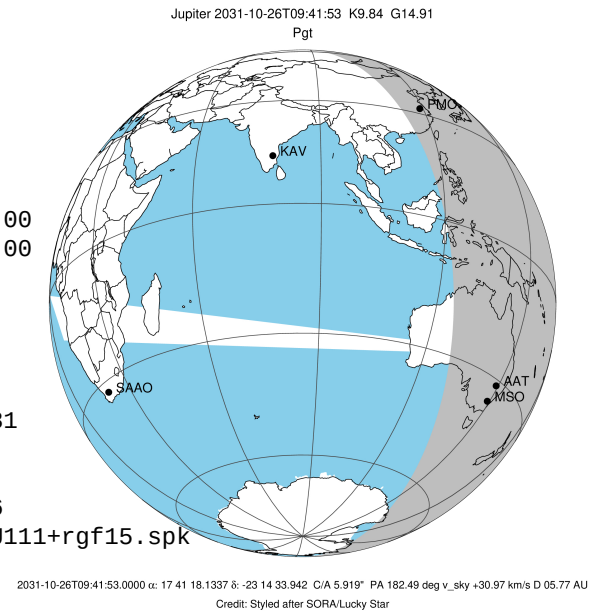
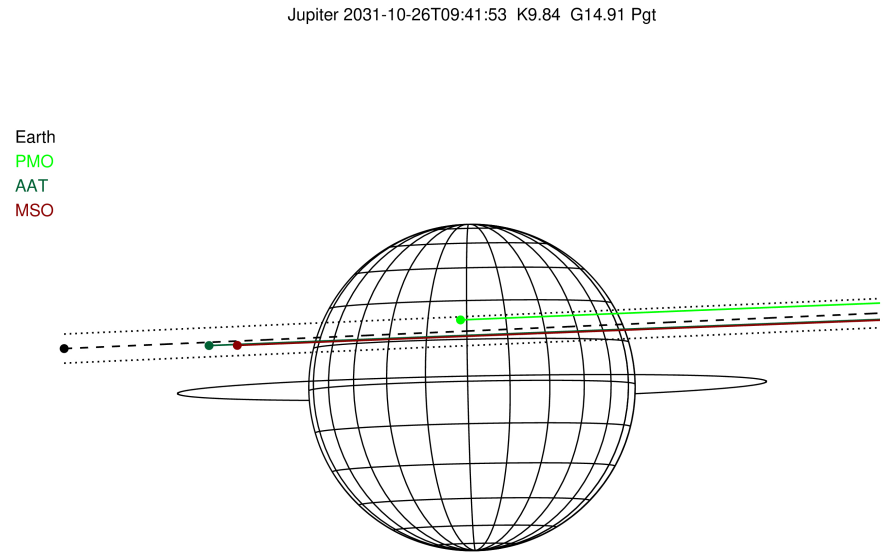
Stellar occultation prediction by rfrench@wellesley.edu Sun Jun 25 10:10:27 2023

target : Jupiter
target radius (km) : 71492.00
C/A epoch : 2031-10-26T09:41:53.000
Event type : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Gaia source ID : 4116490857732226944
2Mass ID (if available) : 17411814-2314334

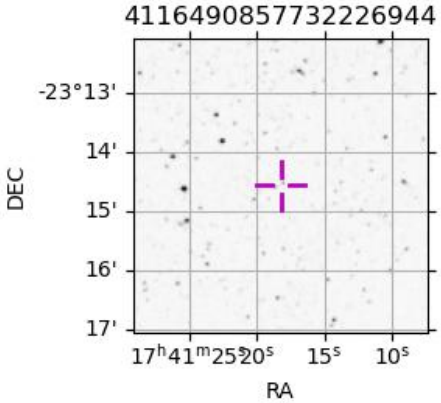
ICRS Star Coord at Epoch: 17h 41m 18.13373s -23:14:33.94235s
RUWE (>1.4 is poor) : 1.04
K magnitude : 9.844
G magnitude : 14.909
RP magnitude : 13.504
BP magnitude : 16.306
DUPflag : 0
Distance (au) : 5.766
f0 (km) : 0.00
g0 (km) : 0.00
skyplane vel. (km/s) : 30.97
Sun-Target sep (deg) : 53.37
Sun-Moon sep (deg) : 77.23
B (ring opening deg) : -2.23
PA of pole (deg) : 1.18
Pole direction: RA (deg): 268.05681
Dec (deg): 64.49652
C/A sky separation (") : 5.927
C/A sky separation (km) : 24786.6
NAIF SPICE kernels : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp



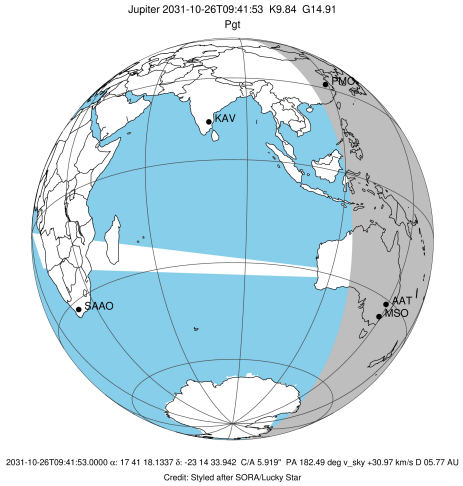


Observable events with sun below -5 deg and altitude above 5 deg

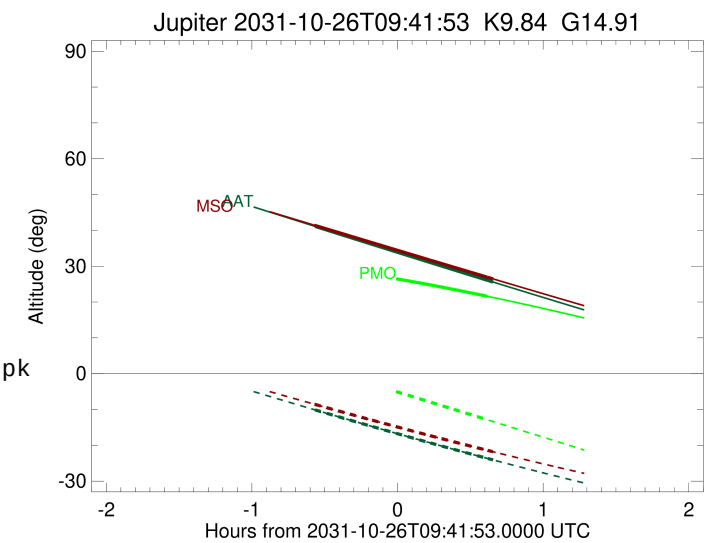
Obs	Location	lat	Elon	Target		Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1				Pnn
PAL	Palomar Mt (200")	33.4	243.1				Pnn
PMO	Purple Mtn Obs. Nanking	32.1	118.8		+	OCT 26 10:18 - OCT 26 10:18	Pne
KPNO	Kitt Peak Natl Obs	32.0	248.4				Pnn
MCD	McDonald Obs. 2.7m	30.7	256.0				Pnn
TEN	Teide Obs./Tenerife	28.3	343.5				Pnn
IRTF	Mauna Kea/IRTF	19.8	204.5				Pnn
KAV	Kavalur Observatory	12.6	78.8				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	+	+	OCT 26 09:07 - OCT 26 10:21	Pie
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8				Pnn
MSO	Mt. Stromlo Observatory	-35.3	149.0	+	+	OCT 26 09:07 - OCT 26 10:21	Pie



Jupiter_2031-10-26T09_41_53.0000_PMO.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:18:13 2023



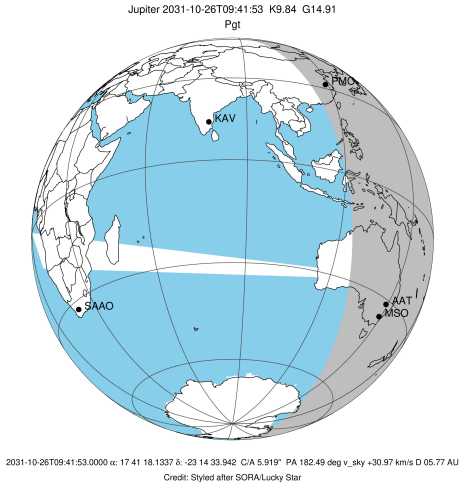

```
target                  : Jupiter
target radius (km)      :  71492.00
C/A epoch               : 2031-10-26T09:43:25.170
Event type              : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code           : PMO
Location                : Purple Mtn Obs. Nanking
Latitude (deg)          :  32.06667
E. Longitude (deg)      : 118.82089
Altitude (km)           :   0.364
Gaia source ID          : 4116490857732226944
2Mass ID (if available) : 17411814-2314334
ICRS Star Coord at Epoch: 17h 41m 18.13373s -23:14:33.94235s
RUWE (>1.4 is poor)     :   1.04
K magnitude             :  9.844
G magnitude             : 14.909
RP magnitude            : 13.504
BP magnitude            : 16.306
DUPflag                 : 0
Distance (au)           :  5.766
f0 (km)                 :       0.00
g0 (km)                 :       0.00
skyplane vel. (km/s)    :  30.97
Sun-Target sep (deg)    :   53.37
Sun-Moon sep (deg)      :   77.55
B (ring opening deg)    :   -2.23
PA of pole (deg)        :    1.18
Pole direction: RA (deg): 268.05681
Dec (deg):  64.49652
C/A sky separation (")  :   7.121
C/A sky separation (km) :  29777.9
NAIF SPICE kernels      : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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	2031-10-26T09:08:02.292	30.05	1.87x	71490.9	23.40	26.29
Jupiter	E	2031-10-26T10:18:45.063	21.61	-12.84	71490.7	25.75	28.84

Jupiter_2031-10-26T09_41_53.0000_AAT.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:34:36 2023




```
target                  : Jupiter
target radius (km)      :  71492.00
C/A epoch               : 2031-10-26T09:44:37.120
Event type              : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code           : AAT
Location                : Siding Spring (AAT)
Latitude (deg)          : -31.27703
E. Longitude (deg)      : 149.06608
Altitude (km)           :   1.164
Gaia source ID          : 4116490857732226944
2Mass ID (if available) : 17411814-2314334
ICRS Star Coord at Epoch: 17h 41m 18.13373s -23:14:33.94235s
RUWE (>1.4 is poor)     :   1.04
K magnitude             :  9.844
G magnitude             : 14.909
RP magnitude            : 13.504
BP magnitude            : 16.306
DUPflag                 : 0
Distance (au)           :  5.766
f0 (km)                 :       0.00
g0 (km)                 :       0.00
skyplane vel. (km/s)    :  30.97
Sun-Target sep (deg)    :   53.37
Sun-Moon sep (deg)      :   77.60
B (ring opening deg)    :   -2.23
PA of pole (deg)        :    1.18
Pole direction: RA (deg): 268.05681
Dec (deg):  64.49652
C/A sky separation (")  :   5.477
C/A sky separation (km) :  22904.2
NAIF SPICE kernels      : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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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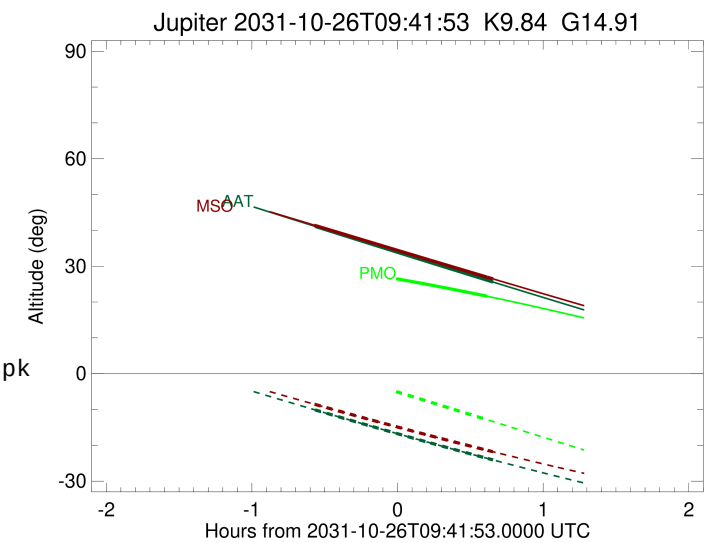
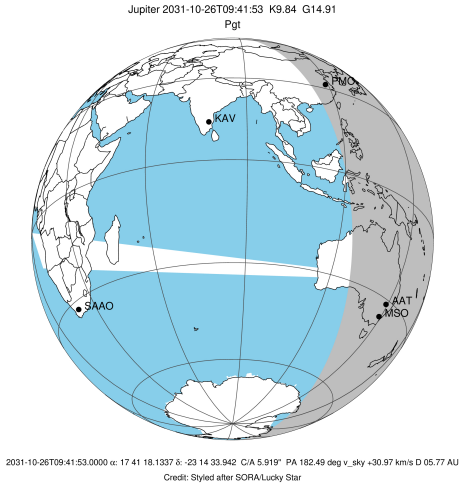
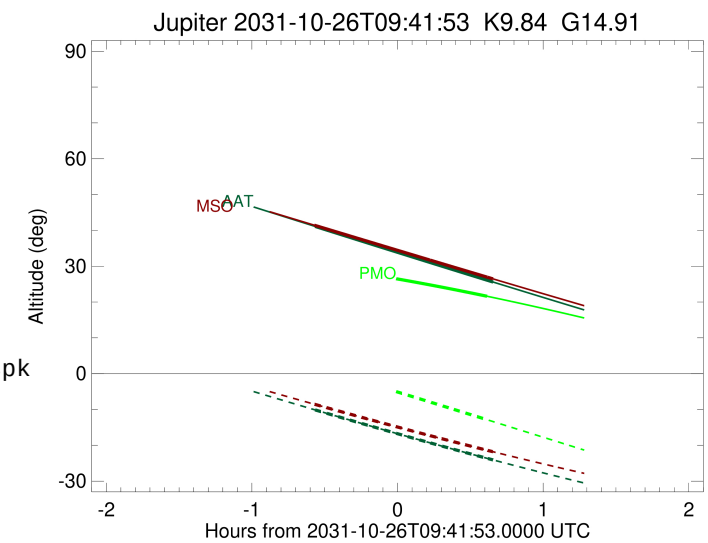



```
x: target alt <  5.0 deg or  sun >  -5.0 deg
Target   I/E            UTC           alt   alt-sun   radius   lat-geo lat-geodetic
-------------------------------------------------------------------------------------
Jupiter  I  2031-10-26T09:07:55.375   41.11  -10.11   71491.4    17.60     19.92
Jupiter  E  2031-10-26T10:21:14.034   25.58  -24.07   71491.2    19.72     22.27
```

Jupiter_2031-10-26T09_41_53.0000_MSO.txt
Occultation predictions computed by rfrench@wellesley.edu Sun Jun 11 11:38:44 2023




```
target                  : Jupiter
target radius (km)      :  71492.00
C/A epoch               : 2031-10-26T09:44:30.160
Event type              : Pgt
: Jupiter occs: geocentric, topocentric
: Not a ringed target
Observer code           : MSO
Location                : Mt. Stromlo Observatory
Latitude (deg)          : -35.32000
E. Longitude (deg)      : 149.00833
Altitude (km)           :   0.770
Gaia source ID          : 4116490857732226944
2Mass ID (if available) : 17411814-2314334
ICRS Star Coord at Epoch: 17h 41m 18.13373s -23:14:33.94235s
RUWE (>1.4 is poor)     :   1.04
K magnitude             :  9.844
G magnitude             : 14.909
RP magnitude            : 13.504
BP magnitude            : 16.306
DUPflag                 : 0
Distance (au)           :  5.766
f0 (km)                 :       0.00
g0 (km)                 :       0.00
skyplane vel. (km/s)    :  30.97
Sun-Target sep (deg)    :   53.37
Sun-Moon sep (deg)      :   77.62
B (ring opening deg)    :   -2.23
PA of pole (deg)        :    1.18
Pole direction: RA (deg): 268.05681
Dec (deg):  64.49652
C/A sky separation (")  :   5.383
C/A sky separation (km) :  22511.5
NAIF SPICE kernels      : RAJobs_U111+rgf15.spk
URKALLv1.spk
naif0012.tls
nep097.bsp
nep101.bsp
sat440l.bsp
de440.bsp
earth_720101_070426.bpc
jup365.bsp
ura116.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  2031-10-26T09:07:44.773   41.41   -8.55   71491.4    17.25     19.54
Jupiter  E  2031-10-26T10:21:10.881   26.47  -21.78   71491.2    19.40     21.91
```