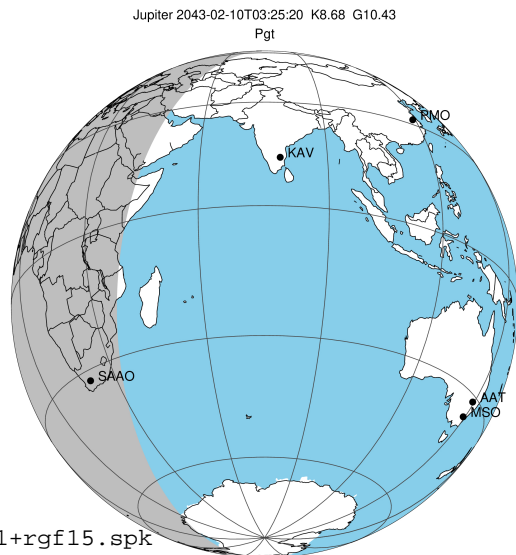


target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-10T03:25:20.810
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116866139178070528
 2Mass ID (if available) : 17440788-2255402

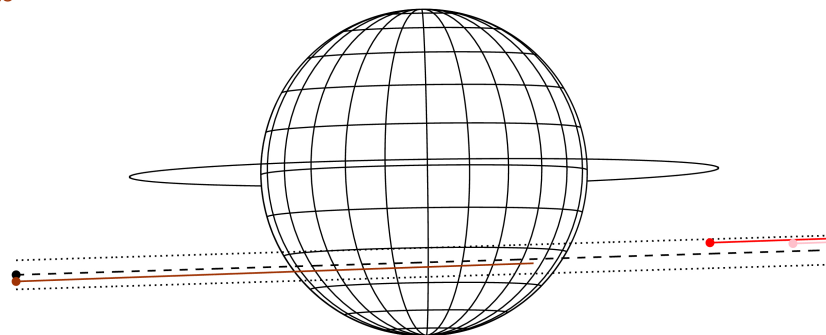
Jupiter 2043-02-10T03:25:20 K8.68 G10.43 Pgt

ICRS Star Coord at Epoch: 17h 44m 07.87044s -22:55:41.10470s
 RUWE (>1.4 is poor) : 1.44
 K magnitude : 8.683
 G magnitude : 10.427
 RP magnitude : 9.838
 BP magnitude : 10.822
 DUPflag : 0
 Distance (au) : 5.824
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 30.58
 Sun-Target sep (deg) : 54.33
 Sun-Moon sep (deg) : 57.82
 B (ring opening deg) : -2.56
 PA of pole (deg) : 0.87
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 9.320
 C/A sky separation (km) : 39370.3
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp



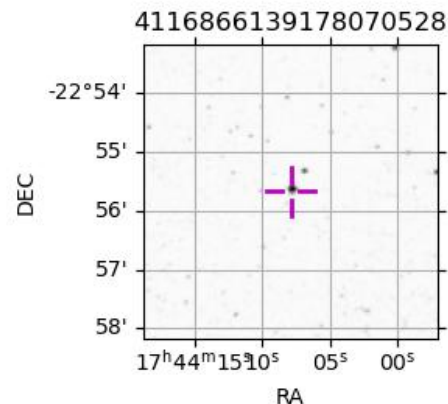
2043-02-10T03:25:20.8100 @: 17 44 07.8704 @: -22 55 41.105 C/A 9.330° PA 1.74 deg v_sky +30.58 km/s D 05.82 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PIC
 TEN
 SAAO



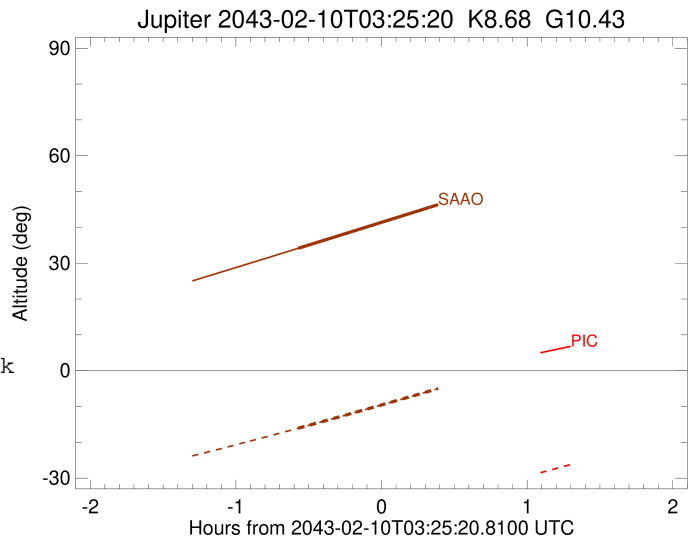
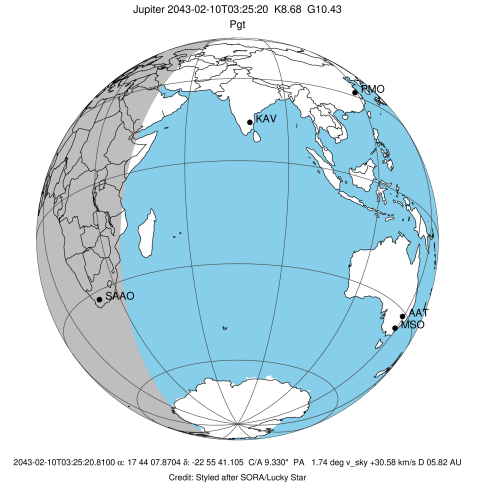
Observable events with sun below -5 deg and altitude above 5 deg

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 10 02:51 - FEB 10 02:51	Pin
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-10T03:23:03.900
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        : 4116866139178070528
2Mass ID (if available) : 17440788-2255402
ICRS Star Coord at Epoch: 17h 44m 07.87044s -22:55:41.10470s
RUWE (>1.4 is poor) : 1.44
K magnitude           : 8.683
G magnitude           : 10.427
RP magnitude          : 9.838
BP magnitude          : 10.822
DUPflag              : 0
Distance (au)         : 5.824
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 30.58
Sun-Target sep (deg) : 54.33
Sun-Moon sep (deg)   : 58.70
B (ring opening deg) : -2.56
PA of pole (deg)     : 0.87
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 9.802
C/A sky separation (km) : 41406.0
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	2043-02-10T02:51:06.144	34.17	-16.04	71488.8	-36.48	-40.13
Jupiter	E	2043-02-10T03:55:05.107	47.70	-3.72x	71489.1	-34.25	-37.82