

target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2040-05-25T19:34:09.330
 Event type : PgRgt
 : Uranus occs: geocentric, not topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 670663369518284928
 2Mass ID (if available) : 08082695+2044133

ICRS Star Coord at Epoch: 08h 08m 26.93050s +20:44:12.84884s

RUWE (>1.4 is poor) : 1.00
 K magnitude : 14.301
 G magnitude : 17.762
 RP magnitude : 16.718
 BP magnitude : 18.876
 DUPflag : 0
 Distance (au) : 19.130
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 23.54
 Sun-Target sep (deg) : 55.18
 Sun-Moon sep (deg) : 115.55
 B (ring opening deg) : 47.15
 PA of pole (deg) : 90.20

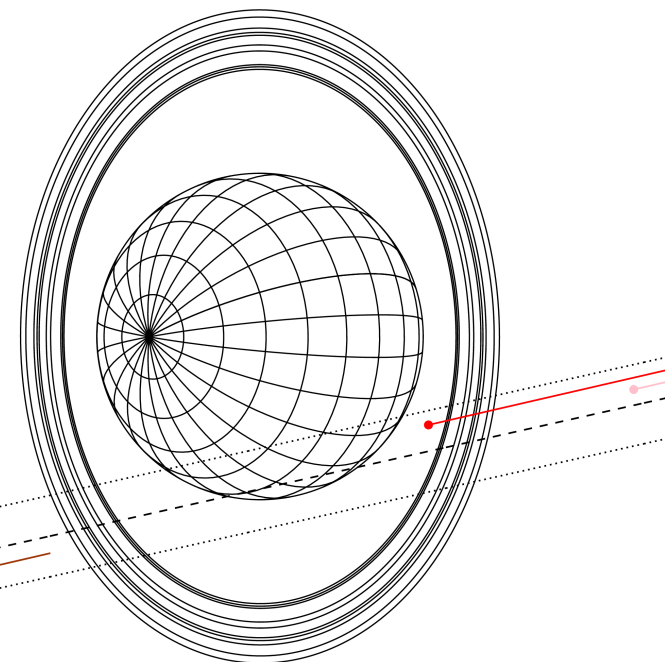
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon



2040-05-25T19:34:09.3300: 08 08 26.9305 s +20 44 12.849 C/A 1.671 PA 12.63 deg v_sky +23.54 km/s D 19.13 AU
 Credit: Styled after SORA/Lucky Star

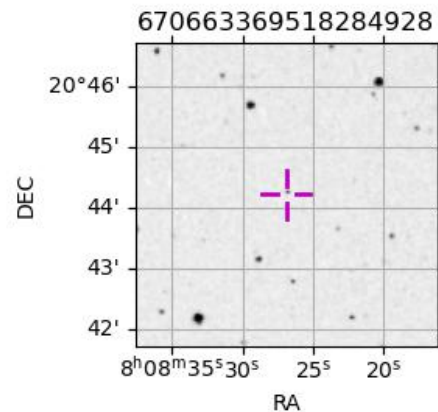
Uranus 2040-05-25T19:34:09 K14.30 G17.76 PgRgt

Earth
 PIC
 TEN
 SAAO

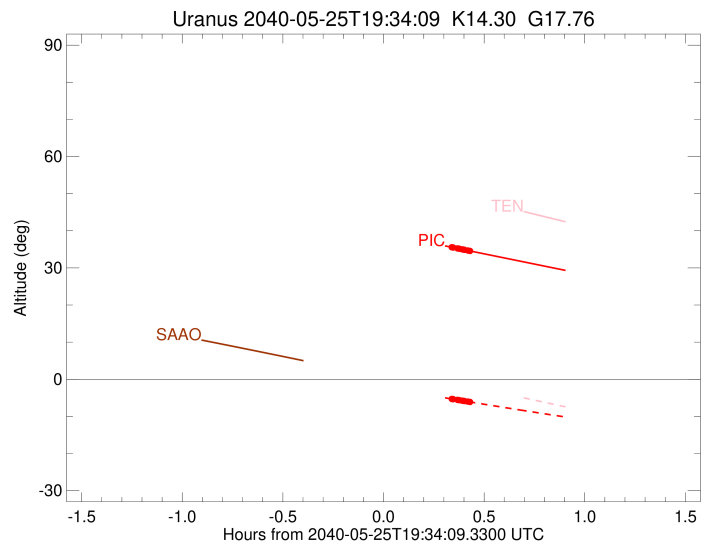
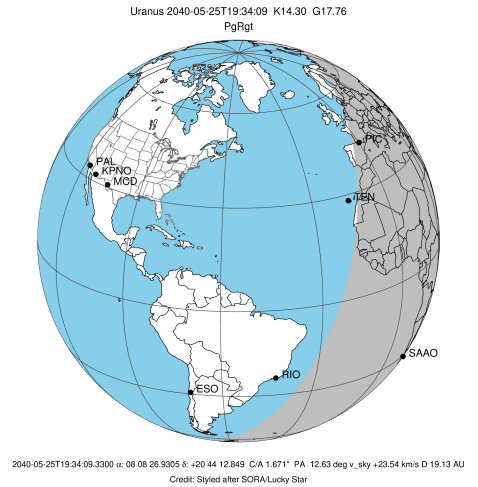


Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEncode
PIC	Pic du Midi	42.9	0.1			+++++	MAY 25 19:54 - MAY 25 19:59	PnnRne
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					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



target : Uranus
 target radius (km) : 25559.00
 C/A epoch : 2040-05-25T19:36:24.670
 Event type : PgRgt
 : Uranus occs: geocentric, not topocentric
 : Ring occs: geocentric, topocentric
 Observer code : PIC
 Location : Pic du Midi
 Latitude (deg) : 42.93656
 E. Longitude (deg) : 0.14231
 Altitude (km) : 2.890
 Gaia source ID : 670663369518284928
 2Mass ID (if available) : 08082695+2044133
 ICRS Star Coord at Epoch: 08h 08m 26.93050s +20:44:12.84884s
 RUWE (>1.4 is poor) : 1.00
 K magnitude : 14.301
 G magnitude : 17.762
 RP magnitude : 16.718
 BP magnitude : 18.876
 DUPflag : 0
 Distance (au) : 19.130
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : 23.54
 Sun-Target sep (deg) : 55.18
 Sun-Moon sep (deg) : 116.33
 B (ring opening deg) : 47.15
 PA of pole (deg) : 90.20
 Pole direction: RA (deg): 257.31100
 Dec (deg): -15.17500
 C/A sky separation (") : 1.400
 C/A sky separation (km) : 19419.6
 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	2040-05-25T19:09:47.281		43.71	1.69x	51552.84	-29.07		
lambda	I	2040-05-25T19:10:39.888		43.55	1.55x	50026.71	-28.93		
delta	I	2040-05-25T19:11:39.750		43.37	1.39x	48300.35	-28.74		
gamma	I	2040-05-25T19:12:03.344		43.30	1.32x	47623.18	-28.66		
eta	I	2040-05-25T19:12:18.958		43.25	1.28x	47176.12	-28.60		
beta	I	2040-05-25T19:13:11.979		43.09	1.14x	45667.70	-28.40		
alpha	I	2040-05-25T19:13:43.858		43.00	1.05x	44752.37	-28.26		
4	I	2040-05-25T19:15:00.873		42.77	0.85x	42608.73	-27.92		
5	I	2040-05-25T19:15:15.186		42.72	0.81x	42228.37	-27.85		
6	I	2040-05-25T19:15:27.205		42.69	0.77x	41833.25	-27.74		
Uranus	I	2040-05-25T19:24:38.048		41.03	-0.69x	25490.78		18.36	19.17
Uranus	E	2040-05-25T19:48:02.011		36.76	-4.32x	25358.91		-32.80	-34.01
6	E	2040-05-25T19:54:29.889		35.57	-5.30	41804.29	27.80		
5	E	2040-05-25T19:54:41.121		35.53	-5.33	42172.70	27.92		
4	E	2040-05-25T19:54:54.871		35.49	-5.36	42528.91	27.99		
alpha	E	2040-05-25T19:56:12.046		35.26	-5.55	44699.31	28.34		
beta	E	2040-05-25T19:56:44.905		35.16	-5.63	45642.25	28.48		
eta	E	2040-05-25T19:57:38.622		34.99	-5.77	47176.12	28.69		
gamma	E	2040-05-25T19:57:54.255		34.94	-5.81	47625.05	28.74		
delta	E	2040-05-25T19:58:17.716		34.87	-5.86	48300.35	28.83		
lambda	E	2040-05-25T19:59:17.398		34.69	-6.01	50026.71	29.02		
epsilon	E	2040-05-25T19:59:45.120		34.60	-6.08	50832.45	29.17		