

target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2041-05-18T18:29:27.940  
 Event type : PgtRgt  
 : Uranus occs: geocentric, topocentric  
 : Ring occs: geocentric, topocentric  
 Gaia source ID : 663739852174797184  
 2Mass ID (if available) : 08255525+1950204

Uranus 2041-05-18T18:29:27 K13.60 G14.94 PgtRgt

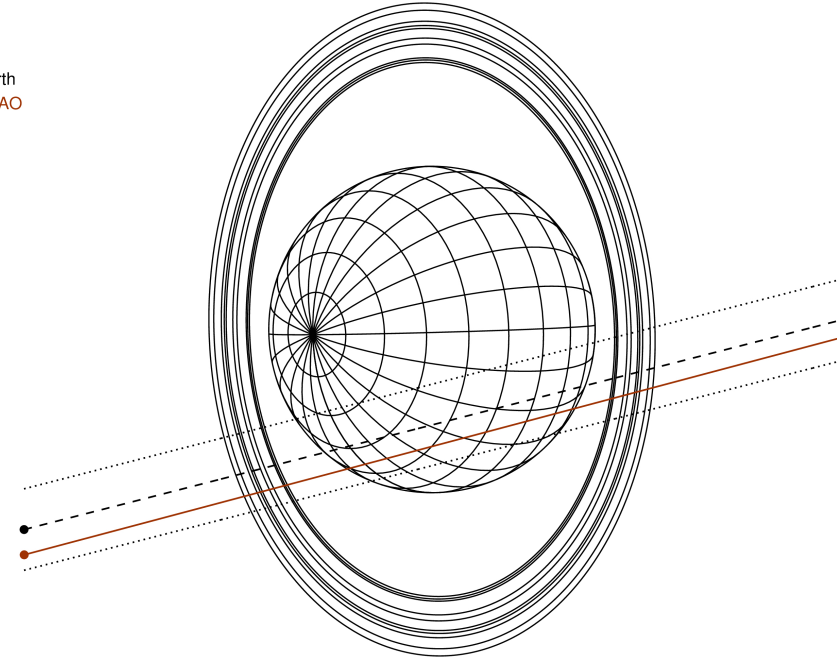
ICRS Star Coord at Epoch: 08h 25m 55.23370s +19:50:20.37114s

RUWE (>1.4 is poor) : 1.02  
 K magnitude : 13.602  
 G magnitude : 14.943  
 RP magnitude : 14.461  
 BP magnitude : 15.261  
 DUPflag : 0  
 Distance (au) : 18.901  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 18.48  
 Sun-Target sep (deg) : 66.39  
 Sun-Moon sep (deg) : 148.33  
 B (ring opening deg) : 43.03  
 PA of pole (deg) : 92.51



2041-05-18T18:29:27.9400 ra: 08 25 55.2337 s: +19 50 20.371 C/A 1.046° PA 14.38 deg v\_sky +18.48 km/s D 18.90 AU  
 Credit: Styled after SORA/Lucky Star

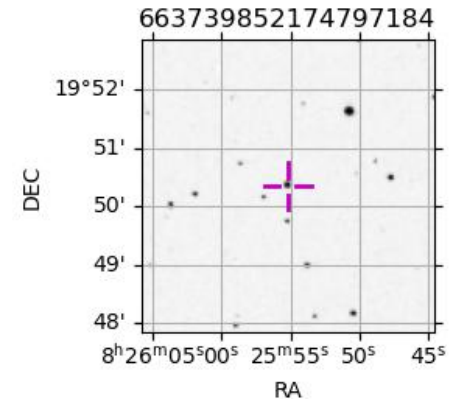
Earth  
 SAAO



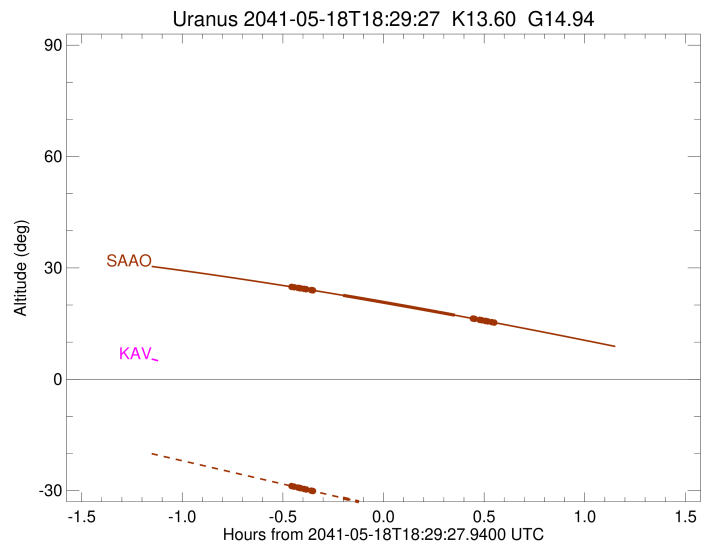
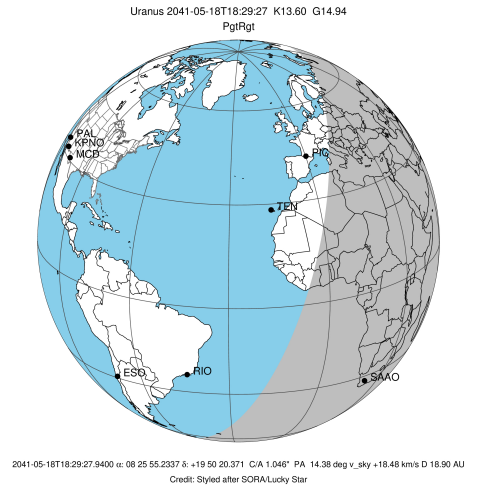
#	a(km)	ring
1	41837.2	6
2	42235.0	5
3	42571.2	4
4	44718.5	alpha
5	45661.1	beta
6	47176.1	eta
7	47626.3	gamma
8	48300.3	delta
9	50026.7	lambda
10	51149.4	epsilon

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					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	+++++	+ +	+++++	MAY 18 18:02 - MAY 18 19:02	PieRie
MSO	Mt. Stromlo Observato	-35.3	149.0					PnnRnn



target : Uranus  
 target radius (km) : 25559.00  
 C/A epoch : 2041-05-18T18:34:09.710  
 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 : 663739852174797184  
 2Mass ID (if available) : 08255525+1950204  
 ICRS Star Coord at Epoch: 08h 25m 55.23370s +19:50:20.37114s  
 RUWE (>1.4 is poor) : 1.02  
 K magnitude : 13.602  
 G magnitude : 14.943  
 RP magnitude : 14.461  
 BP magnitude : 15.261  
 DUPflag : 0  
 Distance (au) : 18.901  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 18.48  
 Sun-Target sep (deg) : 66.39  
 Sun-Moon sep (deg) : 149.20  
 B (ring opening deg) : 43.03  
 PA of pole (deg) : 92.51  
 Pole direction: RA (deg): 257.31100  
 Dec (deg): -15.17500  
 C/A sky separation (") : 1.291  
 C/A sky separation (km) : 17701.8  
 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	2041-05-18T18:02:13.043		24.87	-28.80	50923.91	-24.72		
lambda	I	2041-05-18T18:02:49.477		24.78	-28.93	50026.71	-24.59		
delta	I	2041-05-18T18:03:59.856		24.61	-29.18	48300.35	-24.46		
gamma	I	2041-05-18T18:04:27.617		24.54	-29.27	47622.00	-24.41		
eta	I	2041-05-18T18:04:45.899		24.50	-29.34	47176.12	-24.37		
beta	I	2041-05-18T18:05:47.995		24.35	-29.56	45670.62	-24.23		
alpha	I	2041-05-18T18:06:26.513		24.25	-29.69	44731.34	-24.14		
4	I	2041-05-18T18:07:57.684		24.03	-30.01	42525.96	-23.89		
5	I	2041-05-18T18:08:12.571		23.99	-30.06	42170.09	-23.84		
6	I	2041-05-18T18:08:28.694		23.95	-30.12	41794.86	-23.81		
Uranus	I	2041-05-18T18:17:25.568		22.61	-32.01	25474.97		23.87	24.86
Uranus	E	2041-05-18T18:50:43.739		17.26	-39.05	25362.61		-38.36	-39.65
6	E	2041-05-18T18:56:06.441		16.36	-40.18	41866.41	23.91		
5	E	2041-05-18T18:56:27.928		16.29	-40.26	42312.75	23.94		
4	E	2041-05-18T18:56:38.520		16.26	-40.30	42601.50	23.99		
alpha	E	2041-05-18T18:58:07.030		16.01	-40.61	44732.89	24.25		
beta	E	2041-05-18T18:58:43.863		15.91	-40.74	45641.79	24.34		
eta	E	2041-05-18T18:59:46.796		15.73	-40.96	47176.12	24.49		
gamma	E	2041-05-18T19:00:05.377		15.68	-41.03	47631.53	24.53		
delta	E	2041-05-18T19:00:32.612		15.60	-41.12	48300.35	24.59		
lambda	E	2041-05-18T19:01:42.633		15.40	-41.37	50026.71	24.72		
epsilon	E	2041-05-18T19:02:43.715		15.22	-41.58	51540.12	24.85		