

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2034-04-03T13:56:31.420
 Event type : PtRgt
 : Uranus occs: topocentric, not geocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3425399283719866880
 2Mass ID (if available) : 06075397+2341497

ICRS Star Coord at Epoch: 06h 07m 53.97748s +23:41:49.77938s

RUWE (>1.4 is poor) : 1.55
 K magnitude : 11.533
 G magnitude : 12.106
 RP magnitude : 11.896
 BP magnitude : 12.224
 DUPflag : 0
 Distance (au) : 19.112
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 12.36
 Sun-Target sep (deg) : 78.40
 Sun-Moon sep (deg) : 99.14
 B (ring opening deg) : 73.78
 PA of pole (deg) : 60.98

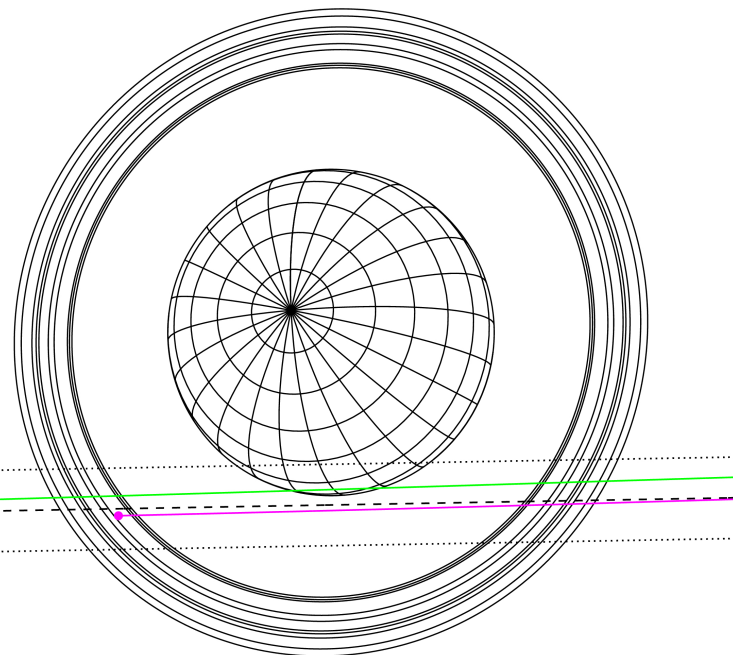
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2034-04-03T13:56:31.4200 α: 06 07 53.9775 δ: +23 41 49.779 C/A 1.941° PA 1.02 deg v_sky +12.37 km/s D 19.11 AU
 Credit: Styled after SORA/Lucky Star

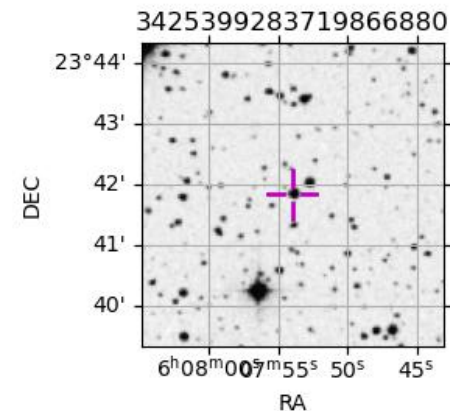
Uranus 2034-04-03T13:56:31 K11.53 G12.11 PtRgt

Earth
 PMO
 KAV



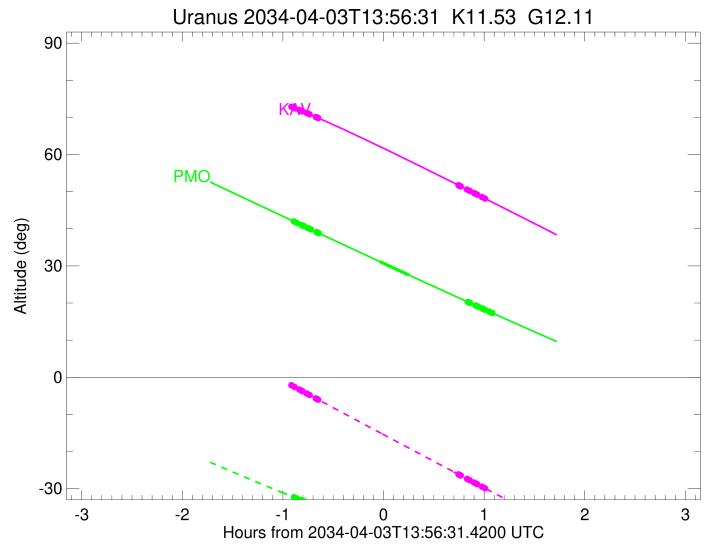
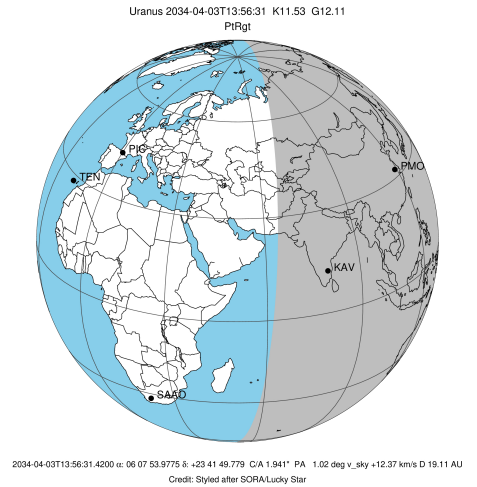
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	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	+++++	+ +	+++++	APR 03 13:03 - APR 03 15:01	PieRie
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 03 13:16 - APR 03 14:57	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



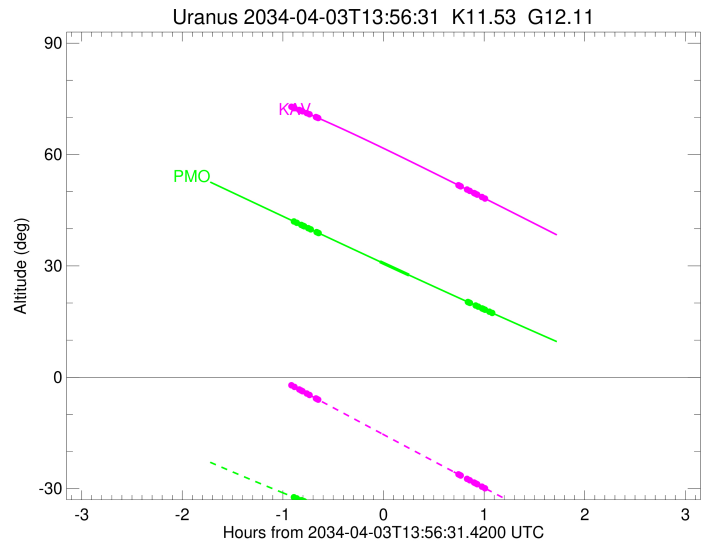
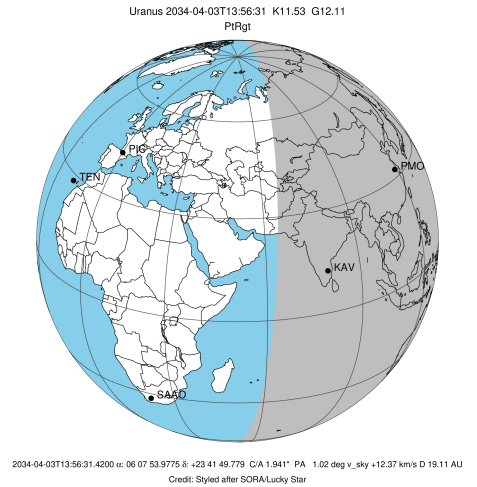
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target                : Uranus
target radius (km)   : 25559.00
C/A epoch            : 2034-04-03T14:03:40.990
Event type           : PtRgt
: Uranus occs: topocentric, not geocentric
: Ring occs: geocentric, topocentric
Observer code        : PMO
Location              : Purple Mtn Obs. Nanking
Latitude (deg)       : 32.06667
E. Longitude (deg)   : 118.82089
Altitude (km)        : 0.364
Gaia source ID       : 3425399283719866880
2Mass ID (if available) : 06075397+2341497
ICRS Star Coord at Epoch: 06h 07m 53.97748s +23:41:49.77938s
RUWE (>1.4 is poor) : 1.55
K magnitude           : 11.533
G magnitude           : 12.106
RP magnitude          : 11.896
BP magnitude          : 12.224
DUPflag              : 0
Distance (au)         : 19.112
f0 (km)               : 0.000
g0 (km)               : 0.000
skyplane vel. (km/s) : 12.36
Sun-Target sep (deg) : 78.40
Sun-Moon sep (deg)   : 99.71
B (ring opening deg) : 73.78
PA of pole (deg)     : 60.98
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 1.774
C/A sky separation (km) : 24590.1
NAIF SPICE kernels   : RAJobs_U111+rgf15.spk
URKALLvl1.spk
urall11.bsp
IAU_URANUS_for_RINGFIT.tpc
vgr2.urall11.bsp
ural61.bsp
vgr2.ural61.bsp
peph.ural60.bsp
earthstns_itrf93_040916.bsp
earth_720101_070426.bpc
earth_200101_990628_predict.bpc
pg3f0000r.bsp
pg490000r.bsp
naif0012.tls
earth_flat_IAU.spk
  
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Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2034-04-03T13:03:42.781		41.84	-32.43	50754.82	-10.90		
lambda	I	2034-04-03T13:04:49.816		41.60	-32.63	50026.71	-10.84		
delta	I	2034-04-03T13:07:30.030		41.04	-33.11	48300.35	-10.71		
gamma	I	2034-04-03T13:08:33.238		40.81	-33.30	47625.01	-10.66		
eta	I	2034-04-03T13:09:15.430		40.66	-33.42	47176.12	-10.62		
beta	I	2034-04-03T13:11:37.553		40.16	-33.84	45675.75	-10.49		
alpha	I	2034-04-03T13:13:11.537		39.83	-34.12	44696.43	-10.40		
4	I	2034-04-03T13:16:39.965		39.10	-34.73	42552.90	-10.14		
5	I	2034-04-03T13:17:03.551		39.01	-34.80	42310.02	-10.13		
6	I	2034-04-03T13:17:54.608		38.83	-34.94	41794.81	-10.06		
Uranus	I	2034-04-03T13:54:22.117		31.15	-40.94	25520.64		-4.21	-4.41
Uranus	E	2034-04-03T14:11:44.438		27.53	-43.50	25291.56		-11.25	-11.77
6	E	2034-04-03T14:46:50.738		20.28	-47.93	41851.74	10.20		
5	E	2034-04-03T14:47:28.734		20.15	-47.99	42238.96	10.27		
4	E	2034-04-03T14:47:58.673		20.05	-48.05	42537.67	10.30		
alpha	E	2034-04-03T14:51:30.071		19.33	-48.42	44750.73	10.56		
beta	E	2034-04-03T14:52:56.468		19.03	-48.57	45667.79	10.66		
eta	E	2034-04-03T14:55:17.068		18.55	-48.81	47176.12	10.80		
gamma	E	2034-04-03T14:55:58.287		18.42	-48.87	47622.24	10.84		
delta	E	2034-04-03T14:57:00.654		18.20	-48.98	48300.35	10.90		
lambda	E	2034-04-03T14:59:38.002		17.67	-49.23	50026.71	11.04		
epsilon	E	2034-04-03T15:01:45.148		17.24	-49.43	51436.85	11.11		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2034-04-03T14:00:51.560
 Event type : PtRgt
 : Uranus occs: topocentric, not geocentric
 : 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 : 3425399283719866880
 2Mass ID (if available) : 06075397+2341497
 ICRS Star Coord at Epoch: 06h 07m 53.97748s +23:41:49.77938s
 RUWE (>1.4 is poor) : 1.55
 K magnitude : 11.533
 G magnitude : 12.106
 RP magnitude : 11.896
 BP magnitude : 12.224
 DUPflag : 0
 Distance (au) : 19.112
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 12.36
 Sun-Target sep (deg) : 78.40
 Sun-Moon sep (deg) : 99.99
 B (ring opening deg) : 73.78
 PA of pole (deg) : 60.98
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 2.011
 C/A sky separation (km) : 27879.7
 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	2034-04-03T13:02:14.697		72.75	-2.31x	50762.53	-10.21		
lambda	I	2034-04-03T13:03:27.084		72.53	-2.60x	50026.71	-10.13		
delta	I	2034-04-03T13:06:18.904		72.00	-3.30x	48300.35	-9.96		
gamma	I	2034-04-03T13:07:26.993		71.79	-3.57x	47624.60	-9.89		
eta	I	2034-04-03T13:08:12.467		71.65	-3.76x	47176.12	-9.84		
beta	I	2034-04-03T13:10:46.245		71.16	-4.38x	45676.86	-9.66		
alpha	I	2034-04-03T13:12:28.395		70.83	-4.79x	44698.75	-9.53		
4	I	2034-04-03T13:16:17.813		70.09	-5.72	42549.06	-9.19		
5	I	2034-04-03T13:16:43.242		70.01	-5.82	42312.40	-9.16		
6	I	2034-04-03T13:17:40.006		69.82	-6.05	41795.23	-9.06		

No planet occultations

6	E	2034-04-03T14:41:12.468		51.73	-26.14	41847.42	9.15		
5	E	2034-04-03T14:41:56.160		51.57	-26.32	42247.28	9.24		
4	E	2034-04-03T14:42:28.324		51.45	-26.44	42534.71	9.27		
alpha	E	2034-04-03T14:46:21.783		50.57	-27.37	44749.57	9.63		
beta	E	2034-04-03T14:47:56.618		50.21	-27.75	45669.52	9.76		
eta	E	2034-04-03T14:50:29.600		49.63	-28.35	47176.12	9.95		
gamma	E	2034-04-03T14:51:14.306		49.46	-28.53	47621.96	10.00		
delta	E	2034-04-03T14:52:21.892		49.21	-28.79	48300.35	10.08		
lambda	E	2034-04-03T14:55:11.704		48.56	-29.47	50026.71	10.25		
epsilon	E	2034-04-03T14:57:26.063		48.06	-30.00	51413.29	10.34		