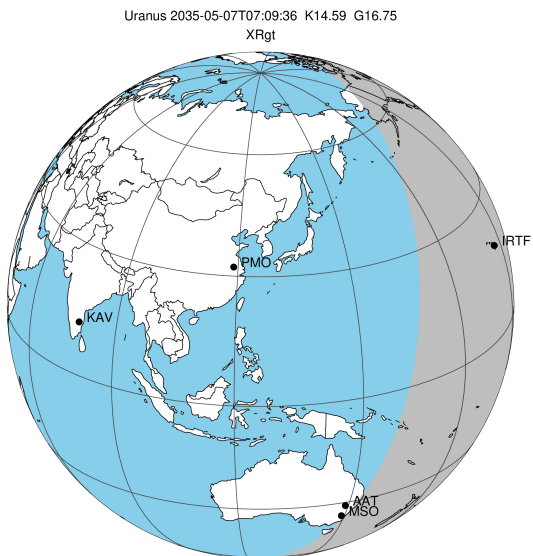


target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-07T07:09:36.110
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3382600656170316032
 2Mass ID (if available) : 06312785+2333565

ICRS Star Coord at Epoch: 06h 31m 27.85230s +23:33:56.46073s

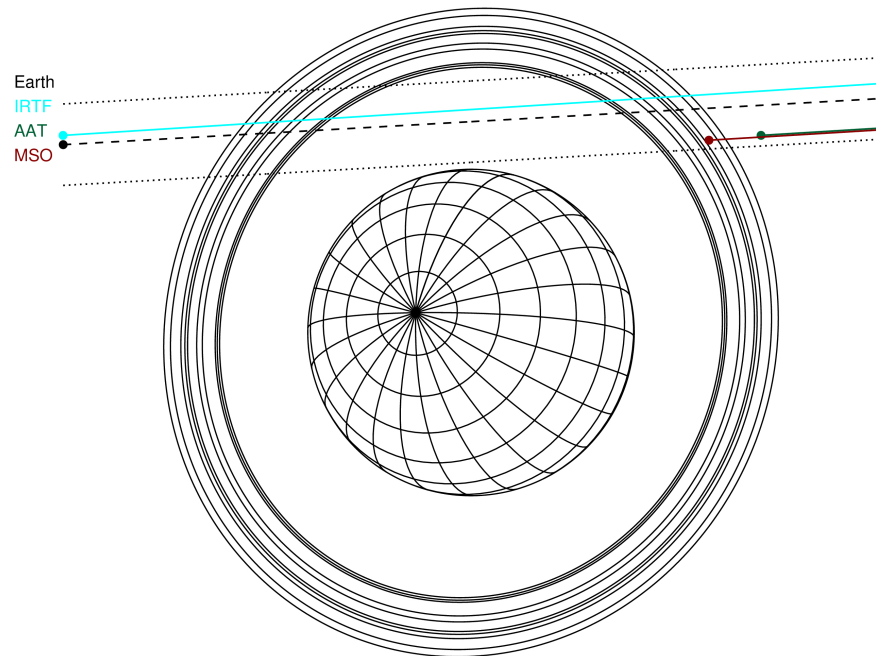
RUWE (>1.4 is poor) : 1.11
 K magnitude : 14.589
 G magnitude : 16.746
 RP magnitude : 16.016
 BP magnitude : 17.342
 DUPflag : 0
 Distance (au) : 19.484
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 25.12
 Sun-Target sep (deg) : 51.11
 Sun-Moon sep (deg) : 58.73
 B (ring opening deg) : 68.90
 PA of pole (deg) : 70.30

#	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



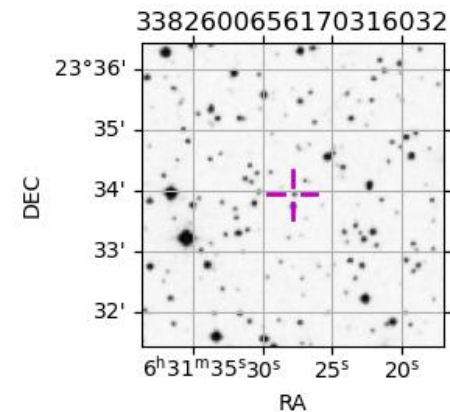
2035-05-07T07:09:36.1100 ex: 06 31 27.8523 s: +23 33 56.461 C/A 2.340° PA 183.23 deg v_sky +25.12 km/s D 19.48 AU
 Credit: Styled after SORA/Lucky Star

Uranus 2035-05-07T07:09:36 K14.59 G16.75 XRgt

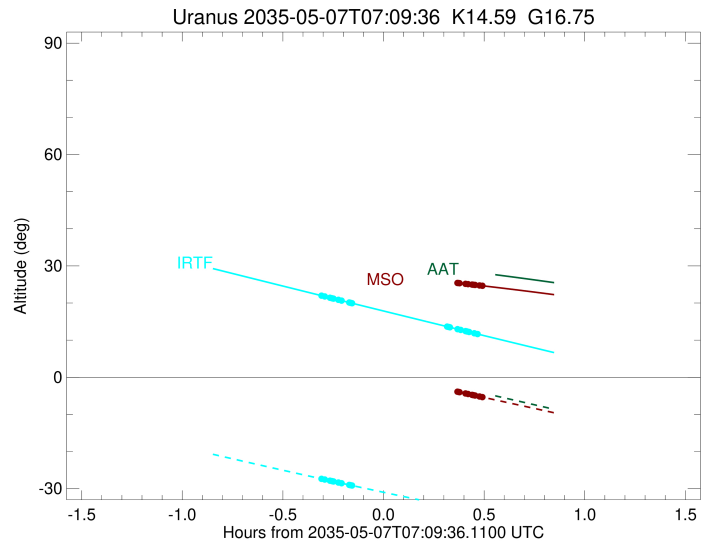
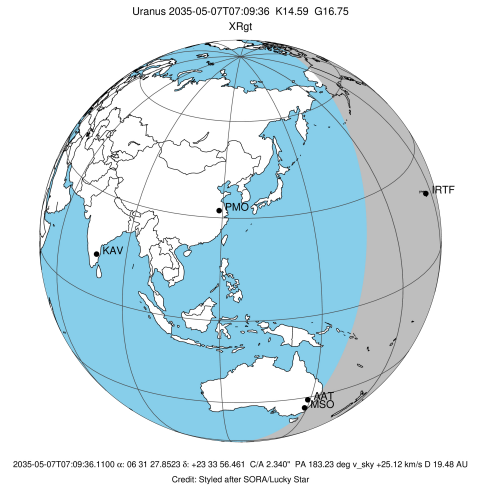


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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					PnnRnn
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	+++++		+++++	MAY 07 06:50 - MAY 07 07:37	PnnRie
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					PnnRnn
SAAO	So. Afr. Astro. Obs.	-32.4	20.8					PnnRnn
MSO	Mt. Stromlo Observato	-35.3	149.0			++	MAY 07 07:38 - MAY 07 07:38	PnnRne



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-07T07:13:17.330
 Event type : XRgt
 : No Uranus occs
 : 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 : 3382600656170316032
 2Mass ID (if available) : 06312785+2333565
 ICRS Star Coord at Epoch: 06h 31m 27.85230s +23:33:56.46073s
 RUWE (>1.4 is poor) : 1.11
 K magnitude : 14.589
 G magnitude : 16.746
 RP magnitude : 16.016
 BP magnitude : 17.342
 DUPflag : 0
 Distance (au) : 19.484
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 25.12
 Sun-Target sep (deg) : 51.11
 Sun-Moon sep (deg) : 59.47
 B (ring opening deg) : 68.90
 PA of pole (deg) : 70.30
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.466
 C/A sky separation (km) : 34850.1
 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

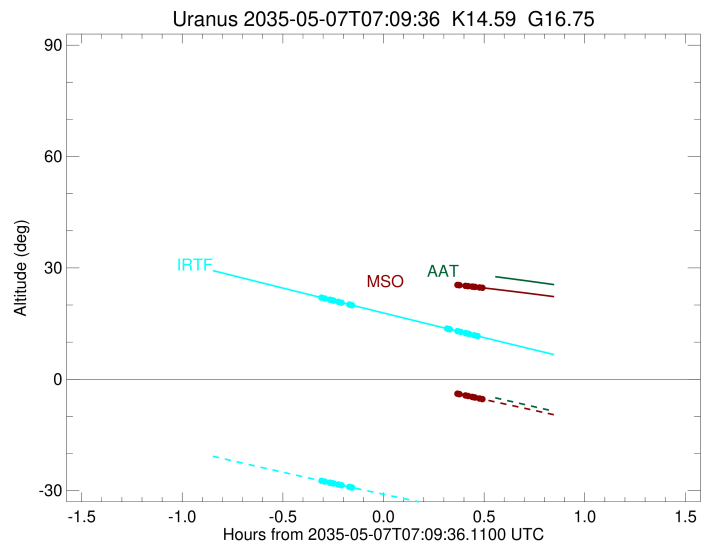
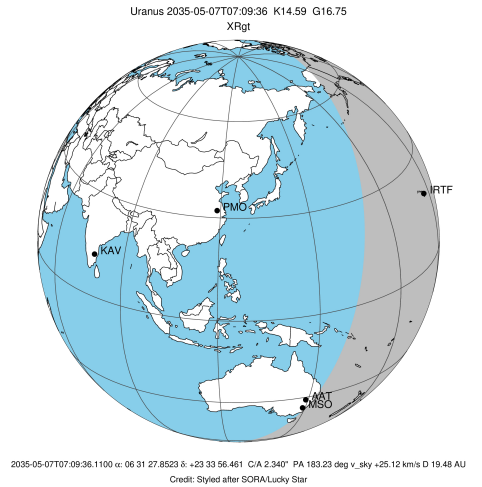


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-05-07T06:50:58.258		22.02	-27.33	51330.66	-19.16		
lambda	I	2035-05-07T06:52:06.660		21.76	-27.56	50026.71	-18.83		
delta	I	2035-05-07T06:53:40.001		21.42	-27.87	48300.35	-18.15		
gamma	I	2035-05-07T06:54:17.242		21.28	-27.99	47629.97	-17.85		
eta	I	2035-05-07T06:54:42.813		21.18	-28.07	47176.12	-17.64		
beta	I	2035-05-07T06:56:11.448		20.85	-28.37	45645.10	-16.87		
alpha	I	2035-05-07T06:57:05.404		20.65	-28.54	44752.09	-16.36		
4	I	2035-05-07T06:59:23.083		20.14	-28.99	42589.72	-14.93		
5	I	2035-05-07T06:59:48.904		20.04	-29.08	42222.33	-14.58		
6	I	2035-05-07T07:00:14.051		19.95	-29.16	41853.49	-14.34		

No planet occultations

6	E	2035-05-07T07:28:35.947		13.64	-34.57	41879.72	14.38		
5	E	2035-05-07T07:28:55.054		13.57	-34.63	42157.26	14.62		
4	E	2035-05-07T07:29:25.984		13.46	-34.73	42616.52	14.97		
alpha	E	2035-05-07T07:31:40.074		12.96	-35.14	44721.87	16.41		
beta	E	2035-05-07T07:32:36.902		12.75	-35.31	45669.97	16.93		
eta	E	2035-05-07T07:34:03.809		12.43	-35.57	47176.12	17.70		
gamma	E	2035-05-07T07:34:29.316		12.34	-35.65	47630.40	17.92		
delta	E	2035-05-07T07:35:06.401		12.20	-35.76	48300.35	18.21		
lambda	E	2035-05-07T07:36:39.395		11.86	-36.04	50026.71	18.90		
epsilon	E	2035-05-07T07:37:18.874		11.72	-36.16	50778.44	19.24		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-07T07:11:07.220
 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 : 3382600656170316032
 2Mass ID (if available) : 06312785+2333565
 ICRS Star Coord at Epoch: 06h 31m 27.85230s +23:33:56.46073s
 RUWE (>1.4 is poor) : 1.11
 K magnitude : 14.589
 G magnitude : 16.746
 RP magnitude : 16.016
 BP magnitude : 17.342
 DUPflag : 0
 Distance (au) : 19.484
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 25.12
 Sun-Target sep (deg) : 51.11
 Sun-Moon sep (deg) : 59.28
 B (ring opening deg) : 68.90
 PA of pole (deg) : 70.30
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.969
 C/A sky separation (km) : 27826.9
 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_itrfr93_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	2035-05-07T06:44:44.434		29.21	5.05x	51390.87	-21.89		
lambda	I	2035-05-07T06:45:46.864		29.15	4.86x	50026.71	-21.72		
delta	I	2035-05-07T06:47:07.019		29.06	4.61x	48300.35	-21.35		
gamma	I	2035-05-07T06:47:38.570		29.03	4.51x	47629.15	-21.20		
eta	I	2035-05-07T06:48:00.000		29.01	4.44x	47176.12	-21.08		
beta	I	2035-05-07T06:49:13.347		28.93	4.21x	45642.90	-20.69		
alpha	I	2035-05-07T06:49:56.836		28.88	4.08x	44752.32	-20.43		
4	I	2035-05-07T06:51:44.632		28.76	3.74x	42578.95	-19.73		
5	I	2035-05-07T06:52:02.488		28.74	3.69x	42242.71	-19.56		
6	I	2035-05-07T06:52:22.624		28.72	3.62x	41842.86	-19.46		

No planet occultations

6	E	2035-05-07T07:31:40.548		25.40	-3.90x	41878.61	19.49		
5	E	2035-05-07T07:31:54.569		25.38	-3.94x	42154.83	19.59		
4	E	2035-05-07T07:32:17.822		25.34	-4.02x	42614.52	19.76		
alpha	E	2035-05-07T07:34:02.115		25.16	-4.36x	44714.08	20.46		
beta	E	2035-05-07T07:34:48.663		25.09	-4.51x	45673.71	20.72		
eta	E	2035-05-07T07:36:00.414		24.96	-4.74x	47176.12	21.13		
gamma	E	2035-05-07T07:36:21.826		24.93	-4.81x	47629.64	21.24		
delta	E	2035-05-07T07:36:53.294		24.87	-4.91x	48300.35	21.39		
lambda	E	2035-05-07T07:38:13.289		24.73	-5.18	50026.71	21.76		
epsilon	E	2035-05-07T07:38:46.635		24.68	-5.28	50754.82	21.93		