

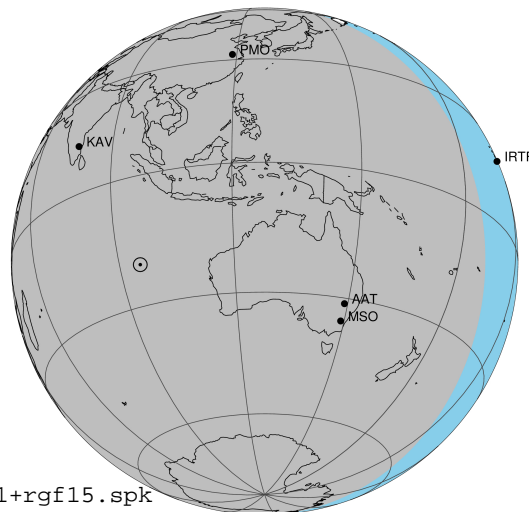
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-05-23T17:33:30.240
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4069573871938648320
 2Mass ID (if available) : 18053749-2301497

Jupiter 2043-05-23T17:33:30 K5.88 G12.17 Pgt

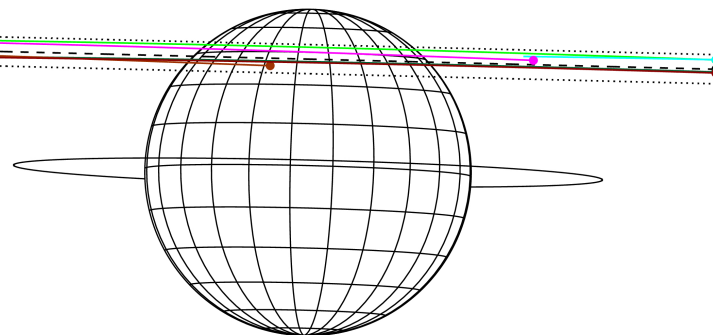
ICRS Star Coord at Epoch: 18h 05m 37.49681s -23:01:49.83575s

RUWE (>1.4 is poor) : 1.08
 K magnitude : 5.876
 G magnitude : 12.169
 RP magnitude : 10.655
 BP magnitude : 15.431
 DUPflag : 0
 Distance (au) : 4.370
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -12.59
 Sun-Target sep (deg) : 150.60
 Sun-Moon sep (deg) : 32.44
 B (ring opening deg) : -2.43
 PA of pole (deg) : -1.44
 Pole direction: RA (deg): 268.05667
 Dec (deg): 64.49732
 C/A sky separation (") : 15.665
 C/A sky separation (km) : 49653.3
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-05-23T17:33:30 K5.88 G12.17
 Pgt



Earth
 PMO
 IRTF
 KAV
 AAT
 SAAO
 MSO

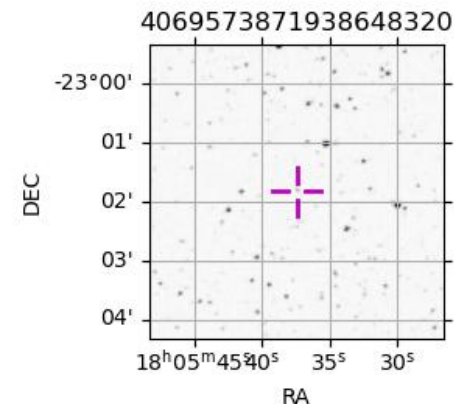


2043-05-23T17:33:30.2400 a: 18 05 37.4968 s: -23 01 49.8358 C/A ***** PA 178.58 deg v_sky -12.59 km/s D 04.37 AU

Credit: Styled after SORA/Lucky Star

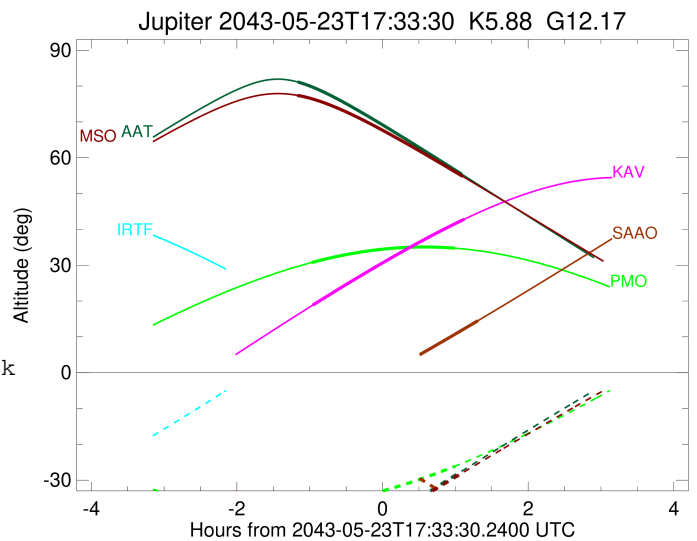
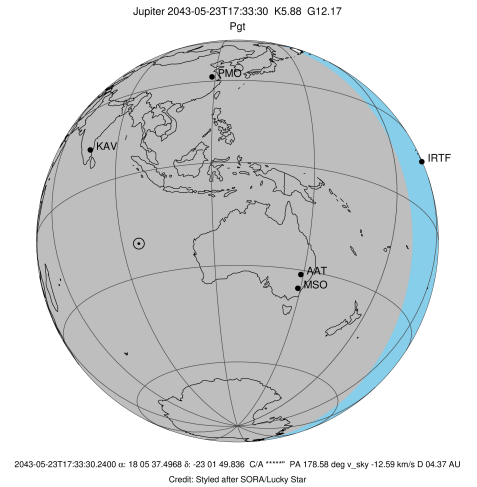
Observable events with sun below -5 deg and altitude above 5 deg

| 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 | + + | MAY 23 16:35 - MAY 23 18:33 | Pie |
| 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 | + + | MAY 23 16:36 - MAY 23 18:41 | Pie |
| 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 | + + | MAY 23 16:23 - MAY 23 18:38 | Pie |
| SAAO | So. Afr. Astro. Obs. (Sutherland) | -32.4 | 20.8 | + + | MAY 23 18:52 - MAY 23 18:52 | Pne |
| MSO | Mt. Stromlo Observatory | -35.3 | 149.0 | + + | MAY 23 16:23 - MAY 23 18:39 | Pie |



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-05-23T17:34:17.280
Event type          : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code       : PMO
Location            : Purple Mtn Obs. Nanking
Latitude (deg)      : 32.06667
E. Longitude (deg)  : 118.82089
Altitude (km)       : 0.364
Gaia source ID      : 4069573871938648320
2Mass ID (if available) : 18053749-2301497
ICRS Star Coord at Epoch: 18h 05m 37.49681s -23:01:49.83575s
RUWE (>1.4 is poor) : 1.08
K magnitude          : 5.876
G magnitude          : 12.169
RP magnitude         : 10.655
BP magnitude         : 15.431
DUPflag             : 0
Distance (au)       : 4.370
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -12.59
Sun-Target sep (deg) : 150.60
Sun-Moon sep (deg)  : 32.73
B (ring opening deg) : -2.43
PA of pole (deg)    : -1.44
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation (" ) : 17.310
C/A sky separation (km) : 54866.5
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
    
```

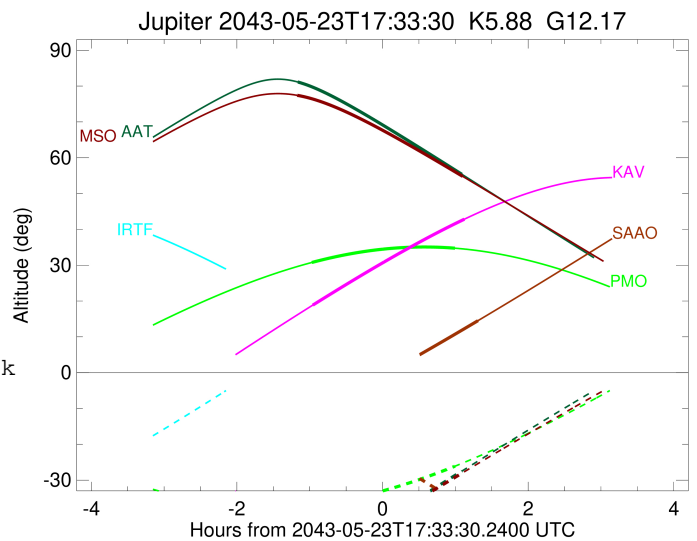
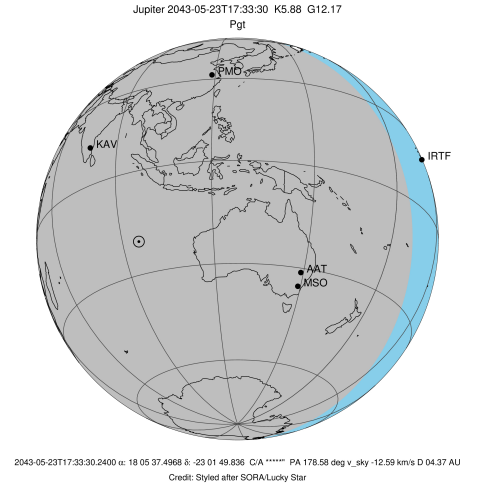


x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|-------|---------|---------|---------|--------------|
| Jupiter | I | 2043-05-23T16:35:17.215 | 30.76 | -36.84 | 71487.3 | 49.95 | 53.54 |
| Jupiter | E | 2043-05-23T18:33:10.995 | 34.74 | -26.11 | 71487.3 | 50.01 | 53.59 |

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-05-23T17:38:47.150
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : KAV
Location             : Kavalur Observatory
Latitude (deg)       : 12.57556
E. Longitude (deg)   : 78.83167
Altitude (km)        : 0.722
Gaia source ID       : 4069573871938648320
2Mass ID (if available) : 18053749-2301497
ICRS Star Coord at Epoch: 18h 05m 37.49681s -23:01:49.83575s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 5.876
G magnitude           : 12.169
RP magnitude          : 10.655
BP magnitude          : 15.431
DUPflag              : 0
Distance (au)        : 4.370
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -12.59
Sun-Target sep (deg) : 150.60
Sun-Moon sep (deg)   : 32.19
B (ring opening deg) : -2.43
PA of pole (deg)     : -1.44
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation (") : 16.630
C/A sky separation (km) : 52710.9
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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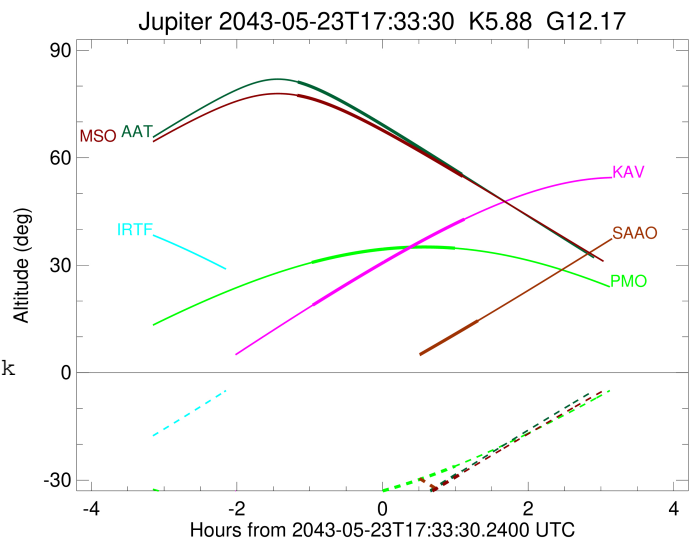
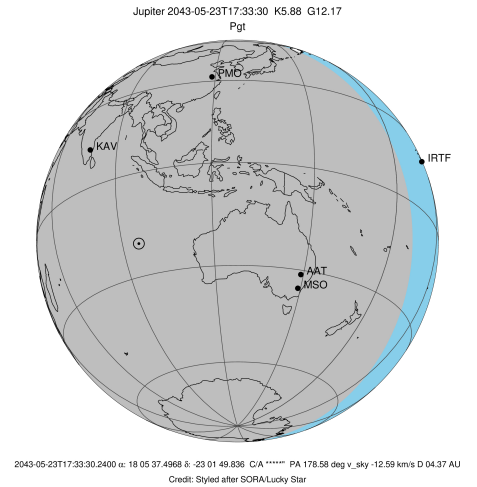


x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|-------|---------|---------|---------|--------------|
| Jupiter | I | 2043-05-23T16:36:04.646 | 18.86 | -44.75 | 71487.7 | 46.86 | 50.53 |
| Jupiter | E | 2043-05-23T18:41:01.492 | 42.85 | -56.84 | 71487.6 | 47.88 | 51.53 |

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-05-23T17:31:16.840
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       : 4069573871938648320
2Mass ID (if available) : 18053749-2301497
ICRS Star Coord at Epoch: 18h 05m 37.49681s -23:01:49.83575s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 5.876
G magnitude           : 12.169
RP magnitude          : 10.655
BP magnitude          : 15.431
DUPflag              : 0
Distance (au)         : 4.370
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -12.59
Sun-Target sep (deg) : 150.60
Sun-Moon sep (deg)   : 33.12
B (ring opening deg) : -2.43
PA of pole (deg)     : -1.44
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation ("): 15.319
C/A sky separation (km): 48558.1
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
    
```

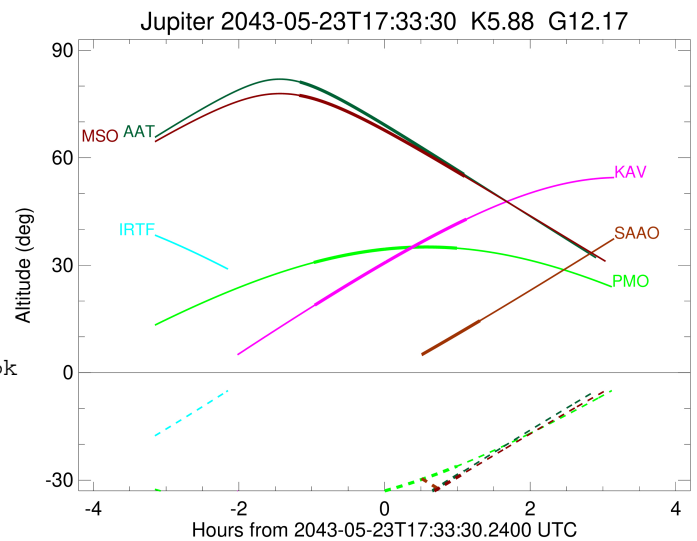
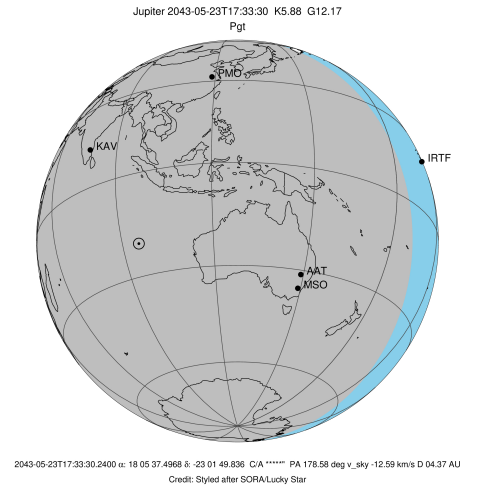


x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|-------|---------|---------|---------|--------------|
| Jupiter | I | 2043-05-23T16:23:46.564 | 81.12 | -56.29 | 71488.2 | 42.96 | 46.67 |
| Jupiter | E | 2043-05-23T18:38:56.527 | 55.36 | -27.48 | 71488.3 | 42.33 | 46.05 |

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-05-23T17:39:47.750
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       : 4069573871938648320
2Mass ID (if available) : 18053749-2301497
ICRS Star Coord at Epoch: 18h 05m 37.49681s -23:01:49.83575s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 5.876
G magnitude           : 12.169
RP magnitude          : 10.655
BP magnitude          : 15.431
DUPflag              : 0
Distance (au)        : 4.370
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -12.59
Sun-Target sep (deg) : 150.60
Sun-Moon sep (deg)   : 31.76
B (ring opening deg) : -2.43
PA of pole (deg)     : -1.44
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation (") : 14.556
C/A sky separation (km) : 46137.2
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
    
```

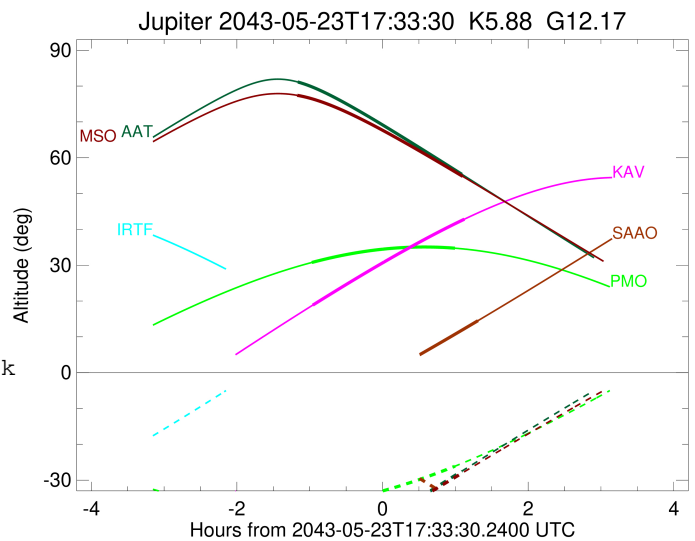
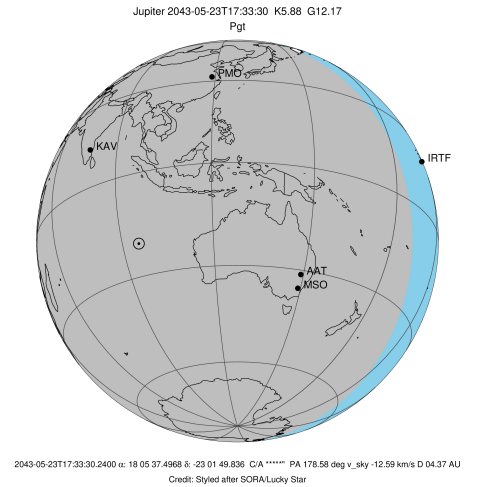


x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|---------|---------|---------|---------|--------------|
| Jupiter | I | 2043-05-23T16:26:37.570 | -12.72x | -9.45 | 71488.7 | 39.51 | 43.21 |
| Jupiter | E | 2043-05-23T18:52:13.142 | 14.52 | -39.69 | 71488.5 | 40.83 | 44.54 |

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-05-23T17:31:24.010
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      : 4069573871938648320
2Mass ID (if available) : 18053749-2301497
ICRS Star Coord at Epoch: 18h 05m 37.49681s -23:01:49.83575s
RUWE (>1.4 is poor) : 1.08
K magnitude         : 5.876
G magnitude         : 12.169
RP magnitude        : 10.655
BP magnitude        : 15.431
DUPflag            : 0
Distance (au)       : 4.370
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -12.59
Sun-Target sep (deg) : 150.60
Sun-Moon sep (deg)  : 33.09
B (ring opening deg) : -2.43
PA of pole (deg)    : -1.44
Pole direction: RA (deg): 268.05667
Dec (deg): 64.49732
C/A sky separation (" ) : 15.183
C/A sky separation (km) : 48126.6
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 | 2043-05-23T16:23:18.014 | 77.41 | -55.57 | 71488.3 | 42.48 | 46.20 |
| Jupiter | E | 2043-05-23T18:39:38.989 | 54.78 | -27.92 | 71488.4 | 41.88 | 45.60 |