

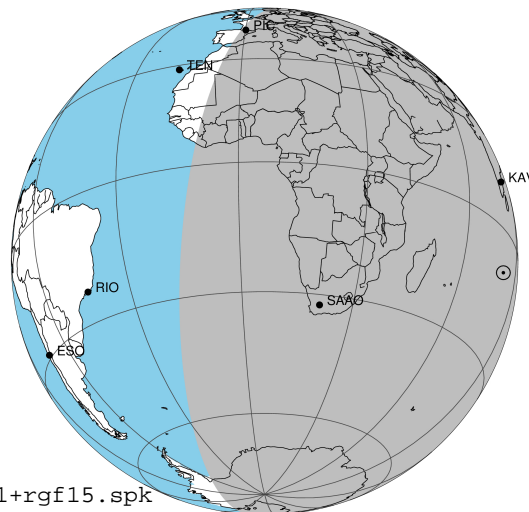
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-08-27T18:45:40.050
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4111432868077529600
 2Mass ID (if available) : 17302942-2305320

Jupiter 2043-08-27T18:45:40 K7.96 G14.45 Pgt

ICRS Star Coord at Epoch: 17h 30m 29.41318s -23:05:32.05037s

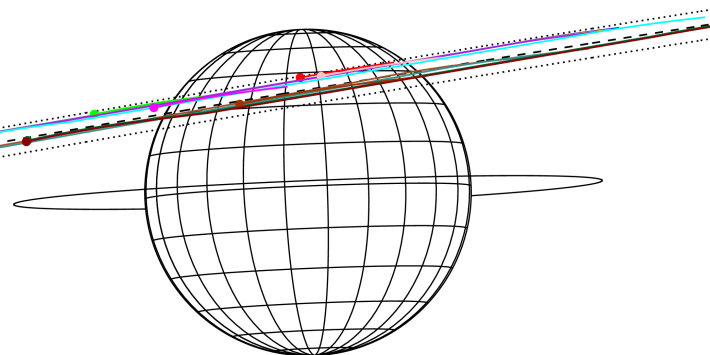
RUWE (>1.4 is poor) : 1.03
 K magnitude : 7.957
 G magnitude : 14.452
 RP magnitude : 12.910
 BP magnitude : 18.004
 DUPflag : 0
 Distance (au) : 4.819
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 3.19
 Sun-Target sep (deg) : 109.42
 Sun-Moon sep (deg) : 162.94
 B (ring opening deg) : -2.31
 PA of pole (deg) : 2.34
 Pole direction: RA (deg): 268.05672
 Dec (deg): 64.49731
 C/A sky separation (") : 12.723
 C/A sky separation (km) : 44471.6
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-08-27T18:45:40 K7.96 G14.45
 Pgt



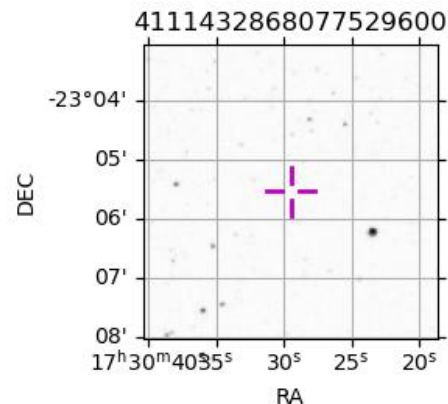
2043-08-27T18:45:40.0500 α: 17 30 29.4132 δ: -23 05 32.050 C/A ***** PA 189.52 deg v_sky + 3.19 km/s D 04.82 AU
 Credit: Styled after SORA/Lucky Star

- Earth
- PIC
- PAL
- PMO
- KPNO
- MCD
- TEN
- IRTF
- KAV
- RIO
- ESO
- AAT
- SAAO
- MSO



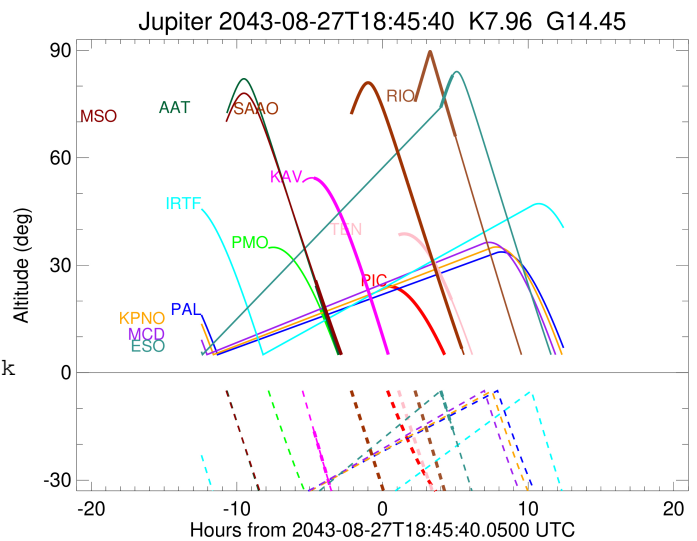
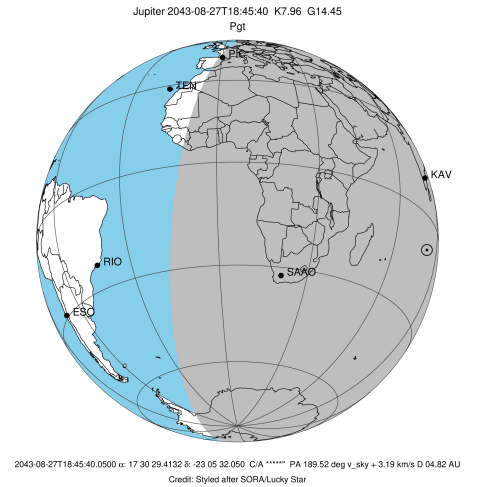
Observable events with sun below -5 deg and altitude above 5 deg

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	+	AUG 27 14:30 - AUG 27 14:30	Pin
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	+	AUG 27 23:30 - AUG 27 23:30	Pne
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+	AUG 27 14:03 - AUG 27 14:03	Pin
RIO	Rio de Janeiro	-22.9	316.8	+	AUG 27 23:46 - AUG 27 23:46	Pne
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	AUG 27 23:35 - AUG 27 23:35	Pne
AAT	Siding Spring (AAT)	-31.3	149.1	+	AUG 27 14:12 - AUG 27 14:12	Pin
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+	AUG 28 00:13 - AUG 28 00:13	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	AUG 27 14:09 - AUG 27 14:09	Pin



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-08-27T19:19:42.300
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      : 4111432868077529600
2Mass ID (if available) : 17302942-2305320
ICRS Star Coord at Epoch: 17h 30m 29.41318s -23:05:32.05037s
RUWE (>1.4 is poor) : 1.03
K magnitude          : 7.957
G magnitude          : 14.452
RP magnitude         : 12.910
BP magnitude         : 18.004
DUPflag             : 0
Distance (au)       : 4.820
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 3.19
Sun-Target sep (deg) : 109.42
Sun-Moon sep (deg)  : 163.60
B (ring opening deg) : -2.31
PA of pole (deg)    : 2.34
Pole direction: RA (deg): 268.05672
Dec (deg): 64.49731
C/A sky separation (" ) : 13.512
C/A sky separation (km) : 47231.8
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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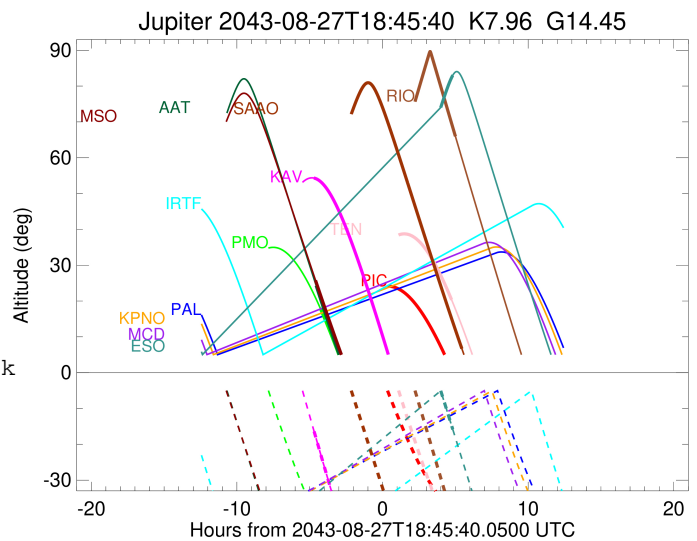
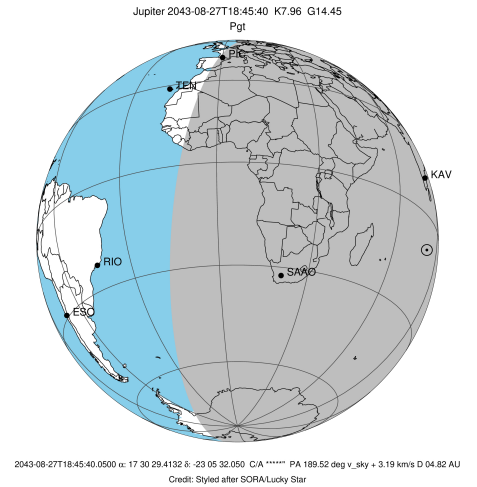


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-08-27T14:30:24.619	17.81	-42.30	71489.4	36.60	40.24
Jupiter	E	2043-08-27T23:27:43.375	-80.68x	22.45x	71488.2	46.44	50.12

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-08-27T18:14:50.740
Event type           : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code        : TEN
Location             : Teide Obs./Tenerife
Latitude (deg)       : 28.30050
E. Longitude (deg)  : 343.48909
Altitude (km)        : 2.395
Gaia source ID       : 4111432868077529600
2Mass ID (if available) : 17302942-2305320
ICRS Star Coord at Epoch: 17h 30m 29.41318s -23:05:32.05037s
RUWE (>1.4 is poor) : 1.03
K magnitude           : 7.957
G magnitude           : 14.452
RP magnitude          : 12.910
BP magnitude          : 18.004
DUPflag              : 0
Distance (au)         : 4.819
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 3.19
Sun-Target sep (deg) : 109.42
Sun-Moon sep (deg)   : 162.96
B (ring opening deg) : -2.31
PA of pole (deg)     : 2.34
Pole direction: RA (deg): 268.05672
Dec (deg): 64.49731
C/A sky separation (") : 13.930
C/A sky separation (km) : 48686.2
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
    
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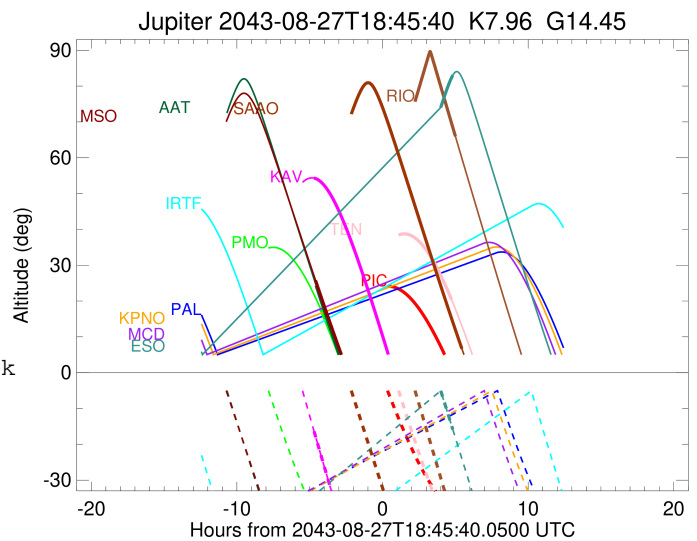
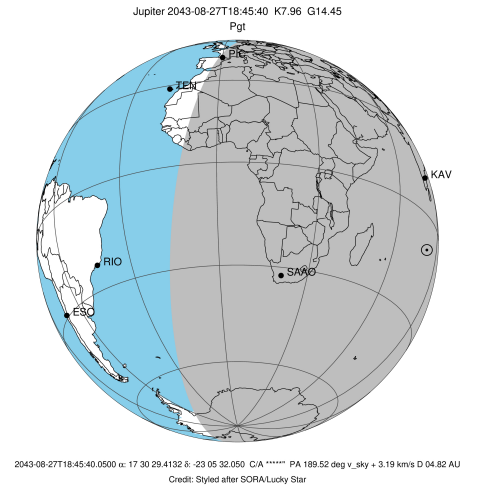


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-08-27T13:23:31.173	-21.73x	71.45x	71489.9	32.54	36.04
Jupiter	E	2043-08-27T23:30:24.062	20.34	-45.39	71487.7	50.64	54.20

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-08-27T19:29:23.000
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      : 4111432868077529600
2Mass ID (if available) : 17302942-2305320
ICRS Star Coord at Epoch: 17h 30m 29.41318s -23:05:32.05037s
RUWE (>1.4 is poor) : 1.03
K magnitude         : 7.957
G magnitude         : 14.452
RP magnitude        : 12.910
BP magnitude        : 18.004
DUPflag            : 0
Distance (au)       : 4.820
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 3.19
Sun-Target sep (deg) : 109.42
Sun-Moon sep (deg)  : 163.92
B (ring opening deg) : -2.31
PA of pole (deg)    : 2.34
Pole direction: RA (deg): 268.05672
Dec (deg): 64.49731
C/A sky separation (" ) : 13.458
C/A sky separation (km) : 47044.3
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
    
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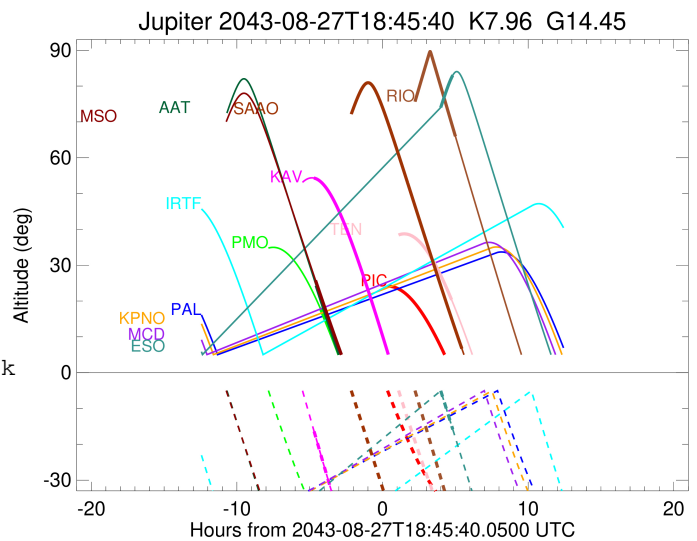
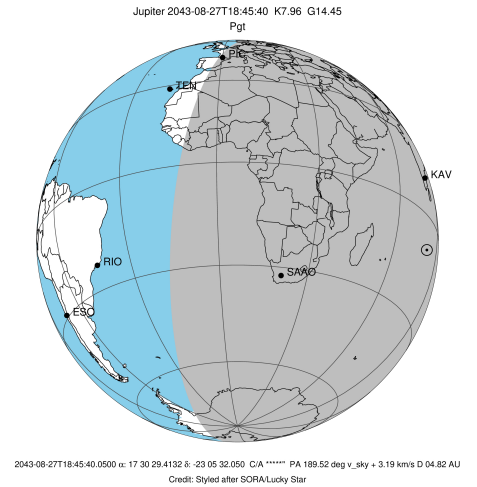


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-08-27T14:03:45.008	54.31	-16.38	71489.6	35.06	38.66
Jupiter	E	2043-08-27T23:51:42.732	-59.25x	-10.90	71488.3	45.16	48.86

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-08-27T18:07:14.710
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      : 4111432868077529600
2Mass ID (if available) : 17302942-2305320
ICRS Star Coord at Epoch: 17h 30m 29.41318s -23:05:32.05037s
RUWE (>1.4 is poor) : 1.03
K magnitude          : 7.957
G magnitude          : 14.452
RP magnitude         : 12.910
BP magnitude         : 18.004
DUPflag             : 0
Distance (au)       : 4.819
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.19
Sun-Target sep (deg) : 109.42
Sun-Moon sep (deg)  : 162.48
B (ring opening deg) : -2.31
PA of pole (deg)    : 2.34
Pole direction: RA (deg): 268.05672
Dec (deg): 64.49731
C/A sky separation ("): 12.212
C/A sky separation (km): 42680.3
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
    
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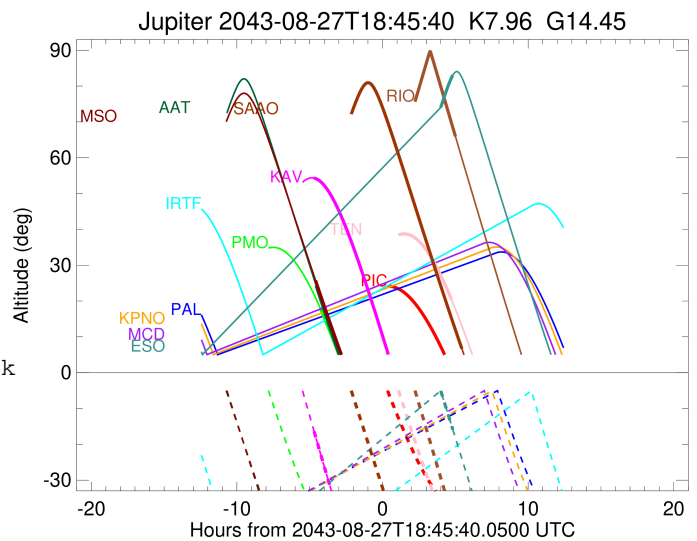
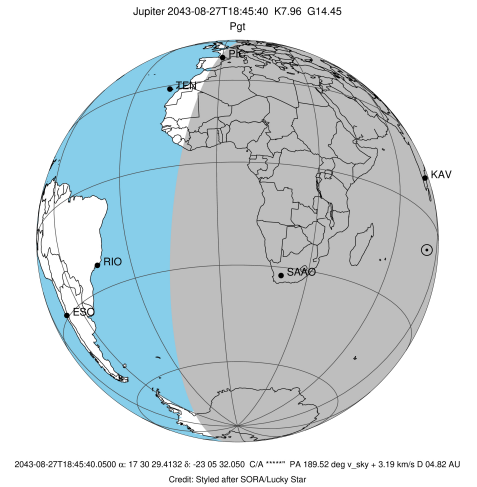


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-08-27T13:11:26.799	-25.20x	48.69x	71490.5	26.69	29.85
Jupiter	E	2043-08-27T23:46:11.827	65.93	-43.28	71488.3	45.72	49.42

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-08-27T18:08:17.840
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       : 4111432868077529600
2Mass ID (if available) : 17302942-2305320
ICRS Star Coord at Epoch: 17h 30m 29.41318s -23:05:32.05037s
RUWE (>1.4 is poor) : 1.03
K magnitude           : 7.957
G magnitude           : 14.452
RP magnitude          : 12.910
BP magnitude          : 18.004
DUPflag              : 0
Distance (au)        : 4.819
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.19
Sun-Target sep (deg) : 109.42
Sun-Moon sep (deg)   : 162.19
B (ring opening deg) : -2.31
PA of pole (deg)     : 2.34
Pole direction: RA (deg): 268.05672
Dec (deg): 64.49731
C/A sky separation (") : 11.721
C/A sky separation (km) : 40965.0
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
    
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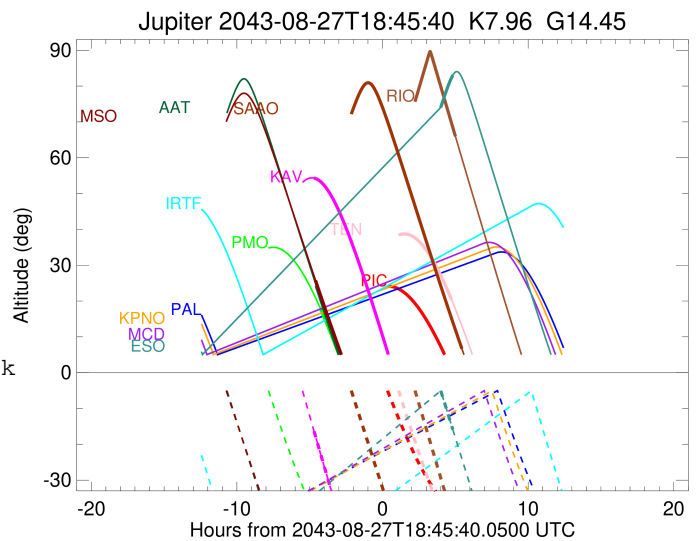
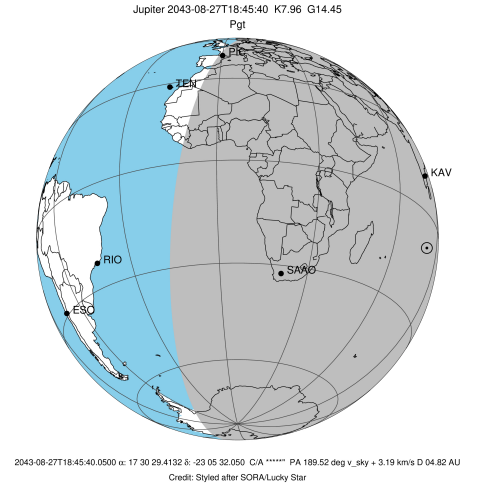


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-08-27T13:21:43.447	-33.60x	27.46x	71490.6	26.06	29.16
Jupiter	E	2043-08-27T23:35:23.134	83.01	-15.87	71488.4	44.77	48.47


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-08-27T19:11:51.670
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       : 4111432868077529600
2Mass ID (if available) : 17302942-2305320
ICRS Star Coord at Epoch: 17h 30m 29.41318s -23:05:32.05037s
RUWE (>1.4 is poor) : 1.03
K magnitude           : 7.957
G magnitude           : 14.452
RP magnitude         : 12.910
BP magnitude         : 18.004
DUPflag              : 0
Distance (au)        : 4.820
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.19
Sun-Target sep (deg) : 109.42
Sun-Moon sep (deg)   : 163.09
B (ring opening deg) : -2.31
PA of pole (deg)     : 2.34
Pole direction: RA (deg): 268.05672
Dec (deg): 64.49731
C/A sky separation (") : 11.480
C/A sky separation (km) : 40127.8
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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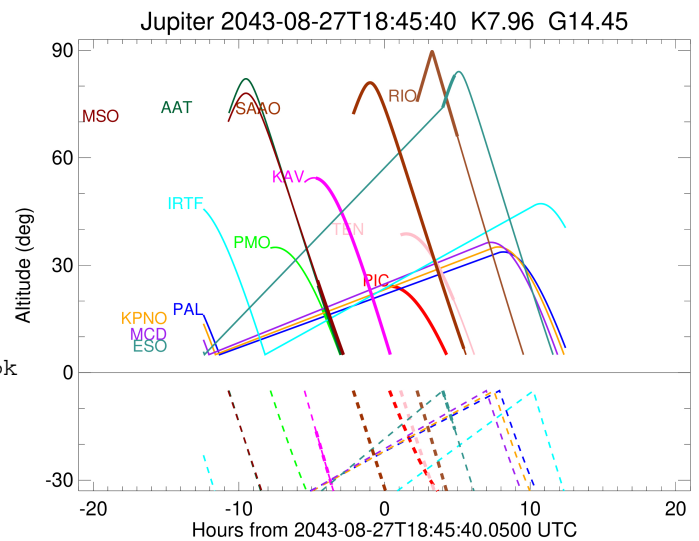
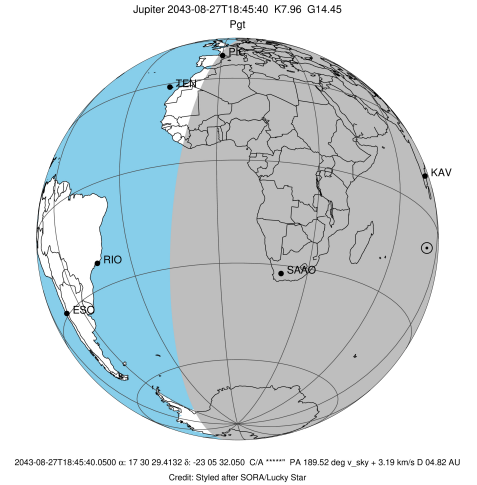


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-08-27T14:12:17.447	24.33	-68.79	71490.2	29.58	32.93
Jupiter	E	2043-08-27T23:40:25.187	-25.20x	36.37x	71488.9	40.36	44.07

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-08-27T18:53:17.080
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : SAAO
Location            : So. Afr. Astro. Obs. (Sutherland)
Latitude (deg)      : -32.37953
E. Longitude (deg)  : 20.81070
Altitude (km)       : 1.768
Gaia source ID      : 4111432868077529600
2Mass ID (if available) : 17302942-2305320
ICRS Star Coord at Epoch: 17h 30m 29.41318s -23:05:32.05037s
RUWE (>1.4 is poor) : 1.03
K magnitude          : 7.957
G magnitude          : 14.452
RP magnitude         : 12.910
BP magnitude         : 18.004
DUPflag             : 0
Distance (au)       : 4.819
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.19
Sun-Target sep (deg) : 109.42
Sun-Moon sep (deg)  : 163.37
B (ring opening deg) : -2.31
PA of pole (deg)    : 2.34
Pole direction: RA (deg): 268.05672
Dec (deg): 64.49731
C/A sky separation (") : 12.485
C/A sky separation (km) : 43640.7
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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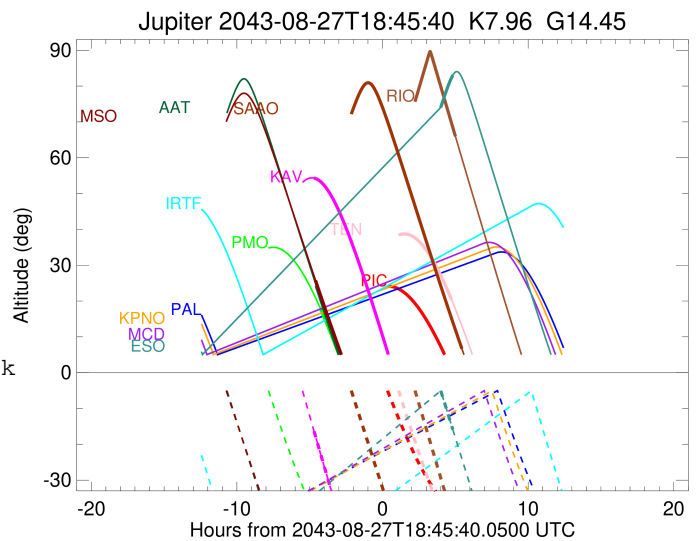
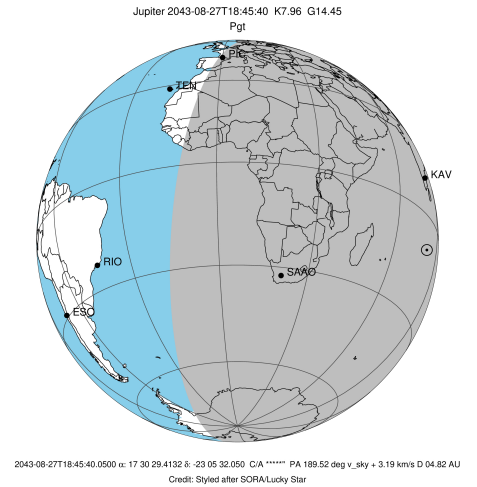


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-08-27T13:11:14.993	29.25	34.20x	71490.4	27.99	31.24
Jupiter	E	2043-08-28T00:13:00.900	6.64	-58.66	71488.6	42.99	46.71


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-08-27T19:11:10.680
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      : 4111432868077529600
2Mass ID (if available) : 17302942-2305320
ICRS Star Coord at Epoch: 17h 30m 29.41318s -23:05:32.05037s
RUWE (>1.4 is poor) : 1.03
K magnitude          : 7.957
G magnitude          : 14.452
RP magnitude         : 12.910
BP magnitude         : 18.004
DUPflag             : 0
Distance (au)       : 4.820
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 3.19
Sun-Target sep (deg) : 109.42
Sun-Moon sep (deg)  : 163.07
B (ring opening deg) : -2.31
PA of pole (deg)    : 2.34
Pole direction: RA (deg): 268.05672
Dec (deg): 64.49731
C/A sky separation (" ) : 11.402
C/A sky separation (km) : 39854.9
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	2043-08-27T14:09:42.485	25.77	-64.80	71490.3	29.20	32.52
Jupiter	E	2043-08-27T23:42:01.976	-21.82x	33.72x	71489.0	40.13	43.84