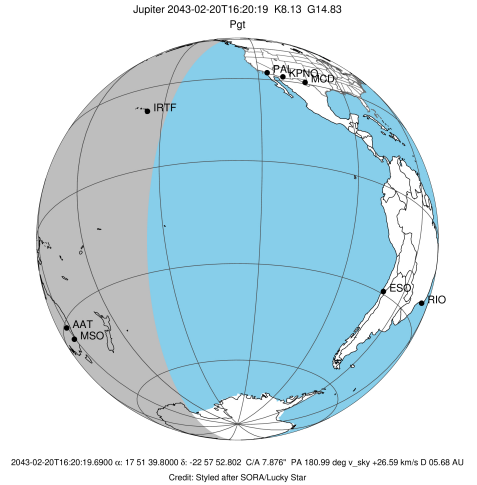
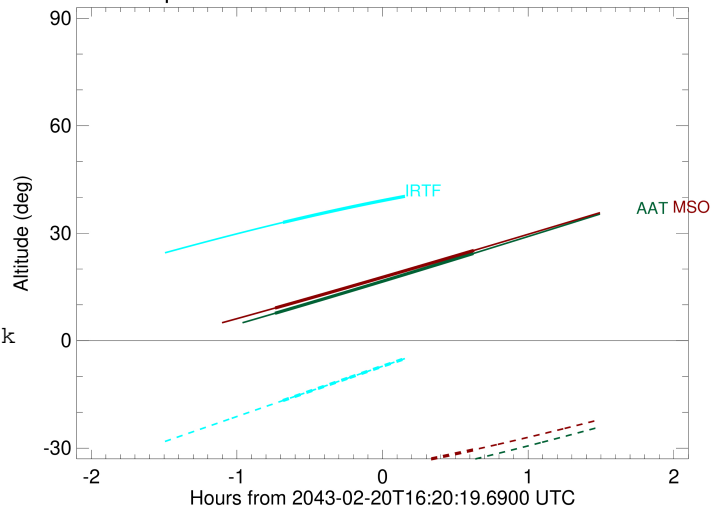



```

target                : Jupiter
target radius (km)    : 71492.00
C/A epoch              : 2043-02-20T16:18:23.930
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        : 4068712134119511936
2Mass ID (if available) : 17513981-2257525
ICRS Star Coord at Epoch: 17h 51m 39.80005s -22:57:52.80224s
RUWE (>1.4 is poor)  : 0.87
K magnitude            : 8.133
G magnitude            : 14.829
RP magnitude           : 13.269
BP magnitude           : 18.663
DUPflag               : 0
Distance (au)         : 5.678
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s)  : 26.59
Sun-Target sep (deg)  : 63.24
Sun-Moon sep (deg)    : 156.11
B (ring opening deg)  : -2.54
PA of pole (deg)      : 0.06
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (") : 8.855
C/A sky separation (km) : 36465.5
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
    
```



Jupiter 2043-02-20T16:20:19 K8.13 G14.83

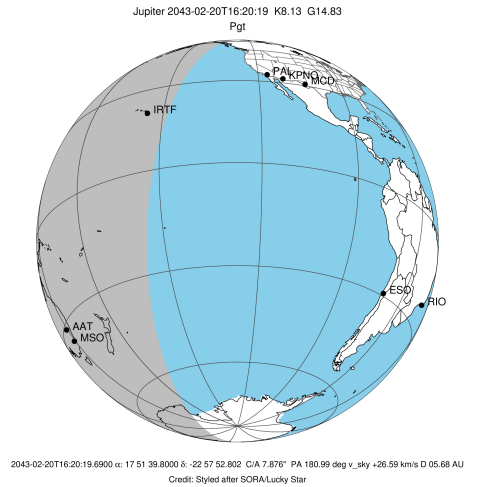


x: target alt < 5.0 deg or sun > -5.0 deg

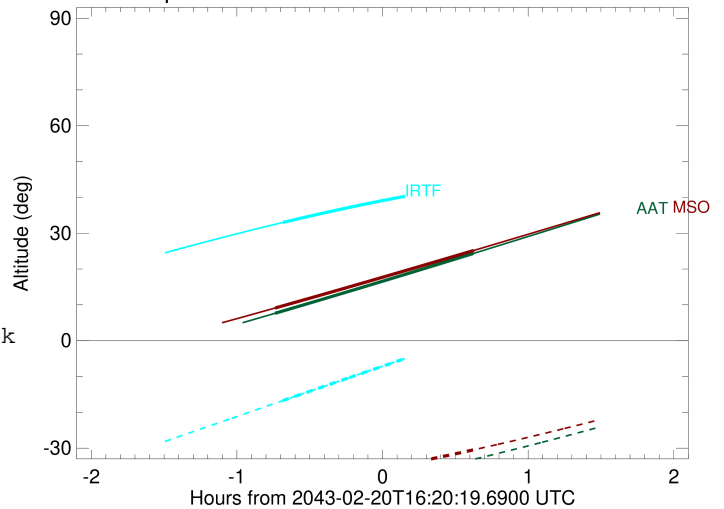
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-20T15:39:19.457	33.00	-16.71	71489.9	29.49	32.83
Jupiter	E	2043-02-20T16:57:32.845	43.42	1.48x	71489.6	31.73	35.19

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-20T16:16:50.190
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      : 4068712134119511936
2Mass ID (if available) : 17513981-2257525
ICRS Star Coord at Epoch: 17h 51m 39.80005s -22:57:52.80224s
RUWE (>1.4 is poor) : 0.87
K magnitude          : 8.133
G magnitude          : 14.829
RP magnitude         : 13.269
BP magnitude         : 18.663
DUPflag             : 0
Distance (au)       : 5.678
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 26.59
Sun-Target sep (deg) : 63.24
Sun-Moon sep (deg)   : 156.09
B (ring opening deg) : -2.54
PA of pole (deg)     : 0.06
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation ("): 7.179
C/A sky separation (km): 29564.1
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
    
```



Jupiter 2043-02-20T16:20:19 K8.13 G14.83

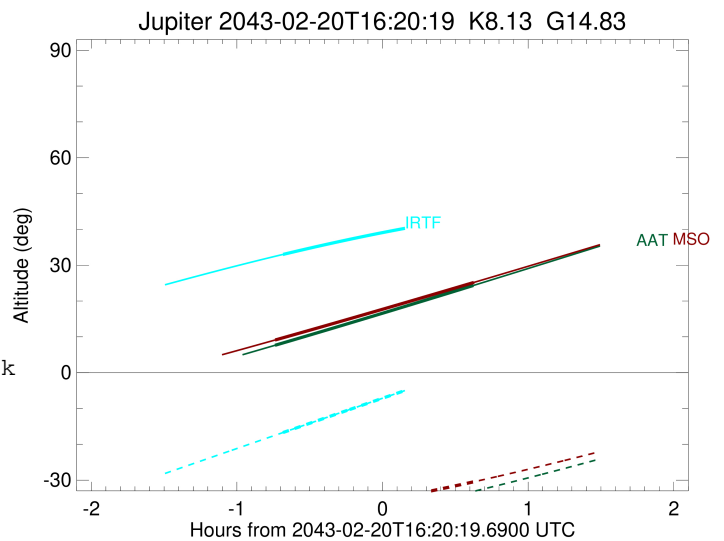
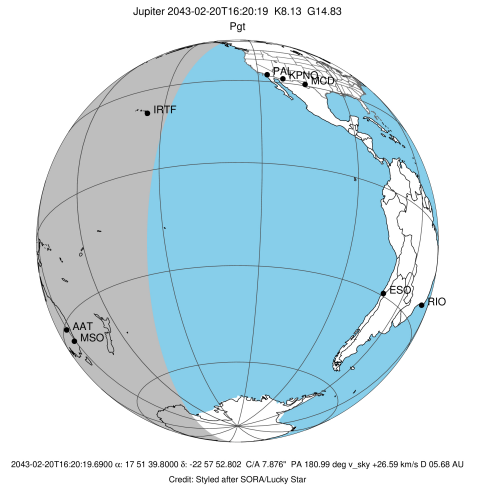


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-20T15:36:03.106	7.65	-44.04	71490.6	23.14	26.01
Jupiter	E	2043-02-20T16:57:45.076	24.33	-33.14	71490.3	25.66	28.74

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-20T16:16:59.960
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       : 4068712134119511936
2Mass ID (if available) : 17513981-2257525
ICRS Star Coord at Epoch: 17h 51m 39.80005s -22:57:52.80224s
RUWE (>1.4 is poor) : 0.87
K magnitude           : 8.133
G magnitude           : 14.829
RP magnitude         : 13.269
BP magnitude         : 18.663
DUPflag              : 0
Distance (au)        : 5.678
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 26.59
Sun-Target sep (deg) : 63.24
Sun-Moon sep (deg)   : 156.05
B (ring opening deg) : -2.54
PA of pole (deg)     : 0.06
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation ("): 7.094
C/A sky separation (km): 29213.0
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	2043-02-20T15:36:06.920	9.12	-40.45	71490.7	22.84	25.69
Jupiter	E	2043-02-20T16:58:00.523	25.19	-30.45	71490.4	25.34	28.39