

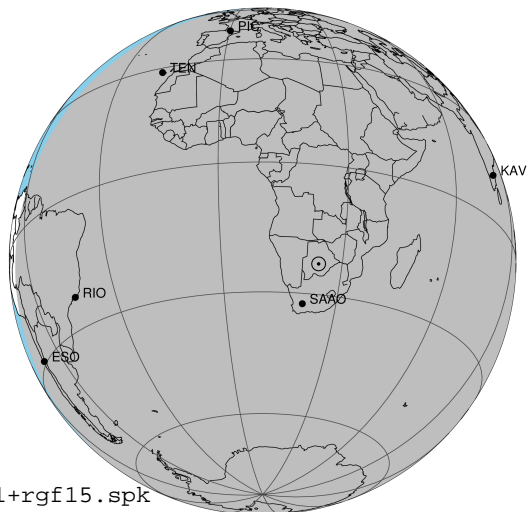
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-07-01T22:27:50.130
 Event type : Pt
 : Jupiter occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4068844453456826112
 2Mass ID (if available) : 17451614-2304578

Jupiter 2043-07-01T22:27:50 K9.96 G14.58 Pt

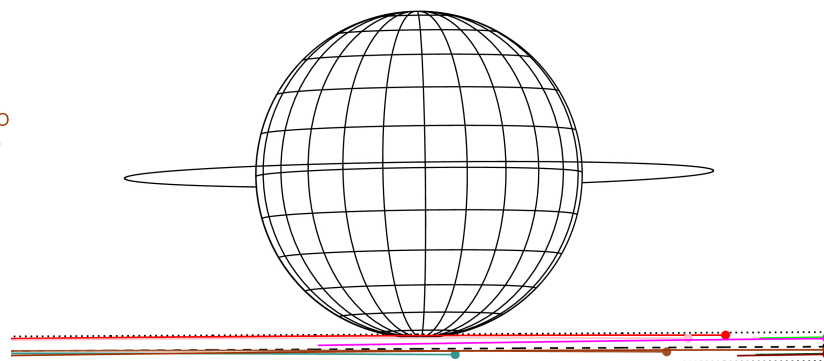
ICRS Star Coord at Epoch: 17h 45m 16.16685s -23:04:57.96386s

RUWE (>1.4 is poor) : 0.91
 K magnitude : 9.955
 G magnitude : 14.585
 RP magnitude : 13.391
 BP magnitude : 16.156
 DUPflag : 0
 Distance (au) : 4.266
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -15.72
 Sun-Target sep (deg) : 167.22
 Sun-Moon sep (deg) : 126.54
 B (ring opening deg) : -2.41
 PA of pole (deg) : 0.75
 Pole direction: RA (deg): 268.05669
 Dec (deg): 64.49732
 C/A sky separation (") : 24.680
 C/A sky separation (km) : 76364.3
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-07-01T22:27:50 K9.96 G14.58
 Pt



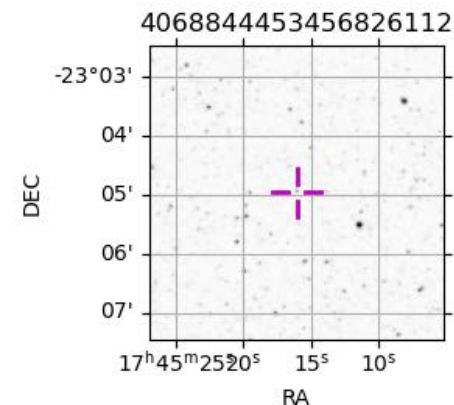
Earth
 PIC
 PMO
 TEN
 KAV
 RIO
 ESO
 AAT
 SAAO
 MSO



2043-07-01T22:27:50.1300 α: 17 45 16.1668 δ: -23 04 57.964 C/A ***** PA 0.31 deg v_sky -15.72 km/s D 04.27 AU
 Credit: Styled after SORA/Lucky Star

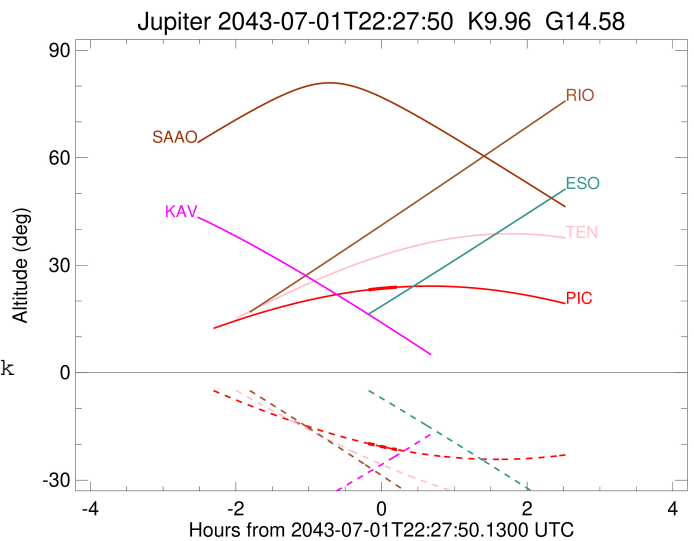
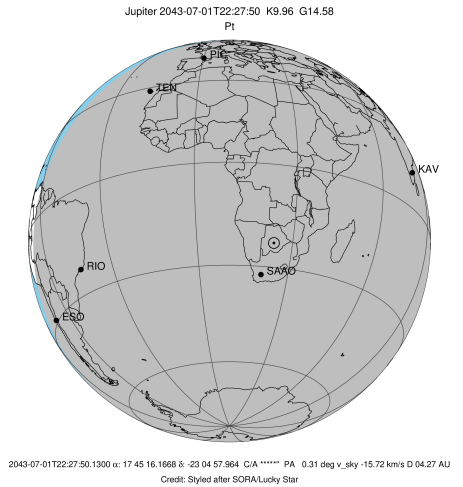
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+ +	JUL 01 22:17 - JUL 01 22:40	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             : 2043-07-01T22:28:47.200
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        : 4068844453456826112
2Mass ID (if available) : 17451614-2304578
ICRS Star Coord at Epoch: 17h 45m 16.16685s -23:04:57.96386s
RUWE (>1.4 is poor)  : 0.91
K magnitude           : 9.955
G magnitude           : 14.585
RP magnitude          : 13.391
BP magnitude          : 16.156
DUPflag              : 0
Distance (au)         : 4.266
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.72
Sun-Target sep (deg)  : 167.22
Sun-Moon sep (deg)    : 126.80
B (ring opening deg)  : -2.41
PA of pole (deg)      : 0.75
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation (") : 22.810
C/A sky separation (km) : 70578.2
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	2043-07-01T22:17:01.613	23.13	-19.78	71484.2	-81.07	-82.12
Jupiter	E	2043-07-01T22:40:32.708	23.86	-21.49	71484.3	-80.06	-81.22