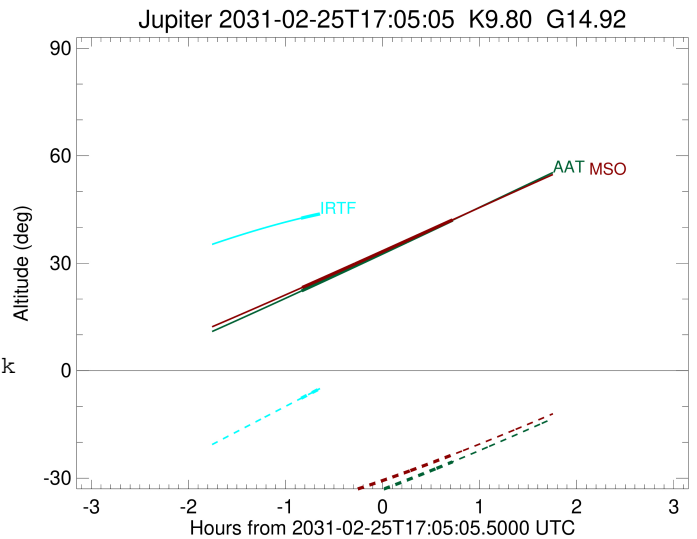
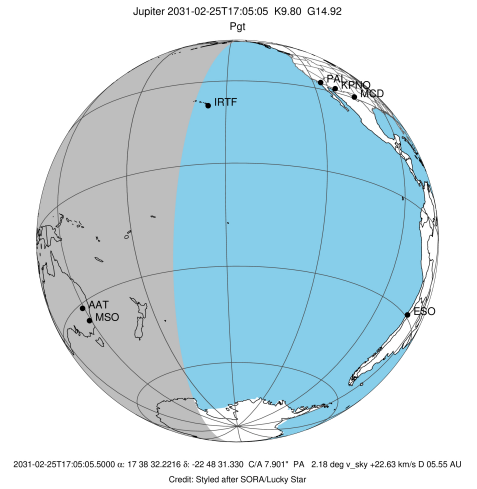



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-02-25T17:04:19.120
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        : 4116753576610603392
2Mass ID (if available) : 17383224-2248310
ICRS Star Coord at Epoch: 17h 38m 32.22163s -22:48:31.33014s
RUWE (>1.4 is poor)  : 1.31
K magnitude           : 9.800
G magnitude           : 14.921
RP magnitude          : 13.500
BP magnitude          : 16.630
DUPflag              : 0
Distance (au)         : 5.549
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 22.63
Sun-Target sep (deg)  : 71.41
Sun-Moon sep (deg)    : 122.96
B (ring opening deg) : -2.65
PA of pole (deg)      : 1.47
Pole direction: RA (deg): 268.05701
Dec (deg): 64.49651
C/A sky separation (") : 6.836
C/A sky separation (km) : 27509.4
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
    
```

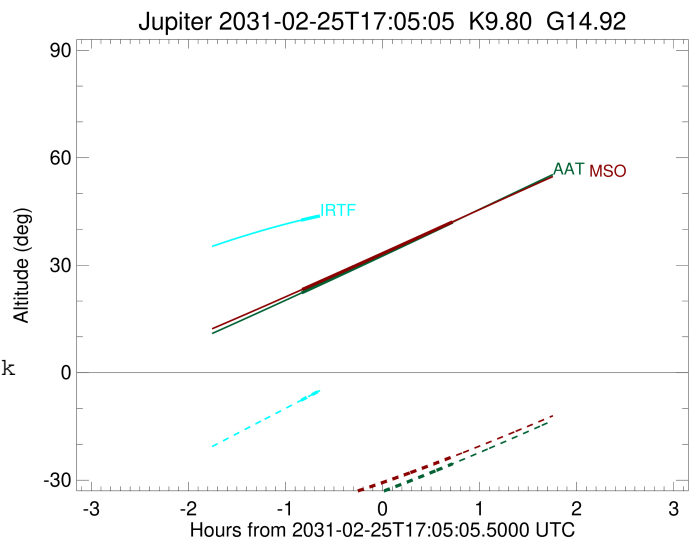
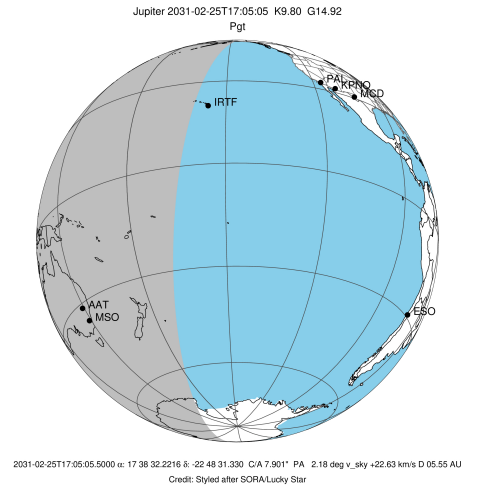


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-02-25T16:14:50.356	42.57	-7.70	71490.5	-23.47	-26.36
Jupiter	E	2031-02-25T17:53:52.332	47.35	15.16x	71490.7	-21.84	-24.59

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-02-25T17:01:39.700
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       : 4116753576610603392
2Mass ID (if available) : 17383224-2248310
ICRS Star Coord at Epoch: 17h 38m 32.22163s -22:48:31.33014s
RUWE (>1.4 is poor) : 1.31
K magnitude          : 9.800
G magnitude          : 14.921
RP magnitude         : 13.500
BP magnitude         : 16.630
DUPflag             : 0
Distance (au)        : 5.549
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 22.63
Sun-Target sep (deg) : 71.41
Sun-Moon sep (deg)   : 122.49
B (ring opening deg) : -2.65
PA of pole (deg)     : 1.47
Pole direction: RA (deg): 268.05701
Dec (deg): 64.49651
C/A sky separation (") : 8.468
C/A sky separation (km) : 34077.3
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
    
```

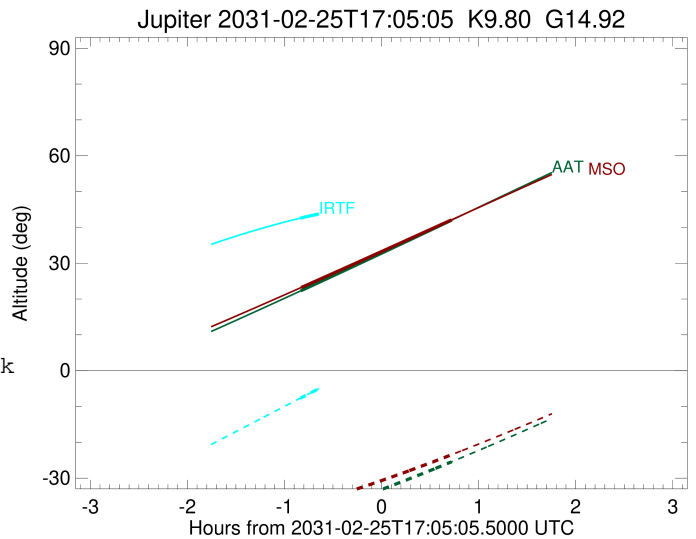
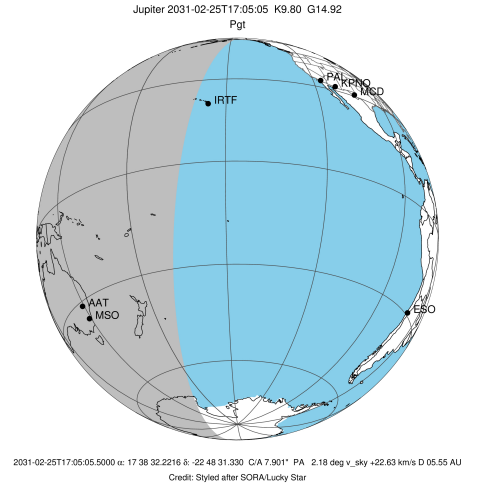


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-02-25T16:15:08.882	22.28	-40.89	71489.7	-29.52	-32.87
Jupiter	E	2031-02-25T17:48:21.593	42.00	-25.45	71490.0	-27.37	-30.58

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-02-25T17:01:49.810
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        : 4116753576610603392
2Mass ID (if available) : 17383224-2248310
ICRS Star Coord at Epoch: 17h 38m 32.22163s -22:48:31.33014s
RUWE (>1.4 is poor) : 1.31
K magnitude           : 9.800
G magnitude           : 14.921
RP magnitude          : 13.500
BP magnitude          : 16.630
DUPflag              : 0
Distance (au)         : 5.549
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 22.63
Sun-Target sep (deg)  : 71.41
Sun-Moon sep (deg)    : 122.51
B (ring opening deg) : -2.65
PA of pole (deg)      : 1.47
Pole direction: RA (deg): 268.05701
Dec (deg): 64.49651
C/A sky separation (") : 8.562
C/A sky separation (km) : 34454.9
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	2031-02-25T16:15:28.817	23.22	-37.75	71489.6	-29.85	-33.21
Jupiter	E	2031-02-25T17:48:21.391	42.10	-23.47	71489.9	-27.73	-30.96