

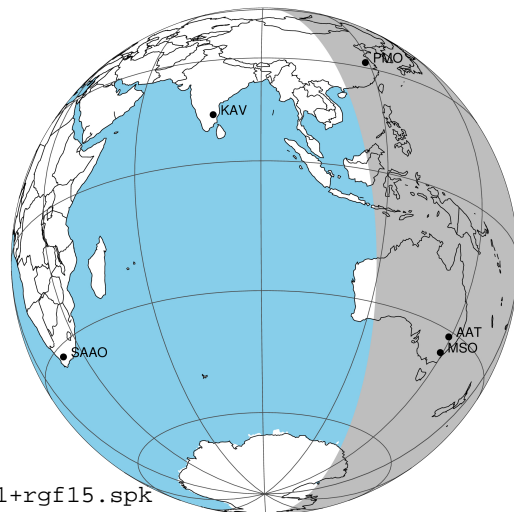
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-10-18T10:03:37.840
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068614896038325632
 2Mass ID (if available) : 17513619-2321479

Jupiter 2043-10-18T10:03:37 K7.98 G14.87 Pgt

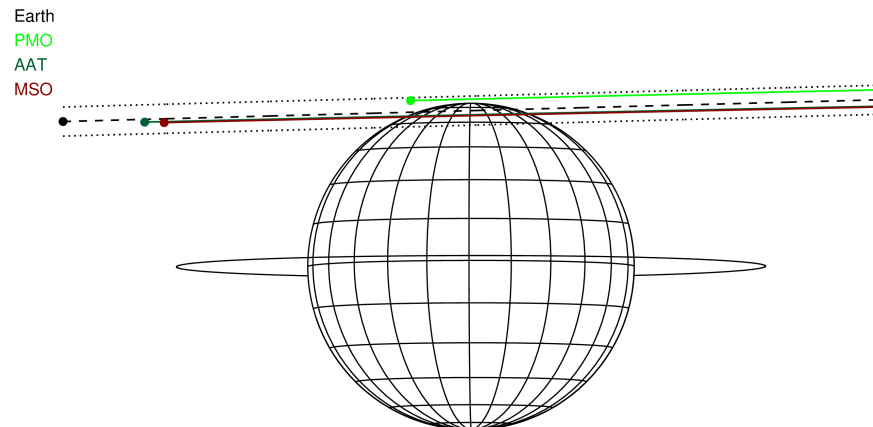
ICRS Star Coord at Epoch: 17h 51m 36.16638s -23°21'48.03792s

RUWE (>1.4 is poor) : 0.00
 K magnitude : 7.984
 G magnitude : 14.870
 RP magnitude : 12.974
 BP magnitude : 17.521
 DUPflag : 0
 Distance (au) : 5.588
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 26.34
 Sun-Target sep (deg) : 63.76
 Sun-Moon sep (deg) : 115.13
 B (ring opening deg) : -2.14
 PA of pole (deg) : 0.07
 Pole direction: RA (deg): 268.05675
 Dec (deg): 64.49731
 C/A sky separation (") : 16.841
 C/A sky separation (km) : 68250.2
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-10-18T10:03:37 K7.98 G14.87
 Pgt

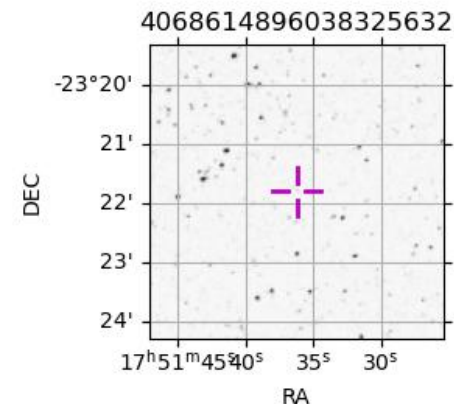


2043-10-18T10:03:37.8400 a: 17 51 36.1664 s: -23 21 48.038 C/A ***** PA 181.53 deg v_sky +26.34 km/s D 05.59 AU
 Credit: Styled after SORA/Lucky Star



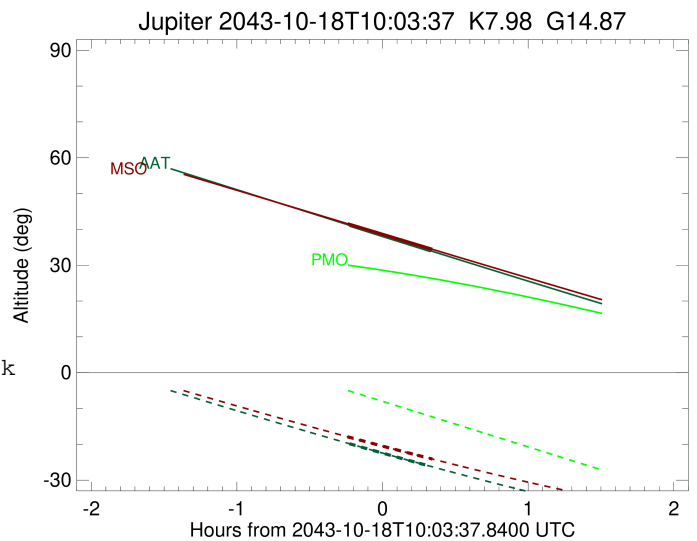
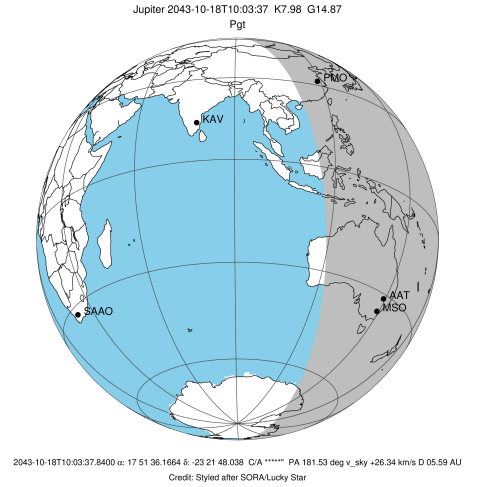
Observable events with sun below -5 deg and altitude above 5 deg

| Obs | Location | lat | Elon | Target | Observed Events Interval | OEcode |
|------|-----------------------------------|-------|-------|--------|-----------------------------|--------|
| 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 | + + | OCT 18 09:50 - OCT 18 10:23 | Pie |
| SAAO | So. Afr. Astro. Obs. (Sutherland) | -32.4 | 20.8 | | | Pnn |
| MSO | Mt. Stromlo Observatory | -35.3 | 149.0 | + + | OCT 18 09:49 - OCT 18 10:24 | Pie |



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-10-18T10:06:49.640
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : AAT
Location             : Siding Spring (AAT)
Latitude (deg)       : -31.27703
E. Longitude (deg)   : 149.06608
Altitude (km)        : 1.164
Gaia source ID       : 4068614896038325632
2Mass ID (if available) : 17513619-2321479
ICRS Star Coord at Epoch: 17h 51m 36.16638s -23:21:48.03792s
RUWE (>1.4 is poor) : 0.00
K magnitude          : 7.984
G magnitude           : 14.870
RP magnitude         : 12.974
BP magnitude         : 17.521
DUPflag              : 0
Distance (au)        : 5.588
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 26.34
Sun-Target sep (deg) : 63.76
Sun-Moon sep (deg)   : 116.01
B (ring opening deg) : -2.14
PA of pole (deg)     : 0.07
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (" ) : 16.396
C/A sky separation (km) : 66446.0
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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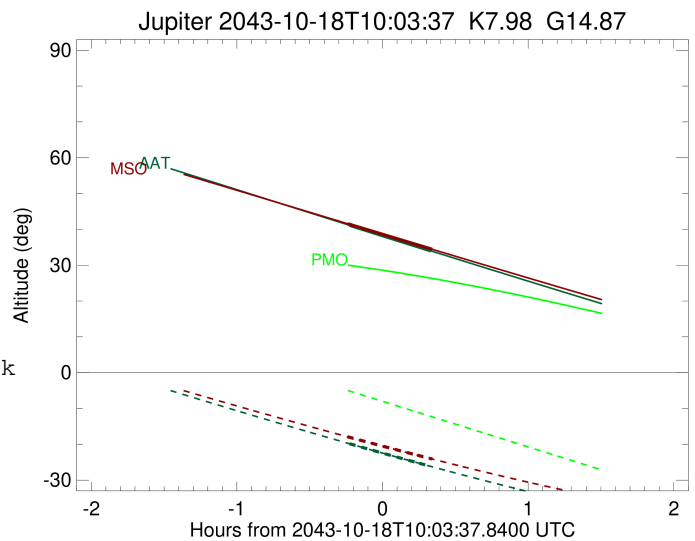
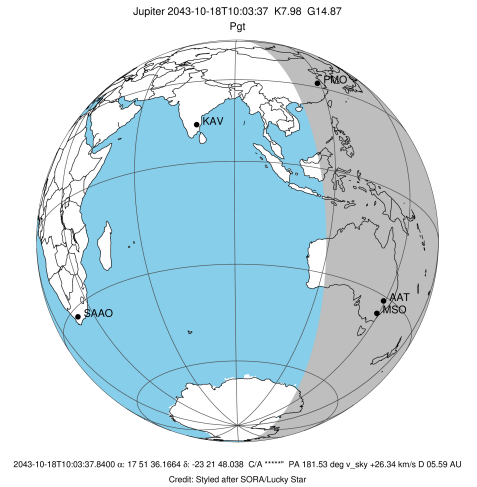


x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|-------|---------|---------|---------|--------------|
| Jupiter | I | 2043-10-18T09:49:59.801 | 41.14 | -19.83 | 71486.7 | 67.08 | 69.58 |
| Jupiter | E | 2043-10-18T10:23:38.271 | 33.98 | -26.18 | 71486.5 | 69.41 | 71.69 |

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-10-18T10:06:41.120
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : MSO
Location              : Mt. Stromlo Observatory
Latitude (deg)       : -35.32000
E. Longitude (deg)   : 149.00833
Altitude (km)        : 0.770
Gaia source ID       : 4068614896038325632
2Mass ID (if available) : 17513619-2321479
ICRS Star Coord at Epoch: 17h 51m 36.16638s -23:21:48.03792s
RUWE (>1.4 is poor) : 0.00
K magnitude           : 7.984
G magnitude           : 14.870
RP magnitude          : 12.974
BP magnitude          : 17.521
DUPflag              : 0
Distance (au)        : 5.588
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 26.34
Sun-Target sep (deg) : 63.76
Sun-Moon sep (deg)   : 116.00
B (ring opening deg) : -2.14
PA of pole (deg)     : 0.07
Pole direction: RA (deg): 268.05675
Dec (deg): 64.49731
C/A sky separation (") : 16.298
C/A sky separation (km) : 66050.0
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 | 2043-10-18T09:49:14.235 | 41.57 | -17.89 | 71486.8 | 66.23 | 68.80 |
| Jupiter | E | 2043-10-18T10:24:06.757 | 34.45 | -24.10 | 71486.6 | 68.59 | 70.94 |