

1.1 Maneuver History

Of the 492 maneuvers designed during Cassini’s nearly twenty-year history, 360 were executed: 183 with the main engine (MEA) and 177 with the RCS thrusters. Tables 5-11 provide ΔV magnitudes for maneuvers performed or cancelled during interplanetary cruise (TCMs) and the Saturn tour (OTMs), grouped by each targeted encounter. In the tables, an orbit location description for each maneuver is given (e.g., number of days to next encounter), as well as the maneuver time in UTC SCET, the reference trajectory deterministic ΔV magnitude if non-zero, and the predicted ΔV statistics (mean, 1-sigma, and ΔV_{95}) which account for both maneuver and OD statistical variations. For performed maneuvers, the design and reconstructed ΔV magnitudes are also supplied, including the burn types (MEA or RCS). For maneuvers not performed, the status “cancelled” or “contingency” is instead given. Finally, the predicted ΔV magnitude error for an executed maneuver is computed by taking the absolute difference between the reconstructed and predicted ΔV mean magnitudes and dividing that quantity by the predicted ΔV 1-sigma value. This error shows how well the reconstructed ΔV s matched the predicted ΔV s.

Table 5. Cassini Mission Maneuver History (TCMs 01-22, SOI, OTMs 001-046).

Maneuver	Orbit Location	Maneuver Time (UTC SCET)	Ref. Traj. Det. ΔV (m/s)	Predicted ΔV Statistics			Design ΔV (m/s)	Recon. ΔV (m/s)	Predicted ΔV Error (σ)*	Burn Type	
				Mean (m/s)	1-σ (m/s)	ΔV95 (m/s)					
TCM-01	Launch+25d	09-Nov-1997 20:00:00		3.24	—	5.88	2.7461	2.7770	—	MEA	
TCM-02	Venus-1-60d	25-Feb-1998 20:00:00		0.35	—	0.89	0.1851	0.1788	—	RCS	
TCM-03	Venus-1-18d	08-Apr-1998 20:00:00		0.06	—	0.13	CANCELLED				
TCM-04	Venus-1+18d	14-May-1998 20:00:00		0.47	—	1.25	CANCELLED				
TCM-05	DSM Venus-2-203d	03-Dec-1998 06:00:00	449.97	450.02	1.52	452.56	449.9739	450.2368	0.1426	MEA	
TCM-06	Venus-2-140d	04-Feb-1999 20:00:00		11.67	0.04	11.74	11.5510	11.5516	2.9606	MEA	
TCM-07	Venus-2-37d	18-May-1999 17:00:00	0.24	0.54	0.27	1.08	0.2386	0.2249	1.1669	RCS	
TCM-08	Venus-2-14d	10-Jun-1999 18:00:00		0.05	0.03	0.10	CANCELLED				
TCM-09	Venus-2+12d	06-Jul-1999 17:00:00	47.33	52.01	11.82	75.44	43.5440	43.4996	0.7200	MEA	
TCM-10	Earth-29d	19-Jul-1999 16:00:00	5.04	5.08	0.29	5.55	5.1328	5.1309	0.1755	MEA	
TCM-11	Earth-15d	02-Aug-1999 21:30:00	36.89	36.89	0.15	37.12	36.3092	36.2876	4.0159	MEA	
TCM-12	Earth-6d	11-Aug-1999 15:30:00	12.38	12.39	0.56	13.33	12.2564	12.2471	0.2552	MEA	
TCM-13	Earth+14d	31-Aug-1999 16:00:00		30.48	15.96	61.1	6.7104	6.6835	1.4910	MEA	
TCM-14	Jupiter-199d	14-Jun-2000 17:00:00	0.5457	0.58	0.012	0.60	0.5546	0.5386	3.4500	MEA	
TCM-15	Jupiter-80d	11-Oct-2000 00:00:00		0.11	0.048	0.20	CANCELLED				
TCM-16	Jupiter-23d	07-Dec-2000 00:00:00		—	—	—	CANCELLED				
TCM-17	Jupiter+60d	28-Feb-2001 17:29:50	0.5000	0.84	—	1.03	0.5123	0.5286	—	MEA	
TCM-18	SOI-819d	03-Apr-2002 18:00:00		0.8665	0.0105	0.8836	0.9007	0.8968	2.8857	MEA	
TCM-19	SOI-426d	01-May-2003 20:00:00	1.3661	1.4633	0.3440	2.0842	1.5983	1.5965	0.3874	MEA	
TCM-19a	SOI-294d	10-Sep-2003 20:00:00	0.1200	0.1200	0.0043	0.1269	0.1200	0.1230	0.6852	RCS	
TCM-19b	SOI-273d	02-Oct-2003 04:00:00	2.0000	2.0002	0.0107	2.0180	2.0000	2.0217	2.0083	MEA	
TCM-20	Phoebe-15d	27-May-2004 22:26:00	35.8893	34.6420	1.5769	37.2655	34.7319	34.7098	0.0430	MEA	
TCM-21	SOI-14d	16-Jun-2004 21:07:00		7.2223	1.9876	10.5601	3.7048	3.6968	1.7739	MEA	
TCM-22	SOI-9d	21-Jun-2004 20:52:00		—	—	—	CONTINGENCY				
Saturn Orbit Insertion (SOI)			01-Jul-2004 01:12:08	626.3533	630.551	1.2527	632.610	625.6161	626.7153	2.9943	MEA
OTM-001	SOI+2d	03-Jul-2004 20:06:00		5.3442	3.9293	10.7605	CANCELLED				
OTM-001a	SOI+17d	17-Jul-2004 19:21:00		—	—	—	CONTINGENCY				
OTM-002	PRM Ta-63d	23-Aug-2004 15:53:00	391.7300	391.752	1.0049	393.067	392.9517	393.0521	1.2937	MEA	
OTM-003	LCU Ta-48d	07-Sep-2004 16:30:00		2.5162	1.2351	4.2081	0.5065	0.5123	1.6224	MEA	
OTM-004	LCU Ta-3d	23-Oct-2004 06:16:00		1.0749	0.7526	2.1404	0.3723	0.3831	0.9191	RCS	
OTM-005	Ta+3d	29-Oct-2004 06:15:00		0.8347	0.6283	1.7297	0.6546	0.6464	0.2998	MEA	
OTM-006	Tb-22d	21-Nov-2004 05:00:00	2.8701	0.3476	0.1912	0.6107	0.4196	0.4201	0.3792	MEA	
OTM-007	Tb-3d	10-Dec-2004 03:06:00		0.1237	0.1012	0.2389	CANCELLED				
OTM-008	PTM Tb+4d	17-Dec-2004 01:22:00	11.8810	11.9308	0.0742	12.0270	11.9375	11.9286	0.0291	MEA	
OTM-009	LCU Tc-22d	23-Dec-2004 00:52:00		0.1114	0.0738	0.2179	0.0176	0.0207	1.2307	RCS	
OTM-010	ODM Tc-17d	28-Dec-2004 00:37:00	23.7333	23.7348	0.0842	23.8432	23.7852	23.7934	0.6958	MEA	
OTM-010a	LCU Tc-10d	03-Jan-2005 23:38:00		0.1960	0.0906	0.3163	0.1347	0.1388	0.6314	RCS	
OTM-011	Tc+2d	16-Jan-2005 09:20:00	21.8099	21.1993	0.0438	21.2552	21.6231	21.6330	9.9037	MEA	
OTM-012	T3-18d	28-Jan-2005 07:08:00	19.0388	19.2940	0.1054	19.4324	18.7016	18.7096	5.5435	MEA	
OTM-013	T3-3d	12-Feb-2005 06:07:00		0.8276	0.5356	1.5989	0.2058	0.2076	1.1577	RCS	
OTM-014	T3+2d	18-Feb-2005 06:00:00	0.0019	0.5348	0.4371	1.1326	0.7224	0.7163	0.4153	MEA	
OTM-015	E1-7d	02-Mar-2005 04:50:00	5.2426	2.8104	1.8330	5.4026	6.2586	6.2623	1.8831	MEA	
OTM-016	E1-3d	06-Mar-2005 04:35:00		0.0661	0.0339	0.1111	CANCELLED				
OTM-017	E1+3d	12-Mar-2005 03:20:00	0.3580	0.6495	0.5385	1.4047	0.4514	0.4492	0.3719	MEA	
OTM-018	T4-12d	19-Mar-2005 18:19:00	1.7164	1.7110	0.1395	1.8886	1.6234	1.6200	0.6519	MEA	
OTM-019	T4-4d	28-Mar-2005 02:00:00		0.1106	0.0766	0.2172	CANCELLED				
OTM-020	T4+3d	04-Apr-2005 02:22:00	0.0022	1.2010	0.9797	2.5628	0.9270	0.9188	0.2881	MEA	
OTM-021	T5-7d	10-Apr-2005 02:00:00	6.3311	6.3599	0.8114	7.4419	5.8704	5.8630	0.6124	MEA	
OTM-022	T5-3d	14-Apr-2005 02:40:00		0.1178	0.0728	0.2202	0.0641	0.0648	0.7278	RCS	
OTM-023	T5+3d	20-Apr-2005 00:59:00	0.0039	0.7285	1.1361	2.2604	CANCELLED				
OTM-024	E2-77d	29-Apr-2005 00:58:00	20.6159	20.5461	0.9494	21.7775	20.5692	20.5872	0.0433	MEA	
OTM-025	E2-6d	08-Jul-2005 20:37:00		1.4341	1.0735	2.9465	0.3724	0.3659	0.9950	MEA	
OTM-026	E2+20d	03-Aug-2005 11:50:00	2.6640	2.8739	1.2623	4.5399	2.6281	2.6217	0.1998	MEA	
OTM-027	T6-12d	10-Aug-2005 13:21:00	2.4819	2.6390	0.2114	2.9034	2.4180	2.4164	1.0529	MEA	
OTM-028	T6-4d	18-Aug-2005 11:00:00		0.1092	0.0755	0.2165	CANCELLED				
OTM-029	T6+3d	25-Aug-2005 17:08:00	0.0017	1.6626	1.2865	3.5140	1.4593	1.4528	0.1631	MEA	
OTM-030	T7-8d	30-Aug-2005 18:43:00	14.8721	14.6058	0.2012	14.8309	14.3505	14.3566	1.2383	MEA	
OTM-031	T7-4d	03-Sep-2005 17:30:00		0.1686	0.1000	0.3056	0.0631	0.0646	1.0404	RCS	
OTM-032	T7+3d	10-Sep-2005 17:09:00	0.0070	2.5801	1.8609	5.0942	CANCELLED				
OTM-033	H1-6d	19-Sep-2005 16:40:00	27.9048	27.8225	0.6463	28.6794	27.9099	27.9299	0.1662	MEA	
OTM-034	H1-3d	23-Sep-2005 07:45:00		0.4073	0.2282	0.7175	CANCELLED				
OTM-035	H1+3d	28-Sep-2005 16:11:00	0.0141	1.7096	1.2517	3.4878	0.2948	0.2963	1.1291	RCS	
OTM-036	D1-10d	01-Oct-2005 14:26:00	0.2793	0.1656	0.1983	0.4337	CANCELLED				
OTM-037	D1-3d	08-Oct-2005 09:30:00		0.1685	0.1182	0.3376	CANCELLED				
OTM-038	D1+1d	12-Oct-2005 05:57:00	14.7892	14.8740	0.1207	15.0001	14.8287	14.8318	0.3499	MEA	
OTM-039	T8-7d	21-Oct-2005 14:58:00	0.0098	0.7125	0.5315	1.4706	0.0905	0.0914	1.1687	RCS	
OTM-040	T8-3d	25-Oct-2005 07:14:00		0.0613	0.0302	0.1026	CANCELLED				
OTM-041	T8+3d	31-Oct-2005 13:59:00	12.4227	12.5945	0.8505	13.7449	12.4159	12.4228	0.2019	MEA	
OTM-042	R1-13d	13-Nov-2005 14:02:00	2.0851	2.2595	0.7842	3.2736	2.1282	2.1262	0.1700	MEA	
OTM-043	R1-3d	23-Nov-2005 13:03:00		0.1552	0.0980	0.2948	0.0603	0.0604	0.9679	RCS	
OTM-044	R1+1d	28-Nov-2005 04:15:00	0.2002	0.5260	0.3411	0.9889	0.2375	0.2409	0.8358	RCS	
OTM-045	T9-15d	11-Dec-2005 11:35:00	0.0156	0.2253	0.1460	0.4295	CANCELLED				
OTM-046	T9-3d	23-Dec-2005 12:25:00		0.0785	0.0720	0.1508	CANCELLED				

* Predicted ΔV Magnitude Error = |Reconstructed ΔV - Predicted ΔV Mean| / Predicted ΔV 1-σ

Table 6. Cassini Mission Maneuver History (OTMs 047-118).

Maneuver	Orbit Location	Maneuver Time (UTC SCET)	Ref. Traj. Det. ΔV (m/s)	Predicted ΔV Statistics			Design ΔV (m/s)	Recon. ΔV (m/s)	Predicted ΔV Error (σ)*	Burn Type
				Mean (m/s)	1-σ (m/s)	ΔV95 (m/s)				
OTM-047	T9+3d	30-Dec-2005 02:47:00	0.0088	0.2600	0.1583	0.4515	0.1828	0.1816	0.4955	RCS
OTM-049	T10-3d	12-Jan-2006 09:23:00		0.2400	0.1696	0.4809	CANCELLED			
OTM-050	T10+3d	18-Jan-2006 08:37:00	0.0025	0.9155	0.6950	1.8597	CANCELLED			
OTM-051	T11-25d	02-Feb-2006 07:53:00	0.0027	0.3337	0.2272	0.6419	0.1862	0.1852	0.6538	RCS
OTM-052	T11-3d	24-Feb-2006 06:26:00		0.3404	0.3275	0.7597	CANCELLED			
OTM-053	T11+3d	02-Mar-2006 05:51:00	0.0164	0.7715	0.4684	1.4373	0.2649	0.2634	1.0847	RCS
OTM-055	T12-3d	16-Mar-2006 04:50:00		0.1024	0.0684	0.1963	CANCELLED			
OTM-056	T12+3d	22-Mar-2006 04:19:00	0.0004	0.6675	0.5162	1.3941	0.4671	0.4706	0.3813	MEA
OTM-057	T13-25d	06-Apr-2006 03:32:00	0.0820	0.3141	0.2136	0.6170	0.3704	0.3673	0.2494	MEA
OTM-058	T13-4d	27-Apr-2006 01:59:00		0.0750	0.0539	0.1519	0.0755	0.0786	0.0666	RCS
OTM-059	T13+3d	04-May-2006 01:28:00	0.0720	0.8795	0.5783	1.7038	0.5051	0.5101	0.6387	MEA
OTM-061	T14-2d	18-May-2006 00:41:00		0.3848	0.2847	0.7893	0.1184	0.1221	0.9227	RCS
OTM-062	T14+3d	23-May-2006 16:41:00	0.0091	0.4365	0.3413	0.9222	CANCELLED			
OTM-063	T15-24d	07-Jun-2006 23:24:00	1.8751	1.9802	0.2832	2.3872	1.9225	1.9160	0.2268	MEA
OTM-064	T15-3d	28-Jun-2006 22:07:00		0.1083	0.0762	0.2155	0.0679	0.0694	0.5104	RCS
OTM-065	T15+3d	05-Jul-2006 21:36:00	0.0323	0.9906	0.6045	1.8254	0.1374	0.1378	1.4108	RCS
OTM-067	T16-3d	18-Jul-2006 20:51:00		0.0785	0.0553	0.1540	CANCELLED			
OTM-068	T16+3d	24-Jul-2006 20:30:00	0.2028	0.2975	0.2812	0.7074	CANCELLED			
OTM-069	T17-37d	01-Aug-2006 20:05:00	5.5891	5.3797	0.1098	5.4778	5.4239	5.4198	0.3643	MEA
OTM-070	T17-3d	04-Sep-2006 18:21:00		0.1849	0.1338	0.3700	0.2277	0.2275	0.3182	RCS
OTM-071	T17+3d	10-Sep-2006 18:00:00	6.1694	7.0629	1.4369	8.9644	6.5742	6.5809	0.3354	MEA
OTM-072	T18-9d	14-Sep-2006 10:07:00	8.4368	8.4580	0.9822	9.7571	8.1681	8.1626	0.3008	MEA
OTM-073	T18-3d	20-Sep-2006 16:32:00		0.0557	0.0285	0.0946	CANCELLED			
OTM-074	T18+3d	26-Sep-2006 17:30:00	0.0029	0.2039	0.2751	0.5877	CANCELLED			
OTM-075	T19-8d	01-Oct-2006 09:08:00	6.0638	5.9564	0.1013	6.0551	6.4796	6.4738	5.1091	MEA
OTM-076	T19-3d	06-Oct-2006 16:24:00		0.0396	0.0212	0.0688	0.0400	0.0410	0.0645	RCS
OTM-077	T19+3d	12-Oct-2006 16:10:00	0.0056	0.4079	0.3143	0.8528	CANCELLED			
OTM-078	T20-8d	17-Oct-2006 15:40:00	0.1550	0.2751	0.1647	0.5017	0.8596	0.8475	3.4762	MEA
OTM-079	T20-3d	22-Oct-2006 15:26:00		0.0265	0.0155	0.0488	0.0620	0.0637	2.4000	RCS
OTM-080	T20+15d	09-Nov-2006 14:28:00	3.6686	3.8007	0.1582	3.9958	3.6712	3.6633	0.8690	MEA
OTM-081 BU	T21-15d	27-Nov-2006 13:15:00	0.0668	0.6353	0.4804	1.2982	0.2198	0.2203	0.8638	RCS
OTM-082	T21-3d	09-Dec-2006 12:32:00		0.0310	0.0186	0.0574	CANCELLED			
OTM-083	T21+3d	15-Dec-2006 12:03:00	0.0798	0.8263	0.2114	1.0938	0.8025	0.7914	0.1649	MEA
OTM-084	T22-8d	20-Dec-2006 11:48:00	6.8259	6.9592	0.0209	6.9867	6.8740	6.8667	4.4199	MEA
OTM-085	T22-3d	25-Dec-2006 11:34:00		0.0412	0.0226	0.0719	CANCELLED			
OTM-086	T22+3d	31-Dec-2006 11:05:00	0.0049	0.3060	0.2974	0.6376	0.4920	0.4952	0.6364	MEA
OTM-087	T23-8d	05-Jan-2007 10:50:00	1.5583	1.5434	0.1786	1.7471	1.6573	1.6491	0.5915	MEA
OTM-088	T23-3d	10-Jan-2007 10:20:00		0.0344	0.0211	0.0640	0.0417	0.0419	0.3568	RCS
OTM-089	T23+3d	16-Jan-2007 02:36:00	0.0152	0.2471	0.2153	0.5129	0.2135	0.2131	0.1577	RCS
OTM-090	T24-8d	21-Jan-2007 09:36:00	2.3266	2.3341	0.0856	2.4408	2.3942	2.3947	0.7079	MEA
OTM-091	T24-3d	26-Jan-2007 09:21:00		0.0381	0.0240	0.0713	0.0153	0.0150	0.9630	RCS
OTM-092	T24+3d	01-Feb-2007 08:52:00	0.0087	0.2277	0.2464	0.5968	CANCELLED			
OTM-093	T25-15d	07-Feb-2007 08:37:00	0.0082	0.3588	0.2927	0.7922	0.2822	0.2781	0.2756	MEA
OTM-094	T25-3d	19-Feb-2007 07:37:00		0.1118	0.0828	0.2256	0.0415	0.0414	0.8500	RCS
OTM-095	T25+3d	25-Feb-2007 07:22:00	0.0046	0.2430	0.2227	0.5428	CANCELLED			
OTM-096	T26-8d	02-Mar-2007 06:51:00	0.6141	0.6401	0.1050	0.7648	0.6651	0.6645	0.2322	MEA
OTM-097	T26-3d	06-Mar-2007 23:06:00		0.0513	0.0332	0.0986	CANCELLED			
OTM-098	T26+3d	13-Mar-2007 06:06:00	0.0029	0.5698	0.4563	1.1795	1.0765	1.0747	1.1066	MEA
OTM-099	T27-8d	18-Mar-2007 05:50:00	1.7898	1.7261	0.0725	1.8023	1.6188	1.6117	1.5784	MEA
OTM-100	T27-3d	22-Mar-2007 20:30:00		0.0691	0.0358	0.1184	0.0687	0.0695	0.0120	RCS
OTM-101	T27+3d	28-Mar-2007 20:49:00	0.0045	0.7093	0.5285	1.4254	0.5307	0.5404	0.3195	MEA
OTM-102	T28-8d	03-Apr-2007 04:34:00	2.6932	2.6916	0.1104	2.8328	2.7017	2.6939	0.0202	MEA
OTM-103	T28-3d	07-Apr-2007 20:48:00		0.0514	0.0258	0.0874	0.0375	0.0378	0.5256	RCS
OTM-104	T28+3d	14-Apr-2007 03:47:00	0.0033	0.7459	0.5919	1.5570	CANCELLED			
OTM-105	T29-8d	19-Apr-2007 03:32:00	3.5297	3.5359	0.1814	3.7439	3.5401	3.5325	0.0190	MEA
OTM-106	T29-3d	24-Apr-2007 03:16:00		0.0488	0.0265	0.0846	0.0157	0.0171	1.1976	RCS
OTM-107	T29+3d	30-Apr-2007 02:45:00	0.0031	0.7691	0.6347	1.6799	CANCELLED			
OTM-108	T30-8d	04-May-2007 19:00:00	5.8206	5.9090	0.2697	6.2078	5.5859	5.5829	1.2092	MEA
OTM-109	T30-4d	09-May-2007 02:14:00		0.0278	0.0157	0.0500	0.0244	0.0253	0.1581	RCS
OTM-110	T30+3d	16-May-2007 01:43:00	0.0053	1.4684	1.1014	3.0320	CANCELLED			
OTM-111	T31-8d	21-May-2007 01:27:00	5.5236	5.6983	0.3819	6.1590	5.5348	5.5339	0.4305	MEA
OTM-112	T31-3d	26-May-2007 01:12:00		0.0375	0.0224	0.0693	CANCELLED			
OTM-113	T31+3d	01-Jun-2007 00:41:00	0.0059	0.8573	0.6687	1.7769	0.6999	0.6985	0.2375	MEA
OTM-114	T32-8d	05-Jun-2007 16:55:00	12.1308	12.3466	0.3045	12.7373	12.2371	12.2366	0.3613	MEA
OTM-115	T32-3d	11-Jun-2007 00:10:00		0.0609	0.0397	0.1152	0.0372	0.0364	0.6175	RCS
OTM-116	T32+3d	16-Jun-2007 23:39:00	0.0069	1.3291	0.9919	2.7329	0.7542	0.7461	0.5877	MEA
OTM-117	T33-8d	21-Jun-2007 23:23:00	8.2086	8.4181	0.3446	8.8850	7.9682	7.9703	1.2995	MEA
OTM-118	T33-3d	26-Jun-2007 23:08:00		0.0462	0.0297	0.0876	0.0134	0.0132	1.1123	RCS

* Predicted ΔV Magnitude Error = |Reconstructed ΔV - Predicted ΔV Mean| / Predicted ΔV 1-σ

Table 7. Cassini Mission Maneuver History (OTMs 119-190)

Maneuver	Orbit Location	Maneuver Time (UTC SCET)	Ref. Traj. Det. ΔV (m/s)	Predicted ΔV Statistics			Design ΔV (m/s)	Recon. ΔV (m/s)	Predicted ΔV Error (σ)*	Burn Type
				Mean (m/s)	1-σ (m/s)	ΔV95 (m/s)				
OTM-119	T33+3d	03-Jul-2007 22:37:00	0.0086	0.9388	0.6457	1.8382	0.0229	0.0243	1.4164	RCS
OTM-121	T34-3d	15-Jul-2007 22:06:00		0.0253	0.0118	0.0417	0.0135	0.0137	0.9824	RCS
OTM-122	T34+3d	21-Jul-2007 21:36:00	0.0074	1.0373	0.7444	2.0952	CANCELLED			
OTM-123 BU	T35-24d	06-Aug-2007 20:35:00	0.0054	0.3790	0.2381	0.7093	0.4306	0.4268	0.2009	MEA
OTM-124	T35-3d	27-Aug-2007 19:20:00		0.0899	0.0656	0.1814	CANCELLED			
OTM-125	T35+2d	02-Sep-2007 11:35:00	0.0015	0.4800	0.3008	0.8799	0.4869	0.4879	0.0262	MEA
OTM-127	I1-2d	08-Sep-2007 18:50:00		0.0747	0.0402	0.1288	CANCELLED			
OTM-128	I1+3d	13-Sep-2007 18:20:00	13.4294	10.1319	1.1694	11.4840	13.4823	13.4700	2.8546	MEA
OTM-129	T36-14d	17-Sep-2007 18:21:00	0.0008	2.9947	0.9771	4.3472	0.1028	0.1029	2.9595	RCS
OTM-130	T36-3d	28-Sep-2007 17:36:00		0.0526	0.0334	0.0999	0.0235	0.0242	0.8488	RCS
OTM-131	T36+3d	05-Oct-2007 17:22:00	1.3849	1.6261	0.2635	1.9638	1.3310	1.3270	1.1350	MEA
OTM-132	T37-17d	01-Nov-2007 15:40:00	1.0836	1.0622	0.1570	1.2663	0.9819	0.9770	0.5430	MEA
OTM-133	T37-3d	15-Nov-2007 14:56:00		0.0644	0.0463	0.1310	0.0668	0.0675	0.0668	RCS
OTM-134	T37+3d	22-Nov-2007 06:57:00	1.3156	1.1724	0.7445	2.1623	1.1717	1.1727	0.0004	MEA
OTM-135	T38-8d	27-Nov-2007 06:43:00	15.6608	15.8417	0.1390	16.0261	15.7637	15.7621	0.5722	MEA
OTM-136	T38-2d	02-Dec-2007 13:44:00		0.0834	0.0545	0.1615	0.0184	0.0195	1.1730	RCS
OTM-137	T38+3d	08-Dec-2007 06:00:00	0.0009	0.8972	0.7201	1.9063	0.6799	0.6809	0.3004	MEA
OTM-138	T39-8d	13-Dec-2007 07:10:00	9.7604	9.5774	0.1568	9.7519	9.6426	9.6361	0.3744	MEA
OTM-139	T39-3d	18-Dec-2007 05:16:00		0.0493	0.0315	0.0929	0.0136	0.0137	1.1320	RCS
OTM-140	T39+3d	24-Dec-2007 05:02:00	0.0093	0.8670	0.8073	2.0073	CANCELLED			
OTM-141	T40-7d	29-Dec-2007 12:02:00	2.0416	1.9196	0.2377	2.1846	2.0524	2.0464	0.5334	MEA
OTM-142	T40-3d	03-Jan-2008 04:18:00		0.0285	0.0157	0.0496	CANCELLED			
OTM-143	T40+10d	16-Jan-2008 04:15:00	2.8842	2.8885	0.2001	3.1500	2.8807	2.8786	0.0493	MEA
OTM-144	T41-17d	06-Feb-2008 02:06:00	37.6436	37.6146	0.3428	38.0850	37.3966	37.4063	0.6078	MEA
OTM-145	T41-3d	19-Feb-2008 08:36:00		0.2389	0.1777	0.4877	0.2986	0.2911	0.2938	MEA
OTM-146	T41+8d	01-Mar-2008 22:56:00	6.4197	6.6024	0.3033	7.0450	7.0276	7.0206	1.3788	MEA
OTM-147	E3-5d	07-Mar-2008 07:21:00	0.0239	0.6298	0.5214	1.3030	1.1210	1.1204	0.9411	MEA
OTM-148	E3-3d	10-Mar-2008 07:06:00		0.0483	0.0289	0.0887	CANCELLED			
OTM-149	E3+1d	13-Mar-2008 23:21:00	1.2406	2.8401	0.1117	2.9901	2.7599	2.7529	0.7809	MEA
OTM-150	T42-7d	18-Mar-2008 06:35:00	0.0327	0.1036	0.0610	0.1868	0.0540	0.0552	0.7925	RCS
OTM-151	T42-3d	22-Mar-2008 22:50:00		0.0113	0.0064	0.0194	CANCELLED			
OTM-152	T42+16d	11-Apr-2008 01:04:00	3.9968	3.3867	0.3952	3.8127	3.3287	3.3273	0.1504	MEA
OTM-153	T43-16d	26-Apr-2008 03:47:00	0.0093	1.3034	1.6215	3.8146	0.5122	0.5153	0.4860	MEA
OTM-154	T43-3d	09-May-2008 03:00:00		0.0320	0.0240	0.0654	CANCELLED			
OTM-155	T43+5d	17-May-2008 01:20:00	1.0659	1.0188	0.2971	1.3288	1.1762	1.1728	0.5183	MEA
OTM-156	T44-6d	22-May-2008 02:13:00	0.0079	0.8754	0.8210	2.0338	0.1963	0.1958	0.8278	RCS
OTM-157	T44-3d	25-May-2008 01:58:00		0.0137	0.0080	0.0246	CANCELLED			
OTM-158	T44+4d	01-Jun-2008 00:27:00	0.1384	0.3657	0.4224	0.9771	CANCELLED			
OTM-159	T45-38d	23-Jun-2008 06:24:00	11.8213	12.1195	0.2330	12.4107	12.1850	12.1793	0.2565	MEA
OTM-160	T45-3d	27-Jul-2008 14:36:00		0.3170	0.2404	0.6651	0.1730	0.1695	0.6138	RCS
OTM-162	T45+4d	03-Aug-2008 22:15:00	2.6671	2.8240	0.4376	3.3869	2.5405	2.5391	0.6513	MEA
OTM-163	E4-3d	08-Aug-2008 21:20:00		0.1352	0.0876	0.2570	CANCELLED			
OTM-164	E4+11d	23-Aug-2008 02:49:00	14.3484	14.2134	1.3128	15.8442	13.5277	13.5181	0.5296	MEA
OTM-164a	E5-19d	20-Sep-2008 18:49:00		1.0859	0.8704	2.3353	0.8933	0.8813	0.2351	MEA
OTM-165	E5-7d	02-Oct-2008 10:19:00	3.8059	3.6096	0.2155	3.8902	3.9372	3.9348	1.5086	MEA
OTM-166	E5-3d	06-Oct-2008 18:05:00		0.2041	0.1317	0.3873	0.0145	0.0149	1.4365	RCS
OTM-167	E5+3d	12-Oct-2008 23:51:00	3.1194	3.3132	0.2025	3.6032	3.3396	3.3367	0.1158	MEA
OTM-168	T46-17d	17-Oct-2008 09:10:00	7.1441	7.1885	0.1008	7.3159	6.9929	6.9881	1.9885	MEA
OTM-169	T46-5d	29-Oct-2008 16:37:00		0.1333	0.0978	0.2726	0.2320	0.2248	0.9352	RCS
OTM-170	T46+5d	08-Nov-2008 22:23:00	8.3960	8.3729	0.2881	8.7467	9.1002	9.0973	2.5140	MEA
OTM-171	T47-7d	12-Nov-2008 22:09:00	0.1366	1.3547	1.1086	2.8075	5.1554	5.1495	3.4230	MEA
OTM-172	T47-3d	16-Nov-2008 08:09:00		0.0191	0.0107	0.0334	CANCELLED			
OTM-173	T47+4d	23-Nov-2008 21:25:00	0.7270	0.9705	0.1967	1.2665	0.7870	0.7789	0.9740	MEA
OTM-174	T48-8d	27-Nov-2008 21:10:00	0.1111	0.9125	0.7356	1.9345	CANCELLED			
OTM-175	T48-4d	01-Dec-2008 20:56:00		0.0154	0.0096	0.0286	0.0684	0.0677	5.4553	RCS
OTM-176	T48+4d	09-Dec-2008 20:27:00	2.9374	3.2866	0.2924	3.7072	3.0383	3.0339	0.8642	MEA
OTM-177	T49-8d	13-Dec-2008 20:13:00	0.1538	1.6131	0.7100	2.5490	1.6275	1.6197	0.0092	MEA
OTM-178	T49-4d	17-Dec-2008 19:58:00		0.0252	0.0133	0.0432	0.0264	0.0265	0.0999	RCS
OTM-179	T49+3d	24-Dec-2008 19:44:00	0.0291	0.4446	0.3331	0.9203	CANCELLED			
OTM-180	T50-14d	24-Jan-2009 03:48:00	4.7331	5.0872	0.4471	5.6936	4.6727	4.6699	0.9332	MEA
OTM-181	T50-3d	04-Feb-2009 10:34:00		0.0611	0.0449	0.1249	CANCELLED			
OTM-182	T50+3d	10-Feb-2009 10:04:00	0.0171	0.4586	0.3431	0.9337	0.3704	0.3637	0.2767	MEA
OTM-183	T51-18d	09-Mar-2009 08:20:00	5.0493	5.2923	0.4477	5.9061	5.0259	5.0226	0.6025	MEA
OTM-183x	T51-9d	18-Mar-2009 00:05:00		—	—	—	0.0203	0.0218	—	RCS
OTM-184	T51-3d	24-Mar-2009 07:20:00		0.0838	0.0622	0.1720	CANCELLED			
OTM-186	T51+2d	29-Mar-2009 13:05:00	0.0159	1.3039	0.8333	2.4488	0.7528	0.7482	0.6668	MEA
OTM-186a	T52-3d	01-Apr-2009 06:35:00		—	—	—	CONTINGENCY			
OTM-188	T52+3d	07-Apr-2009 06:19:00	0.0234	0.2401	0.2404	0.5748	CANCELLED			
OTM-189	T53-8d	12-Apr-2009 12:04:00	6.9771	6.9657	0.1123	7.0842	7.1281	7.1237	1.4070	MEA
OTM-190	T53-3d	17-Apr-2009 05:33:00		0.0380	0.0241	0.0715	CANCELLED			

* Predicted ΔV Magnitude Error = |Reconstructed ΔV - Predicted ΔV Mean| / Predicted ΔV 1-σ

Table 8. Cassini Mission Maneuver History (OTMs 191-262)

Maneuver	Orbit Location	Maneuver Time (UTC SCET)	Ref. Traj. Det. ΔV (m/s)	Predicted ΔV Statistics			Design ΔV (m/s)	Recon. ΔV (m/s)	Predicted ΔV Error (σ)*	Burn Type
				Mean (m/s)	1-σ (m/s)	ΔV95 (m/s)				
OTM-191	T53+3d	23-Apr-2009 05:03:00	0.0042	0.0543	0.0657	0.1520	CANCELLED			
OTM-192	T54-7d	28-Apr-2009 11:02:00	2.2665	2.2623	0.0590	2.3493	2.4913	2.4860	3.7890	MEA
OTM-193	T54-3d	02-May-2009 21:02:00		0.0290	0.0164	0.0514	CANCELLED			
OTM-194	T54+3d	09-May-2009 04:01:00	0.0004	0.1290	0.1309	0.3158	CANCELLED			
OTM-195	T55-7d	14-May-2009 10:00:00	2.2524	2.2513	0.0800	2.3428	2.2289	2.2224	0.3615	MEA
OTM-196	T55-3d	18-May-2009 19:45:00		0.0273	0.0155	0.0486	0.0469	0.0444	1.1064	RCS
OTM-197	T55+3d	25-May-2009 02:59:00	0.0134	0.2691	0.2244	0.5889	CANCELLED			
OTM-198	T56-7d	30-May-2009 08:58:00	1.1321	1.1127	0.2332	1.3877	1.4689	1.4630	1.5022	MEA
OTM-199	T56-3d	03-Jun-2009 18:42:00		0.0249	0.0132	0.0431	CANCELLED			
OTM-200	T56+3d	10-Jun-2009 08:12:00	2.0051	1.9233	0.3199	2.2592	2.1457	2.1396	0.6762	MEA
OTM-201	T57-8d	15-Jun-2009 01:26:00	0.0074	0.1787	0.2461	0.5412	0.0299	0.0296	0.6055	RCS
OTM-202	T57-3d	19-Jun-2009 17:40:00		0.0212	0.0120	0.0370	CANCELLED			
OTM-203	T57+4d	26-Jun-2009 07:09:00	2.4433	2.3813	0.3319	2.7064	2.4248	2.4245	0.1301	MEA
OTM-204	T58-8d	01-Jul-2009 00:24:00	0.0097	0.1803	0.2975	0.6037	0.0159	0.0162	0.5518	RCS
OTM-205	T58-3d	05-Jul-2009 16:38:00		0.0224	0.0118	0.0383	CANCELLED			
OTM-206	T58+4d	12-Jul-2009 16:22:00	3.5290	3.4757	0.2834	3.7018	3.5179	3.5129	0.1314	MEA
OTM-207	T59-7d	17-Jul-2009 15:52:00	0.0065	0.1540	0.3064	0.5462	0.0324	0.0318	0.3988	RCS
OTM-208	T59-3d	21-Jul-2009 15:36:00		0.0195	0.0099	0.0330	CANCELLED			
OTM-209	T59+4d	28-Jul-2009 15:21:00	6.3182	5.0880	0.8192	6.3229	6.2957	6.2945	1.4727	MEA
OTM-210	T60-8d	01-Aug-2009 22:35:00	0.0058	1.5256	0.9135	2.7067	0.0224	0.0226	1.6453	RCS
OTM-211	T60-3d	06-Aug-2009 22:05:00		0.0287	0.0148	0.0485	CANCELLED			
OTM-212	T60+4d	13-Aug-2009 21:49:00	0.0065	1.1670	1.7522	3.8969	CANCELLED			
OTM-213	T61-9d	16-Aug-2009 14:04:00	13.0166	12.0797	1.5720	13.1180	13.0040	13.0018	0.5866	MEA
OTM-214	T61-3d	22-Aug-2009 03:34:00		0.0628	0.0357	0.1117	CANCELLED			
OTM-215	T61+4d	29-Aug-2009 13:19:00	0.0071	0.6914	0.6495	1.6314	0.5136	0.5149	0.2718	MEA
OTM-216	T62-37d	05-Sep-2009 02:48:00	4.7319	4.6122	0.2189	4.7798	4.4801	4.4757	0.6233	MEA
OTM-217	T62-3d	09-Oct-2009 11:04:00		0.1113	0.0771	0.2180	0.1505	0.1457	0.4462	RCS
OTM-218	T62+4d	16-Oct-2009 00:34:00	0.0034	0.2744	0.3970	0.8026	0.8515	0.8441	1.4349	MEA
OTM-219	E7-12d	21-Oct-2009 00:04:00	4.6851	4.8967	0.5125	5.5251	4.1688	4.1621	1.4334	MEA
OTM-220	E7-3d	29-Oct-2009 23:35:00		0.0575	0.0339	0.1044	0.0677	0.0669	0.2788	RCS
OTM-221	E7+3d	05-Nov-2009 09:20:00	0.0178	0.4290	0.3373	0.9062	0.3120	0.3026	0.3749	MEA
OTM-222	E8-9d	12-Nov-2009 09:06:00	0.0072	0.5580	0.5972	1.4284	CANCELLED			
OTM-223	E8-3d	17-Nov-2009 22:37:00		0.0277	0.0144	0.0473	CANCELLED			
OTM-224	E8+2d	22-Nov-2009 22:22:00	2.3821	2.2322	0.1365	2.4074	2.5564	2.5532	2.3517	MEA
OTM-225	T63-8d	04-Dec-2009 07:39:00	0.0146	0.9435	0.6464	1.8610	0.2016	0.1991	1.1516	RCS
OTM-226	T63-3d	08-Dec-2009 21:24:00		0.0208	0.0110	0.0358	CANCELLED			
OTM-227	T63+3d	15-Dec-2009 06:55:00	0.0035	0.3152	0.2753	0.7033	0.7187	0.7161	1.4561	MEA
OTM-228	T64-8d	20-Dec-2009 06:41:00	2.2642	2.1736	0.0639	2.2380	2.2312	2.2249	0.8033	MEA
OTM-229	T64-3d	24-Dec-2009 20:26:00		0.0220	0.0132	0.0405	CANCELLED			
OTM-230	T64+3d	31-Dec-2009 05:57:00	0.0054	0.3799	0.3723	0.9041	CANCELLED			
OTM-231	T65-8d	05-Jan-2010 05:43:00	8.1293	7.9962	0.0699	8.0675	8.0498	8.0536	0.8198	MEA
OTM-232	T65-3d	09-Jan-2010 19:29:00		0.0354	0.0223	0.0667	0.0359	0.0354	0.0011	RCS
OTM-233	T65+3d	16-Jan-2010 04:59:00	0.0013	1.8565	0.6907	2.8113	2.2699	2.2660	0.5929	MEA
OTM-234	T66-8d	21-Jan-2010 04:45:00	6.8959	6.2331	0.1721	6.4550	6.0720	6.0749	0.9190	MEA
OTM-235	T66-3d	25-Jan-2010 18:16:00		0.0297	0.0188	0.0562	CANCELLED			
OTM-236	T66+3d	01-Feb-2010 04:01:00	6.1061	6.1083	0.0394	6.1601	6.2029	6.1970	2.2534	MEA
OTM-237	R2-7d	23-Feb-2010 16:33:00	0.0364	0.0548	0.0234	0.0864	0.0150	0.0160	1.6627	RCS
OTM-238	R2-3d	27-Feb-2010 16:19:00		0.0208	0.0099	0.0342	CANCELLED			
OTM-239	R2+8d	11-Mar-2010 01:34:00	1.0870	1.2410	0.3444	1.7046	CANCELLED			
OTM-240	D2-12d	26-Mar-2010 14:19:00	1.5435	1.7258	0.4377	2.3343	3.0017	3.0023	2.9163	MEA
OTM-241	D2-5d	02-Apr-2010 13:49:00		0.0326	0.0155	0.0534	0.0342	0.0339	0.0821	RCS
OTM-242	D2+4d	10-Apr-2010 23:19:00	9.0915	9.1070	0.0445	9.1661	9.0417	9.0441	1.4139	MEA
OTM-243	E9-9d	18-Apr-2010 12:33:00	0.0985	0.0360	0.0242	0.0706	0.0447	0.0449	0.3670	RCS
OTM-244	E9-3d	24-Apr-2010 22:18:00		0.0324	0.0203	0.0605	CANCELLED			
OTM-245	E9+2d	29-Apr-2010 11:47:00	5.8063	5.8005	0.1148	5.9463	5.7144	5.7158	0.7381	MEA
OTM-246	T68-9d	11-May-2010 11:01:00	8.8145	8.8330	0.0642	8.9181	8.8841	8.8811	0.7493	MEA
OTM-247	T68-4d	16-May-2010 04:31:00		0.0719	0.0373	0.1228	CANCELLED			
OTM-248	T68+3d	23-May-2010 10:15:00	0.0039	1.0274	0.7994	2.1514	0.8523	0.8450	0.2281	MEA
OTM-249	T69-8d	28-May-2010 09:44:00	11.0492	10.7615	0.2178	11.0096	10.7673	10.7657	0.0195	MEA
OTM-250	T69-3d	01-Jun-2010 19:44:00		0.0449	0.0287	0.0852	0.0368	0.0365	0.2927	RCS
OTM-251	T69+3d	08-Jun-2010 02:43:00	0.0057	0.7103	0.5119	1.4260	CANCELLED			
OTM-252	T70-8d	13-Jun-2010 08:42:00	1.2442	1.0855	0.1204	1.2209	1.2393	1.2420	1.2994	MEA
OTM-253	T70-3d	18-Jun-2010 02:11:00		0.0259	0.0160	0.0484	0.0249	0.0252	0.0440	RCS
OTM-254	T70+3d	24-Jun-2010 07:56:00	0.0073	0.7322	0.5324	1.4629	0.8744	0.8701	0.2591	MEA
OTM-255	T71-7d	30-Jun-2010 07:40:00	6.6961	6.5050	0.1481	6.6672	6.2579	6.2555	1.6852	MEA
OTM-256	T71-3d	04-Jul-2010 01:09:00		0.0329	0.0199	0.0607	0.0218	0.0228	0.5044	RCS
OTM-257	T71+3d	10-Jul-2010 06:53:00	0.0100	0.5803	0.4300	1.1782	0.8380	0.8319	0.5853	MEA
OTM-258	E11-27d	18-Jul-2010 06:37:00	6.9309	6.8227	0.0922	6.9233	6.7704	6.7651	0.6251	MEA
OTM-259	E11-3d	10-Aug-2010 22:35:00		0.0833	0.0569	0.1628	CANCELLED			
OTM-260	E11+3d	17-Aug-2010 04:49:00	0.0039	0.0749	0.0637	0.1639	CANCELLED			
OTM-261	T72-22d	03-Sep-2010 03:33:00	2.2994	2.3337	0.0701	2.4259	2.4395	2.4376	1.4828	MEA
OTM-261a	T72-9d	16-Sep-2010 02:47:00		0.0869	0.0649	0.1778	0.1763	0.1748	1.3540	RCS
OTM-262	T72-3d	21-Sep-2010 12:47:00		0.0171	0.0090	0.0291	CANCELLED			

* Predicted ΔV Magnitude Error = |Reconstructed ΔV - Predicted ΔV Mean| / Predicted ΔV 1-σ

Table 9. Cassini Mission Maneuver History (OTMs 263-334)

Maneuver	Orbit Location	Maneuver Time (UTC SCET)	Ref. Traj. Det. ΔV (m/s)	Predicted ΔV Statistics			Design ΔV (m/s)	Recon. ΔV (m/s)	Predicted ΔV Error (σ)*	Burn Type
				Mean (m/s)	1-σ (m/s)	ΔV95 (m/s)				
OTM-263	T72+3d	28-Sep-2010 02:02:00	0.0019	0.0868	0.0709	0.1854	CANCELLED			
OTM-264	T73–28d	15-Oct-2010 01:02:00	0.0022	0.0412	0.0302	0.0818	0.1818	0.1773	4.5027	RCS
OTM-265	T73–3d	08-Nov-2010 09:49:00		0.1312	0.0977	0.2670	0.1721	0.1669	0.3653	RCS
OTM-266	T73+3d	14-Nov-2010 23:19:00	0.0016	0.4514	0.3922	0.9946	CANCELLED			
OTM-267	E12–9d	21-Nov-2010 23:05:00	2.3169	1.9803	0.3177	2.2758	2.2497	2.2488	0.8451	MEA
OTM-268	E12–3d	27-Nov-2010 16:20:00		0.0573	0.0333	0.1026	0.0647	0.0651	0.2350	RCS
OTM-269 BU	E12+1d	01-Dec-2010 22:21:00	0.0007	0.0702	0.0518	0.1411	0.1626	0.1618	1.7685	RCS
OTM-270	E13–12d	08-Dec-2010 22:07:00	0.0361	0.0882	0.0433	0.1483	0.0158	0.0164	1.6581	RCS
OTM-271	E13–3d	17-Dec-2010 21:23:00		0.0226	0.0118	0.0386	CANCELLED			
OTM-272	E13+3d	24-Dec-2010 07:09:00	0.0023	0.1051	0.0835	0.2212	CANCELLED			
OTM-273	R3–10d	01-Jan-2011 06:40:00	0.0033	0.1883	0.2357	0.5290	0.2098	0.2076	0.0820	RCS
OTM-274	R3–3d	08-Jan-2011 06:26:00		0.0175	0.0108	0.0307	0.0344	0.0343	1.5596	RCS
OTM-275	R3+3d	14-Jan-2011 13:27:00	2.6392	2.5621	0.1505	2.6657	2.7661	2.7625	1.3318	MEA
OTM-276	T74–17d	01-Feb-2011 04:44:00	0.0076	0.4548	0.6738	1.4428	0.0202	0.0214	0.6432	RCS
OTM-277	T74–3d	15-Feb-2011 17:46:00		0.0701	0.0547	0.1423	CANCELLED			
OTM-278	T74+3d	22-Feb-2011 03:31:00	0.0005	0.2632	0.1787	0.5165	CANCELLED			
OTM-279	T75–48d	02-Mar-2011 10:17:00	0.0024	0.1408	0.0799	0.2497	0.1004	0.1002	0.5080	RCS
OTM-280	T75–3d	15-Apr-2011 23:48:00		0.1035	0.0777	0.2138	0.0201	0.0217	1.0536	RCS
OTM-281	T75+3d	22-Apr-2011 06:48:00	0.0016	0.2416	0.1598	0.4670	0.0425	0.0419	1.2497	RCS
OTM-282	T76–10d	29-Apr-2011 06:18:00	0.0019	0.0409	0.0353	0.0921	CANCELLED			
OTM-283	T76–3d	05-May-2011 22:17:00		0.0173	0.0113	0.0333	0.0141	0.0147	0.2344	RCS
OTM-284	T76+3d	12-May-2011 05:32:00	0.0119	0.7218	0.5695	1.5241	0.1211	0.1197	1.0571	RCS
OTM-285	T77–28d	24-May-2011 04:46:00	0.0084	0.3533	0.2592	0.7223	0.0365	0.0366	1.2221	RCS
OTM-286	T77–3d	17-Jun-2011 02:57:00		0.0523	0.0458	0.1157	0.0149	0.0155	0.8046	RCS
OTM-287	T77+3d	24-Jun-2011 08:42:00	0.0057	0.9228	0.6387	1.8304	0.1456	0.1446	1.2183	RCS
OTM-288	T78–20d	22-Aug-2011 15:04:00	0.0112	0.1373	0.1028	0.2803	0.0925	0.0922	0.4385	RCS
OTM-288a	T78–10d	01-Sep-2011 22:03:00		0.0149	0.0117	0.0303	CANCELLED			
OTM-289	T78–3d	09-Sep-2011 03:48:00		0.0183	0.0093	0.0308	CANCELLED			
OTM-290	T78+3d	15-Sep-2011 13:47:00	0.0125	0.0024	0.0112	0.0027	CANCELLED			
OTM-291	E14–11d	20-Sep-2011 03:17:00	4.9645	4.9364	0.0855	5.0430	5.0542	5.0538	1.3728	MEA
OTM-292	E14–3d	28-Sep-2011 13:02:00		0.0547	0.0373	0.1075	0.0330	0.0329	0.5860	RCS
OTM-294	E14+4d	05-Oct-2011 02:17:00	0.0135	0.1419	0.1014	0.2862	0.0746	0.0747	0.6629	RCS
OTM-295	E15–9d	10-Oct-2011 02:01:00		0.0071	0.0041	0.0120	CANCELLED			
OTM-296	E15+3d	21-Oct-2011 01:31:00	0.0110	0.0074	0.0057	0.0151	CANCELLED			
OTM-297	E16–9d	28-Oct-2011 11:17:00	0.0057	0.0117	0.0045	0.0177	0.0459	0.0463	7.6648	RCS
OTM-298	E16–3d	03-Nov-2011 00:47:00		0.0149	0.0073	0.0248	CANCELLED			
OTM-299	E16+3d	09-Nov-2011 00:17:00	2.1920	2.2513	0.0905	2.3689	2.0879	2.0864	1.8223	MEA
OTM-300	T79–20d	24-Nov-2011 05:18:00	2.9481	3.0955	0.1788	3.3125	2.9755	2.9756	0.6711	MEA
OTM-300a	T79–12d	01-Dec-2011 23:04:00		0.0461	0.0330	0.0920	0.0207	0.0218	0.7358	RCS
OTM-301	T79–4d	09-Dec-2011 08:49:00		0.0176	0.0090	0.0300	0.0177	0.0190	0.1581	RCS
OTM-303	T79+4d	17-Dec-2011 08:20:00	0.0318	1.7635	1.2778	3.5254	0.5127	0.5071	0.9832	MEA
OTM-304	T80–11d	22-Dec-2011 21:51:00		0.0122	0.0066	0.0214	0.0164	0.0168	0.6987	RCS
OTM-306	T81–14d	16-Jan-2012 06:39:00	0.0056	0.1183	0.0662	0.2400	0.0492	0.0501	1.0283	RCS
OTM-308	T81+4d	03-Feb-2012 05:27:00	0.0086	0.1135	0.0641	0.2320	0.1359	0.1363	0.3563	RCS
OTM-309	T82–9d	10-Feb-2012 12:28:00	0.0081	0.0086	0.0052	0.0165	CANCELLED			
OTM-310 BU	T82–2d	17-Feb-2012 04:29:00		0.0171	0.0098	0.0360	0.0197	0.0205	0.3392	RCS
OTM-311	T82+4d	23-Feb-2012 04:14:00	0.0259	0.1464	0.1576	0.4662	CANCELLED			
OTM-312	E17–18d	10-Mar-2012 03:01:00	3.4998	3.6176	0.1230	3.8760	3.5749	3.5646	0.4306	MEA
OTM-312a	E17–12d	16-Mar-2012 02:46:00		0.0373	0.0275	0.0907	0.1047	0.1040	2.4233	RCS
OTM-313	E17–3d	24-Mar-2012 16:02:00		0.0128	0.0083	0.0289	0.0163	0.0173	0.5385	RCS
OTM-314	E17+4d	31-Mar-2012 01:32:00	0.0621	0.1562	0.1189	0.3759	0.1445	0.1427	0.1135	RCS
OTM-315	E18–9d	05-Apr-2012 08:47:00	0.0633	0.0415	0.0324	0.1039	CANCELLED			
OTM-316	E18–3d	11-Apr-2012 14:48:00		0.0161	0.0084	0.0318	0.0314	0.0318	1.8796	RCS
OTM-317	E18+3d	18-Apr-2012 00:18:00	0.2735	0.2889	0.1644	0.5688	CANCELLED			
OTM-318	E19–8d	24-Apr-2012 07:33:00	0.1178	0.1192	0.0640	0.2327	0.2458	0.2404	1.8942	MEA
OTM-319	E19–3d	29-Apr-2012 07:17:00		0.0117	0.0059	0.0227	0.0350	0.0349	3.8987	RCS
OTM-320	E19+4d	06-May-2012 06:47:00	0.0004	0.1125	0.0919	0.2921	CANCELLED			
OTM-321	T83–8d	14-May-2012 06:01:00	8.2659	8.2267	0.0453	8.2847	8.2722	8.2669	0.8883	MEA
OTM-322 BU	T83–2d	19-May-2012 22:16:00		0.0433	0.0271	0.0962	0.0822	0.0823	1.4379	RCS
OTM-323	T83+3d	25-May-2012 05:16:00	0.0116	0.2629	0.2472	0.7602	CANCELLED			
OTM-324	T84–8d	30-May-2012 05:00:00	3.7088	3.6413	0.0718	3.7229	3.7142	3.7127	0.9940	MEA
OTM-325	T84–3d	03-Jun-2012 21:15:00		0.0243	0.0137	0.0501	0.0375	0.0371	0.9337	RCS
OTM-326	T84+3d	10-Jun-2012 10:29:00	0.0055	0.7638	0.5715	1.8815	0.4216	0.4115	0.6165	MEA
OTM-327	T85–34d	21-Jun-2012 03:28:00	10.1176	9.9983	0.0943	10.1117	10.1186	10.1191	1.2815	MEA
OTM-328	T85–4d	21-Jul-2012 07:38:00		0.1915	0.1382	0.4598	0.1721	0.1719	0.1423	RCS
OTM-329	T85+3d	28-Jul-2012 07:08:00	0.0141	0.9241	0.7150	2.3238	CANCELLED			
OTM-330	T86–50d	07-Aug-2012 06:36:00	4.2676	4.1417	0.1719	4.3132	4.3525	4.3565	1.2493	MEA
OTM-331	T86–3d	23-Sep-2012 13:47:00		0.2115	0.1548	0.5154	0.0612	0.0607	0.9736	RCS
OTM-332	T86+4d	30-Sep-2012 03:16:00	0.0076	1.2076	0.8000	2.7117	0.1901	0.1895	1.2726	RCS
OTM-333	T87–35d	09-Oct-2012 13:01:00	0.7989	0.6101	0.1674	0.8412	0.7608	0.7636	0.9170	MEA
OTM-334	T87–4d	09-Nov-2012 18:46:00		0.0862	0.0587	0.2041	0.0600	0.0600	0.4467	RCS

* Predicted ΔV Magnitude Error = |Reconstructed ΔV - Predicted ΔV Mean| / Predicted ΔV 1-σ

Table 10. Cassini Mission Maneuver History (OTMs 335-406)

Maneuver	Orbit Location	Maneuver Time (UTC SCET)	Ref. Traj. Det. ΔV (m/s)	Predicted ΔV Statistics			Design ΔV (m/s)	Recon. ΔV (m/s)	Predicted ΔV Error (σ)*	Burn Type
				Mean (m/s)	1-σ (m/s)	ΔV95 (m/s)				
OTM-335	T87+4d	17-Nov-2012 00:31:00	0.0129	0.9364	0.7688	2.3754	0.2548	0.2529	0.8891	MEA
OTM-336	T88-7d	22-Nov-2012 00:16:00	5.0468	4.9256	0.1860	5.1376	4.9593	4.9606	0.1882	MEA
OTM-337	T88-3d	26-Nov-2012 00:01:00		0.0411	0.0216	0.0805	0.0219	0.0214	0.9123	RCS
OTM-338	T88+4d	02-Dec-2012 23:32:00	0.0342	0.5138	0.4082	1.3094	0.0276	0.0286	1.1887	RCS
OTM-339	T89-17d	30-Jan-2013 20:09:00	1.6593	1.7294	0.1056	1.9266	1.6575	1.6540	0.7131	MEA
OTM-340	T89-4d	13-Feb-2013 05:26:00		0.0517	0.0371	0.1233	0.0323	0.0314	0.5471	RCS
OTM-341	T89+7d	24-Feb-2013 12:12:00	1.4481	1.4870	0.2270	1.8571	1.4498	1.4474	0.1742	MEA
OTM-342	R4-8d	02-Mar-2013 04:28:00	0.0768	0.8385	0.5704	1.9353	0.2644	0.2612	1.0121	MEA
OTM-343	R4-3d	06-Mar-2013 17:58:00		0.0331	0.0176	0.0659	CANCELLED			
OTM-344	R4+3d	12-Mar-2013 03:44:00	0.0507	0.2017	0.1666	0.5167	CANCELLED			
OTM-345	T90-20d	17-Mar-2013 03:30:00	0.0885	0.1367	0.2122	0.5908	0.1859	0.1858	0.2317	RCS
OTM-346	T90-4d	01-Apr-2013 16:16:00		0.0164	0.0117	0.0369	0.0166	0.0167	0.0307	RCS
OTM-347	T90+3d	09-Apr-2013 01:46:00	0.0083	0.4235	0.3253	1.0371	0.1228	0.1223	0.9260	RCS
OTM-348	T91-23d	30-Apr-2013 08:02:00	0.4132	0.4360	0.1587	0.7020	0.4945	0.4954	0.3742	MEA
OTM-349	T91-4d	19-May-2013 12:46:00		0.0388	0.0266	0.0925	0.0169	0.0170	0.8187	RCS
OTM-350	T91+4d	27-May-2013 06:01:00	0.0715	0.8378	0.6628	2.1582	0.0511	0.0507	1.1876	RCS
OTM-351	T92-29d	11-Jun-2013 21:14:00	0.8144	0.7704	0.2520	1.0871	0.8201	0.8187	0.1916	MEA
OTM-352	T92-3d	07-Jul-2013 09:26:00		0.1080	0.0778	0.2597	0.0576	0.0583	0.6384	RCS
OTM-353 BU	T92+5d	15-Jul-2013 02:40:00		0.7685	0.6174	1.9634	0.2530	0.2491	0.8414	MEA
OTM-354	T93-7d	19-Jul-2013 02:25:00	2.3708	2.2672	0.2057	2.4759	2.2655	2.2688	0.0082	MEA
OTM-355	T93-3d	23-Jul-2013 08:24:00		0.0323	0.0191	0.0699	0.0721	0.0713	2.0410	RCS
OTM-356	T93+4d	30-Jul-2013 07:53:00	0.0016	0.5874	0.4769	1.5035	CANCELLED			
OTM-357	T94-36d	07-Aug-2013 07:22:00	3.6085	3.5526	0.1489	3.7275	3.6145	3.6196	0.4495	MEA
OTM-358	T94-3d	09-Sep-2013 05:18:00		0.1287	0.0940	0.3087	0.0346	0.0341	1.0071	RCS
OTM-359	T94+4d	16-Sep-2013 04:47:00	0.0054	0.2465	0.1960	0.6282	0.0331	0.0320	1.0946	RCS
OTM-360	T95-14d	30-Sep-2013 04:01:00	0.0684	0.0839	0.0412	0.1546	0.0714	0.0706	0.3213	RCS
OTM-361	T95-3d	11-Oct-2013 03:15:00		0.0197	0.0119	0.0430	0.0185	0.0197	0.0038	RCS
OTM-362	T95+3d	17-Oct-2013 13:15:00	0.0079	0.2687	0.2118	0.6793	CANCELLED			
OTM-363	T96-29d	02-Nov-2013 12:15:00	0.3702	0.3659	0.0486	0.4345	0.3642	0.3654	0.0086	MEA
OTM-364	T96-3d	28-Nov-2013 00:45:00		0.1354	0.1055	0.3457	0.0140	0.0137	1.1529	RCS
OTM-365	T96+4d	04-Dec-2013 18:00:00	0.0376	0.4375	0.3414	1.0824	CANCELLED			
OTM-366	T97-15d	17-Dec-2013 23:32:00	0.3618	0.3239	0.1144	0.5000	0.3859	0.3793	0.4846	MEA
OTM-367	T97-3d	29-Dec-2013 22:48:00		0.0435	0.0358	0.1179	0.1154	0.1157	2.0161	RCS
OTM-368	T97+4d	05-Jan-2014 16:03:00	0.0004	0.4286	0.3506	1.1266	0.1033	0.1027	0.9295	RCS
OTM-369	T98-8d	25-Jan-2014 14:51:00	0.0038	0.0829	0.0716	0.2290	CANCELLED			
OTM-370	T98-3d	30-Jan-2014 20:51:00		0.0191	0.0091	0.0358	0.0558	0.0541	3.8299	RCS
OTM-371	T98+3d	05-Feb-2014 14:07:00	0.0056	0.1109	0.1027	0.3126	0.0891	0.0904	0.1992	RCS
OTM-372	T99-17d	17-Feb-2014 13:24:00	1.7128	1.7743	0.0844	1.9769	1.6829	1.6806	1.1096	MEA
OTM-373	T99-3d	03-Mar-2014 18:56:00		0.0662	0.0456	0.1570	0.0242	0.0243	0.9175	RCS
OTM-374	T99+4d	10-Mar-2014 12:12:00	0.0022	0.1185	0.1079	0.3325	CANCELLED			
OTM-375	T100-18d	20-Mar-2014 11:28:00	0.5513	0.5583	0.0834	0.7150	0.5420	0.5451	0.1580	MEA
OTM-376	T100-3d	04-Apr-2014 10:29:00		0.0661	0.0459	0.1542	0.0549	0.0541	0.2605	RCS
OTM-377	T100+4d	11-Apr-2014 10:00:00	0.0006	0.0796	0.0724	0.2275	0.0373	0.0359	0.6032	RCS
OTM-378	T101-23d	24-Apr-2014 09:01:00	0.0012	0.2579	0.2470	0.7744	0.0362	0.0356	0.8999	RCS
OTM-379	T101-3d	14-May-2014 07:46:00		0.0679	0.0615	0.1918	0.0228	0.0214	0.7564	RCS
OTM-380	T101+4d	21-May-2014 07:16:00	0.0006	0.1449	0.1228	0.3667	0.0200	0.0204	1.0140	RCS
OTM-381	T102-15d	03-Jun-2014 06:15:00	0.0026	0.0089	0.0061	0.0201	CANCELLED			
OTM-382	T102-3d	15-Jun-2014 11:44:00		0.0110	0.0069	0.0243	0.0272	0.0282	2.4990	RCS
OTM-383	T102+4d	22-Jun-2014 04:59:00	0.0022	0.0575	0.0436	0.1418	0.0459	0.0452	0.2830	RCS
OTM-384	T103-15d	05-Jul-2014 03:58:00	0.0052	0.0071	0.0039	0.0144	CANCELLED			
OTM-385	T103-3d	17-Jul-2014 09:40:00		0.0113	0.0072	0.0253	0.0322	0.0323	2.9380	RCS
OTM-386	T103+4d	24-Jul-2014 02:40:00	0.0023	0.0545	0.0426	0.1369	CANCELLED			
OTM-387	T104-12d	09-Aug-2014 08:08:00	12.4462	12.4432	0.0102	12.4585	12.4598	12.4660	2.2244	MEA
OTM-388	T104-3d	18-Aug-2014 07:37:00		0.0945	0.0633	0.2186	0.0324	0.0324	0.9820	RCS
OTM-389	T104+4d	25-Aug-2014 07:06:00	0.0013	0.1973	0.1615	0.4974	CANCELLED			
OTM-390	T105-15d	07-Sep-2014 06:19:00	1.2539	1.2445	0.0215	1.2721	1.2659	1.2616	0.7943	MEA
OTM-391	T105-3d	19-Sep-2014 05:33:00		0.0731	0.0488	0.1710	0.0837	0.0855	0.2545	RCS
OTM-392	T105+4d	26-Sep-2014 05:02:00	0.0006	0.1999	0.1663	0.5188	0.0664	0.0665	0.8020	RCS
OTM-393	T106-15d	09-Oct-2014 04:16:00	1.0847	1.0672	0.0298	1.1204	1.0647	1.0613	0.1971	MEA
OTM-394	T106-3d	21-Oct-2014 03:30:00		0.0796	0.0497	0.1737	0.0357	0.0357	0.8851	RCS
OTM-395	T106+4d	27-Oct-2014 20:44:00	0.0026	0.2527	0.1686	0.5784	0.0623	0.0631	1.1248	RCS
OTM-396	T107-19d	22-Nov-2014 01:44:00	0.1730	0.1764	0.0339	0.2316	0.1975	0.1962	0.5854	RCS
OTM-397	T107-3d	07-Dec-2014 18:30:00		0.0719	0.0456	0.1600	0.0371	0.0366	0.7735	RCS
OTM-398	T107+3d	14-Dec-2014 00:15:00	0.0010	0.1591	0.1038	0.3548	0.1612	0.1606	0.0148	RCS
OTM-399	T108-13d	29-Dec-2014 23:31:00	0.9941	0.9914	0.0331	1.0367	0.9683	0.9646	0.8094	MEA
OTM-400 BU	T108-2d	09-Jan-2015 22:47:00		0.1676	0.1029	0.3668	0.0555	0.0562	1.0821	RCS
OTM-401	T108+3d	14-Jan-2015 22:32:00	0.0015	0.3746	0.3415	0.9452	0.2289	0.2294	0.4250	RCS
OTM-402	T109-12d	31-Jan-2015 21:34:00	1.2720	1.2815	0.0647	1.3731	1.2677	1.2727	0.1355	MEA
OTM-403	T109-3d	09-Feb-2015 21:06:00		0.0648	0.0348	0.1291	0.0293	0.0297	1.0093	RCS
OTM-404	T109+3d	15-Feb-2015 20:36:00	0.0019	0.4308	0.3096	1.0342	0.4971	0.4954	0.2089	MEA
OTM-405	T110-12d	04-Mar-2015 19:39:00	0.0038	0.0470	0.0262	0.0950	0.0996	0.0999	2.0198	RCS
OTM-406	T110-3d	13-Mar-2015 19:10:00		0.0126	0.0067	0.0249	0.0228	0.0224	1.4770	RCS

* Predicted ΔV Magnitude Error = |Reconstructed ΔV - Predicted ΔV Mean| / Predicted ΔV 1-σ

Table 11. Cassini Mission Maneuver History (OTMs 407-475)

Maneuver	Orbit Location	Maneuver Time (UTC SCET)	Ref. Traj. Det. ΔV (m/s)	Predicted ΔV Statistics			Design ΔV (m/s)	Recon. ΔV (m/s)	Predicted ΔV Error (σ)*	Burn Type
				Mean (m/s)	1-σ (m/s)	ΔV95 (m/s)				
OTM-407	T110+3d	19-Mar-2015 18:41:00	0.0094	0.1984	0.1441	0.4841	CANCELLED			
OTM-408	T111-17d	20-Apr-2015 16:29:00	0.0086	0.0085	0.0063	0.0206	0.0470	0.0461	5.9417	RCS
OTM-409	T111-3d	04-May-2015 15:30:00		0.0113	0.0068	0.0247	0.0181	0.0186	1.0716	RCS
OTM-410	T111+4d	11-May-2015 15:00:00	0.0004	0.0799	0.0558	0.1874	0.0610	0.0615	0.3302	RCS
OTM-411	D4-8d	08-Jun-2015 13:00:00	0.0051	0.0691	0.0372	0.1396	0.0599	0.0604	0.2322	RCS
OTM-412	D4-3d	13-Jun-2015 12:45:00		0.0059	0.0029	0.0113	CANCELLED			
OTM-413	D4+4d	20-Jun-2015 12:14:00	0.0008	0.0555	0.0438	0.1397	CANCELLED			
OTM-414	T112-11d	26-Jun-2015 11:44:00	0.0050	0.0360	0.0230	0.0800	0.0704	0.0707	1.5106	RCS
OTM-415	T112-3d	04-Jul-2015 11:13:00		0.0114	0.0073	0.0257	CANCELLED			
OTM-416	T112+3d	10-Jul-2015 10:58:00	0.0093	0.1116	0.0743	0.2616	0.0960	0.0963	0.2057	RCS
OTM-417	D5-8d	09-Aug-2015 08:54:00	0.0094	0.0233	0.0165	0.0561	0.0181	0.0179	0.3274	RCS
OTM-418	D5-3d	14-Aug-2015 08:23:00		0.0053	0.0026	0.0101	CANCELLED			
OTM-419	D5+4d	21-Aug-2015 08:07:00	0.0023	0.0459	0.0264	0.0964	0.0581	0.0572	0.4278	RCS
OTM-420	T113-21d	08-Sep-2015 06:50:00	0.0112	0.0265	0.0138	0.0525	CANCELLED			
OTM-421	T113-4d	25-Sep-2015 05:48:00		0.0578	0.0424	0.1393	0.0222	0.0216	0.8551	RCS
OTM-422	T113+3d	02-Oct-2015 05:17:00	0.0062	0.3868	0.3296	1.0745	0.2521	0.2464	0.4260	MEA
OTM-423	E20-8d	06-Oct-2015 05:02:00	2.6956	2.6676	0.2733	3.0719	2.6256	2.6234	0.1617	MEA
OTM-424	E20-3d	11-Oct-2015 04:46:00		0.0278	0.0170	0.0605	0.0345	0.0344	0.3864	RCS
OTM-426	E21-8d	20-Oct-2015 04:15:00	0.0145	0.1809	0.1126	0.3967	0.0704	0.0712	0.9747	RCS
OTM-427	E21-3d	25-Oct-2015 04:00:00		0.0098	0.0071	0.0231	CANCELLED			
OTM-428	E21+1d	29-Oct-2015 03:45:00	0.0013	0.0638	0.0488	0.1569	CANCELLED			
OTM-429	T114-8d	05-Nov-2015 03:29:00	0.0087	0.2509	0.1586	0.5623	0.1108	0.1095	0.8917	RCS
OTM-430	T114-3d	10-Nov-2015 02:59:00		0.0112	0.0094	0.0317	CANCELLED			
OTM-431	T114+3d	16-Nov-2015 02:29:00	0.0059	0.1445	0.1345	0.4263	0.1036	0.1028	0.3102	RCS
OTM-432	E22-24d	26-Nov-2015 02:13:00	0.0225	0.0428	0.0368	0.1161	CANCELLED			
OTM-433	E22-4d	16-Dec-2015 00:44:00		0.0323	0.0232	0.0777	CANCELLED			
OTM-434	E22+3d	23-Dec-2015 00:29:00	0.0205	0.0202	0.0304	0.0855	CANCELLED			
OTM-435	T115-17d	30-Dec-2015 00:00:00	3.0237	2.9813	0.0520	3.0275	2.9863	2.9846	0.0625	MEA
OTM-436	T115-3d	12-Jan-2016 23:16:00		0.0538	0.0394	0.1306	0.0362	0.0367	0.4351	RCS
OTM-437	T115+3d	18-Jan-2016 23:01:00	0.0040	0.1292	0.1155	0.3488	CANCELLED			
OTM-438	T116-8d	23-Jan-2016 22:47:00	6.8455	6.8149	0.0324	6.8474	6.8471	6.8441	0.9010	MEA
OTM-439 BU	T116-2d	29-Jan-2016 22:17:00		0.0353	0.0232	0.0799	0.0158	0.0161	0.8267	RCS
OTM-440	T116+3d	03-Feb-2016 22:03:00	0.0089	0.5441	0.4391	1.3952	0.5826	0.5774	0.0759	MEA
OTM-441	T117-8d	08-Feb-2016 21:49:00	0.7285	0.6072	0.1259	0.7320	0.7469	0.7450	1.0950	MEA
OTM-442	T117-3d	13-Feb-2016 21:34:00		0.0239	0.0147	0.0523	0.0153	0.0154	0.5784	RCS
OTM-443 BU	T117+4d	20-Feb-2016 21:05:00		0.2355	0.1766	0.5738	0.0688	0.0682	0.9476	RCS
OTM-444	T118-10d	25-Mar-2016 18:55:00	7.9489	7.9294	0.0289	7.9600	7.9518	7.9563	0.9311	MEA
OTM-445	T118-3d	01-Apr-2016 18:26:00		0.0619	0.0389	0.1385	0.0625	0.0627	0.0222	RCS
OTM-446	T118+3d	07-Apr-2016 18:11:00	0.0035	0.4185	0.3121	1.0117	0.1668	0.1673	0.8049	RCS
OTM-447	T119-14d	22-Apr-2016 17:13:00	1.7545	1.7352	0.0280	1.7716	1.7674	1.7617	0.9440	MEA
OTM-448 BU	T119-2d	04-May-2016 16:29:00		0.1039	0.0553	0.2064	0.0172	0.0170	1.5707	RCS
OTM-449	T119+3d	09-May-2016 15:59:00	0.0006	0.2311	0.1786	0.5627	0.5512	0.5513	1.7925	MEA
OTM-450	T120-16d	22-May-2016 15:00:00	0.0480	0.0468	0.0177	0.0781	0.0261	0.0268	1.1269	RCS
OTM-451	T120-3d	04-Jun-2016 14:15:00		0.0342	0.0216	0.0759	CANCELLED			
OTM-452	T120+4d	11-Jun-2016 13:45:00	0.0013	0.2759	0.1750	0.6021	0.2542	0.2465	0.1680	MEA
OTM-453	T121-8d	17-Jul-2016 11:13:00	2.1061	2.0457	0.0532	2.1230	2.0250	2.0207	0.4698	MEA
OTM-454	T121-3d	22-Jul-2016 10:42:00		0.0485	0.0255	0.0950	0.0501	0.0499	0.0567	RCS
OTM-455	T121+3d	28-Jul-2016 10:27:00	0.0090	0.4093	0.3482	1.0754	0.1839	0.1849	0.6445	RCS
OTM-456	T122-8d	02-Aug-2016 10:11:00	0.8417	0.8016	0.1222	0.9676	0.7940	0.7934	0.0676	MEA
OTM-457	T122-3d	07-Aug-2016 09:40:00		0.0488	0.0255	0.0965	CANCELLED			
OTM-458	T122+4d	14-Aug-2016 09:10:00	0.0079	0.2849	0.2510	0.8146	CANCELLED			
OTM-459 BU	T123-38d	20-Aug-2016 08:54:00	0.0504	0.0983	0.0797	0.2607	0.0554	0.0556	0.5359	RCS
OTM-460	T123-4d	23-Sep-2016 06:34:00		0.0840	0.0669	0.2053	0.0245	0.0241	0.8951	RCS
OTM-461	T123+3d	30-Sep-2016 06:03:00	0.0138	0.1352	0.1744	0.5095	CANCELLED			
OTM-462	T124-40d	05-Oct-2016 05:48:00	0.0066	0.0787	0.0668	0.2032	0.1710	0.1718	1.3932	RCS
OTM-463	T124-4d	10-Nov-2016 03:29:00		0.0503	0.0380	0.1245	0.0184	0.0195	0.8107	RCS
OTM-464	T124+3d	17-Nov-2016 03:14:00	0.0086	0.0327	0.0304	0.0716	0.1427	0.1420	3.5988	RCS
OTM-465	T125-8d	22-Nov-2016 02:59:00	0.0962	0.3845	0.2430	0.8645	CANCELLED			
OTM-466	T125-2d	27-Nov-2016 16:15:00		0.0133	0.0097	0.0334	CANCELLED			
OTM-467	T125+5d	04-Dec-2016 11:58:00	1.0431	0.9886	0.0467	1.0785	0.9935	0.9900	0.0293	MEA
OTM-468	T126-119d	24-Dec-2016 00:58:00	0.0704	0.2784	0.3401	1.0368	0.2265	0.2249	0.1575	RCS
OTM-468a	T126-59d	22-Feb-2017 15:49:00		0.0285	0.0152	0.0571	0.1962	0.1990	11.1945	RCS
OTM-469	T126-3d	18-Apr-2017 18:12:00		0.0876	0.0621	0.2086	0.0595	0.0578	0.4803	RCS
OTM-470	T126+2d	24-Apr-2017 17:52:00		0.5143	0.2693	0.8874	0.1556	0.1550	1.3343	RCS
OTM-471	Per3+1d	10-May-2017 16:58:00		0.1302	0.0957	0.2691	0.0201	0.0207	1.1434	RCS
OTM-472	Per13+3d	15-Jul-2017 12:21:00		0.0395	0.0322	0.0837	0.1447	0.1429	3.2132	RCS
OTM-473	Per16+16d	17-Aug-2017 09:55:00		—	—	—	CONTINGENCY			
OTM-474	Per19+10d	30-Aug-2017 09:01:00		—	—	—	CONTINGENCY			
OTM-475	Per21+3d	05-Sep-2017 08:38:00		—	—	—	CONTINGENCY			

* Predicted ΔV Magnitude Error = |Reconstructed ΔV - Predicted ΔV Mean| / Predicted ΔV 1-σ