

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2028-08-03T23:04:32.510
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3413044385092765056
 2Mass ID (if available) : 04460865+2218249

ICRS Star Coord at Epoch: 04h 46m 08.65267s +22:18:24.99867s

RUWE (>1.4 is poor) : 1.08
 K magnitude : 13.896
 G magnitude : 16.299
 RP magnitude : 15.542
 BP magnitude : 16.912
 DUPflag : 0
 Distance (au) : 19.824
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 21.77
 Sun-Target sep (deg) : 58.76
 Sun-Moon sep (deg) : 136.67
 B (ring opening deg) : 81.02
 PA of pole (deg) : -38.45

a(km) ring

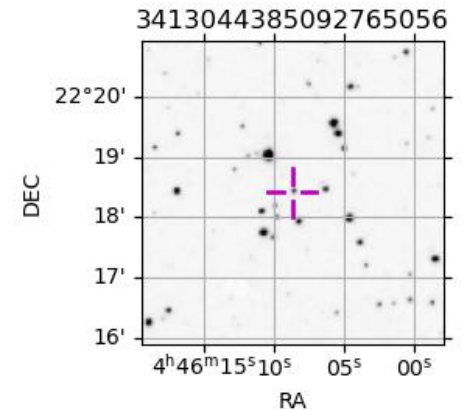
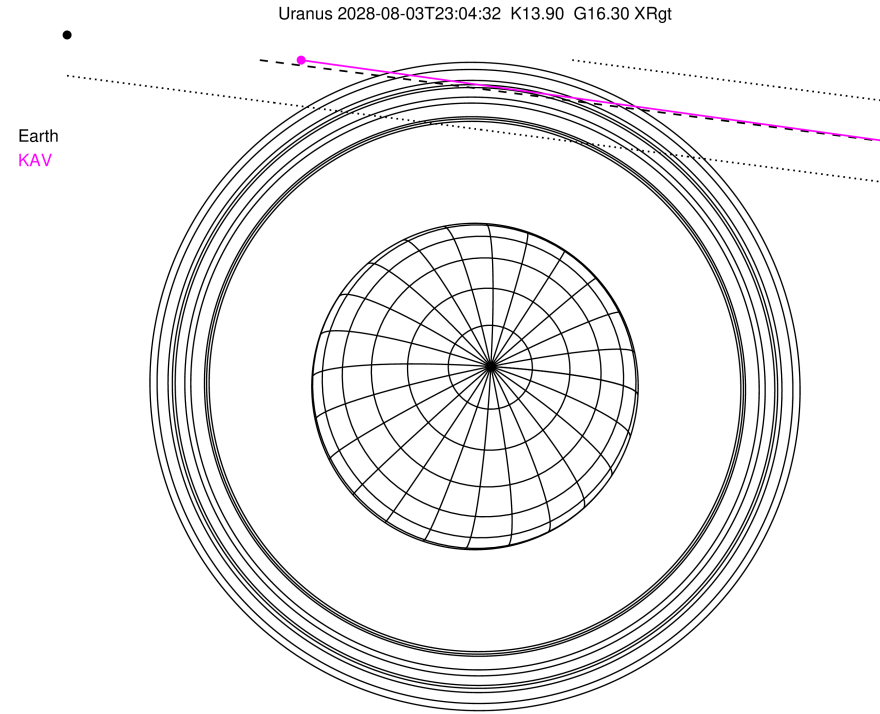
- 1 41837.2 6
- 2 42235.0 5
- 3 42571.2 4
- 4 44718.5 alpha
- 5 45661.1 beta
- 6 47176.1 eta
- 7 47626.3 gamma
- 8 48300.3 delta
- 9 50026.7 lambda
- 10 51149.4 epsilon

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

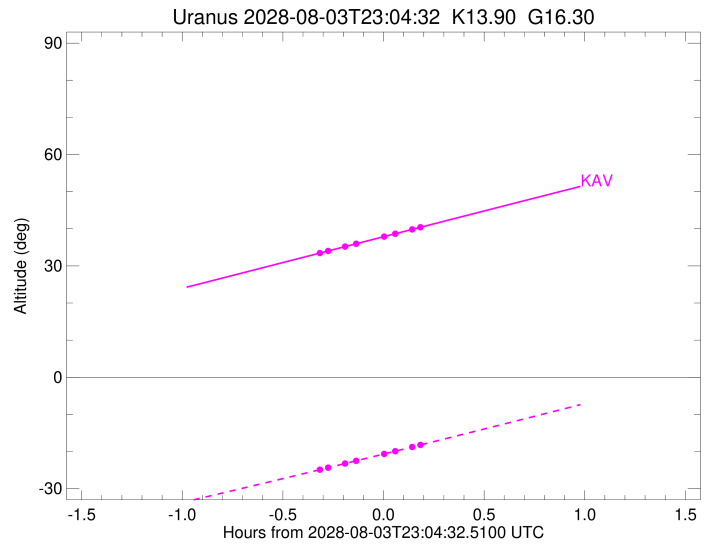
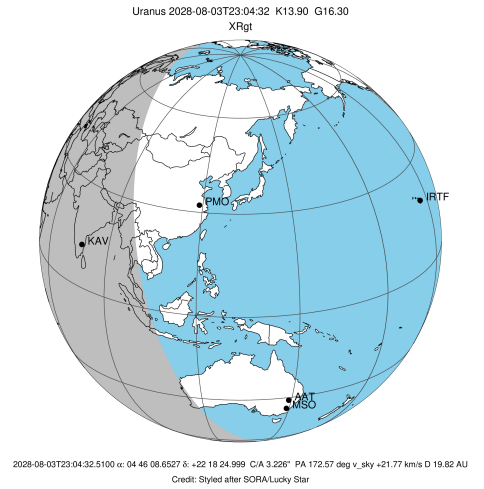
Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1					PnnRnn
PAL	Palomar Mt (200")	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs. Nanki	32.1	118.8					PnnRnn
KPNO	Kitt Peak Natl Obs	32.0	248.4					PnnRnn
MCD	McDonald Obs. 2.7m	30.7	256.0					PnnRnn
TEN	Teide Obs./Tenerife	28.3	343.5					PnnRnn
IRTF	Mauna Kea/IRTF	19.8	204.5					PnnRnn
KAV	Kavalur Observatory	12.6	78.8	++++		++++	AUG 03 22:44 - AUG 03 23:16	PnnRie
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



2028-08-03T23:04:32.5100 ex: 04 46 08.6527 s: +22 18 24.999 C/A 3.226° PA 172.57 deg v_sky +21.77 km/s D 19.82 AU
 Credit: Styled after SORA/Lucky Star



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2028-08-03T23:00:57.320
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : KAV
 Location : Kavalur Observatory
 Latitude (deg) : 12.57556
 E. Longitude (deg) : 78.83167
 Altitude (km) : 0.722
 Gaia source ID : 3413044385092765056
 2Mass ID (if available) : 04460865+2218249
 ICRS Star Coord at Epoch: 04h 46m 08.65267s +22:18:24.99867s
 RUWE (>1.4 is poor) : 1.08
 K magnitude : 13.896
 G magnitude : 16.299
 RP magnitude : 15.542
 BP magnitude : 16.912
 DUPflag : 0
 Distance (au) : 19.824
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 21.77
 Sun-Target sep (deg) : 58.76
 Sun-Moon sep (deg) : 137.59
 B (ring opening deg) : 81.02
 PA of pole (deg) : -38.45
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 3.261
 C/A sky separation (km) : 46888.3
 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	2028-08-03T22:44:57.984		33.32	-25.03	51474.99	-8.59		
lambda	I	2028-08-03T22:48:04.606		34.04	-24.34	50026.71	-7.00		
delta	I	2028-08-03T22:53:08.886		35.21	-23.22	48300.35	-4.30		
gamma	I	2028-08-03T22:56:27.834		35.98	-22.49	47631.50	-2.41		

No planet occultations

gamma	E	2028-08-03T23:04:39.561		37.88	-20.67	47631.57	2.41		
delta	E	2028-08-03T23:07:58.684		38.65	-19.93	48300.35	4.30		
lambda	E	2028-08-03T23:13:03.506		39.83	-18.79	50026.71	6.98		
epsilon	E	2028-08-03T23:16:19.283		40.58	-18.06	51548.90	8.57		