

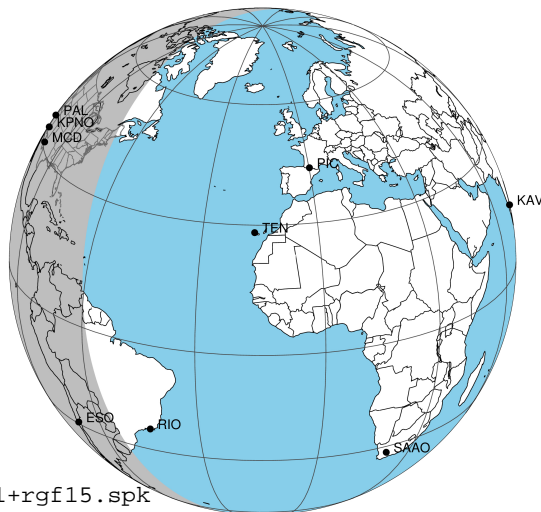
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2037-08-29T09:57:48.610
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 865251608804486656
 2Mass ID (if available) : 07293416+2153378

Jupiter 2037-08-29T09:57:48 K9.49 G10.89 Pgt

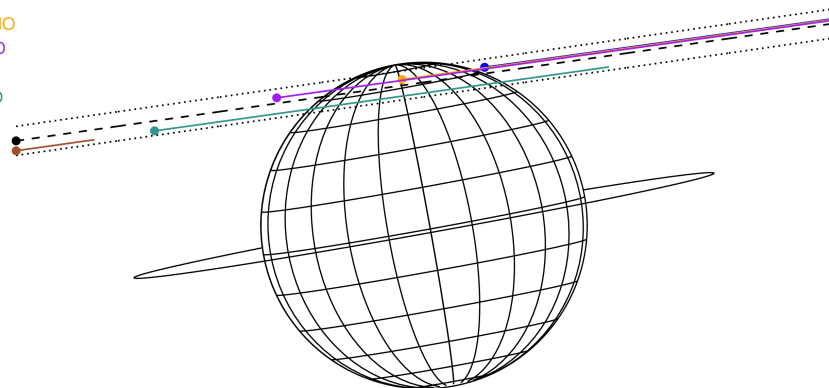
ICRS Star Coord at Epoch: 07h 29m 34.19318s +21:53:35.67729s

RUWE (>1.4 is poor) : 0.92
 K magnitude : 9.491
 G magnitude : 10.887
 RP magnitude : 10.404
 BP magnitude : 11.203
 DUPflag : 0
 Distance (au) : 5.845
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 33.38
 Sun-Target sep (deg) : 45.20
 Sun-Moon sep (deg) : 95.35
 B (ring opening deg) : 1.57
 PA of pole (deg) : 10.22
 Pole direction: RA (deg): 268.05625
 Dec (deg): 64.49689
 C/A sky separation (") : 14.648
 C/A sky separation (km) : 62094.4
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2037-08-29T09:57:48 K9.49 G10.89 Pgt



Earth
 PAL
 KPNO
 MCD
 RIO
 ESO

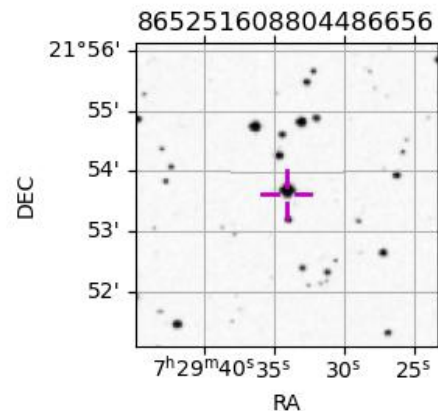


2037-08-29T09:57:48.6100 α: 07 29 34.1932 δ: +21 53 35.677 C/A ***** PA 188.17 deg v_sky +33.38 km/s D 05.84 AU

Credit: Styled after SORA/Lucky Star

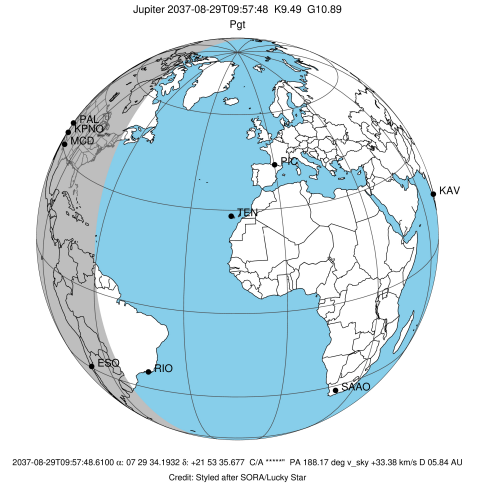
Observable events with sun below -5 deg and altitude above 5 deg

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			Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	AUG 29 10:10 - AUG 29 10:10	Pne
MCD	McDonald Obs. 2.7m	30.7	256.0	+ +	AUG 29 09:39 - AUG 29 10:10	Pie
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
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	+ +	AUG 29 09:34 - AUG 29 10:17	Pie
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

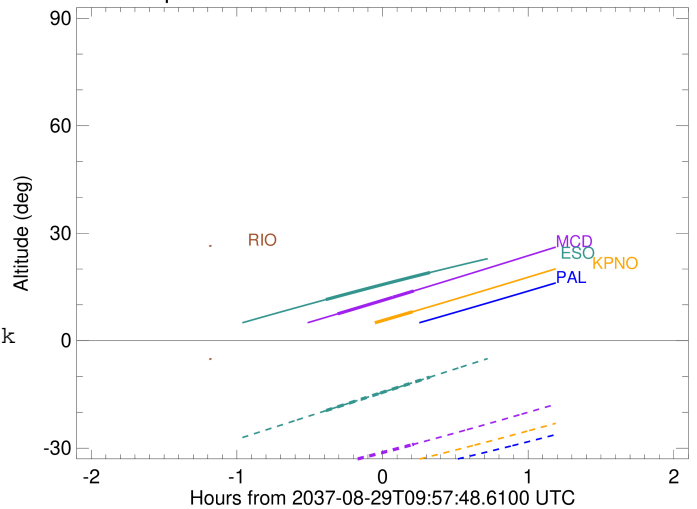


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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2037-08-29T09:55:03.520
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : KPNO
Location            : Kitt Peak Natl Obs
Latitude (deg)      : 31.96333
E. Longitude (deg)  : 248.40000
Altitude (km)       : 2.120
Gaia source ID      : 865251608804486656
2Mass ID (if available) : 07293416+2153378
ICRS Star Coord at Epoch: 07h 29m 34.19318s +21:53:35.67729s
RUWE (>1.4 is poor) : 0.92
K magnitude          : 9.491
G magnitude          : 10.887
RP magnitude         : 10.404
BP magnitude         : 11.203
DUPflag             : 0
Distance (au)       : 5.845
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 33.38
Sun-Target sep (deg) : 45.20
Sun-Moon sep (deg)  : 95.51
B (ring opening deg) : 1.57
PA of pole (deg)    : 10.22
Pole direction: RA (deg): 268.05625
Dec (deg): 64.49689
C/A sky separation (") : 15.255
C/A sky separation (km) : 64668.3
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
    
```



Jupiter 2037-08-29T09:57:48 K9.49 G10.89

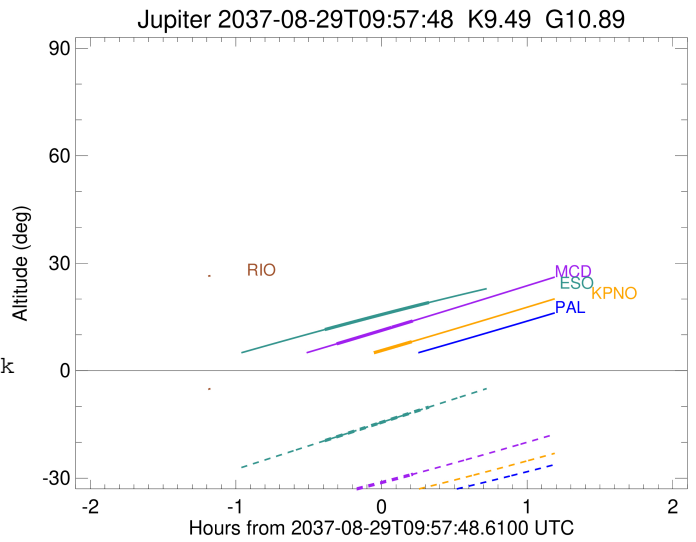
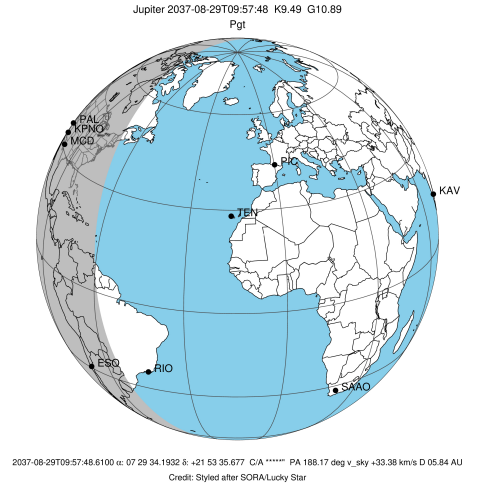


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-08-29T09:39:51.999	2.10x	-38.22	71489.1	67.03	69.53
Jupiter	E	2037-08-29T10:10:15.855	8.08	-33.50	71489.3	62.42	65.30

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2037-08-29T09:55:01.190
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       : 865251608804486656
2Mass ID (if available) : 07293416+2153378
ICRS Star Coord at Epoch: 07h 29m 34.19318s +21:53:35.67729s
RUWE (>1.4 is poor) : 0.92
K magnitude          : 9.491
G magnitude           : 10.887
RP magnitude         : 10.404
BP magnitude         : 11.203
DUPflag              : 0
Distance (au)        : 5.845
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 33.38
Sun-Target sep (deg) : 45.20
Sun-Moon sep (deg)   : 95.60
B (ring opening deg) : 1.57
PA of pole (deg)     : 10.22
Pole direction: RA (deg): 268.05625
Dec (deg): 64.49689
C/A sky separation (") : 15.162
C/A sky separation (km) : 64275.5
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
    
```

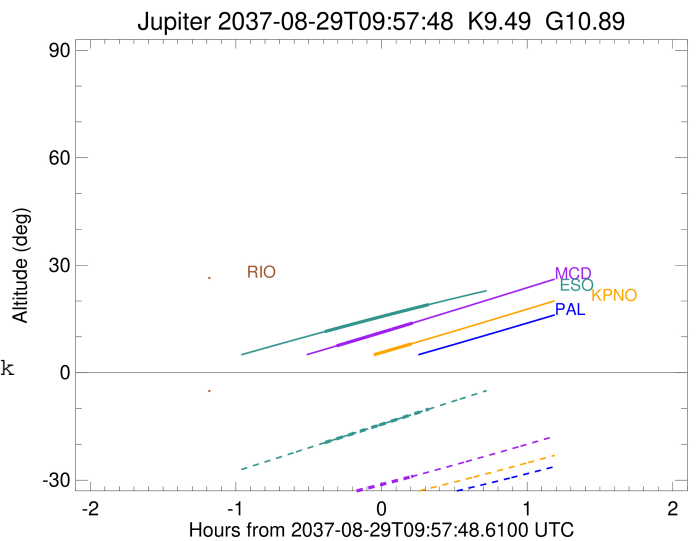
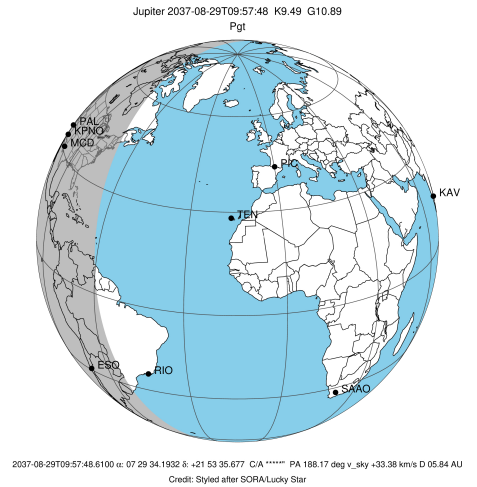


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2037-08-29T09:39:23.744	7.50	-34.40	71489.2	66.30	68.86
Jupiter	E	2037-08-29T10:10:39.511	13.87	-28.93	71489.4	61.70	64.64

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2037-08-29T09:55:52.860
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       : 865251608804486656
2Mass ID (if available) : 07293416+2153378
ICRS Star Coord at Epoch: 07h 29m 34.19318s +21:53:35.67729s
RUWE (>1.4 is poor) : 0.92
K magnitude           : 9.491
G magnitude           : 10.887
RP magnitude         : 10.404
BP magnitude         : 11.203
DUPflag              : 0
Distance (au)        : 5.845
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 33.38
Sun-Target sep (deg) : 45.20
Sun-Moon sep (deg)   : 95.65
B (ring opening deg) : 1.57
PA of pole (deg)     : 10.22
Pole direction: RA (deg): 268.05625
Dec (deg): 64.49689
C/A sky separation (") : 13.551
C/A sky separation (km) : 57445.2
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
    
```



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	2037-08-29T09:34:29.984	11.48	-19.52	71489.7	55.66	58.99
Jupiter	E	2037-08-29T10:17:17.112	19.01	-10.18	71489.9	51.24	54.78