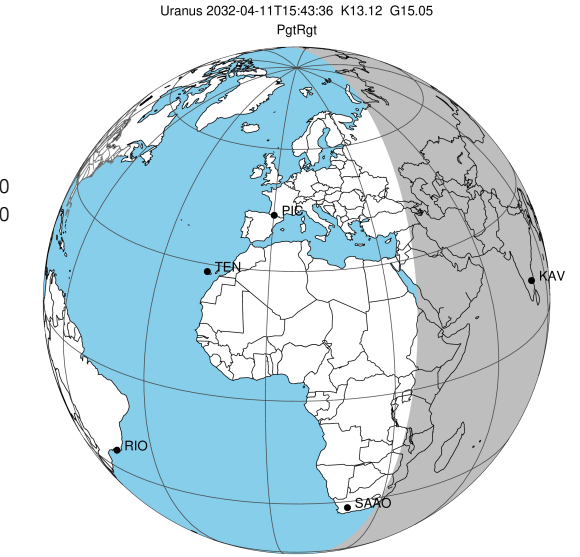


target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2032-04-11T15:43:36.590
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3416547837159235072
 2Mass ID (if available) : 05313859+2326149

ICRS Star Coord at Epoch: 05h 31m 38.59323s +23:26:14.96259s

RUWE (>1.4 is poor) : 1.01
 K magnitude : 13.120
 G magnitude : 15.052
 RP magnitude : 14.402
 BP magnitude : 15.524
 DUPflag : 0
 Distance (au) : 19.521
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 20.50
 Sun-Target sep (deg) : 61.64
 Sun-Moon sep (deg) : 41.61
 B (ring opening deg) : 80.20
 PA of pole (deg) : 33.58
 # a(km) ring

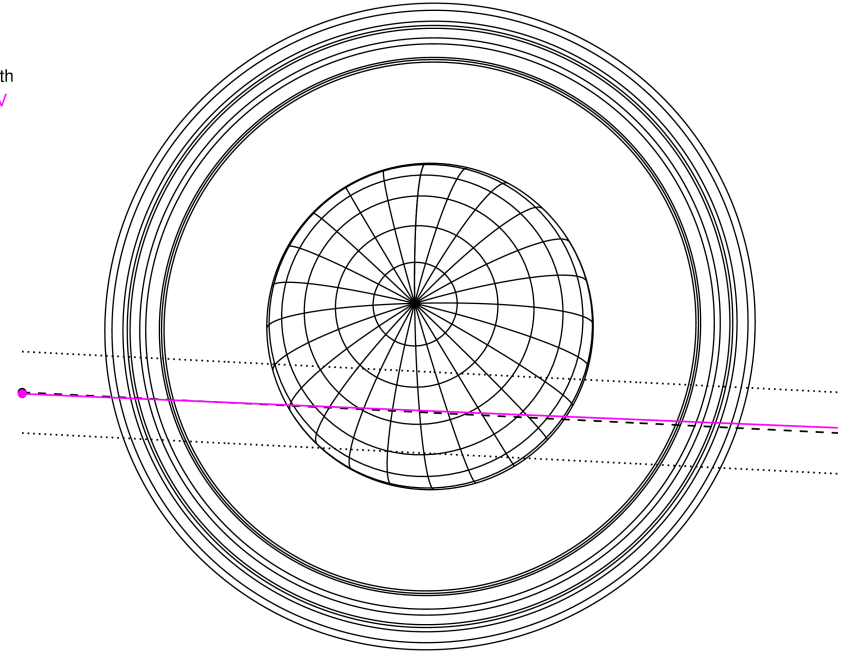
- 1 41837.2 6
- 2 42235.0 5
- 3 42571.2 4
- 4 44718.5 alpha
- 5 45661.1 beta
- 6 47176.1 eta
- 7 47626.3 gamma
- 8 48300.3 delta
- 9 50026.7 lambda
- 10 51149.4 epsilon



2032-04-11T15:43:36.5900 ex: 05 31 38.5932 s: +23 26 14.963 C/A 0.946° PA 357.14 deg v_sky +20.50 km/s D 19.52 AU
 Credit: Styled after SORA/Lucky Star

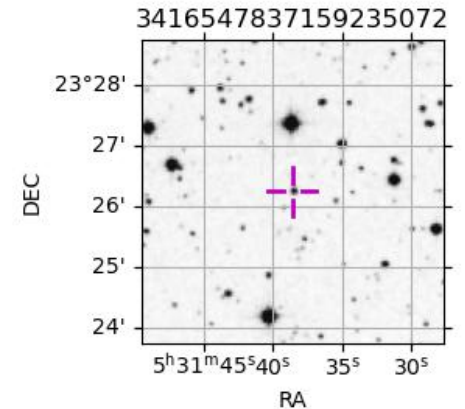
Uranus 2032-04-11T15:43:36 K13.12 G15.05 PgtRgt

Earth
 KAV



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

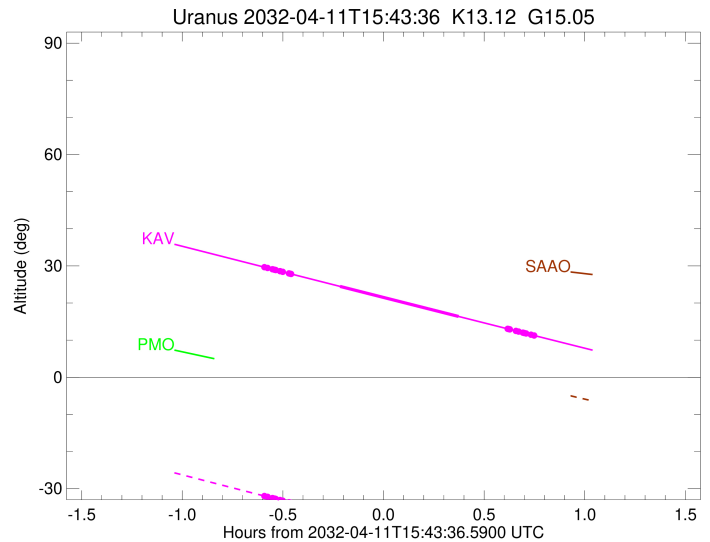
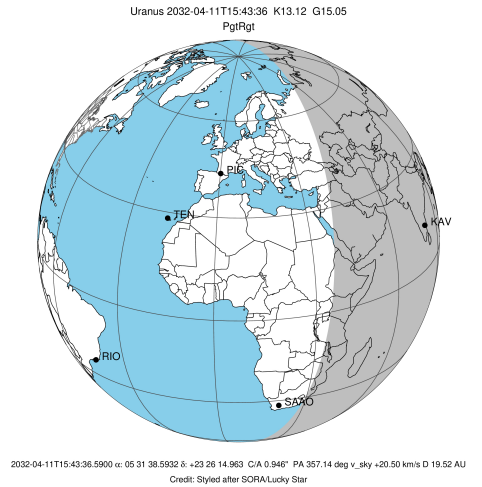
Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1					PnnRnn
PAL	Palomar Mt (200")	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs. Nanki	32.1	118.8					PnnRnn
KPNO	Kitt Peak Natl Obs	32.0	248.4					PnnRnn
MCD	McDonald Obs. 2.7m	30.7	256.0					PnnRnn
TEN	Teide Obs./Tenerife	28.3	343.5					PnnRnn
IRTF	Mauna Kea/IRTF	19.8	204.5					PnnRnn
KAV	Kavalur Observatory	12.6	78.8	+++++	+ +	+++++	APR 11 15:08 - APR 11 16:28	PieRie
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



3416547837159235072

DEC: 23°28', 27', 26', 25', 24'
 RA: 5h31m45s40s, 35s, 30s

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2032-04-11T15:48:33.240
 Event type : PgtRgt
 : Uranus occs: geocentric, 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 : 3416547837159235072
 2Mass ID (if available) : 05313859+2326149
 ICRS Star Coord at Epoch: 05h 31m 38.59323s +23:26:14.96259s
 RUWE (>1.4 is poor) : 1.01
 K magnitude : 13.120
 G magnitude : 15.052
 RP magnitude : 14.402
 BP magnitude : 15.524
 DUPflag : 0
 Distance (au) : 19.521
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 20.50
 Sun-Target sep (deg) : 61.64
 Sun-Moon sep (deg) : 42.52
 B (ring opening deg) : 80.20
 PA of pole (deg) : 33.58
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 0.934
 C/A sky separation (km) : 13217.5
 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	2032-04-11T15:08:04.363		29.67	-31.98	51193.46	-19.62		
lambda	I	2032-04-11T15:09:03.741		29.44	-32.21	50026.71	-19.63		
delta	I	2032-04-11T15:10:31.788		29.10	-32.55	48300.35	-19.58		
gamma	I	2032-04-11T15:11:06.222		28.97	-32.68	47626.50	-19.56		
eta	I	2032-04-11T15:11:29.258		28.88	-32.77	47176.12	-19.54		
beta	I	2032-04-11T15:12:46.029		28.59	-33.07	45677.86	-19.49		
alpha	I	2032-04-11T15:13:33.550		28.40	-33.25	44751.93	-19.45		
4	I	2032-04-11T15:15:28.218		27.96	-33.69	42526.42	-19.35		
5	I	2032-04-11T15:15:43.458		27.91	-33.75	42235.01	-19.33		
6	I	2032-04-11T15:16:01.779		27.84	-33.82	41879.73	-19.32		
Uranus	I	2032-04-11T15:30:37.894		24.48	-37.16	25554.84		0.82	0.86
Uranus	E	2032-04-11T16:05:58.587		16.39	-45.06	25069.25		-9.07	-9.49
6	E	2032-04-11T16:20:35.877		13.06	-48.23	41804.04	19.46		
5	E	2032-04-11T16:20:55.212		12.98	-48.29	42186.60	19.46		
4	E	2032-04-11T16:21:16.972		12.90	-48.37	42603.23	19.49		
alpha	E	2032-04-11T16:23:03.919		12.49	-48.75	44694.40	19.60		
beta	E	2032-04-11T16:23:52.716		12.31	-48.93	45653.52	19.64		
eta	E	2032-04-11T16:25:10.145		12.02	-49.20	47176.12	19.70		
gamma	E	2032-04-11T16:25:33.121		11.93	-49.28	47628.93	19.72		
delta	E	2032-04-11T16:26:07.153		11.80	-49.40	48300.35	19.74		
lambda	E	2032-04-11T16:27:34.471		11.47	-49.71	50026.71	19.80		
epsilon	E	2032-04-11T16:28:18.689		11.30	-49.86	50902.85	19.79		