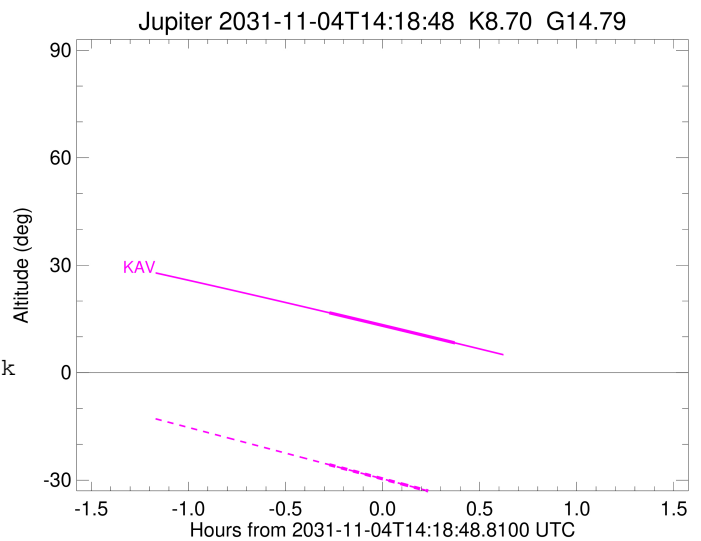
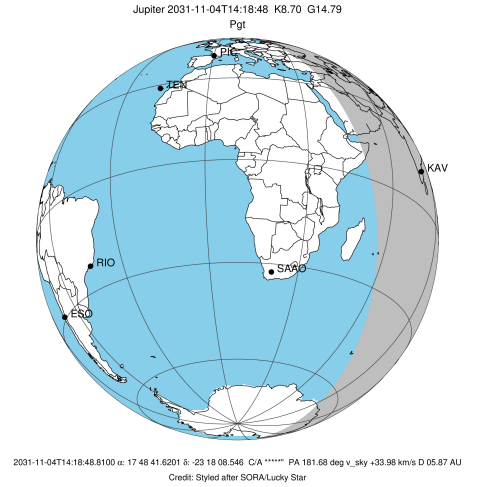



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2031-11-04T14:21:48.220
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      : 4068861594749679744
2Mass ID (if available) : 17484162-2318084
ICRS Star Coord at Epoch: 17h 48m 41.62012s -23:18:08.54569s
RUWE (>1.4 is poor) : 1.31
K magnitude         : 8.699
G magnitude         : 14.788
RP magnitude        : 13.259
BP magnitude        : 17.565
DUPflag            : 0
Distance (au)       : 5.872
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 33.98
Sun-Target sep (deg) : 45.89
Sun-Moon sep (deg)  : 163.90
B (ring opening deg) : -2.20
PA of pole (deg)    : 0.38
Pole direction: RA (deg): 268.05680
Dec (deg): 64.49652
C/A sky separation (") : 14.013
C/A sky separation (km) : 59682.8
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	2031-11-04T14:02:23.852	16.71	-25.69	71487.5	55.51	58.86
Jupiter	E	2031-11-04T14:41:11.131	8.31	-35.00	71487.3	57.55	60.78