

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2033-09-01T15:06:57.640
 Event type : PRgt
 : Uranus occs: not geocentric or topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3377578160072345600
 2Mass ID (if available) : 06213545+2334577

ICRS Star Coord at Epoch: 06h 21m 35.45147s +23:34:57.78965s

RUWE (>1.4 is poor) : 1.08
 K magnitude : 11.404
 G magnitude : 13.420
 RP magnitude : 12.755
 BP magnitude : 13.914
 DUPflag : 0
 Distance (au) : 19.393
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 19.39
 Sun-Target sep (deg) : 64.09
 Sun-Moon sep (deg) : 148.47
 B (ring opening deg) : 71.00
 PA of pole (deg) : 67.01

a(km) ring

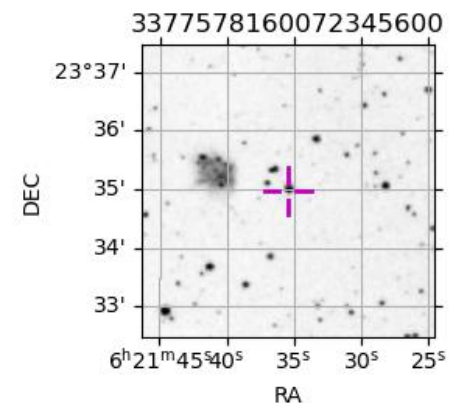
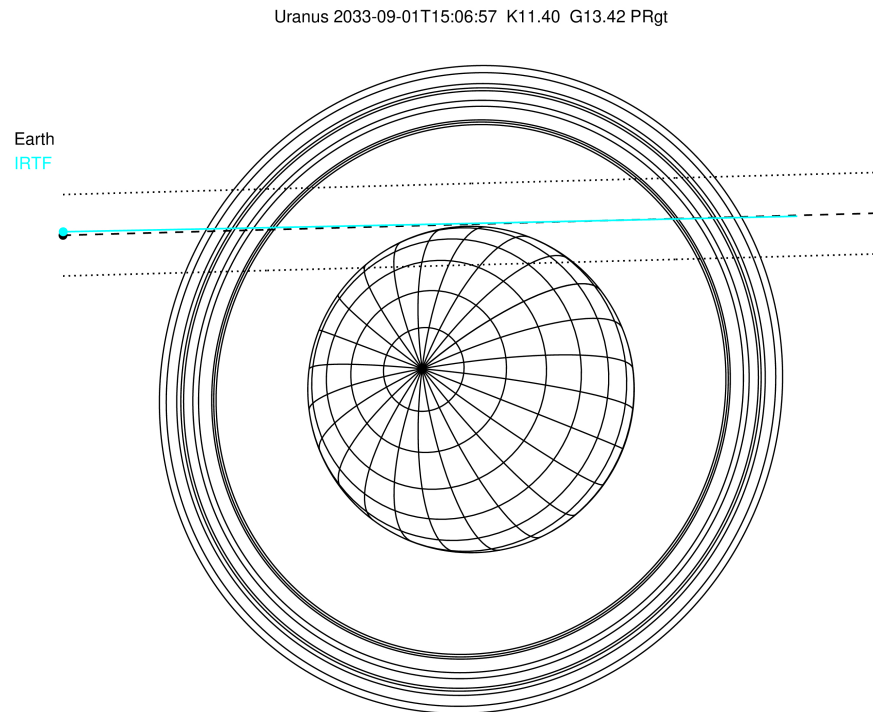
- 1 41837.2 6
- 2 42235.0 5
- 3 42571.2 4
- 4 44718.5 alpha
- 5 45661.1 beta
- 6 47176.1 eta
- 7 47626.3 gamma
- 8 48300.3 delta
- 9 50026.7 lambda
- 10 51149.4 epsilon

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

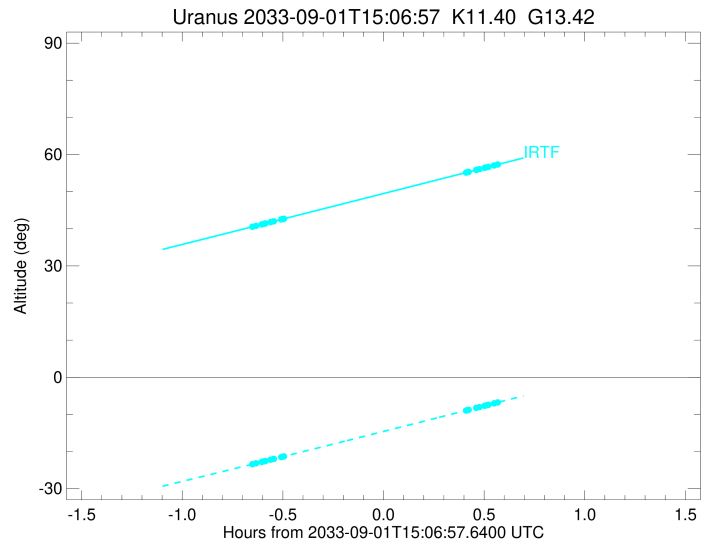
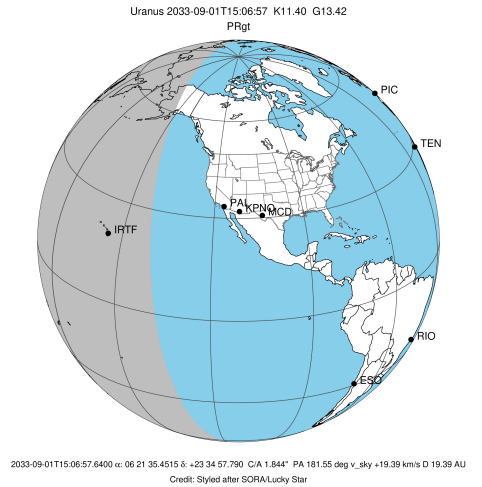
Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1					PnnRnn
PAL	Palomar Mt (200")	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs. Nanki	32.1	118.8					PnnRnn
KPNO	Kitt Peak Natl Obs	32.0	248.4					PnnRnn
MCD	McDonald Obs. 2.7m	30.7	256.0					PnnRnn
TEN	Teide Obs./Tenerife	28.3	343.5					PnnRnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+++++		+++++	SEP 01 14:27 - SEP 01 15:41	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



2033-09-01T15:06:57.6400 ex: 06 21 35.4515 s: +23 34 57.790 C/A 1.844" PA 181.55 deg v_sky +19.39 km/s D 19.39 AU
 Credit: Styled after SORA/Lucky Star



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2033-09-01T15:03:28.530
 Event type : PRgt
 : Uranus occs: not geocentric or topocentric
 : 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 : 3377578160072345600
 2Mass ID (if available) : 06213545+2334577
 ICRS Star Coord at Epoch: 06h 21m 35.45147s +23:34:57.78965s
 RUWE (>1.4 is poor) : 1.08
 K magnitude : 11.404
 G magnitude : 13.420
 RP magnitude : 12.755
 BP magnitude : 13.914
 DUPflag : 0
 Distance (au) : 19.393
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 19.39
 Sun-Target sep (deg) : 64.09
 Sun-Moon sep (deg) : 148.33
 B (ring opening deg) : 71.00
 PA of pole (deg) : 67.01
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.849
 C/A sky separation (km) : 26003.0
 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



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	2033-09-01T14:27:42.522		40.51	-23.46	51328.05	-17.31		
lambda	I	2033-09-01T14:28:58.354		40.80	-23.18	50026.71	-17.08		
delta	I	2033-09-01T14:30:40.149		41.18	-22.80	48300.35	-16.84		
gamma	I	2033-09-01T14:31:20.110		41.34	-22.65	47629.56	-16.74		
eta	I	2033-09-01T14:31:47.262		41.44	-22.55	47176.12	-16.66		
beta	I	2033-09-01T14:33:17.994		41.78	-22.21	45676.82	-16.41		
alpha	I	2033-09-01T14:34:16.561		42.01	-21.99	44715.76	-16.22		
4	I	2033-09-01T14:36:32.919		42.53	-21.48	42544.60	-15.76		
5	I	2033-09-01T14:36:53.605		42.61	-21.40	42201.58	-15.72		
6	I	2033-09-01T14:37:14.105		42.68	-21.33	41876.31	-15.61		

No planet occultations

6	E	2033-09-01T15:31:31.717		55.13	-8.96	41812.53	15.54		
5	E	2033-09-01T15:32:03.691		55.26	-8.84	42313.69	15.64		
4	E	2033-09-01T15:32:18.375		55.31	-8.78	42541.99	15.69		
alpha	E	2033-09-01T15:34:33.250		55.83	-8.27	44687.25	16.14		
beta	E	2033-09-01T15:35:32.095		56.05	-8.04	45644.00	16.32		
eta	E	2033-09-01T15:37:05.282		56.41	-7.68	47176.12	16.57		
gamma	E	2033-09-01T15:37:32.542		56.52	-7.58	47628.81	16.64		
delta	E	2033-09-01T15:38:12.776		56.67	-7.42	48300.35	16.74		
lambda	E	2033-09-01T15:39:55.172		57.06	-7.03	50026.71	16.97		
epsilon	E	2033-09-01T15:41:14.488		57.37	-6.72	51379.71	17.21		