

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T12:02:19.110
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 338260900988577792
 2Mass ID (if available) : 06302372+2335207

ICRS Star Coord at Epoch: 06h 30m 23.72075s +23:35:20.62991s

RUWE (>1.4 is poor) : 1.03
 K magnitude : 13.960
 G magnitude : 15.359
 RP magnitude : 14.901
 BP magnitude : 15.648
 DUPflag : 0
 Distance (au) : 18.009
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.91
 Sun-Target sep (deg) : 152.11
 Sun-Moon sep (deg) : 49.89
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.92

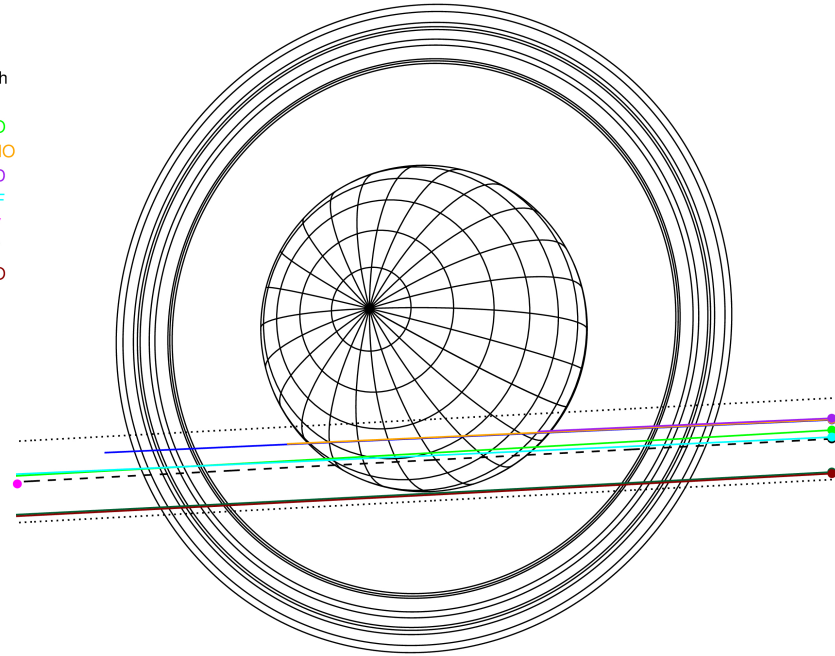
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2035-01-25T12:02:19.1100 α: 06 30 23.7208 δ: +23 35 20.630 C/A 1.573° PA 3.03 deg v_sky -19.91 km/s D 18.01 AU
 Credit: Styled after SORA/Lucky Star

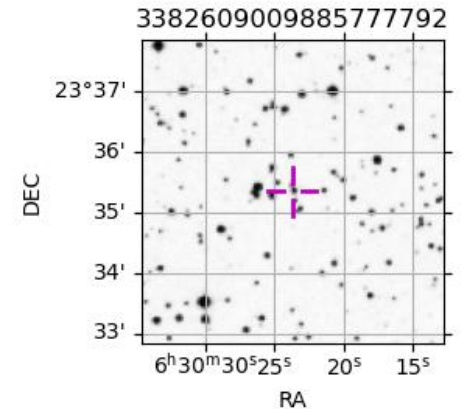
Uranus 2035-01-25T12:02:19 K13.96 G15.36 PgtRgt

Earth
 PAL
 PMO
 KPNO
 MCD
 IRTF
 KAV
 AAT
 MSO

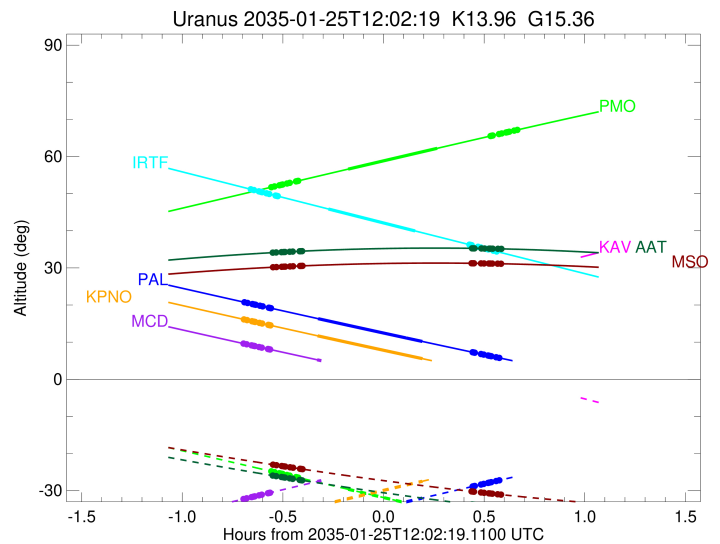
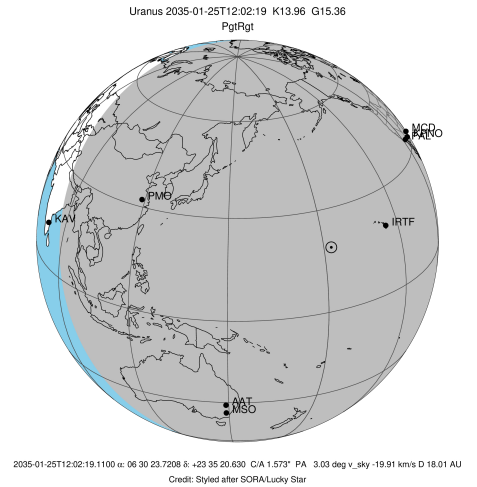


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+++++	+ +	+++++	JAN 25 11:20 - JAN 25 12:36	PieRie
PMO	Purple Mtn Obs. Nanki	32.1	118.8	+++++	+ +	+++++	JAN 25 11:28 - JAN 25 12:41	PieRie
KPNO	Kitt Peak Natl Obs	32.0	248.4	+++++	+ +	+++++	JAN 25 11:20 - JAN 25 12:13	PieRin
MCD	McDonald Obs. 2.7m	30.7	256.0	+++++	+	+++++	JAN 25 11:20 - JAN 25 11:42	PinRin
TEN	Teide Obs./Tenerife	28.3	343.5					PnnRnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+++++	+ +	+++++	JAN 25 11:22 - JAN 25 12:35	PieRie
KAV	Kavalur Observatory	12.6	78.8					PnnRnn
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	+++++		+++++	JAN 25 11:29 - JAN 25 12:37	PnnRie
SAAO	So. Afr. Astro. Obs.	-32.4	20.8					PnnRnn
MSO	Mt. Stromlo Observato	-35.3	149.0	+++++		+++++	JAN 25 11:29 - JAN 25 12:37	PnnRie

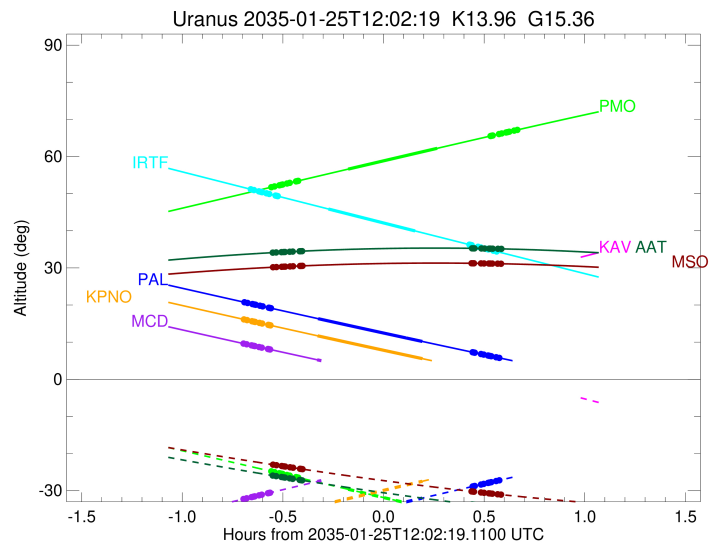
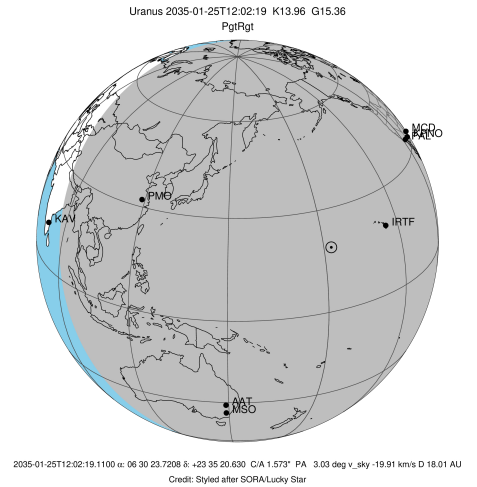


target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T11:58:07.410
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : PAL
 Location : Palomar Mt (200")
 Latitude (deg) : 33.35622
 E. Longitude (deg) : 243.13601
 Altitude (km) : 1.706
 Gaia source ID : 3382609009885777792
 2Mass ID (if available) : 06302372+2335207
 ICRS Star Coord at Epoch: 06h 30m 23.72075s +23:35:20.62991s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 13.960
 G magnitude : 15.359
 RP magnitude : 14.901
 BP magnitude : 15.648
 DUPflag : 0
 Distance (au) : 18.009
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.91
 Sun-Target sep (deg) : 152.11
 Sun-Moon sep (deg) : 49.55
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.92
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.315
 C/A sky separation (km) : 17171.0
 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	2035-01-25T11:20:49.143		20.75	-43.11	51205.25	-19.87		
lambda	I	2035-01-25T11:21:48.390		20.55	-42.90	50026.71	-19.86		
delta	I	2035-01-25T11:23:15.537		20.26	-42.60	48300.35	-19.76		
gamma	I	2035-01-25T11:23:49.596		20.14	-42.48	47628.13	-19.72		
eta	I	2035-01-25T11:24:12.541		20.07	-42.40	47176.12	-19.69		
beta	I	2035-01-25T11:25:30.738		19.80	-42.13	45641.93	-19.58		
alpha	I	2035-01-25T11:26:16.941		19.65	-41.97	44734.13	-19.51		
4	I	2035-01-25T11:28:10.711		19.26	-41.57	42525.94	-19.32		
5	I	2035-01-25T11:28:21.401		19.23	-41.54	42308.05	-19.30		
6	I	2035-01-25T11:28:47.771		19.14	-41.44	41797.45	-19.24		
Uranus	I	2035-01-25T11:42:47.971		16.33	-38.52	25109.06		-19.50	-20.35
Uranus	E	2035-01-25T12:13:52.608		10.19	-32.01	25465.92		8.64	9.04
6	E	2035-01-25T12:28:53.898		7.28	-28.88	41852.13	19.13		
5	E	2035-01-25T12:29:12.726		7.22	-28.81	42211.15	19.19		
4	E	2035-01-25T12:29:32.375		7.16	-28.74	42600.84	19.21		
alpha	E	2035-01-25T12:31:22.801		6.80	-28.36	44729.02	19.39		
beta	E	2035-01-25T12:32:11.186		6.65	-28.19	45670.70	19.46		
eta	E	2035-01-25T12:33:28.404		6.40	-27.92	47176.12	19.56		
gamma	E	2035-01-25T12:33:51.504		6.33	-27.84	47628.27	19.59		
delta	E	2035-01-25T12:34:25.780		6.22	-27.72	48300.35	19.63		
lambda	E	2035-01-25T12:35:53.515		5.94	-27.42	50026.71	19.72		
epsilon	E	2035-01-25T12:36:35.017		5.80	-27.28	50846.20	19.73		

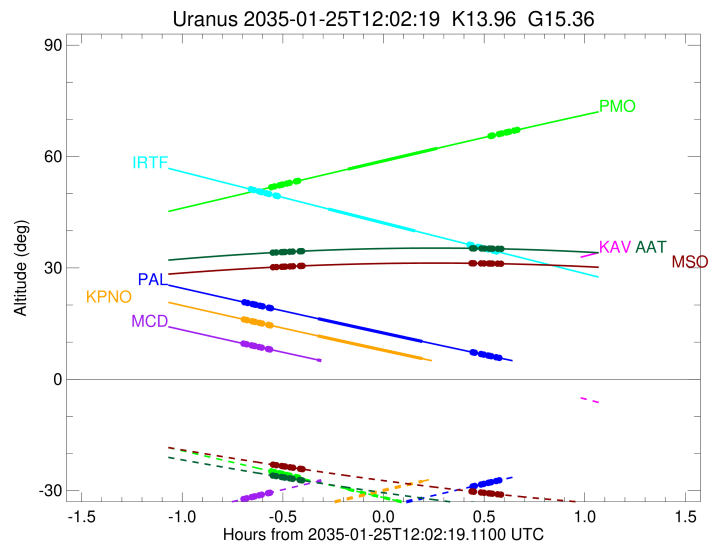
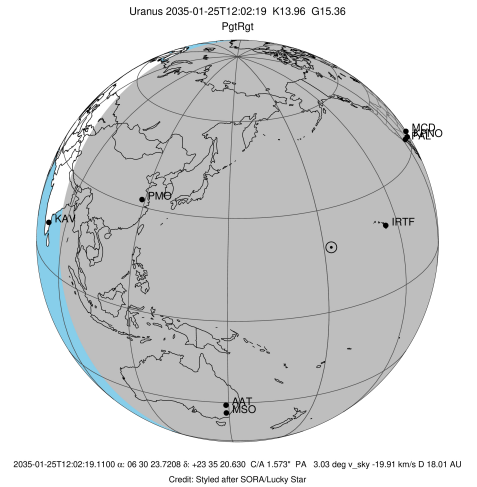
target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T12:04:49.030
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : PMO
 Location : Purple Mtn Obs. Nanking
 Latitude (deg) : 32.06667
 E. Longitude (deg) : 118.82089
 Altitude (km) : 0.364
 Gaia source ID : 3382609009885777792
 2Mass ID (if available) : 06302372+2335207
 ICRS Star Coord at Epoch: 06h 30m 23.72075s +23:35:20.62991s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 13.960
 G magnitude : 15.359
 RP magnitude : 14.901
 BP magnitude : 15.648
 DUPflag : 0
 Distance (au) : 18.009
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.91
 Sun-Target sep (deg) : 152.11
 Sun-Moon sep (deg) : 50.84
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.92
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.495
 C/A sky separation (km) : 19521.7
 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_itrff93_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	2035-01-25T11:28:50.979		51.74	-24.80	51189.51	-19.69		
lambda	I	2035-01-25T11:29:49.963		51.95	-25.01	50026.71	-19.67		
delta	I	2035-01-25T11:31:18.003		52.26	-25.31	48300.35	-19.54		
gamma	I	2035-01-25T11:31:52.440		52.38	-25.43	47628.34	-19.49		
eta	I	2035-01-25T11:32:15.670		52.46	-25.52	47176.12	-19.45		
beta	I	2035-01-25T11:33:34.898		52.74	-25.79	45641.68	-19.31		
alpha	I	2035-01-25T11:34:21.684		52.91	-25.96	44735.55	-19.22		
4	I	2035-01-25T11:36:17.415		53.32	-26.36	42525.95	-18.97		
5	I	2035-01-25T11:36:28.259		53.36	-26.40	42309.67	-18.94		
6	I	2035-01-25T11:36:55.247		53.45	-26.50	41796.72	-18.87		
Uranus	I	2035-01-25T11:51:45.038		56.60	-29.63	25155.10		-18.41	-19.22
Uranus	E	2035-01-25T12:18:20.551		62.21	-35.26	25515.18		5.91	6.19
6	E	2035-01-25T12:34:14.072		65.53	-38.63	41849.17	18.91		
5	E	2035-01-25T12:34:33.574		65.60	-38.70	42216.78	18.99		
4	E	2035-01-25T12:34:53.052		65.66	-38.77	42598.28	19.01		
alpha	E	2035-01-25T12:36:44.647		66.05	-39.16	44731.21	19.27		
beta	E	2035-01-25T12:37:33.161		66.21	-39.33	45669.50	19.35		
eta	E	2035-01-25T12:38:50.761		66.48	-39.61	47176.12	19.50		
gamma	E	2035-01-25T12:39:13.943		66.56	-39.69	47628.58	19.54		
delta	E	2035-01-25T12:39:48.278		66.68	-39.81	48300.35	19.59		
lambda	E	2035-01-25T12:41:16.083		66.98	-40.12	50026.71	19.73		
epsilon	E	2035-01-25T12:41:56.772		67.12	-40.27	50830.56	19.74		

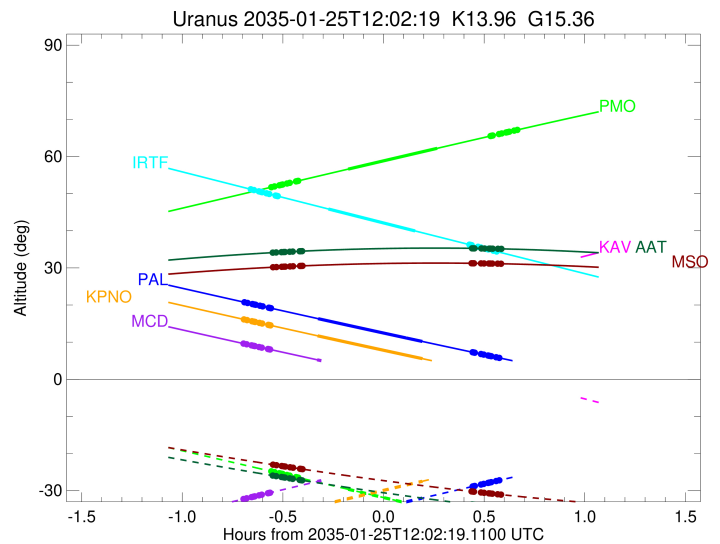
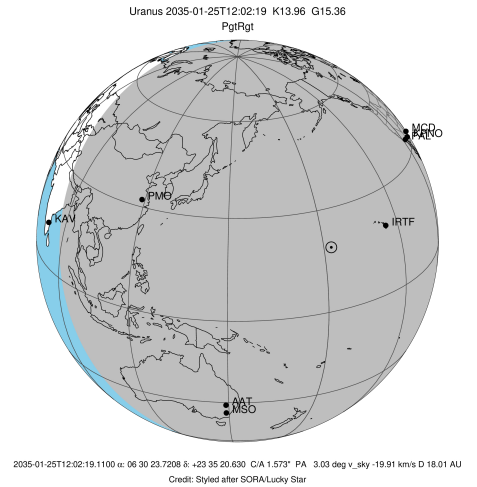
```

target                : Uranus
target radius (km)    : 25559.00
C/A epoch             : 2035-01-25T11:58:04.190
Event type            : PgtRgt
: Uranus occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code         : KPNO
Location              : Kitt Peak Natl Obs
Latitude (deg)        : 31.96333
E. Longitude (deg)    : 248.40000
Altitude (km)         : 2.120
Gaia source ID        : 3382609009885777792
2Mass ID (if available) : 06302372+2335207
ICRS Star Coord at Epoch: 06h 30m 23.72075s +23:35:20.62991s
RUWE (>1.4 is poor)  : 1.03
K magnitude           : 13.960
G magnitude           : 15.359
RP magnitude          : 14.901
BP magnitude          : 15.648
DUPflag               : 0
Distance (au)         : 18.009
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s)  : -19.91
Sun-Target sep (deg)  : 152.11
Sun-Moon sep (deg)    : 49.49
B (ring opening deg)  : 69.13
PA of pole (deg)      : 69.92
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 1.308
C/A sky separation (km) : 17088.5
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_itrff93_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	2035-01-25T11:20:40.344		16.13	-38.77	51205.92	-19.85		
lambda	I	2035-01-25T11:21:39.689		15.93	-38.56	50026.71	-19.84		
delta	I	2035-01-25T11:23:06.926		15.63	-38.25	48300.35	-19.74		
gamma	I	2035-01-25T11:23:41.020		15.52	-38.13	47628.12	-19.70		
eta	I	2035-01-25T11:24:03.987		15.44	-38.05	47176.12	-19.67		
beta	I	2035-01-25T11:25:22.257		15.18	-37.77	45641.94	-19.56		
alpha	I	2035-01-25T11:26:08.506		15.02	-37.60	44734.07	-19.49		
4	I	2035-01-25T11:28:02.369		14.64	-37.20	42525.94	-19.30		
5	I	2035-01-25T11:28:13.069		14.60	-37.16	42307.98	-19.28		
6	I	2035-01-25T11:28:39.454		14.52	-37.07	41797.48	-19.23		
Uranus	I	2035-01-25T11:42:39.346		11.71	-34.10	25107.63		-19.53	-20.38
Uranus	E	2035-01-25T12:13:54.759		5.55	-27.47	25464.20		8.72	9.13
6	E	2035-01-25T12:28:55.643	2.66x	-24.31	41852.22	19.12			
5	E	2035-01-25T12:29:14.473	2.60x	-24.24	42210.99	19.17			
4	E	2035-01-25T12:29:34.150	2.54x	-24.17	42600.91	19.19			
alpha	E	2035-01-25T12:31:24.671	2.19x	-23.78	44728.96	19.38			
beta	E	2035-01-25T12:32:13.110	2.03x	-23.61	45670.74	19.44			
eta	E	2035-01-25T12:33:30.407	1.79x	-23.34	47176.12	19.54			
gamma	E	2035-01-25T12:33:53.532	1.71x	-23.26	47628.26	19.57			
delta	E	2035-01-25T12:34:27.846	1.61x	-23.14	48300.35	19.61			
lambda	E	2035-01-25T12:35:55.681	1.33x	-22.83	50026.71	19.70			
epsilon	E	2035-01-25T12:36:37.256	1.20x	-22.69	50846.66	19.70			

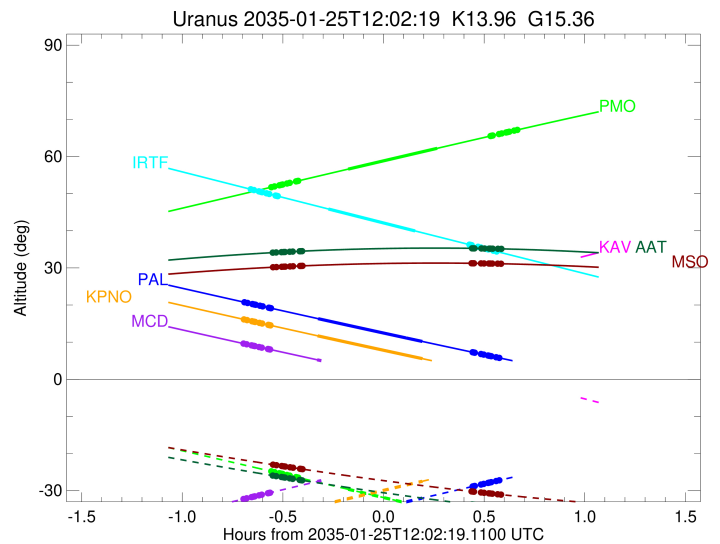
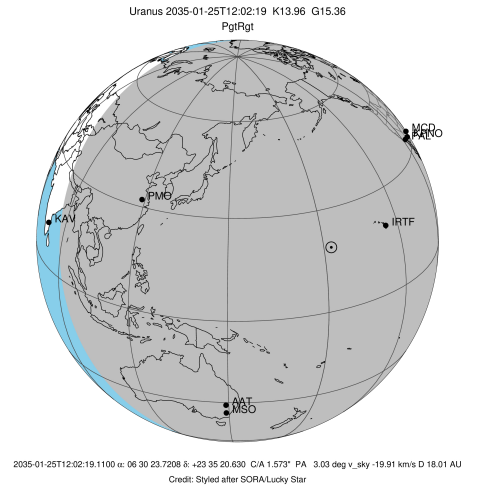
target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T11:58:05.970
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : MCD
 Location : McDonald Obs. 2.7m
 Latitude (deg) : 30.67158
 E. Longitude (deg) : 255.97844
 Altitude (km) : 2.075
 Gaia source ID : 3382609009885777792
 2Mass ID (if available) : 06302372+2335207
 ICRS Star Coord at Epoch: 06h 30m 23.72075s +23:35:20.62991s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 13.960
 G magnitude : 15.359
 RP magnitude : 14.901
 BP magnitude : 15.648
 DUPflag : 0
 Distance (au) : 18.009
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.91
 Sun-Target sep (deg) : 152.11
 Sun-Moon sep (deg) : 49.41
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.92
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.295
 C/A sky separation (km) : 16912.8
 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_itrff93_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	2035-01-25T11:20:32.763		9.62	-32.27	51207.44	-19.82		
lambda	I	2035-01-25T11:21:32.258		9.42	-32.06	50026.71	-19.81		
delta	I	2035-01-25T11:22:59.597		9.13	-31.74	48300.35	-19.72		
gamma	I	2035-01-25T11:23:33.730		9.01	-31.62	47628.09	-19.68		
eta	I	2035-01-25T11:23:56.719		8.94	-31.54	47176.12	-19.65		
beta	I	2035-01-25T11:25:15.064		8.68	-31.26	45641.97	-19.54		
alpha	I	2035-01-25T11:26:01.361		8.52	-31.09	44733.94	-19.48		
4	I	2035-01-25T11:27:55.299		8.14	-30.69	42525.95	-19.29		
5	I	2035-01-25T11:28:06.011		8.11	-30.65	42307.82	-19.27		
6	I	2035-01-25T11:28:32.399		8.02	-30.55	41797.55	-19.22		
Uranus	I	2035-01-25T11:42:30.758		5.25	-27.56	25104.58		-19.60	-20.46
Uranus	E	2035-01-25T12:14:06.742	-0.87x	-20.83	-20.83	25460.60		8.89	9.30
6	E	2035-01-25T12:29:05.710	-3.69x	-17.66	-17.66	41852.39	19.11		
5	E	2035-01-25T12:29:24.523	-3.75x	-17.59	-17.59	42210.65	19.16		
4	E	2035-01-25T12:29:44.234	-3.81x	-17.53	-17.53	42601.06	19.18		
alpha	E	2035-01-25T12:31:34.821	-4.16x	-17.14	-17.14	44728.83	19.36		
beta	E	2035-01-25T12:32:23.312	-4.31x	-16.97	-16.97	45670.81	19.42		
eta	E	2035-01-25T12:33:40.681	-4.55x	-16.70	-16.70	47176.12	19.52		
gamma	E	2035-01-25T12:34:03.829	-4.62x	-16.61	-16.61	47628.24	19.55		
delta	E	2035-01-25T12:34:38.181	-4.72x	-16.49	-16.49	48300.35	19.58		
lambda	E	2035-01-25T12:36:06.120	-5.00x	-16.19	-16.19	50026.71	19.68		
epsilon	E	2035-01-25T12:36:47.794	-5.12x	-16.04	-16.04	50847.59	19.68		

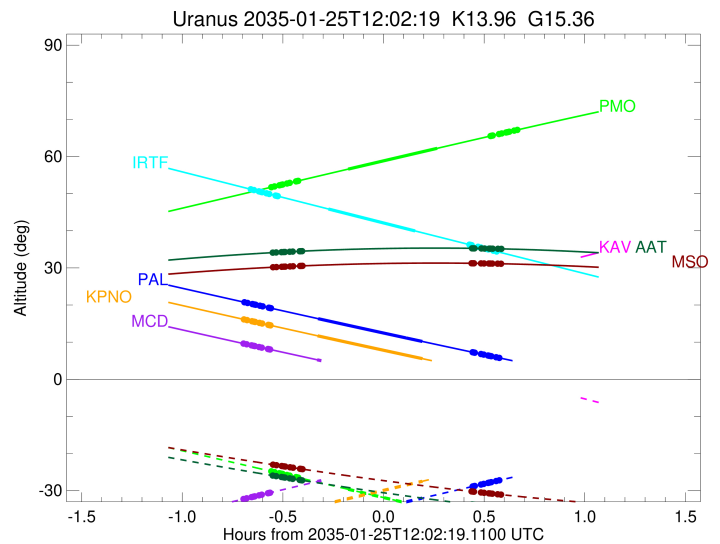
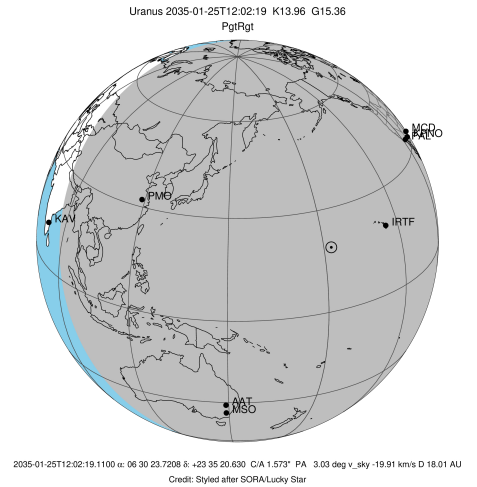

```

target                : Uranus
target radius (km)   : 25559.00
C/A epoch            : 2035-01-25T11:58:34.890
Event type          : PgtRgt
: Uranus occs: geocentric, topocentric
: Ring occs: geocentric, topocentric
Observer code       : IRTF
Location            : Mauna Kea/IRTF
Latitude (deg)      : 19.82622
E. Longitude (deg)  : 204.52800
Altitude (km)       : 4.168
Gaia source ID      : 3382609009885777792
2Mass ID (if available) : 06302372+2335207
ICRS Star Coord at Epoch: 06h 30m 23.72075s +23:35:20.62991s
RUWE (>1.4 is poor) : 1.03
K magnitude          : 13.960
G magnitude          : 15.359
RP magnitude         : 14.901
BP magnitude         : 15.648
DUPflag             : 0
Distance (au)       : 18.009
f0 (km)             : 0.000
g0 (km)             : 0.000
skyplane vel. (km/s) : -19.91
Sun-Target sep (deg) : 152.11
Sun-Moon sep (deg)  : 49.93
B (ring opening deg) : 69.13
PA of pole (deg)    : 69.92
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 1.525
C/A sky separation (km) : 19921.4
NAIF SPICE kernels  : RAJobs_U111+rgf15.spk
URKALLvl1.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	2035-01-25T11:22:44.137		51.18	-78.50	51181.91	-19.65		
lambda	I	2035-01-25T11:23:42.848		50.96	-78.27	50026.71	-19.63		
delta	I	2035-01-25T11:25:11.092		50.62	-77.92	48300.35	-19.49		
gamma	I	2035-01-25T11:25:45.615		50.49	-77.79	47628.43	-19.43		
eta	I	2035-01-25T11:26:08.916		50.40	-77.70	47176.12	-19.39		
beta	I	2035-01-25T11:27:28.401		50.09	-77.39	45641.59	-19.24		
alpha	I	2035-01-25T11:28:15.319		49.91	-77.20	44736.13	-19.15		
4	I	2035-01-25T11:30:11.560		49.47	-76.75	42525.99	-18.88		
5	I	2035-01-25T11:30:22.442		49.43	-76.70	42310.27	-18.85		
6	I	2035-01-25T11:30:49.603		49.32	-76.60	41796.46	-18.77		
Uranus	I	2035-01-25T11:45:52.922		45.87	-73.05	25170.20		-18.04	-18.84
Uranus	E	2035-01-25T12:11:45.662		39.95	-66.97	25519.08		5.64	5.90
6	E	2035-01-25T12:27:57.439		36.26	-63.16	41849.13	18.69		
5	E	2035-01-25T12:28:17.175		36.19	-63.08	42216.83	18.76		
4	E	2035-01-25T12:28:36.878		36.11	-63.00	42598.26	18.79		
alpha	E	2035-01-25T12:30:29.752		35.68	-62.56	44731.20	19.05		
beta	E	2035-01-25T12:31:18.808		35.50	-62.37	45669.50	19.14		
eta	E	2035-01-25T12:32:37.260		35.20	-62.06	47176.12	19.29		
gamma	E	2035-01-25T12:33:00.694		35.11	-61.97	47628.58	19.33		
delta	E	2035-01-25T12:33:35.400		34.98	-61.83	48300.35	19.38		
lambda	E	2035-01-25T12:35:04.143		34.64	-61.49	50026.71	19.52		
epsilon	E	2035-01-25T12:35:45.282		34.49	-61.33	50830.96	19.54		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T12:02:23.400
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : 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 : 3382609009885777792
 2Mass ID (if available) : 06302372+2335207
 ICRS Star Coord at Epoch: 06h 30m 23.72075s +23:35:20.62991s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 13.960
 G magnitude : 15.359
 RP magnitude : 14.901
 BP magnitude : 15.648
 DUPflag : 0
 Distance (au) : 18.009
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.91
 Sun-Target sep (deg) : 152.11
 Sun-Moon sep (deg) : 50.31
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.92
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.978
 C/A sky separation (km) : 25840.1
 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

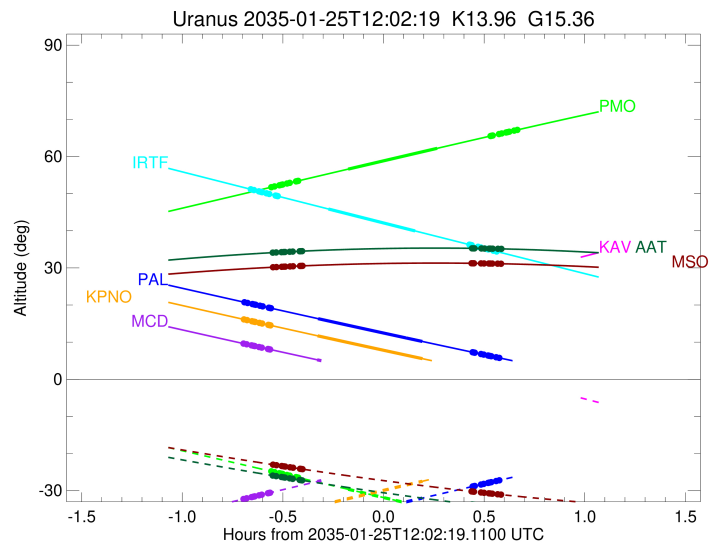
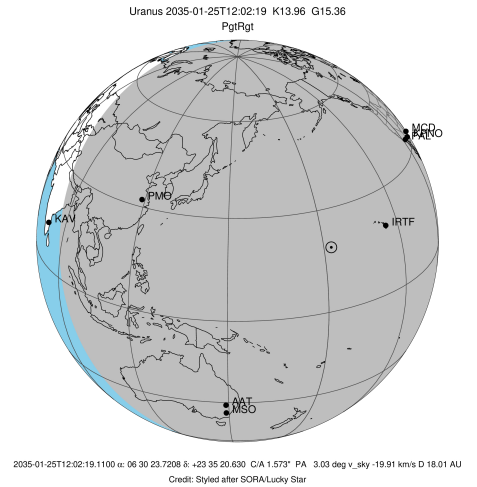


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-01-25T11:29:20.041		34.12	-25.95	51131.12	-18.41		
lambda	I	2035-01-25T11:30:19.995		34.16	-26.10	50026.71	-18.35		
delta	I	2035-01-25T11:31:54.727		34.24	-26.33	48300.35	-18.10		
gamma	I	2035-01-25T11:32:31.932		34.27	-26.42	47629.08	-17.99		
eta	I	2035-01-25T11:32:57.164		34.29	-26.49	47176.12	-17.91		
beta	I	2035-01-25T11:34:23.535		34.35	-26.70	45641.13	-17.62		
alpha	I	2035-01-25T11:35:14.572		34.39	-26.82	44740.27	-17.47		
4	I	2035-01-25T11:37:23.005		34.48	-27.13	42526.95	-16.98		
5	I	2035-01-25T11:37:35.124		34.49	-27.16	42313.79	-16.92		
6	I	2035-01-25T11:38:05.690		34.51	-27.24	41795.05	-16.79		

No planet occultations

6	E	2035-01-25T12:28:42.290		35.27	-33.73	41841.70	16.79		
5	E	2035-01-25T12:29:05.492		35.26	-33.78	42230.79	16.92		
4	E	2035-01-25T12:29:26.265		35.26	-33.81	42591.54	16.98		
alpha	E	2035-01-25T12:31:30.889		35.23	-34.04	44736.14	17.47		
beta	E	2035-01-25T12:32:23.845		35.22	-34.13	45666.51	17.64		
eta	E	2035-01-25T12:33:48.797		35.20	-34.29	47176.12	17.91		
gamma	E	2035-01-25T12:34:14.043		35.19	-34.33	47629.27	17.99		
delta	E	2035-01-25T12:34:51.243		35.18	-34.39	48300.35	18.09		
lambda	E	2035-01-25T12:36:25.991		35.15	-34.56	50026.71	18.34		
epsilon	E	2035-01-25T12:37:07.990		35.13	-34.63	50799.33	18.40		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-01-25T12:02:22.130
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : 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 : 3382609009885777792
 2Mass ID (if available) : 06302372+2335207
 ICRS Star Coord at Epoch: 06h 30m 23.72075s +23:35:20.62991s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 13.960
 G magnitude : 15.359
 RP magnitude : 14.901
 BP magnitude : 15.648
 DUPflag : 0
 Distance (au) : 18.009
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -19.91
 Sun-Target sep (deg) : 152.11
 Sun-Moon sep (deg) : 50.26
 B (ring opening deg) : 69.13
 PA of pole (deg) : 69.92
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.997
 C/A sky separation (km) : 26084.0
 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	2035-01-25T11:29:24.584		30.18	-23.01	51128.84	-18.33		
lambda	I	2035-01-25T11:30:24.673		30.23	-23.15	50026.71	-18.27		
delta	I	2035-01-25T11:31:59.842		30.30	-23.37	48300.35	-18.01		
gamma	I	2035-01-25T11:32:37.227		30.32	-23.46	47629.10	-17.90		
eta	I	2035-01-25T11:33:02.587		30.34	-23.52	47176.12	-17.82		
beta	I	2035-01-25T11:34:29.414		30.40	-23.71	45641.12	-17.54		
alpha	I	2035-01-25T11:35:20.730		30.44	-23.83	44740.44	-17.37		
4	I	2035-01-25T11:37:29.963		30.52	-24.12	42527.02	-16.87		
5	I	2035-01-25T11:37:42.170		30.53	-24.15	42313.90	-16.81		
6	I	2035-01-25T11:38:12.953		30.55	-24.22	41795.01	-16.67		

No planet occultations

6	E	2035-01-25T12:28:33.722		31.25	-30.21	41841.37	16.67		
5	E	2035-01-25T12:28:57.139		31.24	-30.25	42231.39	16.81		
4	E	2035-01-25T12:29:18.004		31.24	-30.29	42591.24	16.87		
alpha	E	2035-01-25T12:31:23.430		31.21	-30.50	44736.33	17.37		
beta	E	2035-01-25T12:32:16.667		31.20	-30.58	45666.38	17.54		
eta	E	2035-01-25T12:33:42.076		31.18	-30.72	47176.12	17.82		
gamma	E	2035-01-25T12:34:07.450		31.17	-30.76	47629.30	17.90		
delta	E	2035-01-25T12:34:44.830		31.16	-30.82	48300.35	18.01		
lambda	E	2035-01-25T12:36:20.016		31.14	-30.98	50026.71	18.26		
epsilon	E	2035-01-25T12:37:02.135		31.12	-31.04	50798.17	18.32		