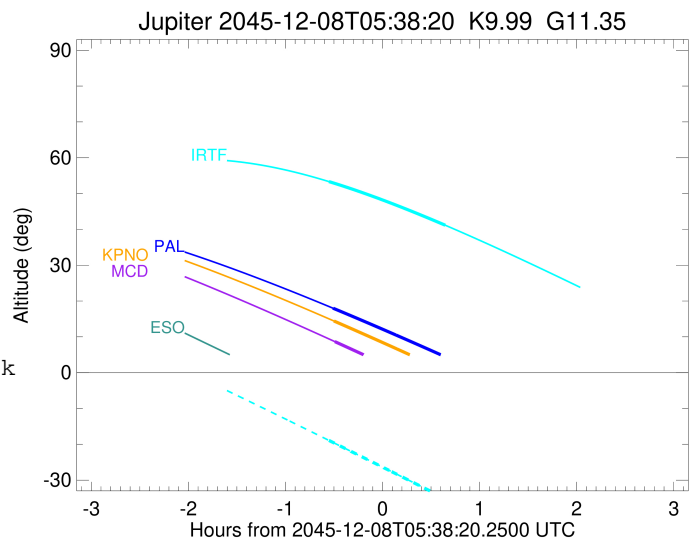
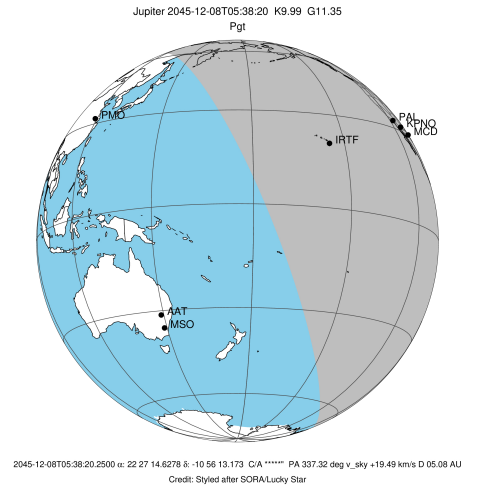



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2045-12-08T05:43:12.900
Event type          : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code       : PAL
Location            : Palomar Mt (200")
Latitude (deg)      : 33.35622
E. Longitude (deg)  : 243.13601
Altitude (km)       : 1.706
Gaia source ID      : 2602832133647589760
2Mass ID (if available) : 22271455-1056122
ICRS Star Coord at Epoch: 22h 27m 14.62777s -10:56:13.17310s
RUWE (>1.4 is poor) : 0.93
K magnitude          : 9.989
G magnitude          : 11.348
RP magnitude         : 10.851
BP magnitude         : 11.677
DUPflag             : 0
Distance (au)       : 5.084
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 19.49
Sun-Target sep (deg) : 78.63
Sun-Moon sep (deg)  : 81.94
B (ring opening deg) : 1.03
PA of pole (deg)    : -23.66
Pole direction: RA (deg): 268.05707
Dec (deg): 64.49723
C/A sky separation ("): 15.859
C/A sky separation (km): 58470.8
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
    
```

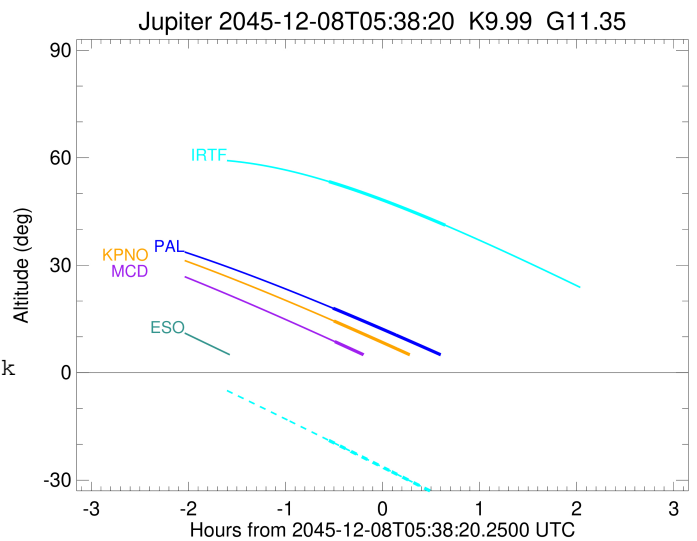
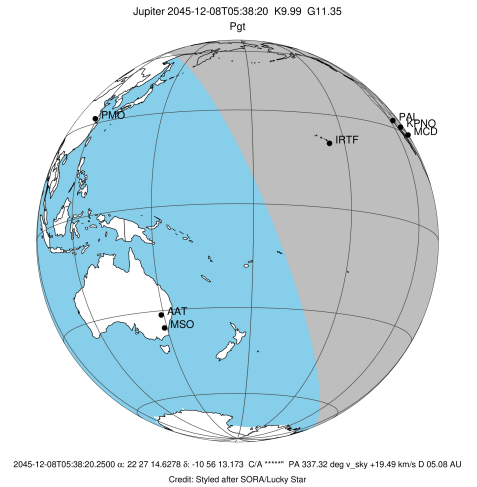


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2045-12-08T05:07:46.475	17.99	-55.18	71491.0	-55.47	-58.82
Jupiter	E	2045-12-08T06:18:32.250	4.14x	-69.41	71491.0	-54.19	-57.60

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2045-12-08T05:43:21.340
Event type          : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code       : KPNO
Location           : Kitt Peak Natl Obs
Latitude (deg)     : 31.96333
E. Longitude (deg) : 248.40000
Altitude (km)      : 2.120
Gaia source ID     : 2602832133647589760
2Mass ID (if available) : 22271455-1056122
ICRS Star Coord at Epoch: 22h 27m 14.62777s -10:56:13.17310s
RUWE (>1.4 is poor) : 0.93
K magnitude         : 9.989
G magnitude         : 11.348
RP magnitude        : 10.851
BP magnitude        : 11.677
DUPflag            : 0
Distance (au)      : 5.084
f0 (km)            : 0.00
g0 (km)            : 0.00
skyplane vel. (km/s) : 19.49
Sun-Target sep (deg) : 78.63
Sun-Moon sep (deg) : 81.88
B (ring opening deg) : 1.03
PA of pole (deg)   : -23.66
Pole direction: RA (deg): 268.05707
Dec (deg): 64.49723
C/A sky separation (" ) : 15.936
C/A sky separation (km) : 58756.0
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
    
```

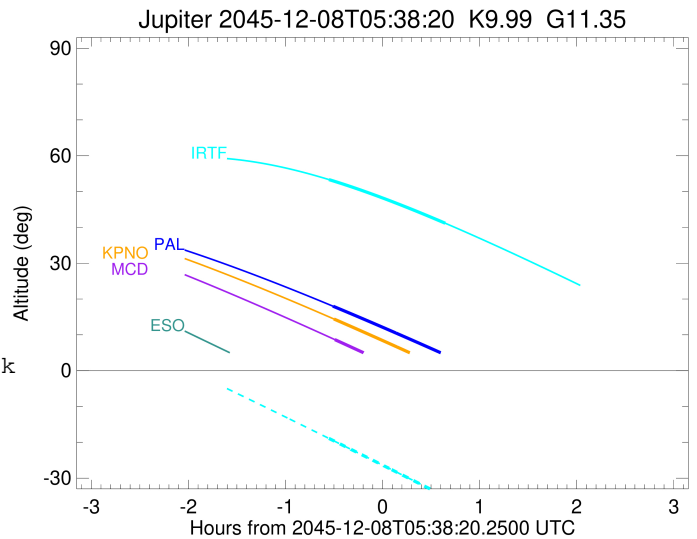
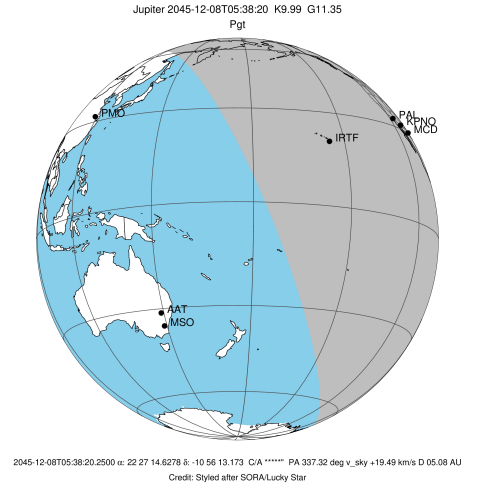


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2045-12-08T05:08:19.169	14.42	-59.89	71491.0	-55.90	-59.22
Jupiter	E	2045-12-08T06:18:16.363	0.23x	-73.94	71491.0	-54.56	-57.95

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2045-12-08T05:43:29.480
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : MCD
Location              : McDonald Obs. 2.7m
Latitude (deg)       : 30.67158
E. Longitude (deg)   : 255.97844
Altitude (km)        : 2.075
Gaia source ID       : 2602832133647589760
2Mass ID (if available) : 22271455-1056122
ICRS Star Coord at Epoch: 22h 27m 14.62777s -10:56:13.17310s
RUWE (>1.4 is poor) : 0.93
K magnitude           : 9.989
G magnitude           : 11.348
RP magnitude          : 10.851
BP magnitude          : 11.677
DUPflag              : 0
Distance (au)        : 5.084
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 19.49
Sun-Target sep (deg) : 78.63
Sun-Moon sep (deg)   : 81.79
B (ring opening deg) : 1.03
PA of pole (deg)     : -23.66
Pole direction: RA (deg): 268.05707
Dec (deg): 64.49723
C/A sky separation ("): 16.022
C/A sky separation (km): 59071.6
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
    
```

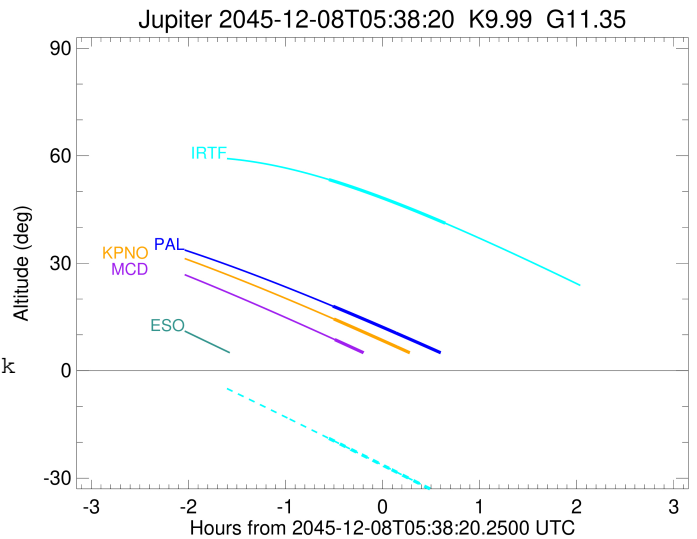
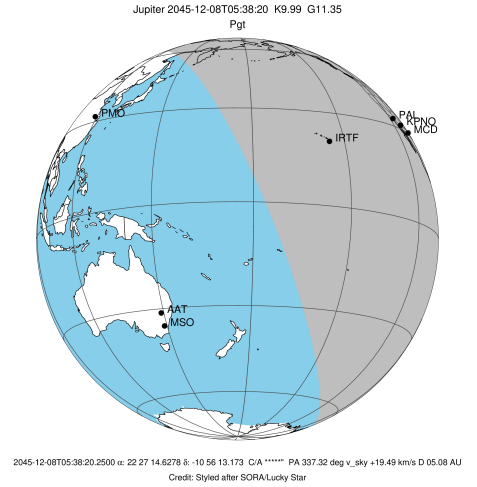


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2045-12-08T05:08:55.872	8.66	-66.63	71491.0	-56.39	-59.68
Jupiter	E	2045-12-08T06:17:55.971	-5.82x	-79.77	71491.0	-54.95	-58.33

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2045-12-08T05:41:14.000
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       : 2602832133647589760
2Mass ID (if available) : 22271455-1056122
ICRS Star Coord at Epoch: 22h 27m 14.62777s -10:56:13.17310s
RUWE (>1.4 is poor) : 0.93
K magnitude          : 9.989
G magnitude          : 11.348
RP magnitude         : 10.851
BP magnitude         : 11.677
DUPflag             : 0
Distance (au)        : 5.084
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 19.49
Sun-Target sep (deg) : 78.63
Sun-Moon sep (deg)   : 82.39
B (ring opening deg) : 1.03
PA of pole (deg)     : -23.66
Pole direction: RA (deg): 268.05707
Dec (deg): 64.49723
C/A sky separation ("): 15.826
C/A sky separation (km): 58349.4
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	2045-12-08T05:05:15.088	53.33	-18.92	71491.0	-55.12	-58.48
Jupiter	E	2045-12-08T06:17:07.678	41.15	-35.15	71491.0	-54.25	-57.66