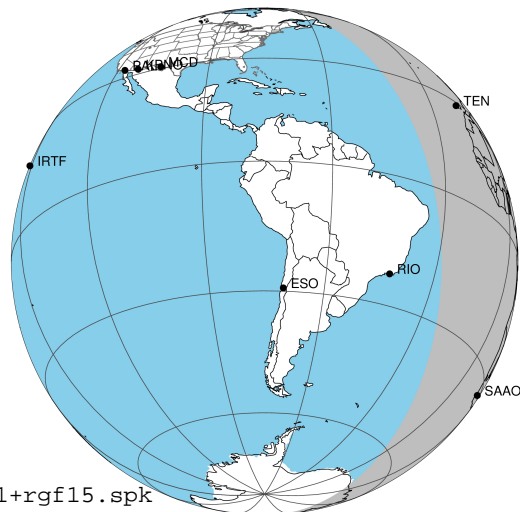


target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2031-11-04T19:57:41.080
 Event type : Pt
 : Jupiter occs: topocentric, not geocentric
 : Not a ringed target
 Gaia source ID : 4068673818645968256
 2Mass ID (if available) : 17485333-2318441

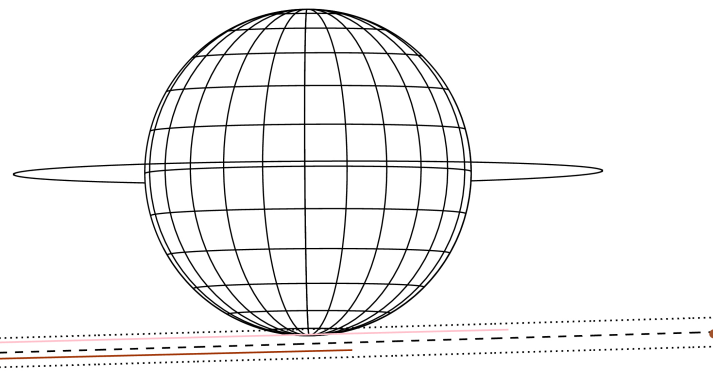
Jupiter 2031-11-04T19:57:41 K9.15 G14.14 Pt

ICRS Star Coord at Epoch: 17h 48m 53.33429s -23:18:44.34922s
 RUWE (>1.4 is poor) : 0.89
 K magnitude : 9.151
 G magnitude : 14.137
 RP magnitude : 12.853
 BP magnitude : 15.849
 DUPflag : 0
 Distance (au) : 5.875
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 34.05
 Sun-Target sep (deg) : 45.70
 Sun-Moon sep (deg) : 161.98
 B (ring opening deg) : -2.19
 PA of pole (deg) : 0.36
 Pole direction: RA (deg): 268.05680
 Dec (deg): 64.49652
 C/A sky separation (") : 17.601
 C/A sky separation (km) : 74993.7
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

Jupiter 2031-11-04T19:57:41 K9.15 G14.14 Pt



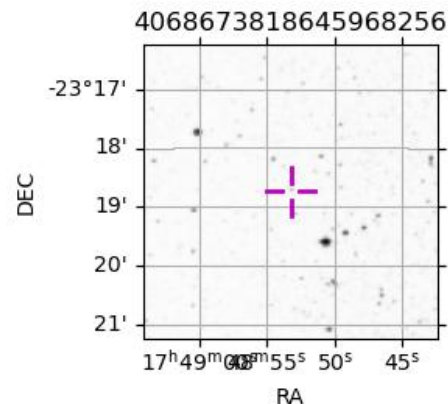
Earth
 PIC
 TEN
 RIO
 SAAO



2031-11-04T19:57:41.0800 α: 17 48 53.3343 δ: -23 18 44.349 C/A ***** PA 1.66 deg v_sky +34.05 km/s D 05.87 AU
 Credit: Styled after SORA/Lucky Star

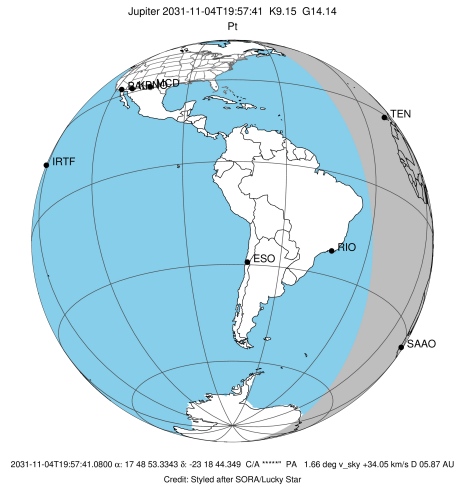
Observable events with sun below -5 deg and altitude above 5 deg

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			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	+ +	NOV 04 19:55 - NOV 04 20:04	Pie
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

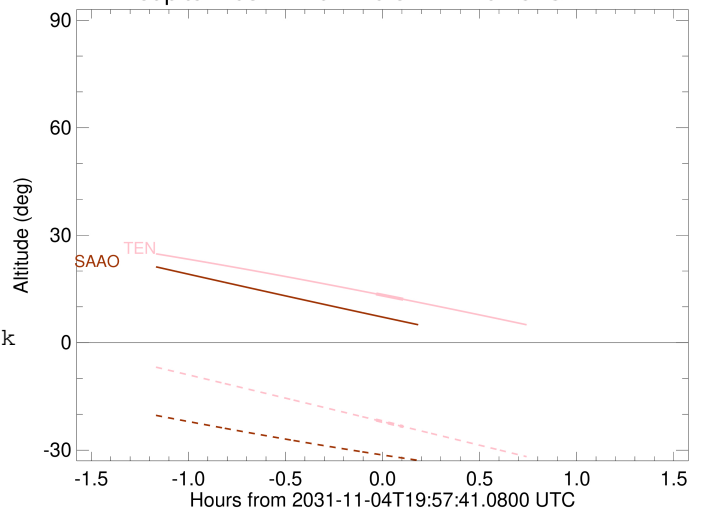


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-11-04T19:59:52.290
Event type            : Pt
: Jupiter occs: topocentric, not geocentric
: Not a ringed target
Observer code         : TEN
Location              : Teide Obs./Tenerife
Latitude (deg)        : 28.30050
E. Longitude (deg)    : 343.48909
Altitude (km)         : 2.395
Gaia source ID        : 4068673818645968256
2Mass ID (if available) : 17485333-2318441
ICRS Star Coord at Epoch: 17h 48m 53.33429s -23:18:44.34922s
RUWE (>1.4 is poor) : 0.89
K magnitude           : 9.151
G magnitude           : 14.137
RP magnitude          : 12.853
BP magnitude          : 15.849
DUPflag              : 0
Distance (au)         : 5.875
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 34.05
Sun-Target sep (deg) : 45.70
Sun-Moon sep (deg)   : 161.29
B (ring opening deg) : -2.19
PA of pole (deg)     : 0.36
Pole direction: RA (deg): 268.05680
Dec (deg): 64.49652
C/A sky separation (") : 16.660
C/A sky separation (km) : 70986.1
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
    
```



Jupiter 2031-11-04T19:57:41 K9.15 G14.14



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	2031-11-04T19:55:43.078	13.61	-21.59	71485.5	-83.89	-84.61
Jupiter	E	2031-11-04T20:04:01.467	12.12	-23.42	71485.6	-81.86	-82.81