

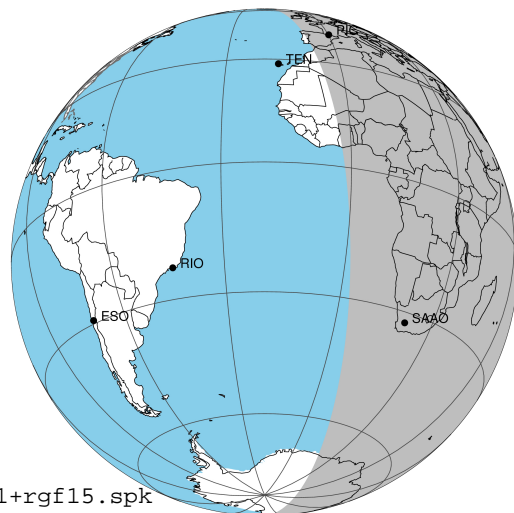
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-10-10T17:52:31.210  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4068775733955874176  
 2Mass ID (if available) : 17463875-2320053

Jupiter 2043-10-10T17:52:31 K9.53 G14.47 Pgt

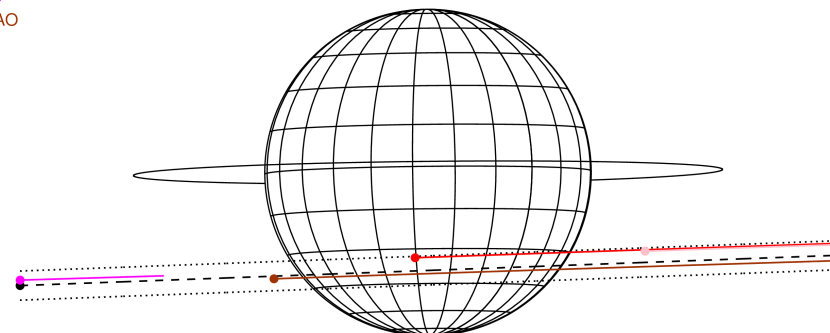
ICRS Star Coord at Epoch: 17h 46m 38.74977s -23:20:05.54934s

RUWE (>1.4 is poor) : 1.08  
 K magnitude : 9.530  
 G magnitude : 14.471  
 RP magnitude : 13.208  
 BP magnitude : 16.157  
 DUPflag : 0  
 Distance (au) : 5.480  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 23.24  
 Sun-Target sep (deg) : 70.22  
 Sun-Moon sep (deg) : 14.58  
 B (ring opening deg) : -2.16  
 PA of pole (deg) : 0.60  
 Pole direction: RA (deg): 268.05675  
 Dec (deg): 64.49731  
 C/A sky separation (") : 10.790  
 C/A sky separation (km) : 42882.4  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2043-10-10T17:52:31 K9.53 G14.47  
 Pgt



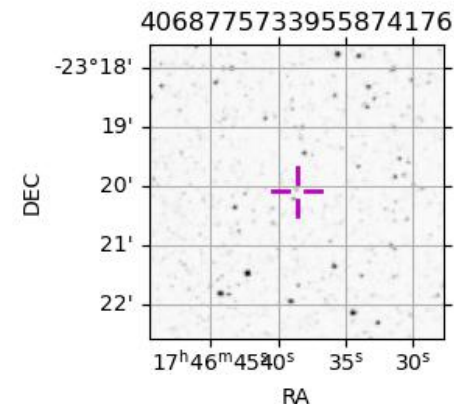
Earth  
 PIC  
 TEN  
 KAV  
 SAAO



2043-10-10T17:52:31.2100 α: 17 46 38.7498 δ: -23 20 05.549 C/A \*\*\*\*\* PA 2.12 deg v\_sky +23.24 km/s D 05.48 AU  
 Credit: Styled after SORA/Lucky Star

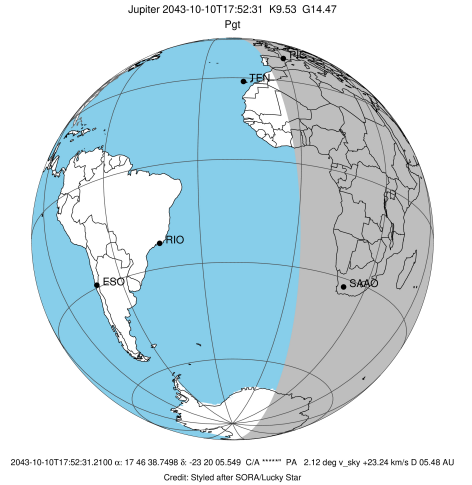
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+	OCT 10 18:37 - OCT 10 18:37	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	+ +	OCT 10 17:14 - OCT 10 18:35	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn

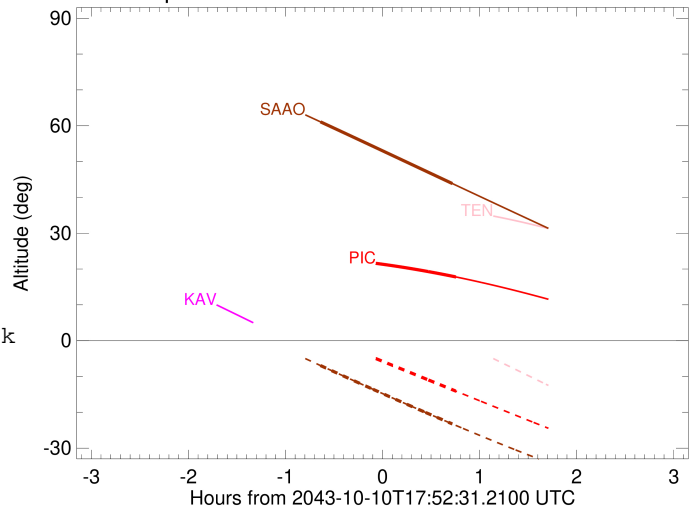


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-10T17:53:31.000
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : PIC
Location             : Pic du Midi
Latitude (deg)       : 42.93656
E. Longitude (deg)   : 0.14231
Altitude (km)        : 2.890
Gaia source ID       : 4068775733955874176
2Mass ID (if available) : 17463875-2320053
ICRS Star Coord at Epoch: 17h 46m 38.74977s -23:20:05.54934s
RUWE (>1.4 is poor) : 1.08
K magnitude          : 9.530
G magnitude          : 14.471
RP magnitude         : 13.208
BP magnitude         : 16.157
DUPflag             : 0
Distance (au)        : 5.480
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.24
Sun-Target sep (deg) : 70.22
Sun-Moon sep (deg)   : 14.78
B (ring opening deg) : -2.16
PA of pole (deg)     : 0.60
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation ("): 9.341
C/A sky separation (km): 37124.7
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
    
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Jupiter 2043-10-10T17:52:31 K9.53 G14.47

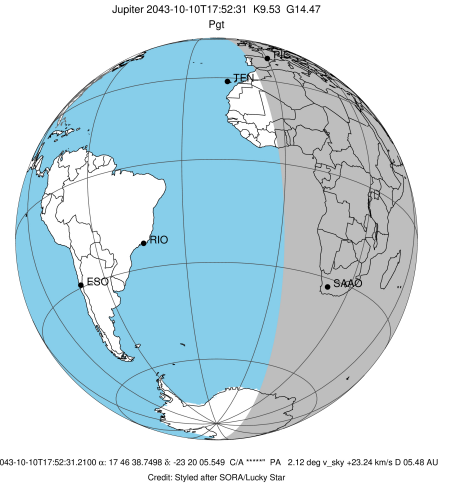


x: target alt < 5.0 deg or sun > -5.0 deg

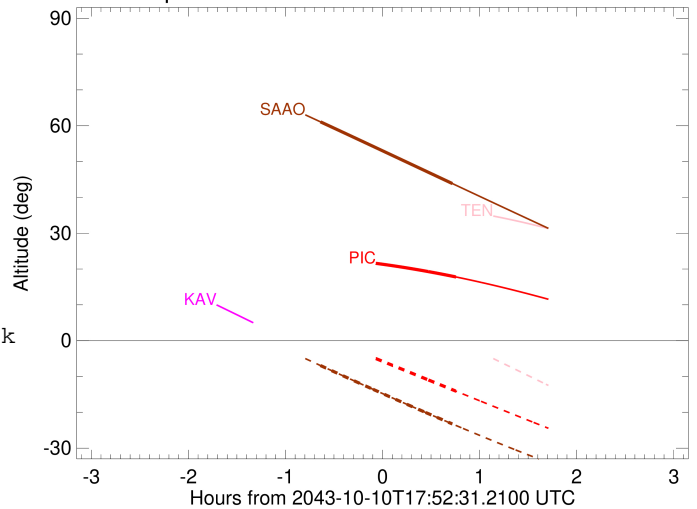
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-10-10T17:09:03.890	23.35	2.16x	71490.1	-32.72	-36.23
Jupiter	E	2043-10-10T18:37:53.846	17.79	-14.09	71490.4	-29.86	-33.23

```

target                : Jupiter
target radius (km)    : 71492.00
C/A epoch              : 2043-10-10T17:54:59.220
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         : 4068775733955874176
2Mass ID (if available) : 17463875-2320053
ICRS Star Coord at Epoch: 17h 46m 38.74977s -23:20:05.54934s
RUWE (>1.4 is poor)  : 1.08
K magnitude            : 9.530
G magnitude            : 14.471
RP magnitude           : 13.208
BP magnitude           : 16.157
DUPflag                : 0
Distance (au)          : 5.480
f0 (km)                : 0.00
g0 (km)                : 0.00
skyplane vel. (km/s)  : 23.24
Sun-Target sep (deg)   : 70.22
Sun-Moon sep (deg)     : 14.23
B (ring opening deg)   : -2.16
PA of pole (deg)       : 0.60
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 11.143
C/A sky separation (km) : 44283.6
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
    
```



Jupiter 2043-10-10T17:52:31 K9.53 G14.47



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	2043-10-10T17:14:10.663	61.08	-6.94	71489.4	-39.56	-43.26
Jupiter	E	2043-10-10T18:35:41.563	43.85	-23.24	71489.7	-36.98	-40.64