

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2027-07-17T06:04:39.850
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 145308093769495296
 2Mass ID (if available) : 04253248+2133301

ICRS Star Coord at Epoch: 04h 25m 32.48707s +21:33:30.12291s

RUWE (>1.4 is poor) : 1.03
 K magnitude : 12.554
 G magnitude : 14.976
 RP magnitude : 14.168
 BP magnitude : 15.659
 DUPflag : 0
 Distance (au) : 20.081
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 27.03
 Sun-Target sep (deg) : 45.97
 Sun-Moon sep (deg) : 149.22
 B (ring opening deg) : 77.83
 PA of pole (deg) : -60.20

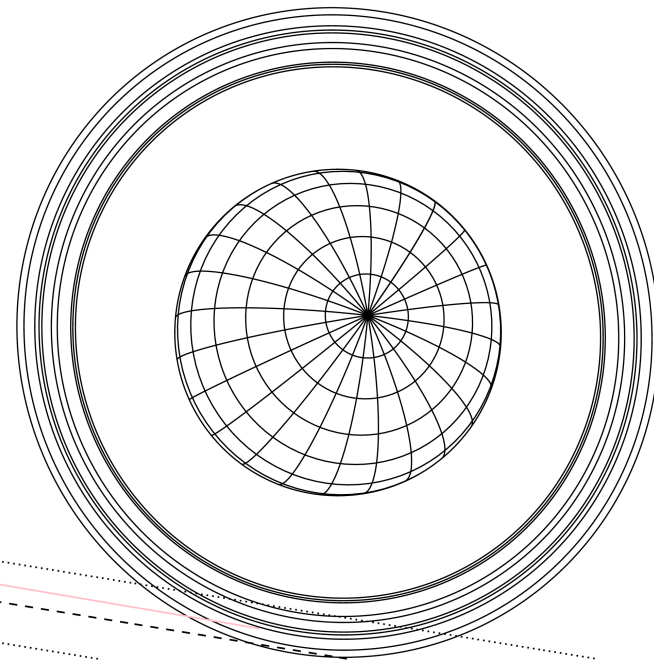
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2027-07-17T06:04:39.8500 ex: 04 25 32.4871 s: +21 33 30.123 C/A 3.444" PA 350.72 deg v_sky +27.03 km/s D 20.08 AU
 Credit: Styled after SORA/Lucky Star

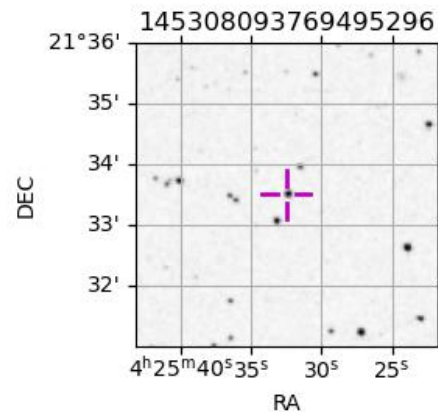
Uranus 2027-07-17T06:04:39 K12.55 G14.98 XRgt

Earth
TEN

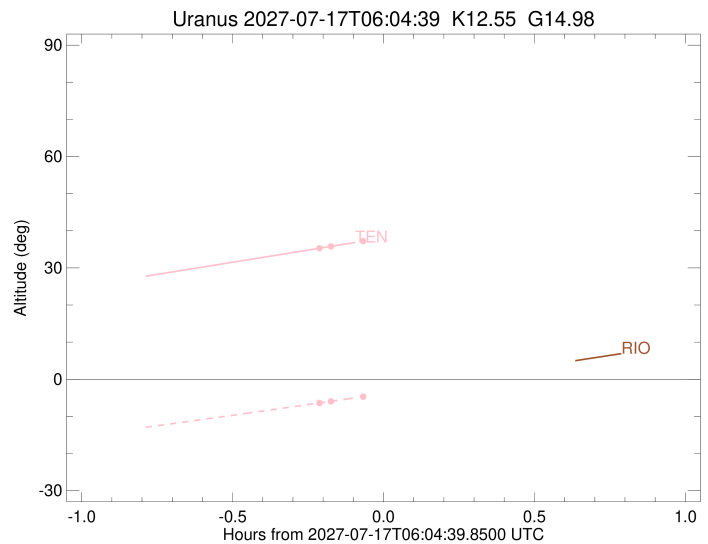
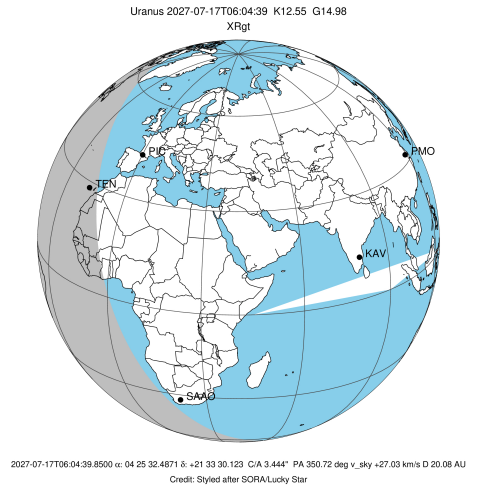


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	++			JUL 17 05:51 - JUL 17 05:54	PnnRin
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
SAAG	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 : 2027-07-17T06:01:45.000
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : TEN
 Location : Teide Obs./Tenerife
 Latitude (deg) : 28.30050
 E. Longitude (deg) : 343.48909
 Altitude (km) : 2.395
 Gaia source ID : 145308093769495296
 2Mass ID (if available) : 04253248+2133301
 ICRS Star Coord at Epoch: 04h 25m 32.48707s +21:33:30.12291s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 12.554
 G magnitude : 14.976
 RP magnitude : 14.168
 BP magnitude : 15.659
 DUPflag : 0
 Distance (au) : 20.081
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 27.03
 Sun-Target sep (deg) : 45.97
 Sun-Moon sep (deg) : 150.00
 B (ring opening deg) : 77.83
 PA of pole (deg) : -60.20
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 3.280
 C/A sky separation (km) : 47776.5
 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_itr93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk



b: ring blocked by planet x: target alt < 5.0 deg or sun > -5.0 deg

Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2027-07-17T05:51:18.346		35.16	-6.51	51519.65	-9.66		
lambda	I	2027-07-17T05:54:15.560		35.81	-5.94	50026.71	-7.24		
delta	I	2027-07-17T06:00:45.617		37.23	-4.67x	48300.35	-1.51		

No planet occultations

delta	E	2027-07-17T06:04:03.466		37.96	-4.02x	48300.35	1.52		
lambda	E	2027-07-17T06:10:33.780		39.39	-2.73x	50026.71	7.23		
epsilon	E	2027-07-17T06:13:33.015		40.04	-2.14x	51536.79	9.65		