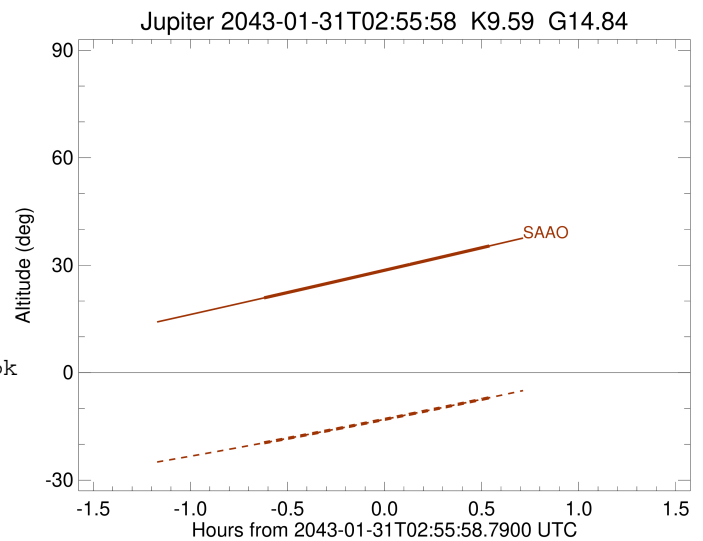
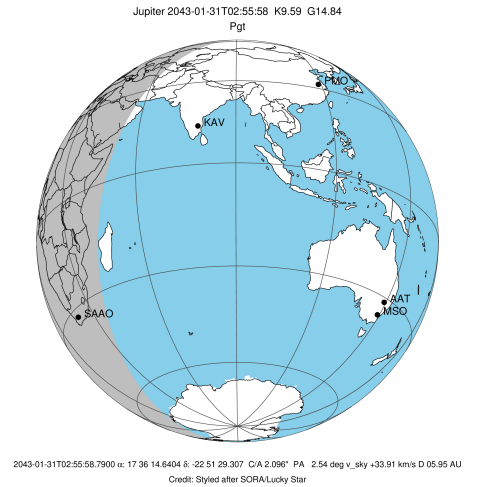




```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-01-31T02:53:33.580
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       : 4116785939163006976
2Mass ID (if available) : 17361464-2251292
ICRS Star Coord at Epoch: 17h 36m 14.64036s -22:51:29.30707s
RUWE (>1.4 is poor) : 0.89
K magnitude           : 9.594
G magnitude           : 14.841
RP magnitude         : 13.491
BP magnitude         : 16.999
DUPflag              : 0
Distance (au)        : 5.950
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 33.91
Sun-Target sep (deg) : 45.98
Sun-Moon sep (deg)   : 66.36
B (ring opening deg) : -2.59
PA of pole (deg)     : 1.72
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 2.694
C/A sky separation (km) : 11627.8
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	2043-01-31T02:18:47.773	20.88	-19.57	71491.7	-10.43	-11.88
Jupiter	E	2043-01-31T03:28:23.435	35.37	-7.00	71491.8	-8.29	-9.45