

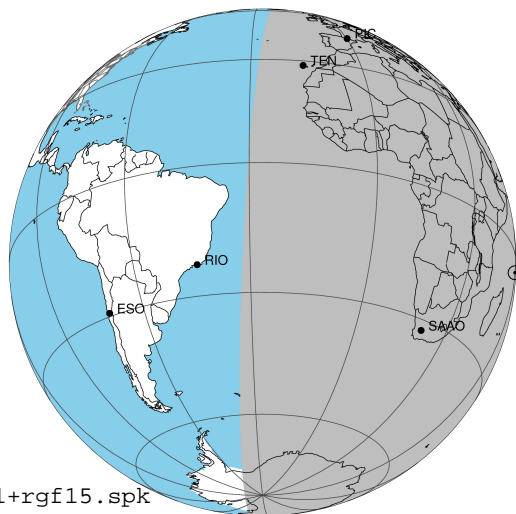
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-09-12T19:57:11.970
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116670937125191040
 2Mass ID (if available) : 17334195-2310283

Jupiter 2043-09-12T19:57:11 K9.06 G14.64 Pgt

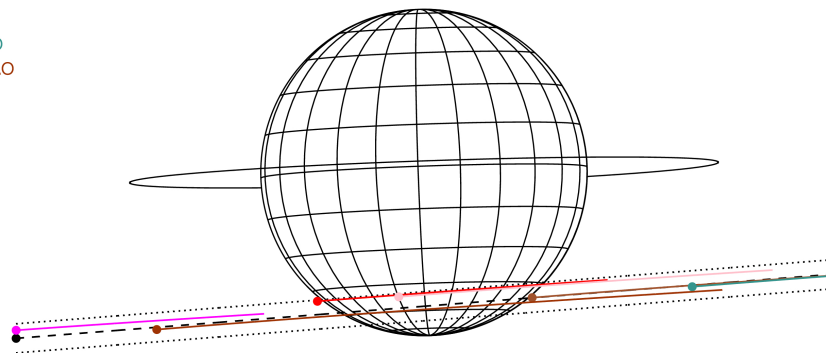
ICRS Star Coord at Epoch: 17h 33m 41.93346s -23:10:28.67646s

RUWE (>1.4 is poor) : 1.99
 K magnitude : 9.065
 G magnitude : 14.638
 RP magnitude : 13.224
 BP magnitude : 17.003
 DUPflag : 0
 Distance (au) : 5.059
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 10.70
 Sun-Target sep (deg) : 94.61
 Sun-Moon sep (deg) : 11.03
 B (ring opening deg) : -2.25
 PA of pole (deg) : 1.99
 Pole direction: RA (deg): 268.05673
 Dec (deg): 64.49731
 C/A sky separation (") : 15.921
 C/A sky separation (km) : 58417.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-09-12T19:57:11 K9.06 G14.64
 Pgt



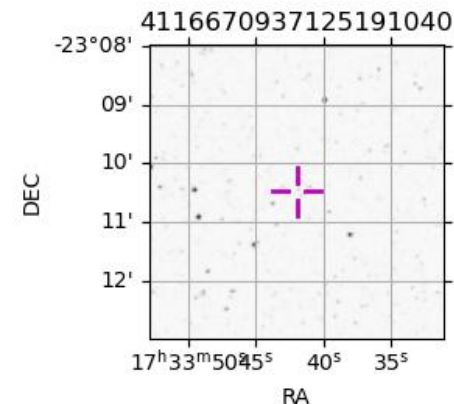
Earth
 PIC
 TEN
 KAV
 RIO
 ESO
 SAAO



2043-09-12T19:57:11.9700 α: 17 33 41.9335 δ: -23 10 28.676 C/A ***** PA 4.49 deg v_sky +10.70 km/s D 05.06 AU
 Credit: Styled after SORA/Lucky Star

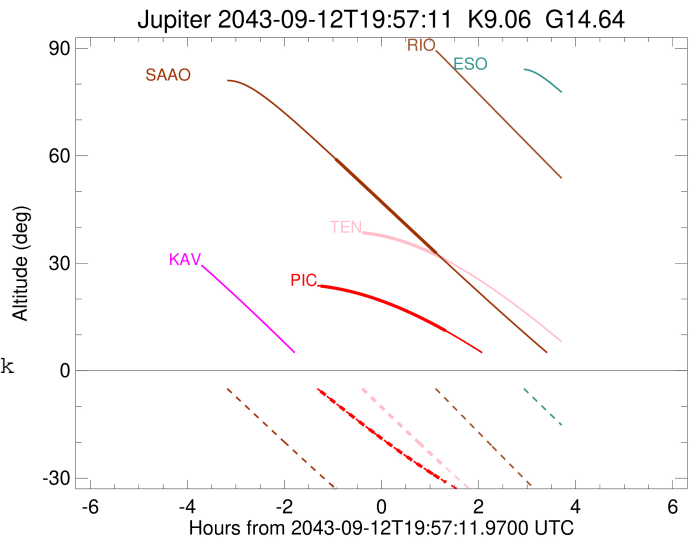
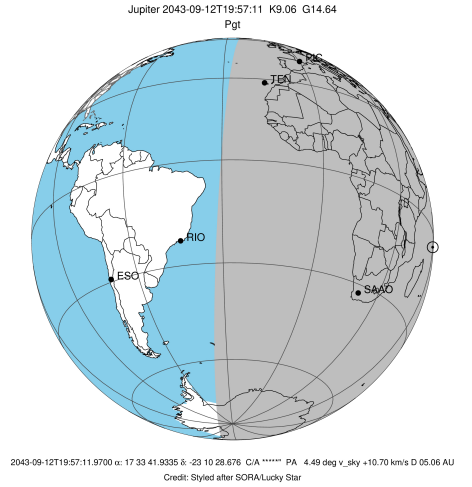
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+ +	SEP 12 18:42 - SEP 12 21:16	Pie
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	+	SEP 12 21:14 - SEP 12 21:14	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			Pnn
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	+ +	SEP 12 19:00 - SEP 12 21:04	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-12T19:59:37.140
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      : 4116670937125191040
2Mass ID (if available) : 17334195-2310283
ICRS Star Coord at Epoch: 17h 33m 41.93346s -23:10:28.67646s
RUWE (>1.4 is poor) : 1.99
K magnitude          : 9.065
G magnitude          : 14.638
RP magnitude         : 13.224
BP magnitude         : 17.003
DUPflag             : 0
Distance (au)       : 5.059
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 10.70
Sun-Target sep (deg) : 94.61
Sun-Moon sep (deg)  : 11.29
B (ring opening deg) : -2.25
PA of pole (deg)    : 1.99
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation ("): 14.354
C/A sky separation (km): 52666.7
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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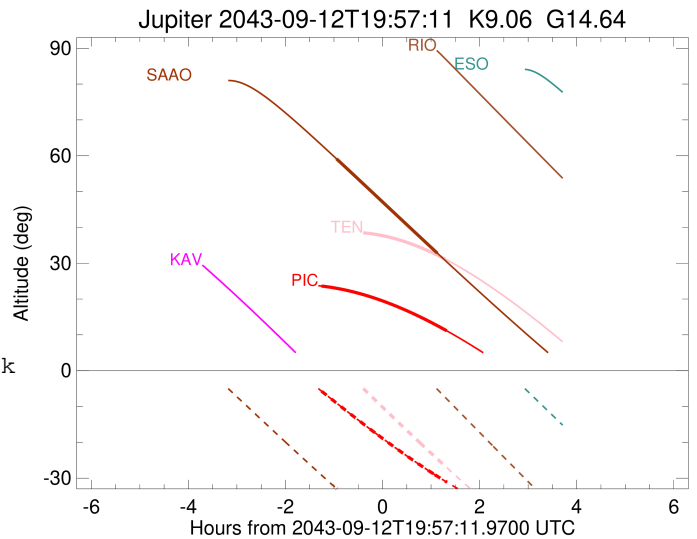
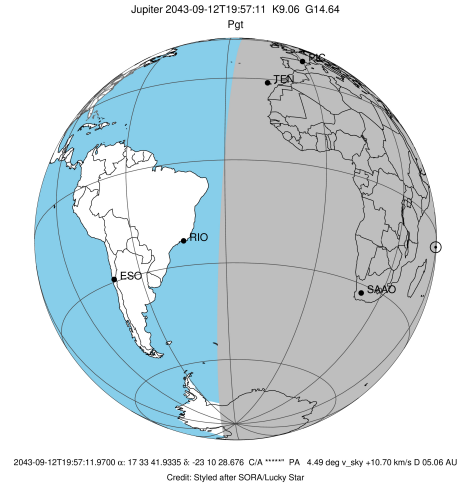


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-09-12T18:42:02.280	23.62	-5.75	71487.9	-49.80	-53.39
Jupiter	E	2043-09-12T21:16:38.730	11.12	-31.11	71488.5	-45.25	-48.95

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-12T19:58:15.320
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       : 4116670937125191040
2Mass ID (if available) : 17334195-2310283
ICRS Star Coord at Epoch: 17h 33m 41.93346s -23:10:28.67646s
RUWE (>1.4 is poor) : 1.99
K magnitude           : 9.065
G magnitude           : 14.638
RP magnitude         : 13.224
BP magnitude         : 17.003
DUPflag              : 0
Distance (au)        : 5.059
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 10.70
Sun-Target sep (deg) : 94.61
Sun-Moon sep (deg)   : 11.41
B (ring opening deg) : -2.25
PA of pole (deg)     : 1.99
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation ("): 14.558
C/A sky separation (km): 53414.7
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
    
```

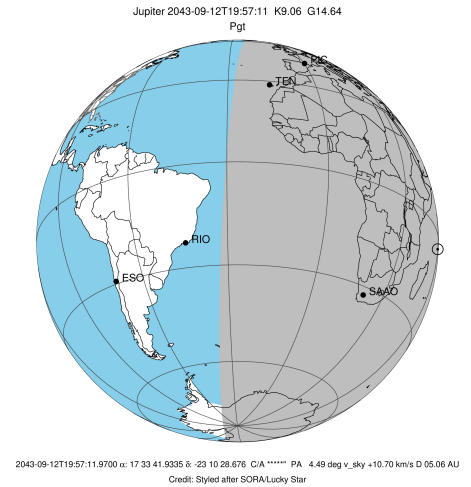


x: target alt < 5.0 deg or sun > -5.0 deg

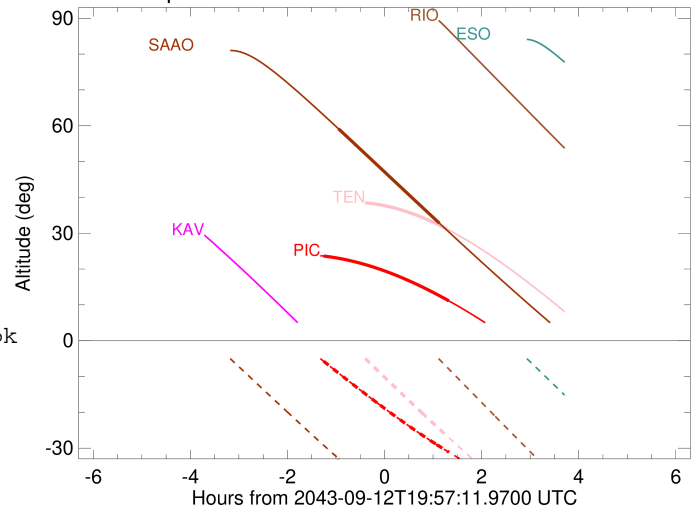
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-09-12T18:41:26.391	38.01	6.44x	71487.8	-50.94	-54.49
Jupiter	E	2043-09-12T21:14:43.141	31.13	-26.66	71488.4	-45.96	-49.65

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-09-12T20:02:51.790
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       : 4116670937125191040
2Mass ID (if available) : 17334195-2310283
ICRS Star Coord at Epoch: 17h 33m 41.93346s -23:10:28.67646s
RUWE (>1.4 is poor) : 1.99
K magnitude          : 9.065
G magnitude          : 14.638
RP magnitude         : 13.224
BP magnitude         : 17.003
DUPflag             : 0
Distance (au)        : 5.059
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 10.70
Sun-Target sep (deg) : 94.61
Sun-Moon sep (deg)   : 10.55
B (ring opening deg) : -2.25
PA of pole (deg)     : 1.99
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation ("): 16.311
C/A sky separation (km): 59848.6
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
    
```



Jupiter 2043-09-12T19:57:11 K9.06 G14.64



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	2043-09-12T19:00:18.017	59.14	-32.91	71486.9	-58.82	-61.97
Jupiter	E	2043-09-12T21:04:51.325	32.82	-55.03	71487.3	-54.91	-58.29