

target : Saturn
 target radius (km) : 60268.00
 C/A epoch : 2047-05-18T23:45:28.490
 Event type : PgtRgt
 : Saturn occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Gaia source ID : 4090746381455760640
 2Mass ID (if available) : 18124815-2218284

Saturn 2047-05-18T23:45:28 K8.40 G12.75 PgtRgt

ICRS Star Coord at Epoch: 18h 12m 48.15227s -22:18:28.65968s

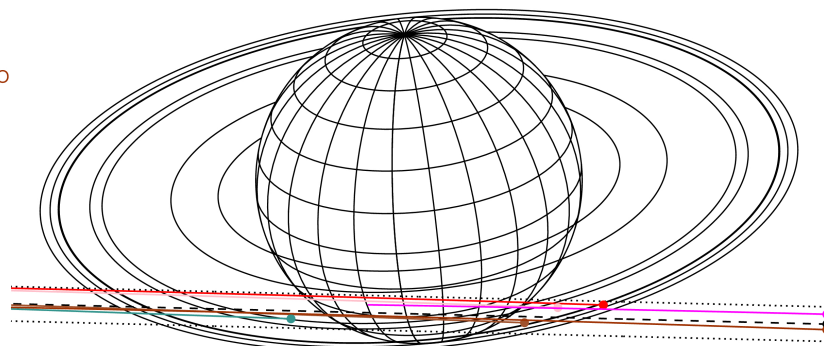
RUWE (>1.4 is poor) : 1.09
 K magnitude : 8.397
 G magnitude : 12.754
 RP magnitude : 11.589
 BP magnitude : 14.196
 DUPflag : 0
 Distance (au) : 9.207
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.60
 Sun-Target sep (deg) : 144.33
 Sun-Moon sep (deg) : 80.11
 B (ring opening deg) : 26.15
 PA of pole (deg) : 5.75

Saturn 2047-05-18T23:45:28 K8.40 G12.75
 PgtRgt



2047-05-18T23:45:28.4900 at: 18 12 48.1523 s: -22 18 28.6596 C/A 7.379° PA 358.57 deg v_sky -14.60 km/s D 09.21 AU
 Credit: Styled after SORA/Lucky Star

Earth
 PIC
 TEN
 KAV
 RIO
 ESO
 SAAO

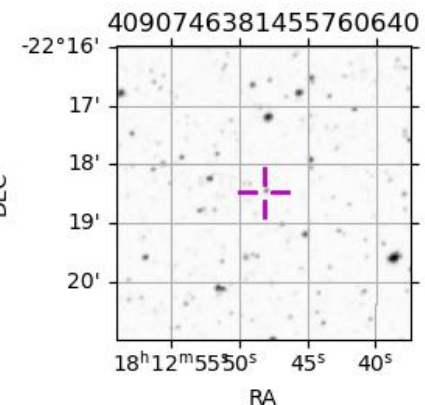


a(km) ring

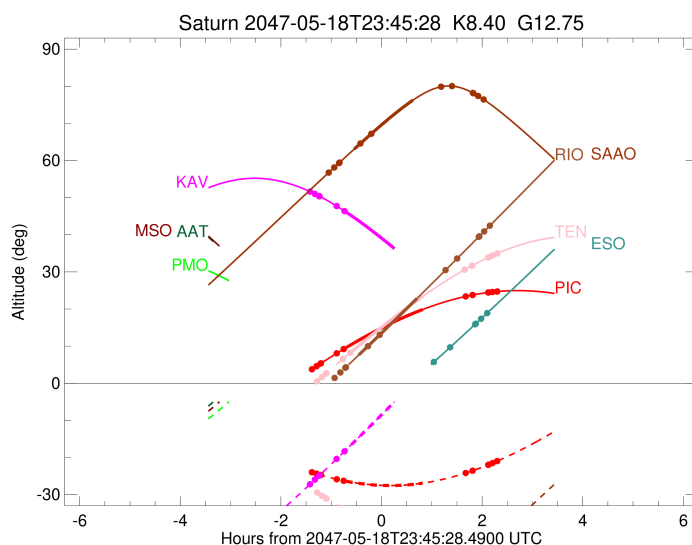
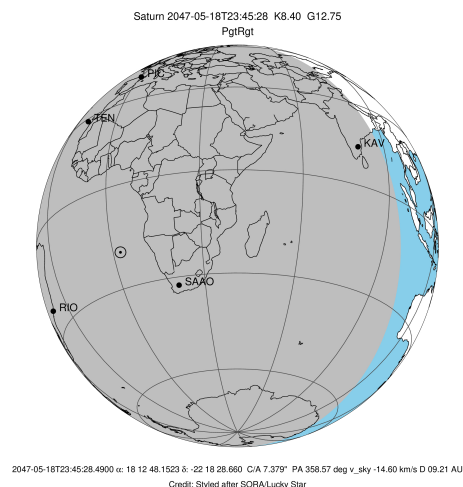
- 1 74490.6 C (IER)
- 2 91984.7 B (IER)
- 3 117571.2 B (OER)
- 4 122050.4 A (IER)
- 5 133423.3 Encke (IEG)
- 6 133744.9 Encke (OEG)
- 7 136774.4 A (OER)
- 8 140461.0 F ring

Observable events with sun below -5 deg and altitude above 5 deg unblocked by planet

Obs	Location	lat	Elon	Rings I	Planet	Rings E	Observed Events Interval	OEncode
PIC	Pic du Midi	42.9	0.1	+	+	+	MAY 18 22:32 - MAY 19 02:03	PieRie
PAL	Palomar Mt (20	33.4	243.1					PnnRnn
PMO	Purple Mtn Obs	32.1	118.8					PnnRnn
KPNO	Kitt Peak Natl	32.0	248.4					PnnRnn
MCD	McDonald Obs.	30.7	256.0					PnnRnn
TEN	Teide Obs./Ten	28.3	343.5	+	+	+	MAY 18 22:59 - MAY 19 02:03	PieRie
IRTF	Mauna Kea/IRTF	19.8	204.5					PnnRnn
KAV	Kavalur Observ	12.6	78.8	+	+	+	MAY 18 22:20 - MAY 18 22:59	PinRin
RIO	Rio de Janeiro	-22.9	316.8		+	+	MAY 18 23:18 - MAY 19 01:54	PieRne
ESO	European South	-29.3	289.3			+	MAY 19 00:48 - MAY 19 01:51	PnnRne
AAT	Siding Spring	-31.3	149.1			+		PnnRnn
SAAO	So. Afr. Astro	-32.4	20.8	+	+	+	MAY 18 22:42 - MAY 19 01:47	PieRie
MSO	Mt. Stromlo Ob	-35.3	149.0			+		PnnRnn

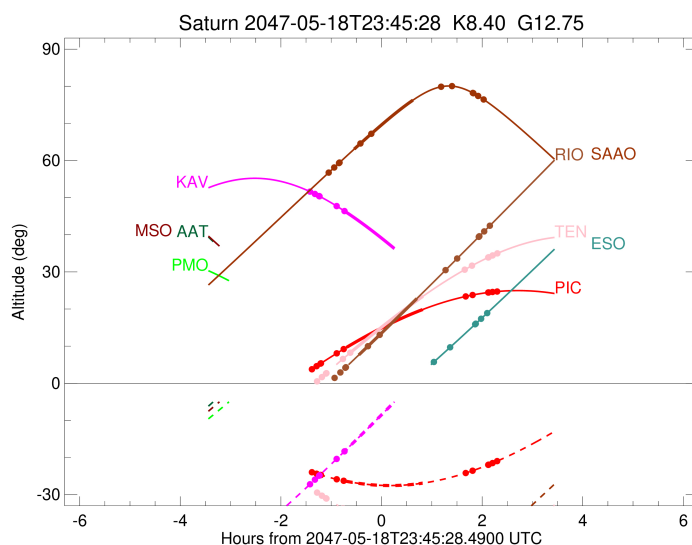
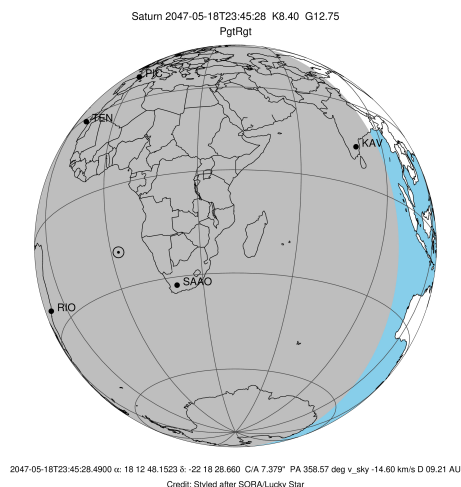


target : Saturn
 target radius (km) : 60268.00
 C/A epoch : 2047-05-18T23:48:58.230
 Event type : PgtRgt
 : Saturn occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : PIC
 Location : Pic du Midi
 Latitude (deg) : 42.93656
 E. Longitude (deg) : 0.14231
 Altitude (km) : 2.890
 Gaia source ID : 4090746381455760640
 2Mass ID (if available) : 18124815-2218284
 ICRS Star Coord at Epoch: 18h 12m 48.15227s -22:18:28.65968s
 RUWE (>1.4 is poor) : 1.09
 K magnitude : 8.397
 G magnitude : 12.754
 RP magnitude : 11.589
 BP magnitude : 14.196
 DUPflag : 0
 Distance (au) : 9.207
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.60
 Sun-Target sep (deg) : 144.33
 Sun-Moon sep (deg) : 80.40
 B (ring opening deg) : 26.15
 PA of pole (deg) : 5.75
 Pole direction: RA (deg): 40.60000
 Dec (deg): 83.50000
 C/A sky separation (") : 6.563
 C/A sky separation (km) : 43824.2
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 Saturn_ring_plane.tf
 sat378.bsp
 sat286.bsp
 vgr1.sat286.bsp
 vgr2.sat286.bsp
 HST1081HSPephemUTC.bsp
 pfb10000r.bsp
 cassini.bsp
 earthstns_itrf93_040916.bsp
 earth_200101_990628_predict.bpc
 earth_720101_070426.bpc
 cpck28Mar2008.tpc
 pck.sat440.tpc
 IAU_SATURN_for_RINGFIT.tpc
 naif0012.tls
 earth_flat_IAU.spk



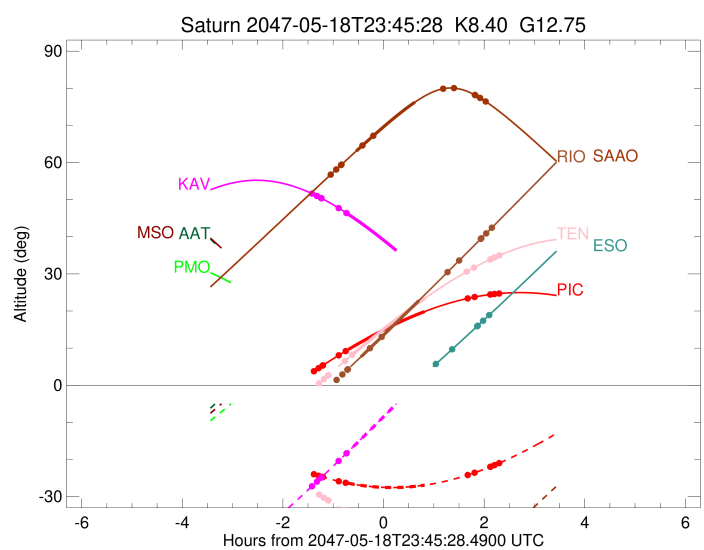
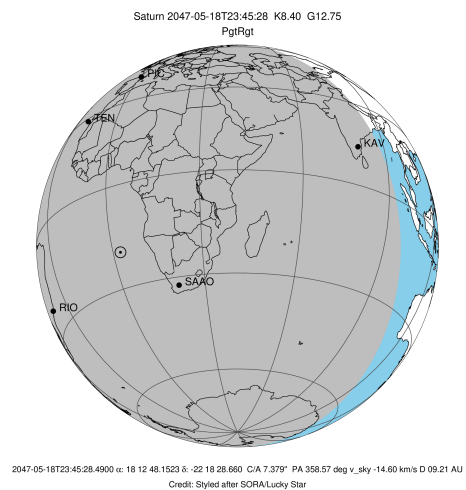
Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
F ring	I	2047-05-18T22:22:32.630	3.78x	-23.97	140461.00	-11.15			
A (OER)	I	2047-05-18T22:28:07.120	4.61x	-24.38	136774.40	-10.89			
Encke (OEG)	I	2047-05-18T22:32:48.532	5.30	-24.70	133744.89	-10.64			
Encke (IEG)	I	2047-05-18T22:33:18.788	5.38	-24.73	133423.31	-10.61			
A (IER)	I	2047-05-18T22:52:10.101	8.08	-25.86	122050.38	-9.44			
B (OER)	I	2047-05-18T23:00:20.602	9.20	-26.26	117571.16	-8.82			
Saturn	I	2047-05-18T23:03:44.917	9.66	-26.42	59526.01			-47.26	-52.74
Saturn	E	2047-05-19T00:34:30.195	19.86	-26.91	59811.97			-35.01	-40.51
B (OER)	E	2047-05-19T01:26:08.405	23.40	-24.16	117571.16	8.91			
A (IER)	E	2047-05-19T01:34:13.699	23.78	-23.55	122050.38	9.54			
Encke (IEG)	E	2047-05-19T01:52:52.078	24.45	-21.97	133423.31	10.75			
Encke (OEG)	E	2047-05-19T01:53:21.967	24.47	-21.92	133744.89	10.77			
A (OER)	E	2047-05-19T01:57:59.906	24.59	-21.49	136774.40	11.02			
F ring	E	2047-05-19T02:03:30.127	24.72	-20.96	140461.00	11.30			

target : Saturn
 target radius (km) : 60268.00
 C/A epoch : 2047-05-18T23:51:05.040
 Event type : PgtRgt
 : Saturn occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : TEN
 Location : Teide Obs./Tenerife
 Latitude (deg) : 28.30050
 E. Longitude (deg) : 343.48909
 Altitude (km) : 2.395
 Gaia source ID : 4090746381455760640
 2Mass ID (if available) : 18124815-2218284
 ICRS Star Coord at Epoch: 18h 12m 48.15227s -22:18:28.65968s
 RUWE (>1.4 is poor) : 1.09
 K magnitude : 8.397
 G magnitude : 12.754
 RP magnitude : 11.589
 BP magnitude : 14.196
 DUPflag : 0
 Distance (au) : 9.207
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.60
 Sun-Target sep (deg) : 144.33
 Sun-Moon sep (deg) : 80.44
 B (ring opening deg) : 26.15
 PA of pole (deg) : 5.75
 Pole direction: RA (deg): 40.60000
 Dec (deg): 83.50000
 C/A sky separation (") : 6.764
 C/A sky separation (km) : 45163.9
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 Saturn_ring_plane.tf
 sat378.bsp
 sat286.bsp
 vgr1.sat286.bsp
 vgr2.sat286.bsp
 HST1081HSPephemUTC.bsp
 pfb10000r.bsp
 cassini.bsp
 earthstns_itrf93_040916.bsp
 earth_200101_990628_predict.bpc
 earth_720101_070426.bpc
 cpck28Mar2008.tpc
 pck.sat440.tpc
 IAU_SATURN_for_RINGFIT.tpc
 naif0012.tls
 earth_flat_IAU.spk



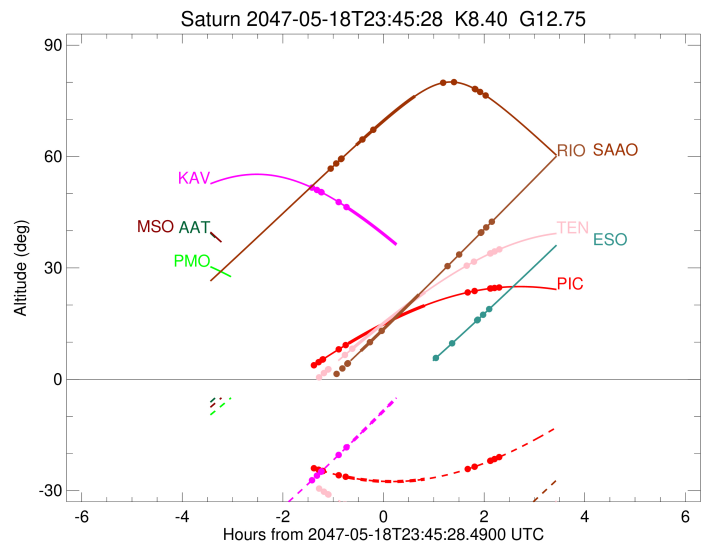
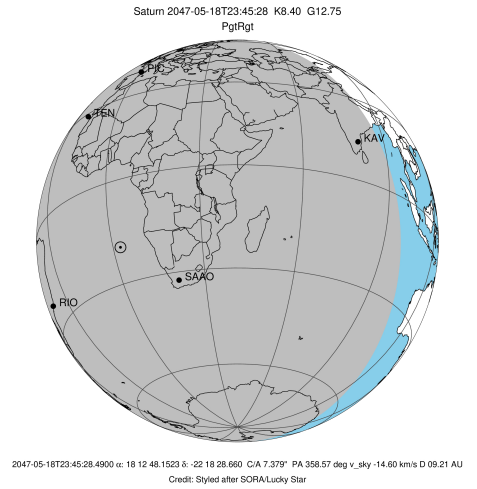
Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
F ring	I	2047-05-18T22:28:42.834		0.53x	-29.45	140461.00	-10.82		
A (OER)	I	2047-05-18T22:34:28.018		1.67x	-30.29	136774.40	-10.53		
Encke (OEG)	I	2047-05-18T22:39:19.226		2.63x	-30.99	133744.89	-10.27		
Encke (IEG)	I	2047-05-18T22:39:50.583		2.73x	-31.06	133423.31	-10.24		
A (IER)	I	2047-05-18T22:59:32.217		6.56	-33.71	122050.38	-8.95		
B (OER)	I	2047-05-18T23:08:12.464	b	8.22	-34.78	117571.16	-8.26		
Saturn	I	2047-05-18T23:07:29.932		8.09	-34.70	59487.98		-48.88	-54.29
Saturn	E	2047-05-19T00:34:56.885		23.45	-41.70	59778.22		-36.50	-42.05
B (OER)	E	2047-05-19T01:24:58.210		30.63	-41.84	117571.16	8.39		
A (IER)	E	2047-05-19T01:33:30.052		31.69	-41.56	122050.38	9.10		
Encke (IEG)	E	2047-05-19T01:52:50.425		33.90	-40.62	133423.31	10.44		
Encke (OEG)	E	2047-05-19T01:53:21.174		33.95	-40.59	133744.89	10.47		
A (OER)	E	2047-05-19T01:58:06.613		34.44	-40.29	136774.40	10.75		
F ring	E	2047-05-19T02:03:44.685		35.00	-39.90	140461.00	11.06		

target : Saturn
 target radius (km) : 60268.00
 C/A epoch : 2047-05-18T23:40:43.050
 Event type : PgtRgt
 : Saturn occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : KAV
 Location : Kavalur Observatory
 Latitude (deg) : 12.57556
 E. Longitude (deg) : 78.83167
 Altitude (km) : 0.722
 Gaia source ID : 4090746381455760640
 2Mass ID (if available) : 18124815-2218284
 ICRS Star Coord at Epoch: 18h 12m 48.15227s -22:18:28.65968s
 RUWE (>1.4 is poor) : 1.09
 K magnitude : 8.397
 G magnitude : 12.754
 RP magnitude : 11.589
 BP magnitude : 14.196
 DUPflag : 0
 Distance (au) : 9.207
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.60
 Sun-Target sep (deg) : 144.33
 Sun-Moon sep (deg) : 80.57
 B (ring opening deg) : 26.15
 PA of pole (deg) : 5.75
 Pole direction: RA (deg): 40.60000
 Dec (deg): 83.50000
 C/A sky separation (") : 6.921
 C/A sky separation (km) : 46217.4
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 Saturn_ring_plane.tf
 sat378.bsp
 sat286.bsp
 vgr1.sat286.bsp
 vgr2.sat286.bsp
 HST1081HSPephemUTC.bsp
 pfb10000r.bsp
 cassini.bsp
 earthstns_itrf93_040916.bsp
 earth_200101_990628_predict.bpc
 earth_720101_070426.bpc
 cpck28Mar2008.tpc
 pck.sat440.tpc
 IAU_SATURN_for_RINGFIT.tpc
 naif0012.tls
 earth_flat_IAU.spk



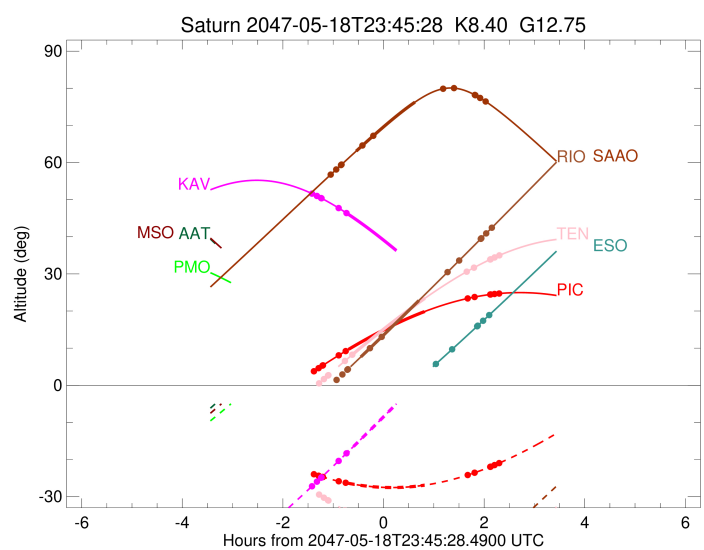
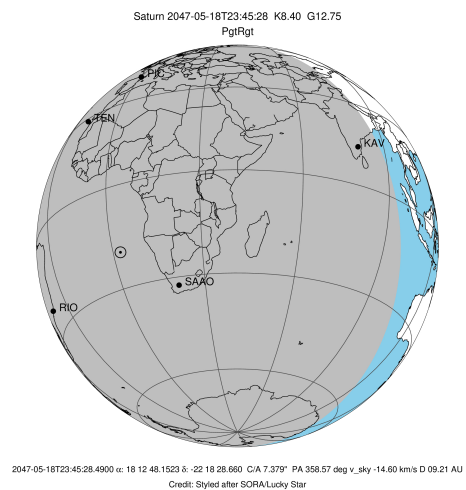
Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
F ring	I	2047-05-18T22:20:16.407		51.62	-27.19	140461.00	-10.67		
A (OER)	I	2047-05-18T22:26:07.412		50.99	-25.95	136774.40	-10.33		
Encke (OEG)	I	2047-05-18T22:31:04.977		50.43	-24.90	133744.89	-10.03		
Encke (IEG)	I	2047-05-18T22:31:37.107		50.36	-24.78	133423.31	-9.99		
A (IER)	I	2047-05-18T22:52:03.822		47.72	-20.37	122050.38	-8.48		
B (OER)	I	2047-05-18T23:01:17.918	b	46.39	-18.35	117571.16	-7.67		
Saturn	I	2047-05-18T22:59:06.235		46.72	-18.83	59475.84		-49.41	-54.78
Saturn	E	2047-05-19T00:22:53.970		32.06	0.01x	59729.69		-38.61	-44.21
B (OER)	E	2047-05-19T01:07:27.544		22.99	10.28x	117571.16	7.59		
A (IER)	E	2047-05-19T01:16:48.084		21.02	12.45x	122050.38	8.38		
Encke (IEG)	E	2047-05-19T01:37:33.815		16.58	17.29x	133423.31	9.82		
Encke (OEG)	E	2047-05-19T01:38:06.524		16.46	17.42x	133744.89	9.85		
A (OER)	E	2047-05-19T01:43:09.653		15.37	18.60x	136774.40	10.14		
F ring	E	2047-05-19T01:49:07.649		14.07	19.99x	140461.00	10.45		

target : Saturn
 target radius (km) : 60268.00
 C/A epoch : 2047-05-18T23:52:49.470
 Event type : PgtRgt
 : Saturn occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : RIO
 Location : Rio de Janeiro
 Latitude (deg) : -22.89506
 E. Longitude (deg) : 316.77708
 Altitude (km) : 0.033
 Gaia source ID : 4090746381455760640
 2Mass ID (if available) : 18124815-2218284
 ICRS Star Coord at Epoch: 18h 12m 48.15227s -22:18:28.65968s
 RUWE (>1.4 is poor) : 1.09
 K magnitude : 8.397
 G magnitude : 12.754
 RP magnitude : 11.589
 BP magnitude : 14.196
 DUPflag : 0
 Distance (au) : 9.207
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.60
 Sun-Target sep (deg) : 144.33
 Sun-Moon sep (deg) : 80.46
 B (ring opening deg) : 26.15
 PA of pole (deg) : 5.75
 Pole direction: RA (deg): 40.60000
 Dec (deg): 83.50000
 C/A sky separation (") : 7.650
 C/A sky separation (km) : 51084.7
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 Saturn_ring_plane.tf
 sat378.bsp
 sat286.bsp
 vgr1.sat286.bsp
 vgr2.sat286.bsp
 HST1081HSPephemUTC.bsp
 pfb10000r.bsp
 cassini.bsp
 earthstns_itrf93_040916.bsp
 earth_200101_990628_predict.bpc
 earth_720101_070426.bpc
 cpck28Mar2008.tpc
 pck.sat440.tpc
 IAU_SATURN_for_RINGFIT.tpc
 naif0012.tls
 earth_flat_IAU.spk



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
F ring	I	2047-05-18T22:49:33.376		1.46x	-34.43	140461.00	-9.12		
A (OER)	I	2047-05-18T22:56:27.157		2.92x	-36.00	136774.40	-8.69		
Encke (OEG)	I	2047-05-18T23:02:24.021		4.19x	-37.36	133744.89	-8.28		
Encke (IEG)	I	2047-05-18T23:03:02.946		4.33x	-37.51	133423.31	-8.24		
A (IER)	I	2047-05-18T23:29:21.412	b	10.00	-43.53	122050.38	-6.07		
B (OER)	I	2047-05-18T23:43:11.849	b	13.01	-46.70	117571.16	-4.69		
Saturn	I	2047-05-18T23:18:27.238		7.64	-41.03	59330.15		-55.87	-60.78
Saturn	E	2047-05-19T00:27:36.314		22.81	-56.92	59592.46		-44.44	-50.02
B (OER)	E	2047-05-19T01:02:19.159		30.59	-64.92	117571.16	4.76		
A (IER)	E	2047-05-19T01:15:55.889		33.65	-68.06	122050.38	6.18		
Encke (IEG)	E	2047-05-19T01:41:40.828		39.49	-73.97	133423.31	8.44		
Encke (OEG)	E	2047-05-19T01:42:18.811		39.63	-74.11	133744.89	8.49		
A (OER)	E	2047-05-19T01:48:06.790		40.95	-75.43	136774.40	8.92		
F ring	E	2047-05-19T01:54:49.684		42.48	-76.96	140461.00	9.38		

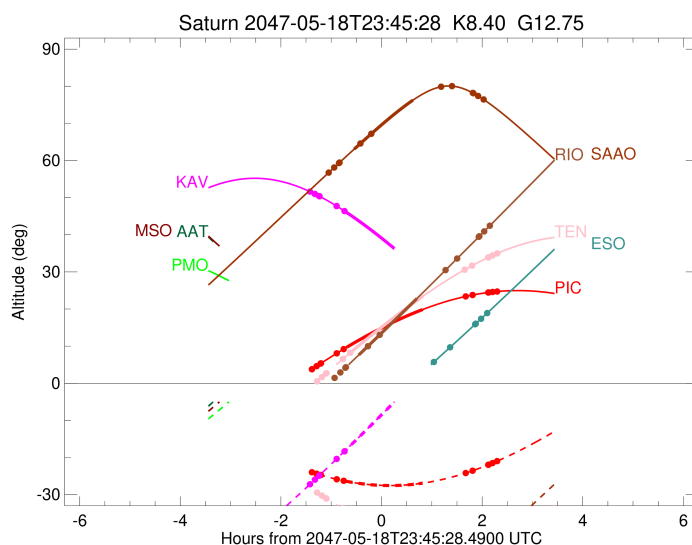
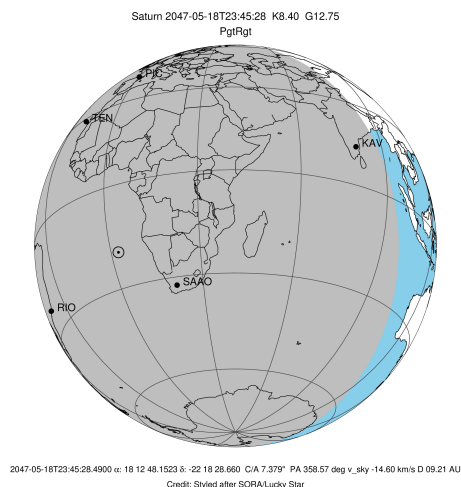
target : Saturn
 target radius (km) : 60268.00
 C/A epoch : 2047-05-18T23:52:11.480
 Event type : PgtRgt
 : Saturn occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 Observer code : ESO
 Location : European Southern Obs. (3.6m)
 Latitude (deg) : -29.26097
 E. Longitude (deg) : 289.26831
 Altitude (km) : 2.400
 Gaia source ID : 4090746381455760640
 2Mass ID (if available) : 18124815-2218284
 ICRS Star Coord at Epoch: 18h 12m 48.15227s -22:18:28.65968s
 RUWE (>1.4 is poor) : 1.09
 K magnitude : 8.397
 G magnitude : 12.754
 RP magnitude : 11.589
 BP magnitude : 14.196
 DUPflag : 0
 Distance (au) : 9.207
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.60
 Sun-Target sep (deg) : 144.33
 Sun-Moon sep (deg) : 80.14
 B (ring opening deg) : 26.15
 PA of pole (deg) : 5.75
 Pole direction: RA (deg): 40.60000
 Dec (deg): 83.50000
 C/A sky separation (") : 7.894
 C/A sky separation (km) : 52708.7
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 Saturn_ring_plane.tf
 sat378.bsp
 sat286.bsp
 vgr1.sat286.bsp
 vgr2.sat286.bsp
 HST1081HSPephemUTC.bsp
 pfb10000r.bsp
 cassini.bsp
 earthstns_itrf93_040916.bsp
 earth_200101_990628_predict.bpc
 earth_720101_070426.bpc
 cpck28Mar2008.tpc
 pck.sat440.tpc
 IAU_SATURN_for_RINGFIT.tpc
 naif0012.tls
 earth_flat_IAU.spk



b: ring blocked by planet x: target alt < 5.0 deg or sun > -5.0 deg

Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
F ring	I	2047-05-18T22:54:18.943		-15.87x	-12.58	140461.00	-8.46		
A (OER)	I	2047-05-18T23:01:47.316		-14.56x	-14.15	136774.40	-7.97		
Encke (OEG)	I	2047-05-18T23:08:18.312		-13.40x	-15.53	133744.89	-7.52		
Encke (IEG)	I	2047-05-18T23:09:01.247		-13.27x	-15.68	133423.31	-7.46		
A (IER)	I	2047-05-18T23:39:28.514	b	-7.68x	-22.18	122050.38	-4.86		
B (OER)	I	2047-05-18T23:58:39.845	b	-4.02x	-26.30	117571.16	-2.88		
Saturn	I	2047-05-18T23:20:50.340		-11.14x	-18.19	59288.91		-57.80	-62.53
Saturn	E	2047-05-19T00:24:01.029		0.94x	-31.80	59532.01		-47.00	-52.50
B (OER)	E	2047-05-19T00:48:38.756		5.88	-37.16	117571.16	2.91		
A (IER)	E	2047-05-19T01:07:34.466		9.74	-41.29	122050.38	4.95		
Encke (IEG)	E	2047-05-19T01:37:23.669		15.93	-47.80	133423.31	7.65		
Encke (OEG)	E	2047-05-19T01:38:05.542		16.08	-47.95	133744.89	7.71		
A (OER)	E	2047-05-19T01:44:26.535		17.41	-49.34	136774.40	8.19		
F ring	E	2047-05-19T01:51:42.691		18.95	-50.92	140461.00	8.71		

target : Saturn
 target radius (km) : 60268.00
 C/A epoch : 2047-05-18T23:47:43.560
 Event type : PgtRgt
 : Saturn occs: geocentric, topocentric
 : Ring occs: geocentric, topocentric
 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 : 4090746381455760640
 2Mass ID (if available) : 18124815-2218284
 ICRS Star Coord at Epoch: 18h 12m 48.15227s -22:18:28.65968s
 RUWE (>1.4 is poor) : 1.09
 K magnitude : 8.397
 G magnitude : 12.754
 RP magnitude : 11.589
 BP magnitude : 14.196
 DUPflag : 0
 Distance (au) : 9.207
 f0 (km) : 0.000
 g0 (km) : 0.000
 skyplane vel. (km/s) : -14.60
 Sun-Target sep (deg) : 144.33
 Sun-Moon sep (deg) : 80.99
 B (ring opening deg) : 26.15
 PA of pole (deg) : 5.75
 Pole direction: RA (deg): 40.60000
 Dec (deg): 83.50000
 C/A sky separation (") : 7.553
 C/A sky separation (km) : 50434.5
 NAIF SPICE kernels : RAJobs_U111+rgf15.spk
 URKALLvl.spk
 Saturn_ring_plane.tf
 sat378.bsp
 sat286.bsp
 vgr1.sat286.bsp
 vgr2.sat286.bsp
 HST1081HSPephemUTC.bsp
 pfb10000r.bsp
 cassini.bsp
 earthstns_itrf93_040916.bsp
 earth_200101_990628_predict.bpc
 earth_720101_070426.bpc
 cpck28Mar2008.tpc
 pck.sat440.tpc
 IAU_SATURN_for_RINGFIT.tpc
 naif0012.tls
 earth_flat_IAU.spk



Ring	I/E	UTC	b?	alt	alt-sun	radius	r-dot	lat-geo	lat-geodetic
F ring	I	2047-05-18T22:42:32.171		56.75	-77.31	140461.00	-9.51		
A (OER)	I	2047-05-18T22:49:08.931		58.14	-76.99	136774.40	-9.07		
Encke (OEG)	I	2047-05-18T22:54:50.511		59.33	-76.58	133744.89	-8.66		
Encke (IEG)	I	2047-05-18T22:55:27.728		59.46	-76.53	133423.31	-8.62		
A (IER)	I	2047-05-18T23:20:25.164	b	64.61	-73.62	122050.38	-6.48		
B (OER)	I	2047-05-18T23:33:13.836	b	67.19	-71.64	117571.16	-5.15		
Saturn	I	2047-05-18T23:12:53.735		63.07	-74.65	59353.56		-54.80	-59.80
Saturn	E	2047-05-19T00:23:01.328		76.27	-62.44	59605.72		-43.88	-49.47
B (OER)	E	2047-05-19T00:57:00.445		79.90	-55.54	117571.16	5.18		
A (IER)	E	2047-05-19T01:09:45.125		80.04	-52.90	122050.38	6.51		
Encke (IEG)	E	2047-05-19T01:34:35.111		78.19	-47.69	133423.31	8.66		
Encke (OEG)	E	2047-05-19T01:35:12.150		78.11	-47.56	133744.89	8.71		
A (OER)	E	2047-05-19T01:40:52.114		77.38	-46.37	136774.40	9.11		
F ring	E	2047-05-19T01:47:27.008		76.42	-44.98	140461.00	9.55		