

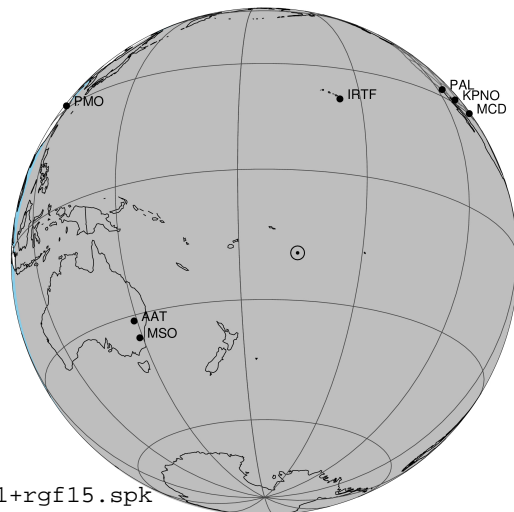
target : Jupiter  
 target radius (km) : 71492.00  
 C/A epoch : 2032-07-26T11:10:20.590  
 Event type : Pgt  
 : Jupiter occs: geocentric, topocentric  
 : Not a ringed target  
 Gaia source ID : 6865255569098453248  
 2Mass ID (if available) : 19514636-2126348

Jupiter 2032-07-26T11:10:20 K7.92 G10.75 Pgt

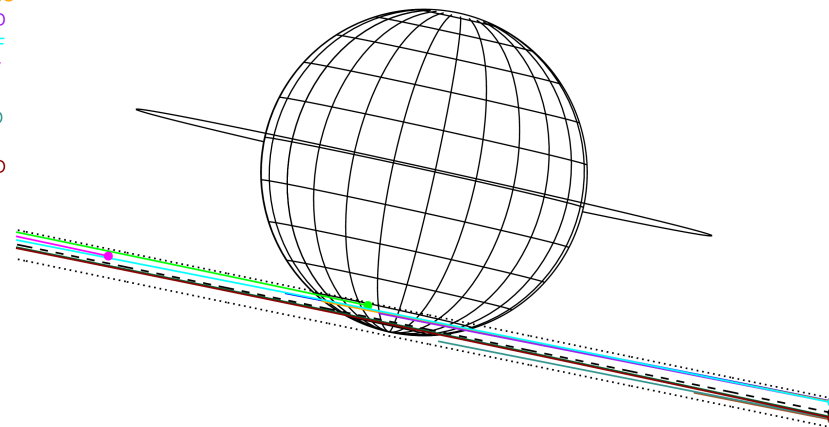
ICRS Star Coord at Epoch: 19h 51m 46.35658s -21:26:34.94722s

RUWE (>1.4 is poor) : 1.08  
 K magnitude : 7.924  
 G magnitude : 10.750  
 RP magnitude : 9.908  
 BP magnitude : 11.506  
 DUPflag : 1  
 Distance (au) : 4.127  
 f0 (km) : 0.00  
 g0 (km) : 0.00  
 skyplane vel. (km/s) : -15.83  
 Sun-Target sep (deg) : 172.28  
 Sun-Moon sep (deg) : 59.60  
 B (ring opening deg) : -1.00  
 PA of pole (deg) : -12.39  
 Pole direction: RA (deg): 268.05662  
 Dec (deg): 64.49655  
 C/A sky separation (") : 22.376  
 C/A sky separation (km) : 66971.4  
 NAIF SPICE kernels : RAJobs\_U111+rgf15.spk

Jupiter 2032-07-26T11:10:20 K7.92 G10.75  
 Pgt



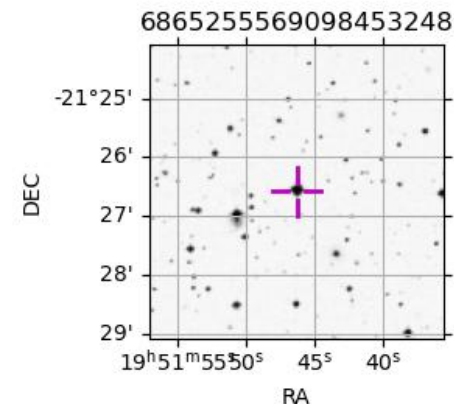
Earth  
 PAL  
 PMO  
 KPNO  
 MCD  
 IRTF  
 KAV  
 RIO  
 ESO  
 AAT  
 MSO



2032-07-26T11:10:20.5900 a: 19 51 46.3566 ð -21 26 34.947 C/A \*\*\*\*\* PA 348.33 deg v\_sky -15.83 km/s D 04.13 AU  
 Credit: Styled after SORA/Lucky Star

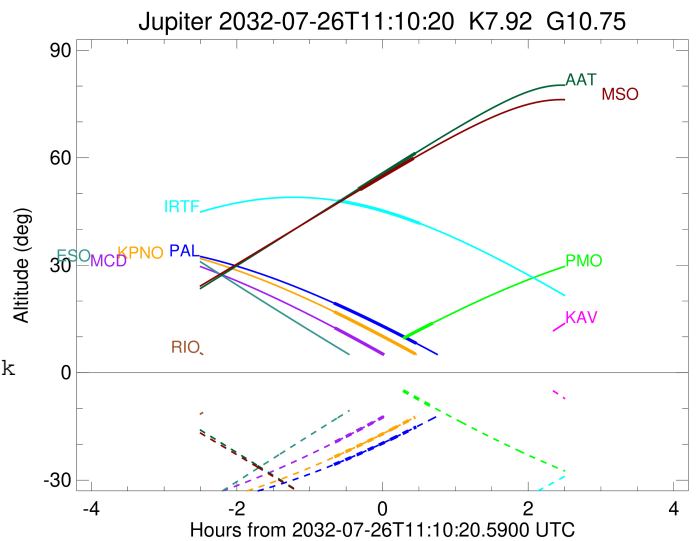
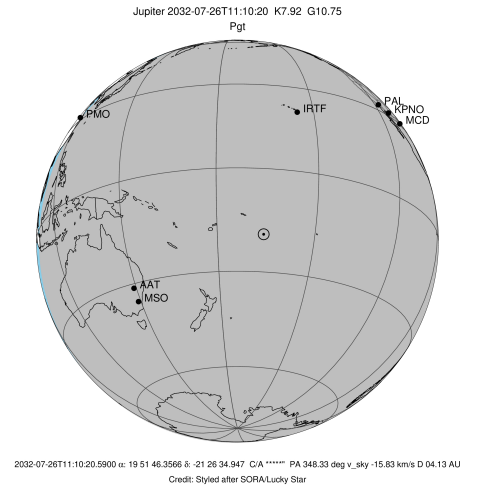
Observable events with sun below -5 deg and altitude above 5 deg

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	+ +	JUL 26 10:30 - JUL 26 11:38		Pie
PMO	Purple Mtn Obs. Nanking	32.1	118.8	+ +	JUL 26 11:51 - JUL 26 11:51		Pne
KPNO	Kitt Peak Natl Obs	32.0	248.4	+ +	JUL 26 10:30 - JUL 26 11:37		Pie
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	JUL 26 10:31 - JUL 26 10:31		Pin
TEN	Teide Obs./Tenerife	28.3	343.5				Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+ +	JUL 26 10:33 - JUL 26 11:41		Pie
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	+ +	JUL 26 10:50 - JUL 26 11:37		Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8				Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+ +	JUL 26 10:51 - JUL 26 11:36		Pie



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2032-07-26T11:04:12.550
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       : 6865255569098453248
2Mass ID (if available) : 19514636-2126348
ICRS Star Coord at Epoch: 19h 51m 46.35658s -21:26:34.94722s
RUWE (>1.4 is poor) : 1.08
K magnitude          : 7.924
G magnitude          : 10.750
RP magnitude         : 9.908
BP magnitude         : 11.506
DUPflag             : 1
Distance (au)        : 4.127
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.83
Sun-Target sep (deg) : 172.28
Sun-Moon sep (deg)   : 59.36
B (ring opening deg) : -1.00
PA of pole (deg)     : -12.39
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49655
C/A sky separation ("): 21.256
C/A sky separation (km): 63619.7
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
    
```

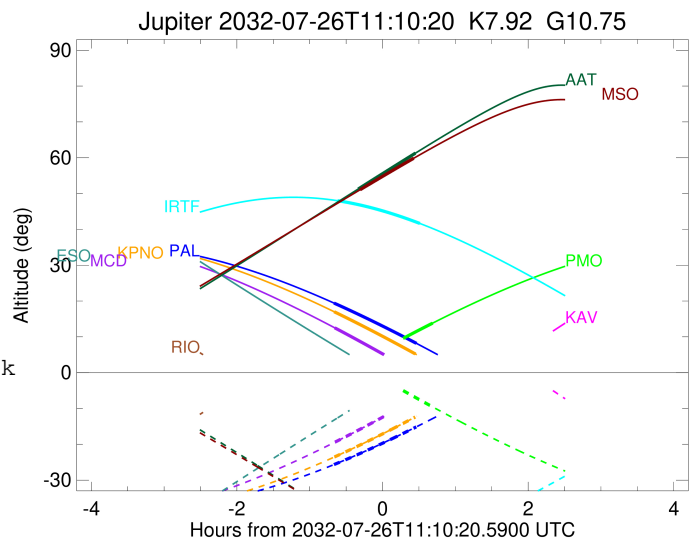
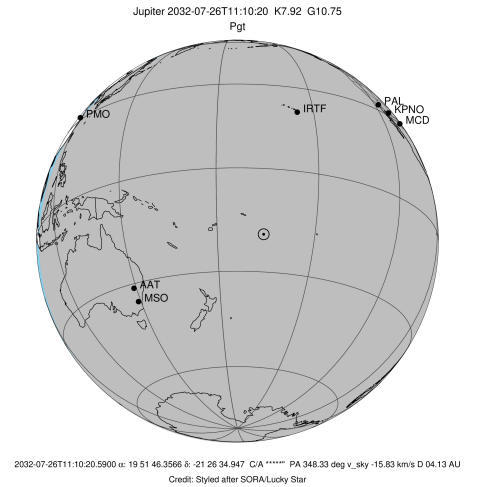


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-07-26T10:30:21.019	19.43	-25.65	71490.9	-61.56	-64.51
Jupiter	E	2032-07-26T11:38:10.744	8.20	-15.13	71490.9	-64.13	-66.88

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2032-07-26T11:14:58.980
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       : 6865255569098453248
2Mass ID (if available) : 19514636-2126348
ICRS Star Coord at Epoch: 19h 51m 46.35658s -21:26:34.94722s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 7.924
G magnitude           : 10.750
RP magnitude          : 9.908
BP magnitude          : 11.506
DUPflag              : 1
Distance (au)        : 4.127
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.83
Sun-Target sep (deg) : 172.28
Sun-Moon sep (deg)   : 60.00
B (ring opening deg) : -1.00
PA of pole (deg)     : -12.39
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49655
C/A sky separation (") : 20.751
C/A sky separation (km) : 62107.9
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
    
```

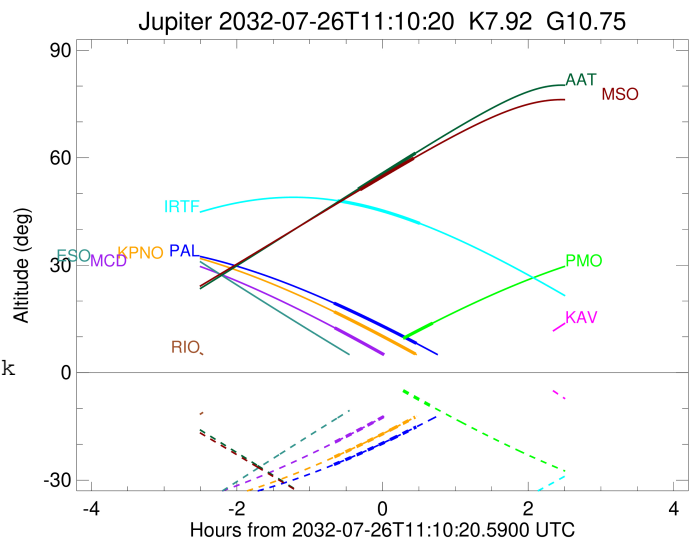
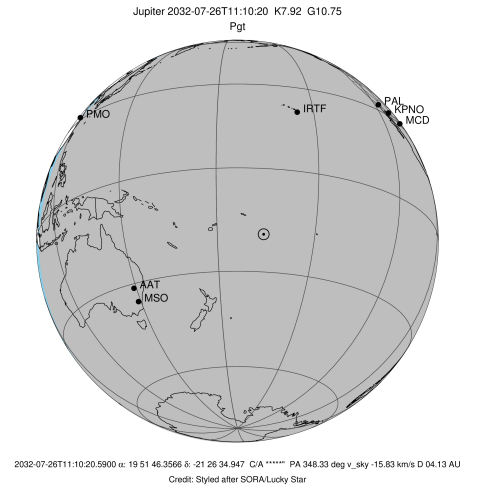


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-07-26T10:38:06.910	0.41x	4.61x	71491.0	-59.96	-63.03
Jupiter	E	2032-07-26T11:51:43.561	13.84	-9.57	71490.9	-60.71	-63.72

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2032-07-26T11:03:54.520
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       : 6865255569098453248
2Mass ID (if available) : 19514636-2126348
ICRS Star Coord at Epoch: 19h 51m 46.35658s -21:26:34.94722s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 7.924
G magnitude           : 10.750
RP magnitude         : 9.908
BP magnitude         : 11.506
DUPflag              : 1
Distance (au)        : 4.127
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.83
Sun-Target sep (deg) : 172.28
Sun-Moon sep (deg)   : 59.29
B (ring opening deg) : -1.00
PA of pole (deg)     : -12.39
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49655
C/A sky separation (") : 21.362
C/A sky separation (km) : 63937.1
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
    
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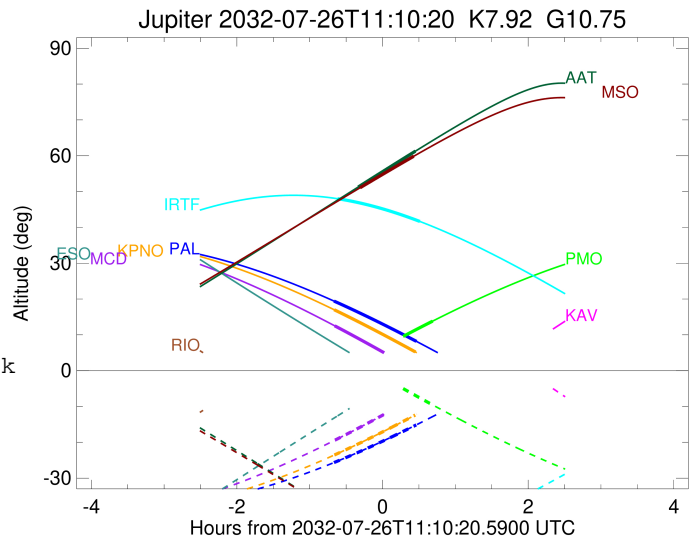
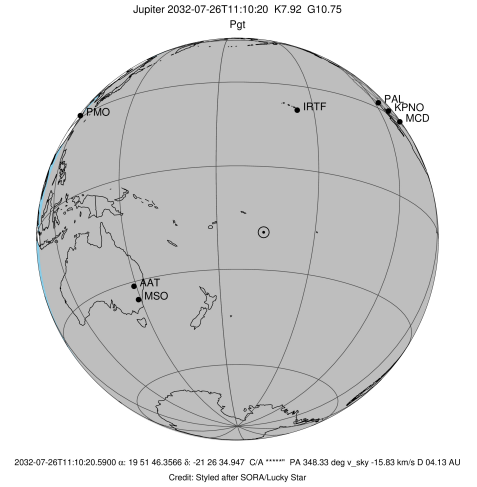


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-07-26T10:30:38.448	16.99	-23.54	71490.9	-62.11	-65.02
Jupiter	E	2032-07-26T11:37:17.446	5.25	-12.38	71490.9	-64.70	-67.40

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2032-07-26T11:03:35.160
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        : 6865255569098453248
2Mass ID (if available) : 19514636-2126348
ICRS Star Coord at Epoch: 19h 51m 46.35658s -21:26:34.94722s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 7.924
G magnitude           : 10.750
RP magnitude          : 9.908
BP magnitude          : 11.506
DUPflag              : 1
Distance (au)         : 4.127
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.83
Sun-Target sep (deg) : 172.28
Sun-Moon sep (deg)   : 59.20
B (ring opening deg) : -1.00
PA of pole (deg)     : -12.39
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49655
C/A sky separation (") : 21.498
C/A sky separation (km) : 64343.6
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
    
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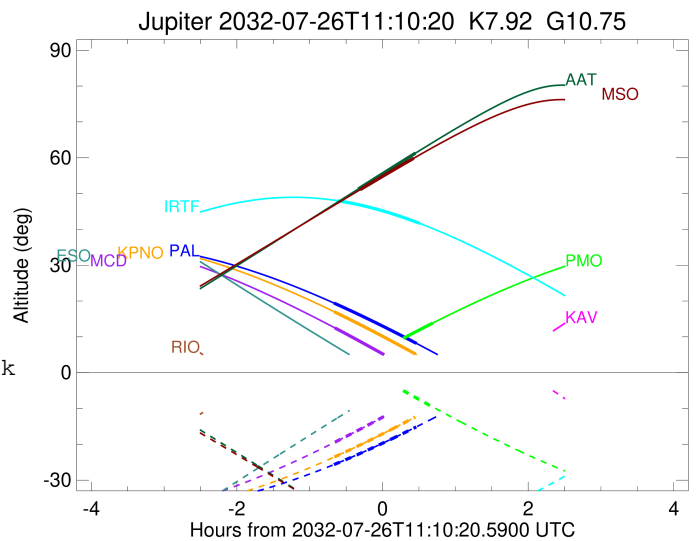
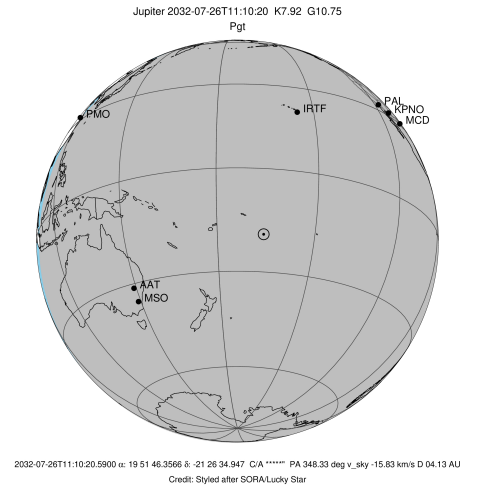


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-07-26T10:31:04.849	12.50	-19.40	71490.9	-62.84	-65.69
Jupiter	E	2032-07-26T11:36:12.455	0.27x	-7.60	71490.9	-65.44	-68.08

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2032-07-26T11:07:02.740
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       : 6865255569098453248
2Mass ID (if available) : 19514636-2126348
ICRS Star Coord at Epoch: 19h 51m 46.35658s -21:26:34.94722s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 7.924
G magnitude           : 10.750
RP magnitude         : 9.908
BP magnitude         : 11.506
DUPflag              : 1
Distance (au)        : 4.127
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : -15.83
Sun-Target sep (deg) : 172.28
Sun-Moon sep (deg)  : 59.99
B (ring opening deg) : -1.00
PA of pole (deg)    : -12.39
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49655
C/A sky separation (" ) : 21.164
C/A sky separation (km) : 63344.4
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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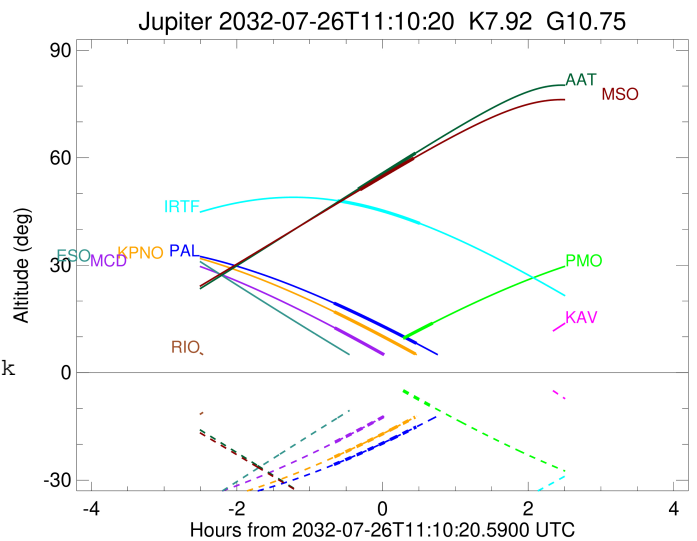
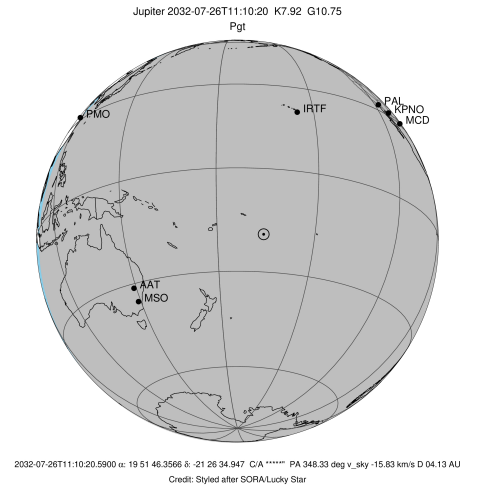


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-07-26T10:33:04.528	48.00	-51.03	71490.9	-61.21	-64.19
Jupiter	E	2032-07-26T11:41:04.342	41.65	-47.18	71490.9	-63.58	-66.37

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2032-07-26T11:14:03.150
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        : 6865255569098453248
2Mass ID (if available) : 19514636-2126348
ICRS Star Coord at Epoch: 19h 51m 46.35658s -21:26:34.94722s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 7.924
G magnitude           : 10.750
RP magnitude          : 9.908
BP magnitude          : 11.506
DUPflag              : 1
Distance (au)         : 4.127
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.83
Sun-Target sep (deg) : 172.28
Sun-Moon sep (deg)   : 60.59
B (ring opening deg) : -1.00
PA of pole (deg)     : -12.39
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49655
C/A sky separation (") : 22.633
C/A sky separation (km) : 67741.5
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
    
```

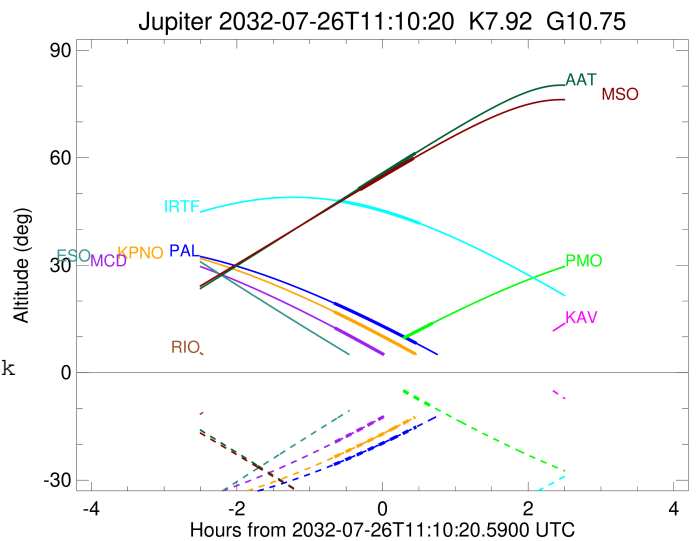
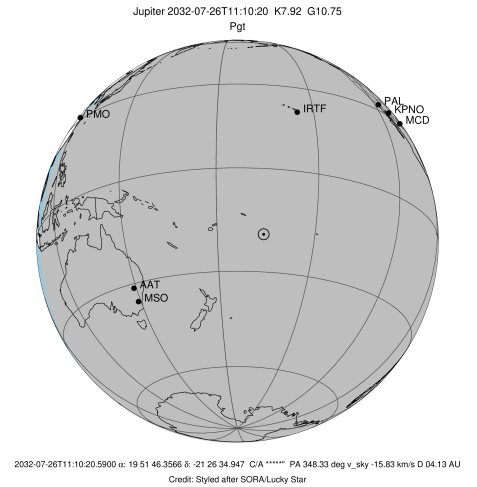


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2032-07-26T10:50:30.874	51.30	-43.67	71490.8	-70.71	-72.86
Jupiter	E	2032-07-26T11:37:33.667	61.29	-53.68	71490.7	-72.02	-74.04

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2032-07-26T11:13:59.840
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        : 6865255569098453248
2Mass ID (if available) : 19514636-2126348
ICRS Star Coord at Epoch: 19h 51m 46.35658s -21:26:34.94722s
RUWE (>1.4 is poor) : 1.08
K magnitude           : 7.924
G magnitude           : 10.750
RP magnitude          : 9.908
BP magnitude          : 11.506
DUPflag              : 1
Distance (au)         : 4.127
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : -15.83
Sun-Target sep (deg) : 172.28
Sun-Moon sep (deg)   : 60.58
B (ring opening deg) : -1.00
PA of pole (deg)     : -12.39
Pole direction: RA (deg): 268.05662
Dec (deg): 64.49655
C/A sky separation (") : 22.781
C/A sky separation (km) : 68184.0
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	2032-07-26T10:51:50.179	51.05	-43.58	71490.7	-71.85	-73.89
Jupiter	E	2032-07-26T11:36:08.019	59.86	-52.48	71490.7	-73.16	-75.07