

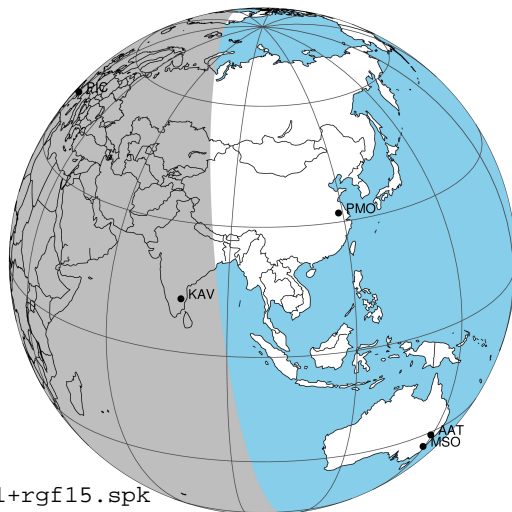
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2024-08-31T00:00:48.320
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3415099887722039552
 2Mass ID (if available) : 05103157+2215001

Jupiter 2024-08-31T00:00:48 K8.05 G11.17 Pgt

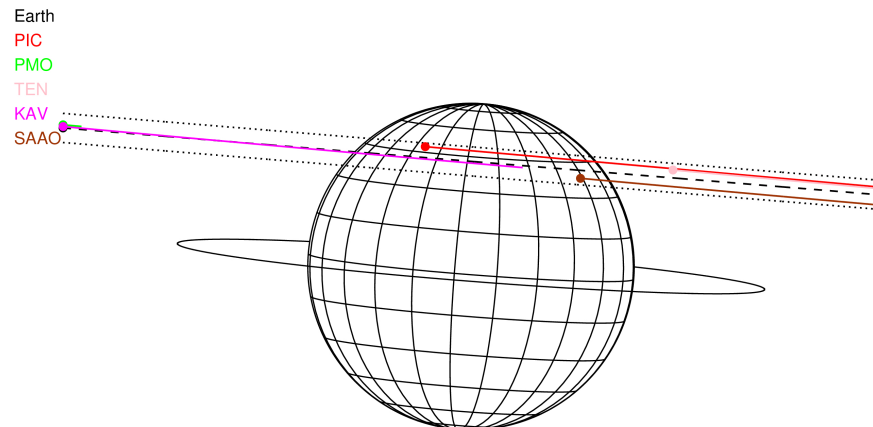
ICRS Star Coord at Epoch: 05h 10m 31.62500s +22:15:00.03378s

RUWE (>1.4 is poor) : 1.14
 K magnitude : 8.054
 G magnitude : 11.173
 RP magnitude : 10.262
 BP magnitude : 12.032
 DUPflag : 0
 Distance (au) : 5.135
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 18.24
 Sun-Target sep (deg) : 79.19
 Sun-Moon sep (deg) : 44.94
 B (ring opening deg) : 2.88
 PA of pole (deg) : -4.47
 Pole direction: RA (deg): 268.05789
 Dec (deg): 64.49673
 C/A sky separation (") : 12.322
 C/A sky separation (km) : 45893.3
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2024-08-31T00:00:48 K8.05 G11.17
 Pgt

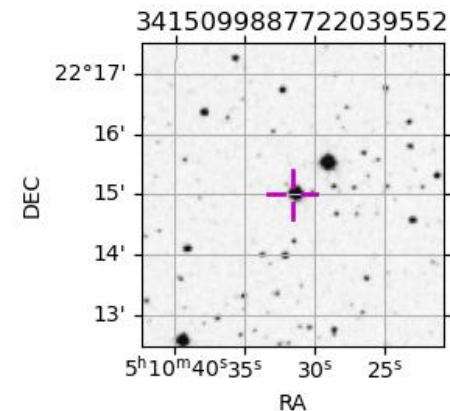


2024-08-31T00:00:48.3200 α: 05 10 31.6250 δ: +22 15 00.034 C/A ***** PA 175.32 deg v_sky +18.24 km/s D 05.14 AU
 Credit: Styled after SORA/Lucky Star



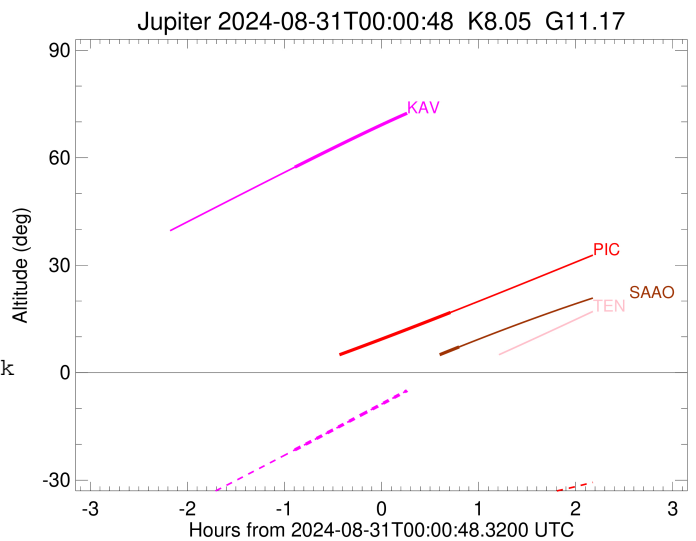
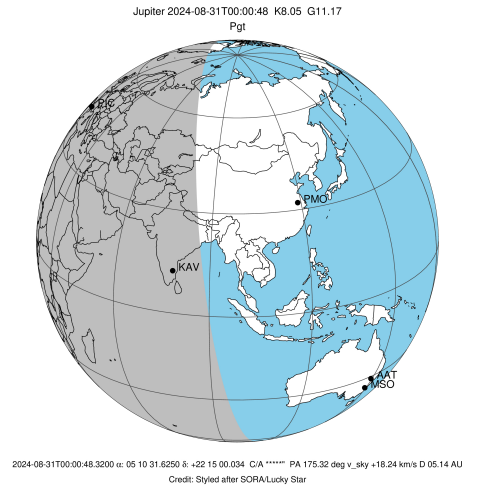
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OCode
PIC	Pic du Midi	42.9	0.1	+	AUG 31 00:43 - AUG 31 00:43	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			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5			Pnn
KAV	Kavalur Observatory	12.6	78.8	+	AUG 30 23:07 - AUG 30 23:07	Pin
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	+	AUG 31 00:48 - AUG 31 00:48	Pne
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2024-08-30T23:57:12.880
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        : 3415099887722039552
2Mass ID (if available) : 05103157+2215001
ICRS Star Coord at Epoch: 05h 10m 31.62500s +22:15:00.03378s
RUWE (>1.4 is poor) : 1.14
K magnitude           : 8.054
G magnitude           : 11.173
RP magnitude          : 10.262
BP magnitude          : 12.032
DUPflag              : 0
Distance (au)         : 5.135
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 18.24
Sun-Target sep (deg) : 79.19
Sun-Moon sep (deg)   : 45.42
B (ring opening deg) : 2.88
PA of pole (deg)     : -4.47
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 13.565
C/A sky separation (km) : 50522.4
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
    
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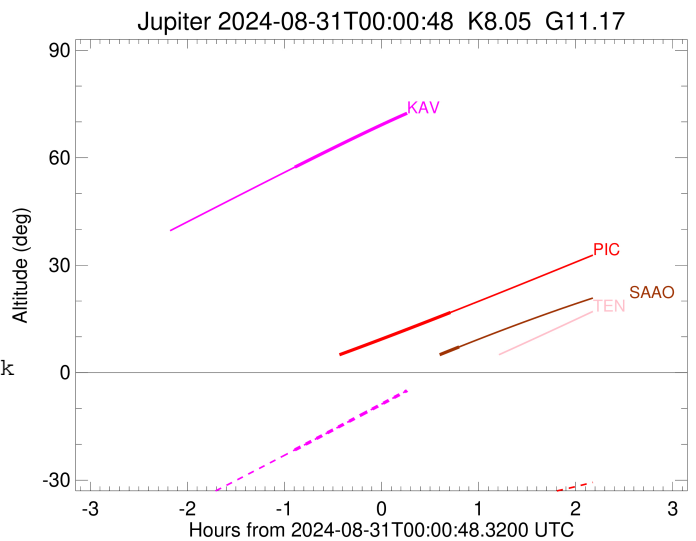
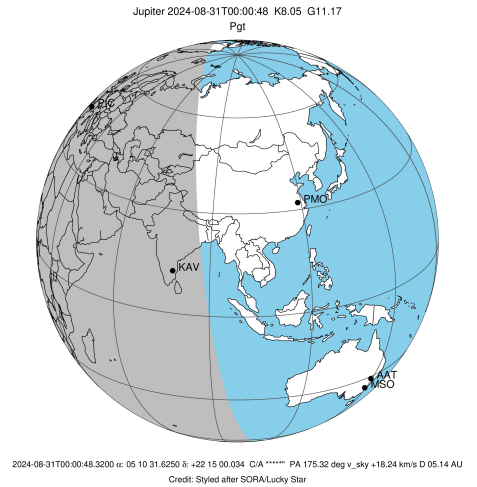


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-08-30T23:11:15.171	1.16x	-37.53	71486.2	45.47	49.17
Jupiter	E	2024-08-31T00:43:22.881	16.80	-37.78	71486.5	44.29	48.00

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2024-08-30T23:59:01.960
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       : 3415099887722039552
2Mass ID (if available) : 05103157+2215001
ICRS Star Coord at Epoch: 05h 10m 31.62500s +22:15:00.03378s
RUWE (>1.4 is poor) : 1.14
K magnitude           : 8.054
G magnitude           : 11.173
RP magnitude          : 10.262
BP magnitude          : 12.032
DUPflag              : 0
Distance (au)        : 5.135
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 18.24
Sun-Target sep (deg) : 79.19
Sun-Moon sep (deg)   : 45.78
B (ring opening deg) : 2.88
PA of pole (deg)     : -4.47
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 12.114
C/A sky separation (km) : 45117.9
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
    
```

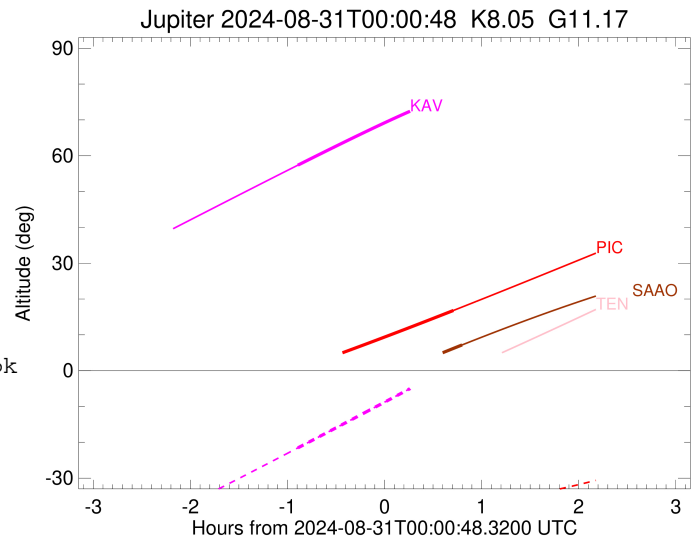
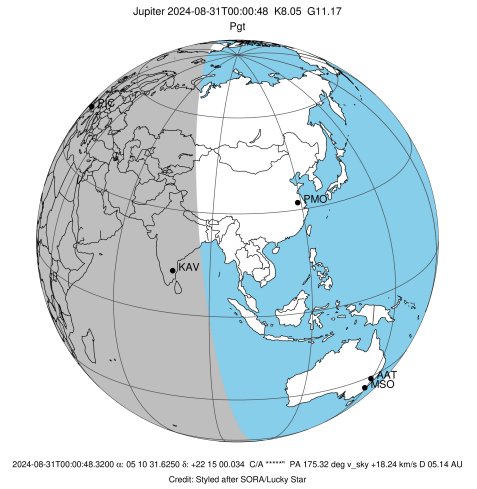


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-08-30T23:07:17.786	57.37	-21.54	71487.4	39.63	43.33
Jupiter	E	2024-08-31T00:50:55.575	78.29	3.27x	71487.6	38.63	42.32

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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2024-08-30T23:56:03.680
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        : 3415099887722039552
2Mass ID (if available) : 05103157+2215001
ICRS Star Coord at Epoch: 05h 10m 31.62500s +22:15:00.03378s
RUWE (>1.4 is poor) : 1.14
K magnitude           : 8.054
G magnitude           : 11.173
RP magnitude          : 10.262
BP magnitude          : 12.032
DUPflag              : 0
Distance (au)         : 5.135
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 18.24
Sun-Target sep (deg)  : 79.19
Sun-Moon sep (deg)    : 45.52
B (ring opening deg) : 2.88
PA of pole (deg)      : -4.47
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 11.484
C/A sky separation (km) : 42773.4
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	2024-08-30T23:03:41.249	-12.97x	-65.55	71487.8	37.38	41.04
Jupiter	E	2024-08-31T00:48:44.248	7.18	-51.40	71488.1	36.02	39.65