

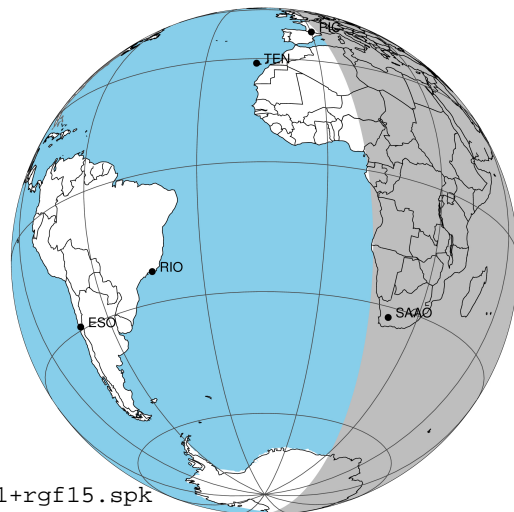
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2031-10-12T17:06:46.820  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4117422281516021760  
 2Mass ID (if available) : 17312584-2307374

Jupiter 2031-10-12T17:06:46 K9.14 G14.32 Pgt

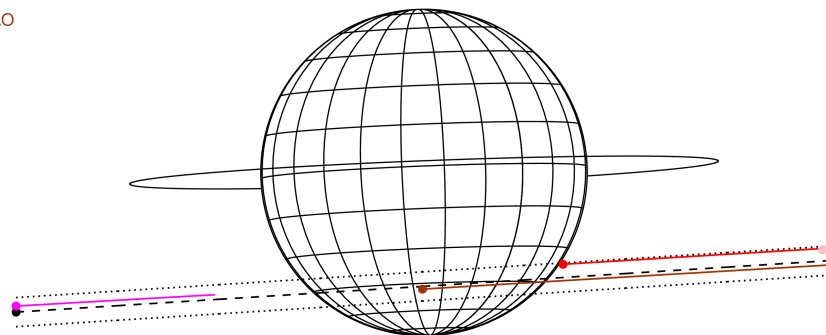
ICRS Star Coord at Epoch: 17h 31m 25.84415s -23°07'37.70472s

RUWE (>1.4 is poor) : 0.93  
 K magnitude : 9.140  
 G magnitude : 14.324  
 RP magnitude : 13.032  
 BP magnitude : 16.224  
 DUPflag : 0  
 Distance (au) : 5.587  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 25.85  
 Sun-Target sep (deg) : 64.70  
 Sun-Moon sep (deg) : 107.68  
 B (ring opening deg) : -2.28  
 PA of pole (deg) : 2.24  
 Pole direction: RA (deg): 268.05682  
 Dec (deg): 64.49652  
 C/A sky separation (") : 12.277  
 C/A sky separation (km) : 49749.3  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2031-10-12T17:06:46 K9.14 G14.32  
 Pgt



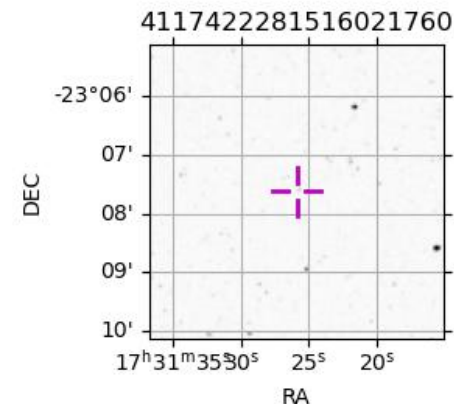
Earth  
 PIC  
 TEN  
 KAV  
 SAAO



2031-10-12T17:06:46.8200 α: 17 31 25.8441 δ: -23 07 37.705 C/A \*\*\*\*\* PA 3.62 deg v\_sky +25.85 km/s D 05.59 AU  
 Credit: Styled after SORA/Lucky Star

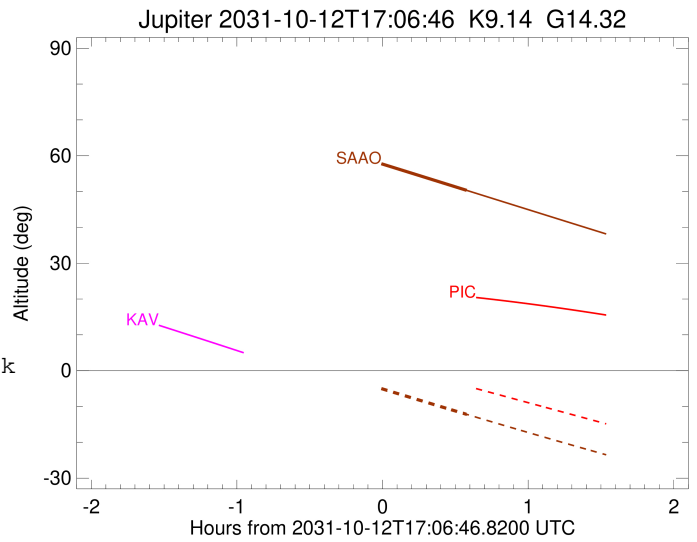
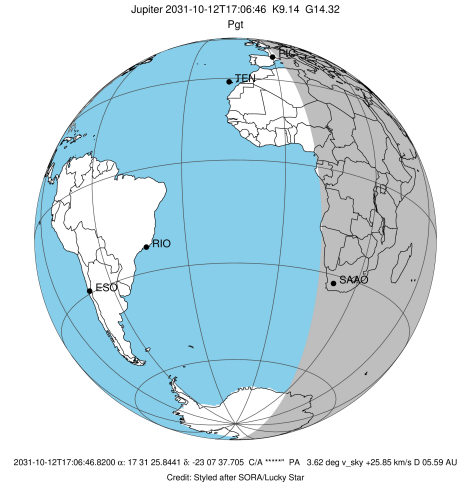
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEncode
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			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	+	OCT 12 17:41 - OCT 12 17:41	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-10-12T17:08:46.220
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : SAAO
Location              : So. Afr. Astro. Obs. (Sutherland)
Latitude (deg)        : -32.37953
E. Longitude (deg)    : 20.81070
Altitude (km)         : 1.768
Gaia source ID        : 4117422281516021760
2Mass ID (if available) : 17312584-2307374
ICRS Star Coord at Epoch: 17h 31m 25.84415s -23:07:37.70472s
RUWE (>1.4 is poor)  : 0.93
K magnitude           : 9.140
G magnitude           : 14.324
RP magnitude          : 13.032
BP magnitude          : 16.224
DUPflag              : 0
Distance (au)         : 5.587
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 25.85
Sun-Target sep (deg)  : 64.70
Sun-Moon sep (deg)    : 108.28
B (ring opening deg) : -2.28
PA of pole (deg)      : 2.24
Pole direction: RA (deg): 268.05682
Dec (deg): 64.49652
C/A sky separation (") : 12.577
C/A sky separation (km) : 50961.6
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	2031-10-12T16:36:01.877	64.07	1.30x	71488.2	-46.67	-50.34
Jupiter	E	2031-10-12T17:41:27.363	50.33	-12.19	71488.5	-44.22	-47.93