

target : Saturn
 target radius (km) : 60268.00
 C/A epoch : 2034-02-17T04:32:27.220
 Event type : XRT
 : No Saturn occs
 : Ring occs: topocentric, not geocentric
 Gaia source ID : 3368025396891496064
 2Mass ID (if available) : 07030169+2225178

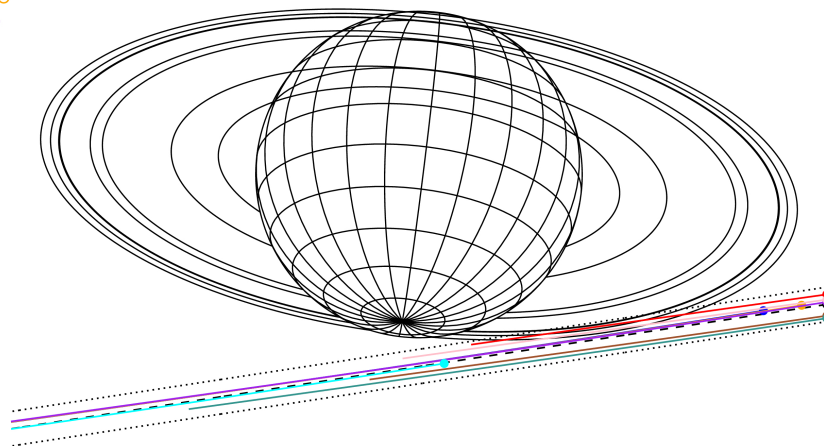
Saturn 2034-02-17T04:32:27 K9.86 G10.61 XRT

ICRS Star Coord at Epoch: 07h 03m 01.68882s +22:25:17.57979s

RUWE (>1.4 is poor) : 1.98
 K magnitude : 9.861
 G magnitude : 10.612
 RP magnitude : 10.333
 BP magnitude : 10.769
 DUPflag : 0
 Distance (au) : 8.293
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -11.97
 Sun-Target sep (deg) : 136.44
 Sun-Moon sep (deg) : 159.13
 B (ring opening deg) : -25.02
 PA of pole (deg) : -6.51
 # a(km) ring



Earth
 PIC
 PAL
 KPNO
 MCD
 TEN
 IRTF
 RIO
 ESO

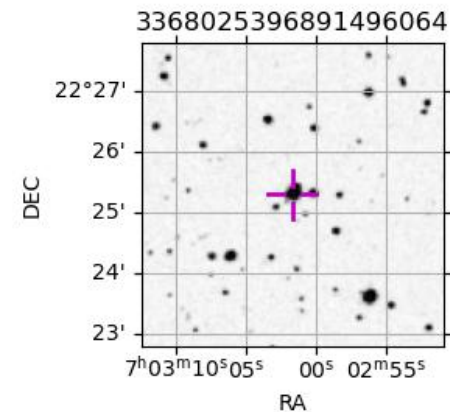


2034-02-17T04:32:27.2200 α: 07 03 01.6888 δ: +22 25 17.580 C/A ***** PA 8.67 deg v_sky -11.97 km/s D 08.29 AU
 Credit: Styled after SORA/Lucky Star

- 1 74490.6 C (IER)
- 2 91984.7 B (IER)
- 3 117571.2 B (OER)
- 4 122050.4 A (IER)
- 5 133423.3 Encke (IEG)
- 6 133744.9 Encke (OEG)
- 7 136774.4 A (OER)
- 8 140461.0 F ring

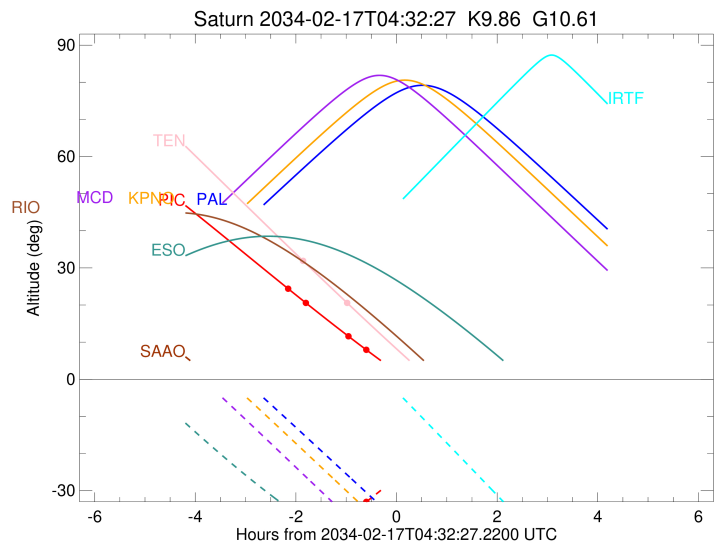
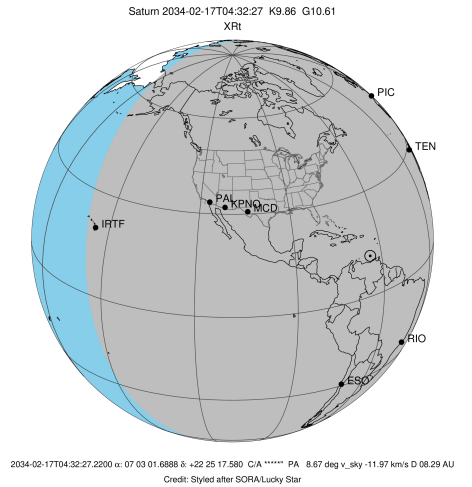
Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEncode
PIC	Pic du Midi	42.9	0.1	+		+	FEB 17 02:22 - FEB 17 03:56	PnnRie
PAL	Palomar Mt (20	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs	32.1	118.8					PnnRnn
KPNO	Kitt Peak Natl	32.0	248.4					PnnRnn
MCD	McDonald Obs.	30.7	256.0					PnnRnn
TEN	Teide Obs./Ten	28.3	343.5	+		+	FEB 17 02:40 - FEB 17 03:34	PnnRie
IRTF	Mauna Kea/IRTF	19.8	204.5					PnnRnn
KAV	Kavalur Observ	12.6	78.8					PnnRnn
RIO	Rio de Janeiro	-22.9	316.8					PnnRnn
ESO	European South	-29.3	289.3					PnnRnn
AAT	Siding Spring	-31.3	149.1					PnnRnn
SAAO	So. Afr. Astro	-32.4	20.8					PnnRnn
MSO	Mt. Stromlo Ob	-35.3	149.0					PnnRnn



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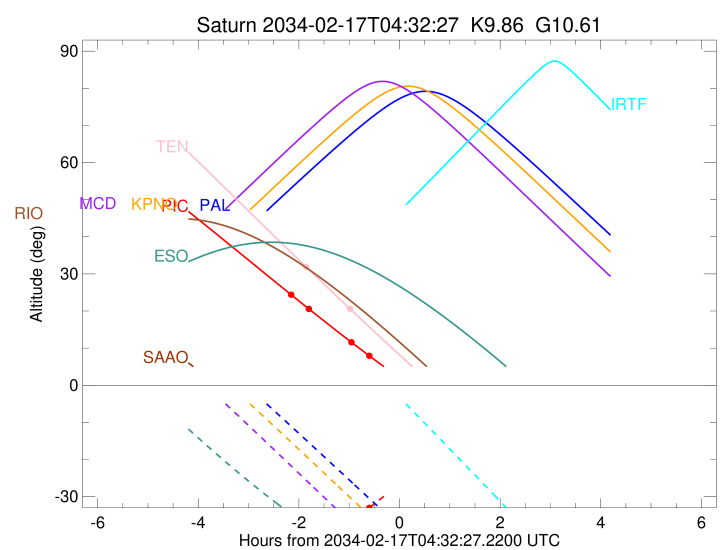
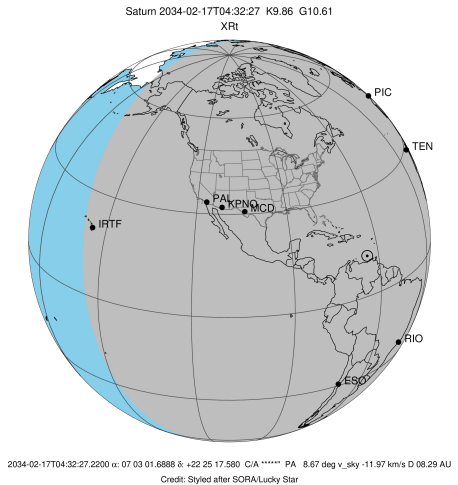
target                : Saturn
target radius (km)   : 60268.00
C/A epoch            : 2034-02-17T04:28:07.160
Event type          : XRt
: No Saturn occs
: Ring occs: topocentric, not geocentric
Observer code       : PIC
Location            : Pic du Midi
Latitude (deg)      : 42.93656
E. Longitude (deg)  : 0.14231
Altitude (km)       : 2.890
Gaia source ID      : 3368025396891496064
2Mass ID (if available) : 07030169+2225178
ICRS Star Coord at Epoch: 07h 03m 01.68882s +22:25:17.57979s
RUWE (>1.4 is poor) : 1.98
K magnitude         : 9.861
G magnitude         : 10.612
RP magnitude        : 10.333
BP magnitude        : 10.769
DUPflag            : 0
Distance (au)       : 8.293
f0 (km)             : 0.000
g0 (km)             : 0.000
skyplane vel. (km/s) : -11.97
Sun-Target sep (deg) : 136.44
Sun-Moon sep (deg)  : 158.73
B (ring opening deg) : -25.02
PA of pole (deg)    : -6.51
Pole direction: RA (deg): 40.60000
Dec (deg): 83.50000
C/A sky separation (") : 10.795
C/A sky separation (km) : 64928.6
NAIF SPICE kernels  : RAJobs_U111+rgf15.spk
URKALLvl.spk
Saturn_ring_plane.tf
sat378.bsp
sat286.bsp
vgr1.sat286.bsp
vgr2.sat286.bsp
HST1081HSPephemUTC.bsp
pfb10000r.bsp
cassini.bsp
earthstns_itrf93_040916.bsp
earth_200101_990628_predict.bpc
earth_720101_070426.bpc
cpck28Mar2008.tpc
pck.sat440.tpc
IAU_SATURN_for_RINGFIT.tpc
naif0012.tls
earth_flat_IAU.spk
  
```



b: ring blocked by planet x: target alt < 5.0 deg or sun > -5.0 deg

Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
F ring	I	2034-02-17T02:22:47.112		24.48	-48.41	140461.00	-3.76		
A (OER)	I	2034-02-17T02:43:33.728		20.71	-45.28	136774.40	-2.14		
No planet occultations									
A (OER)	E	2034-02-17T03:35:45.876		11.47	-36.65	136774.40	2.13		
F ring	E	2034-02-17T03:56:42.353		7.89	-32.98	140461.00	3.72		

target : Saturn
 target radius (km) : 60268.00
 C/A epoch : 2034-02-17T04:26:30.640
 Event type : XRt
 : No Saturn occs
 : Ring occs: topocentric, not geocentric
 Observer code : TEN
 Location : Teide Obs./Tenerife
 Latitude (deg) : 28.30050
 E. Longitude (deg) : 343.48909
 Altitude (km) : 2.395
 Gaia source ID : 3368025396891496064
 2Mass ID (if available) : 07030169+2225178
 ICRS Star Coord at Epoch: 07h 03m 01.68882s +22:25:17.57979s
 RUWE (>1.4 is poor) : 1.98
 K magnitude : 9.861
 G magnitude : 10.612
 RP magnitude : 10.333
 BP magnitude : 10.769
 DUPflag : 0
 Distance (au) : 8.293
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -11.97
 Sun-Target sep (deg) : 136.44
 Sun-Moon sep (deg) : 158.54
 B (ring opening deg) : -25.02
 PA of pole (deg) : -6.51
 Pole direction: RA (deg): 40.60000
 Dec (deg): 83.50000
 C/A sky separation (") : 11.050
 C/A sky separation (km) : 66461.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 Saturn_ring_plane.tf
 sat378.bsp
 sat286.bsp
 vgr1.sat286.bsp
 vgr2.sat286.bsp
 HST1081HSPephemUTC.bsp
 pfb10000r.bsp
 cassini.bsp
 earthstns_itrf93_040916.bsp
 earth_200101_990628_predict.bpc
 earth_720101_070426.bpc
 cpck28Mar2008.tpc
 pck.sat440.tpc
 IAU_SATURN_for_RINGFIT.tpc
 naif0012.tls
 earth_flat_IAU.spk



b: ring blocked by planet x: target alt < 5.0 deg or sun > -5.0 deg

Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
F ring	I	2034-02-17T02:40:16.351		32.07	-65.25	140461.00	-2.18		
No planet occultations									
F ring	E	2034-02-17T03:34:13.421		20.43	-54.75	140461.00	2.16		