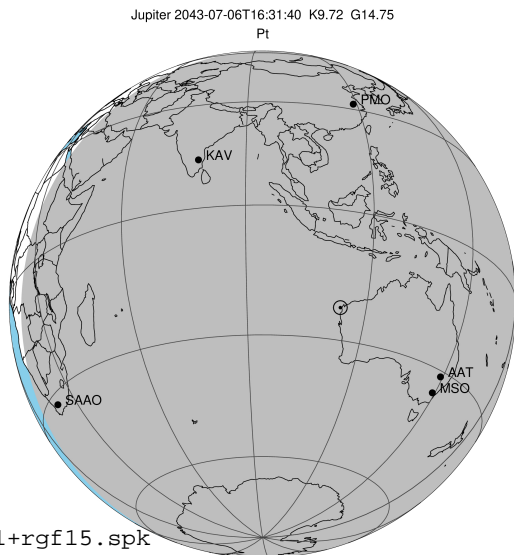


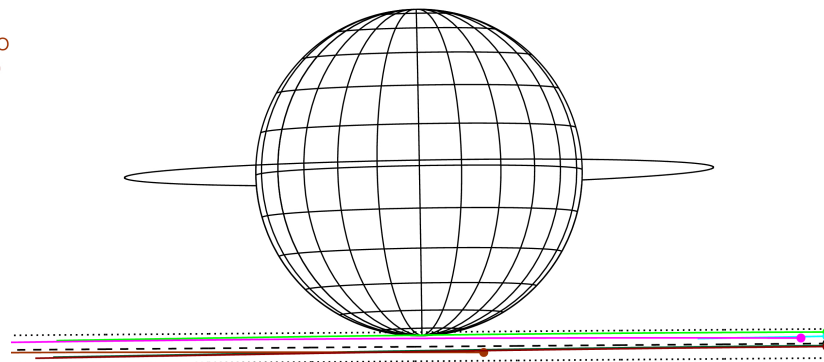
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-07-06T16:31:40.720
 Event type : Pt
 : Jupiter occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4116861053935377792
 2Mass ID (if available) : 17424829-2304440

Jupiter 2043-07-06T16:31:40 K9.72 G14.75 Pt

ICRS Star Coord at Epoch: 17h 42m 48.29983s -23:04:44.34271s
 RUWE (>1.4 is poor) : 0.94
 K magnitude : 9.716
 G magnitude : 14.754
 RP magnitude : 13.497
 BP magnitude : 16.555
 DUPflag : 0
 Distance (au) : 4.284
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -15.05
 Sun-Target sep (deg) : 162.12
 Sun-Moon sep (deg) : 162.12
 B (ring opening deg) : -2.40
 PA of pole (deg) : 1.01
 Pole direction: RA (deg): 268.05669
 Dec (deg): 64.49732
 C/A sky separation (") : 24.560
 C/A sky separation (km) : 76307.5
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



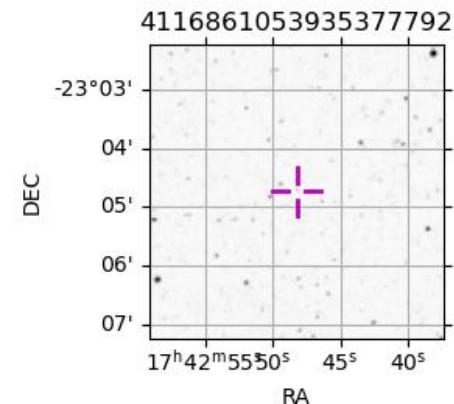
Earth
 PMO
 IRTF
 KAV
 AAT
 SAAO
 MSO



2043-07-06T16:31:40.7200 α: 17 42 48.2998 δ: -23 04 44.343 C/A ***** PA 0.45 deg v_sky -15.05 km/s D 04.28 AU
 Credit: Styled after SORA/Lucky Star

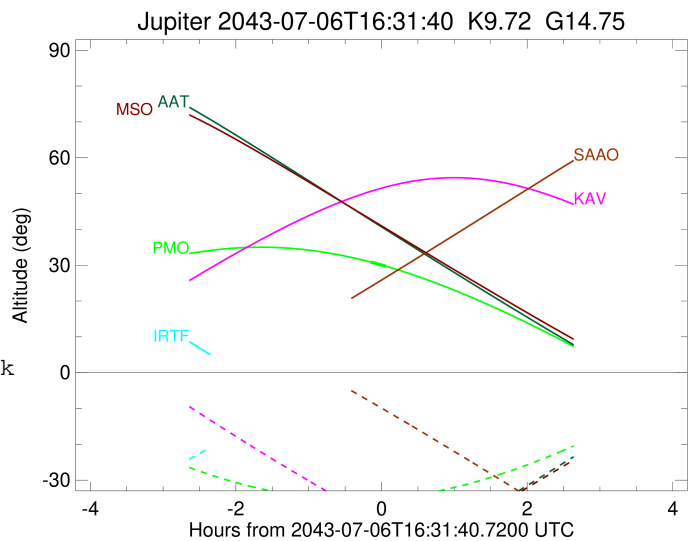
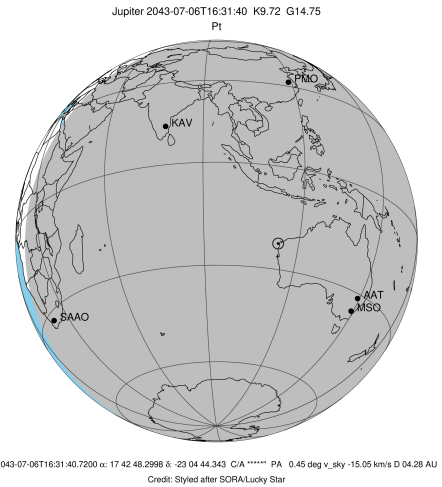
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	JUL 06 16:22 - JUL 06 16:34	Pie
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             : 2043-07-06T16:28:54.880
Event type            : Pt
: Jupiter occs: topocentric, not geocentric
: Not a ringed target
Observer code         : PMO
Location              : Purple Mtn Obs. Nanking
Latitude (deg)        : 32.06667
E. Longitude (deg)    : 118.82089
Altitude (km)         : 0.364
Gaia source ID        : 4116861053935377792
2Mass ID (if available) : 17424829-2304440
ICRS Star Coord at Epoch: 17h 42m 48.29983s -23:04:44.34271s
RUWE (>1.4 is poor)  : 0.94
K magnitude           : 9.716
G magnitude           : 14.754
RP magnitude          : 13.497
BP magnitude          : 16.555
DUPflag              : 0
Distance (au)         : 4.284
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s)  : -15.05
Sun-Target sep (deg)  : 162.12
Sun-Moon sep (deg)    : 162.17
B (ring opening deg)  : -2.40
PA of pole (deg)      : 1.01
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation (") : 22.938
C/A sky separation (km) : 71268.7
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	2043-07-06T16:22:55.628	30.86	-35.37	71484.1	-85.24	-85.80
Jupiter	E	2043-07-06T16:34:54.267	29.74	-35.13	71484.1	-84.65	-85.28