

target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-09-14T06:26:03.440
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4116682585073363840
 2Mass ID (if available) : 17340888-2310567

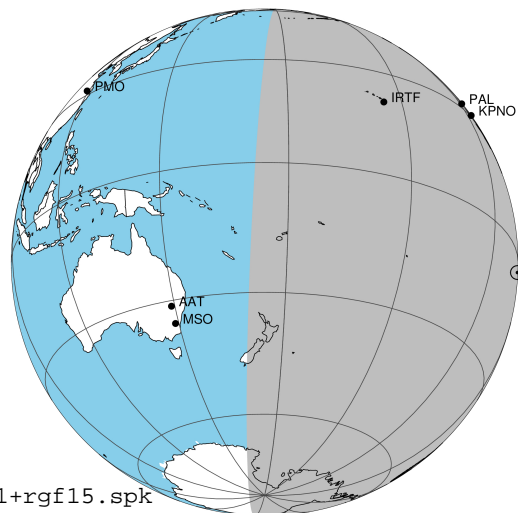
Jupiter 2043-09-14T06:26:03 K7.60 G14.11 Pgt

ICRS Star Coord at Epoch: 17h 34m 08.86557s -23:10:57.20506s

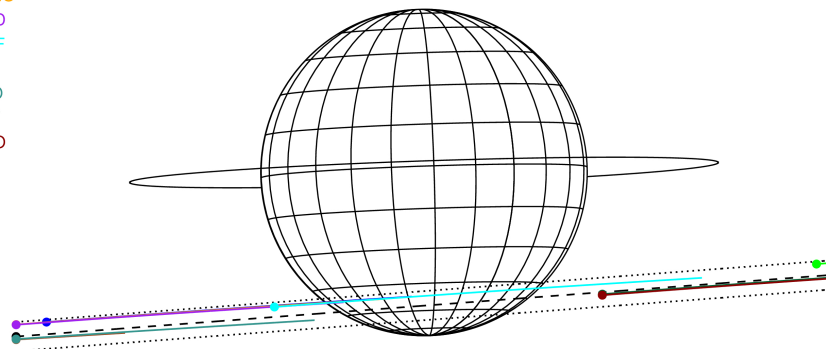
RUWE (>1.4 is poor) : 0.85
 K magnitude : 7.603
 G magnitude : 14.110
 RP magnitude : 12.553
 BP magnitude : 17.842
 DUPflag : 0
 Distance (au) : 5.081
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 11.37
 Sun-Target sep (deg) : 93.31
 Sun-Moon sep (deg) : 27.67
 B (ring opening deg) : -2.25
 PA of pole (deg) : 1.95
 Pole direction: RA (deg): 268.05673
 Dec (deg): 64.49731
 C/A sky separation (") : 15.785
 C/A sky separation (km) : 58168.4
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-09-14T06:26:03 K7.60 G14.11

Pgt



Earth
 PAL
 PMO
 KPNO
 MCD
 IRTF
 RIO
 ESO
 AAT
 MSO

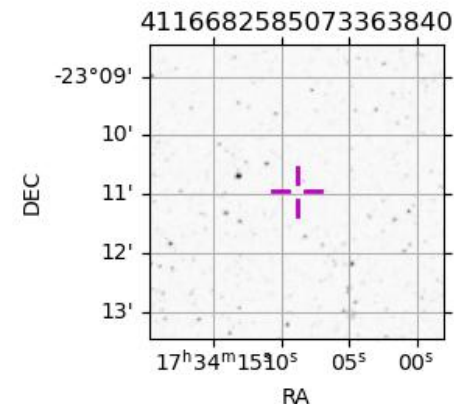


2043-09-14T06:26:03.4400 α: 17 34 08.8656 δ: -23 10 57.205 C/A ***** PA 4.32 deg v_sky +11.37 km/s D 05.08 AU

Credit: Styled after SORA/Lucky Star

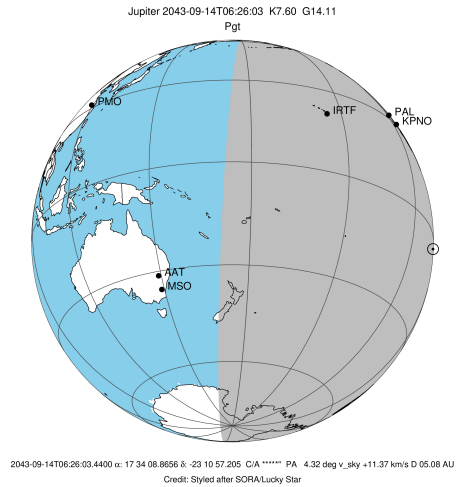
Observable events with sun below -5 deg and altitude above 5 deg

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	+	SEP 14 05:22 - SEP 14 05:22	Pin
PMO	Purple Mtn Obs. Nanking	32.1	118.8			Pnn
KPNO	Kitt Peak Natl Obs	32.0	248.4	+	SEP 14 05:23 - SEP 14 05:23	Pin
MCD	McDonald Obs. 2.7m	30.7	256.0	+	SEP 14 05:24 - SEP 14 05:24	Pin
TEN	Teide Obs./Tenerife	28.3	343.5			Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5	+ +	SEP 14 05:18 - SEP 14 07:40	Pie
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			Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn

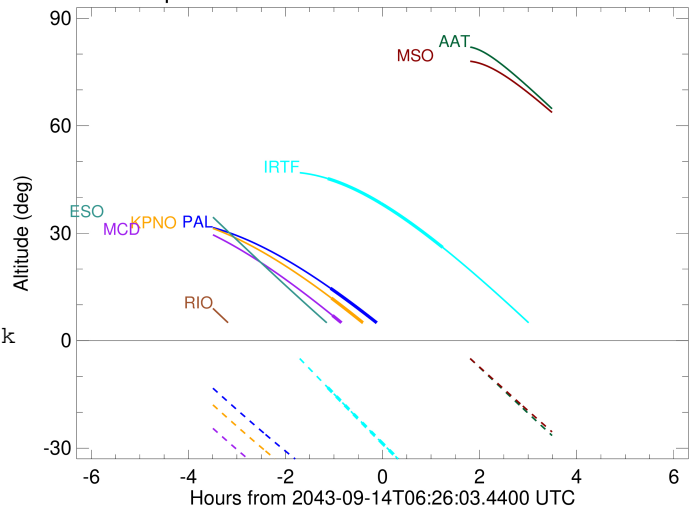


```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-14T06:32:02.330
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       : 4116682585073363840
2Mass ID (if available) : 17340888-2310567
ICRS Star Coord at Epoch: 17h 34m 08.86557s -23:10:57.20506s
RUWE (>1.4 is poor) : 0.85
K magnitude          : 7.603
G magnitude          : 14.110
RP magnitude         : 12.553
BP magnitude         : 17.842
DUPflag             : 0
Distance (au)        : 5.081
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 11.37
Sun-Target sep (deg) : 93.31
Sun-Moon sep (deg)  : 27.20
B (ring opening deg) : -2.25
PA of pole (deg)    : 1.95
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation ("): 14.628
C/A sky separation (km): 53906.0
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
    
```



Jupiter 2043-09-14T06:26:03 K7.60 G14.11

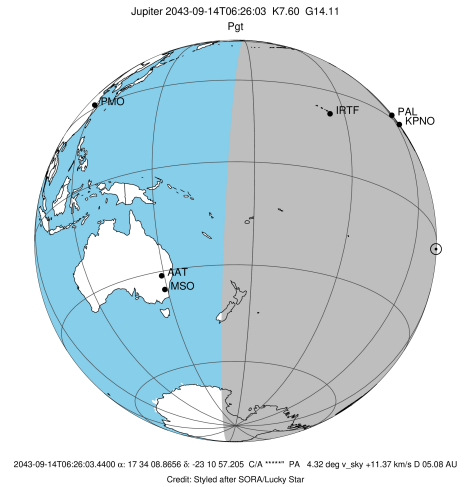


x: target alt < 5.0 deg or sun > -5.0 deg

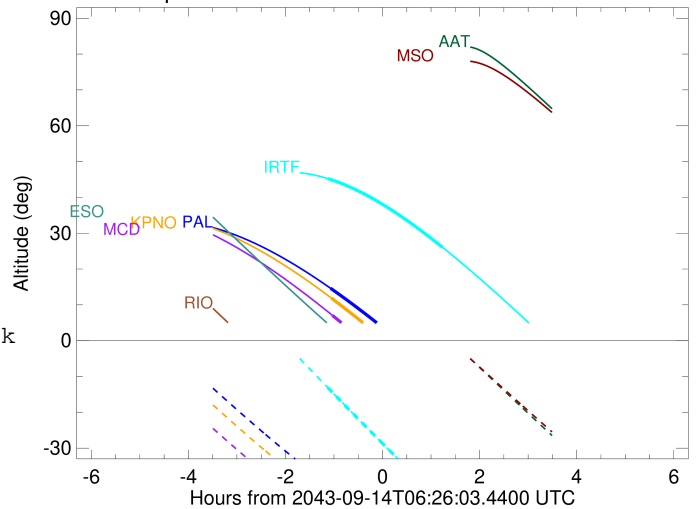
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-09-14T05:22:02.309	14.59	-40.49	71487.8	-50.65	-54.21
Jupiter	E	2043-09-14T07:41:14.714	-10.46x	-53.41	71488.3	-47.25	-50.91

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-14T06:32:20.310
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      : 4116682585073363840
2Mass ID (if available) : 17340888-2310567
ICRS Star Coord at Epoch: 17h 34m 08.86557s -23:10:57.20506s
RUWE (>1.4 is poor) : 0.85
K magnitude          : 7.603
G magnitude          : 14.110
RP magnitude         : 12.553
BP magnitude         : 17.842
DUPflag             : 0
Distance (au)       : 5.081
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 11.37
Sun-Target sep (deg) : 93.31
Sun-Moon sep (deg)  : 27.13
B (ring opening deg) : -2.25
PA of pole (deg)    : 1.95
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation ("): 14.704
C/A sky separation (km): 54187.7
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
    
```



Jupiter 2043-09-14T06:26:03 K7.60 G14.11

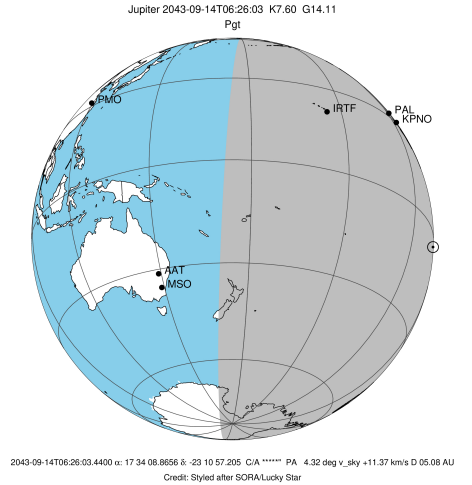


x: target alt < 5.0 deg or sun > -5.0 deg

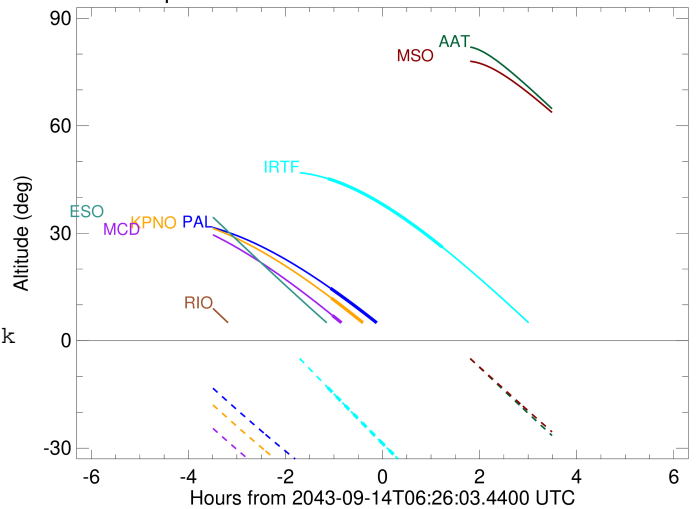
Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-09-14T05:22:59.902	11.86	-44.83	71487.8	-50.94	-54.49
Jupiter	E	2043-09-14T07:40:52.303	-14.09x	-54.52	71488.2	-47.63	-51.28

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-14T06:32:36.800
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       : 4116682585073363840
2Mass ID (if available) : 17340888-2310567
ICRS Star Coord at Epoch: 17h 34m 08.86557s -23:10:57.20506s
RUWE (>1.4 is poor) : 0.85
K magnitude           : 7.603
G magnitude           : 14.110
RP magnitude         : 12.553
BP magnitude         : 17.842
DUPflag              : 0
Distance (au)        : 5.081
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 11.37
Sun-Target sep (deg) : 93.31
Sun-Moon sep (deg)   : 27.05
B (ring opening deg) : -2.25
PA of pole (deg)     : 1.95
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation ("): 14.806
C/A sky separation (km): 54561.4
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
    
```



Jupiter 2043-09-14T06:26:03 K7.60 G14.11

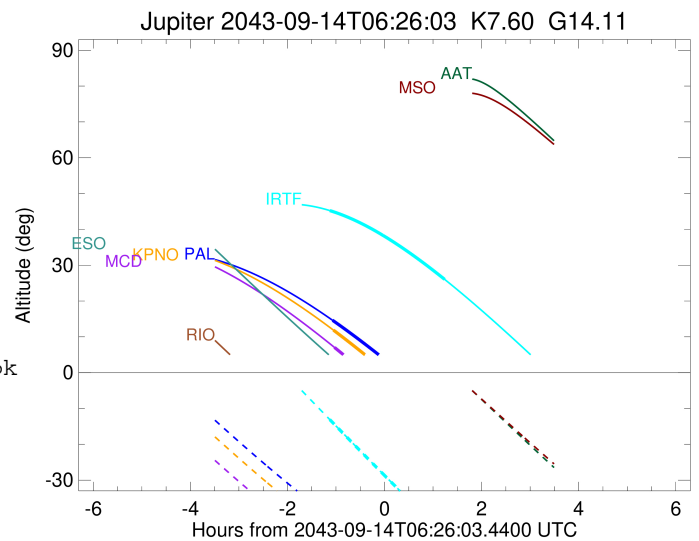
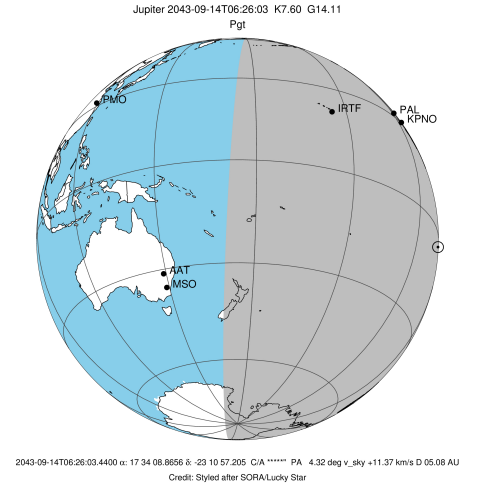


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-09-14T05:24:12.011	7.05	-50.14	71487.8	-51.34	-54.88
Jupiter	E	2043-09-14T07:40:13.012	-19.76x	-54.17	71488.2	-48.12	-51.76

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-09-14T06:29:42.500
Event type          : Pgt
                    : Jupiter occs: geocentric, topocentric
                    : Not a ringed target
Observer code       : IRTF
Location            : Mauna Kea/IRTF
Latitude (deg)      : 19.82622
E. Longitude (deg)  : 204.52800
Altitude (km)       : 4.168
Gaia source ID      : 4116682585073363840
2Mass ID (if available) : 17340888-2310567
ICRS Star Coord at Epoch: 17h 34m 08.86557s -23:10:57.20506s
RUWE (>1.4 is poor) : 0.85
K magnitude          : 7.603
G magnitude          : 14.110
RP magnitude         : 12.553
BP magnitude         : 17.842
DUPflag             : 0
Distance (au)        : 5.081
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 11.37
Sun-Target sep (deg) : 93.31
Sun-Moon sep (deg)   : 27.68
B (ring opening deg) : -2.25
PA of pole (deg)     : 1.95
Pole direction: RA (deg): 268.05673
Dec (deg): 64.49731
C/A sky separation ("): 14.641
C/A sky separation (km): 53953.0
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	2043-09-14T05:18:30.972	45.23	-13.12	71487.8	-51.14	-54.68
Jupiter	E	2043-09-14T07:40:20.174	26.05	-45.02	71488.3	-47.02	-50.69