

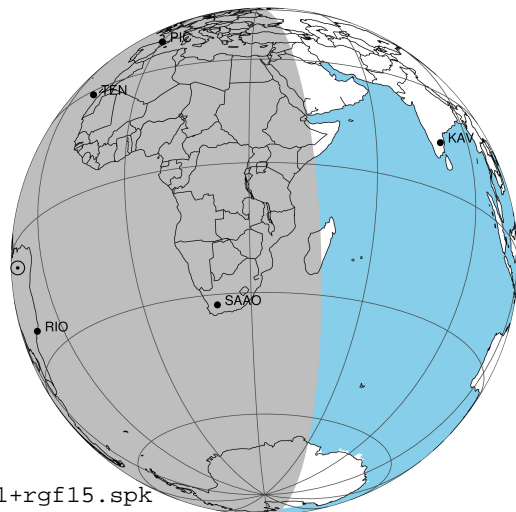
target : Jupiter
 target radius (km) : 71492.00
 C/A epoch : 2043-04-06T03:02:45.180
 Event type : Pgt
 : Jupiter occs: geocentric, topocentric
 : Not a ringed target
 Gaia source ID : 4066624608155670272
 2Mass ID (if available) : 18113804-2258379

Jupiter 2043-04-06T03:02:45 K9.96 G14.91 Pgt

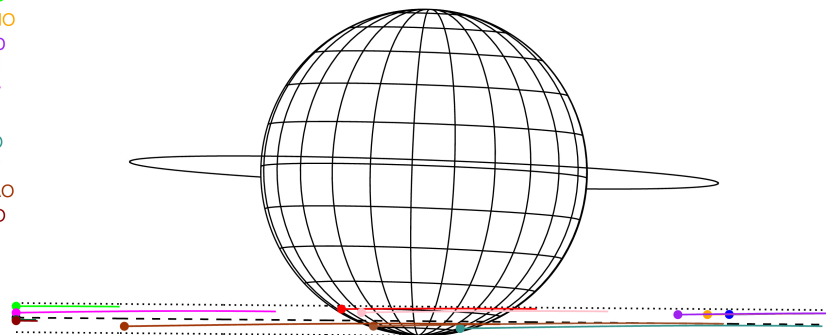
ICRS Star Coord at Epoch: 18h 11m 38.03952s -22:58:37.88390s

RUWE (>1.4 is poor) : 0.98
 K magnitude : 9.963
 G magnitude : 14.915
 RP magnitude : 13.672
 BP magnitude : 16.631
 DUPflag : 0
 Distance (au) : 4.977
 f0 (km) : 0.00
 g0 (km) : 0.00
 skyplane vel. (km/s) : 6.54
 Sun-Target sep (deg) : 102.94
 Sun-Moon sep (deg) : 53.44
 B (ring opening deg) : -2.44
 PA of pole (deg) : -2.09
 Pole direction: RA (deg): 268.05664
 Dec (deg): 64.49732
 C/A sky separation (") : 18.042
 C/A sky separation (km) : 65129.7
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk

Jupiter 2043-04-06T03:02:45 K9.96 G14.91
 Pgt



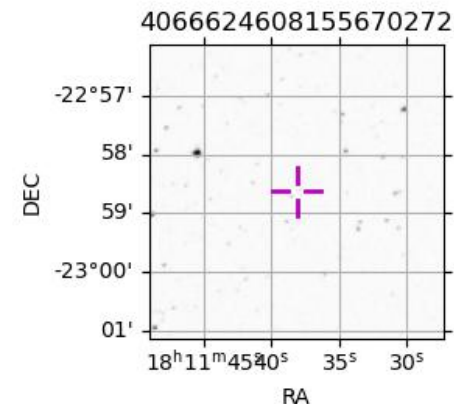
Earth
 PIC
 PAL
 PMO
 KPNO
 MCD
 TEN
 KAV
 RIO
 ESO
 AAT
 SAAO
 MSO



2043-04-06T03:02:45.1800 α: 18 11 38.0395 δ: -22 58 37.884 C/A ***** PA 359.50 deg v_sky + 6.54 km/s D 04.98 AU
 Credit: Styled after SORA/Lucky Star

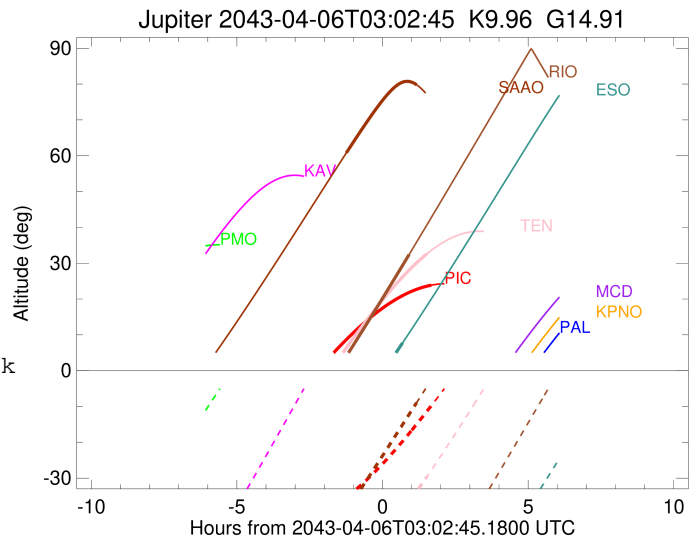
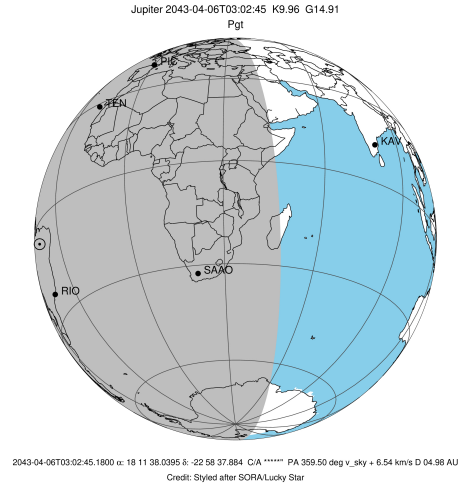
Observable events with sun below -5 deg and altitude above 5 deg

Obs	Location	lat	Elon	Target	Observed Events Interval	OEcode
PIC	Pic du Midi	42.9	0.1	+	APR 06 04:43 - APR 06 04:43	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	+	APR 06 04:34 - APR 06 04:34	Pne
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	+	APR 06 03:57 - APR 06 03:57	Pne
ESO	European Southern Obs. (3.6m)	-29.3	289.3	+	APR 06 03:44 - APR 06 03:44	Pne
AAT	Siding Spring (AAT)	-31.3	149.1			Pnn
SAAO	So. Afr. Astro. Obs. (Sutherland)	-32.4	20.8	+	APR 06 01:48 - APR 06 04:12	Pie
MSO	Mt. Stromlo Observatory	-35.3	149.0			Pnn



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target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-04-06T02:57:54.540
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     : 4066624608155670272
2Mass ID (if available) : 18113804-2258379
ICRS Star Coord at Epoch: 18h 11m 38.03952s -22:58:37.88390s
RUWE (>1.4 is poor) : 0.98
K magnitude        : 9.963
G magnitude        : 14.915
RP magnitude       : 13.672
BP magnitude       : 16.631
DUPflag           : 0
Distance (au)     : 4.977
f0 (km)           : 0.00
g0 (km)           : 0.00
skyplane vel. (km/s) : 6.54
Sun-Target sep (deg) : 102.94
Sun-Moon sep (deg) : 53.94
B (ring opening deg) : -2.44
PA of pole (deg)  : -2.09
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (" ) : 16.514
C/A sky separation (km) : 59614.9
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
    
```

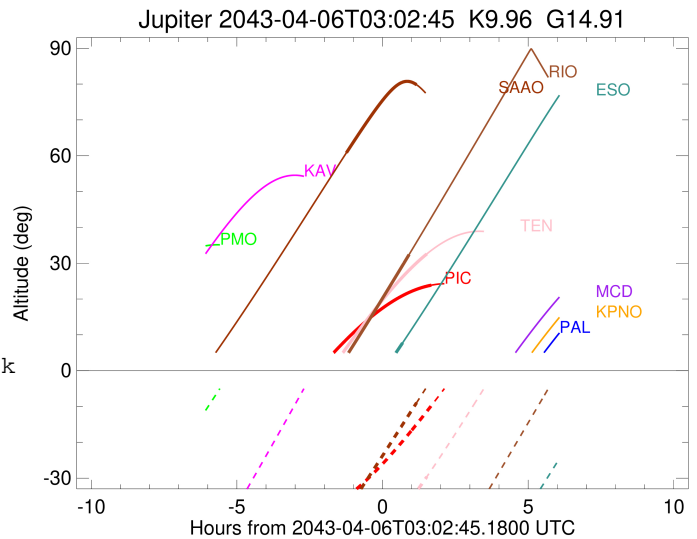
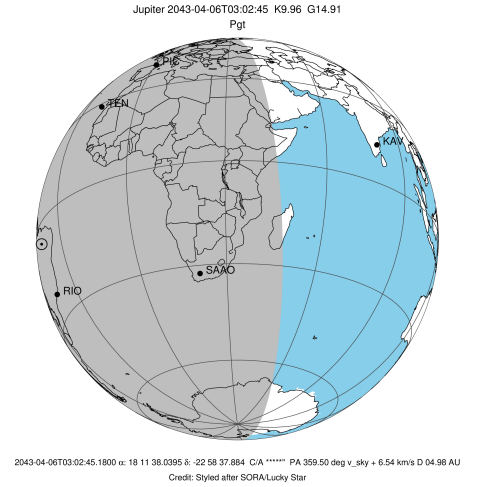


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-06T01:14:33.525	3.90x	-38.20	71486.0	-58.86	-62.00
Jupiter	E	2043-04-06T04:43:08.847	23.86	-9.80	71486.6	-54.43	-57.83

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch             : 2043-04-06T02:54:37.400
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        : 4066624608155670272
2Mass ID (if available) : 18113804-2258379
ICRS Star Coord at Epoch: 18h 11m 38.03952s -22:58:37.88390s
RUWE (>1.4 is poor) : 0.98
K magnitude           : 9.963
G magnitude           : 14.915
RP magnitude          : 13.672
BP magnitude          : 16.631
DUPflag              : 0
Distance (au)         : 4.977
f0 (km)               : 0.00
g0 (km)               : 0.00
skyplane vel. (km/s) : 6.54
Sun-Target sep (deg) : 102.94
Sun-Moon sep (deg)   : 54.11
B (ring opening deg) : -2.44
PA of pole (deg)     : -2.09
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 16.889
C/A sky separation (km) : 60966.9
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
    
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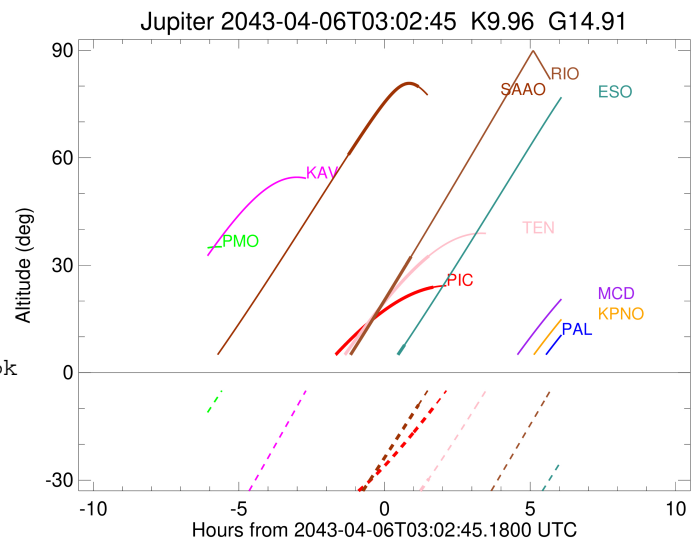
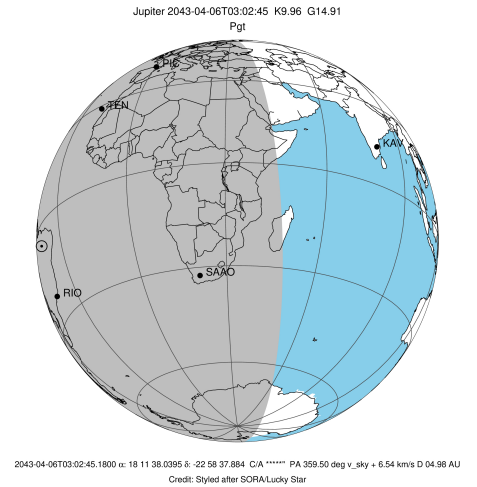


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-06T01:17:31.517	0.39x	-55.45	71485.7	-61.28	-64.25
Jupiter	E	2043-04-06T04:34:10.011	32.60	-29.59	71486.4	-55.96	-59.27

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-04-06T02:52:16.560
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      : 4066624608155670272
2Mass ID (if available) : 18113804-2258379
ICRS Star Coord at Epoch: 18h 11m 38.03952s -22:58:37.88390s
RUWE (>1.4 is poor) : 0.98
K magnitude          : 9.963
G magnitude          : 14.915
RP magnitude         : 13.672
BP magnitude         : 16.631
DUPflag             : 0
Distance (au)       : 4.977
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 6.54
Sun-Target sep (deg) : 102.94
Sun-Moon sep (deg)  : 54.21
B (ring opening deg) : -2.44
PA of pole (deg)    : -2.09
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (" ) : 18.539
C/A sky separation (km) : 66922.9
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
    
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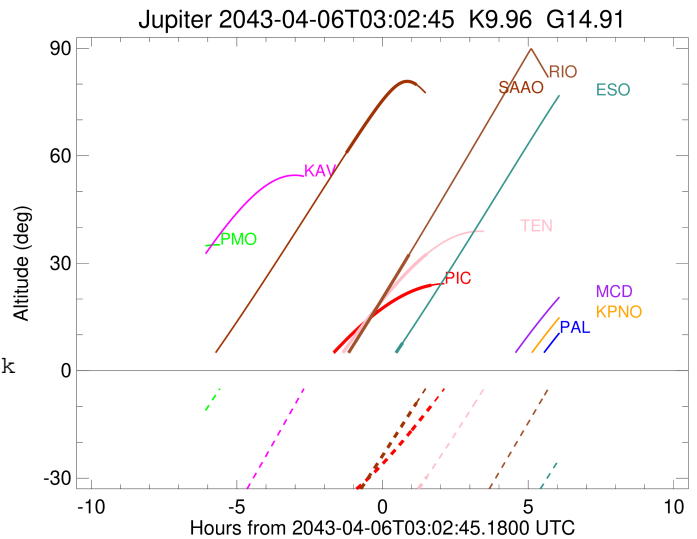
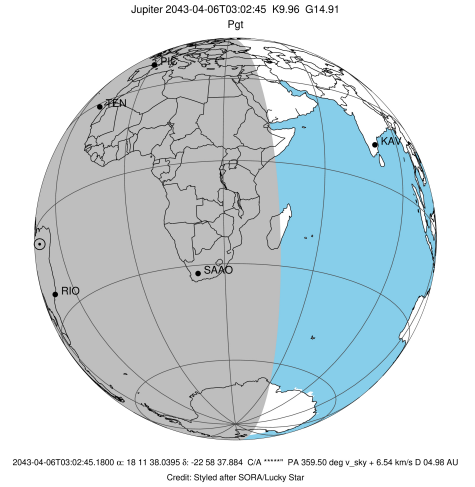


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-06T01:48:12.585	4.03x	-66.96	71484.6	-72.30	-74.30
Jupiter	E	2043-04-06T03:57:38.180	32.43	-67.80	71485.1	-66.31	-68.87

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-04-06T02:53:03.740
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      : 4066624608155670272
2Mass ID (if available) : 18113804-2258379
ICRS Star Coord at Epoch: 18h 11m 38.03952s -22:58:37.88390s
RUWE (>1.4 is poor) : 0.98
K magnitude          : 9.963
G magnitude          : 14.915
RP magnitude         : 13.672
BP magnitude         : 16.631
DUPflag             : 0
Distance (au)       : 4.977
f0 (km)             : 0.00
g0 (km)             : 0.00
skyplane vel. (km/s) : 6.54
Sun-Target sep (deg) : 102.94
Sun-Moon sep (deg)  : 53.90
B (ring opening deg) : -2.44
PA of pole (deg)    : -2.09
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 18.991
C/A sky separation (km) : 68556.4
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
    
```

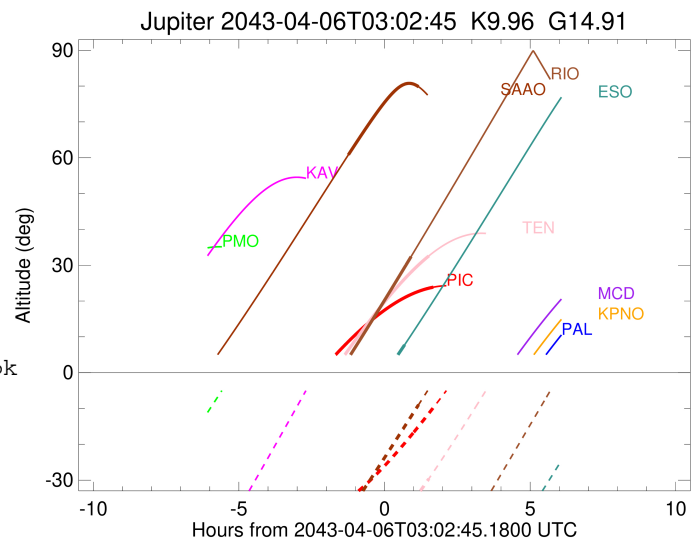
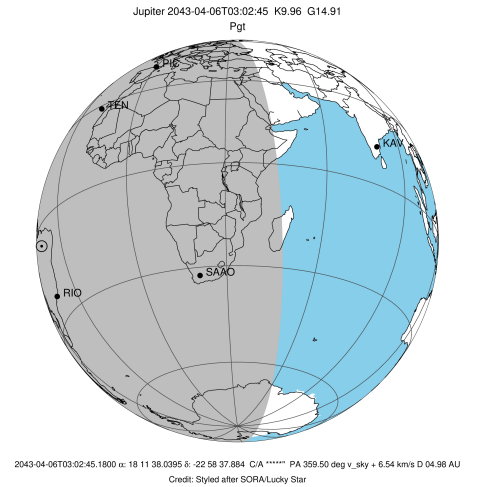


x: target alt < 5.0 deg or sun > -5.0 deg

Target	I/E	UTC	alt	alt-sun	radius	lat-geo	lat-geodetic
Jupiter	I	2043-04-06T02:02:34.976	-11.82x	-45.42	71484.3	-76.18	-77.77
Jupiter	E	2043-04-06T03:44:16.672	7.78	-63.10	71484.7	-70.44	-72.62

```

target                : Jupiter
target radius (km)   : 71492.00
C/A epoch            : 2043-04-06T03:00:22.640
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      : 4066624608155670272
2Mass ID (if available) : 18113804-2258379
ICRS Star Coord at Epoch: 18h 11m 38.03952s -22:58:37.88390s
RUWE (>1.4 is poor) : 0.98
K magnitude          : 9.963
G magnitude          : 14.915
RP magnitude         : 13.672
BP magnitude         : 16.631
DUPflag             : 0
Distance (au)       : 4.977
f0 (km)              : 0.00
g0 (km)              : 0.00
skyplane vel. (km/s) : 6.54
Sun-Target sep (deg) : 102.94
Sun-Moon sep (deg)  : 54.30
B (ring opening deg) : -2.44
PA of pole (deg)    : -2.09
Pole direction: RA (deg): 268.05664
Dec (deg): 64.49732
C/A sky separation (") : 18.337
C/A sky separation (km) : 66194.0
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	2043-04-06T01:48:20.978	60.81	-39.02	71484.8	-69.76	-72.00
Jupiter	E	2043-04-06T04:12:59.223	79.80	-8.94	71485.1	-66.05	-68.63