

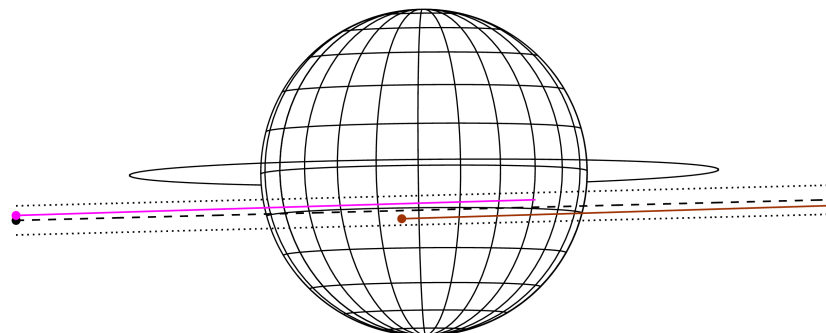
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-14T00:23:48.140
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068839402573434112
 2Mass ID (if available) : 17465992-2256415

Jupiter 2043-02-14T00:23:48 K9.88 G14.94 Pgt

ICRS Star Coord at Epoch: 17h 46m 59.91690s -22:56:42.05095s
 RUWE (>1.4 is poor) : 0.88
 K magnitude : 9.877
 G magnitude : 14.942
 RP magnitude : 13.635
 BP magnitude : 16.950
 DUPflag : 0
 Distance (au) : 5.772
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 29.16
 Sun-Target sep (deg) : 57.59
 Sun-Moon sep (deg) : 112.06
 B (ring opening deg) : -2.55
 PA of pole (deg) : 0.56
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 3.927
 C/A sky separation (km) : 16439.4
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



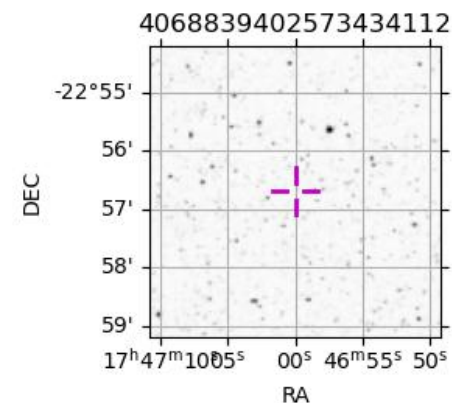
Earth
 KAV
 SAAO



2043-02-14T00:23:48.1400 a: 17 46 59.9169 s: -22 56 42.051 C/A 3.927 PA 1.46 deg v_sky +29.16 km/s D 05.77 AU
 Credit: Styled after SORA/Lucky Star

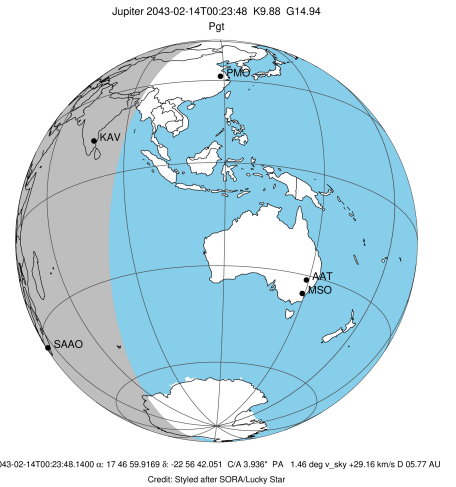
Observable events with sun below -5 deg and altitude above 5 deg

| 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 | | | 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 | + | FEB 13 23:40 - FEB 13 23:40 | Pin |
| 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 | + | FEB 14 01:00 - FEB 14 01:00 | Pne |
| MSO | Mt. Stromlo Observatory | -35.3 | 149.0 | | | Pnn |

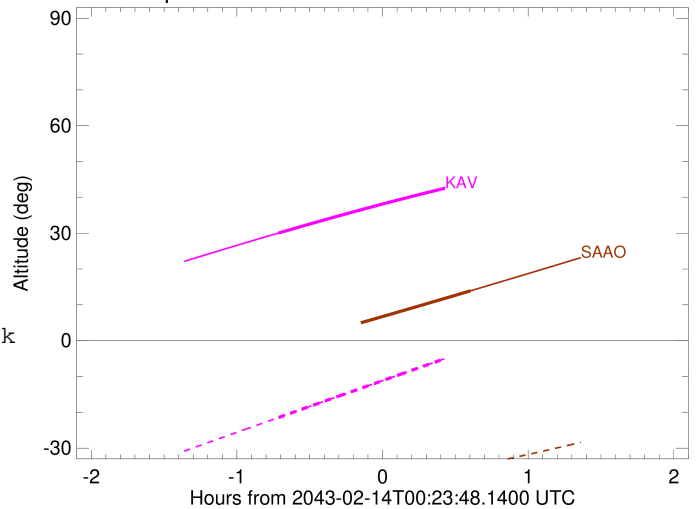


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-14T00:21:32.730
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : KAV
Location             : Kavalur Observatory
Latitude (deg)       : 12.57556
E. Longitude (deg)   : 78.83167
Altitude (km)        : 0.722
Gaia source ID       : 4068839402573434112
2Mass ID (if available) : 17465992-2256415
ICRS Star Coord at Epoch: 17h 46m 59.91690s -22:56:42.05095s
RUWE (>1.4 is poor) : 0.88
K magnitude          : 9.877
G magnitude          : 14.942
RP magnitude         : 13.635
BP magnitude         : 16.950
DUPflag             : 0
Distance (au)        : 5.772
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 29.16
Sun-Target sep (deg) : 57.59
Sun-Moon sep (deg)   : 112.39
B (ring opening deg) : -2.55
PA of pole (deg)     : 0.56
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation ("): 3.194
C/A sky separation (km): 13370.6
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 2043-02-14T00:23:48 K9.88 G14.94

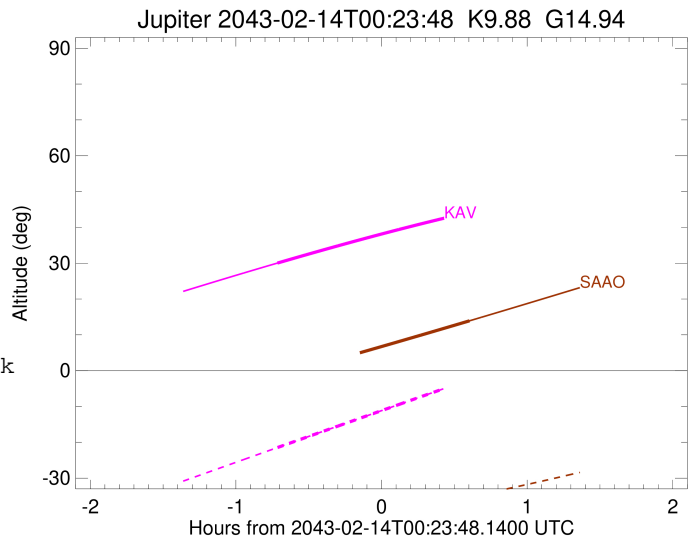
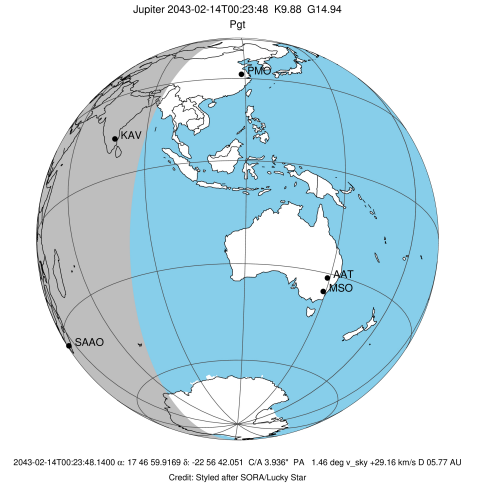


x: target alt < 5.0 deg or sun > -5.0 deg

| Target | I/E | UTC | alt | alt-sun | radius | lat-geo | lat-geodetic |
|---------|-----|-------------------------|-------|---------|---------|---------|--------------|
| Jupiter | I | 2043-02-13T23:40:58.008 | 30.04 | -21.45 | 71491.6 | -11.92 | -13.57 |
| Jupiter | E | 2043-02-14T01:02:12.863 | 44.55 | -1.99x | 71491.7 | -9.66 | -11.02 |

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-14T00:20:50.740
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        : 4068839402573434112
2Mass ID (if available) : 17465992-2256415
ICRS Star Coord at Epoch: 17h 46m 59.91690s -22:56:42.05095s
RUWE (>1.4 is poor)  : 0.88
K magnitude           : 9.877
G magnitude           : 14.942
RP magnitude          : 13.635
BP magnitude          : 16.950
DUPflag              : 0
Distance (au)         : 5.772
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 29.16
Sun-Target sep (deg)  : 57.59
Sun-Moon sep (deg)    : 111.85
B (ring opening deg) : -2.55
PA of pole (deg)      : 0.56
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 4.766
C/A sky separation (km) : 19950.5
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 | 2043-02-13T23:41:43.782 | -1.31x | -43.06 | 71491.2 | -17.37 | -19.67 |
| Jupiter | E | 2043-02-14T01:00:03.997 | 13.91 | -35.14 | 71491.4 | -15.00 | -17.02 |