

target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2026-04-03T06:56:18.180  
 Event type : XRgt  
 : No Uranus occs  
 : Ring occs: geocentric, topocentric  
 Gaia source ID : 63054213010969600  
 2Mass ID (if available) : 03451151+1939248

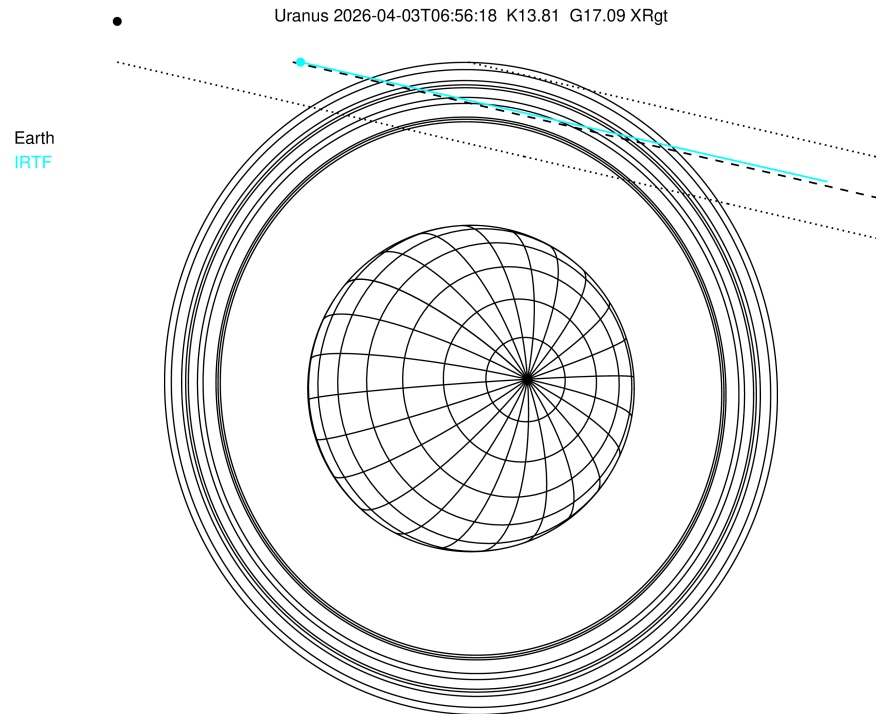
ICRS Star Coord at Epoch: 03h 45m 11.52118s +19:39:24.64811s

RUWE (>1.4 is poor) : 1.04  
 K magnitude : 13.806  
 G magnitude : 17.088  
 RP magnitude : 16.085  
 BP magnitude : 18.143  
 DUPflag : 0  
 Distance (au) : 20.164  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 27.27  
 Sun-Target sep (deg) : 45.33  
 Sun-Moon sep (deg) : 148.19  
 B (ring opening deg) : 69.47  
 PA of pole (deg) : -80.72

#	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

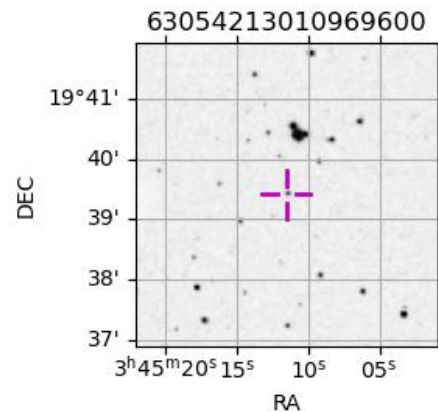


2026-04-03T06:56:18.1800 ex: 03 45 11.5212 s: +19 39 24.648 C/A 2.976° PA 166.93 deg v\_sky +27.27 km/s D 20.16 AU  
 Credit: Styled after SORA/Lucky Star

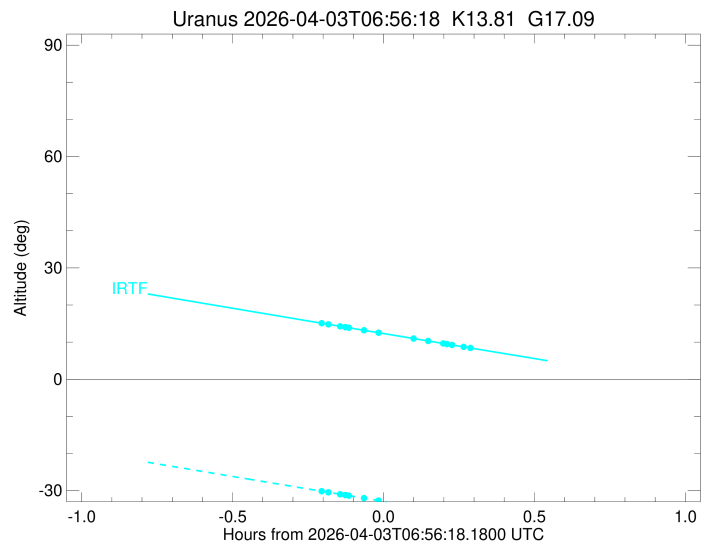
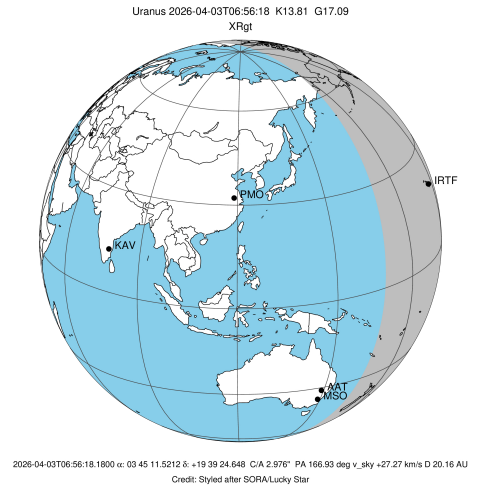


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+++++++		+++++++	APR 03 06:44 - APR 03 07:13	PnnRie
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 : 2026-04-03T06:59:58.910  
 Event type : XRgt  
 : No Uranus occs  
 : Ring occs: geocentric, topocentric  
 Observer code : IRTF  
 Location : Mauna Kea/IRTF  
 Latitude (deg) : 19.82622  
 E. Longitude (deg) : 204.52800  
 Altitude (km) : 4.168  
 Gaia source ID : 63054213010969600  
 2Mass ID (if available) : 03451151+1939248  
 ICRS Star Coord at Epoch: 03h 45m 11.52118s +19:39:24.64811s  
 RUWE (>1.4 is poor) : 1.04  
 K magnitude : 13.806  
 G magnitude : 17.088  
 RP magnitude : 16.085  
 BP magnitude : 18.143  
 DUPflag : 0  
 Distance (au) : 20.164  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 27.27  
 Sun-Target sep (deg) : 45.33  
 Sun-Moon sep (deg) : 149.05  
 B (ring opening deg) : 69.47  
 PA of pole (deg) : -80.72  
 Pole direction: RA (deg): 257.31100  
 Dec (deg): -15.17500  
 C/A sky separation (") : 3.004  
 C/A sky separation (km) : 43926.3  
 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	2026-04-03T06:44:19.227		15.03	-30.22	50902.07	-14.29		
lambda	I	2026-04-03T06:45:22.952		14.79	-30.46	50026.71	-13.33		
delta	I	2026-04-03T06:47:42.251		14.27	-30.97	48300.35	-11.42		
gamma	I	2026-04-03T06:48:43.601		14.03	-31.20	47627.12	-10.52		
eta	I	2026-04-03T06:49:27.895		13.87	-31.36	47176.12	-9.84		
beta	I	2026-04-03T06:52:25.645		13.20	-32.02	45679.86	-6.95		
alpha	I	2026-04-03T06:55:16.206		12.55	-32.65	44750.67	-3.94		

No planet occultations

alpha	E	2026-04-03T07:02:21.071		10.96	-34.20	44752.39	3.94		
beta	E	2026-04-03T07:05:11.510		10.32	-34.83	45681.10	6.96		
eta	E	2026-04-03T07:08:08.772		9.65	-35.47	47176.12	9.86		
gamma	E	2026-04-03T07:08:53.318		9.48	-35.63	47630.46	10.54		
delta	E	2026-04-03T07:09:54.253		9.26	-35.85	48300.35	11.44		
lambda	E	2026-04-03T07:12:13.294		8.74	-36.36	50026.71	13.36		
epsilon	E	2026-04-03T07:13:44.779		8.39	-36.69	51302.02	14.33		