SOST ICY SATELLITE TARGETED FLYBY ONE PAGE SUMMARY

Phase	Flyby	REV	SEQ	Date	DOY	C/A Time	Altitude C/A km	Instrument timeline, Inbound to c/a (hours) -17 … -1, 0, Outbound from c/a (hours) 1 … 17	In/Out Bound from Saturn	Illuminated Approach/Depart	Phase @C/A deg	C/A LAT	C/A LON	delta-V @C/A km/s	Hydrazine gms
Prime	P1	0	S01	06/11/04	163	19:33	2068	CIRS ISS CIRS ISS CIRS ISS C I C I SP RADAR I C I C I C I C I C I C I RADAR SP I C ISS CIRS ISS CIRS ISS CIRS ISS CIRS ISS CIRS	In	-	24	321	10	6.4	
Prime	E0	3	S08	02/17/05	48	3:30	1261	SP RSS SP CIRS VIMS ISS CDA CIRS RSS RADAR ISS SP	Out	App	113	245	50	6.7	
Prime	E1	4	S09	03/09/05	68	9:08	497	S CIRS I CIRS ISS CIRS ISS C ISS SP C V RADAR SP	In	App	43	307	-30	6.6	
Prime	E2	11	S12	07/14/05	195	19:55	166	SP CIRS I CIRS I C I CIRS I C ISS S U S CIRS I U I UVIS VIMS SP RSS SP	In	App	64	331	-21	8.2	
Prime	H1	15	S14	09/26/05	269	2:24	479	SP ISS VIMS ISS RSS I V I V I C I U I C ISS CIRS UVIS RSS RADAR VIMS SP	Out	App	48	58	-4	5.6	
Prime	D1	16	S15	10/11/05	284	17:52	499	UVIS VIMS CIRS VIMS CIRS VIMS UVIS ISS CIRS SP RSS CIRS I U C ISS ISS CAPS ISS C ISS SP RADAR SP RSS	In	App	66	267	-60	9.1	
Prime	R1	18	S16	11/26/05	330	22:37	504	CIRS VIMS RSS ISS RSS SP ISS VIMS C ISS SP RSS ISS RSS SP CIRS VIMS RADAR SP	In	App	87	91	-10	7.3	
Prime	I1	49	S33	09/10/07	253	14:15	1622	SP ISS RADAR VIMS ISS SP CIRS RADAR I UVIS VIMS CIRS VIMS SP ISS CIRS ISS RADAR SP	Out	Dep	59	-3.6	155.5	2.4	
Prime	E3	61	S38	03/12/08	72	19:06	48	SP RADAR VIMS ISS RADAR C V U C I CAPS CIRS RADAR CIRS UVIS SP RSS	In	Dep	137	-20.0	135.1	14.4	
Prime	E4	80	S43	08/11/08	224	21:06	49	UVIS ISS SP RSS VIMS UVIS ISS CIRS VIMS SP RSS UVIS SP	In	Dep	110	-27.9	97.9	17.7	
Equinox	E5	88	S44	10/09/08	283	19:06	25	ISS UVIS SP RSS RADAR SP CIRS UVIS INMS CIRS UVIS SP	In	Dep	113	-26.1	75.0	17.7	176
Equinox	E6	91	S45	10/31/08	305	17:14	169	ISS SP RSS UVIS VIMS CIRS V ISS U CIRS VIMS UVIS SP RSS UVIS SP	In	Dep	110	-27.9	97.2	17.7	
Equinox	E7	120	S54	11/02/09	306	7:41	99	SP RSS CIRS ISS RSS SP ISS RADAR INMS C UVIS CIRS SP VIMS UVIS SP RSS	Out	Dep	90	-89.1	159.1	7.7	158
Equinox	E8	121	S55	11/21/09	325	2:09	1597	SP ISS RSS VIMS CIRS ISS CIRS E CIRS UVIS SP RSS SP	In	Dep	88	-82.0	111.9	7.8	272
Equinox	R2	127	S58	03/02/10	61	17:40	102	SP RADAR CAPS VIMS CIRS SP	In	Dep	87	81.1	260.6	8.6	
Equinox	D2	129	S59	04/07/10	97	5:16	506	I CIRS CAPS UVIS ISS SP VIMS CIRS SP	In	Dep	79	0.0	91.8	8.4	
Equinox	E9	130	S59	04/28/10	118	0:10	100	RSS	Out	Dep	93	-89.3	146.9	6.5	
Equinox	E10	131	S60	05/18/10	138	6:04	437	ISS SP CIRS UVIS I UVIS ISS V I VIMS CIRS UVIS SP RSS	In	Dep	114	-33.2	303.5	6.5	
Equinox	E11	136	S62	08/13/10	225	22:30	2555	ISS C ISS CIRS UVIS V SP	In	Dep	85	-78.5	30.9	6.8	
Solstice	E12	141	S65	11/30/10	334	11:53	46	SP RSS ISS CIRS RSS CIRS VIMS RSS UVIS SP	Out	Dep	78	61.4	53.4	6.3	
Solstice	E13	142	S65	12/21/10	355	1:08	48	SP ISS CIRS VIMS ISS INMS ISS VIMS SP	Out	Dep	89	60.8	233.5	6.2	
Solstice	R3	143	S65	01/11/11	11	4:53	70	S CAPS ISS SP	Out	Dep	101	-76.9	99.0	8.0	
Solstice	E14	154	S70	10/01/11	274	13:52	99	SP ISS INMS CIRS ISS SP	In	Dep	102	-89.6	204.4	7.4	
Solstice	E15	155	S70	10/19/11	292	9:22	1231	SP ISS S ISS UVIS CIRS SP RSS SP	In	Dep	118	-13.8	113.8	7.5	
Solstice	E16	156	S70	11/06/11	310	4:58	497	SP ISS CIRS RADAR ISS SP	In	Dep	74	-29.2	294.7	7.4	137
Solstice	D3	158	S71	12/12/11	346	9:39	101	RSS ISS CIRS RSS/INMS ISS SP RSS	Out	Dep	49	4.8	91.6	8.7	
Solstice	E17	163	S72	03/27/12	87	18:30	74	SP ISS CIRS INMS ISS SP	In	Dep	105	-86.9	127.9	7.5	
Solstice	E18	164	S73	04/14/12	105	14:01	74	SP VIMS ISS CIRS INMS CIRS SP	In	Dep	104	-86.9	280.3	7.5	
Solstice	E19	165	S73	05/02/12	123	9:31	73	SP ISS RSS ISS CIRS RSS CIRS RSS SP	In	Dep	100	-71.9	291.4	7.5	
Solstice	R4	183	S77	03/09/13	68	18:17	997	SP RSS ISS CIRS RSS ISS RSS ISS SP	In	Dep	138	18.3	176.3	9.3	
Solstice	D4	217	S89	06/16/15	167	20:11	516	SP ISS INMS RSS CIRS SP	Out	App	58	79.9	260.8	7.3	
Solstice	D5	220	S90	08/17/15	229	18:33	479	SP CIRS RSS CIRS RSS I RSS CIRS	In	App	67	84.4	281.2	6.4	
Solstice	E20	223	S91	10/14/15	287	10:41	1845	ISS ISS	In	App	63	78.5	109.0	8.5	
Solstice	E21	224	S91	10/28/15	301	15:22	49	ISS INMS ISS	Out	App	118	-83.7	69.8	8.5	
Solstice	E22	228	S92	12/19/15	353	17:49	4999	CIRS ISS SP ISS	Out	App	114	-88.4	356.4	9.5	

This graphic summarizes the Icy Satellite targeted flybys by the Cassini spacecraft, 2004-2017

Term/heading	Description/Definition
Mission phase	Prime (dates), Equinox (dates), Solstice (date-15 Sept 2017)
Rev	The spacecraft orbital revolution around Saturn, counted from Saturn orbit insertion (SOI). Revs commence at apoapse.
SEQ	The spacecraft sequence
Date	Calendar date in UT for closest approach
DOY	Day of the year (e.g. January 1 = 001) for closest approach
C/A Time	Time in SCET (Spacecraft Event Time) of closest approach
Alt	Altitude in km from satellite surface at the time of c/a
Illumination	Was the flyby lit approaching (App) or departing (Dep) the target body
In/Out	In for flybys that occur inbound to Saturn periapse; Out for flybys that occur outbound from Saturn periapse.
C/A LAT/LON	Latitude and longitude of the nadir point at c/a.
Phase @ C/A	phase angle relative to the Sun to indicate illumination (at c/a)
delta-V @ C/A	speed of spacecraft at c/a
Hyd gms	Grams of hydrazine used during this flyby.
Flyby Timeline Legend	
Colored Horizontal bars	which instrument had pointing control of the spacecraft. Gap indicates observation of target other than the flyby body
Light Green	CAPS - Cassini Plasma Spectrometer
Orange	CDA - Cosmic Dust Analyzer
Pink	CIRS - Composite InfraRed Spectrometer
Brown	INMS - Ion and Neutral Mass Sprectrometer
Grey	ISS - Imaging Science Subsystem
Goldenrod	RADAR
Light Blue	RSS - Radio Science Subsystem (often SP really in charge if earth pointed)
Purple	SP - Science Planning (downlink periods, turns, deadtime - E is thruster transition).
Teal	UVIS - UltraViolet Imaging Spectrometer
Yellow	VIMS - Visible Mapping Spectrometer