

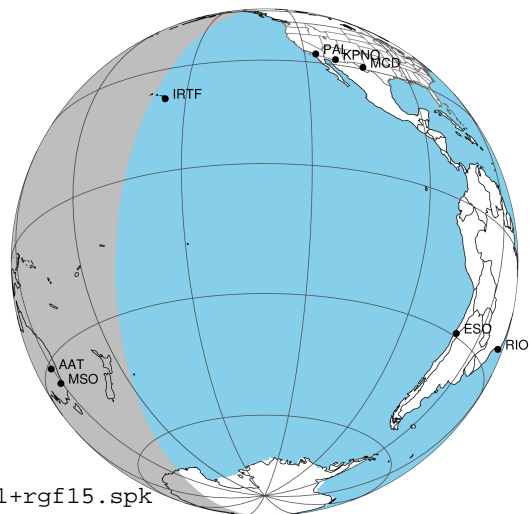
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-02-09T17:10:54.510
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116868917938842880
 2Mass ID (if available) : 17434856-2255212

Jupiter 2043-02-09T17:10:54 K8.94 G14.97 Pgt

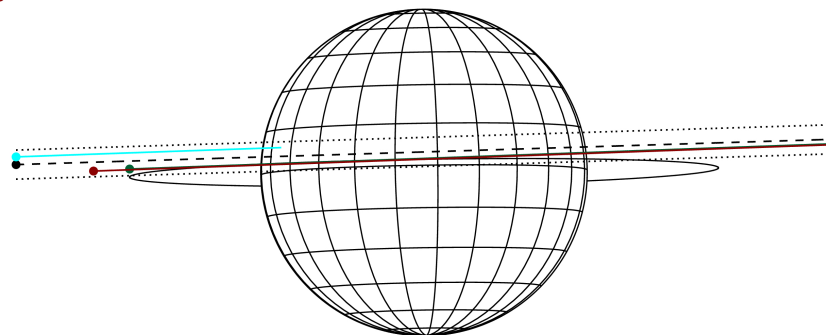
ICRS Star Coord at Epoch: 17h 43m 48.55013s -22:55:21.45302s

RUWE (>1.4 is poor) : 1.05
 K magnitude : 8.944
 G magnitude : 14.967
 RP magnitude : 13.473
 BP magnitude : 17.852
 DUPflag : 0
 Distance (au) : 5.830
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 30.73
 Sun-Target sep (deg) : 53.97
 Sun-Moon sep (deg) : 52.01
 B (ring opening deg) : -2.56
 PA of pole (deg) : 0.91
 Pole direction: RA (deg): 268.05661
 Dec (deg): 64.49732
 C/A sky separation (") : 2.128
 C/A sky separation (km) : 8997.2
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-02-09T17:10:54 K8.94 G14.97
 Pgt



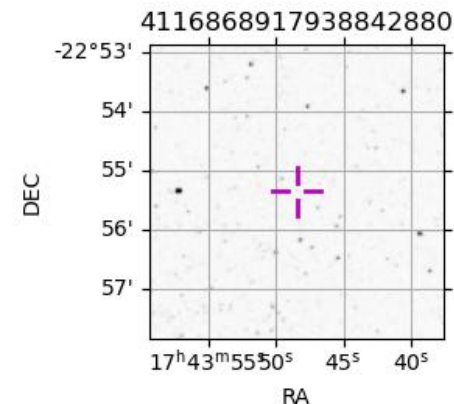
Earth
 IRTF
 AAT
 MSO



2043-02-09T17:10:54.5100 cr: 17 43 48.55013 s: -22 55 21.453 C/A 2.119° PA 181.77 deg v_sky +30.73 km/s D 05.83 AU
 Credit: Styled after SORA/Lucky Star

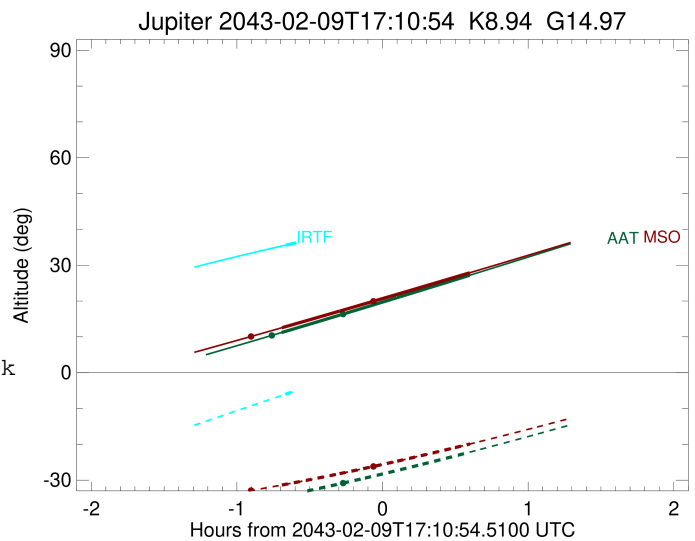
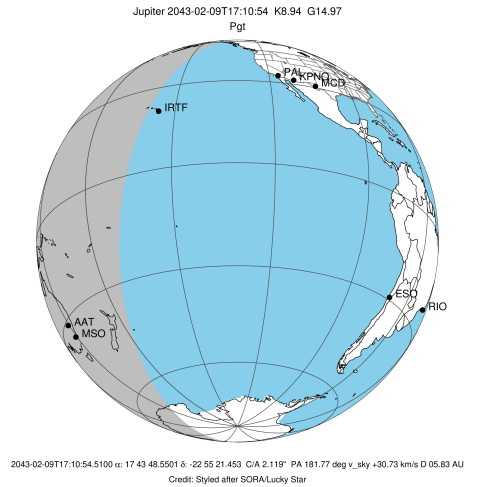
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEncode
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	+	FEB 09 16:30 - FEB 09 16:30	Pin
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 09 16:29 - FEB 09 17:46	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	FEB 09 16:29 - FEB 09 17:46	Pie



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-09T17:09:27.240
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : IRTF
Location            : Mauna Kea/IRTF
Latitude (deg)      : 19.82622
E. Longitude (deg)  : 204.52800
Altitude (km)       : 4.168
Gaia source ID      : 4116868917938842880
2Mass ID (if available) : 17434856-2255212
ICRS Star Coord at Epoch: 17h 43m 48.55013s -22:55:21.45302s
RUWE (>1.4 is poor) : 1.05
K magnitude          : 8.944
G magnitude          : 14.967
RP magnitude         : 13.473
BP magnitude         : 17.852
DUPflag             : 0
Distance (au)       : 5.830
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 30.73
Sun-Target sep (deg) : 53.97
Sun-Moon sep (deg)  : 52.79
B (ring opening deg) : -2.56
PA of pole (deg)    : 0.91
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (" ) : 3.082
C/A sky separation (km) : 13031.3
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
    
```

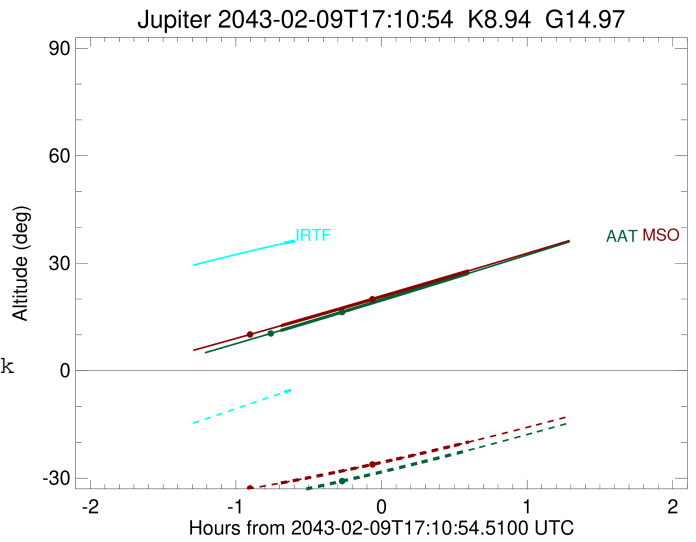
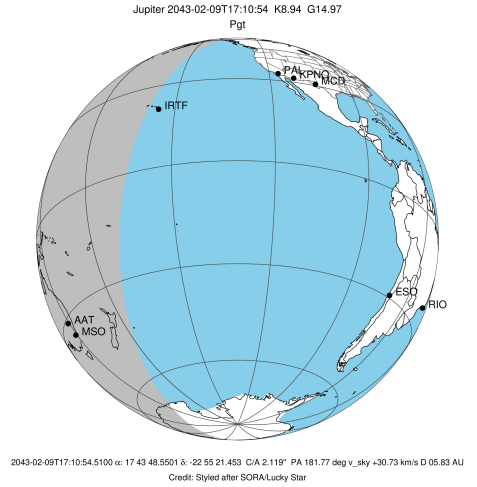


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-09T16:30:51.587	35.56	-6.03	71491.8	9.44	10.77
Jupiter	E	2043-02-09T17:48:06.219	44.81	11.39x	71491.6	11.49	13.08

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-09T17:08:00.570
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       : 4116868917938842880
2Mass ID (if available) : 17434856-2255212
ICRS Star Coord at Epoch: 17h 43m 48.55013s -22:55:21.45302s
RUWE (>1.4 is poor) : 1.05
K magnitude           : 8.944
G magnitude           : 14.967
RP magnitude         : 13.473
BP magnitude         : 17.852
DUPflag              : 0
Distance (au)        : 5.830
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 30.73
Sun-Target sep (deg) : 53.97
Sun-Moon sep (deg)   : 52.73
B (ring opening deg) : -2.56
PA of pole (deg)     : 0.91
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 1.457
C/A sky separation (km) : 6162.6
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
    
```

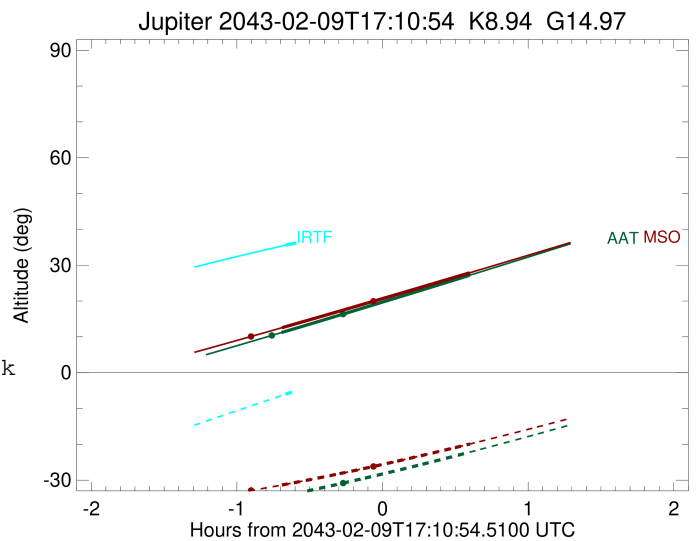
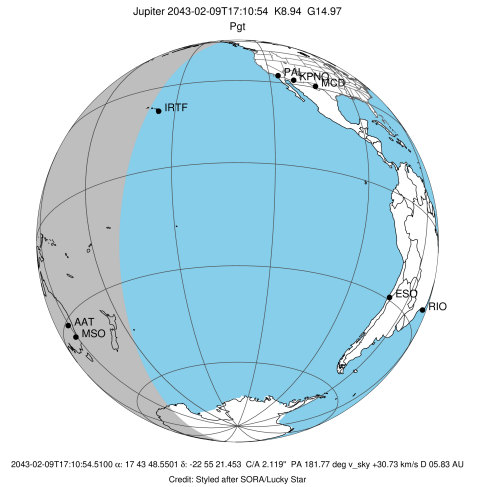


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-02-09T16:29:21.272	11.21	-34.48	71492.0	3.78	4.32
Jupiter	E	2043-02-09T17:46:45.764	27.17	-22.21	71491.9	6.09	6.96

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-02-09T17:08:08.880
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      : 4116868917938842880
2Mass ID (if available) : 17434856-2255212
ICRS Star Coord at Epoch: 17h 43m 48.55013s -22:55:21.45302s
RUWE (>1.4 is poor) : 1.05
K magnitude         : 8.944
G magnitude         : 14.967
RP magnitude        : 13.473
BP magnitude        : 17.852
DUPflag            : 0
Distance (au)       : 5.830
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 30.73
Sun-Target sep (deg) : 53.97
Sun-Moon sep (deg)  : 52.72
B (ring opening deg) : -2.56
PA of pole (deg)    : 0.91
Pole direction: RA (deg): 268.05661
Dec (deg): 64.49732
C/A sky separation (") : 1.374
C/A sky separation (km) : 5808.0
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	2043-02-09T16:29:28.714	12.55	-31.35	71492.0	3.51	4.01
Jupiter	E	2043-02-09T17:46:54.731	27.89	-19.91	71491.9	5.79	6.62