

target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2035-08-22T23:54:30.940  
 Event type : PRgt  
 : Uranus occs: not geocentric or topocentric  
 : Ring occs: geocentric, topocentric  
 Gaia source ID : 3380168124132545024  
 2Mass ID (if available) : 06570877+2307417

ICRS Star Coord at Epoch: 06h 57m 08.78528s +23:07:41.32269s

RUWE (>1.4 is poor) : 1.09  
 K magnitude : 14.434  
 G magnitude : 17.606  
 RP magnitude : 16.614  
 BP magnitude : 18.679  
 DUPflag : 0  
 Distance (au) : 19.536  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 27.09  
 Sun-Target sep (deg) : 46.12  
 Sun-Moon sep (deg) : 86.97  
 B (ring opening deg) : 63.36  
 PA of pole (deg) : 77.49

# a(km) ring

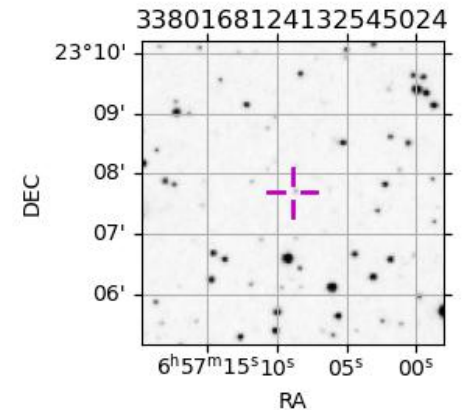
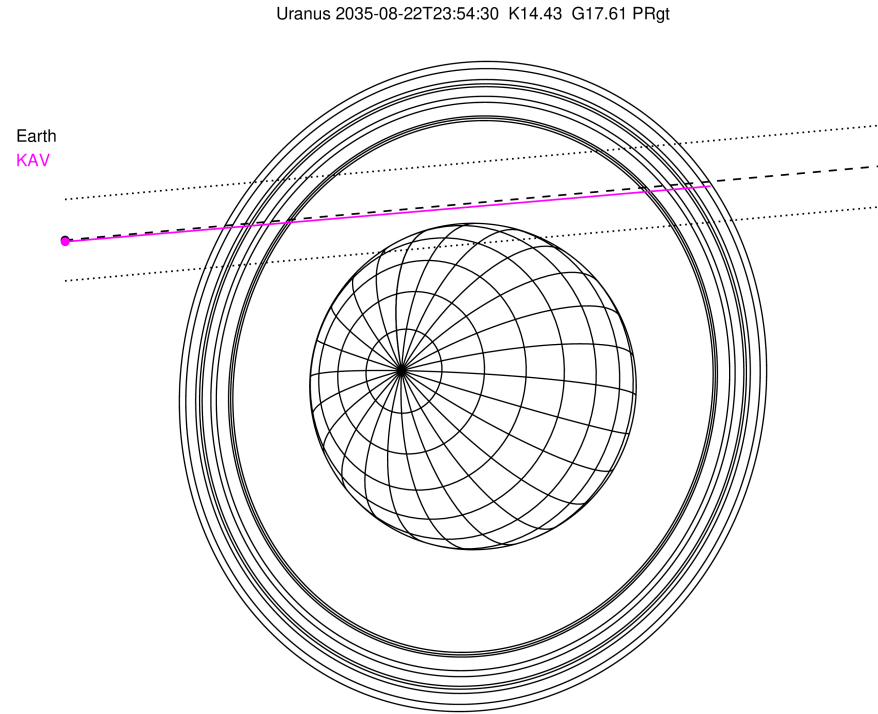
- 1 41837.2 6
- 2 42235.0 5
- 3 42571.2 4
- 4 44718.5 alpha
- 5 45661.1 beta
- 6 47176.1 eta
- 7 47626.3 gamma
- 8 48300.3 delta
- 9 50026.7 lambda
- 10 51149.4 epsilon

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

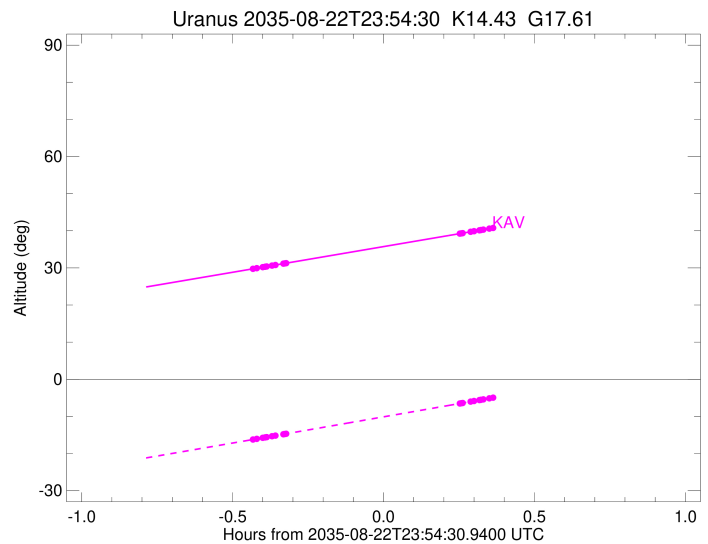
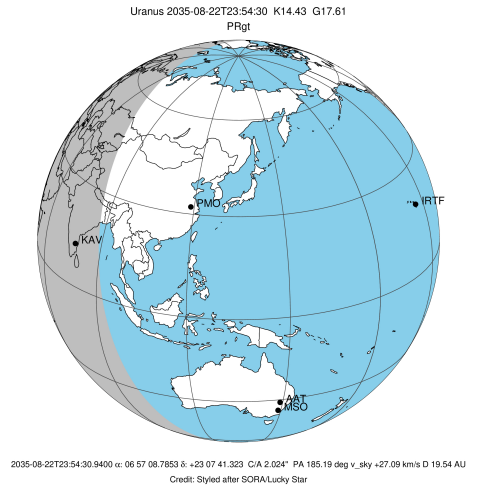
Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEncode
PIC	Pic du Midi	42.9	0.1					PnnRnn
PAL	Palomar Mt (200")	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs. Nanki	32.1	118.8					PnnRnn
KPNO	Kitt Peak Natl Obs	32.0	248.4					PnnRnn
MCD	McDonald Obs. 2.7m	30.7	256.0					PnnRnn
TEN	Teide Obs./Tenerife	28.3	343.5					PnnRnn
IRTF	Mauna Kea/IRTF	19.8	204.5					PnnRnn
KAV	Kavalur Observatory	12.6	78.8	+++++		+++++	AUG 22 23:28 - AUG 23 00:15	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



2035-08-22T23:54:30.9400 ex: 06 57 08.7853 8: +23 07 41.323 C/A 2.024" PA 185.19 deg v\_sky +27.09 km/s D 19.54 AU  
 Credit: Styled after SORA/Lucky Star



target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2035-08-22T23:51:24.020  
 Event type : PRgt  
 : Uranus occs: not geocentric or topocentric  
 : 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 : 3380168124132545024  
 2Mass ID (if available) : 06570877+2307417  
 ICRS Star Coord at Epoch: 06h 57m 08.78528s +23:07:41.32269s  
 RUWE (>1.4 is poor) : 1.09  
 K magnitude : 14.434  
 G magnitude : 17.606  
 RP magnitude : 16.614  
 BP magnitude : 18.679  
 DUPflag : 0  
 Distance (au) : 19.536  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 27.09  
 Sun-Target sep (deg) : 46.12  
 Sun-Moon sep (deg) : 87.49  
 B (ring opening deg) : 63.36  
 PA of pole (deg) : 77.49  
 Pole direction: RA (deg): 257.31100  
 Dec (deg): -15.17500  
 C/A sky separation (") : 1.980  
 C/A sky separation (km) : 28049.2  
 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	2035-08-22T23:28:50.170		29.81	-16.17	50771.72	-24.77		
lambda	I	2035-08-22T23:29:20.405		29.93	-16.05	50026.71	-24.55		
delta	I	2035-08-22T23:30:31.317		30.20	-15.77	48300.35	-24.13		
gamma	I	2035-08-22T23:30:59.510		30.31	-15.66	47622.66	-23.92		
eta	I	2035-08-22T23:31:18.208		30.38	-15.59	47176.12	-23.82		
beta	I	2035-08-22T23:32:22.133		30.63	-15.34	45669.72	-23.36		
alpha	I	2035-08-22T23:33:04.042		30.79	-15.18	44697.65	-23.05		
4	I	2035-08-22T23:34:40.042		31.16	-14.80	42528.94	-22.22		
5	I	2035-08-22T23:34:50.291		31.20	-14.76	42313.07	-22.12		
6	I	2035-08-22T23:35:13.539		31.29	-14.67	41803.06	-21.91		

No planet occultations

6	E	2035-08-23T00:09:42.063		39.24	-6.52	41865.28	21.86		
5	E	2035-08-23T00:09:57.352		39.29	-6.46	42208.46	22.07		
4	E	2035-08-23T00:10:15.138		39.36	-6.39	42592.24	22.16		
alpha	E	2035-08-23T00:11:50.206		39.73	-6.02	44748.86	22.99		
beta	E	2035-08-23T00:12:28.911		39.88	-5.86	45641.49	23.29		
eta	E	2035-08-23T00:13:34.162		40.13	-5.61	47176.12	23.75		
gamma	E	2035-08-23T00:13:52.953		40.20	-5.53	47623.60	23.87		
delta	E	2035-08-23T00:14:21.192		40.31	-5.42	48300.35	24.06		
lambda	E	2035-08-23T00:15:32.323		40.58	-5.14	50026.71	24.48		
epsilon	E	2035-08-23T00:16:29.355		40.80	-4.91x	51431.59	24.69		