

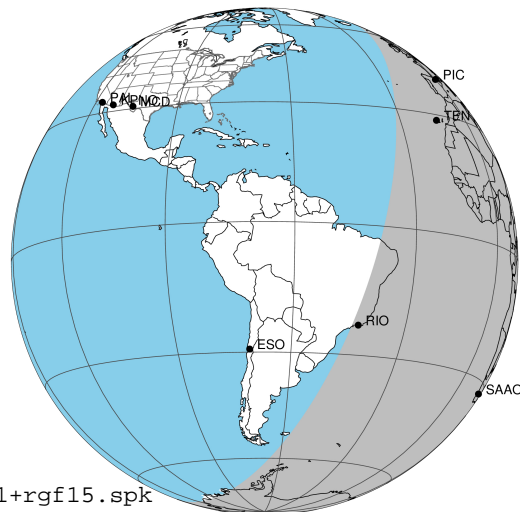
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2041-08-12T20:39:06.900
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3618047159859747328
 2Mass ID (if available) : 13361334-0849464

Jupiter 2041-08-12T20:39:06 K9.79 G11.84 Pgt

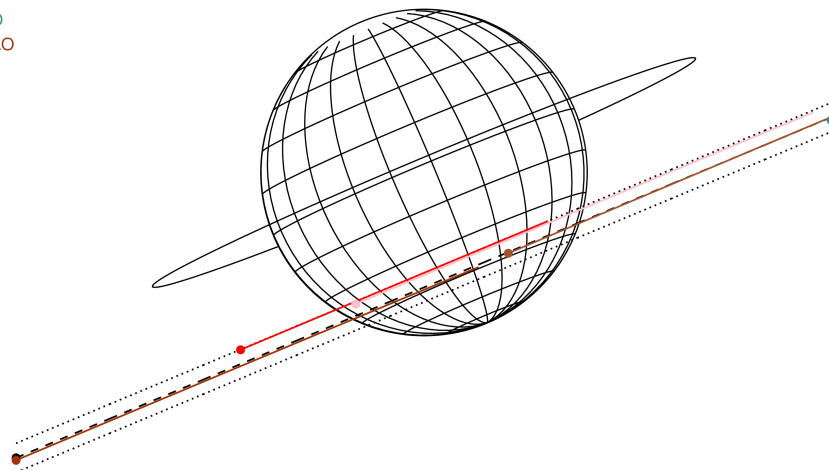
ICRS Star Coord at Epoch: 13h 36m 13.33451s -08:49:46.80790s

RUWE (>1.4 is poor) : 1.50
 K magnitude : 9.788
 G magnitude : 11.838
 RP magnitude : 11.194
 BP magnitude : 12.318
 DUPflag : 0
 Distance (au) : 5.776
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 24.70
 Sun-Target sep (deg) : 65.58
 Sun-Moon sep (deg) : 125.47
 B (ring opening deg) : -2.75
 PA of pole (deg) : 22.79
 Pole direction: RA (deg): 268.05632
 Dec (deg): 64.49724
 C/A sky separation (") : 11.085
 C/A sky separation (km) : 46437.8
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2041-08-12T20:39:06 K9.79 G11.84
 Pgt



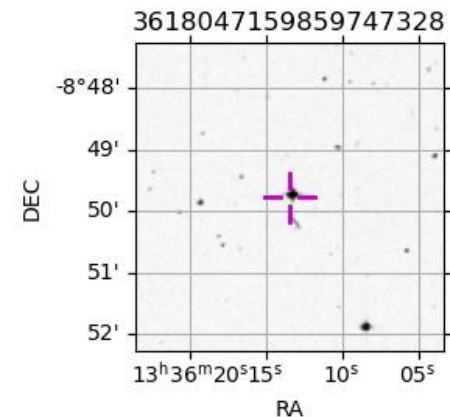
Earth
 PIC
 TEN
 RIO
 ESO
 SAAO



2041-08-12T20:39:06.9000 α: 13 36 13.3345 δ: -08 49 46.808 C/A ***** PA 22.67 deg v_sky +24.70 km/s D 05.78 AU
 Credit: Styled after SORA/Lucky Star

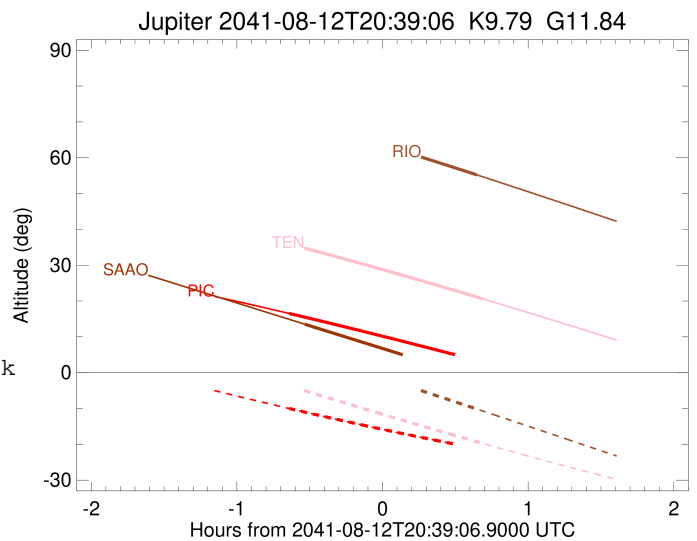
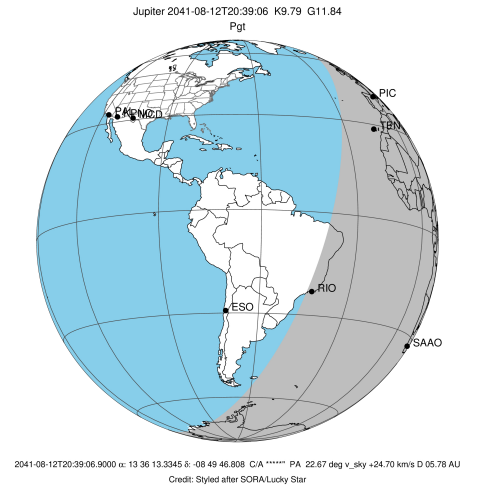
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+	AUG 12 20:00 - AUG 12 20:00	Pin
PAL	Palomar Mt (200")	33.4	243.1			Pnn
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	+	AUG 12 21:20 - AUG 12 21:20	Pne
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 12 21:18 - AUG 12 21:18	Pne
ESO	European Southern Obs. (3.6m)	-29.3	289.3			Pnn
AAT	Siding Spring (AAT)	-31.3	149.1			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+	AUG 12 20:07 - AUG 12 20:07	Pin
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2041-08-12T20:40:37.900
Event type            : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code         : PIC
Location              : Pic du Midi
Latitude (deg)        : 42.93656
E. Longitude (deg)    : 0.14231
Altitude (km)         : 2.890
Gaia source ID        : 3618047159859747328
2Mass ID (if available) : 13361334-0849464
ICRS Star Coord at Epoch: 13h 36m 13.33451s -08:49:46.80790s
RUWE (>1.4 is poor)  : 1.50
K magnitude           : 9.788
G magnitude           : 11.838
RP magnitude          : 11.194
BP magnitude          : 12.318
DUPflag              : 0
Distance (au)         : 5.776
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 24.70
Sun-Target sep (deg)  : 65.58
Sun-Moon sep (deg)    : 125.78
B (ring opening deg)  : -2.75
PA of pole (deg)      : 22.79
Pole direction: RA (deg): 268.05632
Dec (deg): 64.49724
C/A sky separation (") : 9.685
C/A sky separation (km) : 40575.1
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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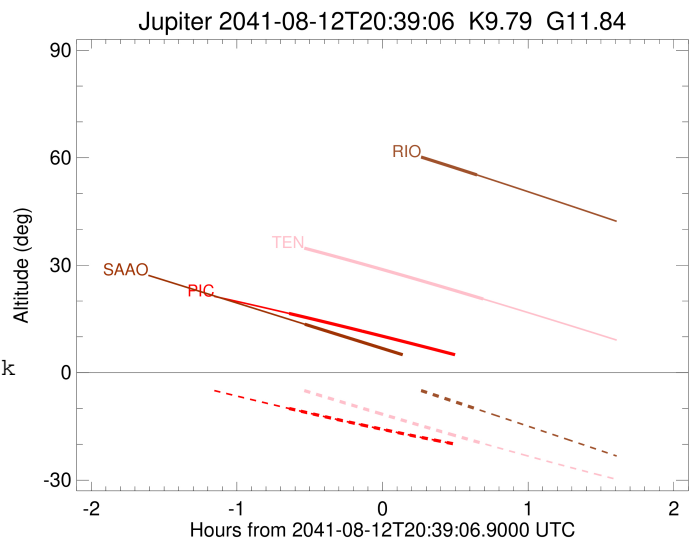
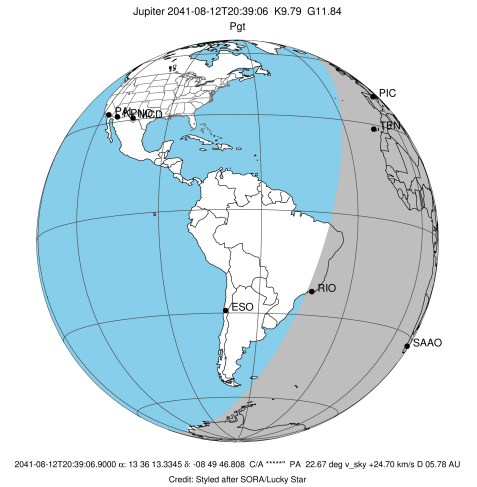


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2041-08-12T20:00:38.926	16.53	-10.00	71488.7	-34.46	-38.04
Jupiter	E	2041-08-12T21:20:30.861	2.97x	-21.42	71488.6	-34.67	-38.26

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2041-08-12T20:40:58.710
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        : 3618047159859747328
2Mass ID (if available) : 13361334-0849464
ICRS Star Coord at Epoch: 13h 36m 13.33451s -08:49:46.80790s
RUWE (>1.4 is poor) : 1.50
K magnitude           : 9.788
G magnitude           : 11.838
RP magnitude          : 11.194
BP magnitude          : 12.318
DUPflag              : 0
Distance (au)         : 5.776
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 24.70
Sun-Target sep (deg) : 65.58
Sun-Moon sep (deg)   : 126.08
B (ring opening deg) : -2.75
PA of pole (deg)     : 22.79
Pole direction: RA (deg): 268.05632
Dec (deg): 64.49724
C/A sky separation ("): 9.908
C/A sky separation (km): 41507.5
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
    
```

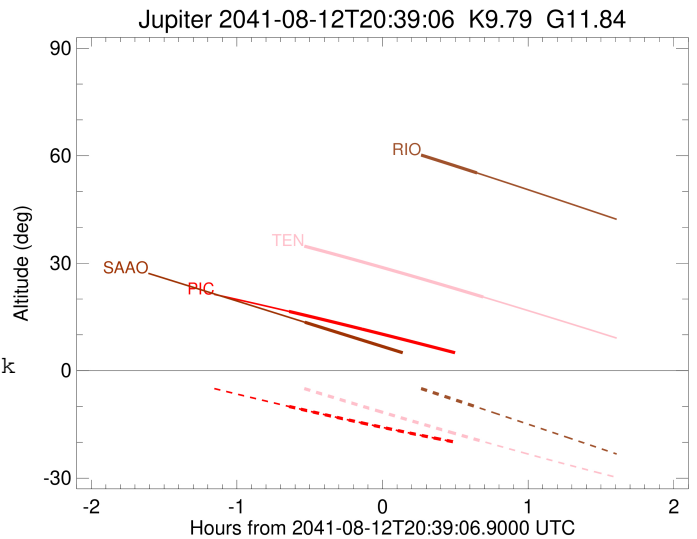
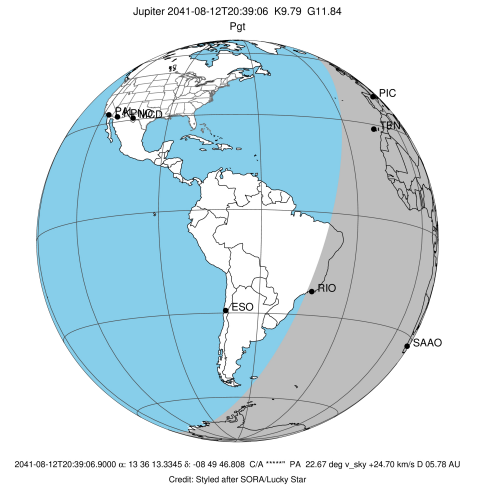


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2041-08-12T20:01:15.186	35.76	-3.83x	71488.5	-35.49	-39.10
Jupiter	E	2041-08-12T21:20:36.335	20.56	-19.78	71488.5	-35.47	-39.09

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2041-08-12T20:41:11.370
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     : 3618047159859747328
2Mass ID (if available) : 13361334-0849464
ICRS Star Coord at Epoch: 13h 36m 13.33451s -08:49:46.80790s
RUWE (>1.4 is poor) : 1.50
K magnitude         : 9.788
G magnitude         : 11.838
RP magnitude        : 11.194
BP magnitude        : 12.318
DUPflag            : 0
Distance (au)      : 5.776
f0 (km)            : 0.00
g0 (km)            : 0.00
skyplane vel. (km/s) : 24.70
Sun-Target sep (deg) : 65.58
Sun-Moon sep (deg) : 126.47
B (ring opening deg) : -2.75
PA of pole (deg)   : 22.79
Pole direction: RA (deg): 268.05632
Dec (deg): 64.49724
C/A sky separation (") : 11.215
C/A sky separation (km) : 46984.9
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
    
```

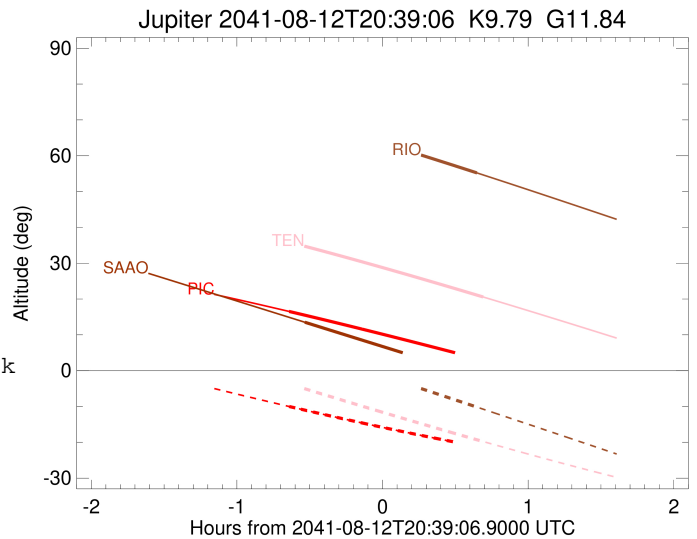
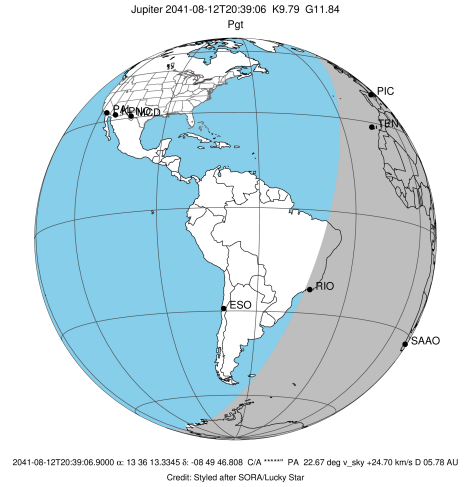


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2041-08-12T20:04:15.848	70.19	6.23x	71487.5	-41.23	-44.95
Jupiter	E	2041-08-12T21:18:03.762	55.19	-10.18	71487.6	-40.88	-44.60

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2041-08-12T20:43:16.160
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      : 3618047159859747328
2Mass ID (if available) : 13361334-0849464
ICRS Star Coord at Epoch: 13h 36m 13.33451s -08:49:46.80790s
RUWE (>1.4 is poor) : 1.50
K magnitude          : 9.788
G magnitude          : 11.838
RP magnitude         : 11.194
BP magnitude         : 12.318
DUPflag             : 0
Distance (au)       : 5.776
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 24.70
Sun-Target sep (deg) : 65.58
Sun-Moon sep (deg)  : 126.16
B (ring opening deg) : -2.75
PA of pole (deg)    : 22.79
Pole direction: RA (deg): 268.05632
Dec (deg): 64.49724
C/A sky separation (") : 11.326
C/A sky separation (km) : 47447.6
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
    
```



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	2041-08-12T20:07:06.273	13.52	-50.74	71487.5	-41.31	-45.03
Jupiter	E	2041-08-12T21:19:20.085	-1.66x	-64.31	71487.4	-41.80	-45.52