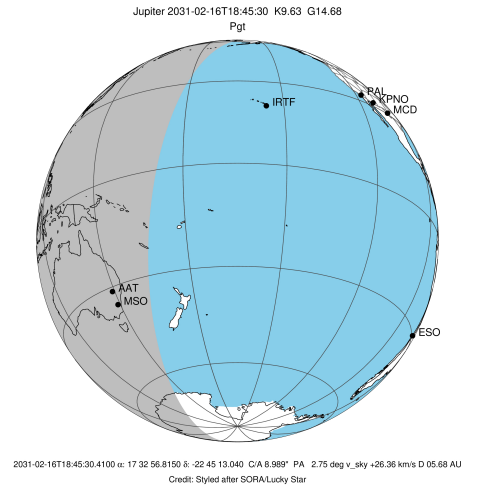
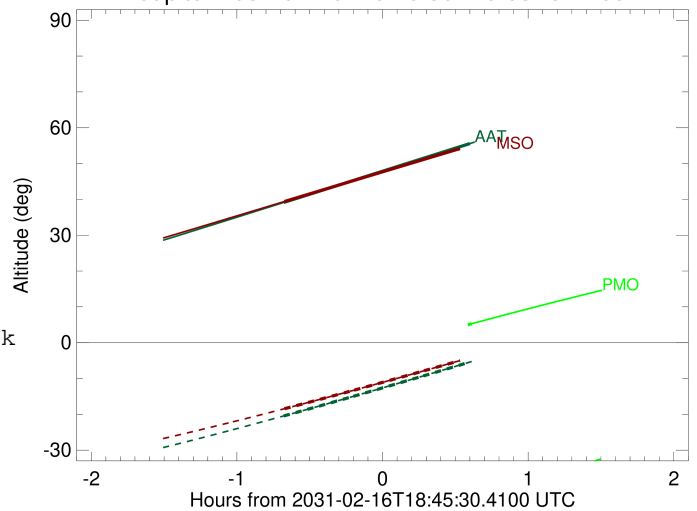



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-02-16T18:42:11.420
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       : 4117459188246648832
2Mass ID (if available) : 17325683-2245127
ICRS Star Coord at Epoch: 17h 32m 56.81497s -22:45:13.04029s
RUWE (>1.4 is poor) : 1.01
K magnitude          : 9.631
G magnitude          : 14.679
RP magnitude         : 13.420
BP magnitude         : 16.466
DUPflag             : 0
Distance (au)        : 5.683
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 26.36
Sun-Target sep (deg) : 63.70
Sun-Moon sep (deg)  : 1.59
B (ring opening deg) : -2.67
PA of pole (deg)    : 2.08
Pole direction: RA (deg): 268.05702
Dec (deg): 64.49651
C/A sky separation (" ) : 8.177
C/A sky separation (km) : 33701.3
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
    
```



Jupiter 2031-02-16T18:45:30 K9.63 G14.68

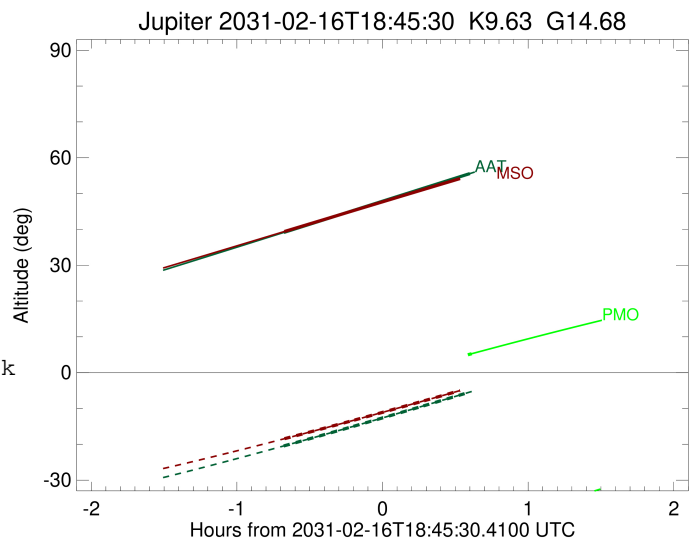
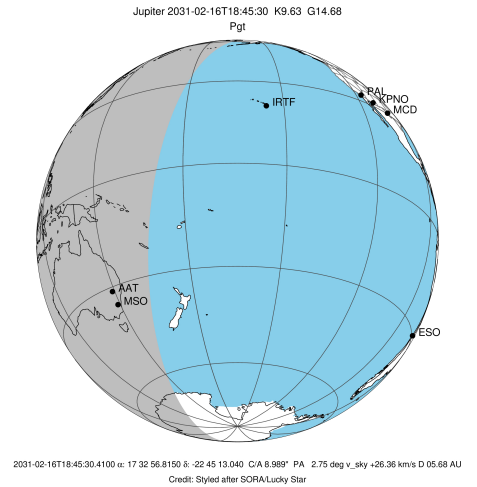


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-02-16T18:02:16.227	-10.03x	-59.13	71489.7	-29.10	-32.41
Jupiter	E	2031-02-16T19:22:13.905	5.28	-43.58	71490.0	-27.09	-30.28

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-02-16T18:43:08.190
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       : 4117459188246648832
2Mass ID (if available) : 17325683-2245127
ICRS Star Coord at Epoch: 17h 32m 56.81497s -22:45:13.04029s
RUWE (>1.4 is poor) : 1.01
K magnitude           : 9.631
G magnitude           : 14.679
RP magnitude         : 13.420
BP magnitude         : 16.466
DUPflag              : 0
Distance (au)        : 5.683
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 26.36
Sun-Target sep (deg) : 63.70
Sun-Moon sep (deg)   : 2.22
B (ring opening deg) : -2.67
PA of pole (deg)     : 2.08
Pole direction: RA (deg): 268.05702
Dec (deg): 64.49651
C/A sky separation (") : 9.411
C/A sky separation (km) : 38790.4
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
    
```

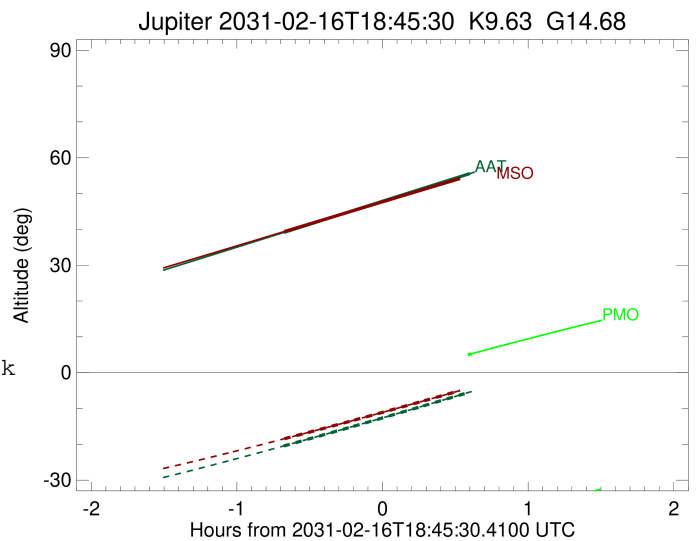
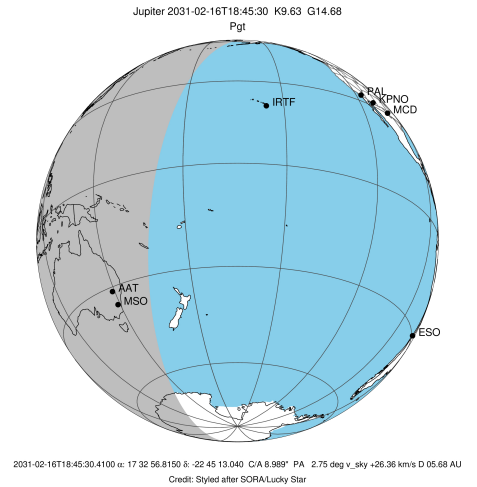


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-02-16T18:04:50.101	39.14	-20.45	71489.0	-33.78	-37.33
Jupiter	E	2031-02-16T19:21:31.712	55.57	-5.40	71489.3	-31.89	-35.37

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-02-16T18:43:15.440
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        : 4117459188246648832
2Mass ID (if available) : 17325683-2245127
ICRS Star Coord at Epoch: 17h 32m 56.81497s -22:45:13.04029s
RUWE (>1.4 is poor) : 1.01
K magnitude           : 9.631
G magnitude           : 14.679
RP magnitude          : 13.420
BP magnitude          : 16.466
DUPflag              : 0
Distance (au)         : 5.683
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 26.36
Sun-Target sep (deg)  : 63.70
Sun-Moon sep (deg)   : 2.28
B (ring opening deg) : -2.67
PA of pole (deg)     : 2.08
Pole direction: RA (deg): 268.05702
Dec (deg): 64.49651
C/A sky separation (" ) : 9.509
C/A sky separation (km) : 39192.7
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
    
```



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	2031-02-16T18:05:08.293	39.41	-18.43	71488.9	-34.15	-37.72
Jupiter	E	2031-02-16T19:21:27.767	54.98	-4.22x	71489.2	-32.29	-35.78