456074.49891204	16.6	C	BC
13 27 52.2321	-06 16 28.435	16	24	2456074.49940972	16.7	C	BC
13 27 52.2275	-06 16 28.401	16	24	2456074.49990741	16.7	C	BC
13 27 52.2206	-06 16 28.413	16	24	2456074.50040509	16.7	C	BC
13 27 42.6177	-06 15 44.818	29	26	2456075.42040509	16.9	I	BC
13 27 42.6073	-06 15 44.751	29	26	2456075.42148148	16.8	I	BC
13 27 42.5938	-06 15 44.731	29	26	2456075.42255787	16.8	I	BC
13 27 42.5806	-06 15 44.653	29	26	2456075.42363426	16.9	I	BC
13 27 42.5706	-06 15 44.595	29	26	2456075.42471065	16.8	I	BC
13 27 42.5462	-06 15 44.521	29	26	2456075.42686343	16.8	I	BC
13 27 42.5371	-06 15 44.474	29	26	2456075.42793981	16.8	I	BC
13 27 42.5115	-06 15 44.334	29	26	2456075.43009259	16.8	I	BC
13 27 42.5011	-06 15 44.312	29	26	2456075.43116898	16.9	I	BC
13 27 42.4935	-06 15 44.318	29	26	2456075.43224537	17.0	I	BC
13 27 42.4657	-06 15 44.182	29	26	2456075.43439815	17.0	I	BC
13 27 42.4567	-06 15 44.108	29	26	2456075.43547454	16.8	I	BC
13 27 42.3859	-06 15 43.869	29	26	2456075.44203704	16.6	C	BC
13 27 42.3797	-06 15 43.818	29	26	2456075.44253472	16.6	C	BC

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Phoebe							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
13 27 42.3743	-06 15 43.812	29	26	2456075.44303241	16.6	C	BC
13 27 42.3703	-06 15 43.775	29	26	2456075.44353009	16.6	C	BC
13 27 42.3653	-06 15 43.745	29	26	2456075.44402778	16.5	C	BC
13 27 42.3593	-06 15 43.720	29	26	2456075.44452546	16.5	C	BC
13 27 42.3558	-06 15 43.694	29	26	2456075.44502315	16.6	C	BC
13 27 42.3496	-06 15 43.688	29	26	2456075.44552083	16.6	C	BC
13 27 42.3437	-06 15 43.669	29	26	2456075.44601852	16.5	C	BC
13 27 42.3401	-06 15 43.625	29	26	2456075.44651620	16.6	C	BC
13 27 42.2306	-06 15 43.190	29	26	2456075.45699074	16.6	C	BC
13 27 42.2253	-06 15 43.096	29	26	2456075.45748843	16.6	C	BC
13 27 42.2205	-06 15 43.069	29	26	2456075.45798611	16.6	C	BC
13 27 42.2147	-06 15 43.019	29	26	2456075.45848380	16.6	C	BC
13 27 32.2038	-06 14 58.399	72	27	2456076.44554398	17.1	I	BC
13 27 31.1266	-06 14 53.725	72	27	2456076.55028935	16.2	I	BC
13 27 31.0881	-06 14 53.645	72	27	2456076.55310185	16.8	I	BC
13 27 31.0549	-06 14 53.532	72	27	2456076.55591435	16.9	I	BC
13 27 31.0412	-06 14 53.363	72	27	2456076.55873843	16.4	I	BC
13 27 31.0036	-06 14 53.299	72	27	2456076.56155093	16.9	I	BC
13 27 30.9435	-06 14 53.044	72	27	2456076.56718750	16.6	I	BC
13 27 30.9152	-06 14 52.867	72	27	2456076.57000000	16.9	I	BC
13 27 30.8855	-06 14 52.792	72	27	2456076.57282407	16.8	I	BC
13 25 55.9952	-06 18 09.025	14	14	2456119.41149306	16.8	un	BC
13 25 56.0318	-06 18 09.373	14	14	2456119.41806713	16.8	un	BC
13 25 56.0359	-06 18 09.413	14	14	2456119.41913194	17.0	un	BC
13 25 56.0421	-06 18 09.495	14	14	2456119.42019676	16.8	un	BC
13 25 56.0479	-06 18 09.549	14	14	2456119.42127315	16.8	un	BC
13 25 56.0557	-06 18 09.576	14	14	2456119.42233796	16.8	un	BC
13 25 56.0648	-06 18 09.693	14	14	2456119.42447917	16.8	un	BC
13 25 56.0715	-06 18 09.736	14	14	2456119.42554398	16.7	un	BC
13 25 56.0788	-06 18 09.826	14	14	2456119.42660880	16.8	un	BC
13 25 56.0844	-06 18 09.848	14	14	2456119.42767361	16.8	un	BC
13 25 56.0894	-06 18 09.922	14	14	2456119.42875000	16.7	un	BC
13 25 56.0947	-06 18 10.002	14	14	2456119.42981482	16.9	un	BC
13 25 56.1001	-06 18 10.042	14	14	2456119.43087963	16.8	un	BC
13 25 56.1141	-06 18 10.168	14	14	2456119.43302083	16.9	un	BC
13 25 56.1204	-06 18 10.215	14	14	2456119.43408565	16.8	un	BC
13 25 56.1236	-06 18 10.284	14	14	2456119.43516204	16.8	un	BC
13 25 56.1375	-06 18 10.374	14	14	2456119.43729167	16.8	un	BC
13 27 13.8336	-06 28 56.922	19	16	2456129.50879060	16.9	R	BC
13 27 13.8555	-06 28 57.059	19	16	2456129.51072674	16.9	R	BC
13 27 13.8599	-06 28 57.081	19	16	2456129.51147308	16.9	R	BC
13 27 13.8746	-06 28 57.215	19	16	2456129.51296560	16.9	R	BC
13 27 13.8796	-06 28 57.299	19	16	2456129.51371177	16.9	R	BC
13 27 13.8878	-06 28 57.330	19	16	2456129.51445812	17.0	R	BC
13 27 13.9009	-06 28 57.437	19	16	2456129.51595064	17.0	R	BC
13 27 13.9182	-06 28 57.531	19	16	2456129.51744297	17.0	R	BC
13 27 13.9224	-06 28 57.603	19	16	2456129.51818860	16.9	R	BC
13 27 13.9508	-06 28 57.849	19	16	2456129.52117362	17.0	R	BC
13 27 13.9584	-06 28 57.891	19	16	2456129.52191980	16.9	R	BC
13 27 13.9659	-06 28 57.938	19	16	2456129.52266578	16.9	R	BC
13 27 13.9733	-06 28 57.968	19	16	2456129.52341194	17.0	R	BC
13 27 22.7610	-06 30 06.179	27	26	2456130.42500168	17.1	R	BC
13 27 22.7643	-06 30 06.283	27	26	2456130.42574785	17.0	R	BC
13 27 22.7713	-06 30 06.342	27	26	2456130.42649420	17.1	R	BC
13 27 22.7789	-06 30 06.400	27	26	2456130.42724037	17.0	R	BC
13 27 22.7844	-06 30 06.441	27	26	2456130.42798654	17.0	R	BC
13 27 22.7948	-06 30 06.504	27	26	2456130.42873307	17.1	R	BC
13 27 22.8016	-06 30 06.604	27	26	2456130.42947924	17.1	R	BC
13 27 22.8092	-06 30 06.617	27	26	2456130.43022522	17.1	R	BC
13 27 22.8198	-06 30 06.718	27	26	2456130.43171775	17.1	R	BC

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Phoebe

RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
13 27 22.8294	-06 30 06.795	27	26	2456130.43246411	17.1	R	BC
13 27 22.8345	-06 30 06.858	27	26	2456130.43321027	17.1	R	BC
13 27 22.8494	-06 30 07.008	27	26	2456130.43470243	17.4	R	BC
13 27 22.8551	-06 30 06.973	27	26	2456130.43544860	17.1	R	BC
13 27 22.8660	-06 30 07.069	27	26	2456130.43619494	17.1	R	BC
13 27 22.8750	-06 30 07.096	27	26	2456130.43694094	17.1	R	BC
13 27 22.8776	-06 30 07.213	27	26	2456130.43768711	17.1	R	BC
14 26 06.1065	-11 39 05.098	41	34	2456415.51099869	16.5	I	BC
14 26 06.0207	-11 39 04.718	41	34	2456415.51571718	16.5	I	BC
14 26 05.9434	-11 39 04.304	41	34	2456415.51957791	16.8	I	BC
14 26 05.9240	-11 39 04.181	41	34	2456415.52067583	16.6	I	BC
14 26 05.9004	-11 39 04.116	41	34	2456415.52177394	16.4	I	BC
14 26 05.8808	-11 39 03.995	41	34	2456415.52287258	15.9	I	BC
14 26 05.8421	-11 39 03.815	41	34	2456415.52506970	16.8	I	BC
14 26 05.8169	-11 39 03.706	41	34	2456415.52616835	15.5	I	BC
14 26 05.7397	-11 39 03.347	41	34	2456415.53049910	16.7	I	BC
14 26 05.6712	-11 39 03.063	41	34	2456415.53379485	16.9	I	BC
14 26 05.6344	-11 39 02.860	41	34	2456415.53599197	15.4	I	BC
14 26 05.5525	-11 39 02.355	41	34	2456415.54038638	16.7	I	BC
14 26 05.4557	-11 39 01.878	41	34	2456415.54548049	16.3	I	BC
14 26 05.3518	-11 39 01.412	41	34	2456415.55097337	16.5	I	BC
14 26 05.3059	-11 39 01.181	41	34	2456415.55317066	16.6	I	BC
14 26 04.0295	-11 38 55.028	41	34	2456415.62044458	16.3	I	BC
14 26 03.9720	-11 38 54.779	41	34	2456415.62333905	16.8	I	BC
14 26 03.9496	-11 38 54.617	41	34	2456415.62443697	16.8	I	BC
14 26 03.9362	-11 38 54.575	41	34	2456415.62553561	16.9	I	BC
14 26 03.9066	-11 38 54.475	41	34	2456415.62663426	16.9	I	BC
14 26 03.8942	-11 38 54.362	41	34	2456415.62773292	16.9	I	BC
14 26 03.8705	-11 38 54.227	41	34	2456415.62883156	16.7	I	BC
14 26 03.8424	-11 38 54.148	41	34	2456415.62993021	16.9	I	BC
14 26 03.8275	-11 38 54.095	41	34	2456415.63102885	16.6	I	BC
14 26 03.8025	-11 38 53.923	41	34	2456415.63212769	16.6	I	BC
14 26 03.7866	-11 38 53.839	41	34	2456415.63322633	16.7	I	BC
14 26 03.7638	-11 38 53.754	41	34	2456415.63432498	16.7	I	BC
14 26 03.7383	-11 38 53.598	41	34	2456415.63542381	16.8	I	BC
14 25 48.6135	-11 37 38.499	28	18	2456416.45146060	16.4	I	BC
14 25 48.5651	-11 37 38.254	28	18	2456416.45365789	16.6	I	BC
14 25 48.5498	-11 37 38.169	28	18	2456416.45475637	16.7	I	BC
14 25 48.5260	-11 37 38.067	28	18	2456416.45585501	16.6	I	BC
14 25 48.5033	-11 37 38.001	28	18	2456416.45695366	16.6	I	BC
14 25 48.4848	-11 37 37.888	28	18	2456416.45805230	16.7	I	BC
14 25 48.4671	-11 37 37.788	28	18	2456416.45915095	16.1	I	BC
14 25 48.4444	-11 37 37.698	28	18	2456416.46024941	16.7	I	BC
14 25 48.4262	-11 37 37.600	28	18	2456416.46134806	16.6	I	BC
14 25 48.4058	-11 37 37.459	28	18	2456416.46244670	16.6	I	BC
14 25 48.3619	-11 37 37.291	28	18	2456416.46464382	16.5	I	BC
14 25 48.2982	-11 37 36.989	28	18	2456416.46793958	16.8	I	BC
14 25 48.2767	-11 37 36.892	28	18	2456416.46903823	16.7	I	BC
14 25 48.2576	-11 37 36.797	28	18	2456416.47013687	16.6	I	BC
14 25 48.1416	-11 37 36.249	28	18	2456416.47633360	16.5	I	BC
14 25 48.0485	-11 37 35.785	28	18	2456416.48113907	16.7	I	BC
14 25 48.0293	-11 37 35.652	28	18	2456416.48223772	16.7	I	BC
14 25 48.0093	-11 37 35.596	28	18	2456416.48333618	16.7	I	BC
14 25 47.8816	-11 37 34.945	28	18	2456416.49008522	16.6	I	BC
14 25 47.8413	-11 37 34.762	28	18	2456416.49228251	16.8	I	BC
14 25 27.0470	-11 35 52.547	16	17	2456417.60863774	16.9	I	BC
14 25 26.9946	-11 35 52.260	16	17	2456417.61136926	16.5	I	BC
14 25 26.9555	-11 35 52.068	16	17	2456417.61356655	16.6	I	BC
14 25 26.9337	-11 35 51.960	16	17	2456417.61466520	16.8	I	BC
14 25 26.8723	-11 35 51.681	16	17	2456417.61796150	16.8	I	BC

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
14 25 26.8519	-11 35 51.549	16	17	2456417.61905997	16.7	I	BC
14 25 26.8312	-11 35 51.473	16	17	2456417.62015861	16.8	I	BC
14 25 26.7464	-11 35 51.094	16	17	2456417.62455338	16.7	I	BC
14 25 26.7251	-11 35 50.992	16	17	2456417.62565204	16.7	I	BC
14 25 26.6839	-11 35 50.761	16	17	2456417.62784933	16.7	I	BC
14 25 26.6648	-11 35 50.675	16	17	2456417.62894797	16.9	I	BC
14 25 26.6205	-11 35 50.449	16	17	2456417.63114562	16.6	I	BC
14 24 52.6425	-11 33 03.317	60	21	2456419.46847449	16.4	I	BC
14 24 52.6179	-11 33 03.167	60	21	2456419.46992145	16.8	I	BC
14 24 52.5903	-11 33 03.056	60	21	2456419.47136733	16.5	I	BC
14 24 52.5730	-11 33 02.958	60	21	2456419.47281338	17.0	I	BC
14 24 52.5356	-11 33 02.794	60	21	2456419.47425943	17.1	I	BC
14 24 52.4810	-11 33 02.577	60	21	2456419.47715172	16.8	I	BC
14 24 52.4590	-11 33 02.407	60	21	2456419.47859759	16.5	I	BC
14 24 31.8951	-11 31 22.177	42	32	2456420.59100601	16.5	I	BC
14 24 31.8753	-11 31 22.081	42	32	2456420.59210483	16.8	I	BC
14 24 31.8367	-11 31 21.825	42	32	2456420.59430248	16.7	I	BC
14 24 31.8132	-11 31 21.796	42	32	2456420.59540111	17.0	I	BC
14 24 31.7873	-11 31 21.685	42	32	2456420.59649976	16.9	I	BC
14 24 31.7672	-11 31 21.564	42	32	2456420.59759858	16.7	I	BC
14 24 31.7291	-11 31 21.419	42	32	2456420.59979586	16.8	I	BC
14 24 31.7099	-11 31 21.286	42	32	2456420.60089469	16.8	I	BC
14 24 31.6721	-11 31 21.016	42	32	2456420.60309214	15.9	I	BC
14 24 31.6447	-11 31 20.965	42	32	2456420.60419079	16.9	I	BC
14 24 12.9345	-11 29 49.688	18	31	2456421.62278197	16.2	I	BC
14 24 12.9069	-11 29 49.524	18	31	2456421.62422801	16.7	I	BC
14 24 12.8758	-11 29 49.382	18	31	2456421.62580681	17.0	I	BC
14 24 12.8583	-11 29 49.292	18	31	2456421.62690544	16.7	I	BC
14 24 12.8384	-11 29 49.267	18	31	2456421.62800427	16.8	I	BC
14 24 12.8167	-11 29 49.146	18	31	2456421.62910328	16.5	I	BC
14 24 12.7954	-11 29 49.056	18	31	2456421.63020191	16.6	I	BC
14 24 12.7738	-11 29 48.955	18	31	2456421.63130073	16.7	I	BC
14 24 12.7556	-11 29 48.814	18	31	2456421.63239956	16.8	I	BC
14 24 12.7356	-11 29 48.762	18	31	2456421.63349819	16.7	I	BC
14 23 55.1482	-11 28 23.180	22	7	2456422.59584090	16.7	I	BC
14 23 55.1293	-11 28 23.109	22	7	2456422.59676611	16.8	I	BC
14 23 55.1161	-11 28 23.013	22	7	2456422.59769132	16.8	I	BC
14 23 55.0951	-11 28 22.921	22	7	2456422.59861581	17.0	I	BC
14 23 55.0804	-11 28 22.854	22	7	2456422.59954156	16.8	I	BC
14 23 55.0288	-11 28 22.610	22	7	2456422.60231737	16.7	I	BC
14 23 55.0116	-11 28 22.526	22	7	2456422.60324547	16.8	I	BC
14 16 42.2251	-10 54 51.225	6	3	2456449.56955912	16.8	R	PE
14 16 42.2144	-10 54 51.174	6	3	2456449.57031978	16.9	R	PE
14 16 42.2042	-10 54 51.131	6	3	2456449.57108279	16.8	R	PE
14 16 42.1834	-10 54 51.047	6	3	2456449.57260501	16.8	R	PE
14 16 42.1633	-10 54 50.958	6	3	2456449.57412670	16.8	R	PE
14 16 42.1526	-10 54 50.921	6	3	2456449.57488935	16.8	R	PE
14 16 42.1427	-10 54 50.878	6	3	2456449.57565037	16.9	R	PE
14 16 42.1226	-10 54 50.784	6	3	2456449.57717152	16.9	R	PE
14 16 42.1123	-10 54 50.742	6	3	2456449.57793399	16.8	R	PE
14 16 42.0820	-10 54 50.622	6	3	2456449.58021471	16.9	R	PE
14 16 42.0724	-10 54 50.568	6	3	2456449.58097664	16.8	R	PE
14 16 42.0622	-10 54 50.524	6	3	2456449.58173694	16.9	R	PE
14 16 42.0524	-10 54 50.487	6	3	2456449.58249725	16.8	R	PE
14 16 42.0421	-10 54 50.444	6	3	2456449.58325755	16.8	R	PE
14 16 42.0324	-10 54 50.402	6	3	2456449.58401785	16.8	R	PE
14 16 42.0221	-10 54 50.359	6	3	2456449.58477796	16.8	R	PE
14 16 42.0017	-10 54 50.272	6	3	2456449.58629892	16.8	R	PE
14 16 41.9812	-10 54 50.185	6	3	2456449.58782007	16.8	R	PE
14 16 41.9502	-10 54 50.055	6	3	2456449.59010315	16.9	R	PE

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Phoebe							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
14 16 41.9402	-10 54 50.011	6	3	2456449.59086381	16.9	R	PE
14 16 41.9310	-10 54 49.967	6	3	2456449.59162465	16.9	R	PE
14 16 41.9099	-10 54 49.884	6	3	2456449.59314563	16.8	R	PE
14 16 41.9000	-10 54 49.841	6	3	2456449.59390628	16.9	R	PE
14 16 41.8798	-10 54 49.760	6	3	2456449.59542670	16.9	R	PE
14 16 41.8697	-10 54 49.715	6	3	2456449.59618701	16.8	R	PE
14 16 41.8500	-10 54 49.620	6	3	2456449.59770743	16.9	R	PE
14 16 41.8399	-10 54 49.583	6	3	2456449.59846773	16.9	R	PE
14 16 41.8191	-10 54 49.495	6	3	2456449.59998959	16.9	R	PE
14 16 41.8097	-10 54 49.459	6	3	2456449.60075027	16.9	R	PE
14 16 41.7987	-10 54 49.414	6	3	2456449.60151111	16.9	R	PE
14 16 41.7788	-10 54 49.324	6	3	2456449.60303297	16.8	R	PE
14 16 41.7683	-10 54 49.278	6	3	2456449.60379363	16.9	R	PE
14 16 41.7589	-10 54 49.241	6	3	2456449.60455466	16.8	R	PE
14 16 41.7486	-10 54 49.201	6	3	2456449.60531532	16.9	R	PE
14 16 41.7383	-10 54 49.154	6	3	2456449.60607562	16.8	R	PE
14 16 17.7061	-10 53 06.032	6	4	2456451.50251648	16.9	R	PE
14 16 17.6976	-10 53 05.993	6	4	2456451.50316194	16.8	R	PE
14 16 17.6893	-10 53 05.961	6	4	2456451.50380741	16.9	R	PE
14 16 17.6815	-10 53 05.920	6	4	2456451.50445250	16.8	R	PE
14 16 17.6644	-10 53 05.857	6	4	2456451.50574270	16.8	R	PE
14 16 17.6565	-10 53 05.828	6	4	2456451.50638834	16.9	R	PE
14 16 17.6402	-10 53 05.752	6	4	2456451.50767854	16.9	R	PE
14 16 17.6321	-10 53 05.722	6	4	2456451.50832363	16.9	R	PE
14 16 17.6232	-10 53 05.687	6	4	2456451.50896801	16.8	R	PE
14 16 17.6153	-10 53 05.654	6	4	2456451.50961311	16.9	R	PE
14 16 17.5980	-10 53 05.583	6	4	2456451.51090295	16.8	R	PE
14 16 17.5898	-10 53 05.544	6	4	2456451.51154841	16.8	R	PE
14 16 17.5829	-10 53 05.519	6	4	2456451.51219351	16.9	R	PE
14 16 17.5739	-10 53 05.481	6	4	2456451.51283897	16.8	R	PE
14 16 17.5654	-10 53 05.450	6	4	2456451.51348426	16.9	R	PE
14 16 17.5579	-10 53 05.418	6	4	2456451.51413117	16.8	R	PE
14 16 17.5495	-10 53 05.379	6	4	2456451.51477626	16.9	R	PE
14 16 17.5245	-10 53 05.271	6	4	2456451.51671120	16.9	R	PE
14 16 17.5164	-10 53 05.244	6	4	2456451.51735558	16.8	R	PE
14 16 17.4991	-10 53 05.170	6	4	2456451.51864470	16.8	R	PE
14 16 17.4917	-10 53 05.143	6	4	2456451.51928943	16.9	R	PE
14 16 17.4743	-10 53 05.072	6	4	2456451.52057891	16.9	R	PE
14 16 17.4660	-10 53 05.046	6	4	2456451.52122383	16.8	R	PE
14 16 17.4577	-10 53 05.006	6	4	2456451.52186894	16.9	R	PE
14 16 17.4496	-10 53 04.971	6	4	2456451.52251403	16.8	R	PE
14 16 17.4420	-10 53 04.941	6	4	2456451.52315913	16.9	R	PE
14 16 17.4333	-10 53 04.901	6	4	2456451.52380424	16.9	R	PE
14 16 17.4261	-10 53 04.875	6	4	2456451.52444933	16.8	R	PE
14 16 17.4167	-10 53 04.834	6	4	2456451.52509534	16.9	R	PE
14 16 17.4094	-10 53 04.802	6	4	2456451.52574061	16.9	R	PE
14 16 17.4005	-10 53 04.759	6	4	2456451.52638572	16.9	R	PE
14 16 17.3926	-10 53 04.731	6	4	2456451.52703082	16.9	R	PE
14 16 05.1974	-10 52 12.585	6	6	2456452.52385439	16.6	R	PE
14 16 05.1897	-10 52 12.561	6	6	2456452.52450256	16.6	R	PE
14 16 05.1813	-10 52 12.527	6	6	2456452.52514910	16.6	R	PE
14 16 05.1653	-10 52 12.461	6	6	2456452.52643911	16.6	R	PE
14 16 05.1572	-10 52 12.437	6	6	2456452.52708402	16.7	R	PE
14 16 05.1491	-10 52 12.396	6	6	2456452.52772912	16.7	R	PE
14 16 05.1411	-10 52 12.356	6	6	2456452.52837404	16.7	R	PE
14 16 05.1324	-10 52 12.337	6	6	2456452.52901895	16.7	R	PE
14 16 05.1248	-10 52 12.284	6	6	2456452.52966513	16.7	R	PE
14 16 05.1168	-10 52 12.264	6	6	2456452.53031023	16.7	R	PE
14 16 05.1089	-10 52 12.236	6	6	2456452.53095515	16.7	R	PE
14 16 05.0932	-10 52 12.164	6	6	2456452.53224389	16.7	R	PE

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Phoebe							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
14 16 05.0848	-10 52 12.120	6	6	2456452.53288899	16.7	R	PE
14 16 05.0772	-10 52 12.105	6	6	2456452.53353354	16.7	R	PE
14 16 05.0687	-10 52 12.067	6	6	2456452.53417955	16.6	R	PE
14 16 05.0531	-10 52 11.990	6	6	2456452.53547336	16.6	R	PE
14 16 05.0452	-10 52 11.962	6	6	2456452.53611773	16.7	R	PE
14 16 05.0370	-10 52 11.941	6	6	2456452.53676211	16.7	R	PE
14 16 05.0281	-10 52 11.897	6	6	2456452.53740648	16.7	R	PE
14 16 05.0200	-10 52 11.862	6	6	2456452.53805122	16.7	R	PE
14 16 05.0120	-10 52 11.841	6	6	2456452.53869613	16.7	R	PE
14 16 05.0040	-10 52 11.800	6	6	2456452.53934105	16.7	R	PE
14 16 04.9969	-10 52 11.760	6	6	2456452.53998887	16.7	R	PE
14 16 04.9880	-10 52 11.730	6	6	2456452.54063595	16.7	R	PE
14 16 04.9796	-10 52 11.702	6	6	2456452.54128087	16.7	R	PE
14 16 04.9717	-10 52 11.657	6	6	2456452.54192578	16.6	R	PE
14 16 04.9633	-10 52 11.627	6	6	2456452.54257088	16.7	R	PE
14 20 24.4357	-11 34 36.598	28	12	2456537.40731108	17.5	I	PE
14 20 24.4941	-11 34 36.924	28	12	2456537.41083774	17.5	I	PE
14 20 24.5103	-11 34 37.003	28	12	2456537.41158970	17.5	I	PE
14 20 24.5217	-11 34 37.090	28	12	2456537.41234148	17.5	I	PE
14 20 24.5351	-11 34 37.168	28	12	2456537.41309344	17.4	I	PE
14 20 24.5491	-11 34 37.255	28	12	2456537.41384557	17.6	I	PE
14 20 24.5702	-11 34 37.397	28	12	2456537.41534929	17.5	I	PE
14 20 24.5982	-11 34 37.572	28	12	2456537.41685321	17.5	I	PE
14 20 24.6243	-11 34 37.713	28	12	2456537.41835712	17.5	I	PE
14 20 24.6360	-11 34 37.771	28	12	2456537.41910907	17.5	I	PE
14 20 24.6531	-11 34 37.868	28	12	2456537.41986084	17.5	I	PE
14 20 24.6658	-11 34 37.954	28	12	2456537.42061280	17.5	I	PE
14 20 24.6780	-11 34 38.016	28	12	2456537.42136494	17.4	I	PE
14 20 24.6895	-11 34 38.096	28	12	2456537.42211671	17.5	I	PE
14 20 24.7011	-11 34 38.151	28	12	2456537.42286885	17.4	I	PE
14 20 24.7179	-11 34 38.251	28	12	2456537.42362062	17.5	I	PE
14 20 24.7296	-11 34 38.312	28	12	2456537.42437258	17.3	I	PE
15 01 03.3197	-14 43 17.081	3	7	2456841.40422889	17.4	I	PE
15 01 03.3054	-14 43 17.055	3	7	2456841.40631631	17.4	I	PE
15 01 03.3024	-14 43 17.061	3	7	2456841.40684013	17.3	I	PE
15 01 03.2917	-14 43 17.040	3	7	2456841.40841102	17.4	I	PE
15 01 03.2881	-14 43 17.038	3	7	2456841.40893476	17.4	I	PE
15 01 03.2848	-14 43 17.030	3	7	2456841.40945824	17.4	I	PE
15 01 03.2778	-14 43 17.026	3	7	2456841.41050554	17.3	I	PE
15 01 03.2746	-14 43 17.002	3	7	2456841.41102900	17.4	I	PE
15 01 03.2711	-14 43 17.011	3	7	2456841.41155278	17.4	I	PE
15 01 03.2636	-14 43 16.989	3	7	2456841.41260017	17.3	I	PE
15 01 03.2569	-14 43 16.993	3	7	2456841.41364726	17.4	I	PE
15 01 03.2538	-14 43 16.988	3	7	2456841.41417101	17.3	I	PE
15 01 03.2503	-14 43 16.984	3	7	2456841.41469470	17.4	I	PE
15 01 03.2462	-14 43 16.964	3	7	2456841.41521836	17.4	I	PE
15 00 56.9902	-14 43 06.351	4	18	2456842.43533892	17.0	I	PE
15 00 56.9870	-14 43 06.349	4	18	2456842.43574744	16.9	I	PE
15 00 56.9819	-14 43 06.340	4	18	2456842.43656442	17.1	I	PE
15 00 56.9741	-14 43 06.304	4	18	2456842.43778993	17.0	I	PE
15 00 56.9721	-14 43 06.295	4	18	2456842.43819833	17.0	I	PE
15 00 56.9691	-14 43 06.289	4	18	2456842.43860676	16.9	I	PE
15 00 56.9664	-14 43 06.298	4	18	2456842.43901524	17.2	I	PE
15 00 56.9645	-14 43 06.300	4	18	2456842.43942376	17.2	I	PE
15 00 56.9610	-14 43 06.314	4	18	2456842.43983225	17.0	I	PE
15 00 56.9590	-14 43 06.317	4	18	2456842.44024071	17.2	I	PE
15 00 56.9560	-14 43 06.310	4	18	2456842.44064914	17.1	I	PE
15 00 56.9513	-14 43 06.255	4	18	2456842.44146609	17.0	I	PE
15 00 56.9457	-14 43 06.255	4	18	2456842.44228294	17.0	I	PE
15 00 51.0245	-14 42 57.207	11	6	2456843.46818611	17.2	I	PE

continued ...

Phoebe							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
15 00 51.0103	-14 42 57.202	11	6	2456843.47045222	17.1	I	PE
15 00 51.0069	-14 42 57.181	11	6	2456843.47120762	17.2	I	PE
15 00 51.0024	-14 42 57.181	11	6	2456843.47196294	17.2	I	PE
15 00 50.9820	-14 42 57.167	11	6	2456843.47498465	17.2	I	PE
15 00 50.9793	-14 42 57.143	11	6	2456843.47573998	17.1	I	PE
15 00 50.9744	-14 42 57.138	11	6	2456843.47649542	17.2	I	PE
15 00 50.9656	-14 42 57.126	11	6	2456843.47800620	17.2	I	PE
15 00 50.9597	-14 42 57.114	11	6	2456843.47876142	17.2	I	PE
15 00 50.9562	-14 42 57.116	11	6	2456843.47951671	17.2	I	PE
15 00 50.9516	-14 42 57.110	11	6	2456843.48027212	17.2	I	PE
15 00 50.9464	-14 42 57.108	11	6	2456843.48102741	17.2	I	PE
15 00 50.9376	-14 42 57.096	11	6	2456843.48253811	17.2	I	PE

Table B.14. CDS data for Siarnaq.

Siarnaq							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
04 34 30.1957	+19 36 29.522	26	71	2452262.41334977	18.3	R	OH
04 34 29.5857	+19 36 28.161	26	71	2452262.44268831	17.6	R	OH
04 34 29.4158	+19 36 27.939	26	71	2452262.45103900	18.0	R	OH
04 33 51.1410	+19 35 06.532	117	99	2452264.35559525	19.7	R	OH
04 33 50.9675	+19 35 06.416	117	99	2452264.36350625	19.4	R	OH
04 33 50.8062	+19 35 06.047	117	99	2452264.37141366	18.8	R	OH
04 33 50.6410	+19 35 05.599	117	99	2452264.37932164	20.0	R	OH
04 28 22.7232	+19 24 12.999	58	50	2452283.32773183	17.6	R	OH
04 28 22.4226	+19 24 12.499	58	50	2452283.34817824	19.5	R	OH
04 28 22.2824	+19 24 12.316	58	50	2452283.35840509	18.9	R	OH
04 27 55.2080	+19 23 24.152	17	42	2452285.32418021	19.3	R	OH
04 27 55.0661	+19 23 23.976	17	42	2452285.33439919	19.7	R	OH
04 27 54.9251	+19 23 23.656	17	42	2452285.34462824	20.3	R	OH
04 27 42.5052	+19 23 01.934	77	41	2452286.28850891	19.5	R	OH
04 27 42.3565	+19 23 01.618	77	41	2452286.29873507	19.0	R	OH
04 27 41.9379	+19 23 00.945	77	41	2452286.33069688	20.0	R	OH
04 27 41.7974	+19 23 00.753	77	41	2452286.34092280	19.8	R	OH
05 34 02.7147	+21 21 00.543	100	50	2452637.47449560	19.6	R	OH
05 34 02.5420	+21 21 00.496	100	50	2452637.48239942	20.2	R	OH
05 34 02.3822	+21 21 00.597	100	50	2452637.49087083	19.7	R	OH
09 23 50.6358	+15 50 10.131	16	11	2454200.65495686	20.4	un	E
09 23 50.6235	+15 50 10.165	16	11	2454200.65689311	20.4	un	E
09 23 50.6130	+15 50 10.230	16	11	2454200.65881523	20.4	un	E
09 23 41.3763	+15 50 52.715	2	1	2454202.64806108	20.4	un	E
09 23 41.3675	+15 50 52.753	2	1	2454202.65005811	20.5	un	E
09 23 37.3659	+15 51 11.126	44	33	2454203.64949169	20.5	un	E
09 23 37.3623	+15 51 11.111	44	33	2454203.65146047	20.5	un	E
10 19 15.3918	+12 27 10.221	93	75	2454623.47355226	20.6	un	E
10 19 15.5202	+12 27 09.681	93	75	2454623.48235249	21.2	un	E
10 19 15.6218	+12 27 09.039	93	75	2454623.48907434	20.6	un	E
11 09 13.9373	+07 08 01.232	36	44	2454973.54426270	20.7	un	E
11 09 13.9417	+07 08 01.133	36	44	2454973.54562476	20.8	un	E
11 09 13.9404	+07 08 01.113	36	44	2454973.54717759	20.7	un	E
11 09 13.9421	+07 08 01.123	36	44	2454973.54831348	20.8	un	E
11 09 13.9425	+07 08 01.103	36	44	2454973.54947761	20.9	un	E
11 09 13.9433	+07 08 01.083	36	44	2454973.55063572	20.8	un	E
11 09 13.9448	+07 08 01.042	36	44	2454973.55179117	20.8	un	E
11 09 13.9425	+07 08 01.027	36	44	2454973.55295067	20.9	un	E
11 09 13.9483	+07 08 01.009	36	44	2454973.55410414	20.8	un	E
11 09 13.9454	+07 08 01.001	36	44	2454973.55522776	20.8	un	E
11 09 13.9478	+07 08 00.994	36	44	2454973.55637974	20.8	un	E
11 09 13.9471	+07 08 00.916	36	44	2454973.55753426	20.7	un	E

continued ...

Siarnaq								
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
11 09 13.9512	+07 08 00.939	36	44	2454973.55869121	20.8	un	E
11 09 13.9478	+07 08 00.868	36	44	2454973.55971679	20.8	un	E
11 09 13.9471	+07 08 00.885	36	44	2454973.56086703	20.9	un	E
11 09 13.9489	+07 08 00.813	36	44	2454973.56199064	20.5	un	E
11 09 13.9521	+07 08 00.822	36	44	2454973.56331497	20.9	un	E
11 09 13.9539	+07 08 00.722	36	44	2454973.56491329	20.8	un	E
11 09 13.9600	+07 08 00.651	36	44	2454973.56607754	20.9	un	E
11 09 13.9552	+07 08 00.637	36	44	2454973.56723090	20.8	un	E
11 09 13.9582	+07 08 00.628	36	44	2454973.56838947	20.7	un	E
11 09 13.9593	+07 08 00.626	36	44	2454973.56951193	20.7	un	E
11 09 13.9617	+07 08 00.545	36	44	2454973.57065951	20.8	un	E
11 09 13.9607	+07 08 00.548	36	44	2454973.57181484	20.8	un	E
11 09 13.9628	+07 08 00.518	36	44	2454973.57297295	21.0	un	E
11 09 13.9643	+07 08 00.453	36	44	2454973.57413130	20.7	un	E
11 09 13.9646	+07 08 00.486	36	44	2454973.57528917	20.8	un	E
11 09 13.9635	+07 08 00.463	36	44	2454973.57644590	20.5	un	E
11 09 13.9638	+07 08 00.457	36	44	2454973.57747170	20.7	un	E
11 09 13.9679	+07 08 00.419	36	44	2454973.57862275	20.7	un	E
11 09 13.9654	+07 08 00.373	36	44	2454973.57977889	20.7	un	E
11 09 13.9675	+07 08 00.373	36	44	2454973.58090239	20.6	un	E
11 09 15.1752	+07 07 38.065	27	50	2454974.58275898	20.7	un	E
11 09 15.1831	+07 07 37.948	27	50	2454974.58893446	20.7	un	E
11 09 15.1855	+07 07 37.811	27	50	2454974.59112555	20.7	un	E
11 09 15.1855	+07 07 37.815	27	50	2454974.59329083	20.2	un	E
11 09 15.1916	+07 07 37.743	27	50	2454974.59547000	20.7	un	E
11 09 15.1923	+07 07 37.732	27	50	2454974.59756895	20.7	un	E
11 09 15.1944	+07 07 37.673	27	50	2454974.59974291	20.8	un	E
11 09 15.1999	+07 07 37.550	27	50	2454974.60236264	20.8	un	E
11 09 15.1999	+07 07 37.569	27	50	2454974.60454748	19.8	un	E
11 09 15.2040	+07 07 37.388	27	50	2454974.60671484	20.7	un	E
11 09 15.2084	+07 07 37.375	27	50	2454974.60889216	20.9	un	E
11 09 15.2116	+07 07 37.319	27	50	2454974.61098949	21.0	un	E
11 09 15.2129	+07 07 37.265	27	50	2454974.61315546	20.6	un	E
11 09 15.2165	+07 07 37.163	27	50	2454974.61526229	20.9	un	E

Table B.15. CDS data for Paaliaq.

Paaliaq							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
09 23 07.6381	+17 17 31.142	38	57	2454200.61767102	21.4	un	E
09 23 07.6333	+17 17 31.175	38	57	2454200.61961804	21.6	un	E
09 23 07.6287	+17 17 31.255	38	57	2454200.62153935	21.6	un	E
09 22 59.2285	+17 17 26.025	20	50	2454203.61496694	21.7	un	E
09 22 59.2215	+17 17 26.085	20	50	2454203.61694059	21.6	un	E
10 19 22.0628	+12 40 22.518	58	5	2454623.49671373	21.9	un	E
10 19 22.1609	+12 40 21.977	58	5	2454623.50410688	20.2	un	E
11 06 49.6930	+08 18 59.568	68	76	2454973.58254782	20.1	un	E
11 06 49.7043	+08 18 59.598	68	76	2454973.58387412	21.2	un	E
11 06 49.7005	+08 18 59.630	68	76	2454973.58503768	19.3	un	E
11 06 49.7093	+08 18 59.538	68	76	2454973.58619197	19.5	un	E

Table B.16. CDS data for Albiorix.

Albiorix							
RA (ICRS)	Dec	RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
09 22 03.6006	+16 13 31.287	60	54	2454200.63963281	20.8	un	E
09 22 03.5976	+16 13 31.250	60	54	2454200.64156802	20.9	un	E
09 22 03.5882	+16 13 31.248	60	54	2454200.64352001	19.2	un	E

continued ...

Albiorix							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
09 21 54.8779	+16 14 03.608	37	8	2454202.63778831	20.8	un	E
09 21 54.8659	+16 14 03.623	37	8	2454202.63977446	19.8	un	E
09 21 51.1550	+16 14 16.882	47	59	2454203.63784898	19.4	un	E
09 21 51.1520	+16 14 16.821	47	59	2454203.63982309	20.0	un	E
11 06 57.2293	+07 27 42.583	31	12	2454971.58817050	20.4	un	E
11 06 57.2329	+07 27 42.519	31	12	2454971.59150998	20.3	un	E
11 06 57.2325	+07 27 42.493	31	12	2454971.59484449	20.5	un	E
11 06 57.2292	+07 27 42.418	31	12	2454971.59819022	19.9	un	E
11 06 57.2354	+07 27 42.342	31	12	2454971.60545836	21.1	un	E
11 06 57.2335	+07 27 42.291	31	12	2454971.60882261	20.9	un	E
11 06 57.2331	+07 27 42.213	31	12	2454971.61214716	20.6	un	E
11 06 57.2323	+07 27 42.183	31	12	2454971.61549659	21.1	un	E
11 06 57.2323	+07 27 42.137	31	12	2454971.61875585	19.2	un	E
11 06 57.6943	+07 27 27.927	13	16	2454972.56086652	19.2	un	E
11 06 57.6956	+07 27 27.879	13	16	2454972.56413412	19.4	un	E
11 06 57.6962	+07 27 27.871	13	16	2454972.56631247	20.9	un	E
11 06 57.6988	+07 27 27.719	13	16	2454972.57490981	19.3	un	E
11 06 57.7007	+07 27 27.700	13	16	2454972.57701895	20.6	un	E
11 06 57.7009	+07 27 27.656	13	16	2454972.57918585	20.7	un	E
11 06 57.7017	+07 27 27.590	13	16	2454972.58128295	21.0	un	E
11 06 57.7036	+07 27 27.557	13	16	2454972.58345645	20.1	un	E
11 06 57.7033	+07 27 27.543	13	16	2454972.58671293	20.4	un	E
11 06 57.7067	+07 27 27.439	13	16	2454972.59136818	20.7	un	E
11 06 57.7065	+07 27 27.315	13	16	2454972.59780823	20.9	un	E
11 06 57.7076	+07 27 27.289	13	16	2454972.59996841	19.6	un	E
11 06 57.7123	+07 27 27.209	13	16	2454972.60634190	20.8	un	E
11 06 59.7708	+07 26 51.058	23	38	2454974.54965837	19.1	un	E
11 06 59.7690	+07 26 50.976	23	38	2454974.55078904	20.5	un	E
11 06 59.7694	+07 26 51.047	23	38	2454974.55195387	20.8	un	E
11 06 59.7730	+07 26 51.017	23	38	2454974.55311533	20.6	un	E
11 06 59.7732	+07 26 51.021	23	38	2454974.55425238	19.3	un	E
11 06 59.7780	+07 26 50.952	23	38	2454974.55540725	20.9	un	E
11 06 59.7789	+07 26 50.965	23	38	2454974.55656177	21.0	un	E
11 06 59.7842	+07 26 50.800	23	38	2454974.56044286	20.6	un	E
11 06 59.7854	+07 26 50.805	23	38	2454974.56262006	20.5	un	E
11 06 59.7856	+07 26 50.741	23	38	2454974.56479228	20.7	un	E
11 06 59.7876	+07 26 50.661	23	38	2454974.56696936	20.7	un	E
11 06 59.7924	+07 26 50.648	23	38	2454974.56906635	20.8	un	E
11 06 59.7953	+07 26 50.582	23	38	2454974.57168850	20.6	un	E
11 06 59.7975	+07 26 50.501	23	38	2454974.57387207	20.5	un	E
11 06 59.8003	+07 26 50.436	23	38	2454974.57604835	20.4	un	E
11 06 59.8026	+07 26 50.392	23	38	2454974.57823193	20.7	un	E
11 06 59.8028	+07 26 50.396	23	38	2454974.58033515	20.6	un	E

Table B.17. CDS data for Sycorax.

Sycorax							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
23 12 02.5426	-06 06 14.176	8	18	2454351.66442231	20.3	un	E
23 12 02.5235	-06 06 14.270	8	18	2454351.66656219	20.4	un	E
23 11 51.8474	-06 07 18.713	34	9	2454352.82709348	20.6	un	E
23 11 51.8320	-06 07 18.837	34	9	2454352.82910765	20.6	un	E
23 07 33.3351	-06 32 44.822	12	58	2454382.69246494	21.3	un	E
23 07 33.3188	-06 32 44.849	12	58	2454382.69474309	20.4	un	E
23 07 33.3003	-06 32 45.050	12	58	2454382.69700759	18.9	un	E
23 07 33.2837	-06 32 45.089	12	58	2454382.69930994	20.7	un	E
23 07 33.2649	-06 32 45.292	12	58	2454382.70150832	19.6	un	E
23 07 26.0935	-06 33 26.046	23	22	2454383.65130210	20.6	un	E

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Sycorax							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
23 07 26.0755	-06 33 26.116	23	22	2454383.65358443	20.6	un	E
23 07 25.9146	-06 33 27.043	23	22	2454383.67494812	20.5	un	E
23 07 25.8973	-06 33 27.176	23	22	2454383.67722523	20.3	un	E
23 07 17.7773	-06 34 12.785	94	32	2454384.76428913	21.2	un	E
23 07 17.7179	-06 34 13.212	94	32	2454384.77349947	19.1	un	E
23 07 17.6513	-06 34 13.454	94	32	2454384.78084663	20.9	un	E
23 07 11.0699	-06 34 50.977	107	76	2454385.68083510	21.2	un	E
23 07 11.0571	-06 34 51.077	107	76	2454385.68313099	20.7	un	E
23 07 11.0554	-06 34 51.336	107	76	2454385.68534755	20.5	un	E
23 07 11.0071	-06 34 51.380	107	76	2454385.69050200	20.6	un	E
23 07 10.9754	-06 34 51.653	107	76	2454385.69504049	18.9	un	E
23 07 04.0954	-06 35 30.483	19	24	2454386.64997998	20.5	un	E
23 07 04.0752	-06 35 30.590	19	24	2454386.65284238	20.5	un	E
23 07 04.0523	-06 35 30.715	19	24	2454386.65568881	20.4	un	E
23 07 04.0305	-06 35 30.802	19	24	2454386.65856962	20.5	un	E
23 07 04.0132	-06 35 30.928	19	24	2454386.66136834	20.5	un	E
23 07 03.9884	-06 35 31.090	19	24	2454386.66460866	20.4	un	E
23 07 03.9662	-06 35 31.193	19	24	2454386.66746724	20.5	un	E
23 07 03.9472	-06 35 31.355	19	24	2454386.67031436	20.4	un	E
23 07 03.9268	-06 35 31.415	19	24	2454386.67329775	20.5	un	E
23 07 03.9052	-06 35 31.569	19	24	2454386.67607539	20.5	un	E
23 33 20.8117	-03 37 42.260	123	61	2454621.93967646	20.5	un	E
23 33 20.8618	-03 37 42.110	123	61	2454621.94887932	18.3	un	E
23 33 29.0716	-03 36 53.510	42	47	2454623.92622580	20.6	un	E
23 33 29.1208	-03 36 53.300	42	47	2454623.93808029	20.0	un	E

Appendix B.4: Satellites of Neptune

Table B.18. CDS data for Nereid.

Nereid							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 19 20.8072	-21 25 43.899	31	42	2448782.79875000	19.1	un	PE
19 19 20.8072	-21 25 43.899	31	42	2448782.79875000	19.1	un	PE
19 19 20.6706	-21 25 44.218	31	42	2448782.82091435	19.5	un	PE
19 19 20.6706	-21 25 44.218	31	42	2448782.82091435	19.5	un	PE
19 45 19.2848	-20 40 10.838	12	20	2449905.66420139	18.9	C	PE
19 45 19.2585	-20 40 10.934	12	20	2449905.66857639	18.9	C	PE
19 45 19.2298	-20 40 10.969	12	20	2449905.67321759	19.0	C	PE
19 45 19.2000	-20 40 11.069	12	20	2449905.67787037	18.9	C	PE
19 45 19.1697	-20 40 11.152	12	20	2449905.68253472	18.9	C	PE
19 45 19.1359	-20 40 11.227	12	20	2449905.68795139	18.7	C	PE
19 45 19.0998	-20 40 11.332	12	20	2449905.69365741	18.8	C	PE
19 45 19.0282	-20 40 11.522	12	20	2449905.70503472	18.6	C	PE
19 45 18.9914	-20 40 11.582	12	20	2449905.71055556	18.5	C	PE
19 45 18.9529	-20 40 11.660	12	20	2449905.71657407	18.8	C	PE
19 44 54.1642	-20 41 13.219	20	32	2449909.65546296	18.6	C	PE
19 44 54.1346	-20 41 13.325	20	32	2449909.65997685	18.5	C	PE
19 44 54.0654	-20 41 13.457	20	32	2449909.67093750	18.5	C	PE
19 44 54.0339	-20 41 13.519	20	32	2449909.67567130	18.4	C	PE
19 44 54.0046	-20 41 13.625	20	32	2449909.68041667	18.5	C	PE
19 44 53.9734	-20 41 13.641	20	32	2449909.68512731	18.8	C	PE
19 44 53.9429	-20 41 13.711	20	32	2449909.68983796	18.5	C	PE
19 44 53.9080	-20 41 13.782	20	32	2449909.69462963	18.8	C	PE
19 38 38.2623	-20 58 00.874	29	9	2450002.45730324	19.5	C	PE
19 38 38.2759	-20 58 00.870	29	9	2450002.46769676	19.5	C	PE
19 38 38.2764	-20 58 00.886	29	9	2450002.47333333	19.4	C	PE
19 38 38.2793	-20 58 00.864	29	9	2450002.47765046	19.5	C	PE
19 38 38.2867	-20 58 00.866	29	9	2450002.48273148	19.4	C	PE
19 38 38.2905	-20 58 00.861	29	9	2450002.48613426	19.4	C	PE

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Nereid

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
19 38 39.2963	-20 58 00.078	53	52	2450003.44665509	19.4	C	PE
19 38 39.3107	-20 58 00.066	53	52	2450003.45458333	19.4	C	PE
19 38 39.3178	-20 58 00.183	53	52	2450003.45872685	19.4	C	PE
19 38 39.3180	-20 58 00.060	53	52	2450003.46300926	19.4	C	PE
19 38 39.3259	-20 58 00.067	53	52	2450003.46716435	19.5	C	PE
20 36 28.7987	-18 26 26.489	72	27	2452147.60774664	18.9	B	BC
20 36 28.7585	-18 26 26.575	72	27	2452147.61508843	18.9	B	BC
20 36 28.7082	-18 26 26.814	72	27	2452147.62294549	18.9	B	BC
20 36 28.6966	-18 26 26.900	72	27	2452147.62686875	18.8	B	BC
20 36 28.6579	-18 26 26.967	72	27	2452147.63079178	18.8	B	BC
20 36 28.6353	-18 26 27.056	72	27	2452147.63471528	18.8	B	BC
20 36 28.5933	-18 26 27.180	72	27	2452147.64256331	18.8	B	BC
20 36 28.5777	-18 26 27.288	72	27	2452147.64648715	18.7	B	BC
20 36 28.5487	-18 26 27.402	72	27	2452147.65041123	18.9	B	BC
20 33 42.4038	-18 37 27.359	75	70	2452207.43516458	18.2	C	PE
20 33 42.4038	-18 37 27.359	75	70	2452207.43516458	18.2	C	PE
20 33 42.4038	-18 37 27.359	75	70	2452207.43516458	18.2	C	PE
20 33 42.4038	-18 37 27.359	75	70	2452207.43516458	18.2	C	PE
20 33 42.4100	-18 37 27.235	75	70	2452207.44241273	18.7	C	PE
20 33 42.4100	-18 37 27.235	75	70	2452207.44241273	18.7	C	PE
20 33 42.4100	-18 37 27.235	75	70	2452207.44241273	18.7	C	PE
20 33 42.4100	-18 37 27.235	75	70	2452207.44241273	18.7	C	PE
20 33 42.4024	-18 37 27.386	75	70	2452207.44644861	19.0	C	PE
20 33 42.4024	-18 37 27.386	75	70	2452207.44644861	19.0	C	PE
20 33 42.4024	-18 37 27.386	75	70	2452207.44644861	19.0	C	PE
20 33 42.4024	-18 37 27.386	75	70	2452207.44644861	19.0	C	PE
20 33 43.4454	-18 37 24.512	59	57	2452208.49891574	20.1	C	PE
20 33 43.4401	-18 37 24.464	59	57	2452208.50332014	19.4	C	PE
20 33 43.4481	-18 37 24.437	59	57	2452208.50750417	19.4	C	PE
20 33 43.4540	-18 37 24.486	59	57	2452208.51161111	18.7	C	PE
20 33 43.4517	-18 37 24.495	59	57	2452208.51643171	19.4	C	PE
20 33 43.4579	-18 37 24.379	59	57	2452208.52046921	19.4	C	PE
20 33 43.4643	-18 37 24.363	59	57	2452208.52450637	19.5	C	PE
20 33 43.4691	-18 37 24.466	59	57	2452208.53318194	19.4	C	PE
20 33 43.4794	-18 37 24.404	59	57	2452208.54330961	19.7	C	PE
20 33 43.4900	-18 37 24.450	59	57	2452208.54732558	19.6	C	PE
20 33 43.4897	-18 37 24.416	59	57	2452208.55134317	19.1	C	PE
20 33 43.5090	-18 37 24.305	59	57	2452208.57745937	18.1	C	PE
20 33 44.5070	-18 37 21.836	50	34	2452209.43526956	19.5	C	PE
20 33 44.5110	-18 37 21.789	50	34	2452209.43930660	19.5	C	PE
20 33 44.5156	-18 37 21.769	50	34	2452209.44334479	18.7	C	PE
20 33 44.5226	-18 37 21.746	50	34	2452209.44739282	19.1	C	PE
20 33 44.5324	-18 37 21.819	50	34	2452209.45143067	19.6	C	PE
20 33 44.5674	-18 37 21.634	50	34	2452209.49183229	19.4	C	PE
20 33 45.8045	-18 37 18.107	23	22	2452210.45359294	19.5	C	PE
20 33 45.8084	-18 37 18.060	23	22	2452210.45762269	19.4	C	PE
20 33 45.8125	-18 37 18.034	23	22	2452210.46166343	19.6	C	PE
20 33 45.8154	-18 37 18.038	23	22	2452210.46569201	19.5	C	PE
20 33 45.8197	-18 37 17.985	23	22	2452210.46971979	19.4	C	PE
20 33 45.8254	-18 37 17.994	23	22	2452210.47374664	19.5	C	PE
20 33 45.8320	-18 37 17.993	23	22	2452210.47777558	19.5	C	PE
20 33 45.8427	-18 37 17.985	23	22	2452210.48583241	19.5	C	PE
20 50 01.2714	-17 38 22.787	56	61	2452471.65959745	18.4	C	BC
20 50 01.1779	-17 38 23.180	56	61	2452471.67542708	18.5	C	BC
20 50 01.1074	-17 38 23.479	56	61	2452471.68730394	18.9	C	BC
20 50 01.0585	-17 38 23.627	56	61	2452471.69522303	18.8	C	BC
20 50 01.0222	-17 38 23.802	56	61	2452471.70050012	18.5	C	BC
20 50 00.9979	-17 38 23.856	56	61	2452471.70445891	18.8	C	BC
20 50 00.9520	-17 38 24.057	56	61	2452471.71237731	18.7	C	BC
20 50 00.9161	-17 38 24.139	56	61	2452471.71632627	18.7	C	BC

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Nereid

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
20 50 00.8937	-17 38 24.243	56	61	2452471.72028588	18.8	C	BC
20 50 00.8260	-17 38 24.416	56	61	2452471.73215579	18.9	C	BC
20 50 00.7170	-17 38 24.978	56	61	2452471.74929028	18.9	C	BC
20 50 00.6895	-17 38 24.929	56	61	2452471.75325116	18.8	C	BC
20 50 00.6649	-17 38 25.093	56	61	2452471.75720058	18.8	C	BC
20 50 00.4253	-17 38 25.972	56	61	2452471.79677014	18.8	C	BC
20 50 00.3987	-17 38 26.131	56	61	2452471.80071875	18.9	C	BC
20 50 00.3809	-17 38 26.235	56	61	2452471.80466887	17.6	C	BC
20 49 55.0236	-17 38 47.977	52	31	2452472.68608866	19.0	C	BC
20 49 54.9980	-17 38 48.129	52	31	2452472.69002674	18.9	C	BC
20 49 54.9207	-17 38 48.394	52	31	2452472.70183356	19.1	C	BC
20 49 54.8671	-17 38 48.602	52	31	2452472.70970185	19.2	C	BC
20 49 54.7026	-17 38 49.233	52	31	2452472.73671262	19.0	C	BC
20 49 54.6726	-17 38 49.359	52	31	2452472.74065069	19.1	C	BC
20 49 54.6508	-17 38 49.396	52	31	2452472.74457998	19.1	C	BC
20 49 54.6028	-17 38 49.570	52	31	2452472.75244699	19.3	C	BC
20 49 54.5283	-17 38 49.912	52	31	2452472.76424294	19.1	C	BC
20 47 22.9404	-17 49 01.489	73	69	2452496.47628993	18.6	C	PE
20 47 22.8831	-17 49 01.560	73	69	2452496.48347315	18.6	C	PE
20 47 22.8281	-17 49 01.946	73	69	2452496.49318600	19.1	C	PE
20 47 22.7904	-17 49 01.951	73	69	2452496.49800185	18.8	C	PE
20 47 22.7667	-17 49 02.193	73	69	2452496.50274514	19.1	C	PE
20 47 22.7332	-17 49 02.325	73	69	2452496.50748981	19.2	C	PE
20 47 22.6926	-17 49 02.349	73	69	2452496.51224329	19.1	C	PE
20 47 22.6696	-17 49 02.638	73	69	2452496.51699745	18.8	C	PE
20 47 22.6303	-17 49 02.606	73	69	2452496.52174572	19.1	C	PE
20 47 10.1126	-17 49 52.990	20	36	2452498.47030556	18.5	un	PE
20 47 09.2066	-17 49 56.571	20	36	2452498.61007350	18.3	un	PE
20 47 09.1577	-17 49 56.752	20	36	2452498.61759583	18.3	un	PE
20 47 09.1061	-17 49 56.981	20	36	2452498.62511782	18.3	un	PE
20 47 09.0576	-17 49 57.123	20	36	2452498.63264039	18.4	un	PE
20 47 09.0079	-17 49 57.395	20	36	2452498.64017222	18.4	un	PE
20 47 08.9566	-17 49 57.623	20	36	2452498.64825914	18.5	un	PE
20 58 23.5197	-17 08 36.404	62	77	2452844.61461019	19.1	C	BC
20 58 23.4980	-17 08 36.286	62	77	2452844.61701875	18.9	C	BC
20 58 23.4900	-17 08 36.435	62	77	2452844.62018009	19.1	C	BC
20 58 23.4611	-17 08 36.464	62	77	2452844.62389850	19.1	C	BC
20 58 23.4528	-17 08 36.591	62	77	2452844.62510810	19.2	C	BC
20 58 17.6573	-17 09 01.176	68	49	2452845.54903137	18.9	C	BC
20 58 17.5923	-17 09 01.482	68	49	2452845.55962697	19.1	C	BC
20 58 17.5619	-17 09 01.644	68	49	2452845.56418750	19.0	C	BC
20 58 17.5473	-17 09 01.669	68	49	2452845.56677546	19.1	C	BC
20 58 16.0442	-17 09 07.924	68	49	2452845.80240243	18.9	C	BC
20 58 16.0210	-17 09 08.041	68	49	2452845.80501030	19.1	C	BC
20 58 15.9972	-17 09 08.115	68	49	2452845.81027847	18.6	C	BC
20 58 15.9742	-17 09 08.242	68	49	2452845.81289815	18.9	C	BC
20 58 15.9567	-17 09 08.386	68	49	2452845.81633461	18.9	C	BC
20 58 15.9075	-17 09 08.392	68	49	2452845.82221528	19.1	C	BC
20 58 15.8895	-17 09 08.639	68	49	2452845.82515046	19.1	C	BC
20 58 11.1720	-17 09 28.842	75	45	2452846.57793032	19.2	C	BC
20 58 09.4903	-17 09 35.872	75	45	2452846.84136470	18.8	C	BC
20 58 09.4677	-17 09 35.925	75	45	2452846.84392373	18.8	C	BC
20 58 09.4556	-17 09 35.915	75	45	2452846.84653576	18.2	C	BC
20 55 31.3022	-17 20 43.664	45	31	2452871.56766979	19.2	C	BC
20 55 31.2850	-17 20 43.740	45	31	2452871.57047002	19.3	C	BC
20 55 30.8157	-17 20 45.625	45	31	2452871.64481898	19.2	C	BC
20 55 30.8010	-17 20 45.670	45	31	2452871.64617731	19.1	C	BC
20 55 30.7903	-17 20 45.691	45	31	2452871.64773299	19.3	C	BC
20 55 30.3166	-17 20 47.669	45	31	2452871.72370891	19.0	C	BC
20 55 30.3078	-17 20 47.702	45	31	2452871.72579965	19.2	C	BC

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Nereid

RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
20 55 30.2956	-17 20 47.718	45	31	2452871.72712778	17.6	C	BC
20 55 30.2845	-17 20 47.750	45	31	2452871.72853495	19.1	C	BC
20 55 06.7888	-17 22 26.058	16	9	2452875.55050532	19.0	C	PE
20 55 06.7622	-17 22 26.167	16	9	2452875.55454201	18.9	C	PE
20 55 06.7391	-17 22 26.260	16	9	2452875.55857361	18.9	C	PE
20 55 06.7121	-17 22 26.357	16	9	2452875.56261053	18.9	C	PE
20 55 06.6875	-17 22 26.485	16	9	2452875.56664826	18.8	C	PE
20 55 06.6610	-17 22 26.577	16	9	2452875.57068495	18.9	C	PE
20 55 06.6381	-17 22 26.690	16	9	2452875.57472188	19.0	C	PE
20 55 06.6115	-17 22 26.791	16	9	2452875.57875926	19.0	C	PE
21 04 34.2417	-16 47 02.442	40	22	2453237.60050532	19.0	un	BC
21 04 34.2283	-16 47 02.522	40	22	2453237.60304074	18.9	un	BC
21 04 34.1926	-16 47 02.653	40	22	2453237.60806806	19.0	un	BC
21 04 34.1727	-16 47 02.775	40	22	2453237.61233611	19.2	un	BC
21 04 34.1591	-16 47 02.848	40	22	2453237.61398646	19.1	un	BC
21 04 34.1471	-16 47 02.854	40	22	2453237.61564815	18.8	un	BC
21 04 34.1346	-16 47 02.875	40	22	2453237.61729942	19.0	un	BC
21 04 34.1262	-16 47 02.927	40	22	2453237.61895289	19.2	un	BC
21 04 34.1200	-16 47 02.984	40	22	2453237.62060313	18.9	un	BC
21 04 34.1027	-16 47 03.016	40	22	2453237.62225463	19.0	un	BC
21 04 34.0818	-16 47 03.117	40	22	2453237.62556331	18.9	un	BC
21 04 34.0723	-16 47 03.215	40	22	2453237.62721597	19.0	un	BC
21 04 34.0626	-16 47 03.205	40	22	2453237.62887951	19.0	un	BC
21 04 34.0553	-16 47 03.298	40	22	2453237.63053032	19.0	un	BC
21 04 34.0332	-16 47 03.371	40	22	2453237.63383507	19.0	un	BC
21 04 34.0255	-16 47 03.427	40	22	2453237.63549734	18.9	un	BC
21 04 33.3646	-16 47 06.197	40	22	2453237.73831157	19.1	un	BC
21 04 33.3320	-16 47 06.363	40	22	2453237.74456748	19.0	un	BC
21 04 33.3162	-16 47 06.418	40	22	2453237.74618993	19.2	un	BC
21 04 33.3141	-16 47 06.430	40	22	2453237.74781343	19.0	un	BC
21 04 33.2911	-16 47 06.579	40	22	2453237.75106840	19.2	un	BC
21 04 33.2710	-16 47 06.633	40	22	2453237.75432859	19.2	un	BC
21 04 33.2086	-16 47 06.852	40	22	2453237.76383148	19.2	un	BC
21 04 33.1967	-16 47 06.898	40	22	2453237.76546435	19.3	un	BC
21 04 33.1899	-16 47 06.964	40	22	2453237.76709931	19.1	un	BC
21 04 33.1738	-16 47 06.982	40	22	2453237.76872975	19.0	un	BC
21 04 28.1551	-16 47 29.235	58	77	2453238.57871308	19.5	un	BC
21 04 28.1274	-16 47 29.184	58	77	2453238.58350058	19.3	un	BC
21 04 28.1223	-16 47 29.203	58	77	2453238.58510764	19.6	un	BC
21 04 28.0419	-16 47 29.645	58	77	2453238.59788438	19.5	un	BC
21 04 28.0285	-16 47 29.773	58	77	2453238.59947963	17.8	un	BC
21 04 28.0215	-16 47 29.795	58	77	2453238.60107500	19.6	un	BC
21 04 27.6264	-16 47 31.488	58	77	2453238.66320648	19.5	un	BC
21 04 27.6140	-16 47 31.402	58	77	2453238.66480104	19.4	un	BC
21 04 27.6067	-16 47 31.432	58	77	2453238.66639641	19.5	un	BC
21 04 27.5831	-16 47 31.531	58	77	2453238.66960903	19.9	un	BC
21 04 27.5792	-16 47 31.626	58	77	2453238.67120532	18.3	un	BC
21 04 27.5624	-16 47 31.797	58	77	2453238.67280359	18.8	un	BC
21 04 27.5473	-16 47 31.736	58	77	2453238.67599352	19.4	un	BC
21 04 27.5275	-16 47 31.881	58	77	2453238.67758993	18.3	un	BC
21 04 27.5156	-16 47 31.945	58	77	2453238.67966204	18.5	un	BC
21 04 27.5051	-16 47 32.046	58	77	2453238.68125637	17.8	un	BC
21 04 27.4858	-16 47 31.968	58	77	2453238.68606806	19.6	un	BC
21 04 27.4431	-16 47 32.168	58	77	2453238.69084757	19.0	un	BC
21 04 27.4318	-16 47 32.188	58	77	2453238.69406609	19.0	un	BC
21 04 22.3463	-16 47 54.781	50	23	2453239.51779028	19.2	un	BC
21 04 22.3380	-16 47 54.790	50	23	2453239.51938565	19.1	un	BC
21 04 22.3221	-16 47 54.904	50	23	2453239.52257905	19.3	un	BC
21 04 22.3020	-16 47 54.934	50	23	2453239.52434340	19.2	un	BC
21 04 22.2952	-16 47 54.987	50	23	2453239.52594062	18.5	un	BC

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 04 22.2878	-16 47 55.044	50	23	2453239.52753750	19.0	un	BC
21 04 22.2643	-16 47 55.143	50	23	2453239.53073056	19.5	un	BC
21 04 22.2495	-16 47 55.123	50	23	2453239.53232639	19.1	un	BC
21 04 22.2400	-16 47 55.178	50	23	2453239.53392130	18.2	un	BC
21 04 22.2290	-16 47 55.279	50	23	2453239.53747963	19.1	un	BC
21 04 22.2111	-16 47 55.333	50	23	2453239.53907697	19.3	un	BC
21 04 22.2020	-16 47 55.426	50	23	2453239.54067326	19.3	un	BC
21 04 22.1813	-16 47 55.437	50	23	2453239.54387836	19.1	un	BC
21 04 21.7471	-16 47 57.317	50	23	2453239.61276065	18.9	un	BC
21 04 21.7129	-16 47 57.498	50	23	2453239.61756123	19.3	un	BC
21 04 21.6515	-16 47 57.722	50	23	2453239.62766516	19.1	un	BC
21 04 21.6358	-16 47 57.854	50	23	2453239.63116377	19.3	un	BC
21 04 21.5825	-16 47 58.055	50	23	2453239.63942292	19.2	un	BC
21 04 15.8811	-16 48 23.083	67	44	2453240.56646134	19.2	un	BC
21 04 15.8285	-16 48 23.345	67	44	2453240.57601528	19.4	un	BC
21 04 15.8185	-16 48 23.332	67	44	2453240.57761169	19.1	un	BC
21 04 15.8052	-16 48 23.439	67	44	2453240.57920914	18.9	un	BC
21 04 15.7844	-16 48 23.550	67	44	2453240.58258854	19.3	un	BC
21 04 15.7779	-16 48 23.640	67	44	2453240.58418449	19.3	un	BC
21 04 15.7467	-16 48 23.660	67	44	2453240.58900370	19.1	un	BC
21 04 15.7223	-16 48 23.741	67	44	2453240.59219722	19.0	un	BC
21 04 15.7025	-16 48 23.851	67	44	2453240.59699398	19.1	un	BC
21 04 14.9555	-16 48 27.025	67	44	2453240.71447257	19.0	un	BC
21 04 14.9393	-16 48 27.084	67	44	2453240.71767465	19.4	un	BC
21 04 14.9012	-16 48 27.366	67	44	2453240.72565706	19.4	un	BC
21 04 14.8879	-16 48 27.421	67	44	2453240.72725532	19.4	un	BC
21 04 14.8746	-16 48 27.353	67	44	2453240.72898843	19.1	un	BC
21 04 14.8602	-16 48 27.534	67	44	2453240.73058438	19.4	un	BC
21 04 14.8615	-16 48 27.550	67	44	2453240.73219086	19.5	un	BC
21 04 14.8368	-16 48 27.583	67	44	2453240.73379630	19.3	un	BC
21 04 14.8147	-16 48 27.621	67	44	2453240.73858669	19.2	un	BC
21 04 14.7981	-16 48 27.694	67	44	2453240.74018183	18.1	un	BC
21 04 14.7811	-16 48 27.825	67	44	2453240.74337477	18.1	un	BC
21 04 09.7662	-16 48 49.948	37	42	2453241.56734329	18.9	un	BC
21 04 09.7205	-16 48 50.069	37	42	2453241.57476424	19.0	un	BC
21 04 09.6533	-16 48 50.333	37	42	2453241.58548113	19.3	un	BC
21 04 09.6216	-16 48 50.525	37	42	2453241.59060359	19.3	un	BC
21 04 09.6143	-16 48 50.632	37	42	2453241.59227731	19.3	un	BC
21 04 09.5982	-16 48 50.597	37	42	2453241.59397477	19.0	un	BC
21 04 09.5899	-16 48 50.696	37	42	2453241.59563843	19.2	un	BC
21 04 09.1168	-16 48 52.660	37	42	2453241.67211412	19.2	un	BC
21 04 09.1000	-16 48 52.791	37	42	2453241.67398634	19.2	un	BC
21 04 09.0905	-16 48 52.740	37	42	2453241.67568021	19.5	un	BC
21 04 09.0591	-16 48 52.918	37	42	2453241.68083067	19.4	un	BC
21 04 09.0347	-16 48 53.068	37	42	2453241.68416771	19.3	un	BC
21 04 09.0321	-16 48 53.125	37	42	2453241.68588333	19.7	un	BC
21 04 09.0140	-16 48 53.112	37	42	2453241.68760683	19.2	un	BC
21 04 09.0056	-16 48 53.190	37	42	2453241.68929329	19.2	un	BC
21 04 08.9648	-16 48 53.329	37	42	2453241.69611134	19.4	un	BC
21 04 08.9581	-16 48 53.448	37	42	2453241.69778553	17.9	un	BC
21 04 08.9225	-16 48 53.537	37	42	2453241.70278090	19.2	un	BC
21 01 35.3718	-17 00 05.544	57	24	2453271.58928576	19.2	R	BC
21 01 35.3554	-17 00 05.644	57	24	2453271.59202350	19.3	R	BC
21 01 35.3178	-17 00 05.804	57	24	2453271.60387396	19.1	R	BC
21 01 35.3005	-17 00 05.872	57	24	2453271.60662141	19.5	R	BC
21 00 47.8443	-17 03 35.889	50	47	2453287.47149340	19.4	V	BC
21 00 47.8387	-17 03 35.875	50	47	2453287.47395000	19.2	V	BC
21 00 47.8146	-17 03 36.055	50	47	2453287.48579838	19.6	V	BC
21 00 47.5789	-17 03 37.033	50	47	2453287.59186470	19.4	V	BC
21 00 47.5590	-17 03 37.003	50	47	2453287.60259363	19.6	V	BC

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 00 47.5615	-17 03 37.058	50	47	2453287.60485266	19.2	V	BC
21 28 45.7215	-15 04 52.620	79	67	2453894.84054016	19.2	C	BC
21 28 45.7159	-15 04 52.615	79	67	2453894.84201157	20.0	C	BC
21 28 45.7192	-15 04 52.728	79	67	2453894.84579259	19.2	C	BC
21 28 45.7226	-15 04 52.596	79	67	2453894.84681377	19.6	C	BC
21 28 45.7044	-15 04 52.632	79	67	2453894.84783507	19.3	C	BC
21 28 45.7090	-15 04 52.693	79	67	2453894.84885602	19.3	C	BC
21 28 45.7079	-15 04 52.641	79	67	2453894.84986701	19.7	C	BC
21 28 45.7081	-15 04 52.756	79	67	2453894.85088785	18.4	C	BC
21 28 45.6936	-15 04 52.785	79	67	2453894.85394063	20.5	C	BC
21 28 45.6931	-15 04 52.856	79	67	2453894.85497211	19.9	C	BC
21 28 45.6924	-15 04 52.752	79	67	2453894.85599282	19.4	C	BC
21 28 45.6928	-15 04 52.684	79	67	2453894.85701400	19.6	C	BC
21 28 45.6854	-15 04 52.822	79	67	2453894.86007072	19.6	C	BC
21 28 45.6738	-15 04 52.939	79	67	2453894.86108206	19.2	C	BC
21 28 45.6893	-15 04 52.905	79	67	2453894.86210544	19.0	C	BC
21 21 37.7802	-15 39 30.138	71	68	2453978.61794884	19.4	C	BC
21 21 37.7505	-15 39 30.261	71	68	2453978.62080208	19.4	C	BC
21 21 37.7424	-15 39 30.227	71	68	2453978.62365532	18.3	C	BC
21 21 37.7352	-15 39 30.258	71	68	2453978.62508692	19.5	C	BC
21 21 37.7166	-15 39 30.377	71	68	2453978.62651852	19.4	C	BC
21 21 37.7075	-15 39 30.297	71	68	2453978.62795012	17.7	C	BC
21 21 37.7037	-15 39 30.304	71	68	2453978.62937234	18.2	C	BC
21 21 37.6947	-15 39 30.409	71	68	2453978.63223565	19.0	C	BC
21 21 37.6757	-15 39 30.464	71	68	2453978.63365729	17.9	C	BC
21 21 37.6648	-15 39 30.610	71	68	2453978.63507905	19.2	C	BC
21 21 37.6662	-15 39 30.481	71	68	2453978.63650069	18.2	C	BC
21 21 37.6496	-15 39 30.633	71	68	2453978.63793229	19.7	C	BC
21 21 37.6365	-15 39 30.682	71	68	2453978.63936377	19.4	C	BC
21 21 37.6333	-15 39 30.814	71	68	2453978.64078542	19.9	C	BC
21 21 37.6265	-15 39 30.758	71	68	2453978.64220706	18.0	C	BC
21 21 31.7901	-15 39 58.431	59	30	2453979.62695579	17.9	C	BC
21 21 31.7854	-15 39 58.539	59	30	2453979.62837743	19.5	C	BC
21 21 31.7619	-15 39 58.576	59	30	2453979.63122072	19.4	C	BC
21 21 31.7527	-15 39 58.634	59	30	2453979.63265220	19.0	C	BC
21 21 31.7440	-15 39 58.693	59	30	2453979.63407384	19.2	C	BC
21 21 31.7055	-15 39 58.804	59	30	2453979.63977164	19.3	C	BC
21 21 31.6957	-15 39 58.897	59	30	2453979.64120313	19.4	C	BC
21 21 31.6819	-15 39 58.900	59	30	2453979.64404641	19.3	C	BC
21 21 31.6804	-15 39 59.003	59	30	2453979.64547789	17.8	C	BC
21 19 50.5588	-15 47 56.242	49	53	2453998.64679884	19.6	C	BC
21 19 50.5476	-15 47 56.181	49	53	2453998.64811215	19.1	C	BC
21 19 50.5364	-15 47 56.328	49	53	2453998.65073738	19.1	C	BC
21 19 50.5286	-15 47 56.254	49	53	2453998.65205023	19.7	C	BC
21 19 50.5308	-15 47 56.318	49	53	2453998.65336319	19.7	C	BC
21 19 50.5192	-15 47 56.265	49	53	2453998.65466678	19.2	C	BC
21 19 50.5154	-15 47 56.335	49	53	2453998.65597951	19.2	C	BC
21 19 50.5082	-15 47 56.449	49	53	2453998.65728322	19.5	C	BC
21 19 50.4953	-15 47 56.500	49	53	2453998.65858981	19.4	C	BC
21 19 50.4931	-15 47 56.503	49	53	2453998.65990035	19.6	C	BC
21 19 50.4872	-15 47 56.501	49	53	2453998.66252095	18.1	C	BC
21 19 50.4746	-15 47 56.666	49	53	2453998.66383125	19.7	C	BC
21 19 50.4737	-15 47 56.608	49	53	2453998.66514167	19.6	C	BC
21 19 50.4679	-15 47 56.595	49	53	2453998.66645486	19.4	C	BC
21 19 50.4574	-15 47 56.717	49	53	2453998.66906736	19.5	C	BC
21 19 50.4377	-15 47 56.756	49	53	2453998.67169201	18.9	C	BC
21 19 41.6528	-15 48 38.317	33	64	2454000.61878611	18.8	C	BC
21 19 41.6465	-15 48 38.275	33	64	2454000.62009653	19.5	C	BC
21 19 41.6398	-15 48 38.263	33	64	2454000.62139676	19.5	C	BC
21 19 41.6339	-15 48 38.215	33	64	2454000.62270729	19.3	C	BC

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 19 41.6256	-15 48 38.253	33	64	2454000.62401782	20.0	C	BC
21 19 41.6184	-15 48 38.304	33	64	2454000.62532801	19.9	C	BC
21 19 41.6137	-15 48 38.380	33	64	2454000.62662847	19.6	C	BC
21 19 41.6068	-15 48 38.447	33	64	2454000.62793877	19.8	C	BC
21 19 41.6047	-15 48 38.390	33	64	2454000.62924919	18.5	C	BC
21 19 41.5879	-15 48 38.465	33	64	2454000.63317072	19.1	C	BC
21 19 41.5830	-15 48 38.586	33	64	2454000.63448102	19.2	C	BC
21 19 41.5712	-15 48 38.477	33	64	2454000.63579144	18.4	C	BC
21 19 41.5580	-15 48 38.490	33	64	2454000.63841609	19.6	C	BC
21 19 41.5576	-15 48 38.543	33	64	2454000.63972639	19.4	C	BC
21 19 41.5491	-15 48 38.674	33	64	2454000.64102685	19.6	C	BC
21 19 24.9851	-15 49 56.667	59	32	2454004.54640174	19.5	C	BC
21 19 24.9769	-15 49 56.680	59	32	2454004.54910729	19.5	C	BC
21 19 24.9699	-15 49 56.733	59	32	2454004.55161458	18.5	C	BC
21 19 24.9590	-15 49 56.841	59	32	2454004.55483345	19.3	C	BC
21 19 24.9290	-15 49 56.925	59	32	2454004.56012697	18.1	C	BC
21 19 24.9264	-15 49 56.945	59	32	2454004.56302697	20.3	C	BC
21 19 24.9198	-15 49 57.003	59	32	2454004.56399005	19.4	C	BC
21 19 24.9053	-15 49 57.018	59	32	2454004.56495324	18.2	C	BC
21 19 24.9112	-15 49 56.976	59	32	2454004.56591782	19.3	C	BC
21 19 24.9047	-15 49 57.002	59	32	2454004.56688414	17.8	C	BC
21 19 24.9032	-15 49 57.024	59	32	2454004.56784745	19.4	C	BC
21 19 24.9028	-15 49 57.134	59	32	2454004.56881065	17.7	C	BC
21 19 24.8805	-15 49 57.170	59	32	2454004.57360845	19.3	C	BC
21 19 24.8689	-15 49 57.179	59	32	2454004.57457187	19.8	C	BC
21 19 24.8725	-15 49 57.214	59	32	2454004.57553692	18.7	C	BC
21 19 24.8696	-15 49 57.254	59	32	2454004.57649039	19.8	C	BC
21 19 24.8625	-15 49 57.236	59	32	2454004.57745370	19.8	C	BC
21 19 24.8546	-15 49 57.315	59	32	2454004.57841701	19.4	C	BC
21 19 24.8497	-15 49 57.281	59	32	2454004.57937060	17.9	C	BC
21 19 24.8486	-15 49 57.257	59	32	2454004.58129699	19.4	C	BC
21 19 24.8257	-15 49 57.398	59	32	2454004.58417986	18.4	C	BC
21 19 24.8271	-15 49 57.426	59	32	2454004.58513461	17.7	C	BC
21 18 14.2440	-15 55 32.583	34	34	2454034.44003090	19.3	C	BC
21 18 14.2404	-15 55 32.675	34	34	2454034.44189769	19.3	C	BC
21 18 14.2447	-15 55 32.669	34	34	2454034.44322118	19.3	C	BC
21 18 14.2435	-15 55 32.591	34	34	2454034.44588900	19.3	C	BC
21 18 14.2360	-15 55 32.690	34	34	2454034.44722211	19.4	C	BC
21 18 14.2380	-15 55 32.659	34	34	2454034.44854502	19.3	C	BC
21 18 14.2356	-15 55 32.683	34	34	2454034.44987847	19.4	C	BC
21 18 14.2370	-15 55 32.650	34	34	2454034.45121169	19.2	C	BC
21 18 14.2315	-15 55 32.641	34	34	2454034.45254456	19.4	C	BC
21 18 14.2196	-15 55 32.774	34	34	2454034.47433171	19.5	C	BC
21 18 14.2204	-15 55 32.712	34	34	2454034.47869352	19.4	C	BC
21 18 14.2162	-15 55 32.720	34	34	2454034.48071076	19.4	C	BC
21 18 14.2179	-15 55 32.742	34	34	2454034.48273819	19.4	C	BC
21 32 24.9484	-14 52 23.248	40	16	2454326.75362894	19.1	C	PE
21 32 24.9182	-14 52 23.418	40	16	2454326.75904444	19.1	C	PE
21 32 24.8664	-14 52 23.707	40	16	2454326.76736574	19.0	C	PE
21 32 24.8239	-14 52 23.867	40	16	2454326.77392361	18.6	C	PE
21 32 24.7710	-14 52 24.102	40	16	2454326.78129711	19.0	C	PE
21 32 24.7528	-14 52 24.220	40	16	2454326.78457153	19.1	C	PE
21 31 40.5044	-14 56 03.484	69	34	2454333.76159653	18.9	C	PE
21 31 40.5016	-14 56 03.514	69	34	2454333.76224676	19.0	C	PE
21 31 40.4932	-14 56 03.474	69	34	2454333.76257188	18.9	C	PE
21 31 40.4830	-14 56 03.500	69	34	2454333.76320266	18.7	C	PE
21 31 40.4830	-14 56 03.476	69	34	2454333.76416817	18.9	C	PE
21 31 40.4854	-14 56 03.524	69	34	2454333.76448380	18.7	C	PE
21 31 40.4828	-14 56 03.533	69	34	2454333.76479896	18.3	C	PE
21 31 40.4747	-14 56 03.600	69	34	2454333.76575741	18.9	C	PE

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 31 40.4617	-14 56 03.648	69	34	2454333.76638773	19.0	C	PE
21 31 34.4196	-14 56 33.482	58	23	2454334.72622627	19.1	C	BC
21 31 34.3935	-14 56 33.519	58	23	2454334.72835961	18.9	C	BC
21 31 34.3715	-14 56 33.633	58	23	2454334.73260046	19.1	C	BC
21 31 34.3009	-14 56 33.977	58	23	2454334.74321782	19.1	C	BC
21 31 34.2612	-14 56 34.135	58	23	2454334.74957986	19.2	C	BC
21 31 34.2090	-14 56 34.425	58	23	2454334.75804757	19.2	C	BC
21 31 34.1704	-14 56 34.652	58	23	2454334.76440856	19.2	C	BC
21 31 28.3378	-14 57 03.495	56	24	2454335.69323449	19.2	C	BC
21 31 28.3205	-14 57 03.524	56	24	2454335.69535799	19.6	C	BC
21 31 28.2947	-14 57 03.688	56	24	2454335.69960451	19.2	C	BC
21 31 28.2818	-14 57 03.772	56	24	2454335.70172824	19.2	C	BC
21 31 28.2696	-14 57 03.850	56	24	2454335.70385567	19.1	C	BC
21 31 28.2241	-14 57 03.985	56	24	2454335.71021875	18.7	C	BC
21 31 28.2219	-14 57 04.053	56	24	2454335.71234190	19.1	C	BC
21 31 28.1958	-14 57 04.207	56	24	2454335.71656910	19.1	C	BC
21 31 28.1774	-14 57 04.258	56	24	2454335.71869213	19.2	C	BC
21 31 28.1631	-14 57 04.340	56	24	2454335.72080521	19.2	C	BC
21 31 28.1420	-14 57 04.453	56	24	2454335.72292824	19.2	C	BC
21 31 28.1354	-14 57 04.489	56	24	2454335.72505220	19.2	C	BC
21 31 28.1072	-14 57 04.593	56	24	2454335.72928970	19.2	C	BC
21 31 22.1277	-14 57 34.091	68	52	2454336.68370903	18.2	C	BC
21 31 21.9746	-14 57 34.882	68	52	2454336.70707025	19.0	C	BC
21 31 21.9656	-14 57 34.942	68	52	2454336.70919178	19.0	C	BC
21 31 21.9306	-14 57 35.129	68	52	2454336.71343623	18.7	C	BC
21 31 21.8613	-14 57 35.336	68	52	2454336.72402419	19.0	C	BC
21 31 16.2971	-14 58 03.384	67	31	2454337.62640347	18.3	C	PE
21 31 16.2851	-14 58 03.387	67	31	2454337.62736817	18.5	C	PE
21 31 16.2813	-14 58 03.511	67	31	2454337.62977373	18.4	C	PE
21 31 16.2558	-14 58 03.563	67	31	2454337.63141389	18.8	C	PE
21 31 16.2571	-14 58 03.556	67	31	2454337.63252731	18.3	C	PE
21 31 16.2341	-14 58 03.598	67	31	2454337.63526134	18.4	C	PE
21 31 16.2382	-14 58 03.646	67	31	2454337.63581794	18.4	C	PE
21 31 16.2148	-14 58 03.706	67	31	2454337.63858102	18.3	C	PE
21 31 16.2049	-14 58 03.758	67	31	2454337.64024144	18.8	C	PE
21 31 16.0099	-14 58 04.278	40	26	2454337.66606528	17.4	C	BC
21 31 15.9804	-14 58 04.470	40	26	2454337.67030567	19.4	C	BC
21 31 15.9141	-14 58 04.737	40	26	2454337.68088715	18.8	C	BC
21 31 15.9013	-14 58 04.852	40	26	2454337.68300775	18.7	C	BC
21 31 15.8905	-14 58 04.891	40	26	2454337.68512812	19.3	C	BC
21 31 15.8420	-14 58 05.079	40	26	2454337.69149456	19.5	C	BC
21 29 52.4178	-15 04 54.760	15	5	2454351.65045626	19.3	un	E
21 29 52.4060	-15 04 54.813	15	5	2454351.65229224	19.2	un	E
21 29 52.3944	-15 04 54.871	15	5	2454351.65413807	19.2	un	E
21 29 46.3911	-15 05 24.209	61	30	2454352.72157310	20.3	un	E
21 29 46.3801	-15 05 24.318	61	30	2454352.72342934	19.4	un	E
21 29 46.3627	-15 05 24.349	61	30	2454352.72523730	19.4	un	E
21 29 19.9030	-15 07 33.889	26	30	2454357.59866921	19.4	C	BC
21 29 19.8807	-15 07 33.905	26	30	2454357.60206354	19.5	C	BC
21 29 19.8732	-15 07 34.004	26	30	2454357.60445278	19.5	C	BC
21 29 19.8645	-15 07 34.024	26	30	2454357.60564699	19.8	C	BC
21 29 19.8571	-15 07 34.090	26	30	2454357.60683148	19.5	C	BC
21 29 19.8518	-15 07 34.138	26	30	2454357.60802593	19.4	C	BC
21 29 19.8420	-15 07 34.101	26	30	2454357.60981690	19.4	C	BC
21 29 19.8310	-15 07 34.231	26	30	2454357.61220567	19.5	C	BC
21 29 19.8213	-15 07 34.229	26	30	2454357.61340012	19.5	C	BC
21 29 19.8131	-15 07 34.236	26	30	2454357.61459433	19.8	C	BC
21 29 19.8100	-15 07 34.246	26	30	2454357.61577882	19.4	C	BC
21 29 19.8008	-15 07 34.337	26	30	2454357.61697326	19.3	C	BC
21 29 19.7897	-15 07 34.403	26	30	2454357.61932072	19.6	C	BC

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 29 19.7769	-15 07 34.442	26	30	2454357.62170972	19.0	C	BC
21 29 19.7616	-15 07 34.546	26	30	2454357.62408912	19.4	C	BC
21 29 14.8195	-15 07 58.627	24	9	2454358.56960903	19.9	C	BC
21 29 14.8098	-15 07 58.708	24	9	2454358.57191123	19.2	C	BC
21 29 14.7966	-15 07 58.750	24	9	2454358.57447384	19.5	C	BC
21 29 14.7915	-15 07 58.797	24	9	2454358.57567141	19.4	C	BC
21 29 14.7804	-15 07 58.868	24	9	2454358.57806690	19.5	C	BC
21 29 14.7724	-15 07 58.888	24	9	2454358.57927419	19.4	C	BC
21 29 14.7581	-15 07 58.954	24	9	2454358.58165949	19.5	C	BC
21 29 14.7522	-15 07 58.978	24	9	2454358.58285718	19.2	C	BC
21 29 14.7292	-15 07 59.103	24	9	2454358.58762743	19.4	C	BC
21 29 14.7194	-15 07 59.135	24	9	2454358.58883484	18.4	C	BC
21 29 14.7105	-15 07 59.147	24	9	2454358.59003229	19.9	C	BC
21 29 14.7008	-15 07 59.211	24	9	2454358.59241771	19.3	C	BC
21 29 14.6936	-15 07 59.258	24	9	2454358.59360532	19.5	C	BC
21 29 14.6879	-15 07 59.279	24	9	2454358.59480220	19.6	C	BC
21 29 14.6811	-15 07 59.299	24	9	2454358.59599931	19.5	C	BC
21 29 14.6446	-15 07 59.496	24	9	2454358.60316597	19.5	C	BC
21 29 09.5423	-15 08 24.426	24	22	2454359.59236343	19.5	C	BC
21 29 09.5148	-15 08 24.521	24	22	2454359.59735359	19.4	C	BC
21 29 09.4850	-15 08 24.657	24	22	2454359.60271204	19.4	C	BC
21 29 09.4783	-15 08 24.655	24	22	2454359.60390984	19.3	C	BC
21 29 09.4730	-15 08 24.739	24	22	2454359.60510764	19.7	C	BC
21 29 09.4521	-15 08 24.804	24	22	2454359.60870093	19.5	C	BC
21 29 09.4394	-15 08 24.847	24	22	2454359.61109653	19.2	C	BC
21 29 09.4164	-15 08 24.940	24	22	2454359.61588692	19.8	C	BC
21 29 09.4118	-15 08 24.996	24	22	2454359.61708484	19.5	C	BC
21 29 09.3997	-15 08 25.074	24	22	2454359.61947998	19.2	C	BC
21 29 09.3908	-15 08 25.137	24	22	2454359.62066748	19.5	C	BC
21 29 09.3779	-15 08 25.157	24	22	2454359.62307222	19.5	C	BC
21 29 09.3785	-15 08 25.183	24	22	2454359.62369954	19.5	C	BC
21 29 04.4713	-15 08 49.112	48	30	2454360.58944907	19.3	C	BC
21 29 04.4559	-15 08 49.178	48	30	2454360.59203831	19.5	C	BC
21 29 04.4498	-15 08 49.214	48	30	2454360.59325359	19.4	C	BC
21 29 04.4433	-15 08 49.193	48	30	2454360.59445961	18.1	C	BC
21 29 04.4452	-15 08 49.321	48	30	2454360.59565752	19.3	C	BC
21 29 04.4289	-15 08 49.346	48	30	2454360.59805266	19.1	C	BC
21 29 04.4270	-15 08 49.375	48	30	2454360.59925035	19.7	C	BC
21 29 04.4153	-15 08 49.412	48	30	2454360.60044826	19.4	C	BC
21 29 04.3978	-15 08 49.452	48	30	2454360.60522500	19.5	C	BC
21 29 04.3899	-15 08 49.533	48	30	2454360.60642292	19.5	C	BC
21 29 04.3721	-15 08 49.551	48	30	2454360.60843079	19.6	C	BC
21 29 04.3740	-15 08 49.616	48	30	2454360.60962905	19.6	C	BC
21 29 04.3665	-15 08 49.598	48	30	2454360.61051435	19.7	C	BC
21 29 04.3599	-15 08 49.639	48	30	2454360.61171238	17.6	C	BC
21 29 04.3505	-15 08 49.692	48	30	2454360.61290984	19.4	C	BC
21 29 04.3462	-15 08 49.723	48	30	2454360.61410579	19.6	C	BC
21 29 04.3225	-15 08 49.886	48	30	2454360.61889201	19.5	C	BC
21 29 04.3080	-15 08 49.851	48	30	2454360.62128727	19.5	C	BC
21 29 04.2995	-15 08 49.960	48	30	2454360.62247500	19.4	C	BC
21 29 04.3006	-15 08 49.934	48	30	2454360.62367280	18.8	C	BC
21 27 35.2484	-15 16 02.993	8	15	2454382.64082832	19.4	un	E
21 27 35.2426	-15 16 03.008	8	15	2454382.64287607	19.4	un	E
21 27 35.2370	-15 16 03.031	8	15	2454382.64492451	19.4	un	E
21 27 35.2309	-15 16 03.069	8	15	2454382.64699234	19.4	un	E
21 27 35.2176	-15 16 03.148	8	15	2454382.65150148	19.4	un	E
21 27 35.2109	-15 16 03.198	8	15	2454382.65371549	19.4	un	E
21 27 35.2044	-15 16 03.198	8	15	2454382.65575895	19.5	un	E
21 27 35.1978	-15 16 03.250	8	15	2454382.65784977	19.4	un	E
21 27 35.1931	-15 16 03.269	8	15	2454382.65984020	19.4	un	E

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 27 32.4711	-15 16 16.421	18	18	2454383.61388021	19.4	un	E
21 27 32.4642	-15 16 16.435	18	18	2454383.61594961	19.3	un	E
21 27 32.4574	-15 16 16.464	18	18	2454383.61797883	19.3	un	E
21 27 32.4542	-15 16 16.499	18	18	2454383.62002461	19.2	un	E
21 27 32.4472	-15 16 16.540	18	18	2454383.62196329	19.4	un	E
21 27 32.4409	-15 16 16.601	18	18	2454383.62438907	19.4	un	E
21 27 32.4365	-15 16 16.616	18	18	2454383.62645222	19.4	un	E
21 27 32.4225	-15 16 16.667	18	18	2454383.63051239	19.6	un	E
21 27 32.4191	-15 16 16.687	18	18	2454383.63247735	19.4	un	E
21 27 27.0525	-15 16 42.706	40	35	2454385.63683554	19.4	un	E
21 27 27.0415	-15 16 42.734	40	35	2454385.64088171	19.7	un	E
21 27 27.0362	-15 16 42.779	40	35	2454385.64291858	19.1	un	E
21 27 27.0205	-15 16 42.776	40	35	2454385.64732912	19.6	un	E
21 27 27.0129	-15 16 42.887	40	35	2454385.64936900	20.0	un	E
21 27 27.0151	-15 16 42.876	40	35	2454385.65140772	19.2	un	E
21 27 26.9997	-15 16 42.862	40	35	2454385.65542970	19.7	un	E
21 27 24.5996	-15 16 54.630	28	10	2454386.60847266	19.4	un	E
21 27 24.5950	-15 16 54.644	28	10	2454386.61051531	19.4	un	E
21 27 24.5905	-15 16 54.682	28	10	2454386.61257151	19.3	un	E
21 27 24.5853	-15 16 54.696	28	10	2454386.61463987	19.4	un	E
21 27 24.5683	-15 16 54.795	28	10	2454386.62222832	19.4	un	E
21 27 24.5635	-15 16 54.835	28	10	2454386.62427260	19.4	un	E
21 27 24.5590	-15 16 54.830	28	10	2454386.62634952	19.4	un	E
21 27 24.5538	-15 16 54.872	28	10	2454386.62841788	19.4	un	E
21 27 24.5483	-15 16 54.901	28	10	2454386.63038597	19.4	un	E
21 46 24.0975	-13 45 45.870	6	6	2454621.91211441	19.4	un	E
21 46 24.0927	-13 45 45.897	6	6	2454621.91658250	19.4	un	E
21 46 24.0889	-13 45 45.932	6	6	2454621.92097949	19.4	un	E
21 46 24.0851	-13 45 45.950	6	6	2454621.92544955	19.4	un	E
21 46 24.0797	-13 45 45.973	6	6	2454621.92984458	19.4	un	E
21 46 22.1539	-13 45 57.909	6	12	2454623.90197560	19.4	un	E
21 46 22.1486	-13 45 57.917	6	12	2454623.90647043	19.4	un	E
21 46 22.1427	-13 45 57.954	6	12	2454623.91095356	19.4	un	E
21 46 22.1349	-13 45 57.981	6	12	2454623.91691570	19.4	un	E
21 44 43.6966	-13 54 55.268	72	56	2454656.85571910	18.6	I	PE
21 44 43.6893	-13 54 55.314	72	56	2454656.85786678	18.9	I	PE
21 44 43.6750	-13 54 55.334	72	56	2454656.86000185	19.2	I	PE
21 44 43.6645	-13 54 55.458	72	56	2454656.86213958	19.3	I	PE
21 44 43.6390	-13 54 55.421	72	56	2454656.86657187	18.6	I	PE
21 44 43.6311	-13 54 55.625	72	56	2454656.86885162	19.2	I	PE
21 44 43.6122	-13 54 55.592	72	56	2454656.87100104	20.1	I	PE
21 44 43.6050	-13 54 55.758	72	56	2454656.87316088	17.6	I	PE
21 42 51.5894	-14 04 43.803	26	53	2454677.69095162	19.4	I	PE
21 42 51.4981	-14 04 44.387	26	53	2454677.70533368	19.5	I	PE
21 42 51.4541	-14 04 44.539	26	53	2454677.71271782	19.8	I	PE
21 42 51.4084	-14 04 44.717	26	53	2454677.72006632	19.6	I	PE
21 42 51.3679	-14 04 44.934	26	53	2454677.72741597	19.3	I	PE
21 42 51.3228	-14 04 45.205	26	53	2454677.73476366	18.1	I	PE
21 42 51.2753	-14 04 45.441	26	53	2454677.74211146	19.7	I	PE
21 42 51.1857	-14 04 45.808	26	53	2454677.75681019	19.5	I	PE
21 41 31.6121	-14 11 37.509	44	44	2454690.64667454	19.3	I	BC
21 41 31.5750	-14 11 37.687	44	44	2454690.65292928	19.0	I	BC
21 41 31.5506	-14 11 37.907	44	44	2454690.65577326	19.0	I	BC
21 41 31.5375	-14 11 37.936	44	44	2454690.65863657	19.4	I	BC
21 41 31.5292	-14 11 37.959	44	44	2454690.66005833	19.2	I	BC
21 41 31.4972	-14 11 38.185	44	44	2454690.66575498	18.6	I	BC
21 41 31.4692	-14 11 38.230	44	44	2454690.66859838	19.0	I	BC
21 41 31.4601	-14 11 38.387	44	44	2454690.67109734	17.6	I	BC
21 41 31.4304	-14 11 38.526	44	44	2454690.67538252	19.2	I	BC
21 41 31.4178	-14 11 38.562	44	44	2454690.67680463	19.1	I	BC

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 41 31.3939	-14 11 38.635	44	44	2454690.68107998	19.2	I	BC
21 41 31.3644	-14 11 38.748	44	44	2454690.68534560	19.4	I	BC
21 37 41.6095	-14 31 06.964	76	65	2454729.60531516	19.4	I	PE
21 37 41.5646	-14 31 07.237	76	65	2454729.61390590	19.6	I	PE
21 37 41.3844	-14 31 08.042	76	65	2454729.64824525	19.8	I	PE
21 37 41.3650	-14 31 08.021	76	65	2454729.65222454	19.6	I	PE
21 37 27.3407	-14 32 18.651	32	20	2454732.58380336	19.4	I	PE
21 37 27.3190	-14 32 18.786	32	20	2454732.58878912	19.5	I	PE
21 37 27.2960	-14 32 18.873	32	20	2454732.59267674	19.4	I	PE
21 37 27.2767	-14 32 18.966	32	20	2454732.59660347	19.9	I	PE
21 37 27.2545	-14 32 19.044	32	20	2454732.60195243	19.3	I	PE
21 37 27.2312	-14 32 19.136	32	20	2454732.60583438	18.7	I	PE
21 37 27.1993	-14 32 19.328	32	20	2454732.61359792	19.6	I	PE
21 37 27.1620	-14 32 19.535	32	20	2454732.62135463	19.3	I	PE
21 37 22.6204	-14 32 42.386	60	71	2454733.60467234	19.4	I	PE
21 37 22.5996	-14 32 42.353	60	71	2454733.60879201	19.5	I	PE
21 37 22.5597	-14 32 42.624	60	71	2454733.61700775	20.1	I	PE
21 37 22.5455	-14 32 42.668	60	71	2454733.62111539	19.6	I	PE
21 37 22.5152	-14 32 42.679	60	71	2454733.62522396	18.8	I	PE
21 37 22.4980	-14 32 42.772	60	71	2454733.62943009	18.6	I	PE
21 54 59.6581	-13 04 56.763	44	41	2454971.91773082	19.5	un	E
21 54 59.6570	-13 04 56.639	44	41	2454971.91888314	19.5	un	E
21 54 59.6647	-13 04 56.739	44	41	2454971.92004507	19.4	un	E
21 54 59.6643	-13 04 56.641	44	41	2454971.92347137	19.4	un	E
21 54 59.6675	-13 04 56.642	44	41	2454971.92578064	19.5	un	E
21 54 59.6708	-13 04 56.645	44	41	2454971.92694095	19.4	un	E
21 54 59.6710	-13 04 56.662	44	41	2454971.92966440	19.4	un	E
21 54 59.6779	-13 04 56.651	44	41	2454971.93081788	19.5	un	E
21 54 59.6810	-13 04 56.679	44	41	2454971.93196581	19.5	un	E
21 54 59.6854	-13 04 56.582	44	41	2454971.93427231	19.3	un	E
21 55 02.0353	-13 04 46.248	34	11	2454973.76546379	19.5	un	E
21 55 02.0433	-13 04 46.227	34	11	2454973.76663197	19.5	un	E
21 55 02.0403	-13 04 46.209	34	11	2454973.76779136	19.6	un	E
21 55 02.0446	-13 04 46.208	34	11	2454973.76894426	19.3	un	E
21 55 02.0406	-13 04 46.218	34	11	2454973.77006880	19.5	un	E
21 55 02.0452	-13 04 46.218	34	11	2454973.77122946	19.4	un	E
21 55 02.0500	-13 04 46.218	34	11	2454973.77239428	19.3	un	E
21 55 02.0508	-13 04 46.187	34	11	2454973.77377140	19.5	un	E
21 55 02.0511	-13 04 46.210	34	11	2454973.77492164	19.6	un	E
21 55 02.0542	-13 04 46.180	34	11	2454973.77720811	19.6	un	E
21 55 02.0532	-13 04 46.161	34	11	2454973.77836414	19.5	un	E
21 55 02.0563	-13 04 46.176	34	11	2454973.77951368	19.5	un	E
21 55 02.0552	-13 04 46.161	34	11	2454973.78067943	19.5	un	E
21 55 03.1579	-13 04 41.559	20	21	2454974.76353377	19.3	un	E
21 55 03.1594	-13 04 41.554	20	21	2454974.76928034	19.5	un	E
21 55 03.1621	-13 04 41.530	20	21	2454974.77158510	19.5	un	E
21 55 03.1636	-13 04 41.513	20	21	2454974.77274506	19.2	un	E
21 55 03.1635	-13 04 41.565	20	21	2454974.77422115	19.5	un	E
21 55 03.1658	-13 04 41.553	20	21	2454974.77538273	19.3	un	E
21 55 03.1700	-13 04 41.565	20	21	2454974.77769641	19.4	un	E
21 55 03.1711	-13 04 41.539	20	21	2454974.77884966	19.4	un	E
21 55 03.1733	-13 04 41.501	20	21	2454974.78000997	19.3	un	E
21 55 03.1720	-13 04 41.519	20	21	2454974.78116854	19.4	un	E
21 55 03.1734	-13 04 41.503	20	21	2454974.78232723	19.3	un	E
21 55 03.1743	-13 04 41.504	20	21	2454974.78348279	19.4	un	E
21 55 03.1763	-13 04 41.501	20	21	2454974.78463778	19.4	un	E
21 55 04.1087	-13 04 37.653	34	24	2454975.76499427	18.0	un	E
21 55 04.1254	-13 04 37.551	34	24	2454975.77989715	18.9	un	E
21 55 04.1282	-13 04 37.535	34	24	2454975.78656210	19.5	un	E
21 55 04.1412	-13 04 37.477	34	24	2454975.80417822	19.4	un	E

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
21 55 04.1441	-13 04 37.471	34	24	2454975.80530786	19.4	un	E
21 55 04.1457	-13 04 37.522	34	24	2454975.80645544	19.0	un	E
21 55 04.1467	-13 04 37.497	34	24	2454975.80757639	19.3	un	E
21 55 04.1484	-13 04 37.508	34	24	2454975.80872188	17.7	un	E
21 55 04.1444	-13 04 37.511	34	24	2454975.80984458	18.9	un	E
21 55 04.1463	-13 04 37.463	34	24	2454975.81099228	19.0	un	E
21 55 04.1494	-13 04 37.485	34	24	2454975.81330803	19.3	un	E
21 55 04.1728	-13 04 37.319	34	24	2454975.84789451	19.0	un	E
21 55 04.1848	-13 04 37.293	34	24	2454975.85788484	18.0	un	E
21 55 04.1825	-13 04 37.318	34	24	2454975.85925360	19.4	un	E
21 54 31.1716	-13 08 08.655	48	71	2455006.77115324	17.8	I	PE
21 54 31.1616	-13 08 08.784	48	71	2455006.77390428	17.9	I	PE
21 54 31.1549	-13 08 08.626	48	71	2455006.77663935	19.8	I	PE
21 54 31.1318	-13 08 08.847	48	71	2455006.78490104	19.9	I	PE
21 54 31.1193	-13 08 08.923	48	71	2455006.78768519	19.6	I	PE
21 54 31.1181	-13 08 08.880	48	71	2455006.79049525	19.9	I	PE
21 54 31.1108	-13 08 09.051	48	71	2455006.79323866	19.6	I	PE
21 52 32.4285	-13 19 03.951	30	31	2455034.65733056	19.3	C	BC
21 52 32.4101	-13 19 04.047	30	31	2455034.66083773	19.3	C	BC
21 52 32.3948	-13 19 04.097	30	31	2455034.66334722	19.4	C	BC
21 52 32.3787	-13 19 04.179	30	31	2455034.66569780	19.4	C	BC
21 52 32.3635	-13 19 04.182	30	31	2455034.66806817	19.4	C	BC
21 52 32.3453	-13 19 04.344	30	31	2455034.67162951	19.2	C	BC
21 52 32.3297	-13 19 04.476	30	31	2455034.67517211	19.5	C	BC
21 52 32.3202	-13 19 04.479	30	31	2455034.67694850	19.1	C	BC
21 52 32.2995	-13 19 04.628	30	31	2455034.68050012	19.5	C	BC
21 52 32.2878	-13 19 04.683	30	31	2455034.68227627	19.4	C	BC
21 52 32.2689	-13 19 04.778	30	31	2455034.68582870	19.3	C	BC
21 52 32.2594	-13 19 04.786	30	31	2455034.68760475	19.4	C	BC
21 52 32.2532	-13 19 04.833	30	31	2455034.68938125	19.7	C	BC
21 52 32.2401	-13 19 04.856	30	31	2455034.69115775	19.7	C	BC
22 03 33.0072	-12 23 51.281	14	7	2455363.82175926	19.4	R	PE
22 03 33.0058	-12 23 51.296	14	7	2455363.82317130	19.3	R	PE
22 03 33.0015	-12 23 51.298	14	7	2455363.82458333	19.4	R	PE
22 03 33.0011	-12 23 51.323	14	7	2455363.82599537	19.3	R	PE
22 03 32.9973	-12 23 51.325	14	7	2455363.82740741	19.3	R	PE
22 03 32.9937	-12 23 51.368	14	7	2455363.83024306	19.3	R	PE
22 03 32.9893	-12 23 51.376	14	7	2455363.83165509	19.4	R	PE
22 03 32.9887	-12 23 51.387	14	7	2455363.83306713	19.3	R	PE
22 03 32.9841	-12 23 51.420	14	7	2455363.83447917	19.3	R	PE
22 03 32.9799	-12 23 51.438	14	7	2455363.83730324	19.3	R	PE
22 03 32.9753	-12 23 51.468	14	7	2455363.83871528	19.4	R	PE
22 03 32.9741	-12 23 51.468	14	7	2455363.84012731	19.3	R	PE
22 03 32.9702	-12 23 51.482	14	7	2455363.84153935	19.3	R	PE
22 03 32.9691	-12 23 51.499	14	7	2455363.84295139	19.3	R	PE
22 03 32.9672	-12 23 51.506	14	7	2455363.84436343	19.3	R	PE
22 03 32.9651	-12 23 51.533	14	7	2455363.84577546	19.3	R	PE
22 03 32.9613	-12 23 51.551	14	7	2455363.84718750	19.3	R	PE
22 03 32.9594	-12 23 51.560	14	7	2455363.84859954	19.4	R	PE
22 03 29.4498	-12 24 13.303	19	6	2455365.77285880	19.4	R	PE
22 03 29.4402	-12 24 13.377	19	6	2455365.77850694	19.5	R	PE
22 03 29.4347	-12 24 13.385	19	6	2455365.77991898	19.4	R	PE
22 03 29.4280	-12 24 13.448	19	6	2455365.78415509	19.4	R	PE
22 03 29.4236	-12 24 13.461	19	6	2455365.78556713	19.5	R	PE
22 03 29.4171	-12 24 13.478	19	6	2455365.78839120	19.5	R	PE
22 03 29.4172	-12 24 13.508	19	6	2455365.78980324	19.4	R	PE
22 03 29.4141	-12 24 13.524	19	6	2455365.79121528	19.4	R	PE
22 03 29.4112	-12 24 13.532	19	6	2455365.79262732	19.6	R	PE
22 03 29.4068	-12 24 13.555	19	6	2455365.79402778	19.4	R	PE
22 03 29.4016	-12 24 13.570	19	6	2455365.79543981	19.5	R	PE

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RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
22 03 29.3984	-12 24 13.601	19	6	2455365.79826389	19.5	R	PE
22 03 29.3961	-12 24 13.631	19	6	2455365.79967593	19.4	R	PE
22 02 40.2382	-12 29 02.838	25	28	2455382.79479167	19.3	C	BC
22 02 40.2343	-12 29 02.833	25	28	2455382.79549769	19.2	C	BC
22 02 40.2260	-12 29 02.838	25	28	2455382.79693287	19.2	C	BC
22 02 40.2235	-12 29 02.905	25	28	2455382.79765046	19.0	C	BC
22 02 40.2196	-12 29 02.892	25	28	2455382.79908565	18.9	C	BC
22 02 40.2177	-12 29 02.894	25	28	2455382.79980324	19.1	C	BC
22 02 40.2122	-12 29 02.924	25	28	2455382.80052083	19.2	C	BC
22 02 40.2128	-12 29 02.999	25	28	2455382.80123843	19.2	C	BC
22 02 40.1981	-12 29 03.062	25	28	2455382.80409722	19.3	C	BC
22 02 40.1948	-12 29 03.026	25	28	2455382.80481481	19.2	C	BC
22 02 40.1934	-12 29 03.056	25	28	2455382.80553241	19.1	C	BC
22 02 40.1906	-12 29 03.070	25	28	2455382.80625000	19.2	C	BC
22 02 40.1857	-12 29 03.053	25	28	2455382.80696759	19.1	C	BC
22 02 40.1817	-12 29 03.138	25	28	2455382.80912037	19.3	C	BC
22 02 40.1793	-12 29 03.108	25	28	2455382.80982639	19.4	C	BC
22 02 40.1659	-12 29 03.228	25	28	2455382.81197917	19.1	C	BC
22 02 40.1644	-12 29 03.166	25	28	2455382.81269676	19.3	C	BC
22 02 40.1619	-12 29 03.254	25	28	2455382.81341435	19.2	C	BC
22 02 36.4295	-12 29 24.697	34	24	2455383.78649306	18.8	C	BC
22 02 36.4221	-12 29 24.738	34	24	2455383.78900463	19.2	C	BC
22 02 36.4101	-12 29 24.778	34	24	2455383.79115741	19.2	C	BC
22 02 36.4077	-12 29 24.788	34	24	2455383.79187500	19.3	C	BC
22 02 36.4101	-12 29 24.790	34	24	2455383.79259259	19.2	C	BC
22 02 36.4026	-12 29 24.828	34	24	2455383.79403935	17.9	C	BC
22 02 36.3981	-12 29 24.806	34	24	2455383.79475694	19.2	C	BC
22 02 36.3968	-12 29 24.830	34	24	2455383.79547454	19.1	C	BC
22 02 36.3894	-12 29 24.919	34	24	2455383.79619213	19.0	C	BC
22 02 36.3897	-12 29 24.915	34	24	2455383.79762731	19.3	C	BC
22 02 36.3816	-12 29 24.919	34	24	2455383.79906250	19.2	C	BC
22 02 36.3808	-12 29 24.969	34	24	2455383.79978009	19.0	C	BC
22 02 36.3799	-12 29 25.007	34	24	2455383.80049769	19.0	C	BC
22 02 36.3728	-12 29 24.997	34	24	2455383.80122685	19.0	C	BC
22 02 32.5004	-12 29 47.257	45	36	2455384.78687500	19.2	C	BC
22 02 32.4935	-12 29 47.283	45	36	2455384.78886574	19.2	C	BC
22 02 32.4895	-12 29 47.311	45	36	2455384.78958333	19.2	C	BC
22 02 32.4881	-12 29 47.263	45	36	2455384.79030093	19.1	C	BC
22 02 32.4857	-12 29 47.408	45	36	2455384.79172454	19.1	C	BC
22 02 32.4772	-12 29 47.387	45	36	2455384.79459491	19.2	C	BC
22 02 32.4602	-12 29 47.515	45	36	2455384.79745370	19.3	C	BC
22 02 32.4508	-12 29 47.521	45	36	2455384.79888889	19.2	C	BC
22 02 32.4489	-12 29 47.599	45	36	2455384.80104167	19.3	C	BC
22 02 32.4397	-12 29 47.542	45	36	2455384.80175926	19.2	C	BC
22 07 30.4723	-12 07 43.921	61	50	2455792.65458333	18.5	I	BC
22 07 30.4612	-12 07 43.992	61	50	2455792.65553241	18.9	I	BC
22 07 30.4641	-12 07 44.012	61	50	2455792.65648148	18.4	I	BC
22 07 30.4544	-12 07 44.091	61	50	2455792.65741898	18.3	I	BC
22 07 30.4561	-12 07 44.143	61	50	2455792.65836806	18.9	I	BC
22 07 30.4453	-12 07 44.186	61	50	2455792.65931713	18.7	I	BC
22 07 30.4372	-12 07 44.195	61	50	2455792.66026620	18.7	I	BC
22 07 30.4340	-12 07 44.194	61	50	2455792.66121528	18.8	I	BC
22 07 30.4237	-12 07 44.188	61	50	2455792.66215278	18.6	I	BC
22 07 30.4151	-12 07 44.242	61	50	2455792.66310185	17.7	I	BC
22 07 30.4027	-12 07 44.373	61	50	2455792.66500000	18.7	I	BC
22 07 30.3872	-12 07 44.362	61	50	2455792.66688657	18.8	I	BC
22 07 30.3903	-12 07 44.366	61	50	2455792.66783565	18.6	I	BC
22 07 30.3825	-12 07 44.437	61	50	2455792.66878472	18.8	I	BC
22 07 30.3721	-12 07 44.511	61	50	2455792.66973380	18.6	I	BC
22 07 30.3780	-12 07 44.511	61	50	2455792.67068287	18.6	I	BC

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RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
22 07 30.3662	-12 07 44.484	61	50	2455792.67162037	18.6	I	BC
22 07 30.3514	-12 07 44.652	61	50	2455792.67256944	19.0	I	BC
22 07 30.3347	-12 07 44.701	61	50	2455792.67614583	18.7	I	BC
22 07 30.3284	-12 07 44.784	61	50	2455792.67708333	18.6	I	BC
22 07 30.3145	-12 07 44.737	61	50	2455792.67898148	18.8	I	BC
22 07 30.3120	-12 07 44.848	61	50	2455792.67993056	18.7	I	BC
22 07 30.3038	-12 07 44.977	61	50	2455792.68087963	18.7	I	BC
22 07 30.2926	-12 07 44.963	61	50	2455792.68276620	18.9	I	BC
22 07 30.2888	-12 07 45.031	61	50	2455792.68371528	18.7	I	BC
22 07 30.2769	-12 07 45.093	61	50	2455792.68466435	18.7	I	BC
22 07 30.2822	-12 07 45.014	61	50	2455792.68561343	18.8	I	BC
22 07 30.2712	-12 07 45.131	61	50	2455792.68655093	18.7	I	BC
22 07 30.2632	-12 07 45.152	61	50	2455792.68844907	19.0	I	BC
22 07 30.2567	-12 07 45.251	61	50	2455792.68939815	18.8	I	BC
22 07 30.2407	-12 07 45.173	61	50	2455792.69128472	18.8	I	BC
22 07 30.2336	-12 07 45.321	61	50	2455792.69223380	18.9	I	BC
22 07 30.2318	-12 07 45.278	61	50	2455792.69318287	18.7	I	BC
22 07 30.1868	-12 07 45.614	61	50	2455792.69976852	18.3	I	BC
22 07 30.1801	-12 07 45.547	61	50	2455792.70071759	18.7	I	BC
22 07 30.1684	-12 07 45.620	61	50	2455792.70166667	18.6	I	BC
22 07 30.1709	-12 07 45.601	61	50	2455792.70260417	18.8	I	BC
22 07 30.1668	-12 07 45.589	61	50	2455792.70355324	18.7	I	BC
22 07 30.1424	-12 07 45.819	61	50	2455792.70545139	18.6	I	BC
22 07 30.1447	-12 07 45.793	61	50	2455792.70733796	18.5	I	BC
22 07 30.1009	-12 07 45.905	61	50	2455792.71302083	18.7	I	BC
22 07 30.0961	-12 07 46.071	61	50	2455792.71491898	18.8	I	BC
22 07 30.0783	-12 07 46.043	61	50	2455792.71586806	18.8	I	BC
22 05 50.4066	-12 17 02.402	49	21	2455808.72568287	19.1	I	PE
22 05 50.3919	-12 17 02.501	49	21	2455808.72780093	19.4	I	PE
22 05 50.3786	-12 17 02.505	49	21	2455808.72993056	17.9	I	PE
22 05 50.3235	-12 17 02.822	49	21	2455808.73841435	18.8	I	PE
22 05 50.3158	-12 17 02.871	49	21	2455808.74053241	18.4	I	PE
22 05 50.2995	-12 17 02.988	49	21	2455808.74266204	19.3	I	PE
22 05 50.2944	-12 17 03.030	49	21	2455808.74478009	19.3	I	PE
22 05 50.2504	-12 17 03.262	49	21	2455808.75114583	19.2	I	PE
22 05 50.2283	-12 17 03.409	49	21	2455808.75539352	19.3	I	PE
22 05 50.2096	-12 17 03.499	49	21	2455808.75751157	17.2	I	PE
22 05 50.1990	-12 17 03.547	49	21	2455808.75962963	19.5	I	PE
22 05 50.1764	-12 17 03.615	49	21	2455808.76174769	18.2	I	PE
22 05 50.1649	-12 17 03.700	49	21	2455808.76387731	18.9	I	PE
22 05 50.1063	-12 17 04.052	49	21	2455808.77376157	18.9	I	PE
22 05 50.0979	-12 17 04.107	49	21	2455808.77589120	19.5	I	PE
22 05 50.0803	-12 17 04.144	49	21	2455808.77800926	19.3	I	PE
22 05 50.0733	-12 17 04.201	49	21	2455808.78012731	19.3	I	PE
22 05 50.0422	-12 17 04.364	49	21	2455808.78437500	19.6	I	PE
22 05 50.0185	-12 17 04.488	49	21	2455808.78862269	19.2	I	PE
22 05 50.0038	-12 17 04.582	49	21	2455808.79074074	19.3	I	PE
22 03 42.1999	-12 28 46.880	62	61	2455831.58862269	19.3	C	BC
22 03 42.1893	-12 28 46.976	62	61	2455831.58957176	18.9	C	BC
22 03 42.1786	-12 28 47.112	62	61	2455831.59241898	19.5	C	BC
22 03 42.1624	-12 28 47.219	62	61	2455831.59526620	19.2	C	BC
22 03 42.1628	-12 28 47.230	62	61	2455831.59716435	17.5	C	BC
22 03 42.1465	-12 28 47.216	62	61	2455831.59811343	17.6	C	BC
22 03 42.1393	-12 28 47.219	62	61	2455831.60096065	19.1	C	BC
22 10 54.1444	-11 53 27.871	61	70	2456219.54387597	19.5	un	BC
22 10 54.1067	-11 53 28.019	61	70	2456219.55402367	19.4	un	BC
22 10 54.0877	-11 53 28.076	61	70	2456219.56044556	19.0	un	BC
22 10 54.0760	-11 53 28.080	61	70	2456219.56258606	17.8	un	BC
22 10 54.0669	-11 53 28.281	61	70	2456219.56472656	19.5	un	BC
22 10 54.0592	-11 53 28.134	61	70	2456219.56922080	18.0	un	BC

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RA (ICRS) h m s	Dec ° ′ ″	RA error (mas)	Dec error (mas)	Epoch (jd)	Mag	Filter	Telescope
22 10 54.0532	-11 53 28.202	61	70	2456219.57136076	19.5	un	BC
22 10 54.0424	-11 53 28.380	61	70	2456219.57350073	19.7	un	BC
22 10 54.0229	-11 53 28.456	61	70	2456219.58206078	19.1	un	BC
22 10 51.3180	-11 53 43.064	76	77	2456220.51459181	19.1	un	BC
22 10 51.3133	-11 53 43.326	76	77	2456220.51803856	19.4	un	BC
22 10 51.3019	-11 53 43.206	76	77	2456220.52009714	17.8	un	BC
22 10 51.3004	-11 53 43.192	76	77	2456220.52084911	19.5	un	BC
22 10 51.3009	-11 53 43.342	76	77	2456220.52160125	19.5	un	BC
22 10 51.3094	-11 53 43.375	76	77	2456220.52235465	19.9	un	BC
22 10 51.3043	-11 53 43.237	76	77	2456220.52311782	17.8	un	BC
22 10 51.3051	-11 53 43.324	76	77	2456220.52389240	19.8	un	BC
22 10 51.2940	-11 53 43.464	76	77	2456220.52614955	19.5	un	BC
22 10 51.2912	-11 53 43.285	76	77	2456220.52690079	19.9	un	BC
22 10 51.2892	-11 53 43.349	76	77	2456220.52765203	19.1	un	BC
22 10 51.2879	-11 53 43.388	76	77	2456220.52840326	17.6	un	BC
22 10 51.2803	-11 53 43.314	76	77	2456220.52915468	20.2	un	BC
22 29 20.8266	-10 10 40.986	32	26	2456452.83503830	19.6	R	PE
22 29 20.8318	-10 10 41.001	32	26	2456452.83718825	19.5	R	PE
22 29 20.8296	-10 10 41.057	32	26	2456452.83933786	19.5	R	PE
22 29 20.8303	-10 10 40.997	32	26	2456452.84148745	19.4	R	PE
22 29 20.8289	-10 10 41.014	32	26	2456452.84363706	19.5	R	PE
22 23 30.8906	-10 46 24.863	15	10	2456537.68332777	19.2	I	PE
22 23 30.8688	-10 46 24.997	15	10	2456537.68664755	19.1	I	PE
22 23 30.8554	-10 46 25.055	15	10	2456537.68878839	19.0	I	PE
22 23 30.8300	-10 46 25.205	15	10	2456537.69307008	19.1	I	PE
22 23 30.8143	-10 46 25.299	15	10	2456537.69521075	19.0	I	PE
22 23 30.8023	-10 46 25.379	15	10	2456537.69735160	18.9	I	PE
22 23 30.7896	-10 46 25.469	15	10	2456537.69949244	19.2	I	PE
22 23 30.7769	-10 46 25.533	15	10	2456537.70163329	19.1	I	PE
22 23 25.0759	-10 46 58.965	29	37	2456538.62475318	19.1	I	PE
22 23 25.0759	-10 46 58.965	29	37	2456538.62475318	19.1	I	PE
22 23 25.0526	-10 46 59.076	29	37	2456538.62772339	19.2	I	PE
22 23 25.0526	-10 46 59.076	29	37	2456538.62772339	19.2	I	PE
22 23 25.0428	-10 46 59.180	29	37	2456538.62986388	19.1	I	PE
22 23 25.0428	-10 46 59.180	29	37	2456538.62986388	19.1	I	PE
22 23 25.0298	-10 46 59.225	29	37	2456538.63200418	19.1	I	PE
22 23 25.0298	-10 46 59.225	29	37	2456538.63200418	19.1	I	PE
22 23 25.0128	-10 46 59.228	29	37	2456538.63414466	19.3	I	PE
22 23 25.0128	-10 46 59.228	29	37	2456538.63414466	19.3	I	PE
22 23 25.0008	-10 46 59.377	29	37	2456538.63628497	19.3	I	PE
22 23 25.0008	-10 46 59.377	29	37	2456538.63628497	19.3	I	PE
22 23 24.9851	-10 46 59.422	29	37	2456538.63842545	17.0	I	PE
22 23 24.9851	-10 46 59.422	29	37	2456538.63842545	17.0	I	PE
22 23 24.9743	-10 46 59.511	29	37	2456538.64056576	19.4	I	PE
22 23 24.9743	-10 46 59.511	29	37	2456538.64056576	19.4	I	PE
22 23 24.9446	-10 46 59.667	29	37	2456538.64484655	19.3	I	PE
22 23 24.9446	-10 46 59.667	29	37	2456538.64484655	19.3	I	PE
22 23 24.9225	-10 46 59.885	29	37	2456538.64912734	19.3	I	PE
22 23 24.9225	-10 46 59.885	29	37	2456538.64912734	19.3	I	PE
22 23 24.9032	-10 46 59.918	29	37	2456538.65126764	19.2	I	PE
22 23 24.9032	-10 46 59.918	29	37	2456538.65126764	19.2	I	PE
22 23 24.8935	-10 47 00.013	29	37	2456538.65340795	19.1	I	PE
22 23 24.8935	-10 47 00.013	29	37	2456538.65340795	19.1	I	PE
22 23 24.8792	-10 47 00.125	29	37	2456538.65554843	19.4	I	PE
22 23 24.8792	-10 47 00.125	29	37	2456538.65554843	19.4	I	PE
22 23 24.8626	-10 47 00.081	29	37	2456538.65768874	19.2	I	PE
22 23 24.8626	-10 47 00.081	29	37	2456538.65768874	19.2	I	PE
22 23 24.8532	-10 47 00.221	29	37	2456538.65982922	19.1	I	PE
22 23 24.8532	-10 47 00.221	29	37	2456538.65982922	19.1	I	PE
22 23 24.8362	-10 47 00.218	29	37	2456538.66196953	19.1	I	PE

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Nereid							
RA (ICRS) Dec		RA error	Dec error	Epoch	Mag	Filter	Telescope
h m s	° ′ ″	(mas)	(mas)	(jd)			
22 23 24.8362	-10 47 00.218	29	37	2456538.66196953	19.1	I	PE
22 23 24.8251	-10 47 00.378	29	37	2456538.66411001	19.1	I	PE
22 23 24.8251	-10 47 00.378	29	37	2456538.66411001	19.1	I	PE
22 23 24.8091	-10 47 00.429	29	37	2456538.66625050	19.0	I	PE
22 23 24.8091	-10 47 00.429	29	37	2456538.66625050	19.0	I	PE
22 37 18.0411	-09 28 42.274	24	19	2456841.81383981	19.3	I	PE
22 37 18.0378	-09 28 42.293	24	19	2456841.81494206	19.3	I	PE
22 37 18.0334	-09 28 42.330	24	19	2456841.81714634	19.4	I	PE
22 37 18.0289	-09 28 42.343	24	19	2456841.81824844	18.8	I	PE
22 37 18.0257	-09 28 42.389	24	19	2456841.81935060	19.2	I	PE
22 37 18.0226	-09 28 42.408	24	19	2456841.82045301	19.4	I	PE
22 37 18.0234	-09 28 42.450	24	19	2456841.82155516	18.8	I	PE
22 37 18.0136	-09 28 42.482	24	19	2456841.82486183	19.4	I	PE
22 37 18.0033	-09 28 42.548	24	19	2456841.82816837	19.3	I	PE
22 37 17.9973	-09 28 42.558	24	19	2456841.82927050	19.4	I	PE
22 37 17.9950	-09 28 42.554	24	19	2456841.83037277	19.2	I	PE
22 37 17.9967	-09 28 42.609	24	19	2456841.83147490	18.9	I	PE
22 37 17.9888	-09 28 42.598	24	19	2456841.83257727	19.2	I	PE
22 37 17.9879	-09 28 42.590	24	19	2456841.83367941	19.4	I	PE
22 37 17.9833	-09 28 42.619	24	19	2456841.83478166	19.5	I	PE
22 37 12.9646	-09 29 16.061	26	29	2456843.69122869	18.8	I	PE
22 37 12.9631	-09 29 16.092	26	29	2456843.69233135	19.1	I	PE
22 37 12.9550	-09 29 16.069	26	29	2456843.69563914	19.2	I	PE
22 37 12.9514	-09 29 16.142	26	29	2456843.69674167	19.1	I	PE
22 37 12.9410	-09 29 16.189	26	29	2456843.69894681	19.0	I	PE
22 37 12.9372	-09 29 16.262	26	29	2456843.70115198	19.4	I	PE
22 37 12.9348	-09 29 16.259	26	29	2456843.70225412	19.1	I	PE
22 37 12.9290	-09 29 16.280	26	29	2456843.70445941	18.9	I	PE
22 37 12.9246	-09 29 16.331	26	29	2456843.70556194	19.0	I	PE
22 37 12.9177	-09 29 16.359	26	29	2456843.70666446	19.1	I	PE
22 37 12.9151	-09 29 16.305	26	29	2456843.70776704	19.3	I	PE
22 37 12.9122	-09 29 16.398	26	29	2456843.70886963	19.0	I	PE
22 37 12.9093	-09 29 16.358	26	29	2456843.70997209	19.1	I	PE
22 37 12.9083	-09 29 16.393	26	29	2456843.71107455	19.0	I	PE