

target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2035-01-08T11:46:19.630  
 Event type : XRT  
 : No Uranus occs  
 : Ring occs: topocentric, not geocentric  
 Gaia source ID : 3382643850660285824  
 2Mass ID (if available) : 06332122+2333082

ICRS Star Coord at Epoch: 06h 33m 21.22843s +23:33:08.24875s

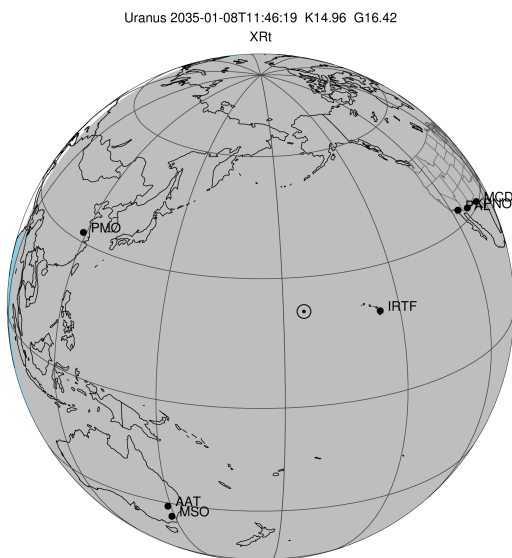
RUWE (>1.4 is poor) : 1.07  
 K magnitude : 14.958  
 G magnitude : 16.419  
 RP magnitude : 15.917  
 BP magnitude : 16.739  
 DUPflag : 0  
 Distance (au) : 17.918  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : -22.95  
 Sun-Target sep (deg) : 170.11  
 Sun-Moon sep (deg) : 174.18  
 B (ring opening deg) : 68.50  
 PA of pole (deg) : 70.89

# a(km) ring

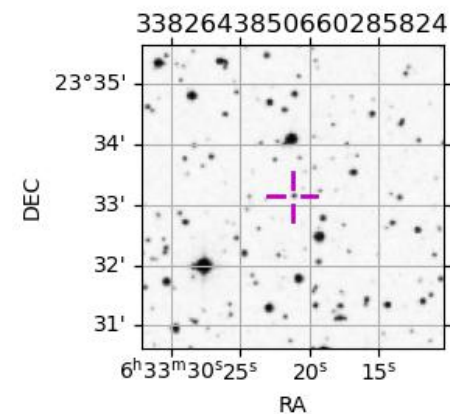
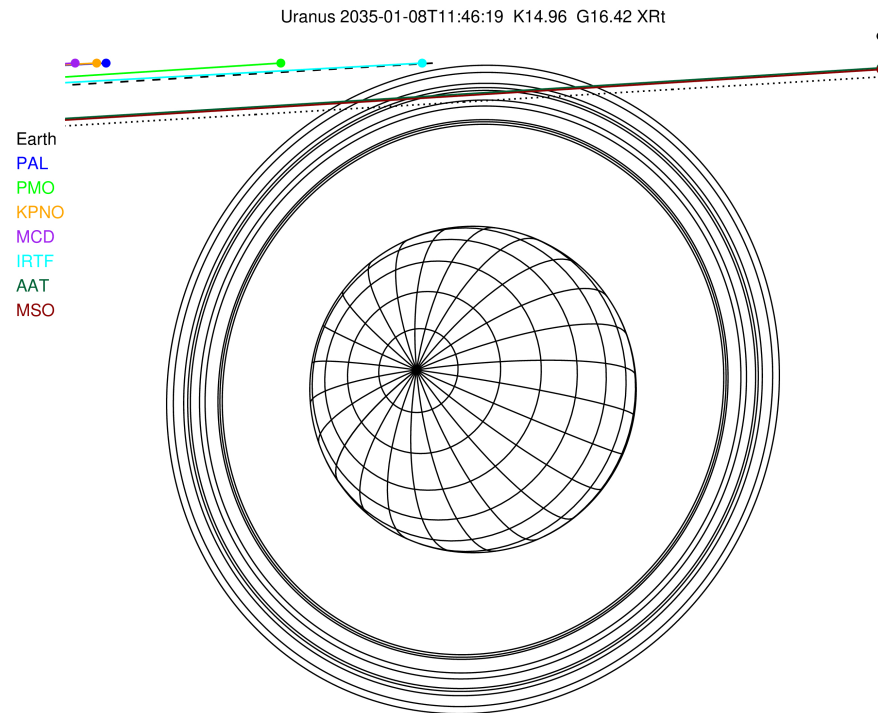
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 1 41837.2 6  
 2 42235.0 5  
 3 42571.2 4  
 4 44718.5 alpha  
 5 45661.1 beta  
 6 47176.1 eta  
 7 47626.3 gamma  
 8 48300.3 delta  
 9 50026.7 lambda  
 10 51149.4 epsilon

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

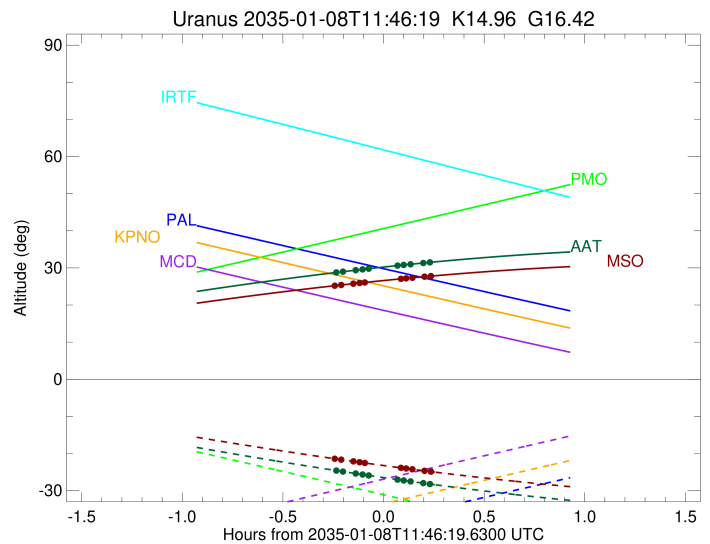
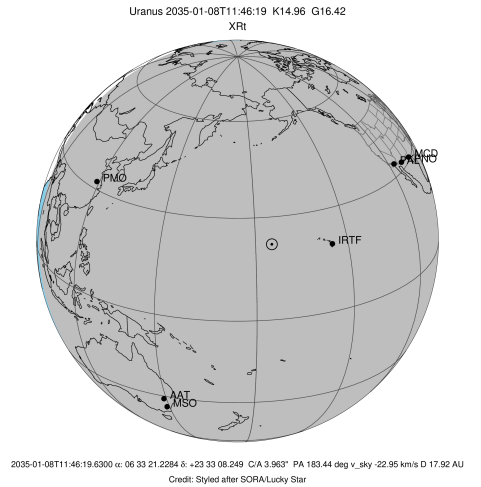
Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1					PnnRnn
PAL	Palomar Mt (200")	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs. Nanki	32.1	118.8					PnnRnn
KPNO	Kitt Peak Natl Obs	32.0	248.4					PnnRnn
MCD	McDonald Obs. 2.7m	30.7	256.0					PnnRnn
TEN	Teide Obs./Tenerife	28.3	343.5					PnnRnn
IRTF	Mauna Kea/IRTF	19.8	204.5					PnnRnn
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 08 11:31 - JAN 08 12:00	PnnRie
SAAO	So. Afr. Astro. Obs.	-32.4	20.8					PnnRnn
MSO	Mt. Stromlo Observato	-35.3	149.0	+++++		+++++	JAN 08 11:31 - JAN 08 12:00	PnnRie



2035-01-08T11:46:19.6300 ra: 06 33 21.2284 s: +23 33 08.249 C/A 3.963" PA 183.44 deg v\_sky -22.95 km/s D 17.92 AU  
 Credit: Styled after SORA/Lucky Star



target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2035-01-08T11:47:49.770  
 Event type : XRt  
 : No Uranus occs  
 : Ring occs: topocentric, not geocentric  
 Observer code : AAT  
 Location : Siding Spring (AAT)  
 Latitude (deg) : -31.27703  
 E. Longitude (deg) : 149.06608  
 Altitude (km) : 1.164  
 Gaia source ID : 3382643850660285824  
 2Mass ID (if available) : 06332122+2333082  
 ICRS Star Coord at Epoch: 06h 33m 21.22843s +23:33:08.24875s  
 RUWE (>1.4 is poor) : 1.07  
 K magnitude : 14.958  
 G magnitude : 16.419  
 RP magnitude : 15.917  
 BP magnitude : 16.739  
 DUPflag : 0  
 Distance (au) : 17.918  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : -22.95  
 Sun-Target sep (deg) : 170.11  
 Sun-Moon sep (deg) : 173.46  
 B (ring opening deg) : 68.50  
 PA of pole (deg) : 70.89  
 Pole direction: RA (deg): 257.31100  
 Dec (deg): -15.17500  
 C/A sky separation (") : 3.561  
 C/A sky separation (km) : 46272.4  
 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

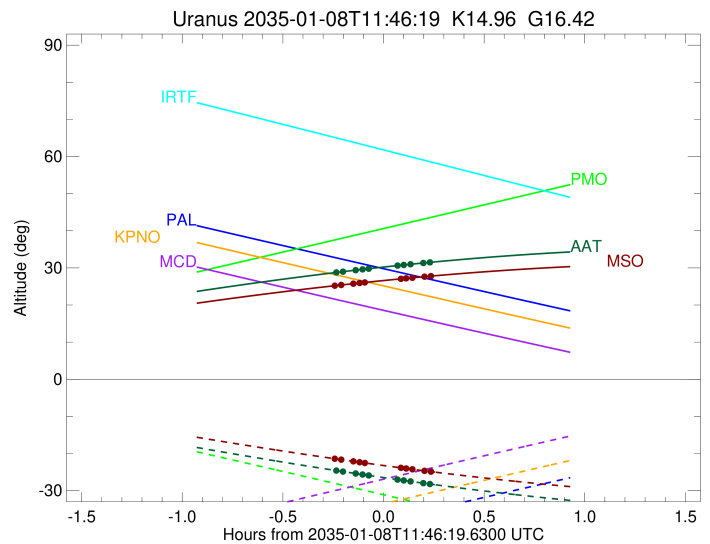
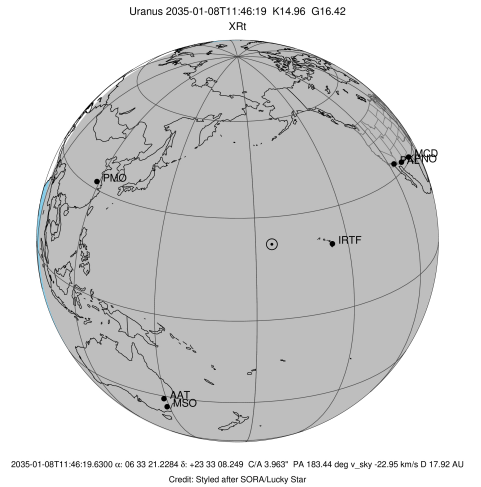


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-01-08T11:31:41.793		28.71	-24.52	51509.87	-10.32		
lambda	I	2035-01-08T11:34:15.873		28.99	-24.87	50026.71	-8.82		
delta	I	2035-01-08T11:38:04.677		29.39	-25.39	48300.35	-6.22		
gamma	I	2035-01-08T11:40:08.798		29.60	-25.67	47621.29	-4.71		
eta	I	2035-01-08T11:41:59.830		29.79	-25.92	47176.12	-3.30		

No planet occultations

eta	E	2035-01-08T11:50:26.242		30.62	-27.02	47176.12	3.31		
gamma	E	2035-01-08T11:52:17.464		30.79	-27.25	47622.33	4.71		
delta	E	2035-01-08T11:54:21.314		30.98	-27.51	48300.35	6.23		
lambda	E	2035-01-08T11:58:09.989		31.32	-27.98	50026.71	8.83		
epsilon	E	2035-01-08T12:00:18.105		31.50	-28.24	51243.93	10.33		

target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2035-01-08T11:47:44.650  
 Event type : XRt  
 : No Uranus occs  
 : Ring occs: topocentric, not geocentric  
 Observer code : MSO  
 Location : Mt. Stromlo Observatory  
 Latitude (deg) : -35.32000  
 E. Longitude (deg) : 149.00833  
 Altitude (km) : 0.770  
 Gaia source ID : 3382643850660285824  
 2Mass ID (if available) : 06332122+2333082  
 ICRS Star Coord at Epoch: 06h 33m 21.22843s +23:33:08.24875s  
 RUWE (>1.4 is poor) : 1.07  
 K magnitude : 14.958  
 G magnitude : 16.419  
 RP magnitude : 15.917  
 BP magnitude : 16.739  
 DUPflag : 0  
 Distance (au) : 17.918  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : -22.95  
 Sun-Target sep (deg) : 170.11  
 Sun-Moon sep (deg) : 173.43  
 B (ring opening deg) : 68.50  
 PA of pole (deg) : 70.89  
 Pole direction: RA (deg): 257.31100  
 Dec (deg): -15.17500  
 C/A sky separation (") : 3.542  
 C/A sky separation (km) : 46026.1  
 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\_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	2035-01-08T11:31:14.900		25.15	-21.34	51512.01	-10.58		
lambda	I	2035-01-08T11:33:44.842		25.40	-21.66	50026.71	-9.13		
delta	I	2035-01-08T11:37:22.437		25.75	-22.12	48300.35	-6.69		
gamma	I	2035-01-08T11:39:15.312		25.94	-22.36	47621.24	-5.33		
eta	I	2035-01-08T11:40:49.047		26.08	-22.55	47176.12	-4.16		

No planet occultations

eta	E	2035-01-08T11:51:27.692		27.05	-23.85	47176.12	4.16		
gamma	E	2035-01-08T11:53:01.619		27.18	-24.03	47622.43	5.33		
delta	E	2035-01-08T11:54:54.225		27.34	-24.25	48300.35	6.70		
lambda	E	2035-01-08T11:58:31.697		27.64	-24.66	50026.71	9.14		
epsilon	E	2035-01-08T12:00:35.662		27.80	-24.90	51239.40	10.59		