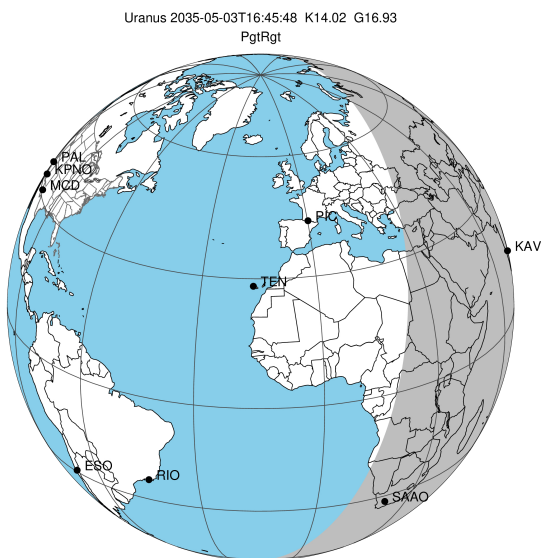


target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-03T16:45:48.050
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3382598285348392704
 2Mass ID (if available) : 06304877+2334230

Uranus 2035-05-03T16:45:48 K14.02 G16.93 PgtRgt

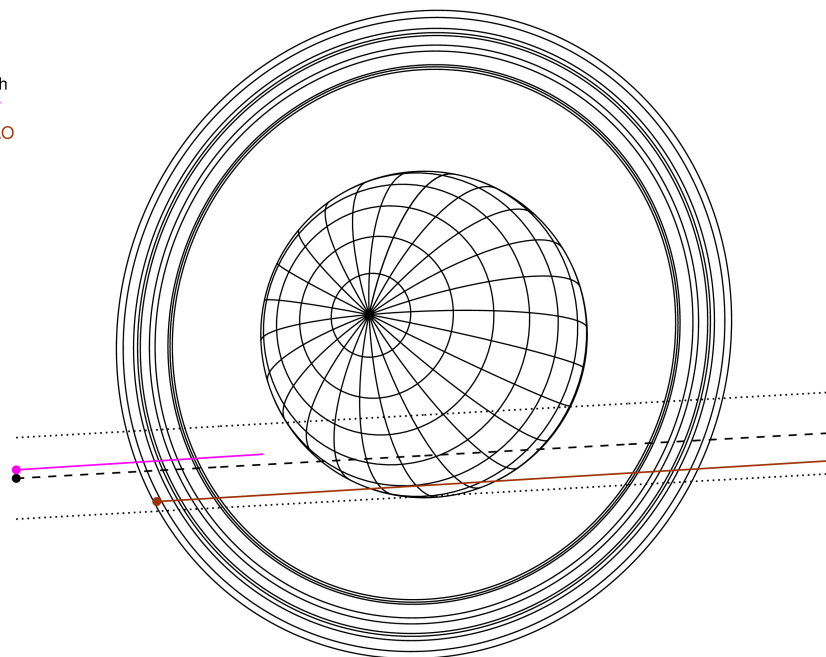
ICRS Star Coord at Epoch: 06h 30m 48.74964s +23:34:22.90127s

RUWE (>1.4 is poor) : 1.01
 K magnitude : 14.018
 G magnitude : 16.934
 RP magnitude : 16.059
 BP magnitude : 17.737
 DUPflag : 0
 Distance (au) : 19.436
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 23.72
 Sun-Target sep (deg) : 54.45
 Sun-Moon sep (deg) : 109.30
 B (ring opening deg) : 69.04
 PA of pole (deg) : 70.08



2035-05-03T16:45:48.0500 α: 06 30 48.7496 δ: +23 34 22.901 C/A 1.337" PA 3.19 deg v_sky +23.72 km/s D 19.44 AU
 Credit: Styled after SORA/Lucky Star

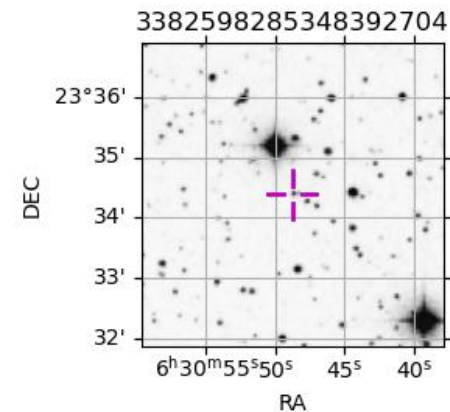
Earth
 KAV
 SAAO



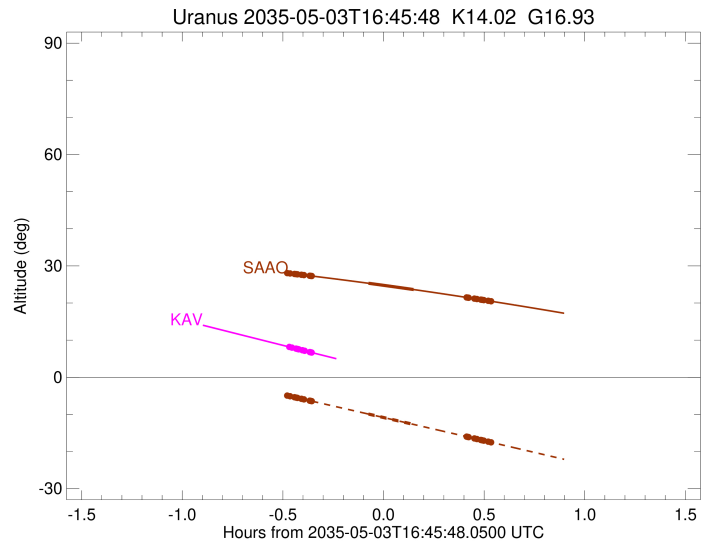
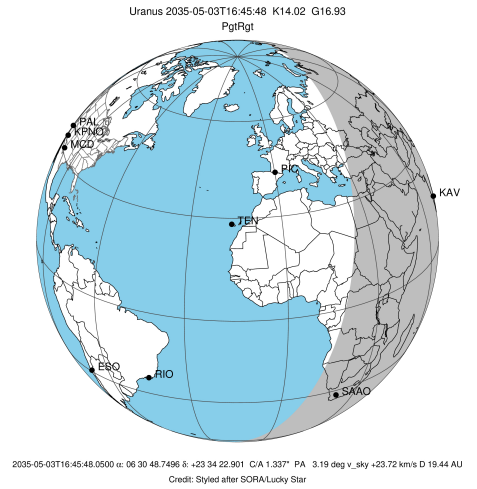
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon

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					PnnRnn
KAV	Kavalur Observatory	12.6	78.8	+++++			MAY 03 16:17 - MAY 03 16:24	PnnRin
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	+++++	+	+++++	MAY 03 16:17 - MAY 03 17:17	PieRie
MSO	Mt. Stromlo Observato	-35.3	149.0					PnnRnn

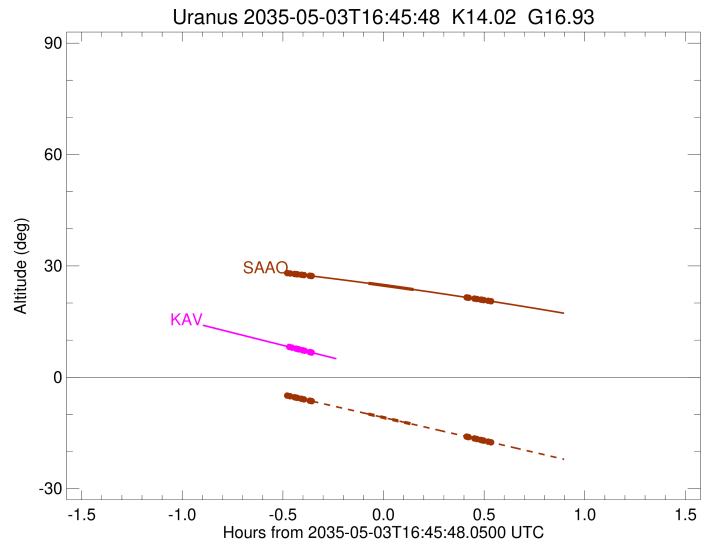
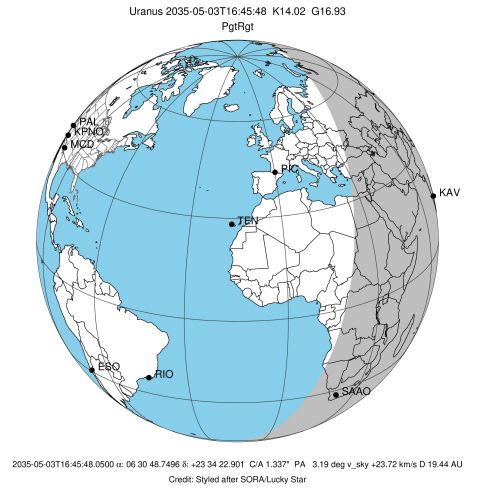


target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-03T16:50:10.990
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : KAV
 Location : Kavalur Observatory
 Latitude (deg) : 12.57556
 E. Longitude (deg) : 78.83167
 Altitude (km) : 0.722
 Gaia source ID : 3382598285348392704
 2Mass ID (if available) : 06304877+2334230
 ICRS Star Coord at Epoch: 06h 30m 48.74964s +23:34:22.90127s
 RUWE (>1.4 is poor) : 1.01
 K magnitude : 14.018
 G magnitude : 16.934
 RP magnitude : 16.059
 BP magnitude : 17.737
 DUPflag : 0
 Distance (au) : 19.436
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 23.72
 Sun-Target sep (deg) : 54.45
 Sun-Moon sep (deg) : 109.02
 B (ring opening deg) : 69.04
 PA of pole (deg) : 70.08
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.215
 C/A sky separation (km) : 17120.4
 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



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2035-05-03T16:17:26.623		8.23	-44.52	51553.83	-23.65		
lambda	I	2035-05-03T16:18:31.310		7.99	-44.73	50026.71	-23.56		
delta	I	2035-05-03T16:19:44.756		7.71	-44.96	48300.35	-23.45		
gamma	I	2035-05-03T16:20:13.652		7.60	-45.06	47623.52	-23.40		
eta	I	2035-05-03T16:20:32.786		7.53	-45.12	47176.12	-23.36		
beta	I	2035-05-03T16:21:38.376		7.28	-45.33	45646.49	-23.24		
alpha	I	2035-05-03T16:22:17.970		7.13	-45.45	44727.56	-23.16		
4	I	2035-05-03T16:23:53.061		6.77	-45.76	42530.13	-22.94		
5	I	2035-05-03T16:24:02.561		6.74	-45.79	42314.34	-22.93		
6	I	2035-05-03T16:24:24.908		6.65	-45.86	41797.49	-22.86		
Uranus	I	2035-05-03T16:36:57.187	3.83x	-48.19	25470.88			8.44	8.84
Uranus	E	2035-05-03T17:03:02.849	-2.01x	-52.69	25103.91			-19.71	-20.57
6	E	2035-05-03T17:14:46.503	-4.61x	-54.51	41851.93		22.97		
5	E	2035-05-03T17:15:00.924	-4.66x	-54.55	42191.34		23.04		
4	E	2035-05-03T17:15:18.611	-4.73x	-54.59	42584.48		23.05		
alpha	E	2035-05-03T17:16:49.018	-5.06x	-54.81	44688.82		23.28		
beta	E	2035-05-03T17:17:31.699	-5.22x	-54.92	45681.22		23.37		
eta	E	2035-05-03T17:18:35.438	-5.45x	-55.07	47176.12		23.49		
gamma	E	2035-05-03T17:18:54.538	-5.52x	-55.12	47625.20		23.53		
delta	E	2035-05-03T17:19:23.201	-5.63x	-55.19	48300.35		23.58		
lambda	E	2035-05-03T17:20:36.223	-5.89x	-55.36	50026.71		23.70		
epsilon	E	2035-05-03T17:21:09.442	-6.02x	-55.44	50814.89		23.79		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2035-05-03T16:48:18.560
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : SAAO
 Location : So. Afr. Astro. Obs. (Sutherland)
 Latitude (deg) : -32.37953
 E. Longitude (deg) : 20.81070
 Altitude (km) : 1.768
 Gaia source ID : 3382598285348392704
 2Mass ID (if available) : 06304877+2334230
 ICRS Star Coord at Epoch: 06h 30m 48.74964s +23:34:22.90127s
 RUWE (>1.4 is poor) : 1.01
 K magnitude : 14.018
 G magnitude : 16.934
 RP magnitude : 16.059
 BP magnitude : 17.737
 DUPflag : 0
 Distance (au) : 19.436
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 23.72
 Sun-Target sep (deg) : 54.45
 Sun-Moon sep (deg) : 109.50
 B (ring opening deg) : 69.04
 PA of pole (deg) : 70.08
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.675
 C/A sky separation (km) : 23607.1
 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_itrfr93_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	2035-05-03T16:16:48.050		28.09	-4.88x	51545.34	-21.93		
lambda	I	2035-05-03T16:17:57.513		27.97	-5.11	50026.71	-21.77		
delta	I	2035-05-03T16:19:17.237		27.83	-5.38	48300.35	-21.54		
gamma	I	2035-05-03T16:19:48.768		27.77	-5.49	47622.87	-21.43		
eta	I	2035-05-03T16:20:09.642		27.73	-5.56	47176.12	-21.37		
beta	I	2035-05-03T16:21:21.494		27.61	-5.81	45648.83	-21.12		
alpha	I	2035-05-03T16:22:05.519		27.53	-5.96	44722.16	-20.94		
4	I	2035-05-03T16:23:51.215		27.34	-6.32	42527.46	-20.50		
5	I	2035-05-03T16:24:01.581		27.32	-6.35	42315.23	-20.46		
6	I	2035-05-03T16:24:26.880		27.27	-6.44	41795.46	-20.33		
Uranus	I	2035-05-03T16:41:19.981		25.32	-9.91	25558.89		-0.30	-0.31
Uranus	E	2035-05-03T16:54:47.750		23.63	-12.71	25304.59		-14.52	-15.17
6	E	2035-05-03T17:10:34.292		21.51	-16.00	41844.44	20.38		
5	E	2035-05-03T17:10:51.553		21.47	-16.06	42204.11	20.51		
4	E	2035-05-03T17:11:10.451		21.42	-16.12	42576.57	20.55		
alpha	E	2035-05-03T17:12:51.517		21.19	-16.47	44686.51	21.00		
beta	E	2035-05-03T17:13:38.829		21.08	-16.64	45680.88	21.18		
eta	E	2035-05-03T17:14:48.941		20.91	-16.88	47176.12	21.43		
gamma	E	2035-05-03T17:15:09.824		20.86	-16.96	47624.42	21.50		
delta	E	2035-05-03T17:15:41.186		20.79	-17.07	48300.35	21.60		
lambda	E	2035-05-03T17:17:00.657		20.60	-17.34	50026.71	21.84		
epsilon	E	2035-05-03T17:17:38.300		20.51	-17.48	50850.82	22.01		