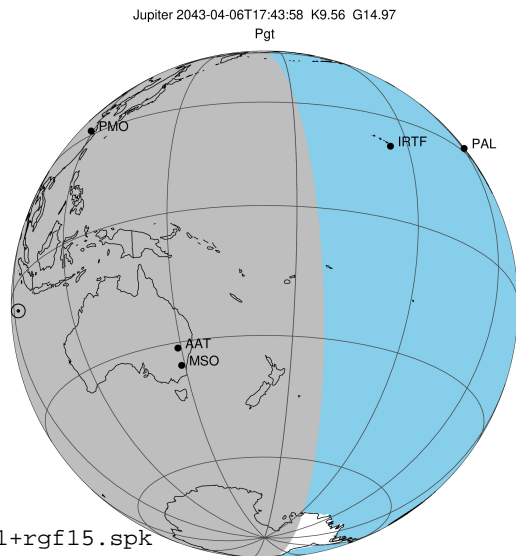


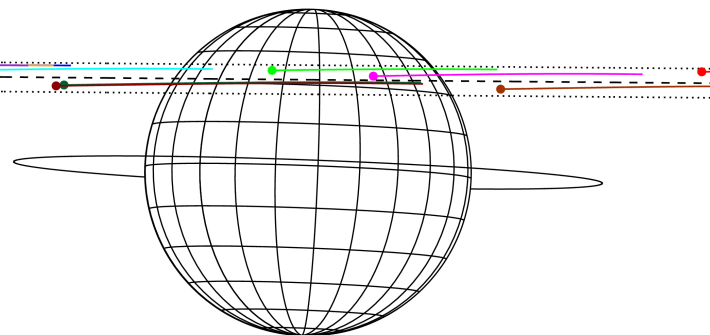
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-04-06T17:43:58.630
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4066623955319957888
 2Mass ID (if available) : 18114481-2258076

Jupiter 2043-04-06T17:43:58 K9.56 G14.97 Pgt

ICRS Star Coord at Epoch: 18h 11m 44.80678s -22:58:07.73523s
 RUWE (>1.4 is poor) : 1.00
 K magnitude : 9.564
 G magnitude : 14.966
 RP magnitude : 13.675
 BP magnitude : 16.858
 DUPflag : 0
 Distance (au) : 4.968
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 6.25
 Sun-Target sep (deg) : 103.52
 Sun-Moon sep (deg) : 61.88
 B (ring opening deg) : -2.45
 PA of pole (deg) : -2.10
 Pole direction: RA (deg): 268.05664
 Dec (deg): 64.49732
 C/A sky separation (") : 11.279
 C/A sky separation (km) : 40637.7
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



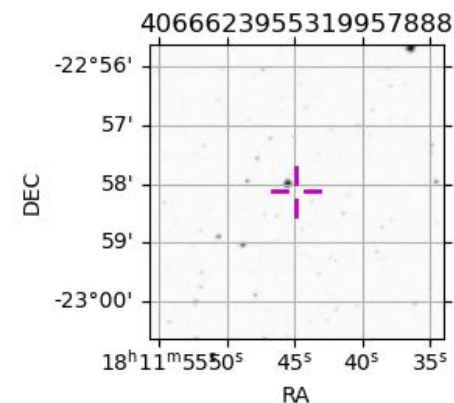
Earth
 PIC
 PAL
 PMO
 KPNO
 MCD
 IRTF
 KAV
 ESO
 AAT
 SAAO
 MSO



2043-04-06T17:43:58.6300 α: 18 11 44.8068 δ: -22 58 07.735 C/A ***** PA 179.49 deg v_sky + 6.25 km/s D 04.97 AU
 Credit: Styled after SORA/Lucky Star

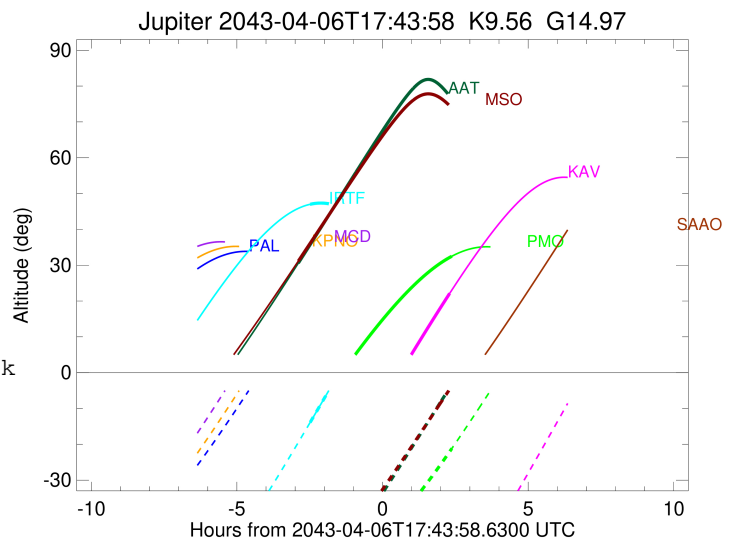
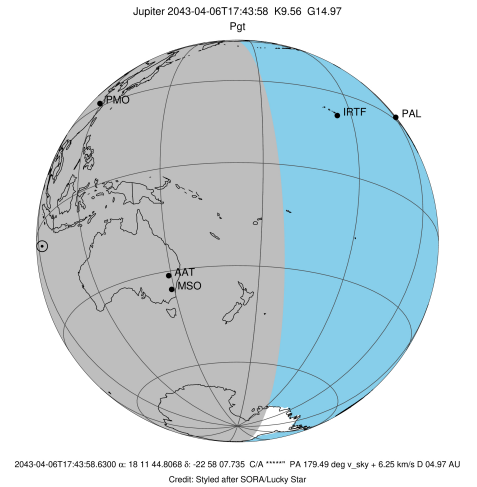
Observable events with sun below -5 deg and altitude above 5 deg

| 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 | + | APR 06 20:06 - APR 06 20:06 | Pne |
| 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 | + | APR 06 15:14 - APR 06 15:14 | Pin |
| KAV | Kavalur Observatory | 12.6 | 78.8 | + | APR 06 20:02 - APR 06 20:02 | Pne |
| 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 | + | APR 06 14:50 - APR 06 14:50 | Pin |
| SAAO | So. Afr. Astro. Obs. (Sutherland) | -32.4 | 20.8 | | | Pnn |
| MSO | Mt. Stromlo Observatory | -35.3 | 149.0 | + | APR 06 14:50 - APR 06 14:50 | Pin |



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-04-06T17:29:26.500
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      : 4066623955319957888
2Mass ID (if available) : 18114481-2258076
ICRS Star Coord at Epoch: 18h 11m 44.80678s -22:58:07.73523s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.564
G magnitude          : 14.966
RP magnitude         : 13.675
BP magnitude         : 16.858
DUPflag             : 0
Distance (au)        : 4.968
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 6.25
Sun-Target sep (deg) : 103.52
Sun-Moon sep (deg)  : 62.42
B (ring opening deg) : -2.45
PA of pole (deg)    : -2.10
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 12.474
C/A sky separation (km) : 44942.9
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
    
```

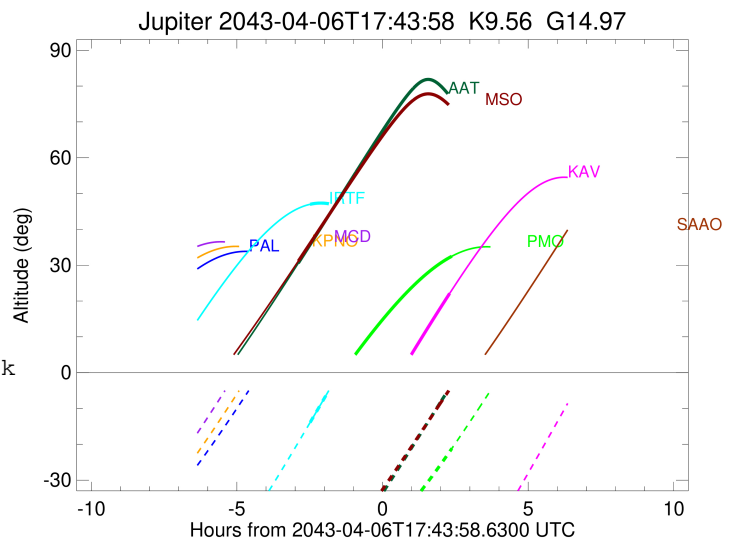
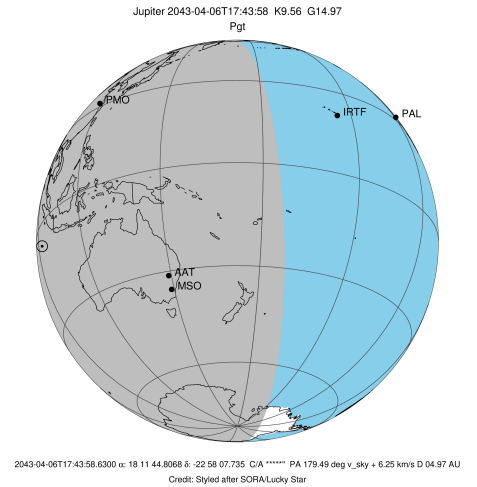


x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|---------|---------|---------|---------|--------------|
| Jupiter | I | 2043-04-06T14:59:19.660 | -16.01x | -48.29 | 71489.2 | 35.97 | 39.60 |
| Jupiter | E | 2043-04-06T20:06:47.489 | 32.49 | -21.17 | 71488.4 | 41.36 | 45.07 |

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-04-06T17:55:18.180
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : IRTF
Location             : Mauna Kea/IRTF
Latitude (deg)       : 19.82622
E. Longitude (deg)   : 204.52800
Altitude (km)        : 4.168
Gaia source ID       : 4066623955319957888
2Mass ID (if available) : 18114481-2258076
ICRS Star Coord at Epoch: 18h 11m 44.80678s -22:58:07.73523s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.564
G magnitude          : 14.966
RP magnitude         : 13.675
BP magnitude         : 16.858
DUPflag             : 0
Distance (au)        : 4.967
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 6.25
Sun-Target sep (deg) : 103.52
Sun-Moon sep (deg)   : 62.19
B (ring opening deg) : -2.45
PA of pole (deg)     : -2.10
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 12.353
C/A sky separation (km) : 44504.9
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
    
```

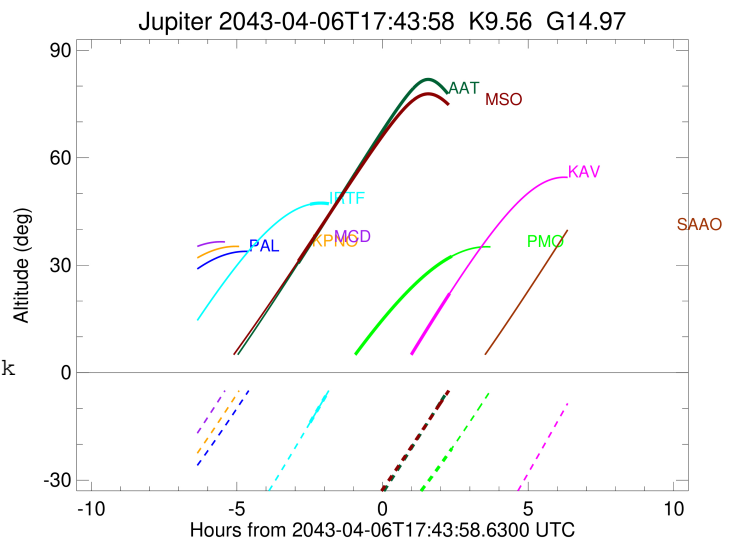
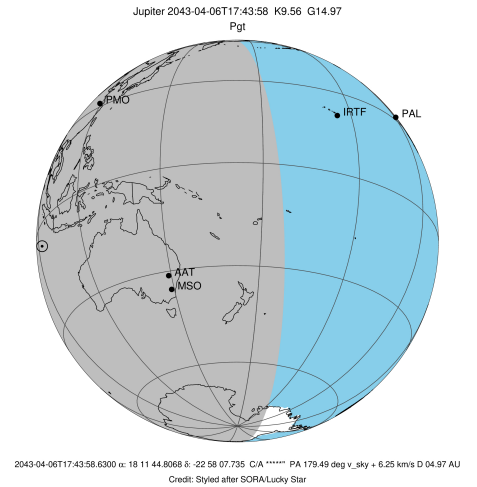


x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|-------|---------|---------|---------|--------------|
| Jupiter | I | 2043-04-06T15:14:53.700 | 47.00 | -13.89 | 71489.0 | 37.34 | 41.00 |
| Jupiter | E | 2043-04-06T20:32:16.783 | 6.13 | 59.88x | 71488.8 | 38.72 | 42.41 |

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-04-06T17:24:30.390
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      : 4066623955319957888
2Mass ID (if available) : 18114481-2258076
ICRS Star Coord at Epoch: 18h 11m 44.80678s -22:58:07.73523s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 9.564
G magnitude          : 14.966
RP magnitude         : 13.675
BP magnitude         : 16.858
DUPflag             : 0
Distance (au)       : 4.968
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 6.25
Sun-Target sep (deg) : 103.52
Sun-Moon sep (deg)  : 62.20
B (ring opening deg) : -2.45
PA of pole (deg)    : -2.10
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 11.557
C/A sky separation (km) : 41638.8
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
    
```

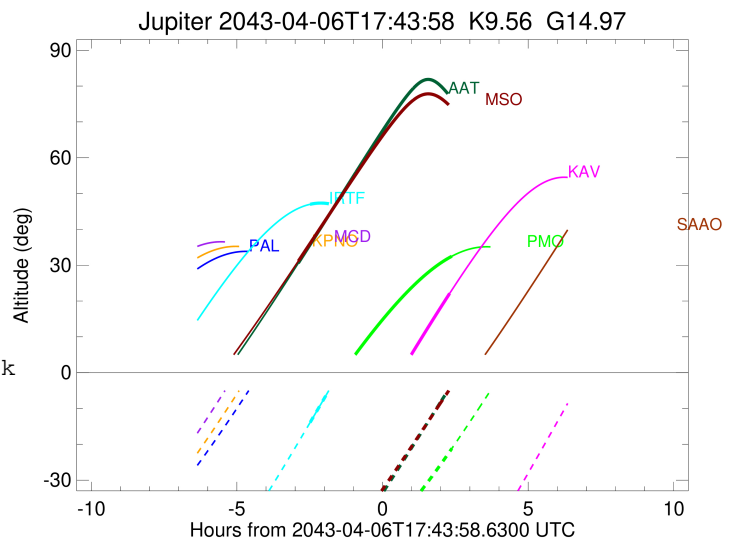
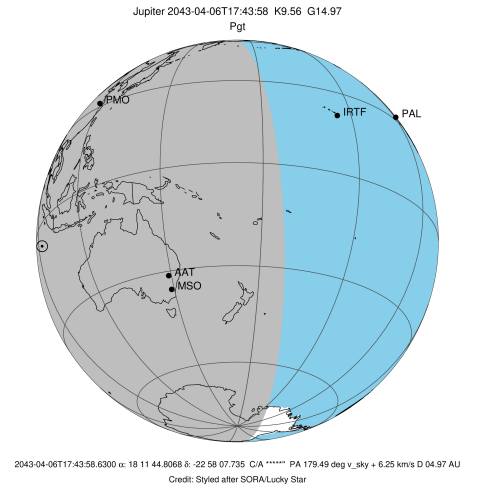


x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|---------|---------|---------|---------|--------------|
| Jupiter | I | 2043-04-06T14:55:30.619 | -47.03x | -29.41 | 71489.6 | 32.61 | 36.11 |
| Jupiter | E | 2043-04-06T20:02:16.046 | 22.11 | -63.23 | 71488.8 | 38.76 | 42.45 |

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-04-06T17:36:34.270
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        : 4066623955319957888
2Mass ID (if available) : 18114481-2258076
ICRS Star Coord at Epoch: 18h 11m 44.80678s -22:58:07.73523s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 9.564
G magnitude           : 14.966
RP magnitude          : 13.675
BP magnitude          : 16.858
DUPflag              : 0
Distance (au)         : 4.968
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 6.25
Sun-Target sep (deg) : 103.52
Sun-Moon sep (deg)   : 62.84
B (ring opening deg) : -2.45
PA of pole (deg)     : -2.10
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 10.980
C/A sky separation (km) : 39561.3
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
    
```

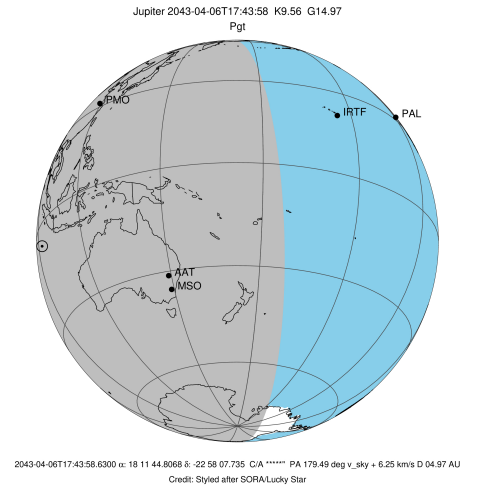


x: target alt < 5.0 deg or sun > -5.0 deg

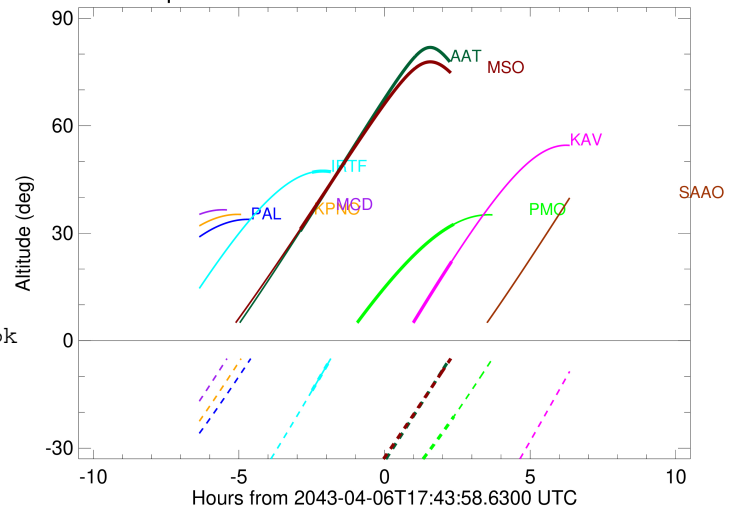
| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|-------|---------|---------|---------|--------------|
| Jupiter | I | 2043-04-06T14:50:35.678 | 30.59 | -63.34 | 71489.8 | 30.96 | 34.39 |
| Jupiter | E | 2043-04-06T20:27:50.880 | 72.46 | 1.20x | 71489.3 | 35.21 | 38.81 |

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-04-06T17:36:54.590
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       : 4066623955319957888
2Mass ID (if available) : 18114481-2258076
ICRS Star Coord at Epoch: 18h 11m 44.80678s -22:58:07.73523s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 9.564
G magnitude           : 14.966
RP magnitude          : 13.675
BP magnitude          : 16.858
DUPflag              : 0
Distance (au)        : 4.968
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 6.25
Sun-Target sep (deg) : 103.52
Sun-Moon sep (deg)   : 62.82
B (ring opening deg) : -2.45
PA of pole (deg)     : -2.10
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 10.860
C/A sky separation (km) : 39128.4
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 2043-04-06T17:43:58 K9.56 G14.97



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 | 2043-04-06T14:50:31.383 | 31.14 | -59.67 | 71489.9 | 30.60 | 34.00 |
| Jupiter | E | 2043-04-06T20:28:25.804 | 70.46 | 0.68x | 71489.3 | 34.79 | 38.38 |