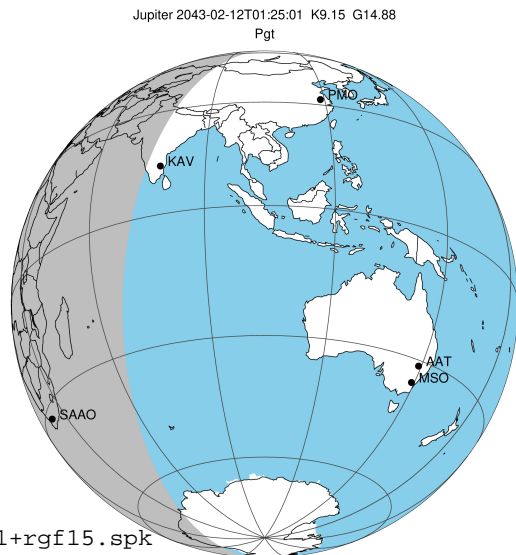


target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-02-12T01:25:01.630  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4068848267388236544  
 2Mass ID (if available) : 17453384-2255558

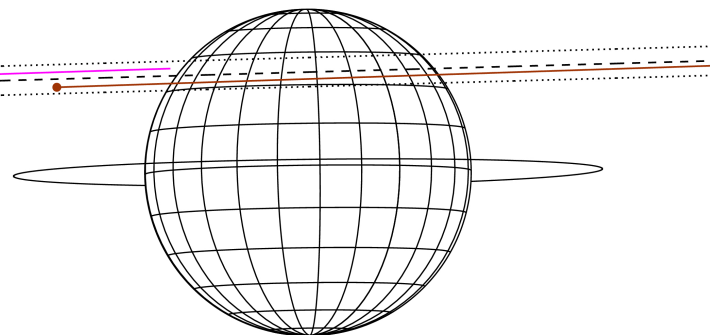
Jupiter 2043-02-12T01:25:01 K9.15 G14.88 Pgt

ICRS Star Coord at Epoch: 17h 45m 33.83868s -22:55:55.96743s  
 RUWE (>1.4 is poor) : 1.10  
 K magnitude : 9.148  
 G magnitude : 14.882  
 RP magnitude : 13.427  
 BP magnitude : 17.430  
 DUPflag : 0  
 Distance (au) : 5.799  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 29.88  
 Sun-Target sep (deg) : 55.94  
 Sun-Moon sep (deg) : 84.44  
 B (ring opening deg) : -2.56  
 PA of pole (deg) : 0.72  
 Pole direction: RA (deg): 268.05661  
 Dec (deg): 64.49732  
 C/A sky separation (") : 10.454  
 C/A sky separation (km) : 43964.0  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk



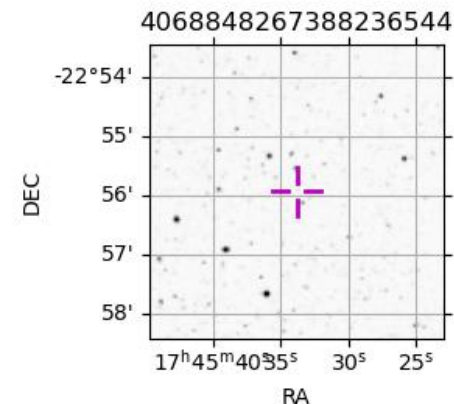
2043-02-12T01:25:01.6300 α: 17 45 33.8387 δ: -22 55 55.967 C/A \*\*\*\*\* PA 181.60 deg v\_sky +29.88 km/s D 05.80 AU  
 Credit: Styled after SORA/Lucky Star

Earth  
 KAV  
 SAAO



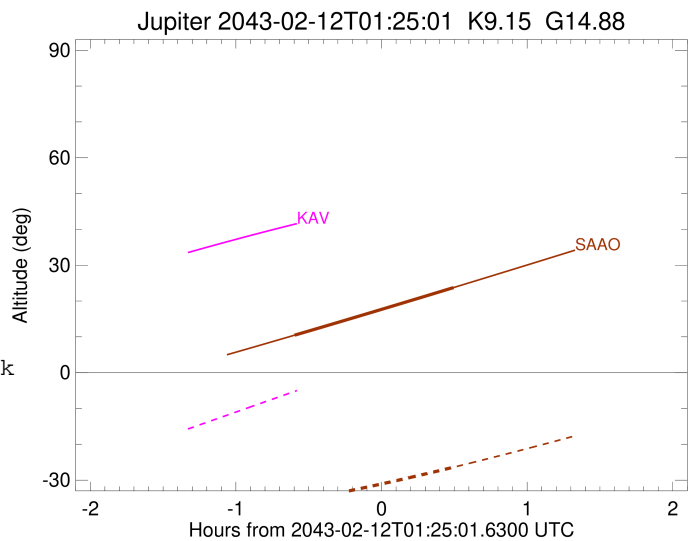
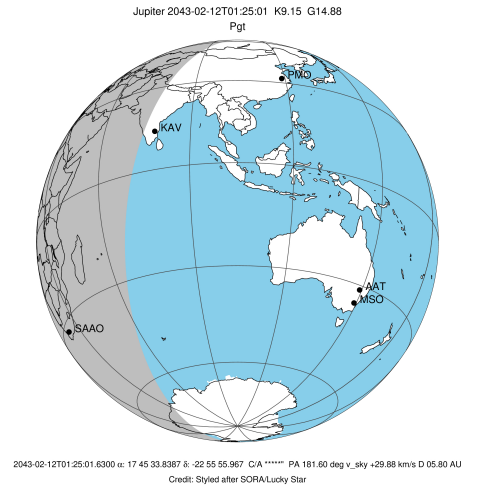
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	FEB 12 00:49 - FEB 12 01:54	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-12T01:21:57.510
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       : 4068848267388236544
2Mass ID (if available) : 17453384-2255558
ICRS Star Coord at Epoch: 17h 45m 33.83868s -22:55:55.96743s
RUWE (>1.4 is poor) : 1.10
K magnitude           : 9.148
G magnitude           : 14.882
RP magnitude         : 13.427
BP magnitude         : 17.430
DUPflag              : 0
Distance (au)        : 5.799
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 29.88
Sun-Target sep (deg) : 55.94
Sun-Moon sep (deg)   : 84.82
B (ring opening deg) : -2.56
PA of pole (deg)     : 0.72
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 9.735
C/A sky separation (km) : 40942.0
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	2043-02-12T00:49:15.995	10.47	-35.98	71489.2	33.73	37.28
Jupiter	E	2043-02-12T01:54:43.385	23.75	-26.39	71488.9	36.07	39.70