

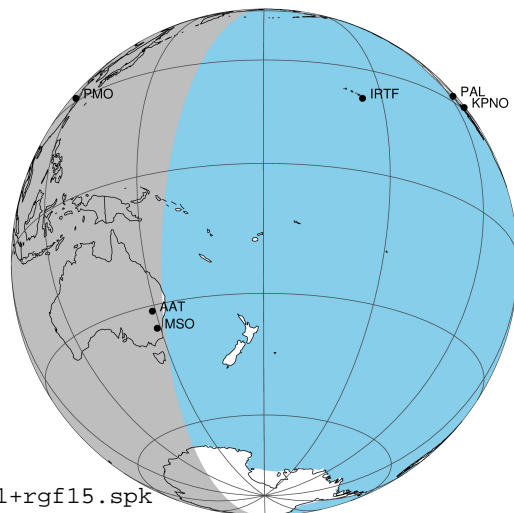
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-23T19:40:44.780
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4070152391222572416
 2Mass ID (if available) : 17534408-2258399

Jupiter 2043-02-23T19:40:44 K9.58 G14.24 Pgt

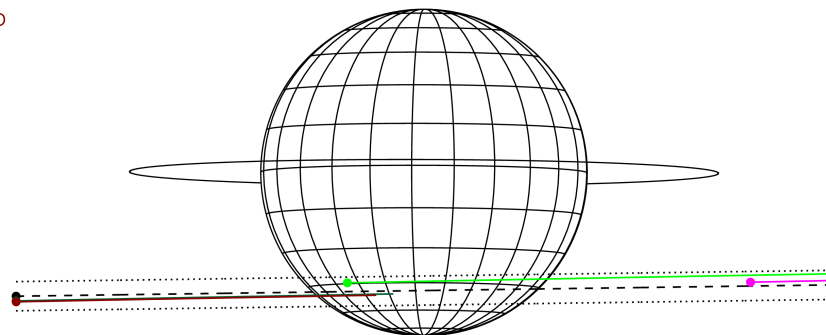
ICRS Star Coord at Epoch: 17h 53m 44.08905s -22:58:40.05690s

RUWE (>1.4 is poor) : 5.16
 K magnitude : 9.581
 G magnitude : 14.245
 RP magnitude : 13.022
 BP magnitude : 15.761
 DUPflag : 0
 Distance (au) : 5.632
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 25.33
 Sun-Target sep (deg) : 65.93
 Sun-Moon sep (deg) : 115.14
 B (ring opening deg) : -2.52
 PA of pole (deg) : -0.16
 Pole direction: RA (deg): 268.05662
 Dec (deg): 64.49732
 C/A sky separation (") : 12.659
 C/A sky separation (km) : 51705.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-02-23T19:40:44 K9.58 G14.24
 Pgt



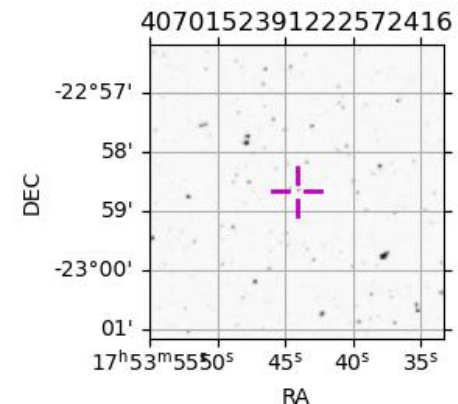
Earth
 PMO
 KAV
 AAT
 MSO



2043-02-23T19:40:44.7800 α: 17 53 44.0890 δ: -22 58 40.057 C/A ***** PA 0.79 deg v_sky +25.33 km/s D 05.63 AU
 Credit: Styled after SORA/Lucky Star

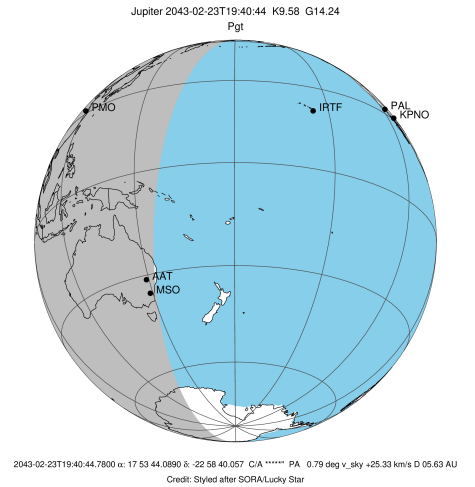
Observable events with sun below -5 deg and altitude above 5 deg

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	+	FEB 23 20:13 - FEB 23 20:13	Pne
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 23 19:07 - FEB 23 19:07	Pin
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	FEB 23 19:07 - FEB 23 19:07	Pin

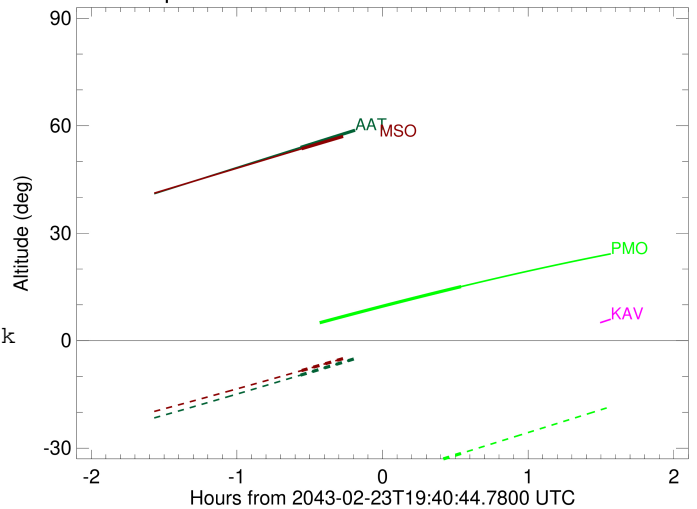


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-23T19:37:44.670
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : PMO
Location              : Purple Mtn Obs. Nanking
Latitude (deg)       : 32.06667
E. Longitude (deg)   : 118.82089
Altitude (km)        : 0.364
Gaia source ID       : 4070152391222572416
2Mass ID (if available) : 17534408-2258399
ICRS Star Coord at Epoch: 17h 53m 44.08905s -22:58:40.05690s
RUWE (>1.4 is poor) : 5.16
K magnitude           : 9.581
G magnitude           : 14.245
RP magnitude          : 13.022
BP magnitude          : 15.761
DUPflag              : 0
Distance (au)        : 5.632
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 25.33
Sun-Target sep (deg) : 65.93
Sun-Moon sep (deg)   : 115.60
B (ring opening deg) : -2.52
PA of pole (deg)     : -0.16
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (") : 11.670
C/A sky separation (km) : 47666.6
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
    
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Jupiter 2043-02-23T19:40:44 K9.58 G14.24

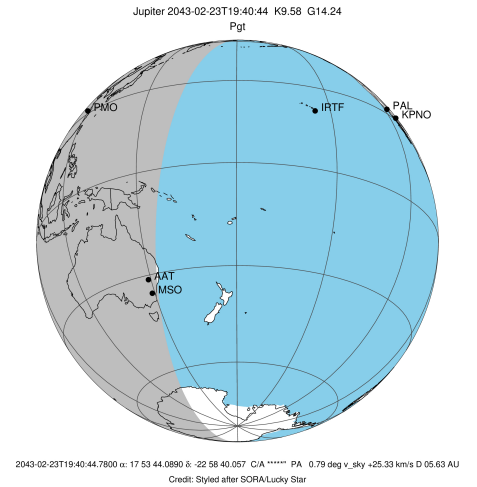


x: target alt < 5.0 deg or sun > -5.0 deg

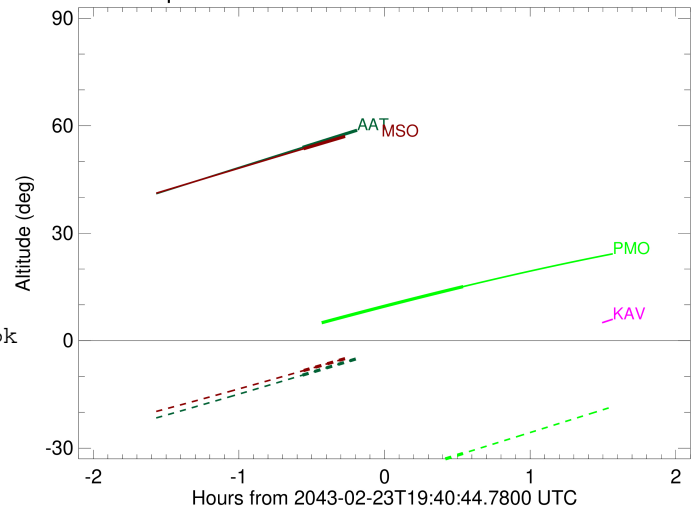
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-23T19:02:29.609	2.72x	-45.97	71487.9	-43.05	-46.77
Jupiter	E	2043-02-23T20:13:05.171	15.08	-31.48	71488.3	-40.51	-44.23

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-02-23T19:38:59.240
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        : 4070152391222572416
2Mass ID (if available) : 17534408-2258399
ICRS Star Coord at Epoch: 17h 53m 44.08905s -22:58:40.05690s
RUWE (>1.4 is poor) : 5.16
K magnitude           : 9.581
G magnitude           : 14.245
RP magnitude          : 13.022
BP magnitude          : 15.761
DUPflag              : 0
Distance (au)         : 5.632
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 25.33
Sun-Target sep (deg)  : 65.93
Sun-Moon sep (deg)    : 116.05
B (ring opening deg) : -2.52
PA of pole (deg)      : -0.16
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (") : 12.964
C/A sky separation (km) : 52950.0
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
    
```



Jupiter 2043-02-23T19:40:44 K9.58 G14.24

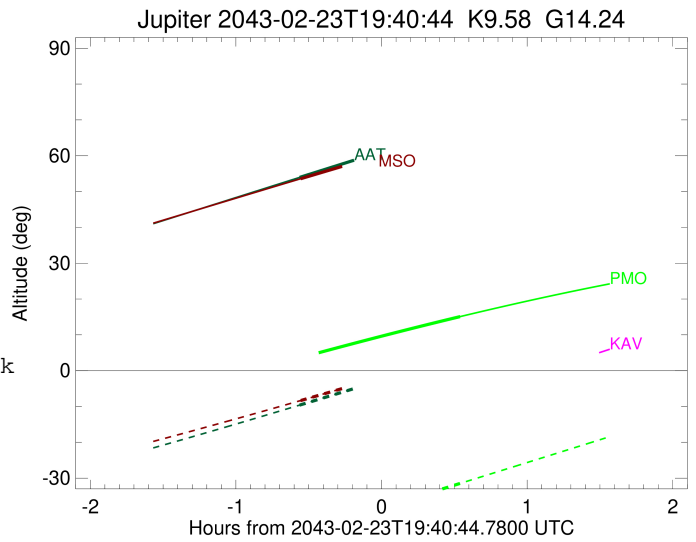
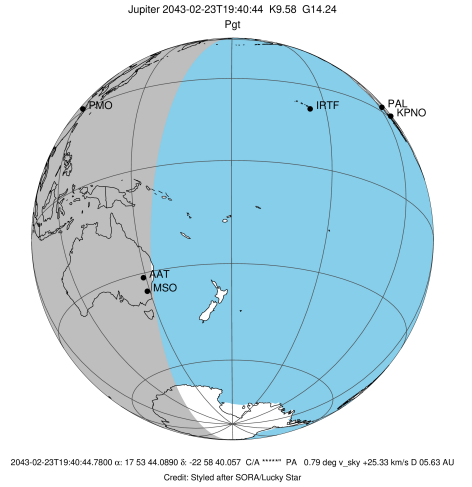


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-23T19:07:00.159	53.94	-9.61	71487.0	-48.90	-52.52
Jupiter	E	2043-02-23T20:11:01.362	67.50	3.71x	71487.4	-46.60	-50.28

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-23T19:39:04.130
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      : 4070152391222572416
2Mass ID (if available) : 17534408-2258399
ICRS Star Coord at Epoch: 17h 53m 44.08905s -22:58:40.05690s
RUWE (>1.4 is poor) : 5.16
K magnitude          : 9.581
G magnitude          : 14.245
RP magnitude         : 13.022
BP magnitude         : 15.761
DUPflag             : 0
Distance (au)       : 5.632
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 25.33
Sun-Target sep (deg) : 65.93
Sun-Moon sep (deg)  : 116.04
B (ring opening deg) : -2.52
PA of pole (deg)    : -0.16
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49732
C/A sky separation (") : 13.068
C/A sky separation (km) : 53376.2
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	2043-02-23T19:07:25.063	53.57	-8.34	71487.0	-49.40	-53.00
Jupiter	E	2043-02-23T20:10:46.071	66.03	4.23x	71487.3	-47.12	-50.79