

target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2036-08-22T07:55:40.930  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 3414571842966512512  
 2Mass ID (if available) : 05231408+2233191

Jupiter 2036-08-22T07:55:40 K9.60 G13.11 Pgt

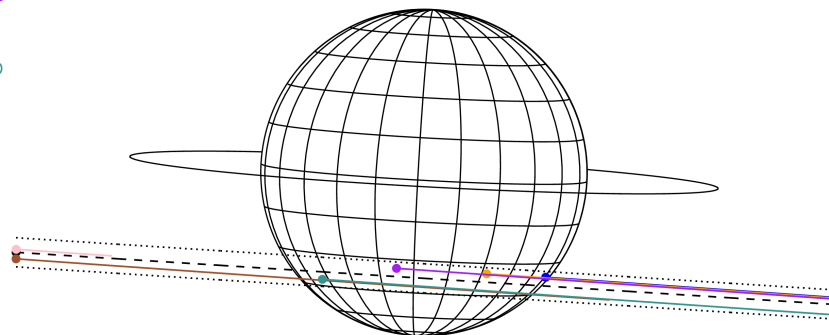
ICRS Star Coord at Epoch: 05h 23m 14.07805s +22:33:19.15505s

RUWE (>1.4 is poor) : 2.22  
 K magnitude : 9.598  
 G magnitude : 13.114  
 RP magnitude : 12.098  
 BP magnitude : 14.159  
 DUPflag : 0  
 Distance (au) : 5.351  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : 23.89  
 Sun-Target sep (deg) : 67.80  
 Sun-Moon sep (deg) : 76.27  
 B (ring opening deg) : 2.77  
 PA of pole (deg) : -3.12  
 Pole direction: RA (deg): 268.05634  
 Dec (deg): 64.49686  
 C/A sky separation (") : 11.922  
 C/A sky separation (km) : 46267.3  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2036-08-22T07:55:40 K9.60 G13.11  
 Pgt



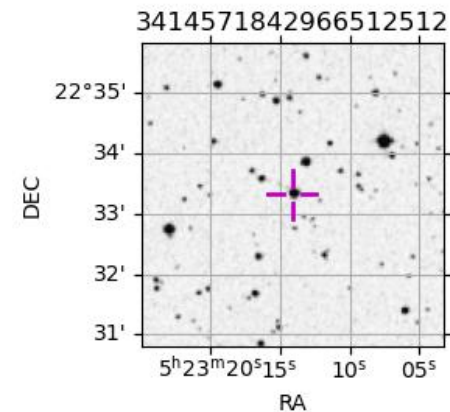
Earth  
 PAL  
 KPNO  
 MCD  
 TEN  
 RIO  
 ESO



2036-08-22T07:55:40.9300 α: 05 23 14.0780 δ: +22 33 19.155 C/A \*\*\*\*\* PA 356.35 deg v\_sky +23.89 km/s D 05.35 AU  
 Credit: Styled after SORA/Lucky Star

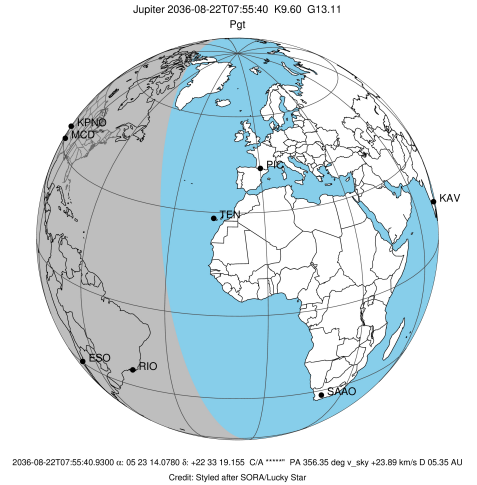
Observable events with sun below -5 deg and altitude above 5 deg

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	+	AUG 22 08:32 - AUG 22 08:32	Pne
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	AUG 22 08:32 - AUG 22 08:32	Pne
MCD	McDonald Obs. 2.7m	30.7	256.0	+	AUG 22 08:31 - AUG 22 08:31	Pne
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	+ +	AUG 22 07:16 - AUG 22 08:29	Pie
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	AUG 22 08:27 - AUG 22 08:27	Pne
AAT	Siding Spring (AAT)	-31.3	149.1			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn

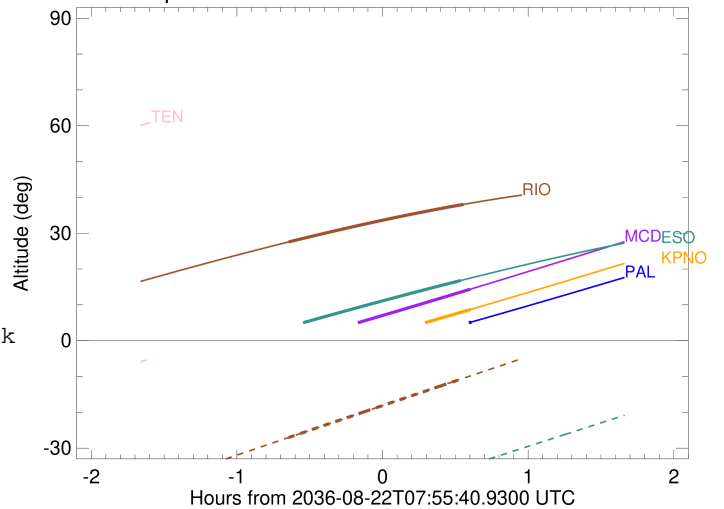


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2036-08-22T07:52:10.130
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : PAL
Location            : Palomar Mt (200")
Latitude (deg)      : 33.35622
E. Longitude (deg)  : 243.13601
Altitude (km)       : 1.706
Gaia source ID      : 3414571842966512512
2Mass ID (if available) : 05231408+2233191
ICRS Star Coord at Epoch: 05h 23m 14.07805s +22:33:19.15505s
RUWE (>1.4 is poor) : 2.22
K magnitude          : 9.598
G magnitude          : 13.114
RP magnitude         : 12.098
BP magnitude         : 14.159
DUPflag             : 0
Distance (au)       : 5.351
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.89
Sun-Target sep (deg) : 67.80
Sun-Moon sep (deg)  : 76.42
B (ring opening deg) : 2.77
PA of pole (deg)    : -3.12
Pole direction: RA (deg): 268.05634
Dec (deg): 64.49686
C/A sky separation (" ) : 10.844
C/A sky separation (km) : 42087.0
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 2036-08-22T07:55:40 K9.60 G13.11

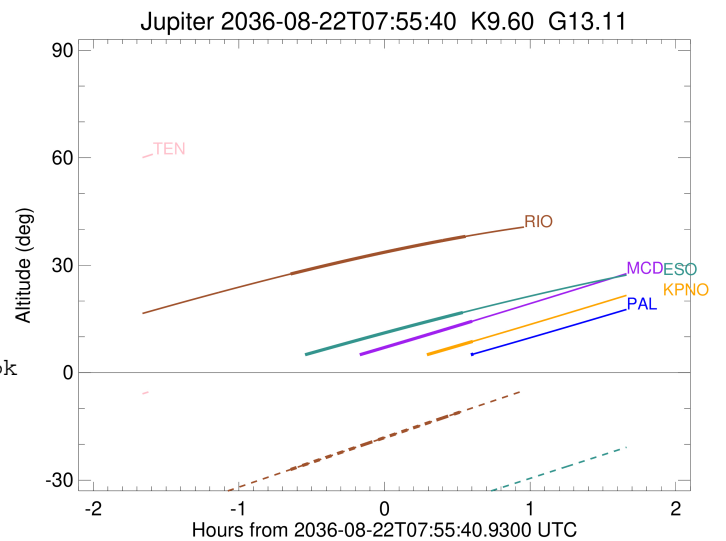
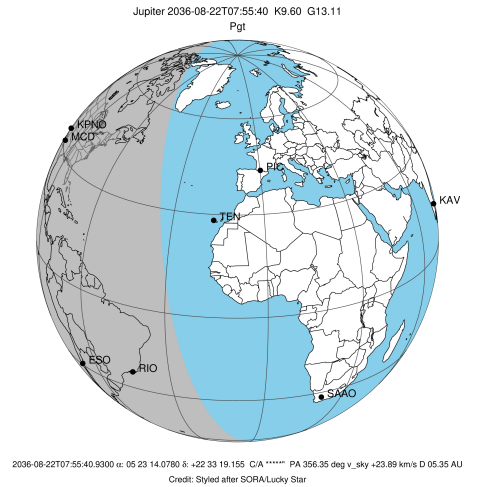


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2036-08-22T07:12:09.563	-9.45x	-44.37	71488.5	-35.19	-38.79
Jupiter	E	2036-08-22T08:32:18.430	5.20	-44.19	71488.2	-36.88	-40.53

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2036-08-22T07:51:59.610
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : KPNO
Location             : Kitt Peak Natl Obs
Latitude (deg)       : 31.96333
E. Longitude (deg)  : 248.40000
Altitude (km)        : 2.120
Gaia source ID       : 3414571842966512512
2Mass ID (if available) : 05231408+2233191
ICRS Star Coord at Epoch: 05h 23m 14.07805s +22:33:19.15505s
RUWE (>1.4 is poor) : 2.22
K magnitude          : 9.598
G magnitude          : 13.114
RP magnitude         : 12.098
BP magnitude         : 14.159
DUPflag             : 0
Distance (au)        : 5.351
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.89
Sun-Target sep (deg) : 67.80
Sun-Moon sep (deg)  : 76.48
B (ring opening deg) : 2.77
PA of pole (deg)    : -3.12
Pole direction: RA (deg): 268.05634
Dec (deg): 64.49686
C/A sky separation (") : 10.916
C/A sky separation (km) : 42364.9
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
    
```

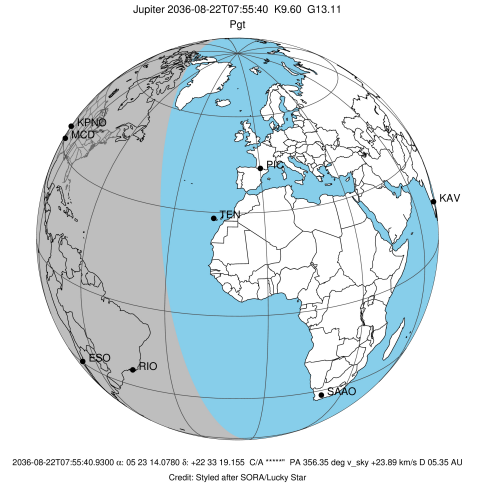


x: target alt < 5.0 deg or sun > -5.0 deg

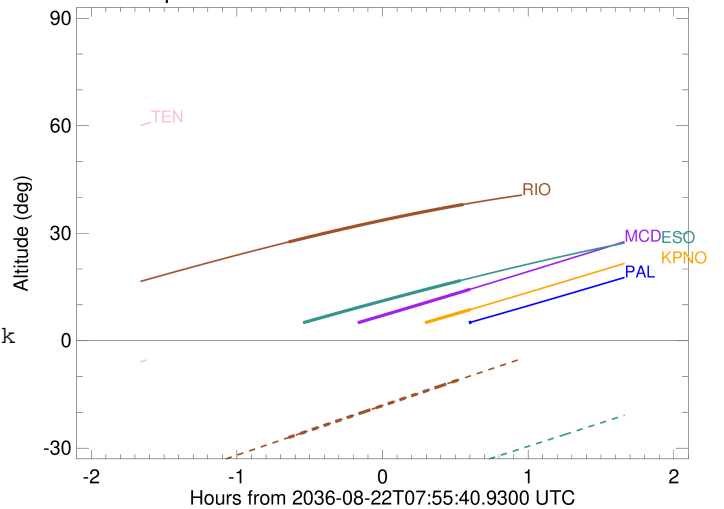
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2036-08-22T07:12:04.402	-6.52x	-46.48	71488.5	-35.44	-39.05
Jupiter	E	2036-08-22T08:32:02.838	8.72	-44.15	71488.2	-37.17	-40.83

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2036-08-22T07:51:49.670
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : MCD
Location             : McDonald Obs. 2.7m
Latitude (deg)       : 30.67158
E. Longitude (deg)   : 255.97844
Altitude (km)        : 2.075
Gaia source ID       : 3414571842966512512
2Mass ID (if available) : 05231408+2233191
ICRS Star Coord at Epoch: 05h 23m 14.07805s +22:33:19.15505s
RUWE (>1.4 is poor) : 2.22
K magnitude           : 9.598
G magnitude           : 13.114
RP magnitude         : 12.098
BP magnitude         : 14.159
DUPflag              : 0
Distance (au)        : 5.351
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.89
Sun-Target sep (deg) : 67.80
Sun-Moon sep (deg)   : 76.58
B (ring opening deg) : 2.77
PA of pole (deg)     : -3.12
Pole direction: RA (deg): 268.05634
Dec (deg): 64.49686
C/A sky separation (") : 11.010
C/A sky separation (km) : 42731.8
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
    
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Jupiter 2036-08-22T07:55:40 K9.60 G13.11

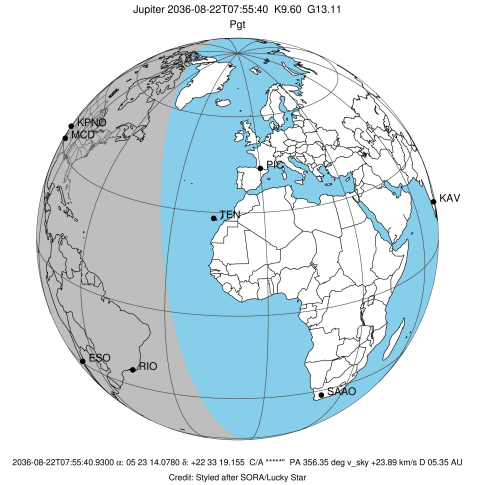


x: target alt < 5.0 deg or sun > -5.0 deg

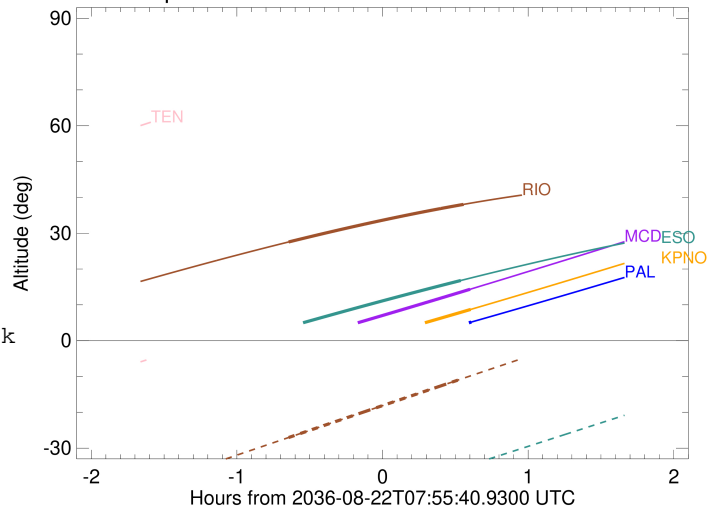
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2036-08-22T07:12:00.834	-1.53x	-47.84	71488.4	-35.78	-39.40
Jupiter	E	2036-08-22T08:31:46.772	14.35	-42.41	71488.1	-37.55	-41.22

```

target                : Jupiter
target radius (km)    : 71492.00
C/A epoch             : 2036-08-22T07:52:59.030
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : RIO
Location              : Rio de Janeiro
Latitude (deg)        : -22.89506
E. Longitude (deg)    : 316.77708
Altitude (km)         : 0.033
Gaia source ID        : 3414571842966512512
2Mass ID (if available) : 05231408+2233191
ICRS Star Coord at Epoch: 05h 23m 14.07805s +22:33:19.15505s
RUWE (>1.4 is poor) : 2.22
K magnitude           : 9.598
G magnitude           : 13.114
RP magnitude          : 12.098
BP magnitude          : 14.159
DUPflag              : 0
Distance (au)         : 5.351
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 23.89
Sun-Target sep (deg)  : 67.80
Sun-Moon sep (deg)   : 76.96
B (ring opening deg) : 2.77
PA of pole (deg)     : -3.12
Pole direction: RA (deg): 268.05634
Dec (deg): 64.49686
C/A sky separation (") : 12.930
C/A sky separation (km) : 50182.0
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 2036-08-22T07:55:40 K9.60 G13.11

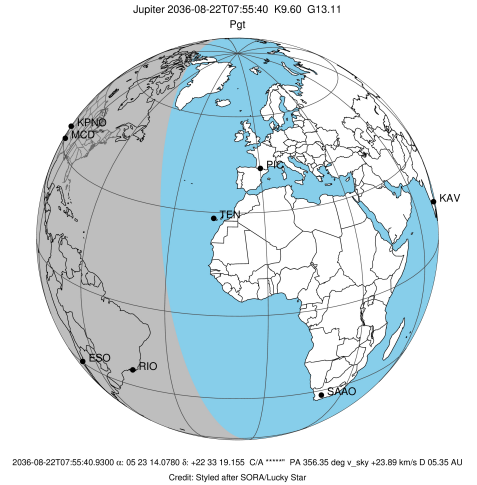


x: target alt < 5.0 deg or sun > -5.0 deg

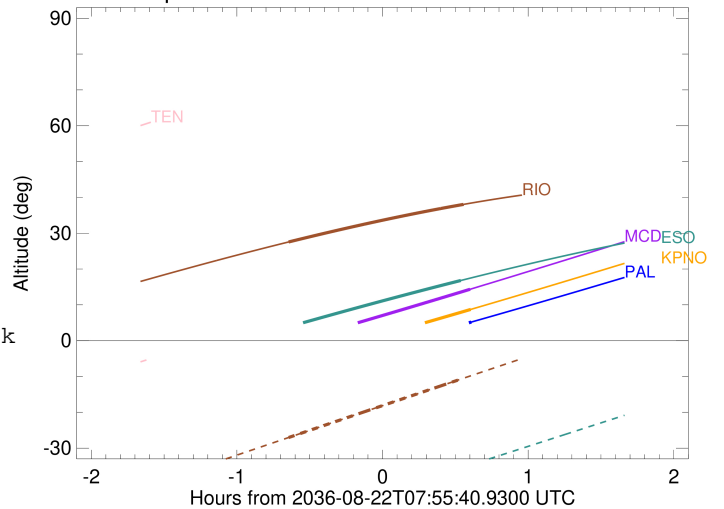
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2036-08-22T07:16:58.821	27.55	-27.04	71487.0	-43.69	-47.40
Jupiter	E	2036-08-22T08:29:04.065	38.04	-10.48	71486.7	-45.30	-49.00

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2036-08-22T07:51:50.980
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : ESO
Location             : European Southern Obs. (3.6m)
Latitude (deg)       : -29.26097
E. Longitude (deg)   : 289.26831
Altitude (km)        : 2.400
Gaia source ID       : 3414571842966512512
2Mass ID (if available) : 05231408+2233191
ICRS Star Coord at Epoch: 05h 23m 14.07805s +22:33:19.15505s
RUWE (>1.4 is poor) : 2.22
K magnitude          : 9.598
G magnitude          : 13.114
RP magnitude         : 12.098
BP magnitude         : 14.159
DUPflag             : 0
Distance (au)        : 5.351
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 23.89
Sun-Target sep (deg) : 67.80
Sun-Moon sep (deg)  : 76.66
B (ring opening deg) : 2.77
PA of pole (deg)    : -3.12
Pole direction: RA (deg): 268.05634
Dec (deg): 64.49686
C/A sky separation (" ) : 12.832
C/A sky separation (km) : 49801.7
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 2036-08-22T07:55:40 K9.60 G13.11



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	2036-08-22T07:15:51.673	3.64x	-50.91	71487.1	-43.20	-46.91
Jupiter	E	2036-08-22T08:27:56.673	16.80	-35.55	71486.8	-44.97	-48.67