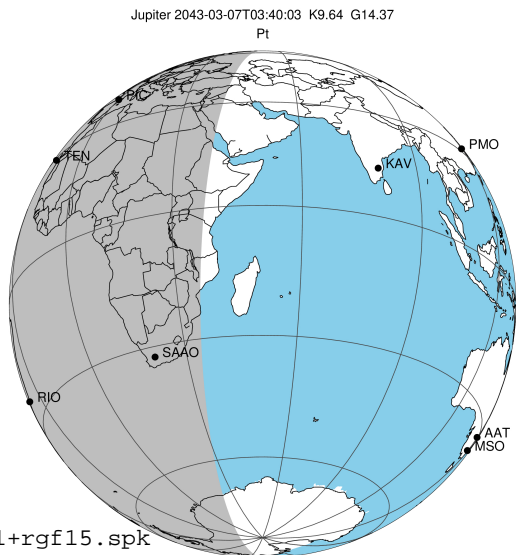


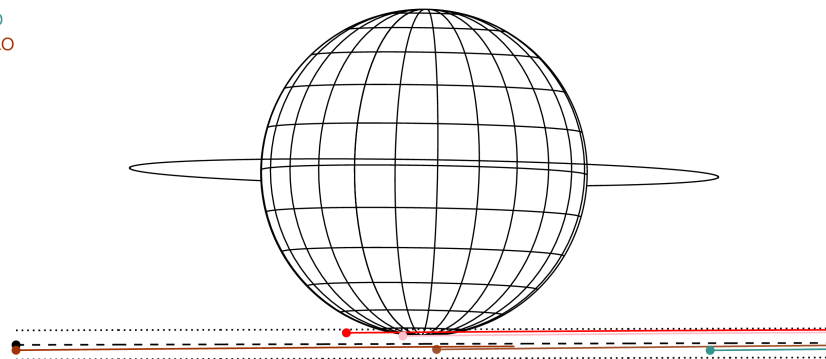
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-03-07T03:40:03.590
 Event type : Pt
 : Jupiter occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4069438533238215296
 2Mass ID (if available) : 18002871-2259311

Jupiter 2043-03-07T03:40:03 K9.64 G14.37 Pt

ICRS Star Coord at Epoch: 18h 00m 28.70306s -22:59:31.22020s
 RUWE (>1.4 is poor) : 1.54
 K magnitude : 9.638
 G magnitude : 14.368
 RP magnitude : 13.298
 BP magnitude : 15.513
 DUPflag : 0
 Distance (au) : 5.458
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 20.52
 Sun-Target sep (deg) : 75.75
 Sun-Moon sep (deg) : 22.10
 B (ring opening deg) : -2.50
 PA of pole (deg) : -0.89
 Pole direction: RA (deg): 268.05663
 Dec (deg): 64.49732
 C/A sky separation (") : 18.968
 C/A sky separation (km) : 75088.5
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



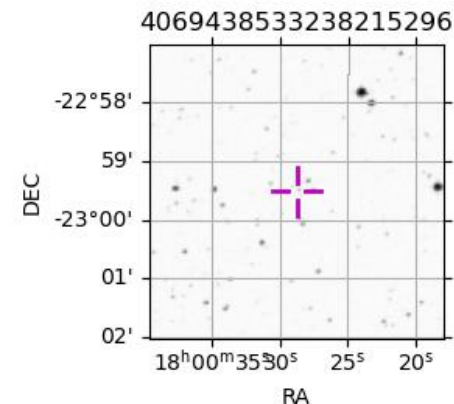
Earth
 PIC
 TEN
 RIO
 ESO
 SAAO



2043-03-07T03:40:03.5900 α: 18 00 28.7031 δ: -22 59 31.220 C/A ***** PA 0.14 deg v_sky +20.52 km/s D 05.46 AU
 Credit: Styled after SORA/Lucky Star

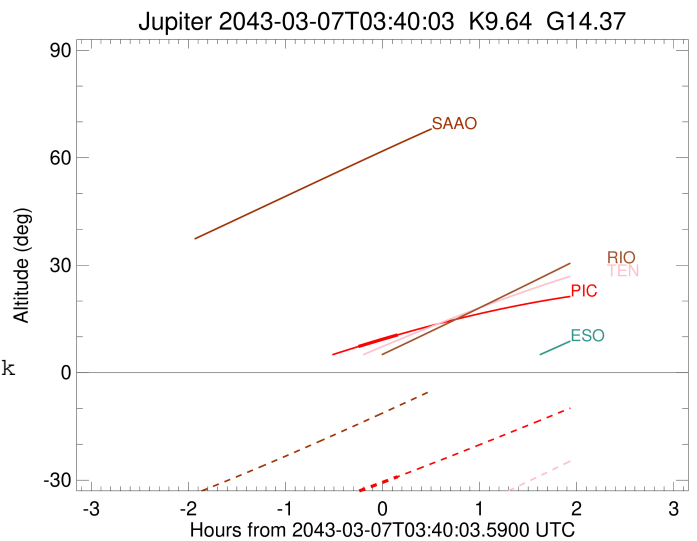
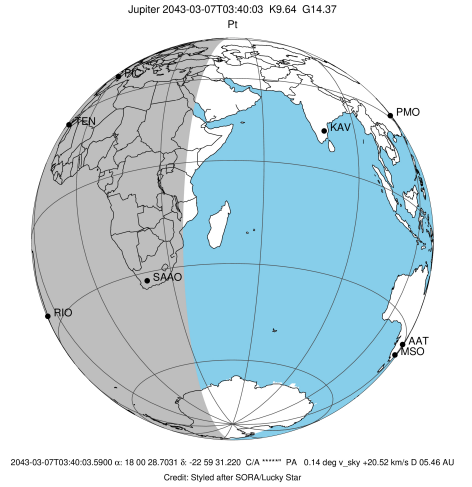
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+ +	MAR 07 03:25 - MAR 07 03:49	Pie
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8			Pnn
RIO	Rio de Janeiro	-22.9	316.8			Pnn
ESO	European Southern Obs. (3.6m)	-29.3	289.3			Pnn
AAT	Siding Spring (AAT)	-31.3	149.1			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-03-07T03:37:23.130
Event type            : Pt
: Jupiter occs: topocentric, not geocentric
: Not a ringed target
Observer code         : PIC
Location              : Pic du Midi
Latitude (deg)        : 42.93656
E. Longitude (deg)    : 0.14231
Altitude (km)         : 2.890
Gaia source ID        : 4069438533238215296
2Mass ID (if available) : 18002871-2259311
ICRS Star Coord at Epoch: 18h 00m 28.70306s -22:59:31.22020s
RUWE (>1.4 is poor)  : 1.54
K magnitude           : 9.638
G magnitude           : 14.368
RP magnitude          : 13.298
BP magnitude          : 15.513
DUPflag              : 0
Distance (au)         : 5.458
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 20.52
Sun-Target sep (deg)  : 75.75
Sun-Moon sep (deg)   : 22.82
B (ring opening deg) : -2.50
PA of pole (deg)     : -0.89
Pole direction: RA (deg): 268.05663
Dec (deg): 64.49732
C/A sky separation (") : 17.674
C/A sky separation (km) : 69963.2
NAIF SPICE kernels   : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat4401.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
urall6.bsp
IAU_SATURN_for_RINGFIT.tpc
pck00010.tpc
earth_200101_990628_predict.bpc
uranus_ringframes_rfrench20220627_v1.tf
neptune_ringframes_rfrench20220702a_v1.tf
earth_flat_IAU.spk
    
```



x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-03-07T03:25:21.815	7.32	-33.07	71483.7	-79.20	-80.45
Jupiter	E	2043-03-07T03:49:25.124	10.55	-29.03	71483.9	-76.61	-78.16