

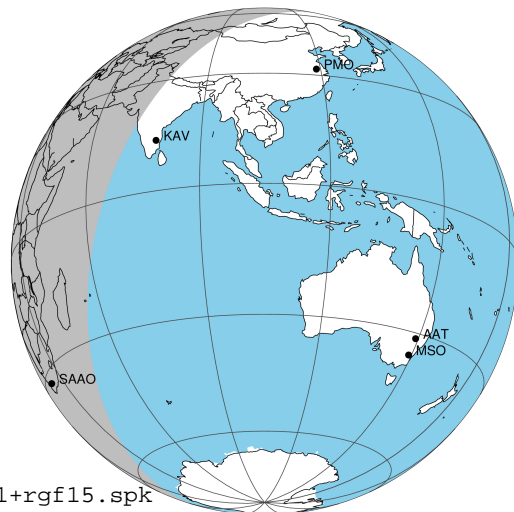
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2042-01-02T01:42:14.700
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 6258386688858652800
 2Mass ID (if available) : 15264546-1748211

Jupiter 2042-01-02T01:42:14 K8.05 G10.59 Pgt

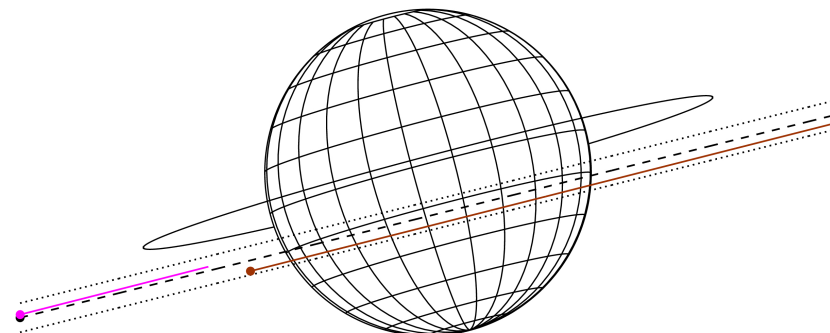
ICRS Star Coord at Epoch: 15h 26m 45.42307s -17:48:20.78674s

RUWE (>1.4 is poor) : 1.13
 K magnitude : 8.047
 G magnitude : 10.587
 RP magnitude : 9.811
 BP magnitude : 11.241
 DUPflag : 0
 Distance (au) : 6.031
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 32.95
 Sun-Target sep (deg) : 47.39
 Sun-Moon sep (deg) : 174.25
 B (ring opening deg) : -3.10
 PA of pole (deg) : 14.81
 Pole direction: RA (deg): 268.05639
 Dec (deg): 64.49727
 C/A sky separation (") : 4.247
 C/A sky separation (km) : 18580.1
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2042-01-02T01:42:14 K8.05 G10.59
 Pgt



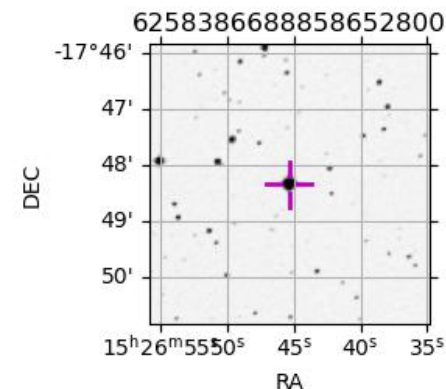
Earth
 KAV
 SAAO



2042-01-02T01:42:14.7000 at: 15 26 45.4231 s: -17 48 20.787 C/A 4.257" PA 13.97 deg v_sky +32.95 km/s D 06.03 AU
 Credit: Styled after SORA/Lucky Star

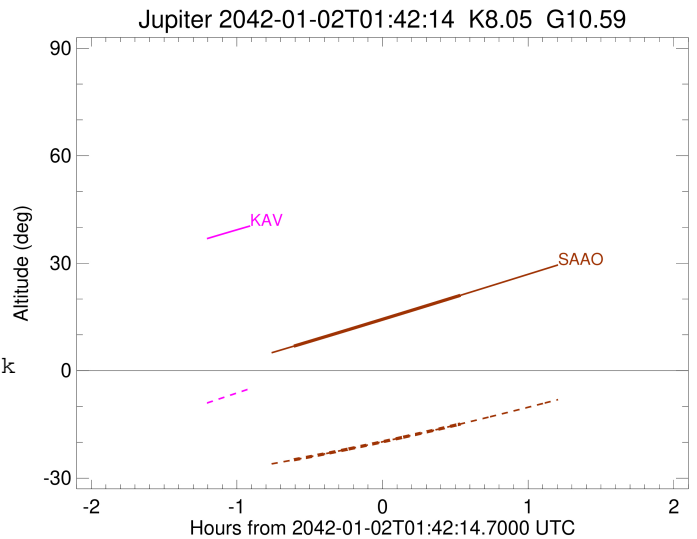
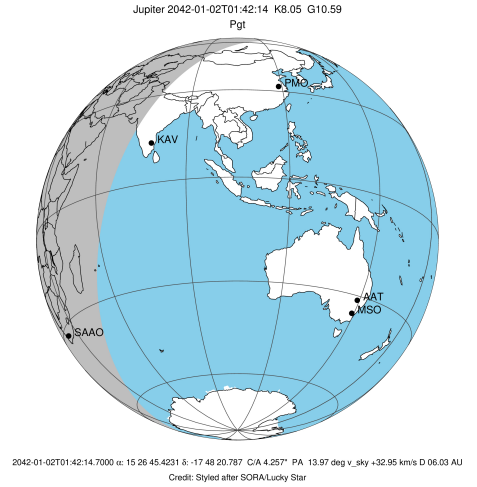
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8			Pnn
RIO	Rio de Janeiro	-22.9	316.8			Pnn
ESO	European Southern Obs. (3.6m)	-29.3	289.3			Pnn
AAT	Siding Spring (AAT)	-31.3	149.1			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+ +	JAN 02 01:05 - JAN 02 02:14	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2042-01-02T01:40:01.340
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        : 6258386688858652800
2Mass ID (if available) : 15264546-1748211
ICRS Star Coord at Epoch: 15h 26m 45.42307s -17:48:20.78674s
RUWE (>1.4 is poor) : 1.13
K magnitude           : 8.047
G magnitude           : 10.587
RP magnitude          : 9.811
BP magnitude          : 11.241
DUPflag              : 0
Distance (au)         : 6.031
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 32.95
Sun-Target sep (deg) : 47.39
Sun-Moon sep (deg)   : 173.39
B (ring opening deg) : -3.10
PA of pole (deg)     : 14.81
Pole direction: RA (deg): 268.05639
Dec (deg): 64.49727
C/A sky separation ("): 5.223
C/A sky separation (km): 22846.2
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	2042-01-02T01:05:47.283	6.86	-24.87	71490.7	-17.98	-20.34
Jupiter	E	2042-01-02T02:14:19.533	21.02	-14.88	71490.6	-19.22	-21.72