

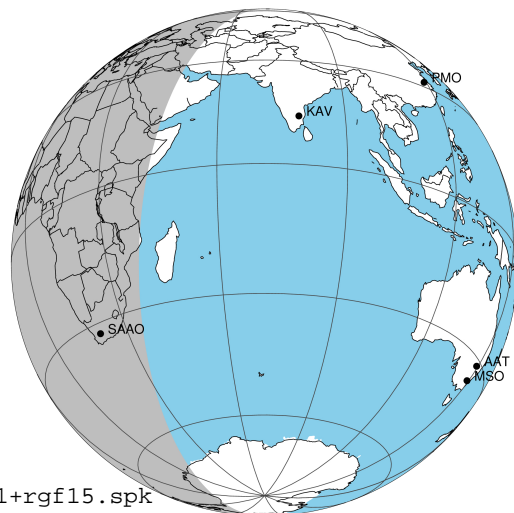
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-17T03:20:15.980
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068876545399619968
 2Mass ID (if available) : 17491370-2257047

Jupiter 2043-02-17T03:20:15 K9.34 G14.61 Pgt

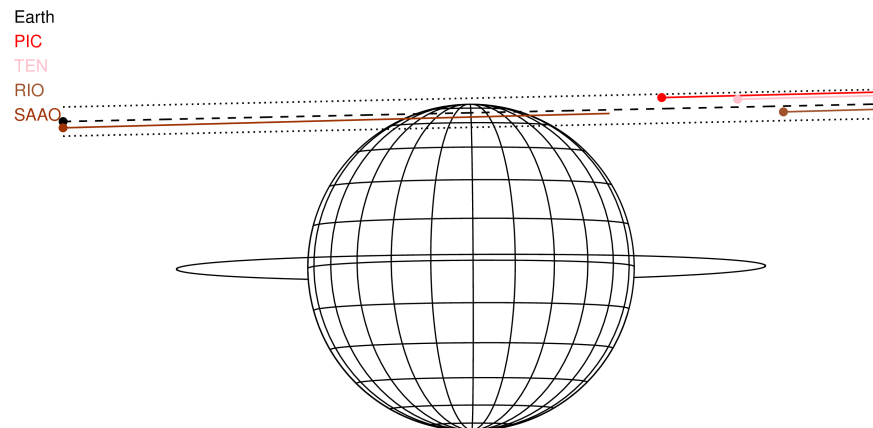
ICRS Star Coord at Epoch: 17h 49m 13.70390s -22:57:05.17022s

RUWE (>1.4 is poor) : 0.90
 K magnitude : 9.342
 G magnitude : 14.606
 RP magnitude : 13.309
 BP magnitude : 16.558
 DUPflag : 0
 Distance (au) : 5.728
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 27.97
 Sun-Target sep (deg) : 60.23
 Sun-Moon sep (deg) : 155.41
 B (ring opening deg) : -2.55
 PA of pole (deg) : 0.32
 Pole direction: RA (deg): 268.05662
 Dec (deg): 64.49732
 C/A sky separation (") : 16.309
 C/A sky separation (km) : 67759.1
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-02-17T03:20:15 K9.34 G14.61
 Pgt

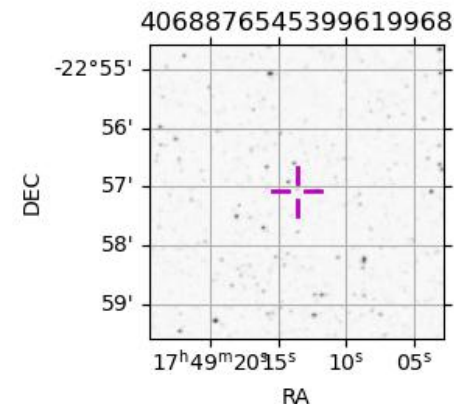


2043-02-17T03:20:15.9800 az: 17.49 13.7039 az: -22.57 05.170 C/A ***** PA 181.23 deg v_sky +27.97 km/s D 05.73 AU
 Credit: Styled after SORA/Lucky Star



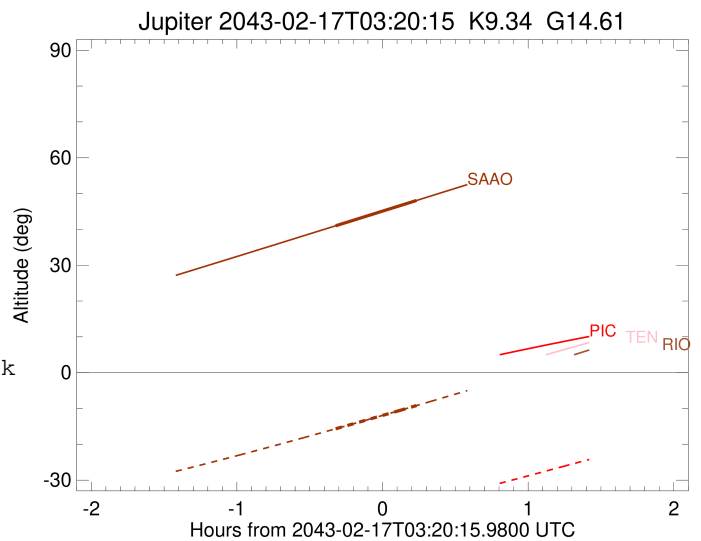
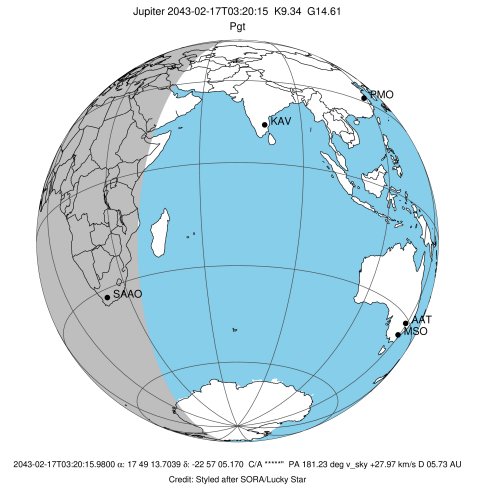
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	FEB 17 03:00 - FEB 17 03:34	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-17T03:17:37.420
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      : 4068876545399619968
2Mass ID (if available) : 17491370-2257047
ICRS Star Coord at Epoch: 17h 49m 13.70390s -22:57:05.17022s
RUWE (>1.4 is poor) : 0.90
K magnitude          : 9.342
G magnitude          : 14.606
RP magnitude         : 13.309
BP magnitude         : 16.558
DUPflag             : 0
Distance (au)       : 5.728
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 27.97
Sun-Target sep (deg) : 60.23
Sun-Moon sep (deg)  : 155.09
B (ring opening deg) : -2.55
PA of pole (deg)    : 0.32
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (" ) : 15.860
C/A sky separation (km) : 65893.9
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	2043-02-17T03:00:58.157	41.00	-15.66	71484.6	65.90	68.49
Jupiter	E	2043-02-17T03:34:17.663	48.06	-9.18	71484.4	68.20	70.59