

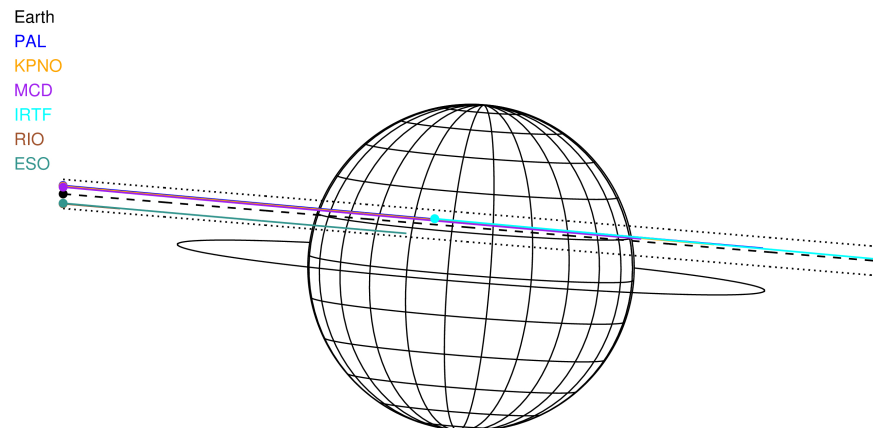
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2024-08-30T11:07:36.160
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3415285975768572544
 2Mass ID (if available) : 05101526+2214336

Jupiter 2024-08-30T11:07:36 K9.30 G12.37 Pgt

ICRS Star Coord at Epoch: 05h 10m 15.26787s +22:14:33.72021s
 RUWE (>1.4 is poor) : 1.42
 K magnitude : 9.297
 G magnitude : 12.368
 RP magnitude : 11.472
 BP magnitude : 13.196
 DUPflag : 0
 Distance (au) : 5.143
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 18.48
 Sun-Target sep (deg) : 78.73
 Sun-Moon sep (deg) : 38.38
 B (ring opening deg) : 2.88
 PA of pole (deg) : -4.50
 Pole direction: RA (deg): 268.05789
 Dec (deg): 64.49673
 C/A sky separation (") : 4.673
 C/A sky separation (km) : 17432.3
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLv1.spk
 naif0012.tls
 nep097.bsp
 nep101.bsp
 sat4401.bsp

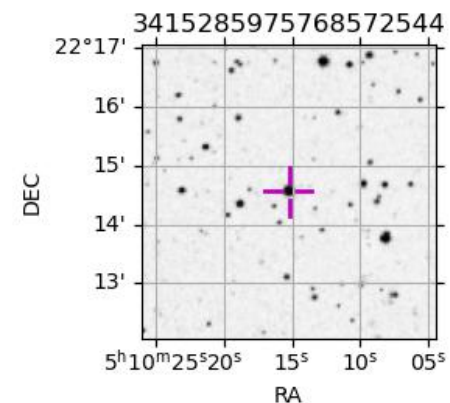


2024-08-30T11:07:36.1600 cc: 05 10 15.26787 s +22 14 33.72021 C/A 4.684" PA 175.29 deg v_sky +18.48 km/s D 05.14 AU
 Credit: Styled after SORA/Lucky Star



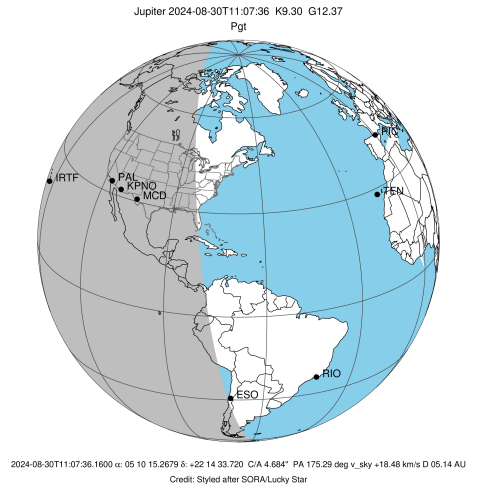
Observable events with sun below -5 deg and altitude above 5 deg

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 30 10:01 - AUG 30 12:07	Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	AUG 30 10:01 - AUG 30 12:07	Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	AUG 30 10:01 - AUG 30 12:08	Pie
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5		AUG 30 12:04 - AUG 30 12:04	Pne
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	+	AUG 30 10:02 - AUG 30 10:02	Pin
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

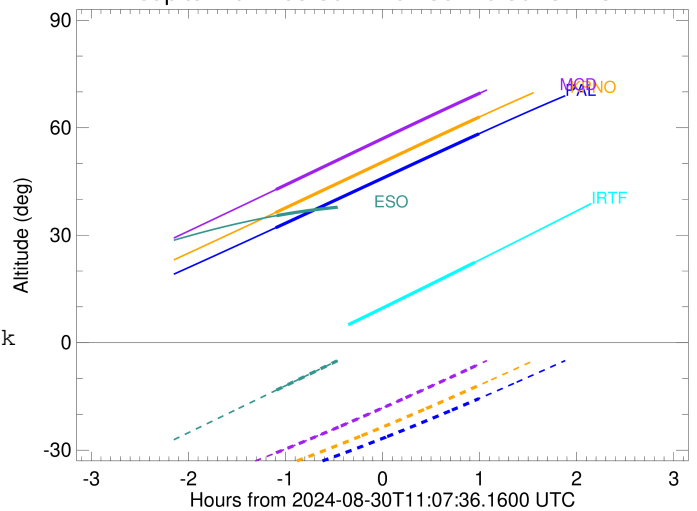


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-08-30T11:04:12.920
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : PAL
Location             : Palomar Mt (200")
Latitude (deg)       : 33.35622
E. Longitude (deg)   : 243.13601
Altitude (km)        : 1.706
Gaia source ID       : 3415285975768572544
2Mass ID (if available) : 05101526+2214336
ICRS Star Coord at Epoch: 05h 10m 15.26787s +22:14:33.72021s
RUWE (>1.4 is poor) : 1.42
K magnitude           : 9.297
G magnitude           : 12.368
RP magnitude          : 11.472
BP magnitude          : 13.196
DUPflag              : 0
Distance (au)         : 5.143
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 18.48
Sun-Target sep (deg) : 78.73
Sun-Moon sep (deg)   : 39.19
B (ring opening deg) : 2.88
PA of pole (deg)     : -4.50
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation ("): 5.272
C/A sky separation (km): 19667.7
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
    
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Jupiter 2024-08-30T11:07:36 K9.30 G12.37

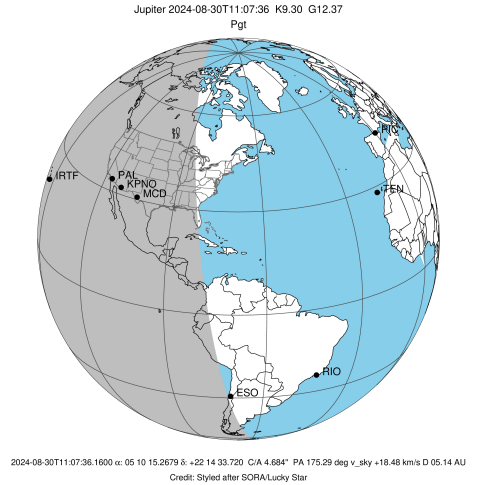


x: target alt < 5.0 deg or sun > -5.0 deg

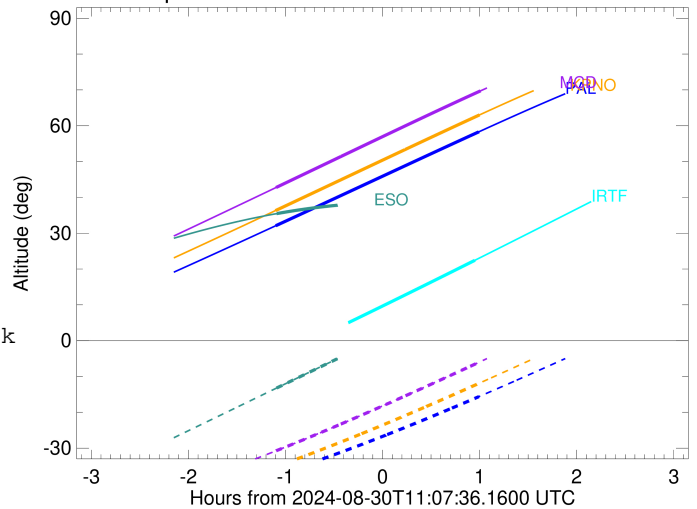
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-08-30T10:01:35.490	32.07	-37.40	71491.1	16.59	18.80
Jupiter	E	2024-08-30T12:07:11.700	58.30	-15.62	71491.2	15.36	17.43

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-08-30T11:04:26.380
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       : 3415285975768572544
2Mass ID (if available) : 05101526+2214336
ICRS Star Coord at Epoch: 05h 10m 15.26787s +22:14:33.72021s
RUWE (>1.4 is poor) : 1.42
K magnitude          : 9.297
G magnitude          : 12.368
RP magnitude         : 11.472
BP magnitude         : 13.196
DUPflag             : 0
Distance (au)        : 5.143
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 18.48
Sun-Target sep (deg) : 78.73
Sun-Moon sep (deg)   : 39.20
B (ring opening deg) : 2.88
PA of pole (deg)     : -4.50
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation ("): 5.192
C/A sky separation (km): 19366.2
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
    
```



Jupiter 2024-08-30T11:07:36 K9.30 G12.37

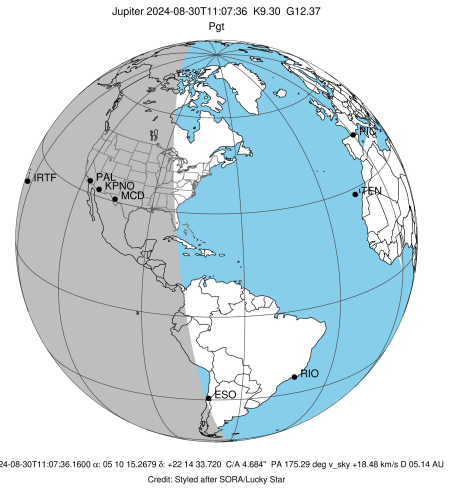


x: target alt < 5.0 deg or sun > -5.0 deg

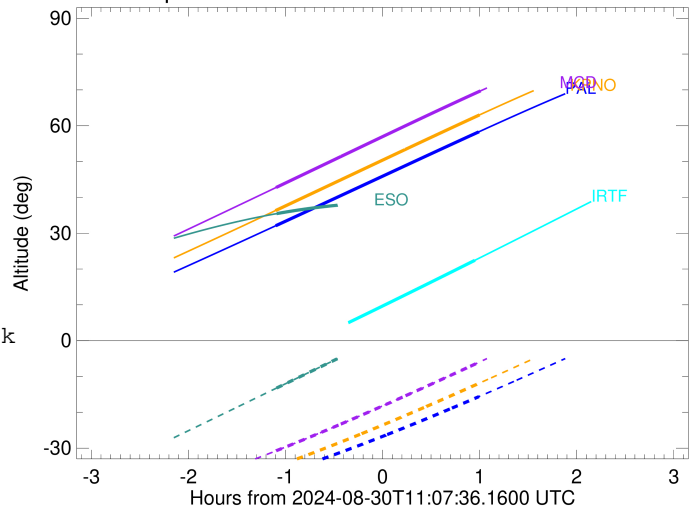
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-08-30T10:01:37.489	36.34	-35.15	71491.1	16.33	18.51
Jupiter	E	2024-08-30T12:07:35.705	63.02	-11.84	71491.2	15.13	17.18

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2024-08-30T11:04:51.710
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        : 3415285975768572544
2Mass ID (if available) : 05101526+2214336
ICRS Star Coord at Epoch: 05h 10m 15.26787s +22:14:33.72021s
RUWE (>1.4 is poor) : 1.42
K magnitude           : 9.297
G magnitude           : 12.368
RP magnitude          : 11.472
BP magnitude          : 13.196
DUPflag              : 0
Distance (au)         : 5.143
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 18.48
Sun-Target sep (deg) : 78.73
Sun-Moon sep (deg)   : 39.19
B (ring opening deg) : 2.88
PA of pole (deg)     : -4.50
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 5.097
C/A sky separation (km) : 19012.2
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
    
```



Jupiter 2024-08-30T11:07:36 K9.30 G12.37

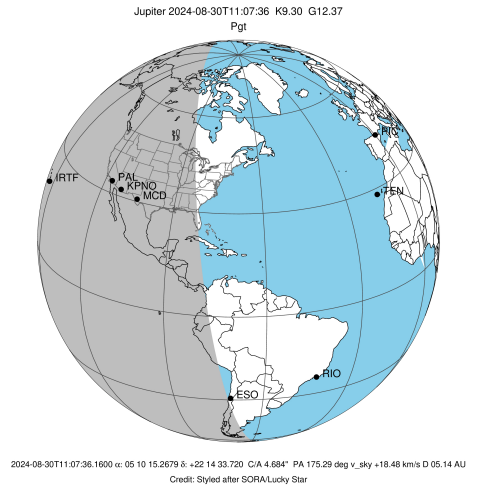


x: target alt < 5.0 deg or sun > -5.0 deg

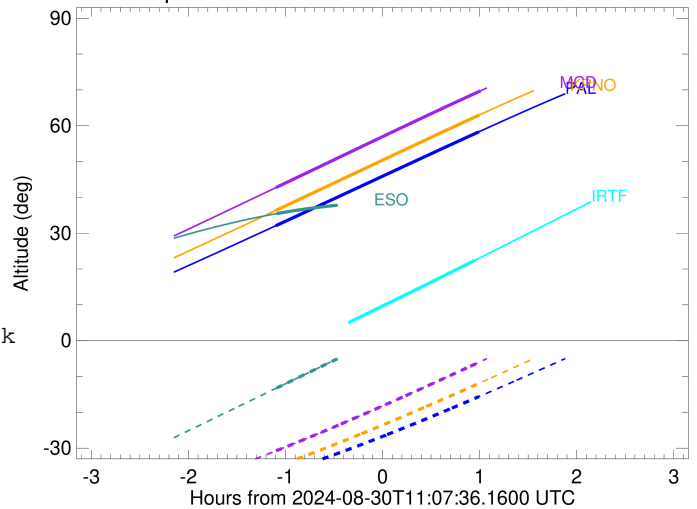
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-08-30T10:01:48.411	42.75	-30.74	71491.1	16.01	18.16
Jupiter	E	2024-08-30T12:08:13.589	69.73	-5.83	71491.2	14.88	16.89

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-08-30T11:02:30.210
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      : 3415285975768572544
2Mass ID (if available) : 05101526+2214336
ICRS Star Coord at Epoch: 05h 10m 15.26787s +22:14:33.72021s
RUWE (>1.4 is poor) : 1.42
K magnitude          : 9.297
G magnitude          : 12.368
RP magnitude         : 11.472
BP magnitude         : 13.196
DUPflag             : 0
Distance (au)       : 5.143
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 18.48
Sun-Target sep (deg) : 78.73
Sun-Moon sep (deg)  : 39.09
B (ring opening deg) : 2.88
PA of pole (deg)    : -4.50
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (" ) : 5.319
C/A sky separation (km) : 19841.7
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 2024-08-30T11:07:36 K9.30 G12.37

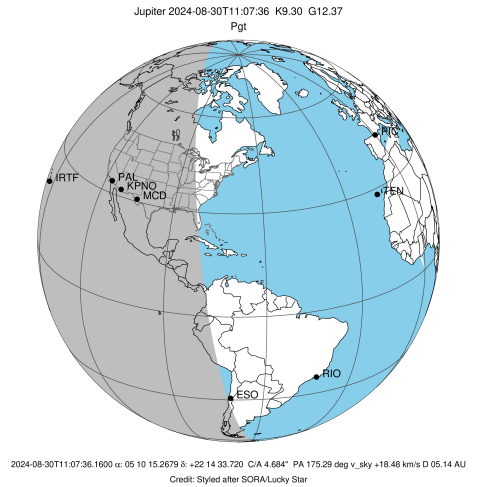


x: target alt < 5.0 deg or sun > -5.0 deg

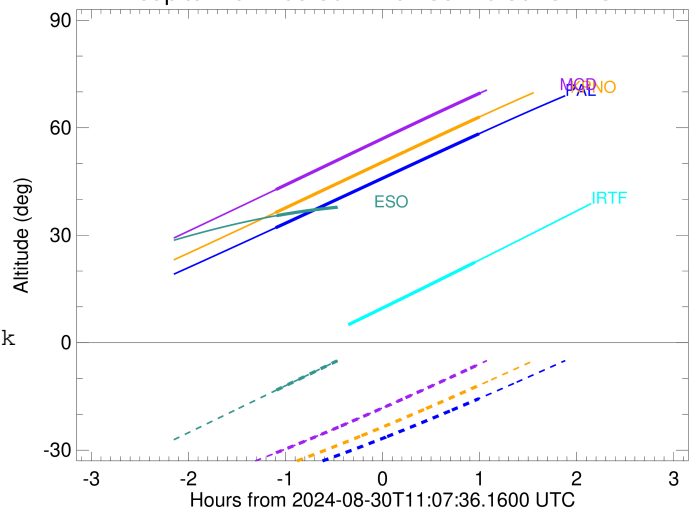
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-08-30T10:00:47.331	-4.86x	-61.06	71491.1	16.79	19.03
Jupiter	E	2024-08-30T12:04:40.775	22.43	-52.03	71491.2	15.36	17.43

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2024-08-30T11:07:01.650
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       : 3415285975768572544
2Mass ID (if available) : 05101526+2214336
ICRS Star Coord at Epoch: 05h 10m 15.26787s +22:14:33.72021s
RUWE (>1.4 is poor) : 1.42
K magnitude           : 9.297
G magnitude           : 12.368
RP magnitude          : 11.472
BP magnitude          : 13.196
DUPflag              : 0
Distance (au)        : 5.143
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 18.48
Sun-Target sep (deg) : 78.73
Sun-Moon sep (deg)   : 38.91
B (ring opening deg) : 2.88
PA of pole (deg)     : -4.50
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 3.349
C/A sky separation (km) : 12491.5
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
    
```



Jupiter 2024-08-30T11:07:36 K9.30 G12.37



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	2024-08-30T10:02:11.930	35.46	-13.21	71491.6	10.45	11.90
Jupiter	E	2024-08-30T12:11:58.059	37.01	14.58x	71491.7	9.79	11.16