

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2041-10-03T06:27:14.330
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 612280027934141056
 2Mass ID (if available) : 08553318+1759192

ICRS Star Coord at Epoch: 08h 55m 33.18106s +17:59:19.32547s

RUWE (>1.4 is poor) : 1.03
 K magnitude : 14.106
 G magnitude : 15.921
 RP magnitude : 15.338
 BP magnitude : 16.334
 DUPflag : 0
 Distance (au) : 19.002
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 22.13
 Sun-Target sep (deg) : 58.60
 Sun-Moon sep (deg) : 149.88
 B (ring opening deg) : 35.91
 PA of pole (deg) : 96.01

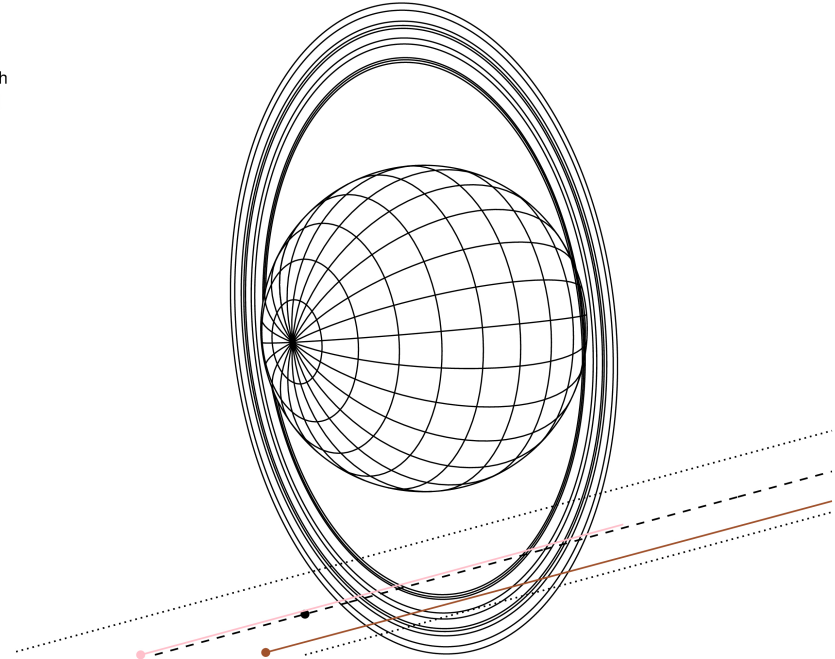
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2041-10-03T06:27:14.3300 or: 08 55 33.1811 s: +17 59 19.325 C/A 2.777" PA 15.16 deg v_sky +22.13 km/s D 19.00 AU
 Credit: Styled after SORA/Lucky Star

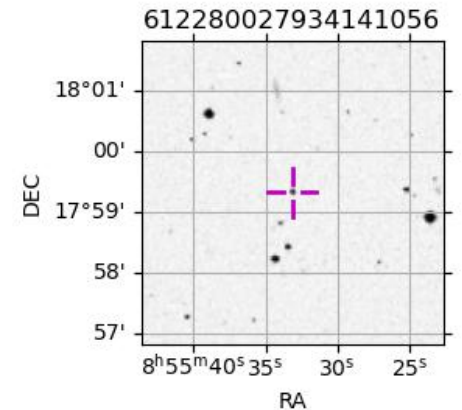
Earth
 TEN
 RIO

Uranus 2041-10-03T06:27:14 K14.11 G15.92 XRgt

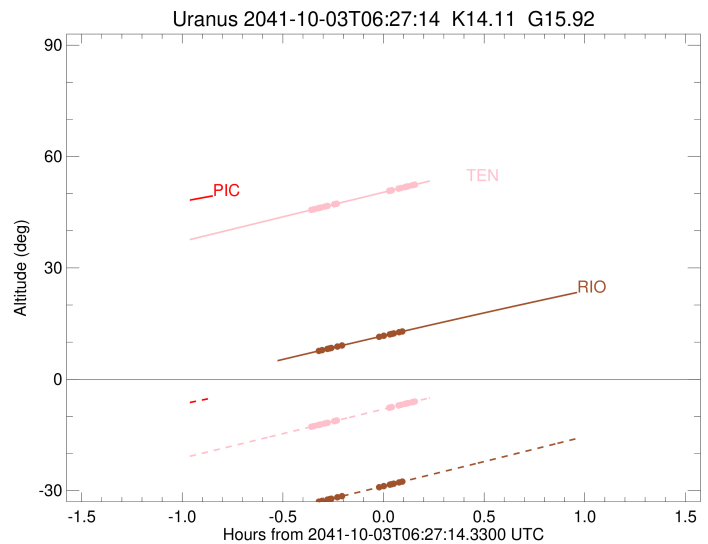
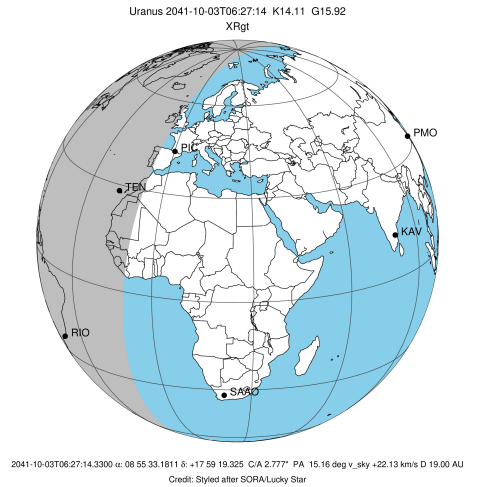


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+++++		+++++	OCT 03 06:05 - OCT 03 06:36	PnnRie
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	+++++		+++++	OCT 03 06:07 - OCT 03 06:32	PnnRie
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 : 2041-10-03T06:24:09.330
 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 : 612280027934141056
 2Mass ID (if available) : 08553318+1759192
 ICRS Star Coord at Epoch: 08h 55m 33.18106s +17:59:19.32547s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 14.106
 G magnitude : 15.921
 RP magnitude : 15.338
 BP magnitude : 16.334
 DUPflag : 0
 Distance (au) : 19.002
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 22.13
 Sun-Target sep (deg) : 58.60
 Sun-Moon sep (deg) : 149.72
 B (ring opening deg) : 35.91
 PA of pole (deg) : 96.01
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.741
 C/A sky separation (km) : 37777.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 ural11.bsp
 IAU_URANUS_for_RINGFIT.tpc
 vgr2.ural11.bsp
 ural61.bsp
 vgr2.ural61.bsp
 peph.ural60.bsp
 earthstns_itr93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk

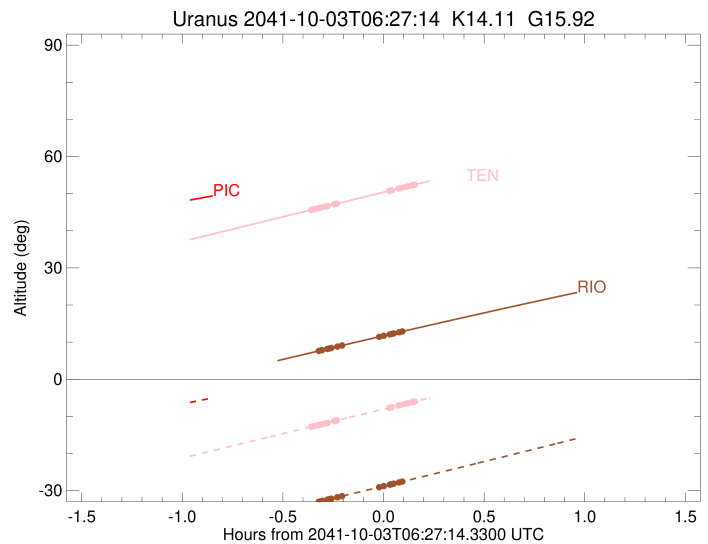
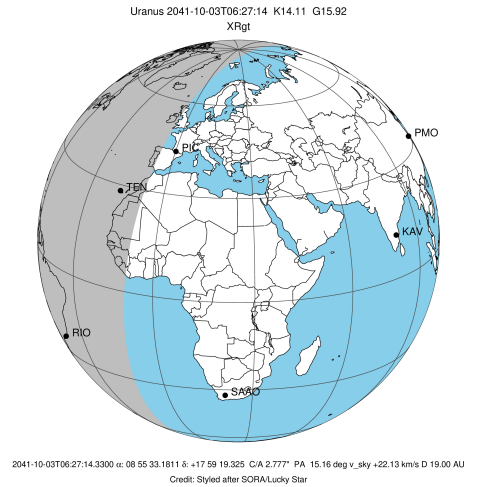


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2041-10-03T06:05:39.891		45.61	-12.80	51250.41	-24.48		
lambda	I	2041-10-03T06:06:30.219		45.80	-12.61	50026.71	-23.92		
delta	I	2041-10-03T06:07:44.258		46.07	-12.34	48300.35	-22.69		
gamma	I	2041-10-03T06:08:14.087		46.18	-12.23	47631.55	-22.15		
eta	I	2041-10-03T06:08:34.827		46.26	-12.16	47176.12	-21.76		
beta	I	2041-10-03T06:09:47.802		46.53	-11.89	45641.14	-20.31		
alpha	I	2041-10-03T06:10:32.411		46.69	-11.73	44749.23	-19.33		
4	I	2041-10-03T06:12:35.482		47.14	-11.27	42537.48	-16.41		
5	I	2041-10-03T06:12:57.163		47.22	-11.19	42203.08	-15.90		
6	I	2041-10-03T06:13:21.752		47.31	-11.10	41798.24	-15.16		

No planet occultations

6	E	2041-10-03T06:28:53.085		50.73	-7.68	41824.02	15.15		
5	E	2041-10-03T06:29:25.196		50.85	-7.56	42272.19	15.89		
4	E	2041-10-03T06:29:41.795		50.91	-7.50	42574.90	16.39		
alpha	E	2041-10-03T06:31:42.212		51.35	-7.06	44719.54	19.31		
beta	E	2041-10-03T06:32:29.319		51.52	-6.89	45651.54	20.29		
eta	E	2041-10-03T06:33:41.664		51.79	-6.62	47176.12	21.73		
gamma	E	2041-10-03T06:34:02.247		51.86	-6.55	47627.28	22.11		
delta	E	2041-10-03T06:34:32.321		51.97	-6.44	48300.35	22.65		
lambda	E	2041-10-03T06:35:46.498		52.24	-6.16	50026.71	23.88		
epsilon	E	2041-10-03T06:36:17.377		52.36	-6.05	50771.43	24.43		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2041-10-03T06:23:43.210
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : RIO
 Location : Rio de Janeiro
 Latitude (deg) : -22.89506
 E. Longitude (deg) : 316.77708
 Altitude (km) : 0.033
 Gaia source ID : 612280027934141056
 2Mass ID (if available) : 08553318+1759192
 ICRS Star Coord at Epoch: 08h 55m 33.18106s +17:59:19.32547s
 RUWE (>1.4 is poor) : 1.03
 K magnitude : 14.106
 G magnitude : 15.921
 RP magnitude : 15.338
 BP magnitude : 16.334
 DUPflag : 0
 Distance (au) : 19.002
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 22.13
 Sun-Target sep (deg) : 58.60
 Sun-Moon sep (deg) : 149.48
 B (ring opening deg) : 35.91
 PA of pole (deg) : 96.01
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 3.094
 C/A sky separation (km) : 42638.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 ural11.bsp
 IAU_URANUS_for_RINGFIT.tpc
 vgr2.ural11.bsp
 ural61.bsp
 vgr2.ural61.bsp
 peph.ural60.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	2041-10-03T06:07:57.038		7.64	-32.98	51187.71	-19.93		
lambda	I	2041-10-03T06:08:56.277		7.85	-32.77	50026.71	-19.01		
delta	I	2041-10-03T06:10:32.241		8.19	-32.42	48300.35	-16.94		
gamma	I	2041-10-03T06:11:12.862		8.33	-32.28	47631.36	-15.99		
eta	I	2041-10-03T06:11:41.956		8.43	-32.17	47176.12	-15.29		
beta	I	2041-10-03T06:13:32.419		8.82	-31.78	45641.27	-12.47		
alpha	I	2041-10-03T06:14:50.966		9.10	-31.49	44744.29	-10.26		

No planet occultations

alpha	E	2041-10-03T06:25:56.016		11.43	-29.09	44728.66	10.25		
beta	E	2041-10-03T06:27:17.117		11.71	-28.79	45647.58	12.45		
eta	E	2041-10-03T06:29:06.970		12.10	-28.39	47176.12	15.27		
gamma	E	2041-10-03T06:29:35.920		12.20	-28.28	47628.30	15.97		
delta	E	2041-10-03T06:30:16.804		12.34	-28.13	48300.35	16.91		
lambda	E	2041-10-03T06:31:52.956		12.67	-27.78	50026.71	18.97		
epsilon	E	2041-10-03T06:32:32.889		12.81	-27.64	50800.05	19.89		