

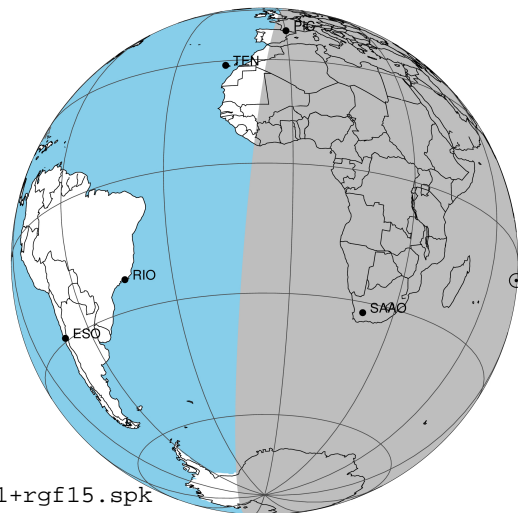
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2031-09-07T18:35:25.860  
 Event type : Pt  
 : Jupiter occs: topocentric, not geocentric  
 : Not a ringed target  
 Gaia source ID : 4114539739987659520  
 2Mass ID (if available) : 17141800-2247358

Jupiter 2031-09-07T18:35:25 K9.30 G13.10 Pt

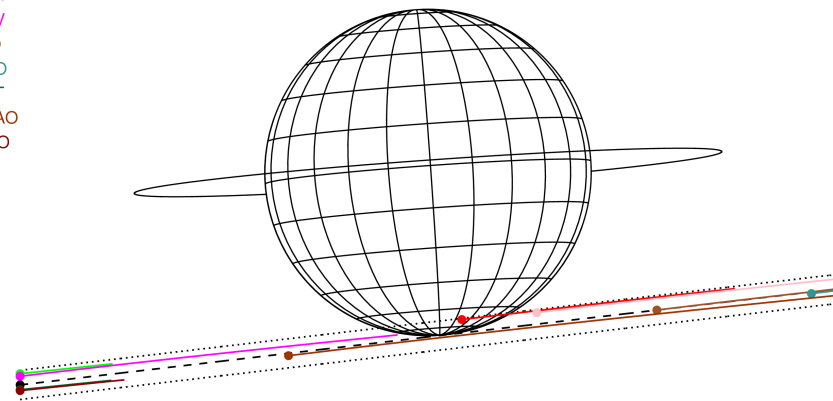
ICRS Star Coord at Epoch: 17h 14m 18.01110s -22:47:35.81528s

RUWE (>1.4 is poor) : 1.08  
 K magnitude : 9.304  
 G magnitude : 13.095  
 RP magnitude : 12.049  
 BP magnitude : 14.217  
 DUPflag : 0  
 Distance (au) : 5.067  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 10.44  
 Sun-Target sep (deg) : 94.97  
 Sun-Moon sep (deg) : 164.92  
 B (ring opening deg) : -2.40  
 PA of pole (deg) : 4.07  
 Pole direction: RA (deg): 268.05685  
 Dec (deg): 64.49652  
 C/A sky separation (") : 19.465  
 C/A sky separation (km) : 71534.4  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2031-09-07T18:35:25 K9.30 G13.10  
 Pt



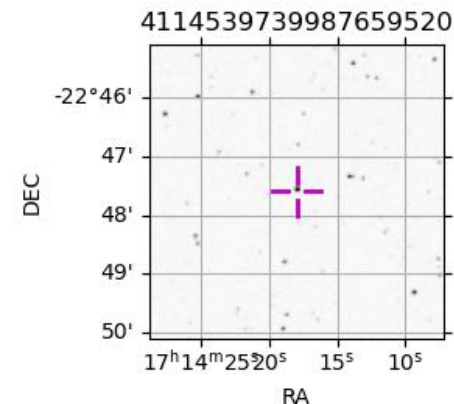
Earth  
 PIC  
 PMO  
 TEN  
 KAV  
 RIO  
 ESO  
 AAT  
 SAAO  
 MSO



2031-09-07T18:35:25.8600 α: 17 14 18.0111 δ: -22 47 35.815 C/A \*\*\*\*\* PA 6.70 deg v\_sky +10.44 km/s D 05.07 AU  
 Credit: Styled after SORA/Lucky Star

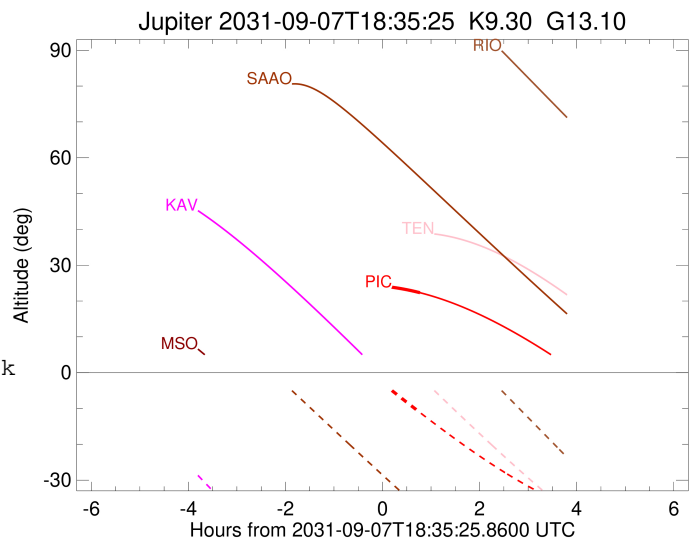
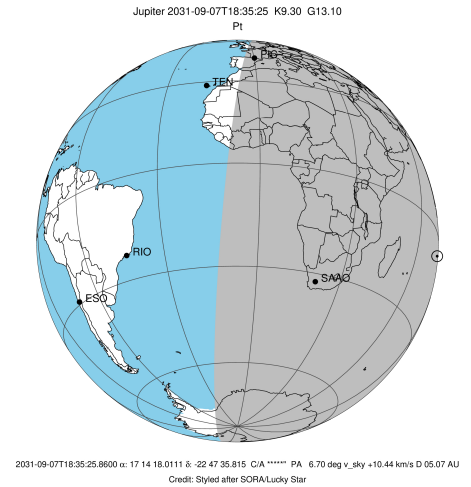
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+	SEP 07 19:21 - SEP 07 19:21	Pne
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



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-09-07T18:35:28.750
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        : 4114539739987659520
2Mass ID (if available) : 17141800-2247358
ICRS Star Coord at Epoch: 17h 14m 18.01110s -22:47:35.81528s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 9.304
G magnitude           : 13.095
RP magnitude          : 12.049
BP magnitude          : 14.217
DUPflag              : 0
Distance (au)         : 5.067
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 10.44
Sun-Target sep (deg)  : 94.97
Sun-Moon sep (deg)   : 164.96
B (ring opening deg) : -2.40
PA of pole (deg)     : 4.07
Pole direction: RA (deg): 268.05685
Dec (deg): 64.49652
C/A sky separation (" ) : 17.884
C/A sky separation (km) : 65722.2
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	2031-09-07T17:49:13.072	24.27	5.53x	71485.1	-69.54	-71.80
Jupiter	E	2031-09-07T19:21:38.719	22.32	-11.11	71485.6	-64.05	-66.81