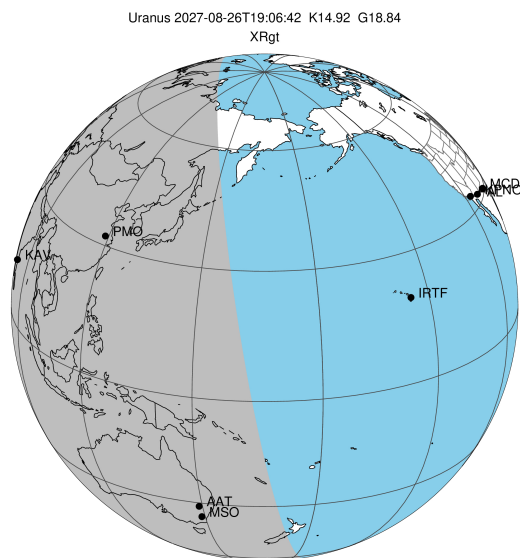


target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2027-08-26T19:06:42.330
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 144655975998312704
 2Mass ID (if available) : 04305782+2145397

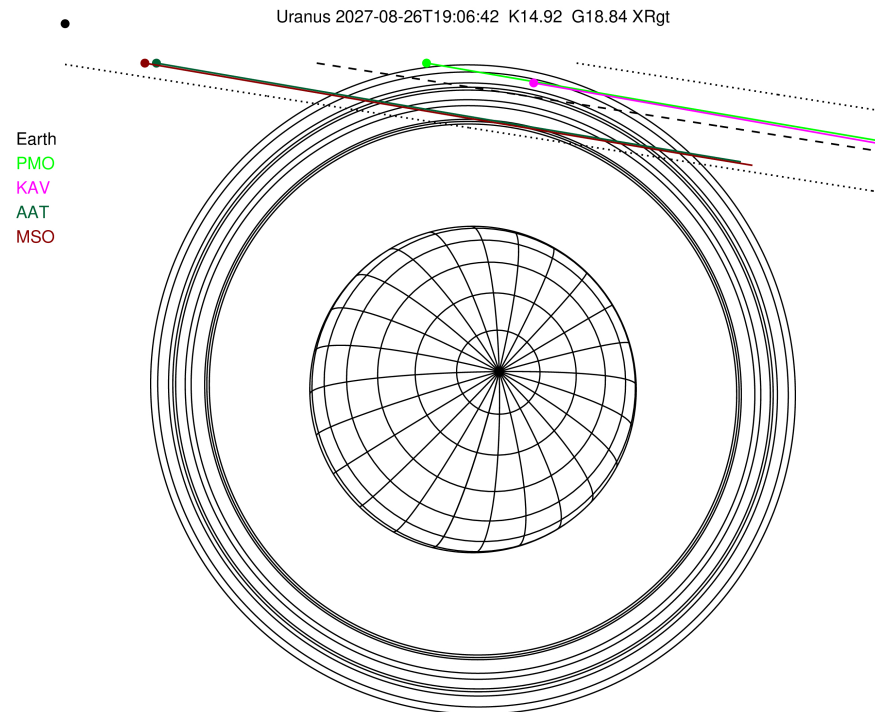
ICRS Star Coord at Epoch: 04h 30m 57.84119s +21:45:39.81783s

RUWE (>1.4 is poor) : 0.99
 K magnitude : 14.924
 G magnitude : 18.841
 RP magnitude : 17.724
 BP magnitude : 20.112
 DUPflag : 0
 Distance (au) : 19.468
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 9.69
 Sun-Target sep (deg) : 83.54
 Sun-Moon sep (deg) : 15.82
 B (ring opening deg) : 78.79
 PA of pole (deg) : -55.64

#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon

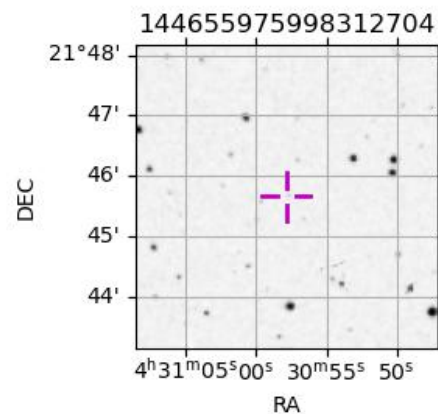


2027-08-26T19:06:42.3300 cr: 04 30 57.8412 s: +21 45 39.818 C/A 3.3111 PA 171.10 deg v_sky + 9.69 km/s D 19.47 AU
 Credit: Styled after SORA/Lucky Star

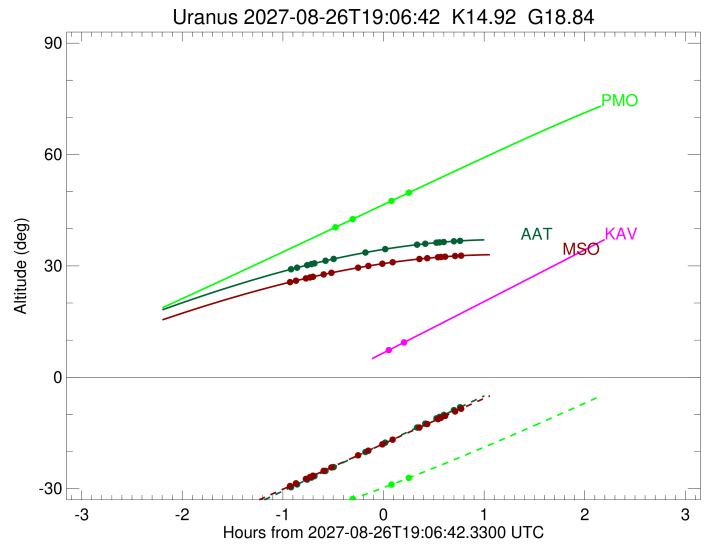
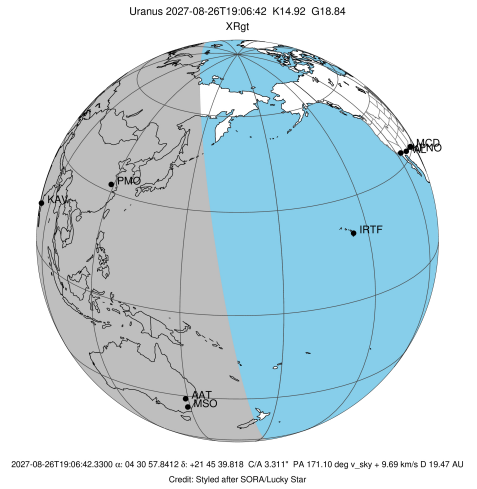


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1					PnnRnn
PAL	Palomar Mt (200")	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs. Nanki	32.1	118.8	++		++	AUG 26 18:40 - AUG 26 19:20	PnnRie
KPNO	Kitt Peak Natl Obs	32.0	248.4					PnnRnn
MCD	McDonald Obs. 2.7m	30.7	256.0					PnnRnn
TEN	Teide Obs./Tenerife	28.3	343.5					PnnRnn
IRTF	Mauna Kea/IRTF	19.8	204.5					PnnRnn
KAV	Kavalur Observatory	12.6	78.8			++	AUG 26 19:09 - AUG 26 19:18	PnnRne
RIO	Rio de Janeiro	-22.9	316.8					PnnRnn
ESO	European Southern Obs	-29.3	289.3					PnnRnn
AAT	Siding Spring (AAT)	-31.3	149.1	+++++++		+++++++	AUG 26 18:12 - AUG 26 19:52	PnnRie
SAAO	So. Afr. Astro. Obs.	-32.4	20.8					PnnRnn
MSO	Mt. Stromlo Observato	-35.3	149.0	+++++++		+++++++	AUG 26 18:12 - AUG 26 19:53	PnnRie



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2027-08-26T19:01:33.170
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : PMO
 Location : Purple Mtn Obs. Nanking
 Latitude (deg) : 32.06667
 E. Longitude (deg) : 118.82089
 Altitude (km) : 0.364
 Gaia source ID : 144655975998312704
 2Mass ID (if available) : 04305782+2145397
 ICRS Star Coord at Epoch: 04h 30m 57.84119s +21:45:39.81783s
 RUWE (>1.4 is poor) : 0.99
 K magnitude : 14.924
 G magnitude : 18.841
 RP magnitude : 17.724
 BP magnitude : 20.112
 DUPflag : 0
 Distance (au) : 19.469
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 9.69
 Sun-Target sep (deg) : 83.54
 Sun-Moon sep (deg) : 16.47
 B (ring opening deg) : 78.79
 PA of pole (deg) : -55.64
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 3.479
 C/A sky separation (km) : 49127.5
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 ura111.bsp
 IAU_URANUS_for_RINGFIT.tpc
 vgr2.ura111.bsp
 ura161.bsp
 vgr2.ura161.bsp
 peph.ura160.bsp
 earthstns_itrf93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk



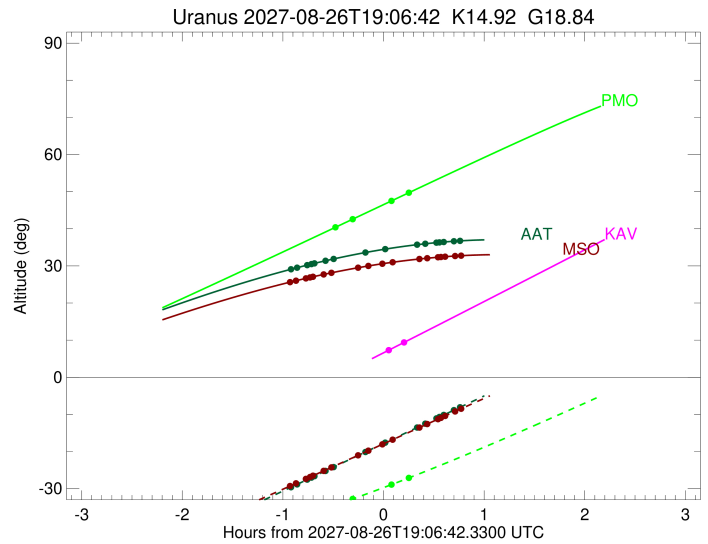
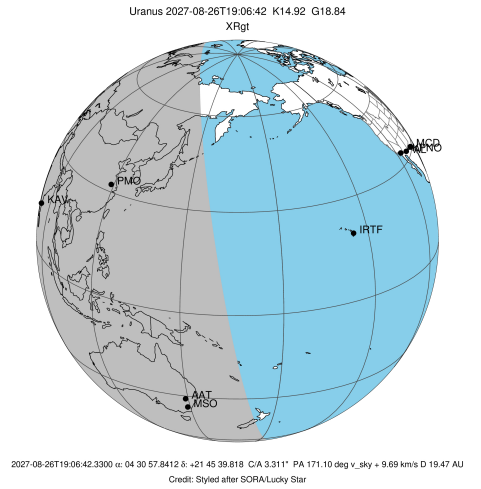
Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2027-08-26T18:40:14.100		40.86	-34.06	50868.54	-2.18		
lambda	I	2027-08-26T18:48:31.665		42.63	-32.75	50026.71	-1.25		

No planet occultations

lambda	E	2027-08-26T19:11:16.313		47.47	-28.95	50026.71	1.24		
epsilon	E	2027-08-26T19:20:49.648		49.50	-27.29	51027.59	2.17		

```

target                : Uranus
target radius (km)   : 25559.00
C/A epoch            : 2027-08-26T18:57:53.910
Event type           : XRgt
: No Uranus occs
: Ring occs: geocentric, topocentric
Observer code        : KAV
Location             : Kavalur Observatory
Latitude (deg)       : 12.57556
E. Longitude (deg)   : 78.83167
Altitude (km)        : 0.722
Gaia source ID       : 144655975998312704
2Mass ID (if available) : 04305782+2145397
ICRS Star Coord at Epoch: 04h 30m 57.84119s +21:45:39.81783s
RUWE (>1.4 is poor) : 0.99
K magnitude           : 14.924
G magnitude           : 18.841
RP magnitude          : 17.724
BP magnitude          : 20.112
DUPflag              : 0
Distance (au)         : 19.469
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s) : 9.69
Sun-Target sep (deg) : 83.54
Sun-Moon sep (deg)   : 16.64
B (ring opening deg) : 78.79
PA of pole (deg)     : -55.64
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 3.465
C/A sky separation (km) : 48932.2
NAIF SPICE kernels   : RAJobs_U111+rgf15.spk
URKALLvl1.spk
urall1.bsp
IAU_URANUS_for_RINGFIT.tpc
vgr2.urall1.bsp
ural61.bsp
vgr2.ural61.bsp
peph.ural60.bsp
earthstns_itrf93_040916.bsp
earth_720101_070426.bpc
earth_200101_990628_predict.bpc
pg3f0000r.bsp
pg490000r.bsp
naif0012.tls
earth_flat_IAU.spk
  
```

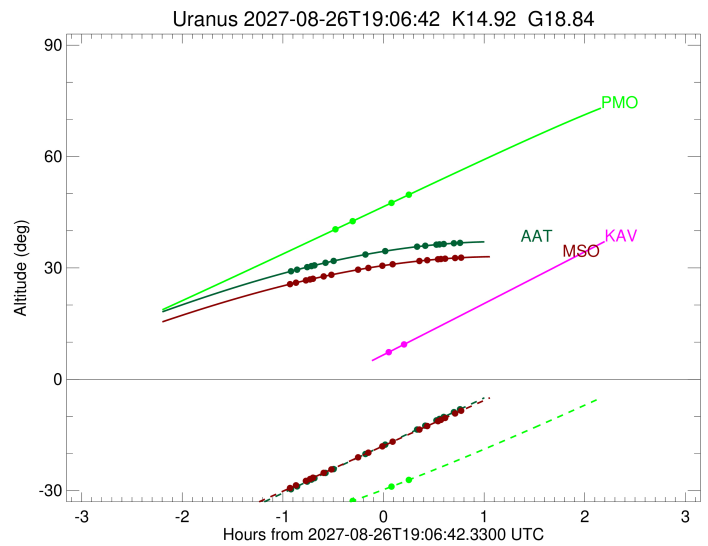
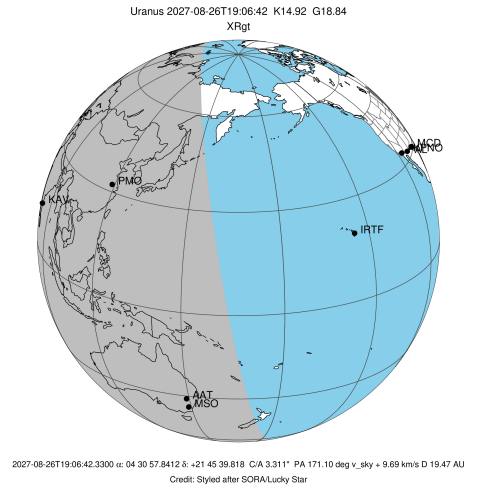


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2027-08-26T18:35:45.567	-0.46x	-67.06	50864.00	-2.40			
lambda	I	2027-08-26T18:42:55.414	1.17x	-67.20	50026.71	-1.55			

No planet occultations

lambda	E	2027-08-26T19:09:40.536	7.26	-66.51	50026.71	1.54			
epsilon	E	2027-08-26T19:18:05.344	9.19	-65.91	51034.65	2.37			

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2027-08-26T19:03:16.110
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : AAT
 Location : Siding Spring (AAT)
 Latitude (deg) : -31.27703
 E. Longitude (deg) : 149.06608
 Altitude (km) : 1.164
 Gaia source ID : 144655975998312704
 2Mass ID (if available) : 04305782+2145397
 ICRS Star Coord at Epoch: 04h 30m 57.84119s +21:45:39.81783s
 RUWE (>1.4 is poor) : 0.99
 K magnitude : 14.924
 G magnitude : 18.841
 RP magnitude : 17.724
 BP magnitude : 20.112
 DUPflag : 0
 Distance (au) : 19.469
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 9.69
 Sun-Target sep (deg) : 83.54
 Sun-Moon sep (deg) : 16.50
 B (ring opening deg) : 78.79
 PA of pole (deg) : -55.64
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.978
 C/A sky separation (km) : 42052.7
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 ura111.bsp
 IAU_URANUS_for_RINGFIT.tpc
 vgr2.ura111.bsp
 ura161.bsp
 vgr2.ura161.bsp
 peph.ura160.bsp
 earthstns_itr93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk

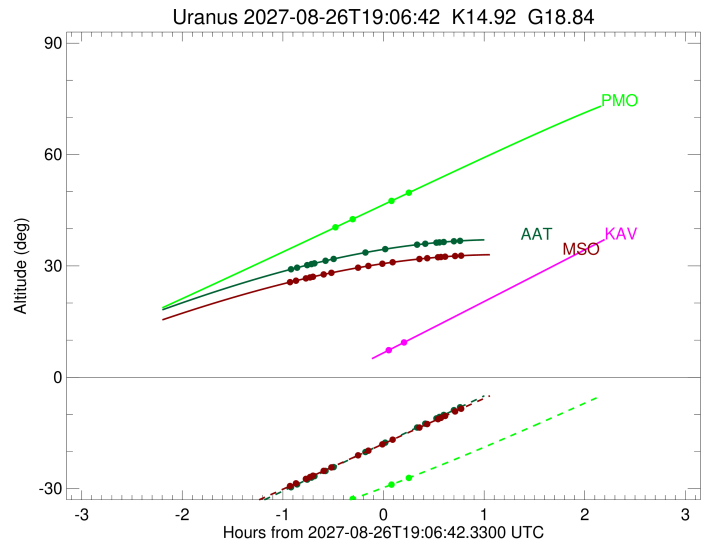
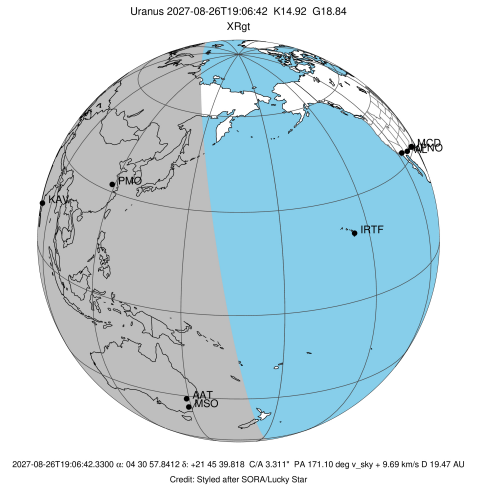


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2027-08-26T18:12:45.728		29.24	-29.37	50783.53	-5.24		
lambda	I	2027-08-26T18:15:13.716		29.52	-28.84	50026.71	-5.02		
delta	I	2027-08-26T18:21:15.345		30.21	-27.56	48300.35	-4.52		
gamma	I	2027-08-26T18:23:48.228		30.49	-27.01	47626.39	-4.29		
eta	I	2027-08-26T18:25:35.101		30.69	-26.63	47176.12	-4.13		
beta	I	2027-08-26T18:32:10.532		31.39	-25.22	45667.54	-3.49		
alpha	I	2027-08-26T18:36:53.330		31.86	-24.21	44752.16	-2.99		
4	I	2027-08-26T18:57:17.478		33.72	-19.84	42538.81	-0.58		

No planet occultations

4	E	2027-08-26T19:06:28.405		34.43	-17.88	42542.89	0.58		
alpha	E	2027-08-26T19:26:46.339		35.72	-13.53	44742.85	2.97		
beta	E	2027-08-26T19:31:37.453		35.96	-12.50	45678.86	3.47		
eta	E	2027-08-26T19:38:12.207		36.26	-11.09	47176.12	4.10		
gamma	E	2027-08-26T19:39:58.861		36.33	-10.72	47622.06	4.26		
delta	E	2027-08-26T19:42:33.972		36.43	-10.16	48300.35	4.48		
lambda	E	2027-08-26T19:48:38.776		36.64	-8.87	50026.71	4.97		
epsilon	E	2027-08-26T19:52:22.010		36.74	-8.08	51167.51	5.18		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2027-08-26T19:03:17.000
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : MSO
 Location : Mt. Stromlo Observatory
 Latitude (deg) : -35.32000
 E. Longitude (deg) : 149.00833
 Altitude (km) : 0.770
 Gaia source ID : 144655975998312704
 2Mass ID (if available) : 04305782+2145397
 ICRS Star Coord at Epoch: 04h 30m 57.84119s +21:45:39.81783s
 RUWE (>1.4 is poor) : 0.99
 K magnitude : 14.924
 G magnitude : 18.841
 RP magnitude : 17.724
 BP magnitude : 20.112
 DUPflag : 0
 Distance (au) : 19.469
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 9.69
 Sun-Target sep (deg) : 83.54
 Sun-Moon sep (deg) : 16.49
 B (ring opening deg) : 78.79
 PA of pole (deg) : -55.64
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.959
 C/A sky separation (km) : 41784.1
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 ura111.bsp
 IAU_URANUS_for_RINGFIT.tpc
 vgr2.ura111.bsp
 ura161.bsp
 vgr2.ura161.bsp
 peph.ura160.bsp
 earthstns_itr93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2027-08-26T18:12:09.263		25.75	-29.06	50781.77	-5.32		
lambda	I	2027-08-26T18:14:34.435		26.02	-28.57	50026.71	-5.11		
delta	I	2027-08-26T18:20:28.863		26.64	-27.37	48300.35	-4.62		
gamma	I	2027-08-26T18:22:58.069		26.90	-26.86	47626.46	-4.41		
eta	I	2027-08-26T18:24:42.123		27.08	-26.51	47176.12	-4.25		
beta	I	2027-08-26T18:31:04.496		27.71	-25.21	45667.23	-3.64		
alpha	I	2027-08-26T18:35:33.967		28.13	-24.30	44752.23	-3.16		
4	I	2027-08-26T18:52:17.796		29.57	-20.88	42536.66	-1.21		
5	I	2027-08-26T19:02:31.864		30.34	-18.78	42241.30	0.47		

No planet occultations

5	E	2027-08-26T19:01:11.232		30.24	-19.06	42240.29	-0.47		
4	E	2027-08-26T19:11:31.667		30.94	-16.94	42545.25	1.21		
alpha	E	2027-08-26T19:28:09.187		31.86	-13.54	44742.42	3.15		
beta	E	2027-08-26T19:32:46.910		32.07	-12.60	45679.00	3.61		
eta	E	2027-08-26T19:39:08.526		32.33	-11.30	47176.12	4.22		
gamma	E	2027-08-26T19:40:52.337		32.39	-10.95	47622.02	4.37		
delta	E	2027-08-26T19:43:23.732		32.48	-10.43	48300.35	4.59		
lambda	E	2027-08-26T19:49:21.235		32.66	-9.22	50026.71	5.06		
epsilon	E	2027-08-26T19:53:01.464		32.75	-8.47	51171.20	5.27		