

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2034-04-08T15:12:34.380
 Event type : PgtRgt
 : Uranus occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 3425401349601823104
 2Mass ID (if available) : 06082506+2341428

Uranus 2034-04-08T15:12:34 K13.86 G16.05 PgtRgt

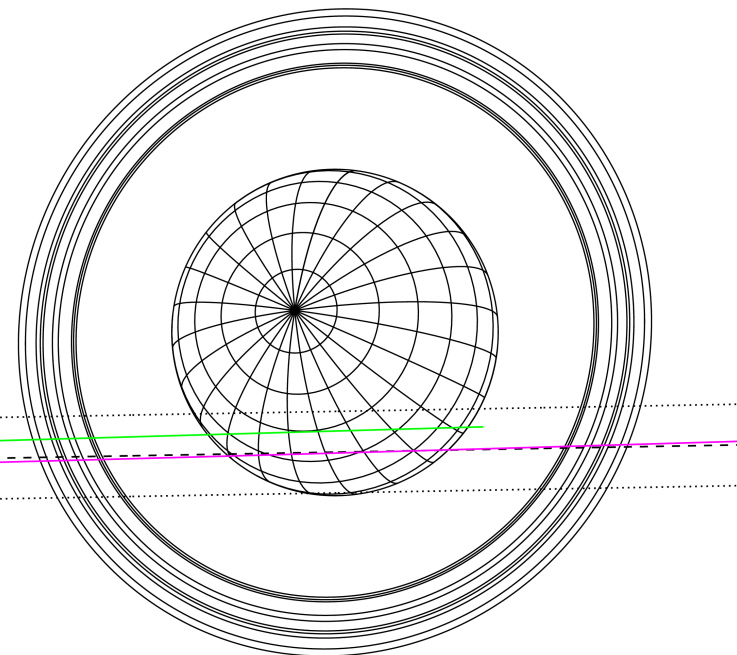
ICRS Star Coord at Epoch: 06h 08m 25.06445s +23:41:42.76930s

RUWE (>1.4 is poor) : 1.14
 K magnitude : 13.861
 G magnitude : 16.052
 RP magnitude : 15.334
 BP magnitude : 16.613
 DUPflag : 0
 Distance (au) : 19.195
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 14.80
 Sun-Target sep (deg) : 73.54
 Sun-Moon sep (deg) : 158.38
 B (ring opening deg) : 73.67
 PA of pole (deg) : 61.23



2034-04-08T15:12:34.3800 α: 06 08 25.0645 δ: +23 41 42.769 C/A 1.339° PA 1.02 deg v_sky +14.80 km/s D 19.19 AU
 Credit: Styled after SORA/Lucky Star

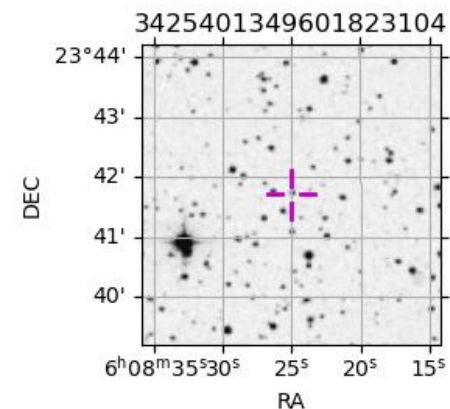
Earth
 PMO
 KAV



#	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

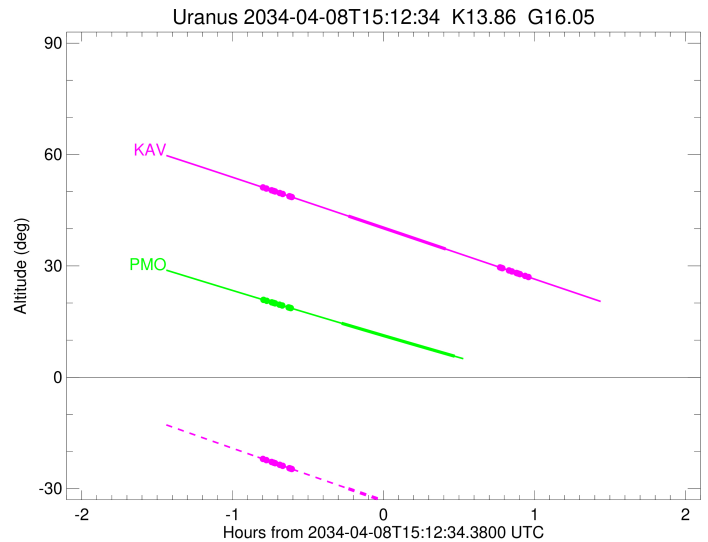
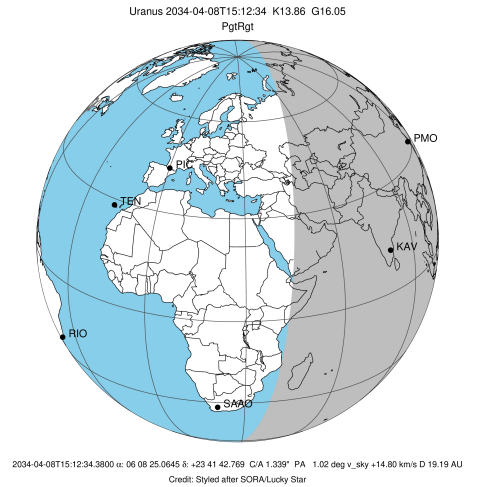
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

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	+++++	+ +		APR 08 14:25 - APR 08 15:40	PieRin
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 08 14:25 - APR 08 16:10	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



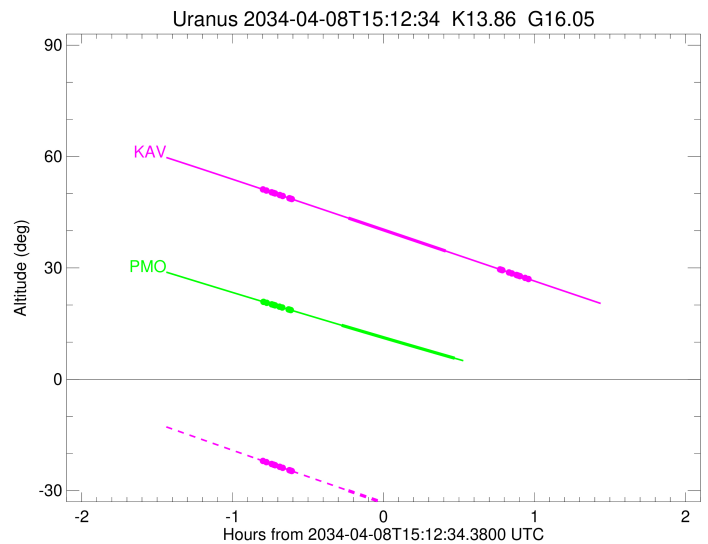
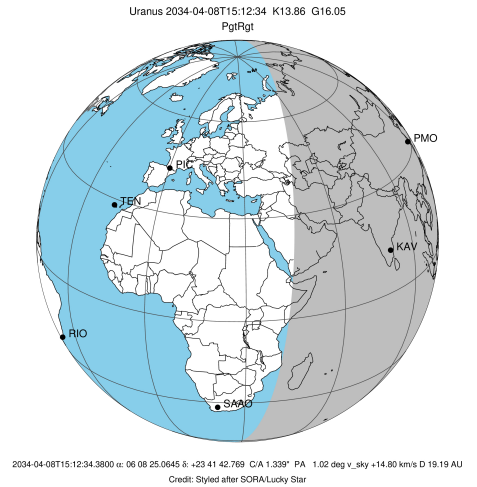
```

target                : Uranus
target radius (km)   : 25559.00
C/A epoch            : 2034-04-08T15:18:45.740
Event type          : PgtRgt
: Uranus occs: geocentric, topocentric
: 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      : 3425401349601823104
2Mass ID (if available) : 06082506+2341428
ICRS Star Coord at Epoch: 06h 08m 25.06445s +23:41:42.76930s
RUWE (>1.4 is poor) : 1.14
K magnitude          : 13.861
G magnitude          : 16.052
RP magnitude         : 15.334
BP magnitude         : 16.613
DUPflag             : 0
Distance (au)       : 19.195
f0 (km)             : 0.000
g0 (km)             : 0.000
skyplane vel. (km/s) : 14.80
Sun-Target sep (deg) : 73.54
Sun-Moon sep (deg)  : 159.23
B (ring opening deg) : 73.67
PA of pole (deg)    : 61.23
Pole direction: RA (deg): 257.31100
Dec (deg): -15.17500
C/A sky separation (") : 1.108
C/A sky separation (km) : 15428.2
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
  
```



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
epsilon	I	2034-04-08T14:25:21.194		20.76	-43.91	50744.89	-14.44		
lambda	I	2034-04-08T14:26:10.950		20.59	-44.01	50026.71	-14.42		
delta	I	2034-04-08T14:28:10.854		20.18	-44.26	48300.35	-14.37		
gamma	I	2034-04-08T14:28:57.748		20.02	-44.36	47626.97	-14.35		
eta	I	2034-04-08T14:29:29.187		19.91	-44.42	47176.12	-14.33		
beta	I	2034-04-08T14:31:14.507		19.55	-44.63	45669.08	-14.28		
alpha	I	2034-04-08T14:32:23.515		19.32	-44.77	44687.75	-14.24		
4	I	2034-04-08T14:34:52.259		18.81	-45.06	42574.10	-14.13		
5	I	2034-04-08T14:35:12.111		18.74	-45.09	42287.88	-14.13		
6	I	2034-04-08T14:35:46.749		18.63	-45.16	41798.92	-14.10		
Uranus	I	2034-04-08T14:55:56.335		14.55	-47.27	25479.03		6.13	6.42
Uranus	E	2034-04-08T15:40:52.583		5.67	-50.24	25029.09		-16.18	-16.90
6	E	2034-04-08T16:00:19.829		1.93x	-50.68	41852.04	14.26		
5	E	2034-04-08T16:00:46.925		1.85x	-50.68	42237.96	14.30		
4	E	2034-04-08T16:01:08.074		1.78x	-50.69	42538.18	14.30		
alpha	E	2034-04-08T16:03:41.598		1.30x	-50.70	44751.10	14.42		
beta	E	2034-04-08T16:04:45.114		1.10x	-50.71	45666.94	14.47		
eta	E	2034-04-08T16:06:29.234		0.77x	-50.71	47176.12	14.53		
gamma	E	2034-04-08T16:06:59.938		0.67x	-50.71	47622.45	14.55		
delta	E	2034-04-08T16:07:46.502		0.53x	-50.71	48300.35	14.57		
lambda	E	2034-04-08T16:09:44.724		0.16x	-50.70	50026.71	14.63		
epsilon	E	2034-04-08T16:11:22.318		-0.15x	-50.69	51457.13	14.66		

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2034-04-08T15:18:22.780
 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 : 3425401349601823104
 2Mass ID (if available) : 06082506+2341428
 ICRS Star Coord at Epoch: 06h 08m 25.06445s +23:41:42.76930s
 RUWE (>1.4 is poor) : 1.14
 K magnitude : 13.861
 G magnitude : 16.052
 RP magnitude : 15.334
 BP magnitude : 16.613
 DUPflag : 0
 Distance (au) : 19.195
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 14.80
 Sun-Target sep (deg) : 73.54
 Sun-Moon sep (deg) : 159.21
 B (ring opening deg) : 73.67
 PA of pole (deg) : 61.23
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.356
 C/A sky separation (km) : 18878.5
 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	2034-04-08T14:25:09.915		51.03	-22.12	50743.54	-13.79		
lambda	I	2034-04-08T14:26:01.943		50.84	-22.33	50026.71	-13.76		
delta	I	2034-04-08T14:28:07.761		50.36	-22.82	48300.35	-13.68		
gamma	I	2034-04-08T14:28:57.081		50.18	-23.02	47626.56	-13.64		
eta	I	2034-04-08T14:29:30.124		50.05	-23.15	47176.12	-13.62		
beta	I	2034-04-08T14:31:20.984		49.63	-23.59	45670.56	-13.54		
alpha	I	2034-04-08T14:32:33.854		49.36	-23.87	44689.05	-13.47		
4	I	2034-04-08T14:35:11.840		48.76	-24.50	42570.08	-13.31		
5	I	2034-04-08T14:35:32.232		48.68	-24.58	42293.06	-13.30		
6	I	2034-04-08T14:36:09.547		48.54	-24.73	41797.41	-13.25		
Uranus	I	2034-04-08T14:58:37.910		43.41	-30.02	25535.15		3.34	3.50
Uranus	E	2034-04-08T15:37:16.790		34.56	-38.97	25072.25		-15.47	-16.16
6	E	2034-04-08T15:58:54.207		29.59	-43.87	41848.35	13.40		
5	E	2034-04-08T15:59:23.852		29.48	-43.98	42245.16	13.45		
4	E	2034-04-08T15:59:45.706		29.40	-44.06	42535.55	13.46		
alpha	E	2034-04-08T16:02:28.563		28.77	-44.67	44750.19	13.63		
beta	E	2034-04-08T16:03:35.839		28.52	-44.92	45668.49	13.70		
eta	E	2034-04-08T16:05:25.530		28.10	-45.32	47176.12	13.79		
gamma	E	2034-04-08T16:05:57.837		27.97	-45.44	47622.18	13.82		
delta	E	2034-04-08T16:06:46.841		27.79	-45.63	48300.35	13.86		
lambda	E	2034-04-08T16:08:50.997		27.31	-46.08	50026.71	13.95		
epsilon	E	2034-04-08T16:10:31.870		26.93	-46.46	51437.32	13.99		