

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2036-09-26T17:06:17.280
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Gaia source ID : 866235843509892224
 2Mass ID (if available) : 07212704+2231273

ICRS Star Coord at Epoch: 07h 21m 27.03869s +22:31:27.24621s

RUWE (>1.4 is poor) : 0.91
 K magnitude : 14.901
 G magnitude : 16.610
 RP magnitude : 16.044
 BP magnitude : 16.977
 DUPflag : 0
 Distance (au) : 19.017
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 14.20
 Sun-Target sep (deg) : 74.94
 Sun-Moon sep (deg) : 158.39
 B (ring opening deg) : 57.94
 PA of pole (deg) : 82.63

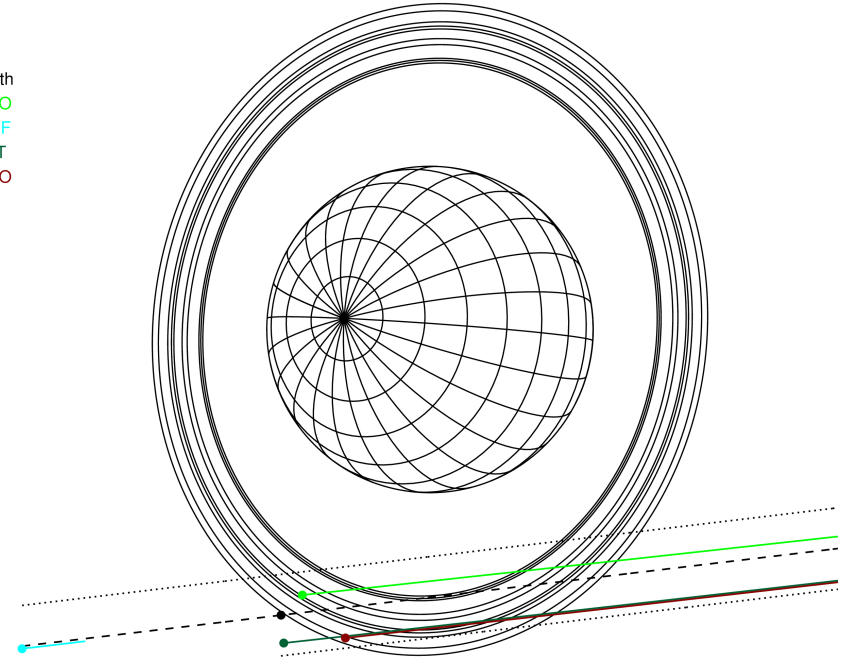
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2036-09-26T17:06:17.2800 α: 07 21 27.0387 β: +22 31 27.246 C/A 3.017" PA 6.82 deg v_sky +14.20 km/s D 19.02 AU
 Credit: Styled after SORA/Lucky Star

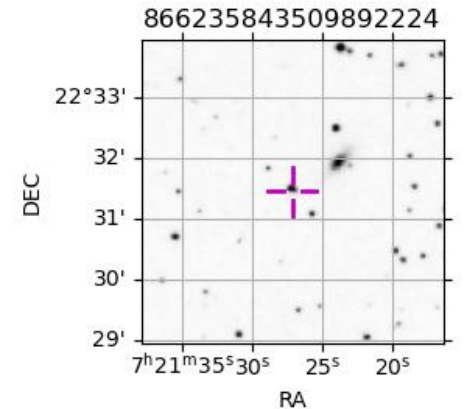
Uranus 2036-09-26T17:06:17 K14.90 G16.61 XRgt

Earth
 PMO
 IRTF
 AAT
 MSO

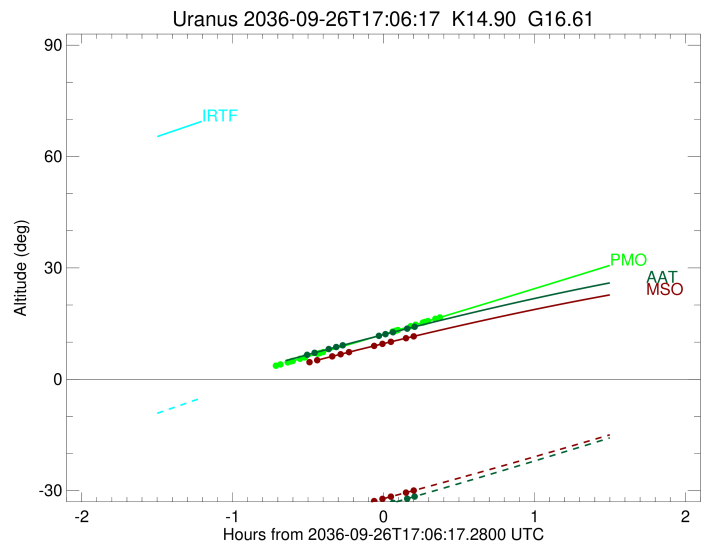
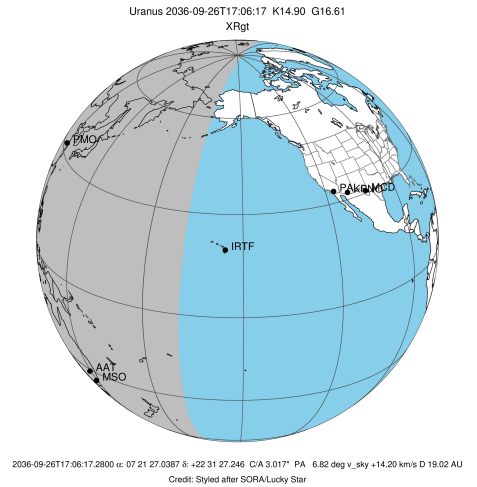


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+++++		+++++	SEP 26 16:33 - SEP 26 17:28	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	+++++		+++++	SEP 26 16:35 - SEP 26 17:18	PnnRie
SAAO	So. Afr. Astro. Obs.	-32.4	20.8					PnnRnn
MSO	Mt. Stromlo Observato	-35.3	149.0	++++		++++	SEP 26 16:39 - SEP 26 17:17	PnnRie



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2036-09-26T16:59:02.900
 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 : 866235843509892224
 2Mass ID (if available) : 07212704+2231273
 ICRS Star Coord at Epoch: 07h 21m 27.03869s +22:31:27.24621s
 RUWE (>1.4 is poor) : 0.91
 K magnitude : 14.901
 G magnitude : 16.610
 RP magnitude : 16.044
 BP magnitude : 16.977
 DUPflag : 0
 Distance (au) : 19.017
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 14.20
 Sun-Target sep (deg) : 74.94
 Sun-Moon sep (deg) : 157.75
 B (ring opening deg) : 57.94
 PA of pole (deg) : 82.63
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.841
 C/A sky separation (km) : 39181.7
 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_itrff93_040916.bsp
 earth_720101_070426.bpc
 earth_200101_990628_predict.bpc
 pg3f0000r.bsp
 pg490000r.bsp
 naif0012.tls
 earth_flat_IAU.spk

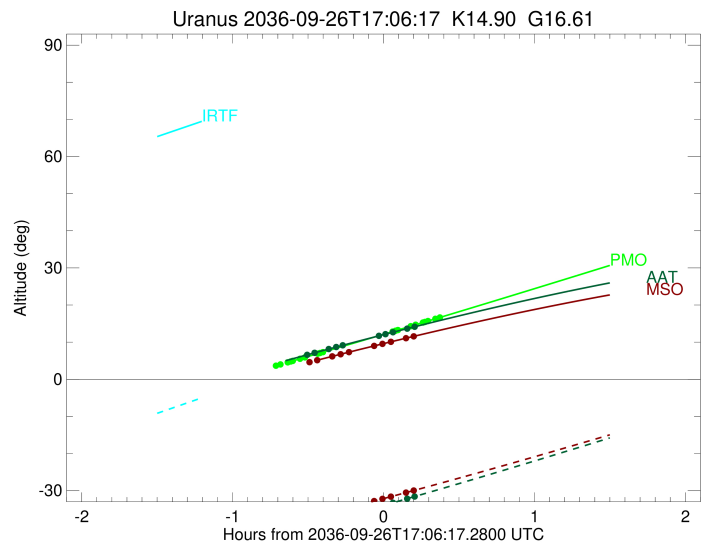
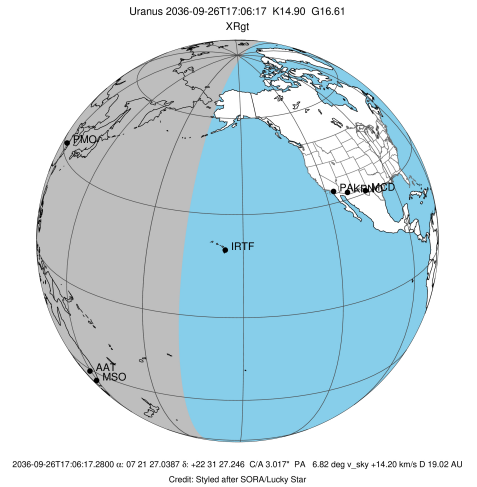


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2036-09-26T16:23:11.622		3.59x	-59.08	51378.61	-10.60		
lambda	I	2036-09-26T16:25:20.805		4.00x	-58.97	50026.71	-10.24		
delta	I	2036-09-26T16:28:14.671		4.57x	-58.81	48300.35	-9.60		
gamma	I	2036-09-26T16:29:25.381		4.80x	-58.74	47631.16	-9.32		
eta	I	2036-09-26T16:30:14.725		4.96x	-58.69	47176.12	-9.12		
beta	I	2036-09-26T16:33:06.659		5.52	-58.51	45670.82	-8.37		
alpha	I	2036-09-26T16:35:02.862		5.90	-58.38	44728.57	-7.81		
4	I	2036-09-26T16:40:05.330		6.89	-58.01	42598.33	-6.24		
5	I	2036-09-26T16:41:09.536		7.10	-57.93	42212.01	-5.84		
6	I	2036-09-26T16:42:19.906		7.33	-57.84	41809.56	-5.46		

No planet occultations

6	E	2036-09-26T17:09:48.165		12.81	-55.10	41835.43	5.43		
5	E	2036-09-26T17:10:48.476		13.02	-54.98	42167.26	5.82		
4	E	2036-09-26T17:12:03.080		13.27	-54.83	42615.97	6.21		
alpha	E	2036-09-26T17:17:01.309		14.27	-54.22	44697.38	7.76		
beta	E	2036-09-26T17:19:03.933		14.69	-53.96	45681.23	8.32		
eta	E	2036-09-26T17:21:56.039		15.27	-53.59	47176.12	9.05		
gamma	E	2036-09-26T17:22:45.647		15.44	-53.48	47630.03	9.25		
delta	E	2036-09-26T17:23:57.056		15.68	-53.32	48300.35	9.52		
lambda	E	2036-09-26T17:26:52.442		16.28	-52.93	50026.71	10.15		
epsilon	E	2036-09-26T17:28:14.008		16.55	-52.74	50865.80	10.49		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2036-09-26T17:00:55.420
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : AAT
 Location : Siding Spring (AAT)
 Latitude (deg) : -31.27703
 E. Longitude (deg) : 149.06608
 Altitude (km) : 1.164
 Gaia source ID : 866235843509892224
 2Mass ID (if available) : 07212704+2231273
 ICRS Star Coord at Epoch: 07h 21m 27.03869s +22:31:27.24621s
 RUWE (>1.4 is poor) : 0.91
 K magnitude : 14.901
 G magnitude : 16.610
 RP magnitude : 16.044
 BP magnitude : 16.977
 DUPflag : 0
 Distance (au) : 19.017
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 14.20
 Sun-Target sep (deg) : 74.94
 Sun-Moon sep (deg) : 157.79
 B (ring opening deg) : 57.94
 PA of pole (deg) : 82.63
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 3.355
 C/A sky separation (km) : 46271.0
 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

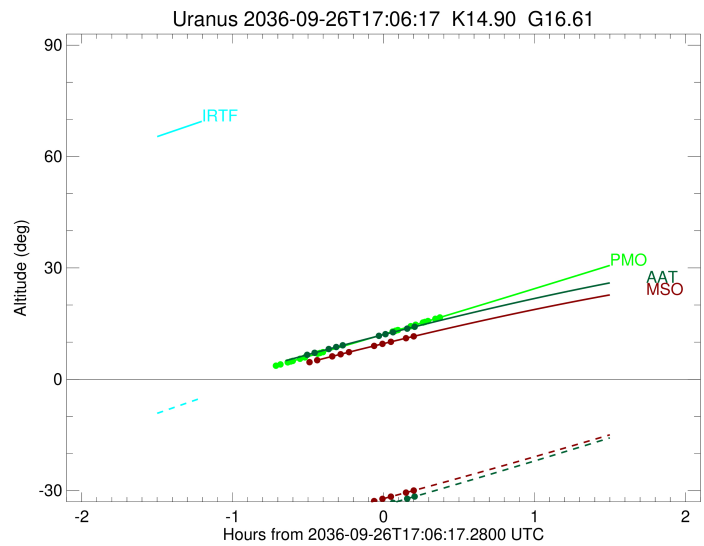
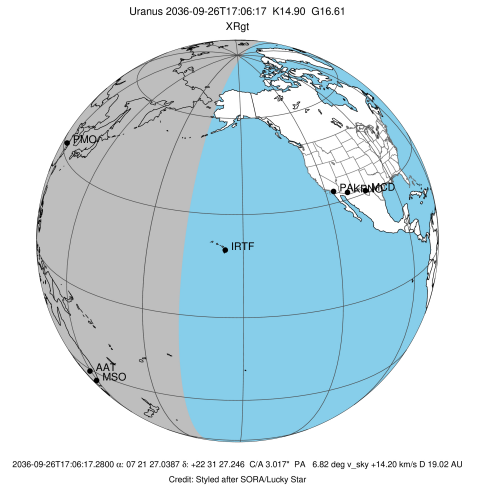


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2036-09-26T16:35:39.402		6.53	-39.68	51281.40	-6.70		
lambda	I	2036-09-26T16:38:56.241		7.13	-39.09	50026.71	-5.92		
delta	I	2036-09-26T16:44:35.045		8.16	-38.06	48300.35	-4.24		
gamma	I	2036-09-26T16:47:32.377		8.69	-37.52	47631.58	-3.30		
eta	I	2036-09-26T16:50:11.643		9.17	-37.02	47176.12	-2.42		

No planet occultations

eta	E	2036-09-26T17:04:21.689		11.68	-34.35	47176.12	2.41		
gamma	E	2036-09-26T17:07:01.193		12.14	-33.85	47631.17	3.29		
delta	E	2036-09-26T17:09:59.190		12.66	-33.27	48300.35	4.23		
lambda	E	2036-09-26T17:15:39.423		13.63	-32.18	50026.71	5.89		
epsilon	E	2036-09-26T17:18:07.850		14.05	-31.69	50951.42	6.66		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2036-09-26T17:01:14.070
 Event type : XRgt
 : No Uranus occs
 : Ring occs: geocentric, topocentric
 Observer code : MSO
 Location : Mt. Stromlo Observatory
 Latitude (deg) : -35.32000
 E. Longitude (deg) : 149.00833
 Altitude (km) : 0.770
 Gaia source ID : 866235843509892224
 2Mass ID (if available) : 07212704+2231273
 ICRS Star Coord at Epoch: 07h 21m 27.03869s +22:31:27.24621s
 RUWE (>1.4 is poor) : 0.91
 K magnitude : 14.901
 G magnitude : 16.610
 RP magnitude : 16.044
 BP magnitude : 16.977
 DUPflag : 0
 Distance (au) : 19.017
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 14.20
 Sun-Target sep (deg) : 74.94
 Sun-Moon sep (deg) : 157.80
 B (ring opening deg) : 57.94
 PA of pole (deg) : 82.63
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 3.375
 C/A sky separation (km) : 46542.7
 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_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	2036-09-26T16:36:35.515		4.56x	-37.29	51276.13	-6.50		
lambda	I	2036-09-26T16:39:58.417		5.14	-36.72	50026.71	-5.69		
delta	I	2036-09-26T16:45:58.351		6.18	-35.71	48300.35	-3.88		
gamma	I	2036-09-26T16:49:18.592		6.75	-35.13	47631.58	-2.80		
eta	I	2036-09-26T16:52:42.869		7.33	-34.54	47176.12	-1.66		

No planet occultations

eta	E	2036-09-26T17:02:24.677		8.96	-32.84	47176.12	1.66		
gamma	E	2036-09-26T17:05:49.179		9.53	-32.23	47631.23	2.79		
delta	E	2036-09-26T17:09:10.064		10.08	-31.63	48300.35	3.86		
lambda	E	2036-09-26T17:15:11.372		11.06	-30.54	50026.71	5.66		
epsilon	E	2036-09-26T17:17:45.860		11.47	-30.07	50956.08	6.47		