

target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2024-09-08T07:06:00.040
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 3415437055538451200
 2Mass ID (if available) : 05142088+2219049

Jupiter 2024-09-08T07:06:00 K8.73 G12.29 Pgt

ICRS Star Coord at Epoch: 05h 14m 20.89201s +22:19:05.00395s

RUWE (>1.4 is poor) : 1.07
 K magnitude : 8.735
 G magnitude : 12.294
 RP magnitude : 11.316
 BP magnitude : 13.288
 DUPflag : 0
 Distance (au) : 5.010
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 14.52
 Sun-Target sep (deg) : 86.34
 Sun-Moon sep (deg) : 142.78
 B (ring opening deg) : 2.87
 PA of pole (deg) : -4.07
 Pole direction: RA (deg): 268.05789
 Dec (deg): 64.49673
 C/A sky separation (") : 9.408
 C/A sky separation (km) : 34184.4
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2024-09-08T07:06:00 K8.73 G12.29
 Pgt

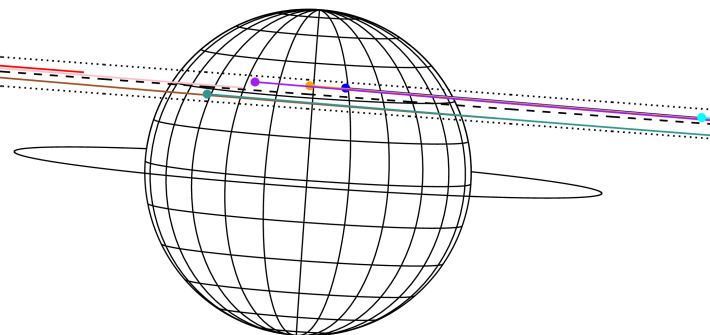


2024-09-08T07:06:00.0400 ex: 05 14 20.8920 8: +22 19 05.004 C/A 9.419° PA 175.77 deg v_sky +14.52 km/s D 05.01 AU

Credit: Styled after SORA/Lucky Star

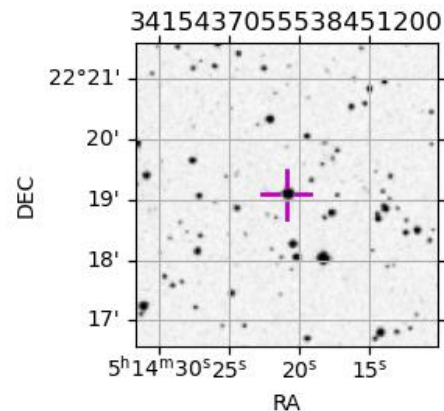
Earth

- PIC
- PAL
- KPNO
- MCD
- TEN
- IRTF
- RIO
- ESO
- SAAO



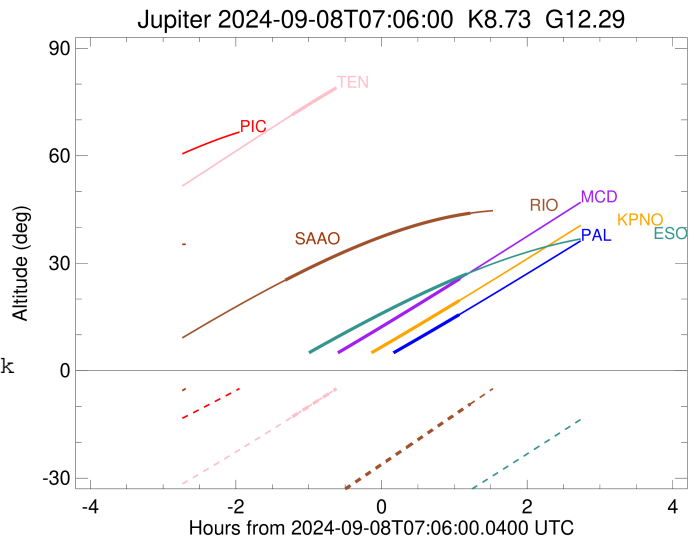
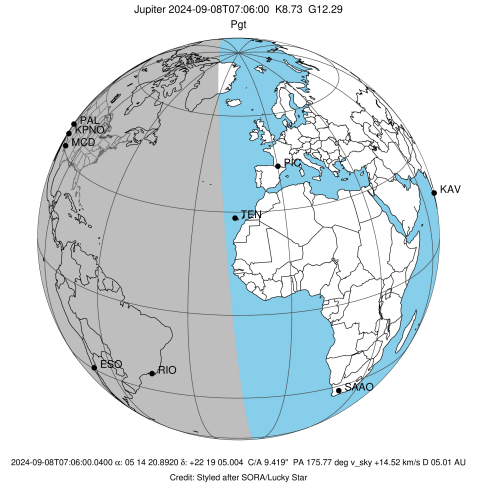
Observable events with sun below -5 deg and altitude above 5 deg

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	+	SEP 08 08:10	- SEP 08 08:10	Pne
PMO	Purple Mtn Obs. Nanking	32.1	118.8				Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	SEP 08 08:10	- SEP 08 08:10	Pne
MCD	McDonald Obs. 2.7m	30.7	256.0	+	SEP 08 08:10	- SEP 08 08:10	Pne
TEN	Teide Obs./Tenerife	28.3	343.5	+	SEP 08 05:52	- SEP 08 05:52	Pin
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	+	SEP 08 05:46	- SEP 08 08:19	Pie
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	SEP 08 08:16	- SEP 08 08:16	Pne
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            : 2024-09-08T07:00:45.510
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : PAL
Location            : Palomar Mt (200")
Latitude (deg)      : 33.35622
E. Longitude (deg)  : 243.13601
Altitude (km)       : 1.706
Gaia source ID      : 3415437055538451200
2Mass ID (if available) : 05142088+2219049
ICRS Star Coord at Epoch: 05h 14m 20.89201s +22:19:05.00395s
RUWE (>1.4 is poor) : 1.07
K magnitude         : 8.735
G magnitude         : 12.294
RP magnitude        : 11.316
BP magnitude        : 13.288
DUPflag            : 0
Distance (au)       : 5.010
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 14.52
Sun-Target sep (deg) : 86.34
Sun-Moon sep (deg)  : 142.21
B (ring opening deg) : 2.87
PA of pole (deg)    : -4.07
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (" ) : 10.519
C/A sky separation (km) : 38222.7
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
    
```

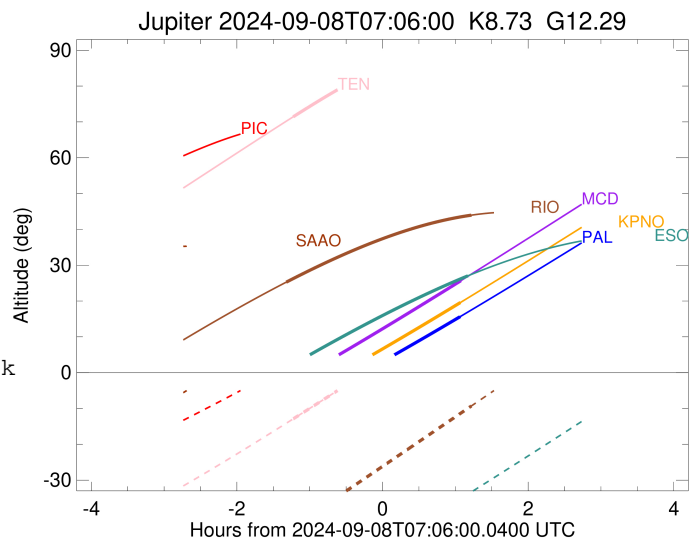
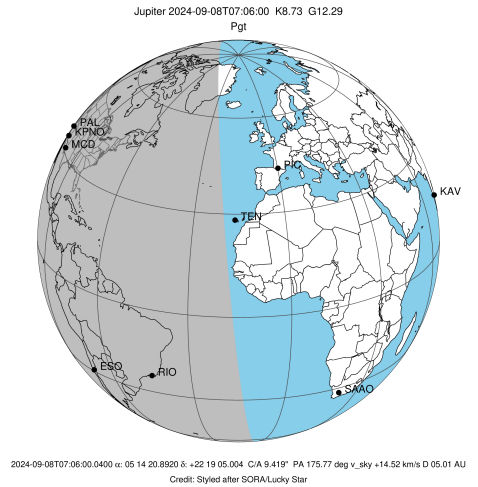


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-09-08T05:52:08.924	-10.30x	-42.98	71488.7	32.94	36.45
Jupiter	E	2024-09-08T08:10:00.022	15.64	-50.92	71488.9	31.54	35.00

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-09-08T07:00:33.590
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      : 3415437055538451200
2Mass ID (if available) : 05142088+2219049
ICRS Star Coord at Epoch: 05h 14m 20.89201s +22:19:05.00395s
RUWE (>1.4 is poor) : 1.07
K magnitude         : 8.735
G magnitude         : 12.294
RP magnitude        : 11.316
BP magnitude        : 13.288
DUPflag            : 0
Distance (au)       : 5.010
f0 (km)            : 0.00
g0 (km)            : 0.00
skyplane vel. (km/s) : 14.52
Sun-Target sep (deg) : 86.34
Sun-Moon sep (deg)  : 142.22
B (ring opening deg) : 2.87
PA of pole (deg)    : -4.07
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 10.441
C/A sky separation (km) : 37938.2
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
    
```

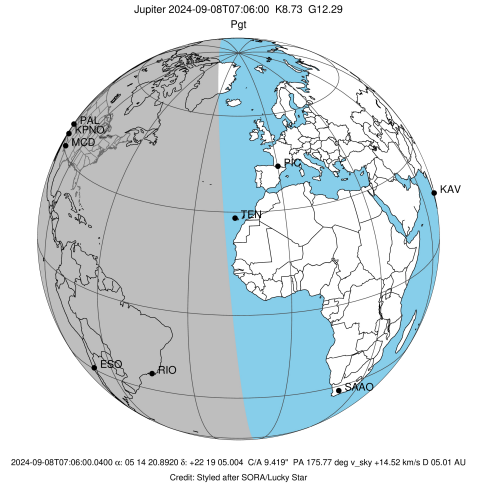


x: target alt < 5.0 deg or sun > -5.0 deg

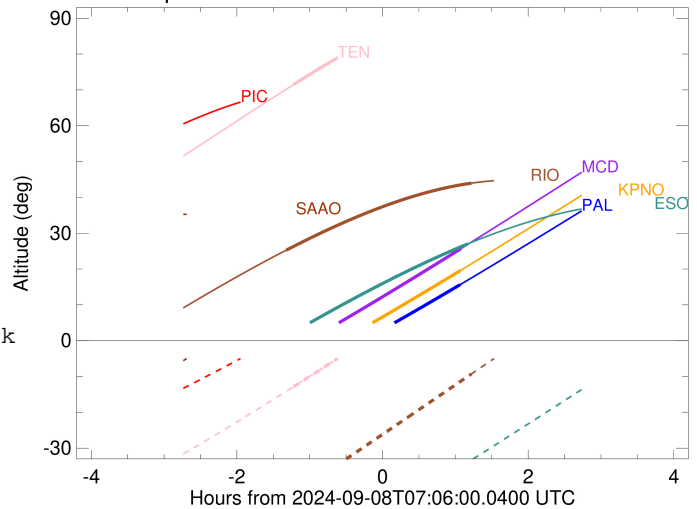
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-09-08T05:51:36.457	-7.48x	-46.71	71488.7	32.70	36.21
Jupiter	E	2024-09-08T08:10:10.228	19.57	-51.17	71488.9	31.25	34.69

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-09-08T07:00:24.430
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       : 3415437055538451200
2Mass ID (if available) : 05142088+2219049
ICRS Star Coord at Epoch: 05h 14m 20.89201s +22:19:05.00395s
RUWE (>1.4 is poor) : 1.07
K magnitude          : 8.735
G magnitude          : 12.294
RP magnitude         : 11.316
BP magnitude         : 13.288
DUPflag             : 0
Distance (au)        : 5.010
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 14.52
Sun-Target sep (deg) : 86.34
Sun-Moon sep (deg)   : 142.27
B (ring opening deg) : 2.87
PA of pole (deg)     : -4.07
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 10.338
C/A sky separation (km) : 37564.5
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
    
```



Jupiter 2024-09-08T07:06:00 K8.73 G12.29

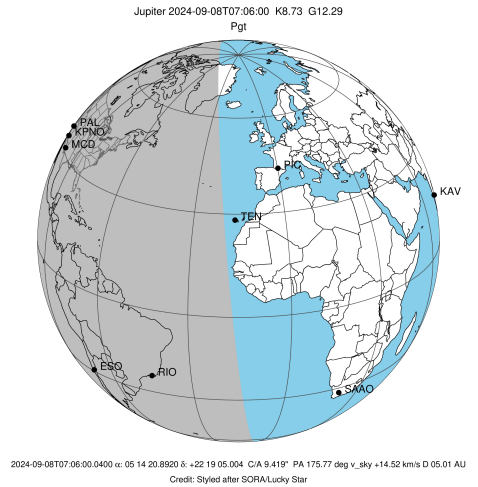


x: target alt < 5.0 deg or sun > -5.0 deg

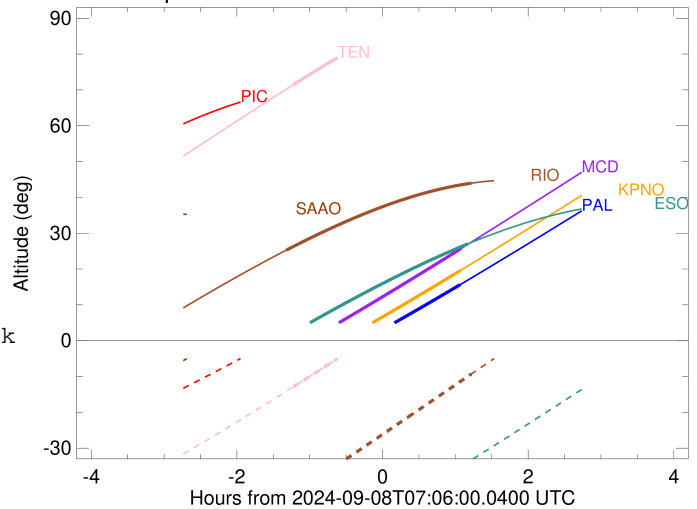
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-09-08T05:50:58.113	-2.63x	-51.00	71488.8	32.39	35.88
Jupiter	E	2024-09-08T08:10:31.825	25.66	-49.61	71489.0	30.88	34.30

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2024-09-08T07:06:01.190
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        : 3415437055538451200
2Mass ID (if available) : 05142088+2219049
ICRS Star Coord at Epoch: 05h 14m 20.89201s +22:19:05.00395s
RUWE (>1.4 is poor) : 1.07
K magnitude           : 8.735
G magnitude           : 12.294
RP magnitude          : 11.316
BP magnitude          : 13.288
DUPflag              : 0
Distance (au)         : 5.010
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 14.52
Sun-Target sep (deg)  : 86.34
Sun-Moon sep (deg)    : 143.30
B (ring opening deg) : 2.87
PA of pole (deg)      : -4.07
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 9.587
C/A sky separation (km) : 34833.6
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 2024-09-08T07:06:00 K8.73 G12.29

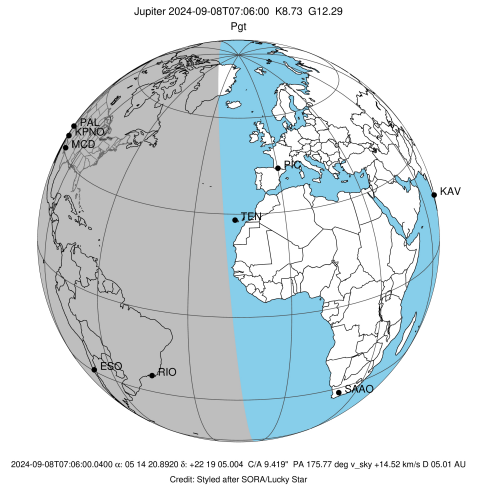


x: target alt < 5.0 deg or sun > -5.0 deg

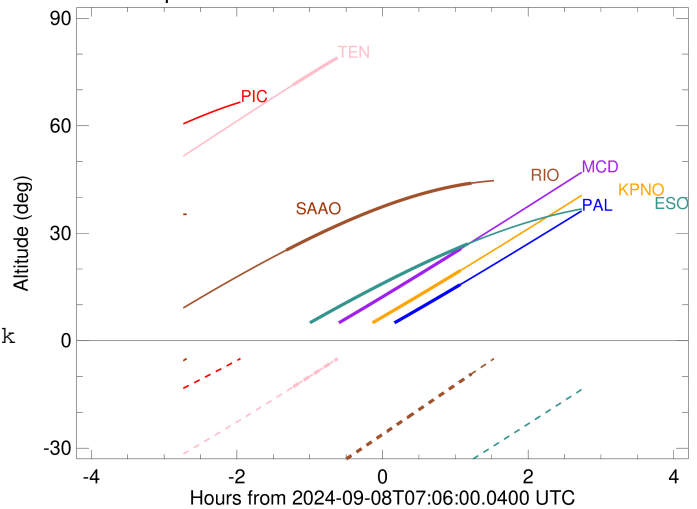
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-09-08T05:52:27.800	71.43	-12.89	71489.2	29.51	32.86
Jupiter	E	2024-09-08T08:19:44.340	73.28	19.34x	71489.3	28.93	32.24

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2024-09-08T07:02:40.800
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        : 3415437055538451200
2Mass ID (if available) : 05142088+2219049
ICRS Star Coord at Epoch: 05h 14m 20.89201s +22:19:05.00395s
RUWE (>1.4 is poor) : 1.07
K magnitude           : 8.735
G magnitude           : 12.294
RP magnitude          : 11.316
BP magnitude          : 13.288
DUPflag              : 0
Distance (au)         : 5.010
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 14.52
Sun-Target sep (deg)  : 86.34
Sun-Moon sep (deg)    : 142.81
B (ring opening deg) : 2.87
PA of pole (deg)      : -4.07
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 8.299
C/A sky separation (km) : 30155.2
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
    
```



Jupiter 2024-09-08T07:06:00 K8.73 G12.29

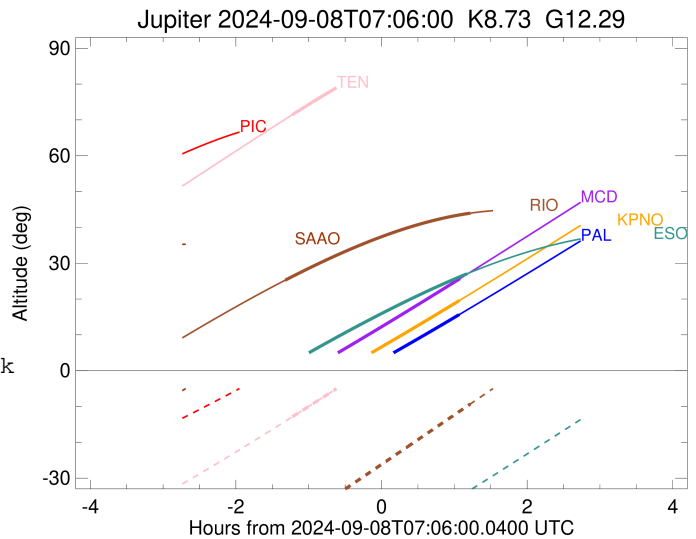
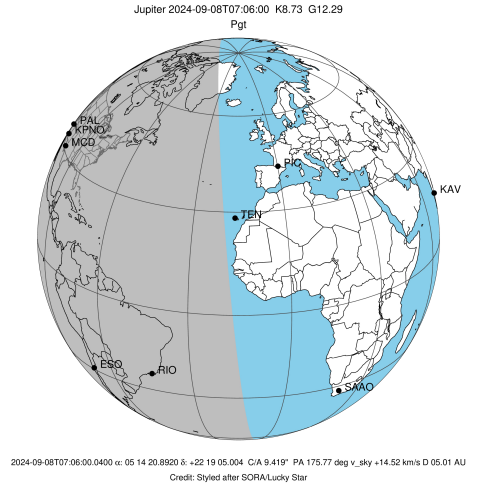


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2024-09-08T05:46:40.551	25.26	-44.18	71489.9	25.58	28.65
Jupiter	E	2024-09-08T08:19:12.120	43.96	-9.30	71490.1	24.42	27.40

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2024-09-08T07:00:41.660
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      : 3415437055538451200
2Mass ID (if available) : 05142088+2219049
ICRS Star Coord at Epoch: 05h 14m 20.89201s +22:19:05.00395s
RUWE (>1.4 is poor) : 1.07
K magnitude          : 8.735
G magnitude          : 12.294
RP magnitude         : 11.316
BP magnitude         : 13.288
DUPflag             : 0
Distance (au)       : 5.010
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 14.52
Sun-Target sep (deg) : 86.34
Sun-Moon sep (deg)  : 142.42
B (ring opening deg) : 2.87
PA of pole (deg)    : -4.07
Pole direction: RA (deg): 268.05789
Dec (deg): 64.49673
C/A sky separation (") : 8.393
C/A sky separation (km) : 30497.0
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	2024-09-08T05:45:46.088	1.04x	-61.80	71489.8	25.99	29.09
Jupiter	E	2024-09-08T08:16:20.299	27.03	-33.92	71490.0	24.52	27.51