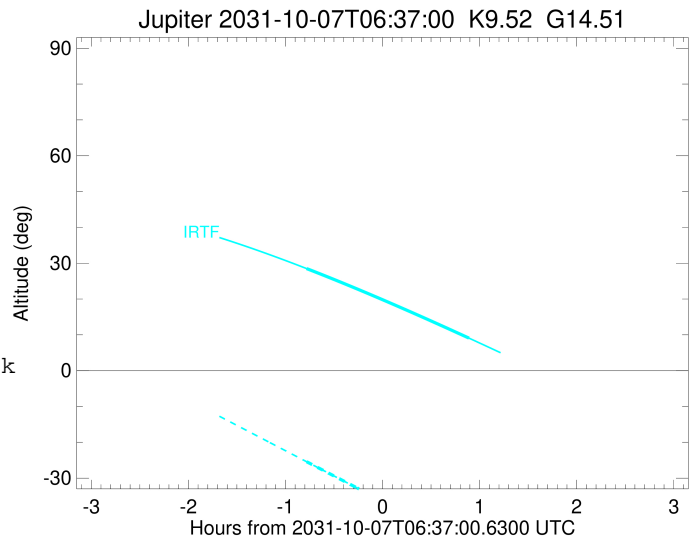
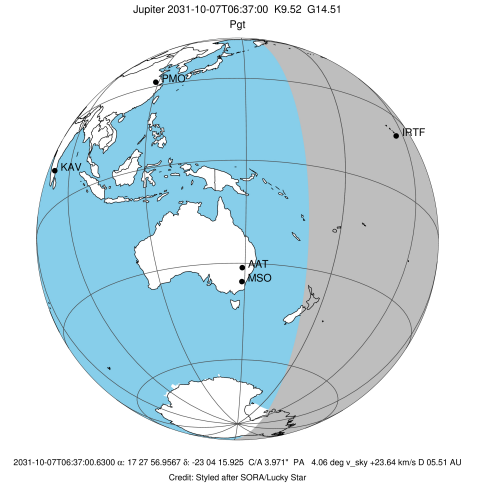



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-10-07T06:40:23.260
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      : 4111468322976235008
2Mass ID (if available) : 17275696-2304157
ICRS Star Coord at Epoch: 17h 27m 56.95671s -23:04:15.92474s
RUWE (>1.4 is poor) : 1.07
K magnitude          : 9.518
G magnitude          : 14.511
RP magnitude         : 13.257
BP magnitude         : 16.235
DUPflag             : 0
Distance (au)        : 5.511
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.64
Sun-Target sep (deg) : 69.27
Sun-Moon sep (deg)  : 170.70
B (ring opening deg) : -2.31
PA of pole (deg)    : 2.61
Pole direction: RA (deg): 268.05682
Dec (deg): 64.49652
C/A sky separation ("): 3.070
C/A sky separation (km): 12268.6
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	2031-10-07T05:50:07.284	28.49	-25.42	71491.7	-11.04	-12.57
Jupiter	E	2031-10-07T07:30:26.905	9.08	-48.74	71491.8	-8.77	-10.01