

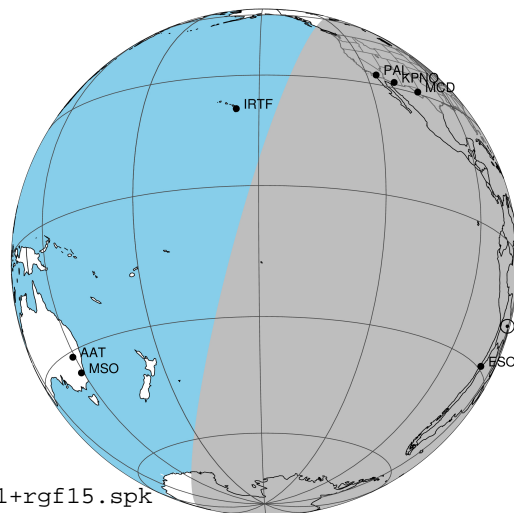
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2042-08-07T04:13:21.800
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 6259019251636050048
 2Mass ID (if available) : 15194608-1729474

Jupiter 2042-08-07T04:13:21 K8.95 G11.94 Pgt

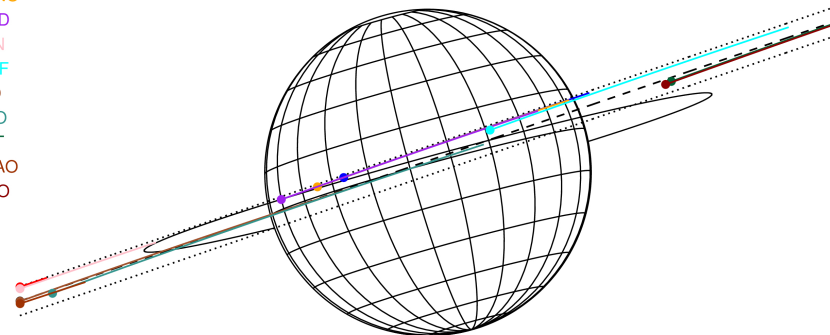
ICRS Star Coord at Epoch: 15h 19m 46.06399s -17:29:47.56576s

RUWE (>1.4 is poor) : 1.04
 K magnitude : 8.953
 G magnitude : 11.937
 RP magnitude : 11.075
 BP magnitude : 12.722
 DUPflag : 0
 Distance (au) : 5.131
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 8.57
 Sun-Target sep (deg) : 97.90
 Sun-Moon sep (deg) : 155.41
 B (ring opening deg) : -2.96
 PA of pole (deg) : 15.43
 Pole direction: RA (deg): 268.05651
 Dec (deg): 64.49731
 C/A sky separation (") : 1.297
 C/A sky separation (km) : 4827.7
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2042-08-07T04:13:21 K8.95 G11.94
 Pgt



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

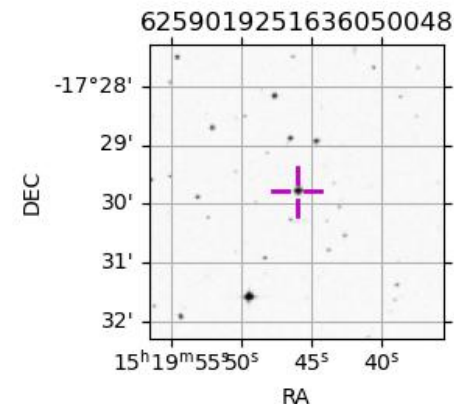


2042-08-07T04:13:21.8000 or: 15 19 46.0640 s: -17 29 47.566 C/A 1.286" PA 198.93 deg v_sky + 8.57 km/s D 05.13 AU

Credit: Styled after SORA/Lucky Star

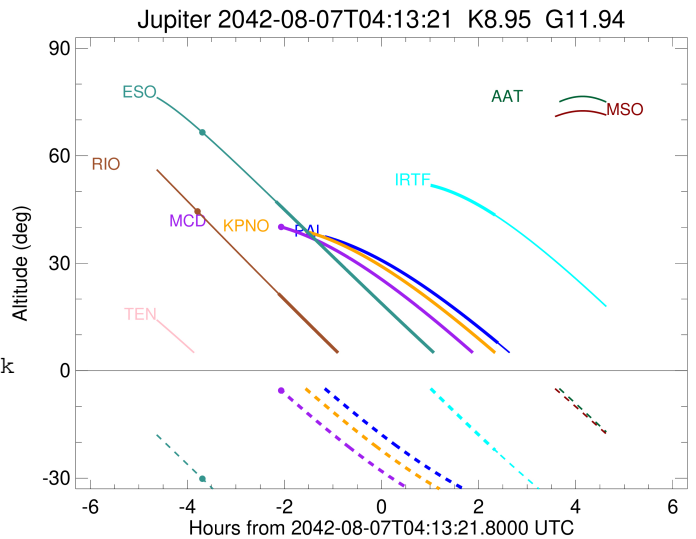
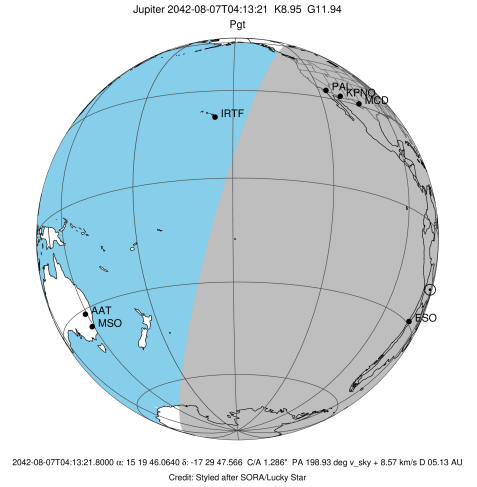
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1			Pnn
PAL	Palomar Mt (200")	33.4	243.1	+	AUG 07 06:37 - AUG 07 06:37	Pne
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
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	+	AUG 07 06:33 - AUG 07 06:33	Pne
KAV	Kavalur Observatory	12.6	78.8			Pnn
RIO	Rio de Janeiro	-22.9	316.8	+	AUG 07 02:05 - AUG 07 02:05	Pin
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	AUG 07 02:02 - AUG 07 02:02	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             : 2042-08-07T04:15:34.510
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       : 6259019251636050048
2Mass ID (if available) : 15194608-1729474
ICRS Star Coord at Epoch: 15h 19m 46.06399s -17:29:47.56576s
RUWE (>1.4 is poor) : 1.04
K magnitude           : 8.953
G magnitude           : 11.937
RP magnitude          : 11.075
BP magnitude          : 12.722
DUPflag              : 0
Distance (au)        : 5.131
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 8.57
Sun-Target sep (deg) : 97.90
Sun-Moon sep (deg)   : 155.87
B (ring opening deg) : -2.96
PA of pole (deg)     : 15.43
Pole direction: RA (deg): 268.05651
Dec (deg): 64.49731
C/A sky separation ("): 2.737
C/A sky separation (km): 10186.3
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
    
```

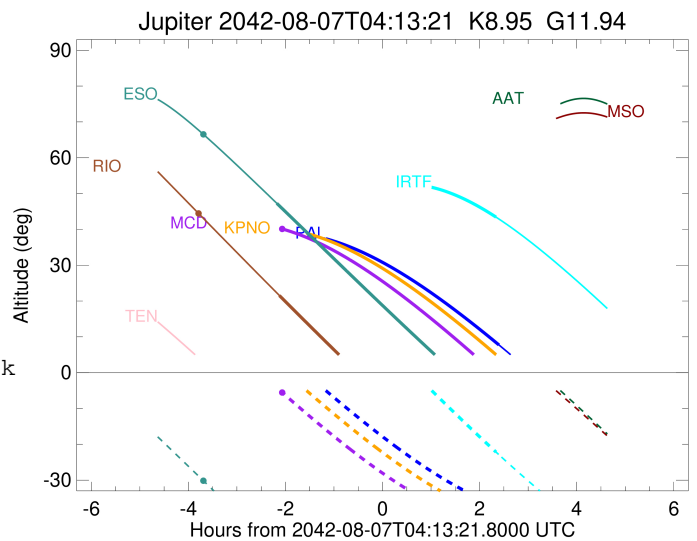
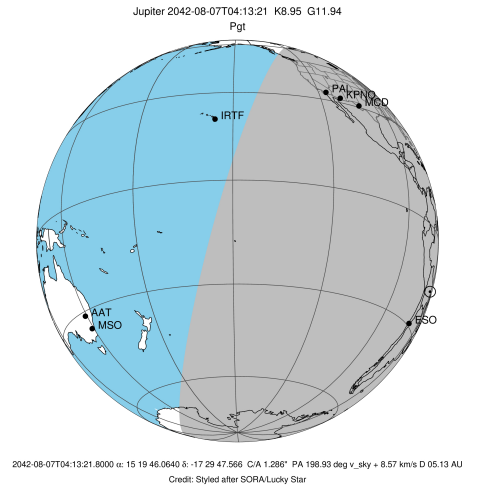


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2042-08-07T01:51:28.760	39.04	9.25x	71491.9	4.03	4.61
Jupiter	E	2042-08-07T06:37:08.802	7.76	-37.24	71491.5	11.63	13.24

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2042-08-07T04:09:07.950
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        : 6259019251636050048
2Mass ID (if available) : 15194608-1729474
ICRS Star Coord at Epoch: 15h 19m 46.06399s -17:29:47.56576s
RUWE (>1.4 is poor) : 1.04
K magnitude           : 8.953
G magnitude           : 11.937
RP magnitude          : 11.075
BP magnitude          : 12.722
DUPflag              : 0
Distance (au)         : 5.131
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 8.57
Sun-Target sep (deg)  : 97.90
Sun-Moon sep (deg)    : 155.52
B (ring opening deg) : -2.96
PA of pole (deg)      : 15.43
Pole direction: RA (deg): 268.05651
Dec (deg): 64.49731
C/A sky separation (") : 2.207
C/A sky separation (km) : 8213.6
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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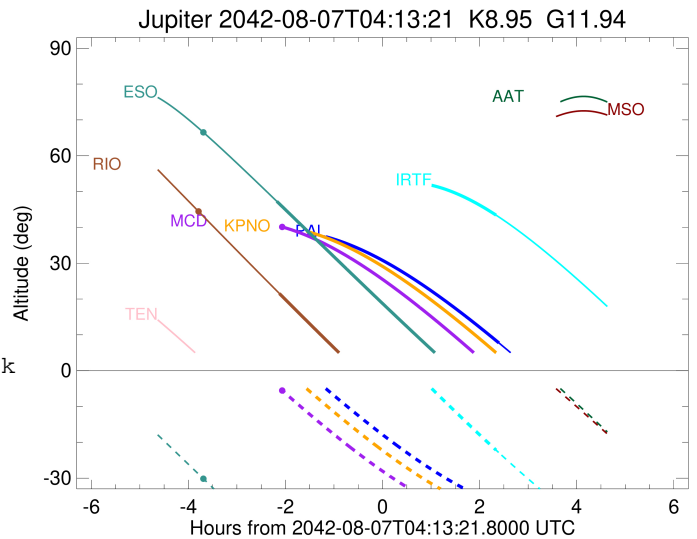
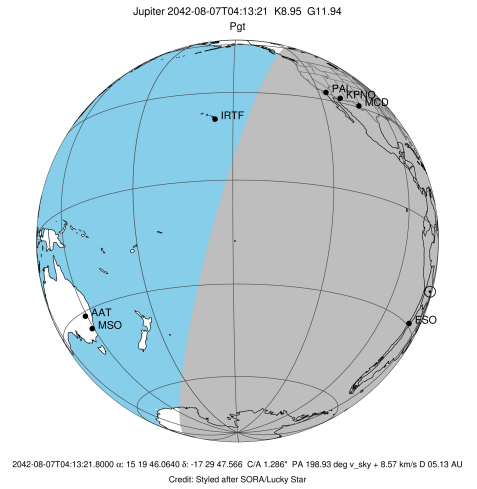


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2042-08-07T01:44:47.323	32.85	43.19x	71492.0	1.83	2.10
Jupiter	E	2042-08-07T06:33:45.022	43.41	-22.17	71491.6	10.87	12.38

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2042-08-07T04:25:34.920
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        : 6259019251636050048
2Mass ID (if available) : 15194608-1729474
ICRS Star Coord at Epoch: 15h 19m 46.06399s -17:29:47.56576s
RUWE (>1.4 is poor)  : 1.04
K magnitude           : 8.953
G magnitude           : 11.937
RP magnitude          : 11.075
BP magnitude          : 12.722
DUPflag               : 0
Distance (au)         : 5.131
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 8.57
Sun-Target sep (deg)  : 97.90
Sun-Moon sep (deg)   : 156.23
B (ring opening deg) : -2.96
PA of pole (deg)     : 15.43
Pole direction: RA (deg): 268.05651
Dec (deg): 64.49731
C/A sky separation (") : 1.037
C/A sky separation (km) : 3859.3
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
    
```

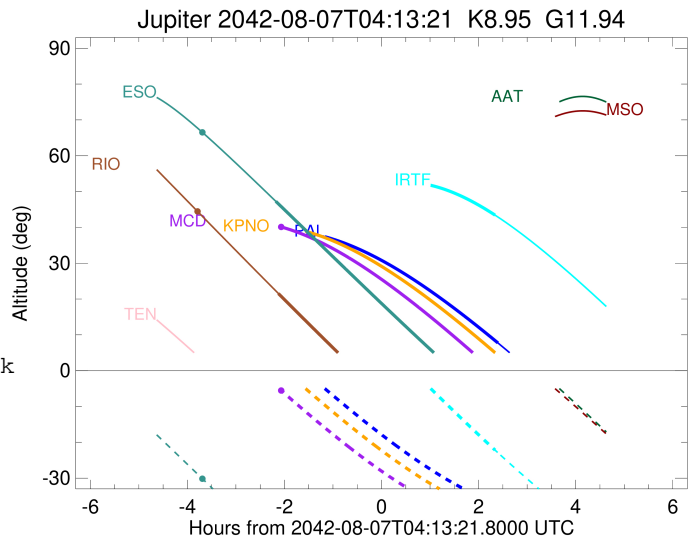
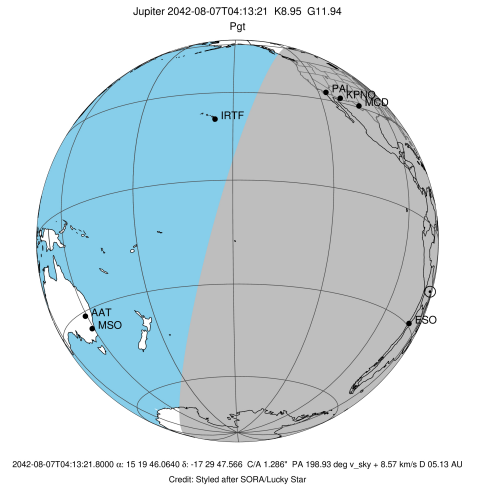


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2042-08-07T02:05:56.217	21.53	-76.06	71492.0	0.41	0.47
Jupiter	E	2042-08-07T06:40:46.157	-35.36x	-37.57	71491.9	5.42	6.19

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2042-08-07T04:25:15.070
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      : 6259019251636050048
2Mass ID (if available) : 15194608-1729474
ICRS Star Coord at Epoch: 15h 19m 46.06399s -17:29:47.56576s
RUWE (>1.4 is poor) : 1.04
K magnitude          : 8.953
G magnitude          : 11.937
RP magnitude         : 11.075
BP magnitude         : 12.722
DUPflag             : 0
Distance (au)       : 5.131
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 8.57
Sun-Target sep (deg) : 97.90
Sun-Moon sep (deg)  : 156.37
B (ring opening deg) : -2.96
PA of pole (deg)    : 15.43
Pole direction: RA (deg): 268.05651
Dec (deg): 64.49731
C/A sky separation (") : 1.089
C/A sky separation (km) : 4050.9
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	2042-08-07T02:02:42.531	47.26	-49.92	71492.0	0.04	0.05
Jupiter	E	2042-08-07T06:43:18.843	-12.18x	-60.77	71491.9	5.85	6.68