

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2047-07-03T13:23:17.290
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3877306229253036928
 2Mass ID (if available) : 10201929+1108343

ICRS Star Coord at Epoch: 10h 20m 19.26638s +11:08:33.71115s

RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.578
 G magnitude : 15.346
 RP magnitude : 14.746
 BP magnitude : 15.784
 DUPflag : 0
 Distance (au) : 18.917
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 25.15
 Sun-Target sep (deg) : 51.94
 Sun-Moon sep (deg) : 76.00
 B (ring opening deg) : 14.55
 PA of pole (deg) : 102.97

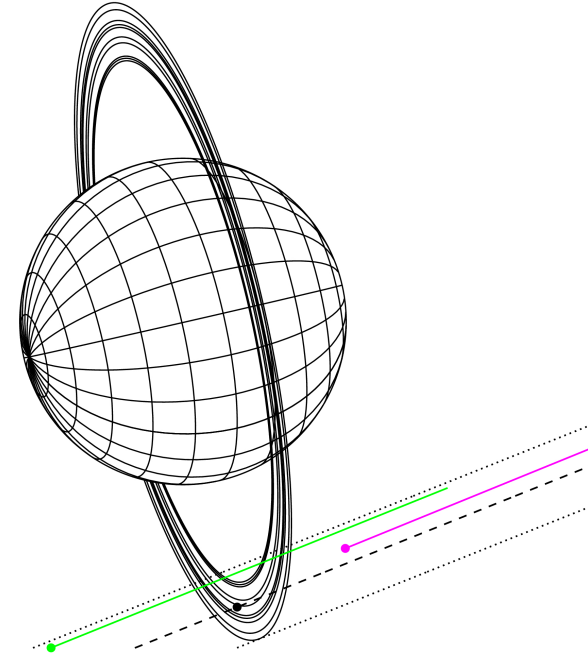
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2047-07-03T13:23:17.2900 cc: 10 20 19.2664 s: +11 08 33.711 C/A 3.2477 PA 21.78 deg v_sky +25.15 km/s D 18.92 AU
 Credit: Styled after SORA/Lucky Star

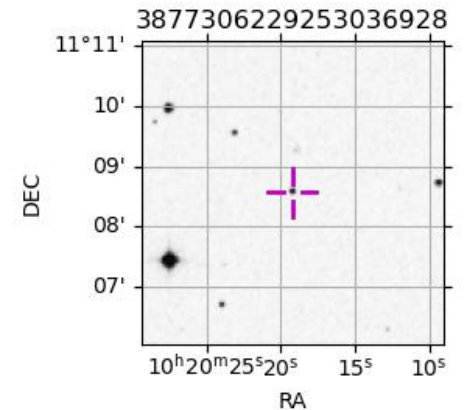
Earth
 PMO
 KAV

Uranus 2047-07-03T13:23:17 K13.58 G15.35 XRgt

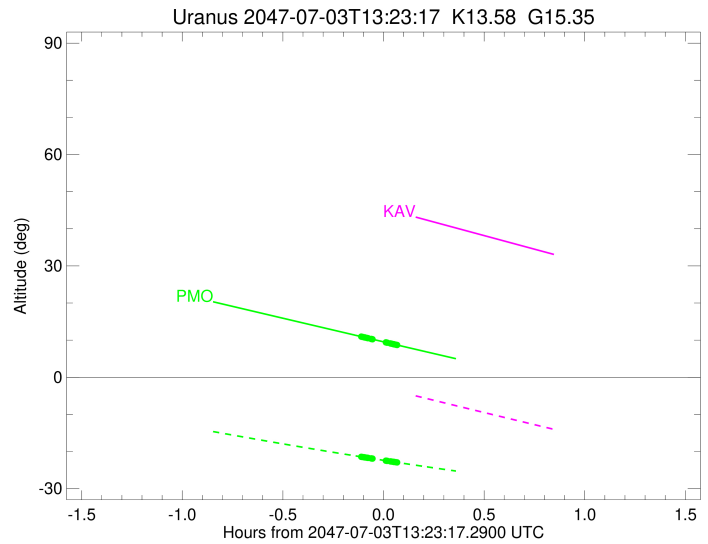
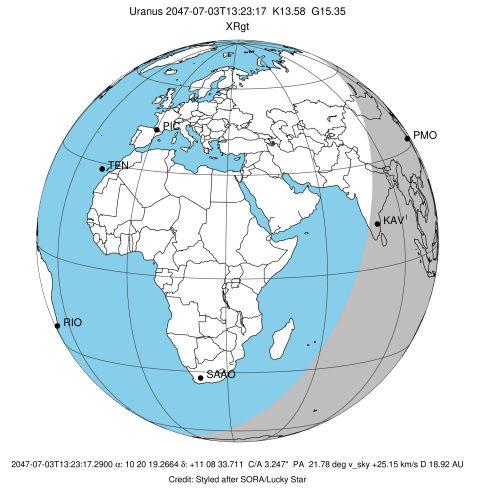


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+++++		+++++	JUL 03 13:16 - JUL 03 13:27	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					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					PnnRnn



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2047-07-03T13:25:53.410
 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 : 3877306229253036928
 2Mass ID (if available) : 10201929+1108343
 ICRS Star Coord at Epoch: 10h 20m 19.26638s +11:08:33.71115s
 RUWE (>1.4 is poor) : 0.95
 K magnitude : 13.578
 G magnitude : 15.346
 RP magnitude : 14.746
 BP magnitude : 15.784
 DUPflag : 0
 Distance (au) : 18.917
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 25.15
 Sun-Target sep (deg) : 51.94
 Sun-Moon sep (deg) : 76.03
 B (ring opening deg) : 14.55
 PA of pole (deg) : 102.97
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.891
 C/A sky separation (km) : 39663.1
 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_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	2047-07-03T13:16:40.830		10.95	-21.43	51095.62	-60.61		
lambda	I	2047-07-03T13:16:58.600		10.88	-21.48	50026.71	-59.05		
delta	I	2047-07-03T13:17:28.844		10.78	-21.55	48300.35	-55.03		
gamma	I	2047-07-03T13:17:41.252		10.73	-21.58	47628.38	-53.26		
eta	I	2047-07-03T13:17:49.845		10.70	-21.60	47176.12	-51.98		
beta	I	2047-07-03T13:18:20.543		10.59	-21.67	45650.16	-47.14		
alpha	I	2047-07-03T13:18:41.303		10.52	-21.72	44699.77	-43.49		
4	I	2047-07-03T13:19:38.026		10.32	-21.86	42526.08	-32.58		
5	I	2047-07-03T13:19:44.930		10.30	-21.87	42290.88	-31.04		
6	I	2047-07-03T13:20:01.245		10.24	-21.91	41795.00	-27.43		

No planet occultations

6	E	2047-07-03T13:23:56.627		9.41	-22.46	41799.06	27.46		
5	E	2047-07-03T13:24:11.427		9.36	-22.50	42245.71	31.07		
4	E	2047-07-03T13:24:22.381		9.32	-22.52	42533.61	32.62		
alpha	E	2047-07-03T13:25:17.920		9.12	-22.65	44684.71	43.53		
beta	E	2047-07-03T13:25:40.202		9.05	-22.70	45669.24	47.18		
eta	E	2047-07-03T13:26:10.461		8.94	-22.77	47176.11	52.04		
gamma	E	2047-07-03T13:26:19.108		8.91	-22.79	47631.57	53.32		
delta	E	2047-07-03T13:26:31.447		8.87	-22.82	48300.35	55.09		
lambda	E	2047-07-03T13:27:01.666		8.76	-22.89	50026.71	59.11		
epsilon	E	2047-07-03T13:27:13.690		8.72	-22.92	50746.42	60.67		