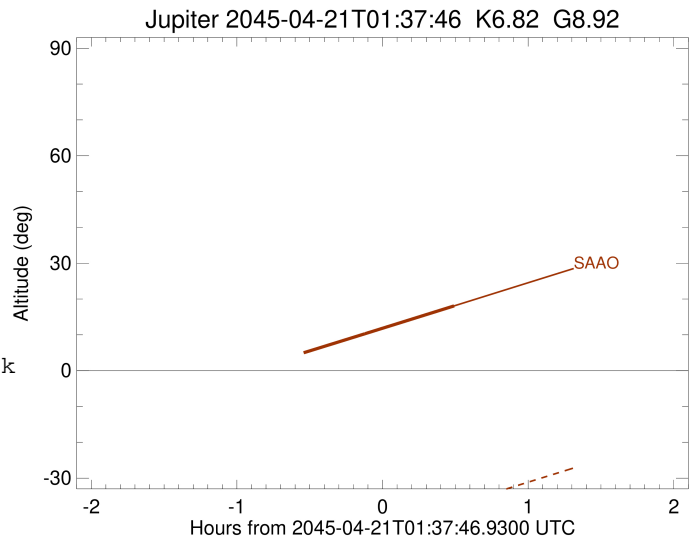
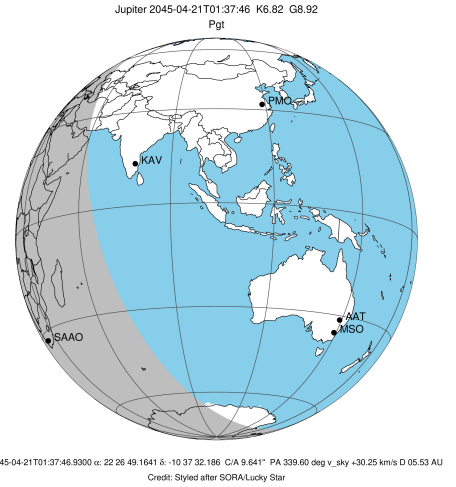




```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2045-04-21T01:34:25.870
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        : 2602910813152994944
2Mass ID (if available) : 22264914-1037320
ICRS Star Coord at Epoch: 22h 26m 49.16412s -10:37:32.18648s
RUWE (>1.4 is poor) : 1.04
K magnitude           : 6.824
G magnitude           : 8.917
RP magnitude          : 8.249
BP magnitude          : 9.426
DUPflag              : 0
Distance (au)         : 5.527
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 30.25
Sun-Target sep (deg) : 56.22
Sun-Moon sep (deg)   : 103.84
B (ring opening deg) : 0.71
PA of pole (deg)     : -23.64
Pole direction: RA (deg): 268.05699
Dec (deg): 64.49725
C/A sky separation (") : 9.926
C/A sky separation (km) : 39785.7
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	2045-04-21T01:01:40.288	4.24x	-50.82	71491.8	-37.17	-40.83
Jupiter	E	2045-04-21T02:07:15.436	18.07	-37.52	71491.8	-30.50	-33.89