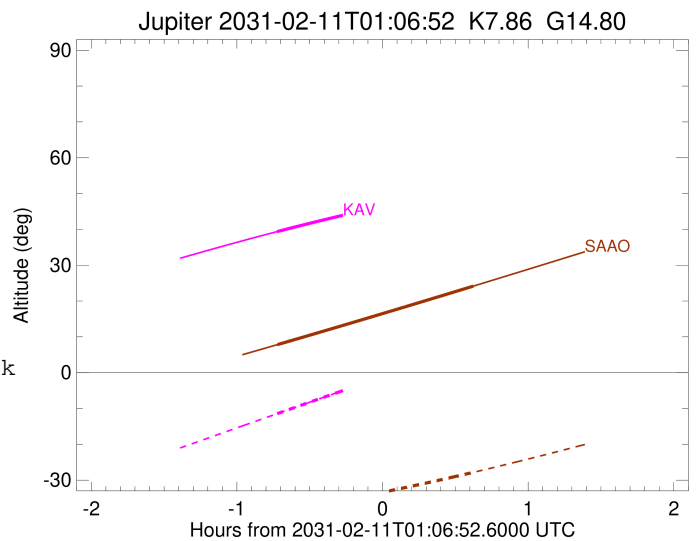
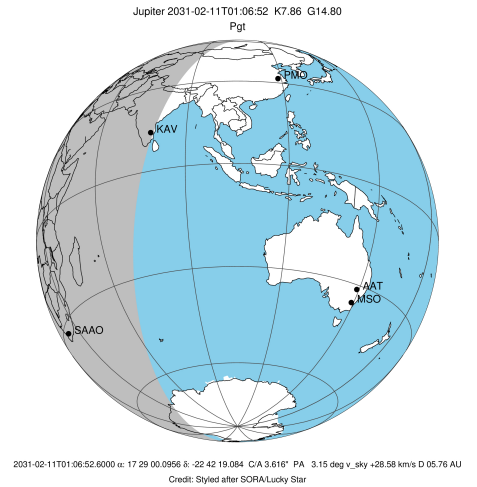



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2031-02-11T01:05:10.160
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : KAV
Location              : Kavalur Observatory
Latitude (deg)        : 12.57556
E. Longitude (deg)    : 78.83167
Altitude (km)         : 0.722
Gaia source ID        : 4111504744300079872
2Mass ID (if available) : 17290010-2242189
ICRS Star Coord at Epoch: 17h 29m 00.09556s -22:42:19.08390s
RUWE (>1.4 is poor) : 1.10
K magnitude           : 7.864
G magnitude           : 14.800
RP magnitude          : 13.209
BP magnitude          : 18.592
DUPflag              : 0
Distance (au)         : 5.765
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 28.58
Sun-Target sep (deg) : 58.81
Sun-Moon sep (deg)    : 80.57
B (ring opening deg) : -2.68
PA of pole (deg)      : 2.50
Pole direction: RA (deg): 268.05703
Dec (deg): 64.49651
C/A sky separation (") : 2.824
C/A sky separation (km) : 11806.5
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
    
```

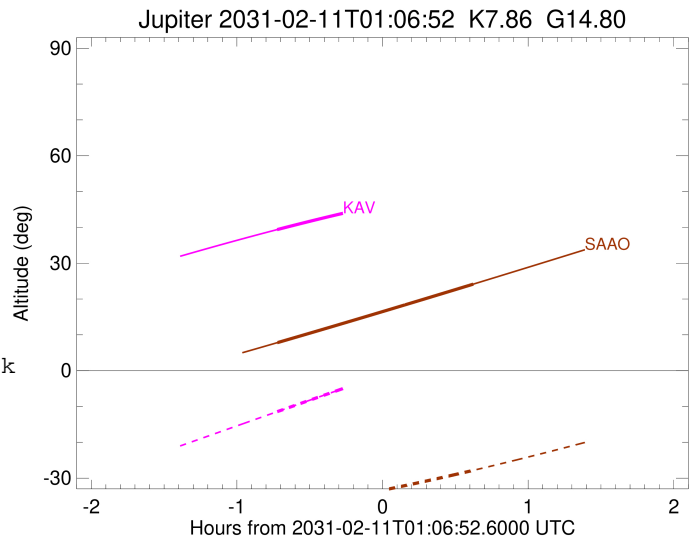
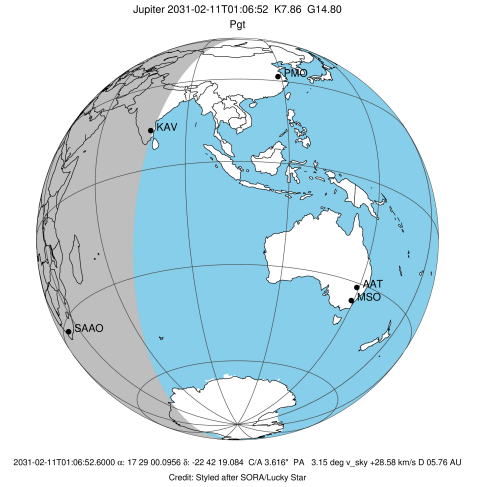


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2031-02-11T00:23:30.604	39.38	-11.44	71491.7	-10.37	-11.82
Jupiter	E	2031-02-11T01:46:54.284	51.36	8.29x	71491.8	-8.67	-9.89

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-02-11T01:03:53.630
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : SAAO
Location             : So. Afr. Astro. Obs. (Sutherland)
Latitude (deg)       : -32.37953
E. Longitude (deg)   : 20.81070
Altitude (km)        : 1.768
Gaia source ID       : 4111504744300079872
2Mass ID (if available) : 17290010-2242189
ICRS Star Coord at Epoch: 17h 29m 00.09556s -22:42:19.08390s
RUWE (>1.4 is poor) : 1.10
K magnitude           : 7.864
G magnitude           : 14.800
RP magnitude         : 13.209
BP magnitude         : 18.592
DUPflag              : 0
Distance (au)        : 5.765
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 28.58
Sun-Target sep (deg) : 58.81
Sun-Moon sep (deg)   : 80.09
B (ring opening deg) : -2.68
PA of pole (deg)     : 2.50
Pole direction: RA (deg): 268.05703
Dec (deg): 64.49651
C/A sky separation (") : 4.378
C/A sky separation (km) : 18305.9
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	2031-02-11T00:23:36.832	7.83	-38.61	71491.3	-15.77	-17.89
Jupiter	E	2031-02-11T01:44:17.299	24.15	-27.82	71491.4	-13.86	-15.75