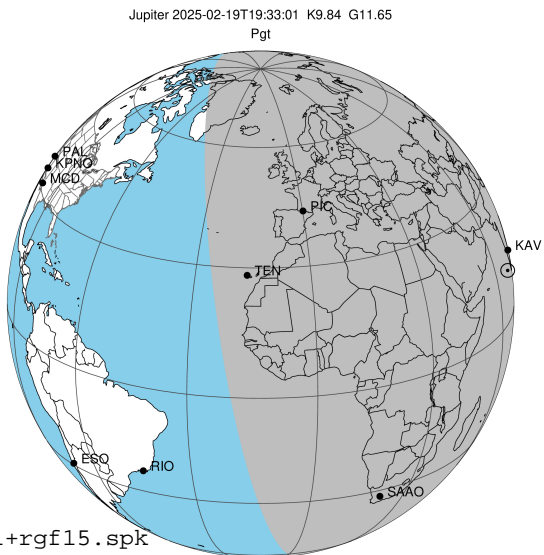


target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2025-02-19T19:33:01.700
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 144831386758691328
 2Mass ID (if available) : 04392082+2142526

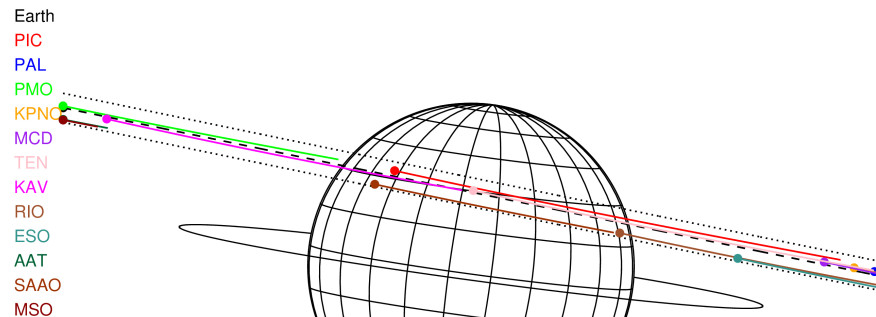
Jupiter 2025-02-19T19:33:01 K9.84 G11.65 Pgt

ICRS Star Coord at Epoch: 04h 39m 20.99462s +21:42:51.74445s

RUWE (>1.4 is poor) : 1.48
 K magnitude : 9.836
 G magnitude : 11.653
 RP magnitude : 11.041
 BP magnitude : 12.087
 DUPflag : 0
 Distance (au) : 4.829
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 7.45
 Sun-Target sep (deg) : 100.26
 Sun-Moon sep (deg) : 159.15
 B (ring opening deg) : 2.64
 PA of pole (deg) : -7.75
 Pole direction: RA (deg): 268.05781
 Dec (deg): 64.49672
 C/A sky separation (") : 9.116
 C/A sky separation (km) : 31930.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

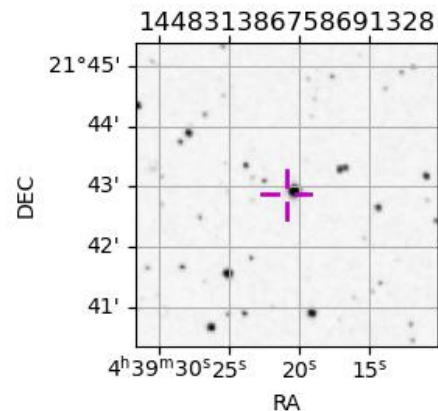


2025-02-19T19:33:01.7000 cr: 04 39 20.9946 s: +21 42 51.744 C/A 9.127" PA 168.37 deg v_sky + 7.45 km/s D 04.83 AU
 Credit: Styled after SORA/Lucky Star



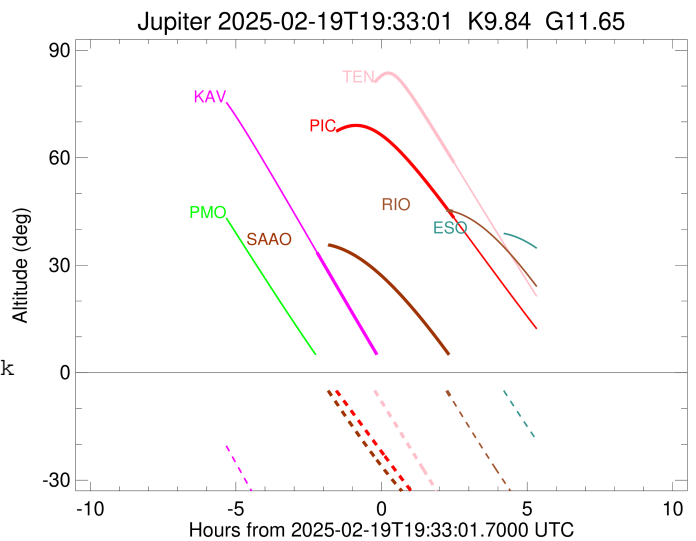
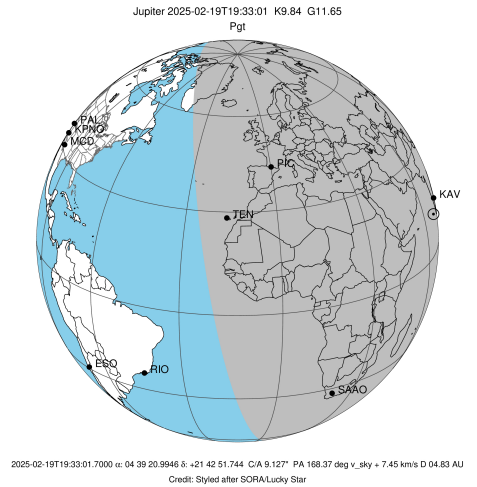
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+	FEB 19 22:02 - FEB 19 22:02	Pne
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	+	FEB 19 22:02 - FEB 19 22:02	Pne
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+	FEB 19 17:20 - FEB 19 17:20	Pin
RIO	Rio de Janeiro	-22.9	316.8	+	FEB 19 21:59 - FEB 19 21:59	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			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2025-02-19T19:36:57.330
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      : 144831386758691328
2Mass ID (if available) : 04392082+2142526
ICRS Star Coord at Epoch: 04h 39m 20.99462s +21:42:51.74445s
RUWE (>1.4 is poor) : 1.48
K magnitude          : 9.836
G magnitude          : 11.653
RP magnitude         : 11.041
BP magnitude         : 12.087
DUPflag             : 0
Distance (au)       : 4.829
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 7.45
Sun-Target sep (deg) : 100.26
Sun-Moon sep (deg)  : 159.55
B (ring opening deg) : 2.64
PA of pole (deg)    : -7.75
Pole direction: RA (deg): 268.05781
Dec (deg): 64.49672
C/A sky separation ("): 9.704
C/A sky separation (km): 33990.4
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
    
```

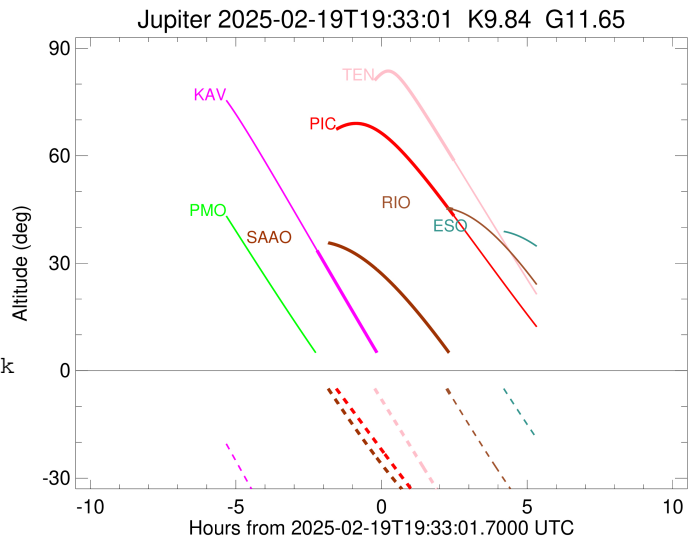
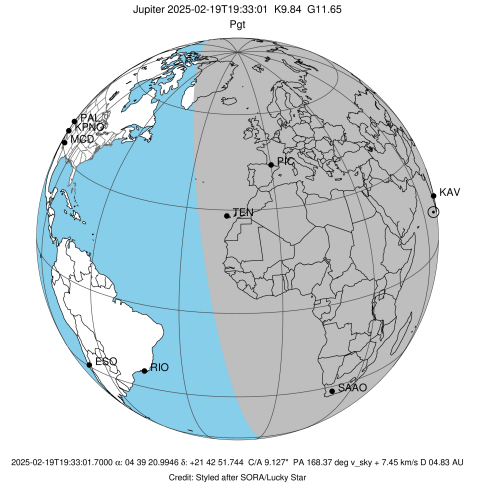


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2025-02-19T17:09:50.509	61.74	3.84x	71489.2	32.86	36.37
Jupiter	E	2025-02-19T22:02:16.042	43.21	-47.34	71490.4	24.56	27.55

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2025-02-19T19:33:33.910
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      : 144831386758691328
2Mass ID (if available) : 04392082+2142526
ICRS Star Coord at Epoch: 04h 39m 20.99462s +21:42:51.74445s
RUWE (>1.4 is poor) : 1.48
K magnitude          : 9.836
G magnitude          : 11.653
RP magnitude         : 11.041
BP magnitude         : 12.087
DUPflag             : 0
Distance (au)       : 4.829
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 7.45
Sun-Target sep (deg) : 100.26
Sun-Moon sep (deg)  : 159.41
B (ring opening deg) : 2.64
PA of pole (deg)    : -7.75
Pole direction: RA (deg): 268.05781
Dec (deg): 64.49672
C/A sky separation ("): 9.334
C/A sky separation (km): 32694.7
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
    
```

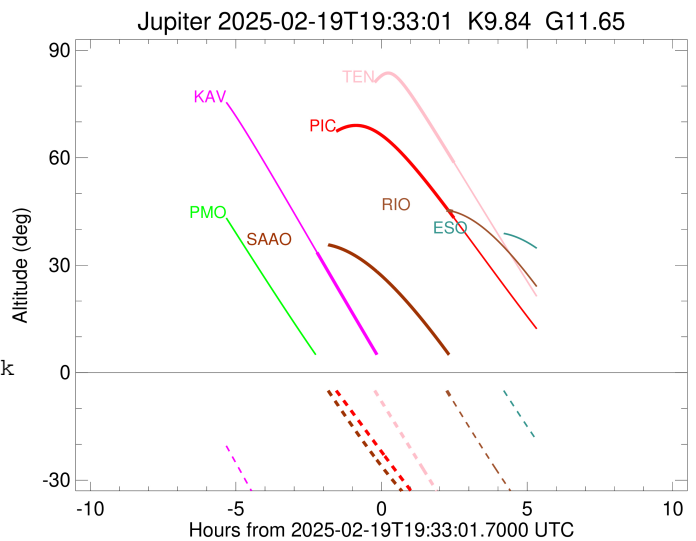
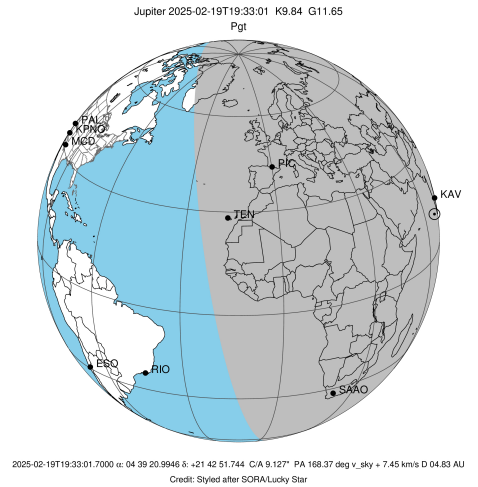


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2025-02-19T17:04:11.676	52.67	23.11x	71489.3	32.12	35.60
Jupiter	E	2025-02-19T22:02:25.716	58.63	-40.83	71490.5	23.01	25.87

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2025-02-19T19:45:37.030
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      : 144831386758691328
2Mass ID (if available) : 04392082+2142526
ICRS Star Coord at Epoch: 04h 39m 20.99462s +21:42:51.74444s
RUWE (>1.4 is poor) : 1.48
K magnitude          : 9.836
G magnitude          : 11.653
RP magnitude         : 11.041
BP magnitude         : 12.087
DUPflag             : 0
Distance (au)       : 4.829
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 7.45
Sun-Target sep (deg) : 100.26
Sun-Moon sep (deg)  : 159.97
B (ring opening deg) : 2.64
PA of pole (deg)    : -7.75
Pole direction: RA (deg): 268.05781
Dec (deg): 64.49672
C/A sky separation (") : 9.181
C/A sky separation (km) : 32158.5
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
    
```

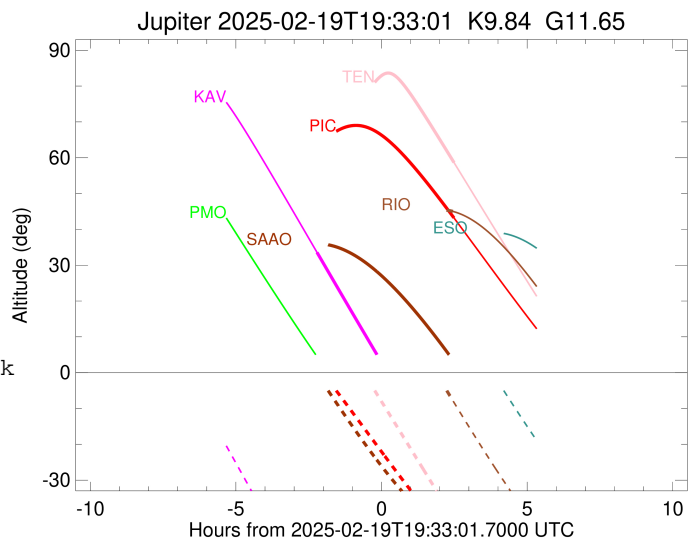
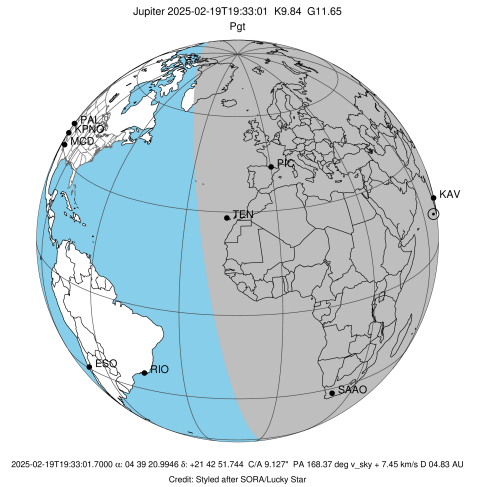


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2025-02-19T17:20:10.793	33.57	-65.92	71489.7	29.51	32.85
Jupiter	E	2025-02-19T22:05:09.673	-30.18x	-44.32	71490.4	24.22	27.19

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2025-02-19T19:25:44.720
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       : 144831386758691328
2Mass ID (if available) : 04392082+2142526
ICRS Star Coord at Epoch: 04h 39m 20.99462s +21:42:51.74445s
RUWE (>1.4 is poor) : 1.48
K magnitude           : 9.836
G magnitude           : 11.653
RP magnitude          : 11.041
BP magnitude          : 12.087
DUPflag              : 0
Distance (au)        : 4.829
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 7.45
Sun-Target sep (deg) : 100.26
Sun-Moon sep (deg)   : 158.99
B (ring opening deg) : 2.64
PA of pole (deg)     : -7.75
Pole direction: RA (deg): 268.05781
Dec (deg): 64.49672
C/A sky separation (") : 8.138
C/A sky separation (km) : 28502.4
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	2025-02-19T16:53:55.295	8.55	61.85x	71489.8	28.73	32.02
Jupiter	E	2025-02-19T21:59:38.671	45.02	-7.72	71491.0	18.67	21.11