

target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2032-06-06T15:27:32.560  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 6854412529020058368  
 2Mass ID (if available) : 20135583-2013124

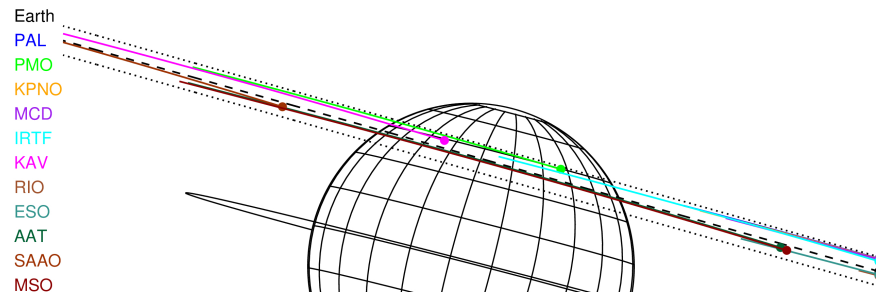
Jupiter 2032-06-06T15:27:32 K7.92 G10.33 Pgt

ICRS Star Coord at Epoch: 20h 13m 55.83640s -20:13:12.83263s

RUWE (>1.4 is poor) : 1.00  
 K magnitude : 7.921  
 G magnitude : 10.326  
 RP magnitude : 9.590  
 BP magnitude : 10.925  
 DUPflag : 0  
 Distance (au) : 4.387  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -7.42  
 Sun-Target sep (deg) : 134.85  
 Sun-Moon sep (deg) : 117.88  
 B (ring opening deg) : -0.99  
 PA of pole (deg) : -14.45  
 Pole direction: RA (deg): 268.05665  
 Dec (deg): 64.49655  
 C/A sky separation (") : 14.668  
 C/A sky separation (km) : 46666.9  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

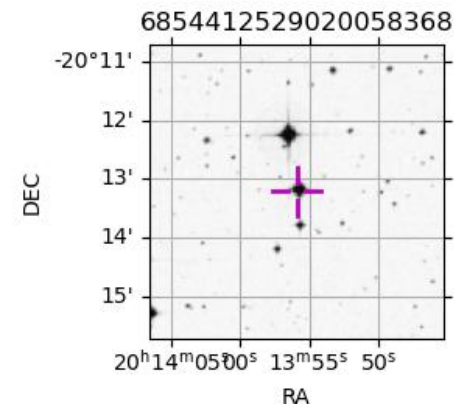


2032-06-06T15:27:32.5600 α: 20 13 55.8364 δ: -20 13 12.833 C/A \*\*\*\*\* PA 164.19 deg v\_sky - 7.42 km/s D 04.39 AU  
 Credit: Styled after SORA/Lucky Star



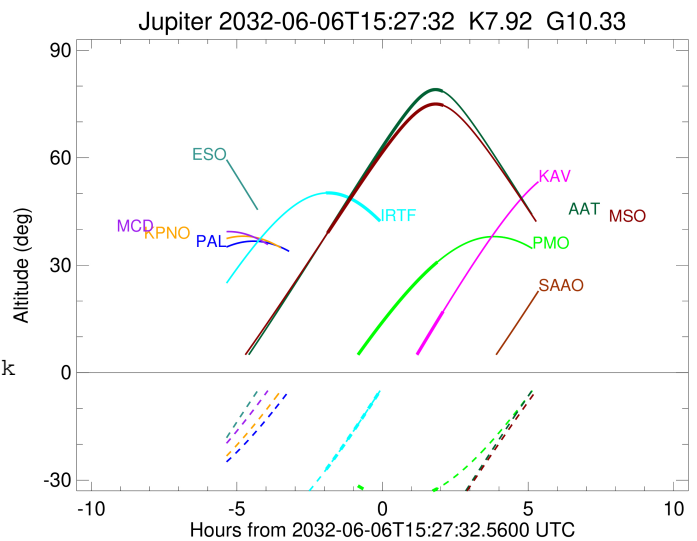
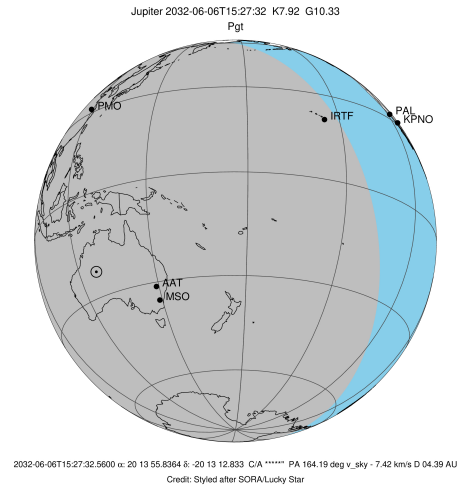
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
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 06 17:20 - JUN 06 17:20	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	+	JUN 06 13:31 - JUN 06 13:31	Pin
KAV	Kavalur Observatory	12.6	78.8	+	JUN 06 17:32 - JUN 06 17:32	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 06 13:35 - JUN 06 17:31	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	JUN 06 13:34 - JUN 06 17:32	Pie



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2032-06-06T15:33:54.950
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       : 6854412529020058368
2Mass ID (if available) : 20135583-2013124
ICRS Star Coord at Epoch: 20h 13m 55.83640s -20:13:12.83263s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 7.921
G magnitude           : 10.326
RP magnitude          : 9.590
BP magnitude          : 10.925
DUPflag              : 0
Distance (au)        : 4.386
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -7.42
Sun-Target sep (deg) : 134.85
Sun-Moon sep (deg)   : 117.83
B (ring opening deg) : -0.99
PA of pole (deg)     : -14.45
Pole direction: RA (deg): 268.05665
Dec (deg): 64.49655
C/A sky separation (") : 16.327
C/A sky separation (km) : 51941.1
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
    
```

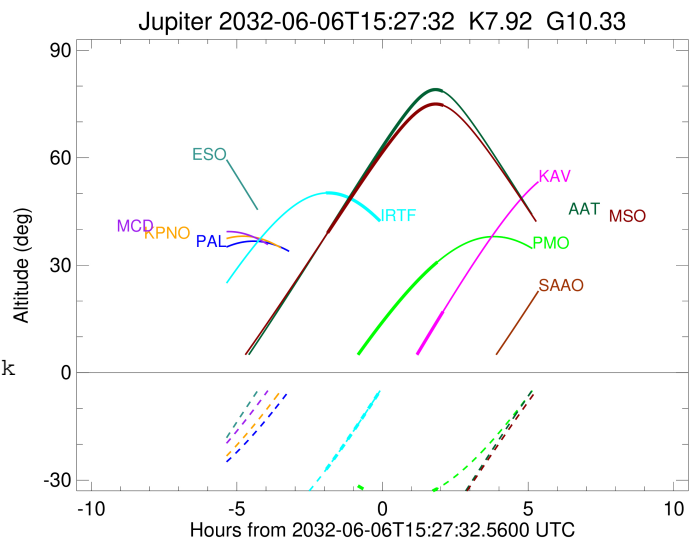
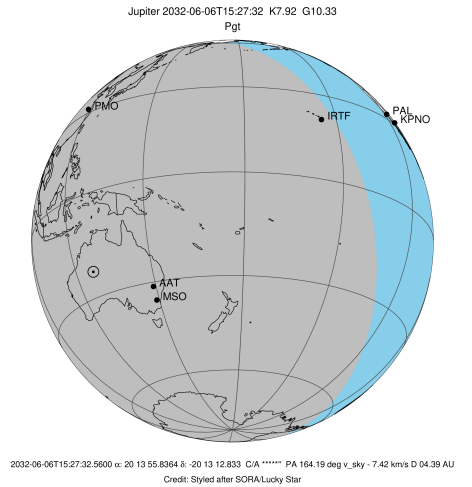


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-06-06T13:45:13.752	-5.09x	-26.14	71491.3	44.59	48.30
Jupiter	E	2032-06-06T17:20:21.184	30.87	-32.35	71491.3	48.00	51.64

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2032-06-06T15:21:48.820
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      : 6854412529020058368
2Mass ID (if available) : 20135583-2013124
ICRS Star Coord at Epoch: 20h 13m 55.83640s -20:13:12.83263s
RUWE (>1.4 is poor) : 1.00
K magnitude         : 7.921
G magnitude         : 10.326
RP magnitude        : 9.590
BP magnitude        : 10.925
DUPflag            : 0
Distance (au)       : 4.387
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : -7.42
Sun-Target sep (deg) : 134.85
Sun-Moon sep (deg)  : 118.68
B (ring opening deg) : -0.99
PA of pole (deg)    : -14.45
Pole direction: RA (deg): 268.05665
Dec (deg): 64.49655
C/A sky separation (" ) : 15.608
C/A sky separation (km) : 49656.0
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
    
```

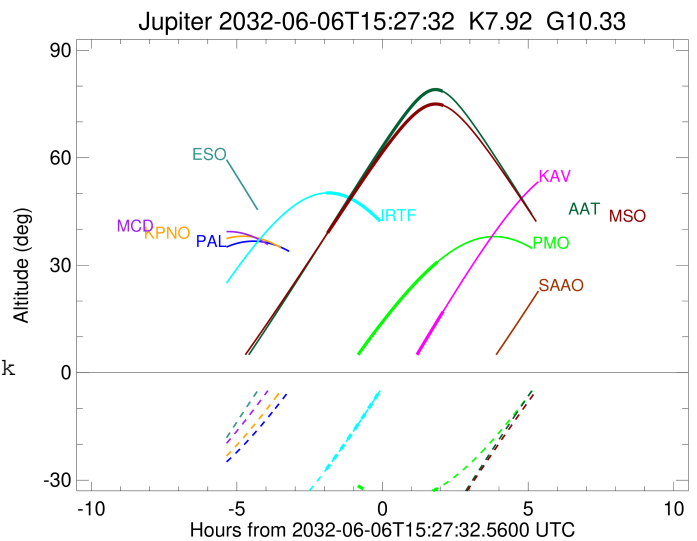
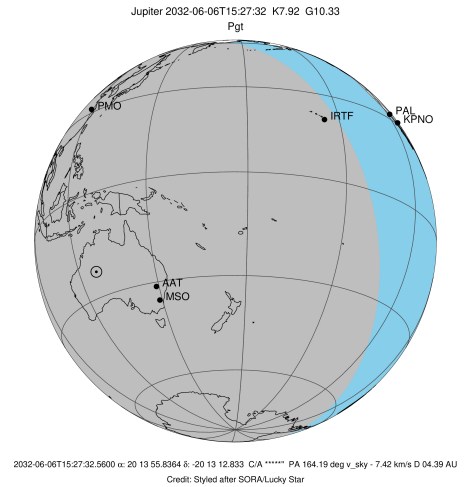


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-06-06T13:31:36.027	50.16	-26.99	71491.4	43.71	47.43
Jupiter	E	2032-06-06T17:12:59.480	23.41	19.06x	71491.4	43.97	47.68

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2032-06-06T15:37:51.270
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      : 6854412529020058368
2Mass ID (if available) : 20135583-2013124
ICRS Star Coord at Epoch: 20h 13m 55.83640s -20:13:12.83263s
RUWE (>1.4 is poor) : 1.00
K magnitude          : 7.921
G magnitude          : 10.326
RP magnitude         : 9.590
BP magnitude         : 10.925
DUPflag             : 0
Distance (au)       : 4.386
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -7.42
Sun-Target sep (deg) : 134.85
Sun-Moon sep (deg)  : 117.32
B (ring opening deg) : -0.99
PA of pole (deg)    : -14.45
Pole direction: RA (deg): 268.05665
Dec (deg): 64.49655
C/A sky separation (") : 15.543
C/A sky separation (km) : 49449.0
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
    
```

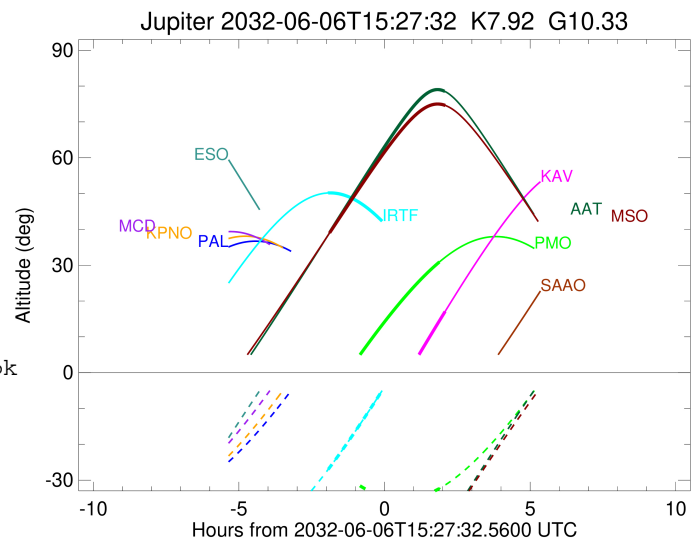
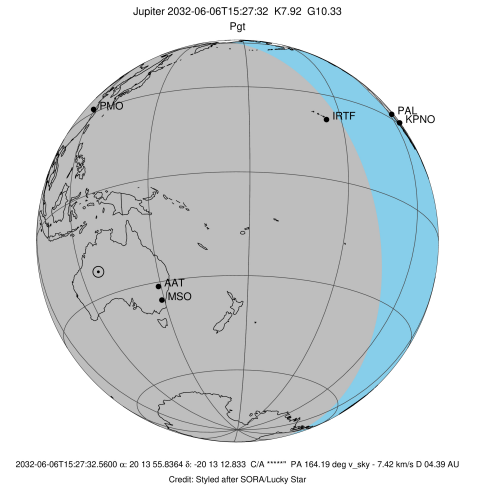


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-06-06T13:39:37.676	-36.60x	-7.74	71491.4	40.97	44.69
Jupiter	E	2032-06-06T17:32:24.221	17.07	-50.68	71491.3	46.06	49.75

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2032-06-06T15:34:04.920
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        : 6854412529020058368
2Mass ID (if available) : 20135583-2013124
ICRS Star Coord at Epoch: 20h 13m 55.83640s -20:13:12.83263s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 7.921
G magnitude           : 10.326
RP magnitude          : 9.590
BP magnitude          : 10.925
DUPflag              : 0
Distance (au)         : 4.386
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -7.42
Sun-Target sep (deg)  : 134.85
Sun-Moon sep (deg)    : 118.43
B (ring opening deg) : -0.99
PA of pole (deg)      : -14.45
Pole direction: RA (deg): 268.05665
Dec (deg): 64.49655
C/A sky separation (") : 14.450
C/A sky separation (km) : 45972.5
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
    
```

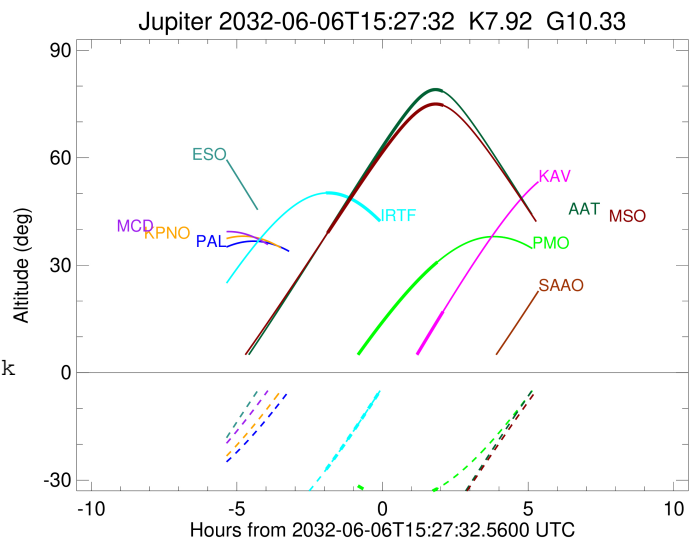
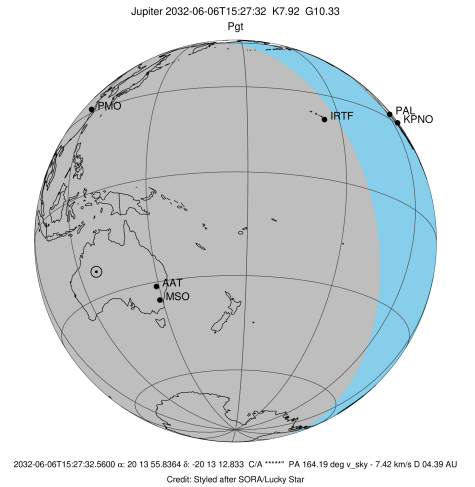


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-06-06T13:35:15.623	39.23	-79.66	71491.5	38.63	42.32
Jupiter	E	2032-06-06T17:31:22.657	78.54	-43.14	71491.4	40.76	44.47

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2032-06-06T15:34:05.660
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        : 6854412529020058368
2Mass ID (if available) : 20135583-2013124
ICRS Star Coord at Epoch: 20h 13m 55.83640s -20:13:12.83263s
RUWE (>1.4 is poor) : 1.00
K magnitude           : 7.921
G magnitude           : 10.326
RP magnitude          : 9.590
BP magnitude          : 10.925
DUPflag              : 0
Distance (au)         : 4.386
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -7.42
Sun-Target sep (deg)  : 134.85
Sun-Moon sep (deg)   : 118.42
B (ring opening deg) : -0.99
PA of pole (deg)     : -14.45
Pole direction: RA (deg): 268.05665
Dec (deg): 64.49655
C/A sky separation ("): 14.312
C/A sky separation (km): 45532.0
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	2032-06-06T13:34:16.453	38.97	-76.13	71491.5	38.17	41.85
Jupiter	E	2032-06-06T17:32:24.514	74.61	-43.06	71491.5	40.32	44.04