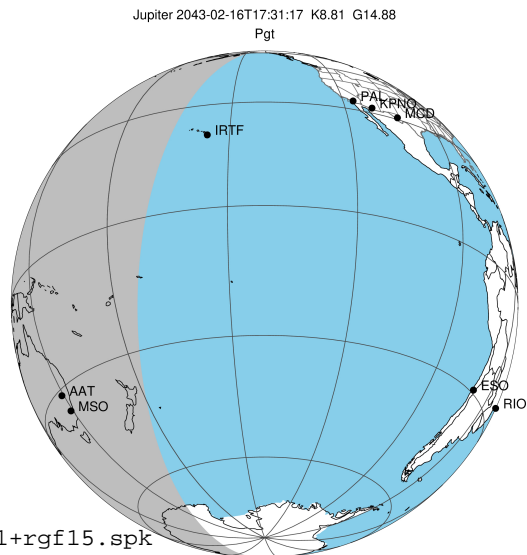


target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2043-02-16T17:31:17.220  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 4068876717198670336  
 2Mass ID (if available) : 17485643-2257053

Jupiter 2043-02-16T17:31:17 K8.81 G14.88 Pgt

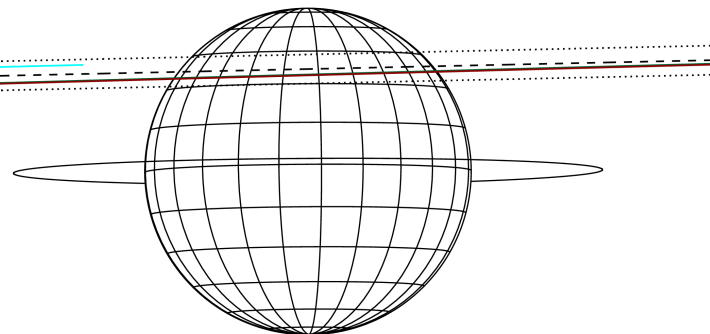
ICRS Star Coord at Epoch: 17h 48m 56.43338s -22:57:05.49631s

RUWE (>1.4 is poor) : 1.03  
 K magnitude : 8.814  
 G magnitude : 14.878  
 RP magnitude : 13.395  
 BP magnitude : 17.879  
 DUPflag : 0  
 Distance (au) : 5.734  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 28.13  
 Sun-Target sep (deg) : 59.88  
 Sun-Moon sep (deg) : 149.86  
 B (ring opening deg) : -2.55  
 PA of pole (deg) : 0.35  
 Pole direction: RA (deg): 268.05662  
 Dec (deg): 64.49732  
 C/A sky separation (") : 10.789  
 C/A sky separation (km) : 44870.9  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk



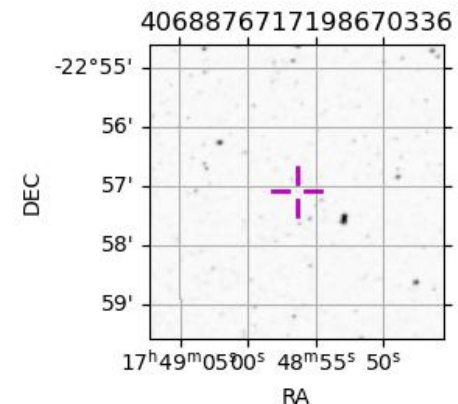
2043-02-16T17:31:17.2200 @: 17 48 56.4334 @: -22 57 05.496 C/A \*\*\*\*\* PA 181.26 deg v\_sky +28.13 km/s D 05.73 AU  
 Credit: Styled after SORA/Lucky Star

Earth  
 IRTF  
 AAT  
 MSO



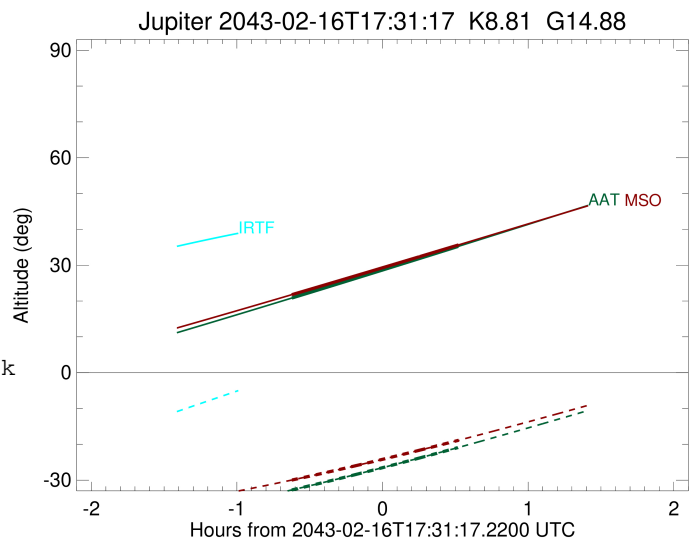
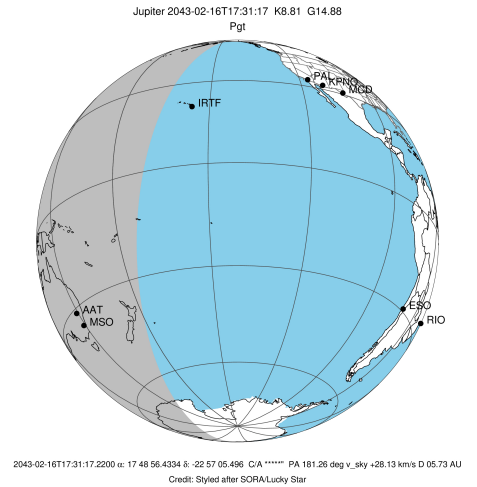
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	FEB 16 16:53 - FEB 16 18:02	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	FEB 16 16:53 - FEB 16 18:02	Pie



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-16T17:28:08.200
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : AAT
Location              : Siding Spring (AAT)
Latitude (deg)        : -31.27703
E. Longitude (deg)    : 149.06608
Altitude (km)         : 1.164
Gaia source ID        : 4068876717198670336
2Mass ID (if available) : 17485643-2257053
ICRS Star Coord at Epoch: 17h 48m 56.43338s -22:57:05.49631s
RUWE (>1.4 is poor) : 1.03
K magnitude           : 8.814
G magnitude           : 14.878
RP magnitude          : 13.395
BP magnitude          : 17.879
DUPflag              : 0
Distance (au)         : 5.734
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 28.13
Sun-Target sep (deg)  : 59.88
Sun-Moon sep (deg)    : 149.39
B (ring opening deg) : -2.55
PA of pole (deg)      : 0.35
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (") : 10.213
C/A sky separation (km) : 42473.0
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
    
```

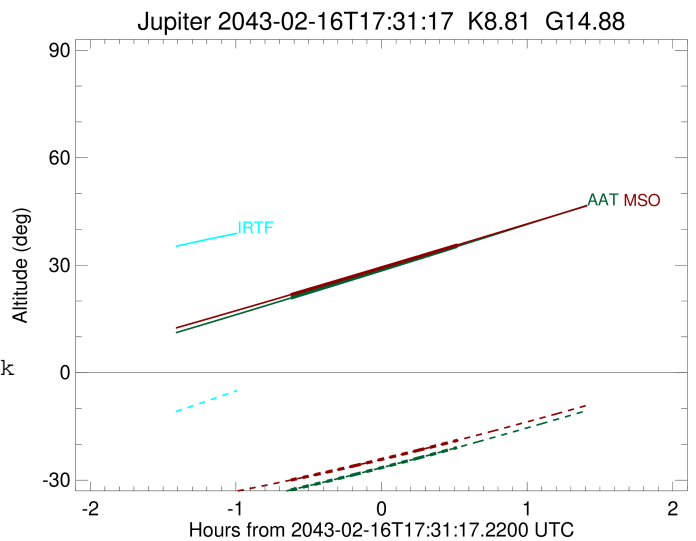
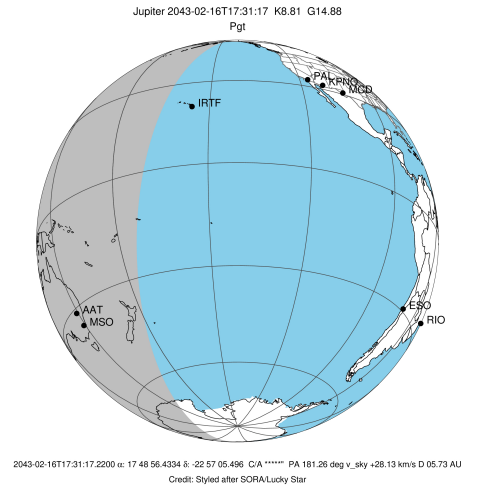


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-16T16:53:56.742	20.83	-32.73	71489.1	35.19	38.80
Jupiter	E	2043-02-16T18:02:24.603	35.23	-20.91	71488.7	37.61	41.28

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-16T17:28:17.080
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : MSO
Location             : Mt. Stromlo Observatory
Latitude (deg)       : -35.32000
E. Longitude (deg)  : 149.00833
Altitude (km)        : 0.770
Gaia source ID       : 4068876717198670336
2Mass ID (if available) : 17485643-2257053
ICRS Star Coord at Epoch: 17h 48m 56.43338s -22:57:05.49631s
RUWE (>1.4 is poor) : 1.03
K magnitude           : 8.814
G magnitude           : 14.878
RP magnitude         : 13.395
BP magnitude         : 17.879
DUPflag              : 0
Distance (au)        : 5.734
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 28.13
Sun-Target sep (deg) : 59.88
Sun-Moon sep (deg)  : 149.42
B (ring opening deg) : -2.55
PA of pole (deg)    : 0.35
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (" ) : 10.123
C/A sky separation (km) : 42098.8
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	2043-02-16T16:53:56.198	21.77	-29.97	71489.1	34.84	38.43
Jupiter	E	2043-02-16T18:02:42.766	35.68	-18.86	71488.8	37.22	40.88