

target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-06-25T13:08:19.830
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4068869394222219776
 2Mass ID (if available) : 17484378-2304362

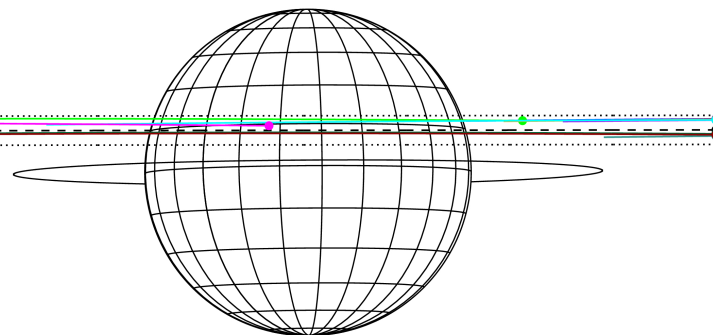
Jupiter 2043-06-25T13:08:19 K9.28 G14.84 Pgt

ICRS Star Coord at Epoch: 17h 48m 43.78282s -23°04'36.59893s
 RUWE (>1.4 is poor) : 0.96
 K magnitude : 9.280
 G magnitude : 14.839
 RP magnitude : 13.428
 BP magnitude : 17.282
 DUPflag : 0
 Distance (au) : 4.253
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : -16.27
 Sun-Target sep (deg) : 174.10
 Sun-Moon sep (deg) : 40.05
 B (ring opening deg) : -2.42
 PA of pole (deg) : 0.38
 Pole direction: RA (deg): 268.05669
 Dec (deg): 64.49732
 C/A sky separation (") : 5.991
 C/A sky separation (km) : 18476.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk



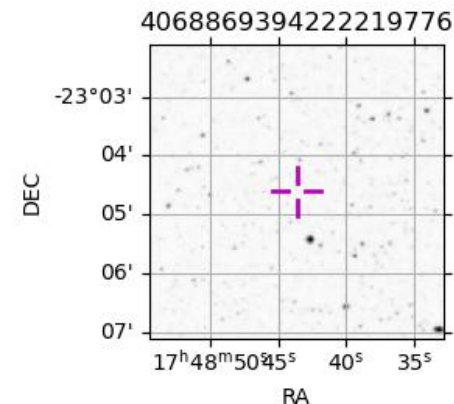
2043-06-25T13:08:19.8300 at: 17 48 43.7828 s: -23 04 36.599 C/A 5.979° PA 180.06 deg v_sky -16.27 km/s D 04.25 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PAL
 PMO
 KPNO
 MCD
 IRTF
 KAV
 ESO
 AAT
 SAAO
 MSO



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

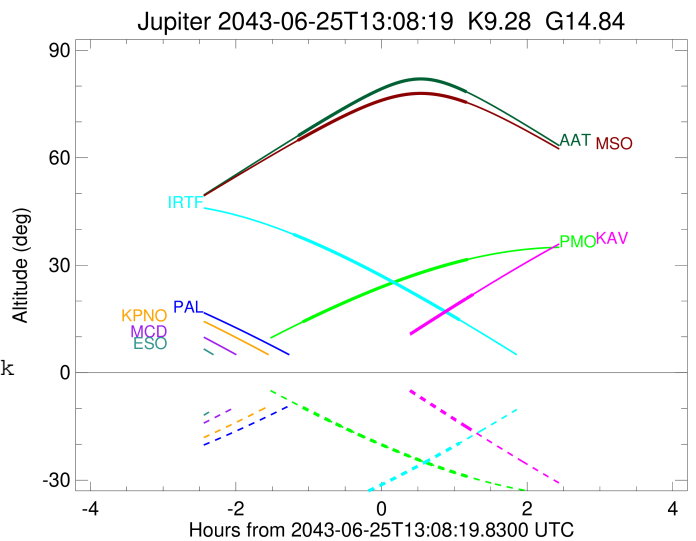
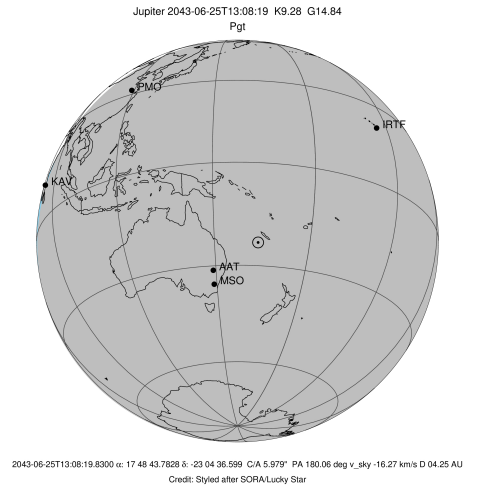
Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	JUN 25 12:03 - JUN 25 14:19	Pie
KPNO	Kitt Peak Natl Obs	32.0	248.4			Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0			Pnn
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+ +	JUN 25 11:55 - JUN 25 14:12	Pie
KAV	Kavalur Observatory	12.6	78.8	+ +	JUN 25 14:23 - JUN 25 14:23	Pne
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	+ +	JUN 25 11:59 - JUN 25 14:18	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	JUN 25 11:59 - JUN 25 14:18	Pie



4068869394222219776

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-06-25T13:11:33.380
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      : 4068869394222219776
2Mass ID (if available) : 17484378-2304362
ICRS Star Coord at Epoch: 17h 48m 43.78282s -23:04:36.59893s
RUWE (>1.4 is poor) : 0.96
K magnitude         : 9.280
G magnitude         : 14.839
RP magnitude        : 13.428
BP magnitude        : 17.282
DUPflag            : 0
Distance (au)       : 4.253
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -16.27
Sun-Target sep (deg) : 174.10
Sun-Moon sep (deg)  : 40.74
B (ring opening deg) : -2.42
PA of pole (deg)    : 0.38
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation (" ) : 7.544
C/A sky separation (km) : 23268.6
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
    
```

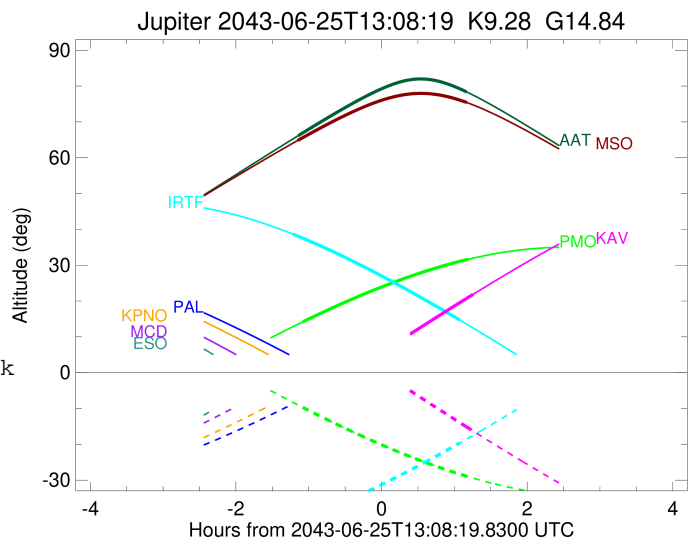
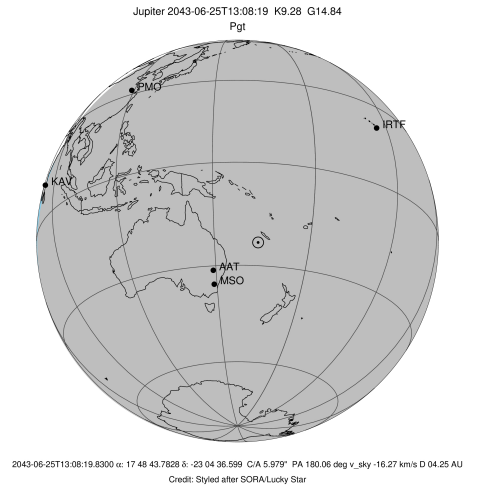


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-06-25T12:03:25.603	14.18	-9.70	71491.2	18.28	20.68
Jupiter	E	2043-06-25T14:19:24.526	31.62	-29.00	71491.1	19.54	22.07

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-06-25T13:04:02.430
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       : 4068869394222219776
2Mass ID (if available) : 17484378-2304362
ICRS Star Coord at Epoch: 17h 48m 43.78282s -23:04:36.59893s
RUWE (>1.4 is poor) : 0.96
K magnitude           : 9.280
G magnitude           : 14.839
RP magnitude         : 13.428
BP magnitude         : 17.282
DUPflag              : 0
Distance (au)        : 4.253
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -16.27
Sun-Target sep (deg) : 174.10
Sun-Moon sep (deg)   : 39.89
B (ring opening deg) : -2.42
PA of pole (deg)     : 0.38
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation (") : 7.155
C/A sky separation (km) : 22068.6
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
    
```

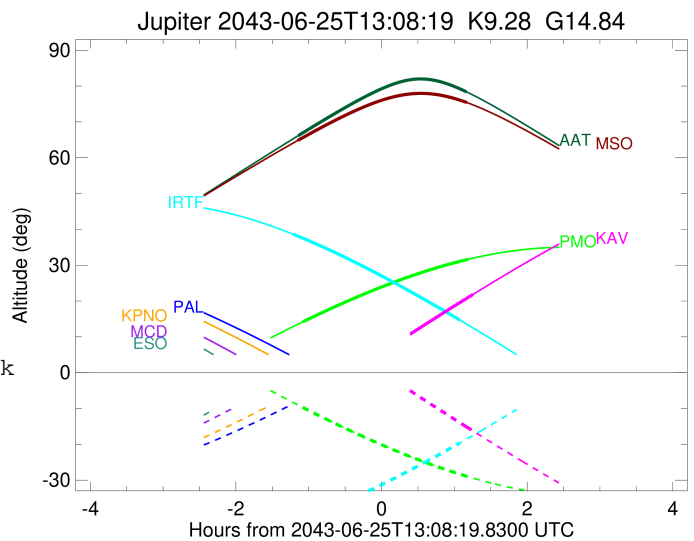
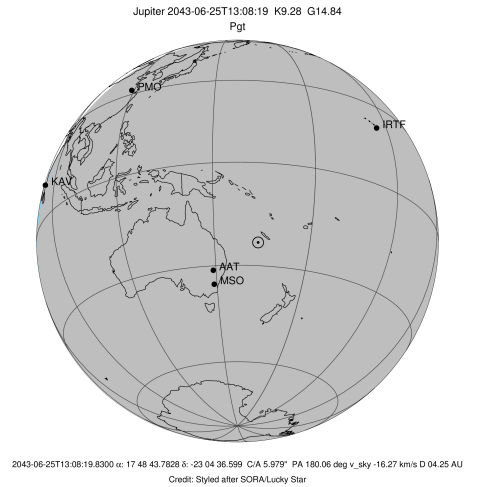


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-06-25T11:55:48.078	38.60	-41.51	71491.2	18.01	20.38
Jupiter	E	2043-06-25T14:12:40.381	14.72	-19.66	71491.3	17.79	20.13

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-06-25T13:14:18.920
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : KAV
Location            : Kavalur Observatory
Latitude (deg)      : 12.57556
E. Longitude (deg)  : 78.83167
Altitude (km)       : 0.722
Gaia source ID      : 4068869394222219776
2Mass ID (if available) : 17484378-2304362
ICRS Star Coord at Epoch: 17h 48m 43.78282s -23:04:36.59893s
RUWE (>1.4 is poor) : 0.96
K magnitude          : 9.280
G magnitude          : 14.839
RP magnitude         : 13.428
BP magnitude         : 17.282
DUPflag             : 0
Distance (au)       : 4.253
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -16.27
Sun-Target sep (deg) : 174.10
Sun-Moon sep (deg)  : 40.80
B (ring opening deg) : -2.42
PA of pole (deg)    : 0.38
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation ("): 6.590
C/A sky separation (km): 20325.0
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
    
```

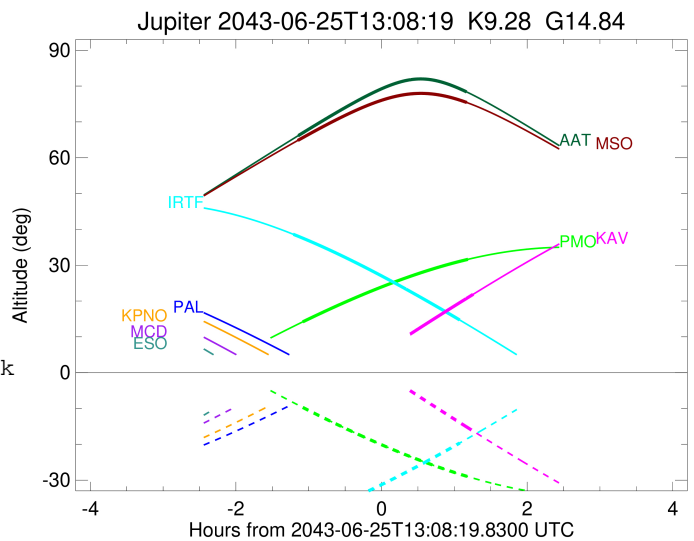
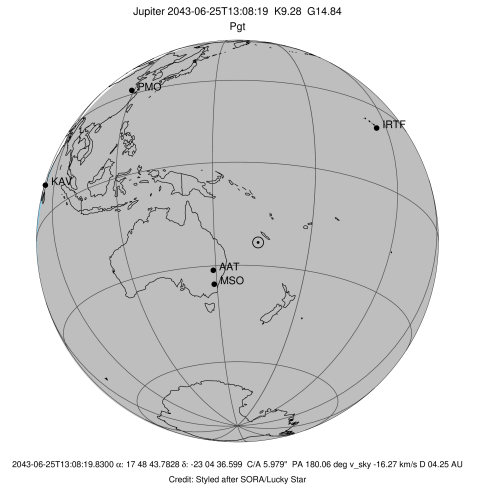


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-06-25T12:04:14.969	-8.85x	14.67x	71491.4	15.57	17.66
Jupiter	E	2043-06-25T14:23:49.644	21.86	-16.29	71491.3	17.39	19.69

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-06-25T13:09:04.890
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       : 4068869394222219776
2Mass ID (if available) : 17484378-2304362
ICRS Star Coord at Epoch: 17h 48m 43.78282s -23:04:36.59893s
RUWE (>1.4 is poor) : 0.96
K magnitude           : 9.280
G magnitude           : 14.839
RP magnitude          : 13.428
BP magnitude          : 17.282
DUPflag              : 0
Distance (au)        : 4.253
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -16.27
Sun-Target sep (deg) : 174.10
Sun-Moon sep (deg)   : 40.72
B (ring opening deg) : -2.42
PA of pole (deg)     : 0.38
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation ("): 5.697
C/A sky separation (km): 17570.3
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
    
```

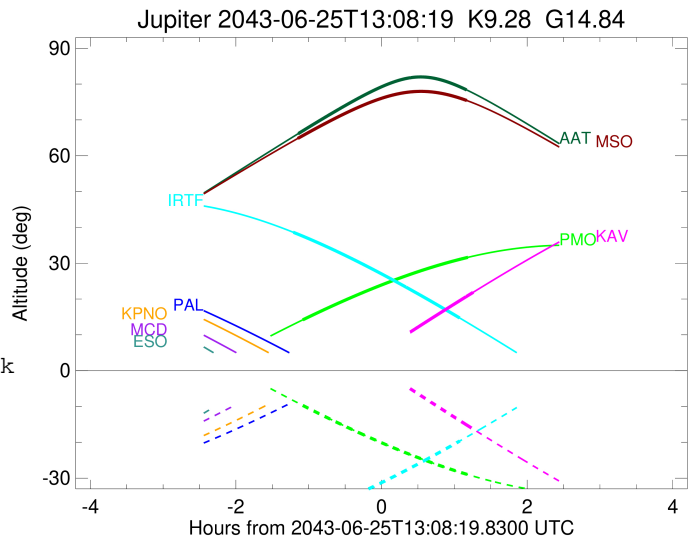
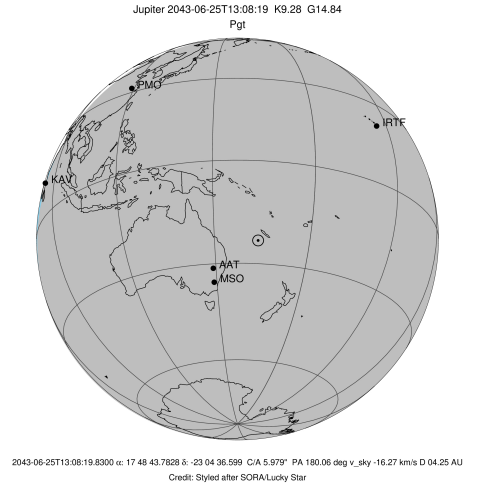


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-06-25T11:59:41.200	66.15	-60.92	71491.6	13.75	15.62
Jupiter	E	2043-06-25T14:18:25.133	78.37	-81.82	71491.5	14.52	16.48

```

target                : Jupiter
target radius (km)    : 71492.00
C/A epoch              : 2043-06-25T13:09:03.340
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        : 4068869394222219776
2Mass ID (if available) : 17484378-2304362
ICRS Star Coord at Epoch: 17h 48m 43.78282s -23:04:36.59893s
RUWE (>1.4 is poor)  : 0.96
K magnitude            : 9.280
G magnitude            : 14.839
RP magnitude          : 13.428
BP magnitude          : 17.282
DUPflag               : 0
Distance (au)         : 4.253
f0 (km)                : 0.00
g0 (km)                : 0.00
skyplane vel. (km/s)  : -16.27
Sun-Target sep (deg)  : 174.10
Sun-Moon sep (deg)    : 40.70
B (ring opening deg)  : -2.42
PA of pole (deg)      : 0.38
Pole direction: RA (deg): 268.05669
Dec (deg): 64.49732
C/A sky separation (") : 5.554
C/A sky separation (km) : 17129.6
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	2043-06-25T11:59:28.771	64.84	-60.05	71491.6	13.39	15.22
Jupiter	E	2043-06-25T14:18:34.580	75.41	-77.95	71491.5	14.15	16.08