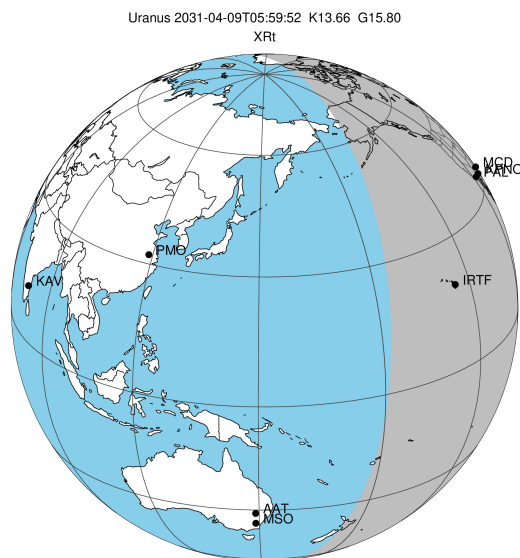


target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2031-04-09T05:59:52.020
 Event type : XRT
 : No Uranus occs
 : Ring occs: topocentric, not geocentric
 Gaia source ID : 3415715923471293440
 2Mass ID (if available) : 05125622+2305590

ICRS Star Coord at Epoch: 05h 12m 56.23074s +23:05:58.97588s

RUWE (>1.4 is poor) : 1.05
 K magnitude : 13.662
 G magnitude : 15.795
 RP magnitude : 15.087
 BP magnitude : 16.328
 DUPflag : 0
 Distance (au) : 19.608
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 21.02
 Sun-Target sep (deg) : 60.42
 Sun-Moon sep (deg) : 139.39
 B (ring opening deg) : 82.03
 PA of pole (deg) : 6.44

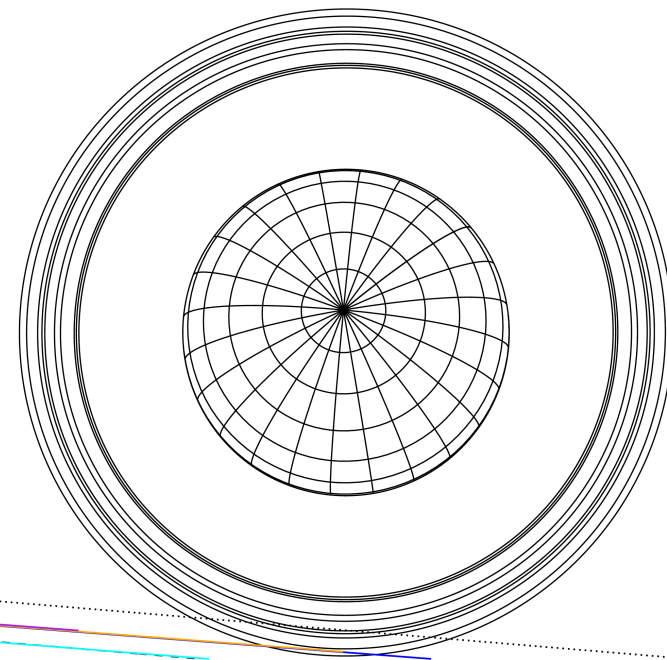
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2031-04-09T05:59:52.0200 ex: 05 12 56.2307 8: +23 05 58.976 C/A 3.710" PA 355.23 deg v_sky +21.02 km/s D 19.61 AU
 Credit: Styled after SORA/Lucky Star

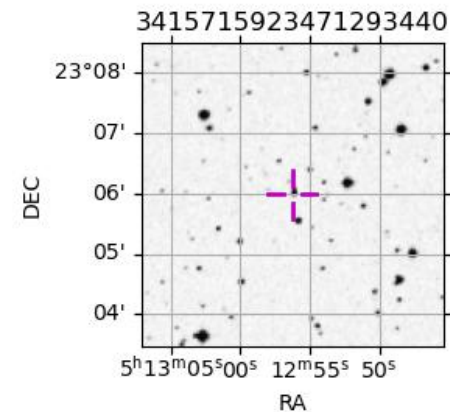
Uranus 2031-04-09T05:59:52 K13.66 G15.80 XRT

PAL
 KPNO
 MCD
 IRTF

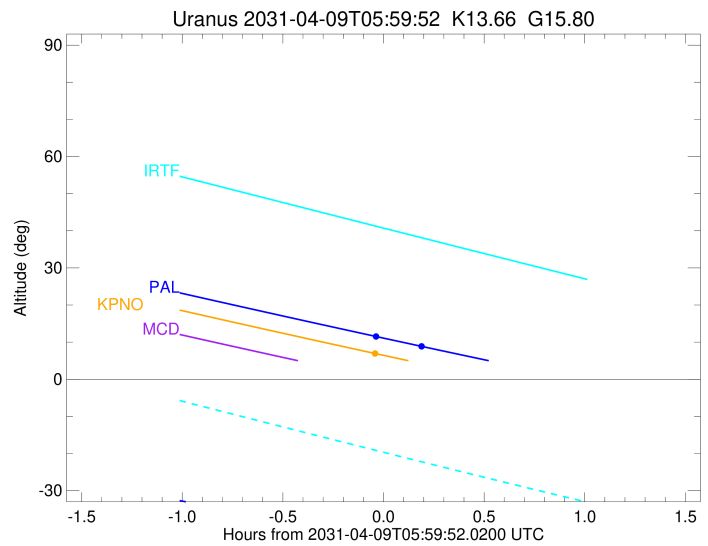
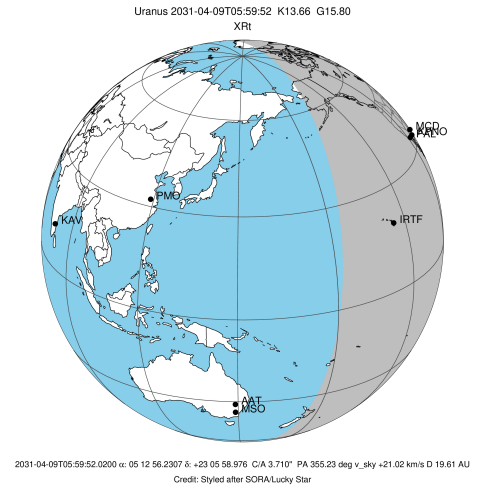


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+			APR 09 05:57 - APR 09 06:12	PnnRie
PMO	Purple Mtn Obs. Nanki	32.1	118.8					PnnRnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+			APR 09 05:56 - APR 09 05:56	PnnRin
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					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 : 2031-04-09T06:04:34.590
 Event type : XRt
 : No Uranus occs
 : Ring occs: topocentric, not geocentric
 Observer code : PAL
 Location : Palomar Mt (200")
 Latitude (deg) : 33.35622
 E. Longitude (deg) : 243.13601
 Altitude (km) : 1.706
 Gaia source ID : 3415715923471293440
 2Mass ID (if available) : 05125622+2305590
 ICRS Star Coord at Epoch: 05h 12m 56.23074s +23:05:58.97588s
 RUWE (>1.4 is poor) : 1.05
 K magnitude : 13.662
 G magnitude : 15.795
 RP magnitude : 15.087
 BP magnitude : 16.328
 DUPflag : 0
 Distance (au) : 19.608
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 21.02
 Sun-Target sep (deg) : 60.42
 Sun-Moon sep (deg) : 140.15
 B (ring opening deg) : 82.03
 PA of pole (deg) : 6.44
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 3.513
 C/A sky separation (km) : 49956.7
 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

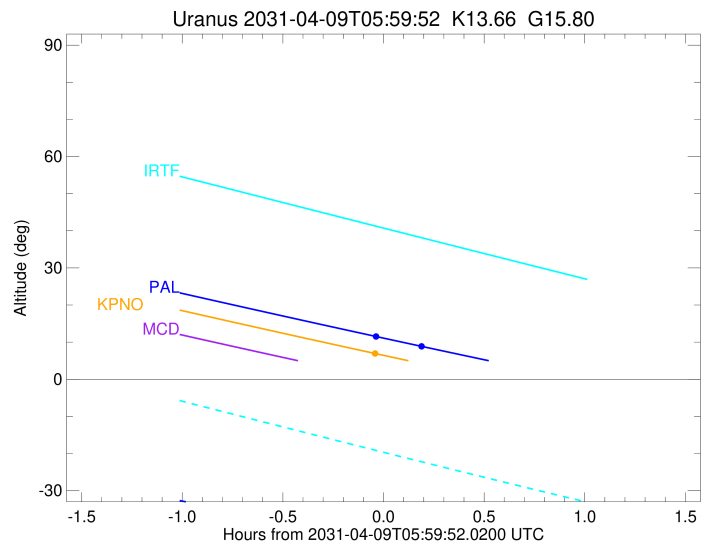
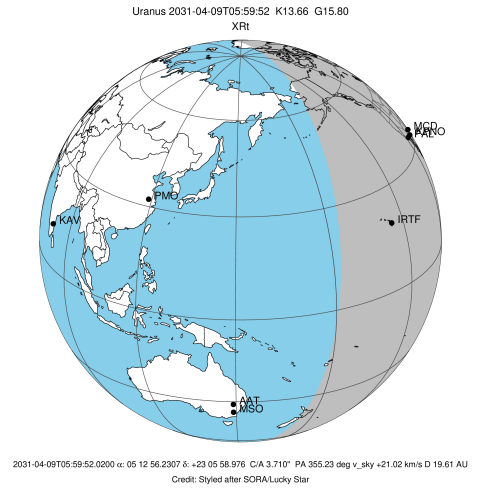


Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2031-04-09T05:57:05.639		11.63	-41.37	51285.13	-3.95		

No planet occultations

epsilon	E	2031-04-09T06:12:19.473		8.65	-43.25	51416.85	3.96		
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target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2031-04-09T06:04:36.970
 Event type : XRt
 : No Uranus occs
 : Ring occs: topocentric, not geocentric
 Observer code : KPNO
 Location : Kitt Peak Natl Obs
 Latitude (deg) : 31.96333
 E. Longitude (deg) : 248.40000
 Altitude (km) : 2.120
 Gaia source ID : 3415715923471293440
 2Mass ID (if available) : 05125622+2305590
 ICRS Star Coord at Epoch: 05h 12m 56.23074s +23:05:58.97588s
 RUWE (>1.4 is poor) : 1.05
 K magnitude : 13.662
 G magnitude : 15.795
 RP magnitude : 15.087
 BP magnitude : 16.328
 DUPflag : 0
 Distance (au) : 19.608
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 21.02
 Sun-Target sep (deg) : 60.42
 Sun-Moon sep (deg) : 140.10
 B (ring opening deg) : 82.03
 PA of pole (deg) : 6.44
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 3.508
 C/A sky separation (km) : 49882.6
 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



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2031-04-09T05:56:50.663		7.04	-45.06	51282.28	-4.11		

No planet occultations

epsilon	E	2031-04-09T06:12:39.183		3.96x	-46.76	51419.19	4.12		
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