

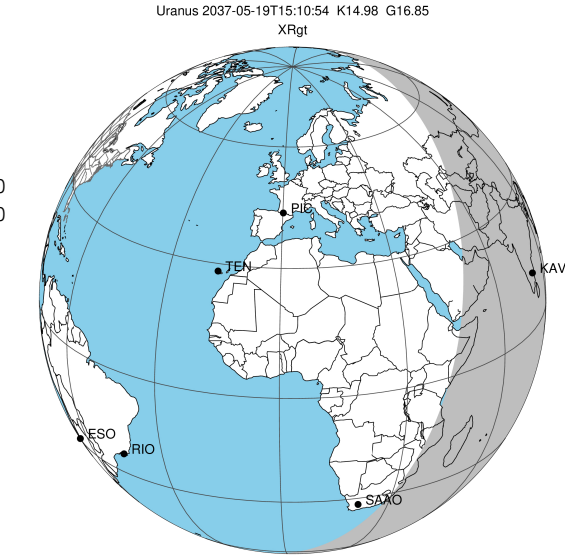
target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2037-05-19T15:10:54.440
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3367528761231801728
 2Mass ID (if available) : 07111810+2251151

ICRS Star Coord at Epoch: 07h 11m 18.08704s +22:51:14.87471s

RUWE (>1.4 is poor) : 0.86
 K magnitude : 14.979
 G magnitude : 16.854
 RP magnitude : 16.209
 BP magnitude : 17.335
 DUPflag : 0
 Distance (au) : 19.405
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 26.44
 Sun-Target sep (deg) : 47.92
 Sun-Moon sep (deg) : 6.52
 B (ring opening deg) : 60.21
 PA of pole (deg) : 80.53

a(km) ring

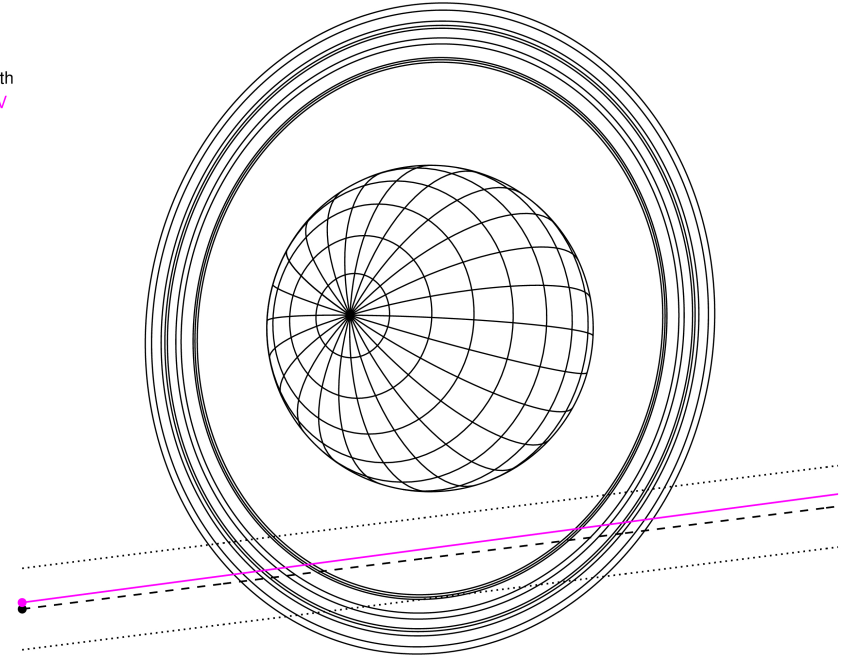
- 1 41837.2 6
- 2 42235.0 5
- 3 42571.2 4
- 4 44718.5 alpha
- 5 45661.1 beta
- 6 47176.1 eta
- 7 47626.3 gamma
- 8 48300.3 delta
- 9 50026.7 lambda
- 10 51149.4 epsilon



2037-05-19T15:10:54.4400 α: 07 11 18.0870 α: +22 51 14.875 C/A 2.523° PA 7.18 deg v_sky +26.44 km/s D 19.41 AU
 Credit: Styled after SORA/Lucky Star

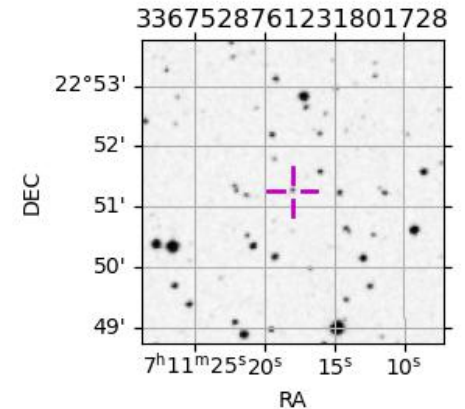
Uranus 2037-05-19T15:10:54 K14.98 G16.85 XRgt

Earth
 KAV

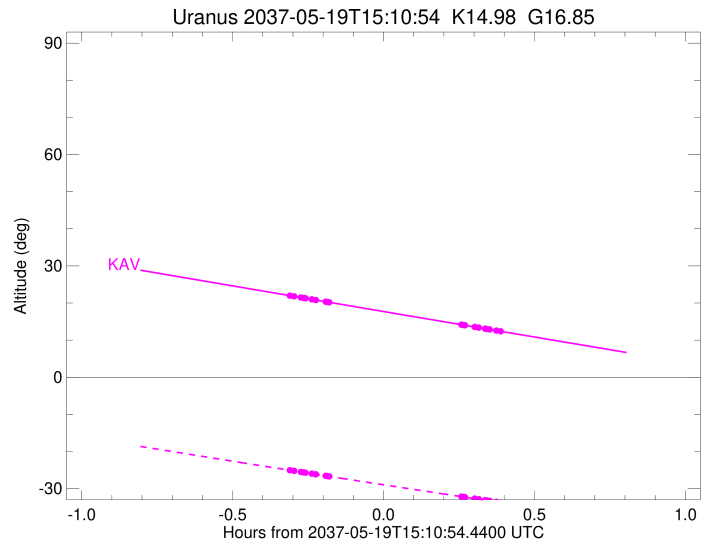
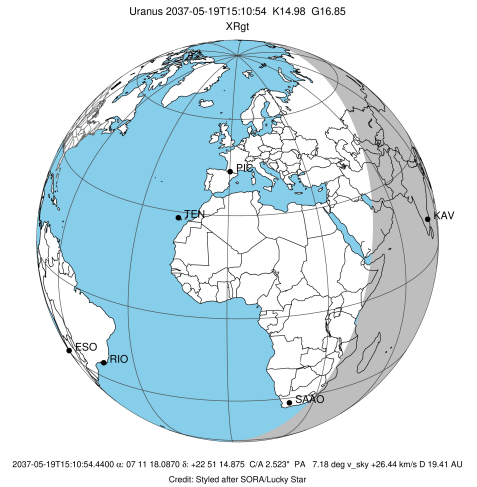


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEncode
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	+++++		+++++	MAY 19 14:52 - MAY 19 15:33	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



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2037-05-19T15:14:47.280
 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 : 3367528761231801728
 2Mass ID (if available) : 071111810+2251151
 ICRS Star Coord at Epoch: 07h 11m 18.08704s +22:51:14.87471s
 RUWE (>1.4 is poor) : 0.86
 K magnitude : 14.979
 G magnitude : 16.854
 RP magnitude : 16.209
 BP magnitude : 17.335
 DUPflag : 0
 Distance (au) : 19.405
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 26.44
 Sun-Target sep (deg) : 47.92
 Sun-Moon sep (deg) : 5.72
 B (ring opening deg) : 60.21
 PA of pole (deg) : 80.53
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.425
 C/A sky separation (km) : 34123.7
 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



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	2037-05-19T14:52:18.231		21.99	-25.05	51152.41	-21.98		
lambda	I	2037-05-19T14:53:09.563		21.80	-25.23	50026.71	-21.72		
delta	I	2037-05-19T14:54:30.391		21.49	-25.51	48300.35	-20.99		
gamma	I	2037-05-19T14:55:02.713		21.36	-25.63	47627.01	-20.68		
eta	I	2037-05-19T14:55:24.637		21.28	-25.71	47176.12	-20.45		
beta	I	2037-05-19T14:56:41.205		20.98	-25.98	45641.21	-19.63		
alpha	I	2037-05-19T14:57:28.976		20.80	-26.15	44718.39	-19.10		
4	I	2037-05-19T14:59:24.320		20.36	-26.55	42603.57	-17.58		
5	I	2037-05-19T14:59:50.201		20.26	-26.64	42155.34	-17.25		
6	I	2037-05-19T15:00:07.812		20.19	-26.70	41849.75	-17.01		

No planet occultations

6	E	2037-05-19T15:26:23.841		14.16	-32.15	41879.65	17.05		
5	E	2037-05-19T15:26:45.064		14.08	-32.23	42216.49	17.29		
4	E	2037-05-19T15:27:03.680		14.01	-32.29	42551.25	17.62		
alpha	E	2037-05-19T15:29:03.322		13.56	-32.69	44751.79	19.15		
beta	E	2037-05-19T15:29:49.755		13.38	-32.85	45655.84	19.69		
eta	E	2037-05-19T15:31:05.251		13.09	-33.10	47176.12	20.52		
gamma	E	2037-05-19T15:31:27.330		13.01	-33.18	47631.56	20.74		
delta	E	2037-05-19T15:31:59.334		12.88	-33.29	48300.35	21.05		
lambda	E	2037-05-19T15:33:19.905		12.58	-33.56	50026.71	21.79		
epsilon	E	2037-05-19T15:33:52.636		12.45	-33.67	50744.40	22.05		