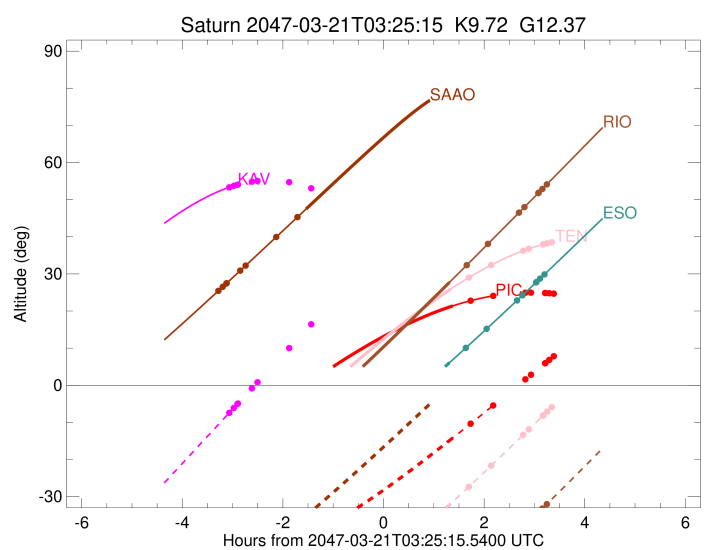
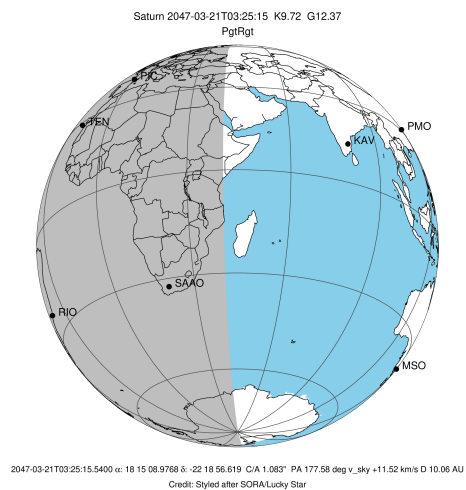




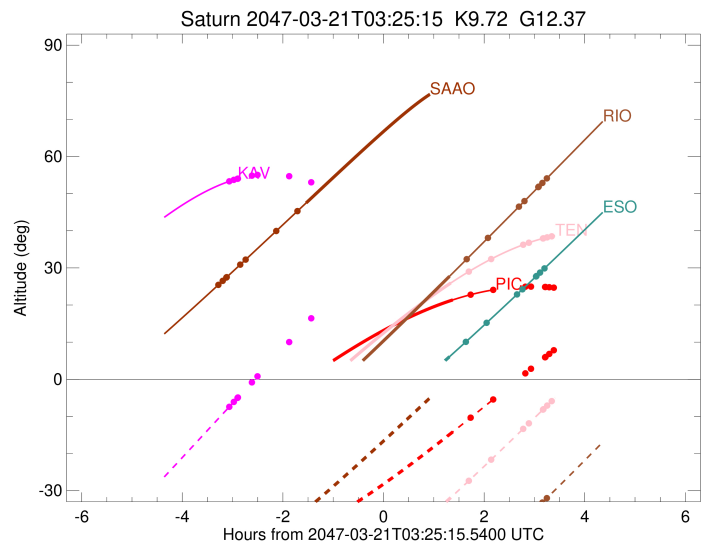
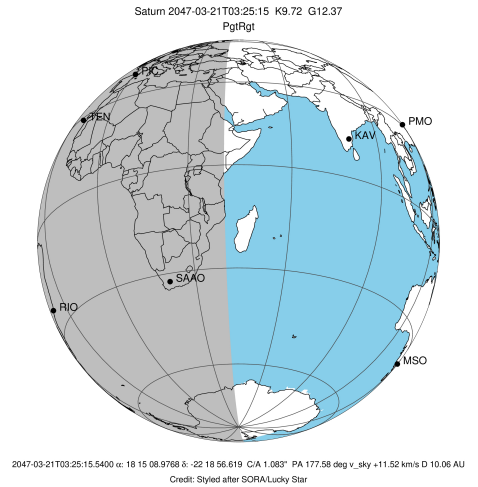
target : Saturn  
 target radius (km) : 60268.00  
 C/A epoch : 2047-03-21T03:20:39.080  
 Event type : PgtRgt  
 : Saturn occs: geocentric, topocentric  
 : Ring occs: geocentric, topocentric  
 Observer code : PIC  
 Location : Pic du Midi  
 Latitude (deg) : 42.93656  
 E. Longitude (deg) : 0.14231  
 Altitude (km) : 2.890  
 Gaia source ID : 4090688588369979904  
 2Mass ID (if available) : 18150898-2218565  
 ICRS Star Coord at Epoch: 18h 15m 08.97685s -22:18:56.61920s  
 RUWE (>1.4 is poor) : 0.80  
 K magnitude : 9.725  
 G magnitude : 12.370  
 RP magnitude : 11.564  
 BP magnitude : 13.059  
 DUPflag : 0  
 Distance (au) : 10.061  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 11.52  
 Sun-Target sep (deg) : 86.27  
 Sun-Moon sep (deg) : 26.62  
 B (ring opening deg) : 26.11  
 PA of pole (deg) : 5.80  
 Pole direction: RA (deg): 40.60000  
 Dec (deg): 83.50000  
 C/A sky separation (") : 1.823  
 C/A sky separation (km) : 13301.6  
 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	2047-03-21T00:17:15.390	-16.02x	-47.07	140461.00	-11.74			
A (OER)	I	2047-03-21T00:22:29.850	-15.09x	-46.98	136774.40	-11.71			
Encke (OEG)	I	2047-03-21T00:26:48.766	-14.33x	-46.89	133744.89	-11.69			
Encke (IEG)	I	2047-03-21T00:27:16.277	-14.25x	-46.88	133423.31	-11.69			
A (IER)	I	2047-03-21T00:43:32.929	-11.41x	-46.33	122050.38	-11.60			
B (OER)	I	2047-03-21T00:49:59.739	-10.30x	-46.03	117571.16	-11.56			
B (IER)	I	2047-03-21T01:27:20.491	-4.02x	-43.44	91984.69	-11.25			
C (IER)	I	2047-03-21T01:53:40.092	0.21x	-40.84	74490.58	-10.87			
Saturn	I	2047-03-21T01:54:30.257	0.34x	-40.75	60130.79			18.31	22.08
Saturn	E	2047-03-21T04:47:55.773	21.38	-14.17	60259.89			4.37	5.37
C (IER)	E	2047-03-21T05:09:08.275	22.78	-10.35	74490.58	10.66			
B (IER)	E	2047-03-21T05:36:02.684	24.08	-5.45	91984.69	10.98			
B (OER)	E	2047-03-21T06:14:26.695	24.93	1.60x	117571.16	11.21			
A (IER)	E	2047-03-21T06:21:05.957	24.96	2.82x	122050.38	11.23			
Encke (IEG)	E	2047-03-21T06:37:55.938	24.86	5.91x	133423.31	11.29			
Encke (OEG)	E	2047-03-21T06:38:24.426	24.85	5.99x	133744.89	11.29			
A (OER)	E	2047-03-21T06:42:52.638	24.79	6.81x	136774.40	11.30			
F ring	E	2047-03-21T06:48:18.627	24.68	7.80x	140461.00	11.32			

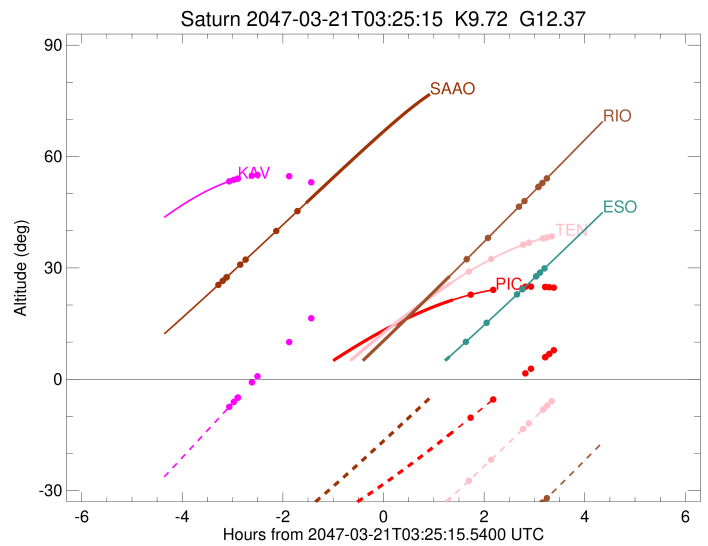
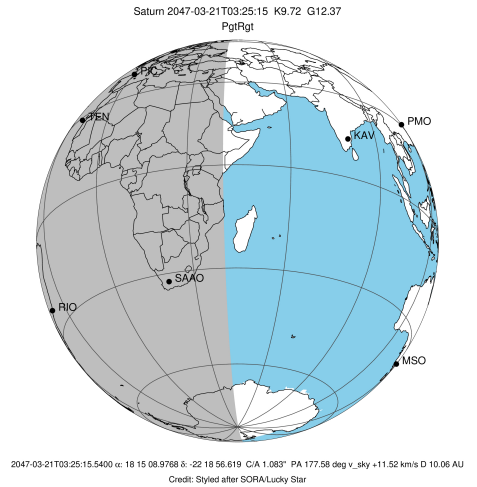
target : Saturn  
 target radius (km) : 60268.00  
 C/A epoch : 2047-03-21T03:18:05.480  
 Event type : PgtRgt  
 : Saturn occs: geocentric, topocentric  
 : Ring occs: geocentric, topocentric  
 Observer code : TEN  
 Location : Teide Obs./Tenerife  
 Latitude (deg) : 28.30050  
 E. Longitude (deg) : 343.48909  
 Altitude (km) : 2.395  
 Gaia source ID : 4090688588369979904  
 2Mass ID (if available) : 18150898-2218565  
 ICRS Star Coord at Epoch: 18h 15m 08.97685s -22:18:56.61920s  
 RUWE (>1.4 is poor) : 0.80  
 K magnitude : 9.725  
 G magnitude : 12.370  
 RP magnitude : 11.564  
 BP magnitude : 13.059  
 DUPflag : 0  
 Distance (au) : 10.061  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 11.52  
 Sun-Target sep (deg) : 86.27  
 Sun-Moon sep (deg) : 26.83  
 B (ring opening deg) : 26.11  
 PA of pole (deg) : 5.80  
 Pole direction: RA (deg): 40.60000  
 Dec (deg): 83.50000  
 C/A sky separation (") : 1.630  
 C/A sky separation (km) : 11893.2  
 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



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	2047-03-21T00:13:48.612	-26.44x	-58.37	140461.00	-11.91			
A (OER)	I	2047-03-21T00:18:58.414	-25.33x	-58.90	136774.40	-11.89			
Encke (OEG)	I	2047-03-21T00:23:13.464	-24.41x	-59.31	133744.89	-11.87			
Encke (IEG)	I	2047-03-21T00:23:40.563	-24.32x	-59.36	133423.31	-11.87			
A (IER)	I	2047-03-21T00:39:42.293	-20.88x	-60.62	122050.38	-11.78			
B (OER)	I	2047-03-21T00:46:03.016	-19.53x	-61.00	117571.16	-11.75			
B (IER)	I	2047-03-21T01:22:45.134	-11.78x	-61.63	91984.69	-11.47			
C (IER)	I	2047-03-21T01:48:30.680	-6.45x	-60.48	74490.58	-11.14			
Saturn	I	2047-03-21T01:52:01.816	-5.73x	-60.23	60150.56			16.89	20.42
Saturn	E	2047-03-21T04:45:36.496	25.95	-31.85	60263.18			3.37	4.14
C (IER)	E	2047-03-21T05:06:58.232	29.00	-27.36	74490.58	10.82			
B (IER)	E	2047-03-21T05:33:36.622	32.37	-21.67	91984.69	11.05			
B (OER)	E	2047-03-21T06:11:53.996	36.24	-13.35	117571.16	11.21			
A (IER)	E	2047-03-21T06:18:33.412	36.78	-11.90	122050.38	11.22			
Encke (IEG)	E	2047-03-21T06:35:25.104	37.94	-8.19	133423.31	11.26			
Encke (OEG)	E	2047-03-21T06:35:53.665	37.97	-8.09	133744.89	11.26			
A (OER)	E	2047-03-21T06:40:22.631	38.22	-7.10	136774.40	11.27			
F ring	E	2047-03-21T06:45:49.683	38.51	-5.90	140461.00	11.28			

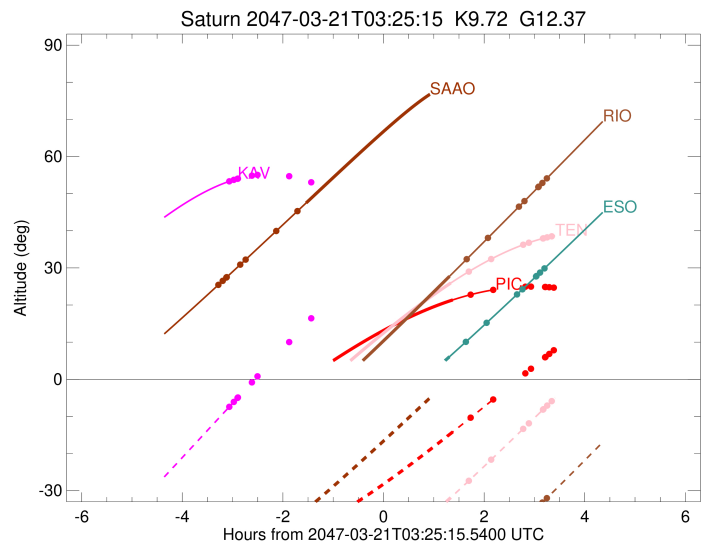
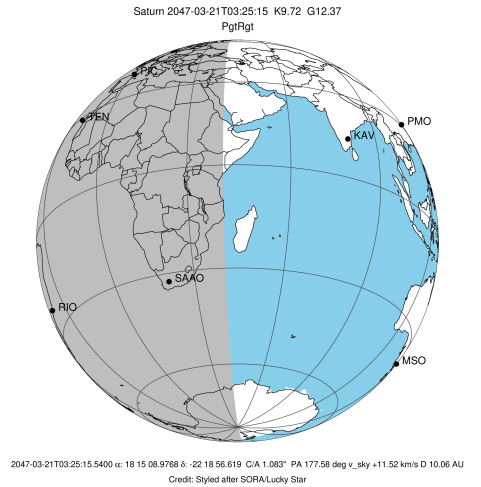
target : Saturn  
 target radius (km) : 60268.00  
 C/A epoch : 2047-03-21T03:30:53.410  
 Event type : PgtRgt  
 : Saturn occs: geocentric, topocentric  
 : Ring occs: geocentric, topocentric  
 Observer code : KAV  
 Location : Kavalur Observatory  
 Latitude (deg) : 12.57556  
 E. Longitude (deg) : 78.83167  
 Altitude (km) : 0.722  
 Gaia source ID : 4090688588369979904  
 2Mass ID (if available) : 18150898-2218565  
 ICRS Star Coord at Epoch: 18h 15m 08.97685s -22:18:56.61920s  
 RUWE (>1.4 is poor) : 0.80  
 K magnitude : 9.725  
 G magnitude : 12.370  
 RP magnitude : 11.564  
 BP magnitude : 13.059  
 DUPflag : 0  
 Distance (au) : 10.060  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 11.52  
 Sun-Target sep (deg) : 86.27  
 Sun-Moon sep (deg) : 25.90  
 B (ring opening deg) : 26.11  
 PA of pole (deg) : 5.80  
 Pole direction: RA (deg): 40.60000  
 Dec (deg): 83.50000  
 C/A sky separation (") : 1.498  
 C/A sky separation (km) : 10927.1  
 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	2047-03-21T00:21:24.774		53.33	-7.41	140461.00	-11.40		
A (OER)	I	2047-03-21T00:26:48.185		53.72	-6.09	136774.40	-11.39		
Encke (OEG)	I	2047-03-21T00:31:14.186		54.02	-5.01	133744.89	-11.38		
Encke (IEG)	I	2047-03-21T00:31:42.434		54.05	-4.89x	133423.31	-11.38		
A (IER)	I	2047-03-21T00:48:23.167		54.86	-0.82x	122050.38	-11.34		
B (OER)	I	2047-03-21T00:54:58.305		55.05	0.79x	117571.16	-11.33		
B (IER)	I	2047-03-21T01:32:50.461		54.70	10.03x	91984.69	-11.18		
C (IER)	I	2047-03-21T01:59:08.339		53.06	16.45x	74490.58	-10.97		
Saturn	I	2047-03-21T02:02:17.668		52.79	17.21x	60147.59		17.11	20.68
Saturn	E	2047-03-21T04:59:05.137		23.55	59.47x	60267.18		1.39	1.71
C (IER)	E	2047-03-21T05:20:19.630		19.06	64.20x	74490.58	11.22		
B (IER)	E	2047-03-21T05:45:59.234		13.52	69.58x	91984.69	11.48		
B (OER)	E	2047-03-21T06:22:44.479		5.41	75.77x	117571.16	11.70		
A (IER)	E	2047-03-21T06:29:06.696		3.98x	76.50x	122050.38	11.73		
Encke (IEG)	E	2047-03-21T06:45:13.198		0.37x	77.63x	133423.31	11.80		
Encke (OEG)	E	2047-03-21T06:45:40.450		0.26x	77.64x	133744.89	11.80		
A (OER)	E	2047-03-21T06:49:56.996		-0.70x	77.73x	136774.40	11.82		
F ring	E	2047-03-21T06:55:08.734		-1.88x	77.71x	140461.00	11.84		

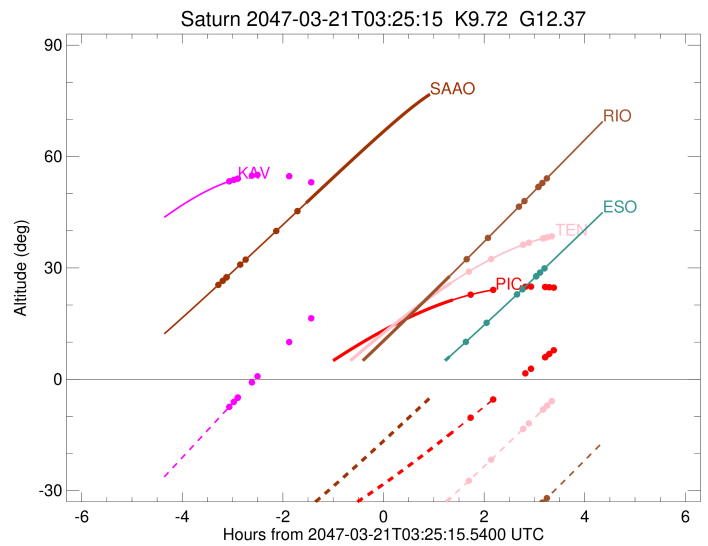
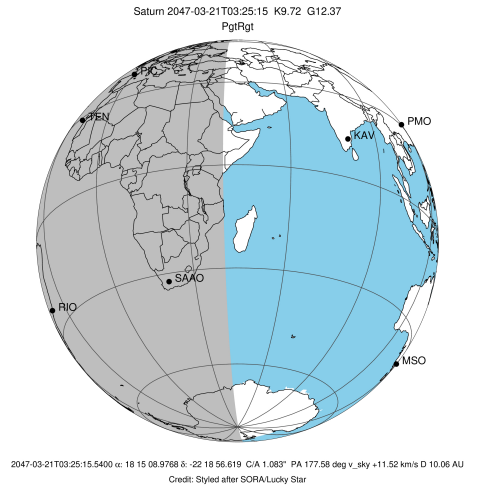
target : Saturn  
 target radius (km) : 60268.00  
 C/A epoch : 2047-03-21T03:16:29.480  
 Event type : PgtRgt  
 : Saturn occs: geocentric, topocentric  
 : Ring occs: geocentric, topocentric  
 Observer code : RIO  
 Location : Rio de Janeiro  
 Latitude (deg) : -22.89506  
 E. Longitude (deg) : 316.77708  
 Altitude (km) : 0.033  
 Gaia source ID : 4090688588369979904  
 2Mass ID (if available) : 18150898-2218565  
 ICRS Star Coord at Epoch: 18h 15m 08.97685s -22:18:56.61920s  
 RUWE (>1.4 is poor) : 0.80  
 K magnitude : 9.725  
 G magnitude : 12.370  
 RP magnitude : 11.564  
 BP magnitude : 13.059  
 DUPflag : 0  
 Distance (au) : 10.061  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 11.52  
 Sun-Target sep (deg) : 86.27  
 Sun-Moon sep (deg) : 26.94  
 B (ring opening deg) : 26.11  
 PA of pole (deg) : 5.80  
 Pole direction: RA (deg): 40.60000  
 Dec (deg): 83.50000  
 C/A sky separation (") : 0.809  
 C/A sky separation (km) : 5905.4  
 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



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	2047-03-21T00:08:30.219	-28.58x	-42.56	140461.00	-12.28			
A (OER)	I	2047-03-21T00:13:30.534	-27.74x	-43.63	136774.40	-12.27			
Encke (OEG)	I	2047-03-21T00:17:37.563	-27.05x	-44.50	133744.89	-12.26			
Encke (IEG)	I	2047-03-21T00:18:03.798	-26.97x	-44.59	133423.31	-12.26			
A (IER)	I	2047-03-21T00:33:33.294	-24.27x	-47.81	122050.38	-12.21			
B (OER)	I	2047-03-21T00:39:40.317	-23.18x	-49.05	117571.16	-12.19			
B (IER)	I	2047-03-21T01:14:48.771	-16.63x	-55.85	91984.69	-12.07			
C (IER)	I	2047-03-21T01:39:05.212	-11.88x	-60.02	74490.58	-11.95			
Saturn	I	2047-03-21T01:50:30.993	-9.59x	-61.77	60211.01			11.67	14.22
Saturn	E	2047-03-21T04:43:59.798	27.75	-56.12	60266.90			-1.61	-1.97
C (IER)	E	2047-03-21T05:04:24.078	32.33	-52.28	74490.58	11.50			
B (IER)	E	2047-03-21T05:29:44.329	38.06	-47.20	91984.69	11.51			
B (OER)	E	2047-03-21T06:06:47.759	46.49	-39.34	117571.16	11.50			
A (IER)	E	2047-03-21T06:13:17.391	47.98	-37.93	122050.38	11.49			
Encke (IEG)	E	2047-03-21T06:29:47.408	51.75	-34.31	133423.31	11.48			
Encke (OEG)	E	2047-03-21T06:30:15.417	51.86	-34.20	133744.89	11.48			
A (OER)	E	2047-03-21T06:34:39.329	52.87	-33.23	136774.40	11.48			
F ring	E	2047-03-21T06:40:00.589	54.10	-32.04	140461.00	11.47			

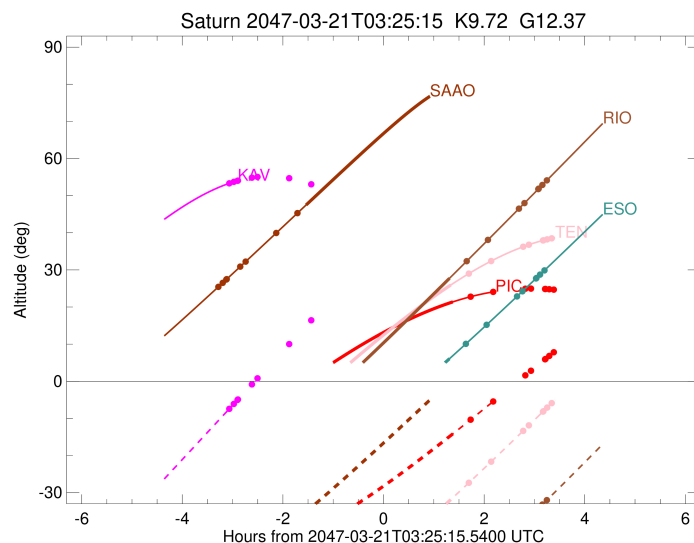
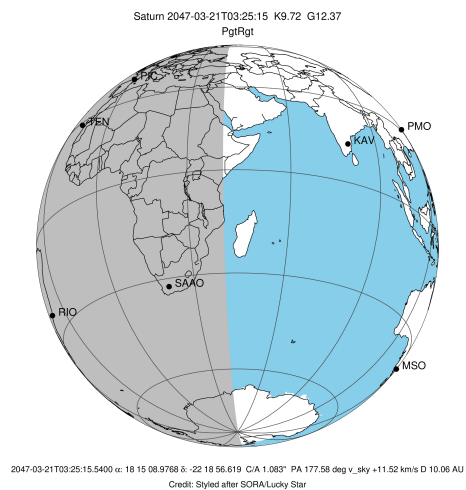
target : Saturn  
 target radius (km) : 60268.00  
 C/A epoch : 2047-03-21T03:17:45.690  
 Event type : PgtRgt  
 : Saturn occs: geocentric, topocentric  
 : Ring occs: geocentric, topocentric  
 Observer code : ESO  
 Location : European Southern Obs. (3.6m)  
 Latitude (deg) : -29.26097  
 E. Longitude (deg) : 289.26831  
 Altitude (km) : 2.400  
 Gaia source ID : 4090688588369979904  
 2Mass ID (if available) : 18150898-2218565  
 ICRS Star Coord at Epoch: 18h 15m 08.97685s -22:18:56.61920s  
 RUWE (>1.4 is poor) : 0.80  
 K magnitude : 9.725  
 G magnitude : 12.370  
 RP magnitude : 11.564  
 BP magnitude : 13.059  
 DUPflag : 0  
 Distance (au) : 10.061  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 11.52  
 Sun-Target sep (deg) : 86.27  
 Sun-Moon sep (deg) : 26.70  
 B (ring opening deg) : 26.11  
 PA of pole (deg) : 5.80  
 Pole direction: RA (deg): 40.60000  
 Dec (deg): 83.50000  
 C/A sky separation (") : 0.591  
 C/A sky separation (km) : 4310.6  
 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	2047-03-21T00:10:55.995	-36.35x	-17.63	140461.00	-12.42			
A (OER)	I	2047-03-21T00:15:52.824	-35.99x	-18.69	136774.40	-12.42			
Encke (OEG)	I	2047-03-21T00:19:56.891	-35.68x	-19.57	133744.89	-12.41			
Encke (IEG)	I	2047-03-21T00:20:22.806	-35.65x	-19.66	133423.31	-12.41			
A (IER)	I	2047-03-21T00:35:40.348	-34.34x	-22.92	122050.38	-12.38			
B (OER)	I	2047-03-21T00:41:42.301	-33.76x	-24.20	117571.16	-12.37			
B (IER)	I	2047-03-21T01:16:17.331	-29.89x	-31.44	91984.69	-12.29			
C (IER)	I	2047-03-21T01:40:05.352	-26.72x	-36.27	74490.58	-12.21			
Saturn	I	2047-03-21T01:52:48.935	-24.88x	-38.79	60222.19			10.44	12.75
Saturn	E	2047-03-21T04:43:58.786	6.08	-61.07	60264.19			-3.00	-3.68
C (IER)	E	2047-03-21T05:03:25.192	10.06	-60.93	74490.58	11.78			
B (IER)	E	2047-03-21T05:28:10.886	15.19	-59.71	91984.69	11.76			
B (OER)	E	2047-03-21T06:04:30.347	22.86	-56.09	117571.16	11.71			
A (IER)	E	2047-03-21T06:10:52.919	24.22	-55.27	122050.38	11.70			
Encke (IEG)	E	2047-03-21T06:27:05.788	27.69	-52.99	133423.31	11.68			
Encke (OEG)	E	2047-03-21T06:27:33.328	27.79	-52.92	133744.89	11.68			
A (OER)	E	2047-03-21T06:31:52.867	28.72	-52.27	136774.40	11.67			
F ring	E	2047-03-21T06:37:08.910	29.85	-51.45	140461.00	11.66			

target : Saturn  
 target radius (km) : 60268.00  
 C/A epoch : 2047-03-21T03:21:53.270  
 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 : 4090688588369979904  
 2Mass ID (if available) : 18150898-2218565  
 ICRS Star Coord at Epoch: 18h 15m 08.97685s -22:18:56.61920s  
 RUWE (>1.4 is poor) : 0.80  
 K magnitude : 9.725  
 G magnitude : 12.370  
 RP magnitude : 11.564  
 BP magnitude : 13.059  
 DUPflag : 0  
 Distance (au) : 10.061  
 f0 (km) : 0.000  
 g0 (km) : 0.000  
 skyplane vel. (km/s) : 11.52  
 Sun-Target sep (deg) : 86.27  
 Sun-Moon sep (deg) : 26.77  
 B (ring opening deg) : 26.11  
 PA of pole (deg) : 5.80  
 Pole direction: RA (deg): 40.60000  
 Dec (deg): 83.50000  
 C/A sky separation (") : 0.922  
 C/A sky separation (km) : 6730.8  
 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	2047-03-21T00:08:21.862		25.44	-52.24	140461.00	-11.80		
A (OER)	I	2047-03-21T00:13:34.441		26.53	-51.58	136774.40	-11.79		
Encke (OEG)	I	2047-03-21T00:17:51.584		27.42	-51.01	133744.89	-11.78		
Encke (IEG)	I	2047-03-21T00:18:18.894		27.52	-50.95	133423.31	-11.77		
A (IER)	I	2047-03-21T00:34:26.624		30.89	-48.67	122050.38	-11.73		
B (OER)	I	2047-03-21T00:40:48.803		32.23	-47.71	117571.16	-11.71		
B (IER)	I	2047-03-21T01:17:24.686		39.95	-41.66	91984.69	-11.59		
C (IER)	I	2047-03-21T01:42:41.942		45.31	-37.08	74490.58	-11.47		
Saturn	I	2047-03-21T01:53:00.342		47.50	-35.14	60200.00		12.76	15.54
Saturn	E	2047-03-21T04:51:36.805		79.92	1.52x	60267.02		-1.52	-1.87
C (IER)	E	2047-03-21T05:12:24.392		79.72	5.92x	74490.58	11.32		
B (IER)	E	2047-03-21T05:38:02.860		76.98	11.31x	91984.69	11.41		
B (OER)	E	2047-03-21T06:15:17.207		70.57	19.06x	117571.16	11.49		
A (IER)	E	2047-03-21T06:21:46.967		69.32	20.39x	122050.38	11.50		
Encke (IEG)	E	2047-03-21T06:38:15.021		66.06	23.75x	133423.31	11.52		
Encke (OEG)	E	2047-03-21T06:38:42.927		65.96	23.85x	133744.89	11.52		
A (OER)	E	2047-03-21T06:43:05.746		65.08	24.73x	136774.40	11.53		
F ring	E	2047-03-21T06:48:25.372		63.99	25.81x	140461.00	11.54		