

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
97/12/19	18:08:46	18:09:48	1:02	345	97/12/19 17:30:22.471	~ 97/12/19 19:01:41.281	
97/12/19	18:57:43	18:58:10	0:27	345	97/12/19 17:30:22.471	~ 97/12/19 19:01:41.281	
98/01/01	18:17:33	18:18:28	0:55	550	98/01/01 17:30:05.224	~ 98/01/01 19:01:23.425	
98/01/01	19:03:20	19:03:59	0:39	551	98/01/01 19:01:23.425	~ 98/01/01 20:32:43.612	
98/01/12	18:14:15	18:15:08	0:53	723	98/01/12 16:47:35.460	~ 98/01/12 18:18:53.291	
98/01/12	19:00:07	19:00:36	0:29	724	98/01/12 18:18:53.291	~ 98/01/12 19:50:13.127	
98/01/24	18:12:30	18:13:14	0:44	913	98/01/24 17:57:44.885	~ 98/01/24 19:29:02.895	
98/01/24	18:58:12	18:58:45	0:33	913	98/01/24 17:57:44.885	~ 98/01/24 19:29:02.895	
98/01/25	18:44:09	18:44:48	0:39	929	98/01/25 18:18:33.282	~ 98/01/25 19:49:52.150	
98/01/25	19:29:50	19:30:23	0:33	929	98/01/25 18:18:33.282	~ 98/01/25 19:49:52.150	
98/02/04	17:48:57	17:49:51	0:54	1086	98/02/04 17:15:01.233	~ 98/02/04 18:46:20.236	
98/02/04	18:34:49	18:35:19	0:30	1086	98/02/04 17:15:01.233	~ 98/02/04 18:46:20.236	
98/02/16	17:44:08	17:45:01	0:53	1275	98/02/16 16:54:02.325	~ 98/02/16 18:25:20.726	
98/02/16	18:29:56	18:30:32	0:36	1276	98/02/16 18:25:20.726	~ 98/02/16 19:56:41.022	
98/02/25	18:22:42	18:23:38	0:56	1417	98/02/25 17:00:52.787	~ 98/02/25 18:32:10.553	
98/02/25	19:08:38	19:09:07	0:29	1418	98/02/25 18:32:10.553	~ 98/02/25 20:03:30.491	
98/03/06	18:31:52	18:32:39	0:47	1559	98/03/06 17:07:53.884	~ 98/03/06 18:39:11.793	
98/03/06	19:17:38	19:18:14	0:36	1560	98/03/06 18:39:11.793	~ 98/03/06 20:10:31.678	
98/03/21	18:20:46	18:21:38	0:52	1796	98/03/21 17:50:12.420	~ 98/03/21 19:21:31.535	
98/03/21	19:07:36	19:08:06	0:30	1796	98/03/21 17:50:12.420	~ 98/03/21 19:21:31.535	
98/03/28	17:55:16	17:56:14	0:58	1906	98/03/28 17:14:56.098	~ 98/03/28 18:46:14.856	
98/03/28	18:41:09	18:41:41	0:32	1906	98/03/28 17:14:56.098	~ 98/03/28 18:46:14.856	
98/04/04	17:34:45	17:35:27	0:42	2016	98/04/04 16:40:01.685	~ 98/04/04 18:11:20.134	
98/04/04	18:20:29	18:21:05	0:36	2017	98/04/04 18:11:20.134	~ 98/04/04 19:42:40.353	
98/04/10	16:59:32	17:00:24	0:52	2110	98/04/10 15:44:01.403	~ 98/04/10 17:15:19.457	
98/04/10	17:45:24	17:45:48	0:24	2111	98/04/10 17:15:19.457	~ 98/04/10 18:46:39.364	
98/04/16	16:04:22	16:05:13	0:51	2204	98/04/16 14:47:29.576	~ 98/04/16 16:18:47.357	
98/04/16	16:50:11	16:50:45	0:34	2205	98/04/16 16:18:47.357	~ 98/04/16 17:50:07.331	
98/04/23	17:04:44	17:05:31	0:47	2315	98/04/23 15:43:38.998	~ 98/04/23 17:14:57.005	
98/04/23	17:50:31	17:51:05	0:34	2316	98/04/23 17:14:57.005	~ 98/04/23 18:46:16.998	
98/05/01	17:35:22	17:36:14	0:52	2442	98/05/01 17:01:06.278	~ 98/05/01 18:32:25.371	
98/05/01	18:21:16	18:21:37	0:21	2442	98/05/01 17:01:06.278	~ 98/05/01 18:32:25.371	
98/05/07	16:38:48	16:39:41	0:53	2536	98/05/07 16:04:54.167	~ 98/05/07 17:36:13.247	
98/05/07	17:24:44	17:25:11	0:27	2536	98/05/07 16:04:54.167	~ 98/05/07 17:36:13.247	
98/05/15	16:27:56	16:28:50	0:54	2662	98/05/15 15:50:49.833	~ 98/05/15 17:22:08.722	
98/05/15	17:13:47	17:14:19	0:32	2662	98/05/15 15:50:49.833	~ 98/05/15 17:22:08.722	
98/05/23	16:38:26	16:39:09	0:43	2788	98/05/23 15:36:57.738	~ 98/05/23 17:08:16.054	
98/05/23	17:24:13	17:24:44	0:31	2789	98/05/23 17:08:16.054	~ 98/05/23 18:39:36.115	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
98/06/03	16:22:41	16:23:31	0:50	2961	98/06/03 14:54:22.387	~ 98/06/03 16:25:40.181	
98/06/03	17:11:31	17:12:01	0:30	2962	98/06/03 16:25:40.181	~ 98/06/03 17:56:59.876	
98/06/11	16:41:52	16:42:33	0:41	3088	98/06/11 16:11:36.457	~ 98/06/11 17:42:55.333	
98/06/11	17:27:31	17:28:09	0:38	3088	98/06/11 16:11:36.457	~ 98/06/11 17:42:55.333	
98/06/20	16:55:55	16:56:47	0:52	3230	98/06/20 16:18:45.664	~ 98/06/20 17:50:04.655	
98/06/20	17:41:48	17:42:07	0:19	3230	98/06/20 16:18:45.664	~ 98/06/20 17:50:04.655	
98/06/29	17:02:44	17:03:41	0:57	3372	98/06/29 16:25:32.803	~ 98/06/29 17:56:51.687	
98/06/29	17:48:37	17:49:08	0:31	3372	98/06/29 16:25:32.803	~ 98/06/29 17:56:51.687	
98/07/07	17:10:10	17:11:01	0:51	3498	98/07/07 16:11:32.034	~ 98/07/07 17:42:50.089	
98/07/07	17:55:58	17:56:35	0:37	3499	98/07/07 17:42:50.089	~ 98/07/07 19:14:10.243	
98/07/16	17:41:36	17:42:40	1:04	3640	98/07/16 16:18:13.372	~ 98/07/16 17:49:31.094	
98/07/16	18:30:37	18:31:08	0:31	3641	98/07/16 17:49:31.094	~ 98/07/16 19:20:51.285	
98/07/25	17:29:57	17:30:38	0:41	3782	98/07/25 16:26:09.700	~ 98/07/25 17:57:28.104	
98/07/25	18:16:44	18:17:11	0:27	3783	98/07/25 17:57:28.104	~ 98/07/25 19:28:48.133	
98/08/01	16:19:33	16:20:20	0:47	3892	98/08/01 15:51:21.773	~ 98/08/01 17:22:41.004	
98/08/01	17:05:27	17:05:43	0:16	3892	98/08/01 15:51:21.773	~ 98/08/01 17:22:41.004	
98/08/08	17:25:03	17:26:01	0:58	4003	98/08/08 16:47:21.108	~ 98/08/08 18:18:39.938	
98/08/08	18:11:49	18:12:16	0:27	4003	98/08/08 16:47:21.108	~ 98/08/08 18:18:39.938	
98/08/15	16:46:22	16:47:12	0:50	4113	98/08/15 16:12:17.467	~ 98/08/15 17:43:36.453	
98/08/15	17:32:09	17:32:38	0:29	4113	98/08/15 16:12:17.467	~ 98/08/15 17:43:36.453	
98/08/21	17:43:20	17:44:05	0:45	4208	98/08/21 16:47:34.893	~ 98/08/21 18:18:53.275	
98/08/21	18:29:45	18:30:19	0:34	4209	98/08/21 18:18:53.275	~ 98/08/21 19:50:13.518	
98/08/27	17:07:11	17:08:04	0:53	4302	98/08/27 15:51:27.993	~ 98/08/27 17:22:45.781	
98/08/27	17:51:34	17:52:01	0:27	4303	98/08/27 17:22:45.781	~ 98/08/27 18:54:05.625	
98/09/01	17:17:21	17:18:12	0:51	4381	98/09/01 16:05:16.665	~ 98/09/01 17:36:34.609	
98/09/01	18:03:12	18:03:47	0:35	4382	98/09/01 17:36:34.609	~ 98/09/01 19:07:54.770	
98/09/07	16:33:00	16:33:48	0:48	4475	98/09/07 15:09:13.778	~ 98/09/07 16:40:31.848	
98/09/07	17:20:19	17:20:50	0:31	4476	98/09/07 16:40:31.848	~ 98/09/07 18:11:51.799	
98/09/12	17:20:50	17:21:32	0:42	4555	98/09/12 16:54:55.307	~ 98/09/12 18:26:14.639	
98/09/12	18:05:00	18:05:23	0:23	4555	98/09/12 16:54:55.307	~ 98/09/12 18:26:14.639	
98/09/18	16:23:13	16:24:05	0:52	4649	98/09/18 15:58:37.755	~ 98/09/18 17:29:56.914	
98/09/18	17:08:43	17:09:07	0:24	4649	98/09/18 15:58:37.755	~ 98/09/18 17:29:56.914	
98/09/22	16:26:51	16:27:29	0:38	4712	98/09/22 15:51:51.809	~ 98/09/22 17:23:11.016	
98/09/22	17:11:08	17:11:30	0:22	4712	98/09/22 15:51:51.809	~ 98/09/22 17:23:11.016	
98/09/26	16:18:10	16:18:56	0:46	4775	98/09/26 15:44:57.000	~ 98/09/26 17:16:16.028	
98/09/26	17:03:58	17:04:25	0:27	4775	98/09/26 15:44:57.000	~ 98/09/26 17:16:16.028	
98/10/01	16:36:00	16:36:52	0:52	4854	98/10/01 15:58:57.412	~ 98/10/01 17:30:16.302	
98/10/01	17:21:50	17:22:18	0:28	4854	98/10/01 15:58:57.412	~ 98/10/01 17:30:16.302	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
98/10/06	17:16:00	17:16:44	0:44	4933	98/10/06 16:12:53.743	~ 98/10/06 17:44:11.892	
98/10/06	17:59:30	18:00:05	0:35	4934	98/10/06 17:44:11.892	~ 98/10/06 19:15:31.937	
98/10/10	17:12:07	17:12:56	0:49	4996	98/10/10 16:05:55.173	~ 98/10/10 17:37:13.452	
98/10/10	17:57:20	17:57:43	0:23	4997	98/10/10 17:37:13.452	~ 98/10/10 19:08:33.443	
98/10/15	17:41:06	17:41:56	0:50	5075	98/10/15 16:19:48.038	~ 98/10/15 17:51:05.819	
98/10/15	18:27:54	18:28:27	0:33	5076	98/10/15 17:51:05.819	~ 98/10/15 19:22:25.656	
98/10/19	17:25:00	17:25:46	0:46	5138	98/10/19 16:12:55.347	~ 98/10/19 17:44:13.666	
98/10/19	18:10:50	18:11:21	0:31	5139	98/10/19 17:44:13.666	~ 98/10/19 19:15:33.872	
98/10/24	16:23:54	16:24:37	0:43	5216	98/10/24 14:55:44.712	~ 98/10/24 16:27:02.694	
98/10/24	17:09:37	17:10:13	0:36	5217	98/10/24 16:27:02.694	~ 98/10/24 17:58:22.494	
98/10/30	17:20:28	17:21:19	0:51	5312	98/10/30 17:02:09.785	~ 98/10/30 18:33:29.030	
98/10/30	18:05:00	18:05:27	0:27	5312	98/10/30 17:02:09.785	~ 98/10/30 18:33:29.030	
98/11/04	17:43:03	17:43:53	0:50	5391	98/11/04 17:16:14.228	~ 98/11/04 18:47:33.367	
98/11/04	18:28:51	18:29:17	0:26	5391	98/11/04 17:16:14.228	~ 98/11/04 18:47:33.367	
98/11/08	17:38:25	17:39:19	0:54	5454	98/11/08 17:09:10.368	~ 98/11/08 18:40:29.418	
98/11/08	18:23:50	18:24:22	0:32	5454	98/11/08 17:09:10.368	~ 98/11/08 18:40:29.418	
98/11/11	18:40:10	18:40:50	0:40	5502	98/11/11 18:12:31.039	~ 98/11/11 19:43:50.469	
98/11/11	19:29:00	19:29:30	0:30	5502	98/11/11 18:12:31.039	~ 98/11/11 19:43:50.469	
98/11/16	17:35:18	17:36:10	0:52	5580	98/11/16 16:55:22.525	~ 98/11/16 18:26:41.325	
98/11/16	18:20:51	18:21:23	0:32	5580	98/11/16 16:55:22.525	~ 98/11/16 18:26:41.325	
98/11/22	17:01:00	17:01:47	0:47	5674	98/11/22 15:59:14.213	~ 98/11/22 17:30:32.344	
98/11/22	17:48:20	17:48:50	0:30	5675	98/11/22 17:30:32.344	~ 98/11/22 19:01:52.288	
98/11/27	17:34:10	17:35:05	0:55	5753	98/11/27 16:13:00.062	~ 98/11/27 17:44:17.665	
98/11/27	18:19:20	18:19:54	0:34	5754	98/11/27 17:44:17.665	~ 98/11/27 19:15:37.477	
98/12/01	17:18:44	17:19:37	0:53	5816	98/12/01 16:05:59.447	~ 98/12/01 17:37:17.492	
98/12/01	18:04:50	18:05:19	0:29	5817	98/12/01 17:37:17.492	~ 98/12/01 19:08:37.609	
98/12/05	17:11:40	17:12:24	0:44	5879	98/12/05 15:59:05.995	~ 98/12/05 17:30:24.221	
98/12/05	17:59:00	17:59:33	0:33	5880	98/12/05 17:30:24.221	~ 98/12/05 19:01:44.362	
98/12/09	17:24:10	17:24:50	0:40	5943	98/12/09 17:23:40.042	~ 98/12/09 18:54:59.986	
98/12/09	18:09:30	18:10:00	0:30	5943	98/12/09 17:23:40.042	~ 98/12/09 18:54:59.986	
98/12/13	17:31:20	17:32:00	0:40	6006	98/12/13 17:16:59.840	~ 98/12/13 18:48:19.425	
98/12/13	18:16:25	18:16:48	0:23	6006	98/12/13 17:16:59.840	~ 98/12/13 18:48:19.425	
98/12/16	17:09:10	17:09:36	0:26	6053	98/12/16 16:49:18.470	~ 98/12/16 18:20:38.028	
98/12/16	17:52:20	17:52:39	0:19	6053	98/12/16 16:49:18.470	~ 98/12/16 18:20:38.028	
98/12/20	17:07:07	17:07:46	0:39	6116	98/12/20 16:42:36.540	~ 98/12/20 18:13:55.965	
98/12/20	17:52:55	17:53:14	0:19	6116	98/12/20 16:42:36.540	~ 98/12/20 18:13:55.965	
98/12/25	17:29:20	17:30:12	0:52	6195	98/12/25 16:56:40.069	~ 98/12/25 18:27:59.167	
98/12/25	18:17:00	18:17:28	0:28	6195	98/12/25 16:56:40.069	~ 98/12/25 18:27:59.167	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
98/12/29	17:21:00	17:21:45	0:45	6258	98/12/29 16:49:52.292	~ 98/12/29 18:21:11.548	
98/12/29	18:12:00	18:12:30	0:30	6258	98/12/29 16:49:52.292	~ 98/12/29 18:21:11.548	
99/01/03	17:55:02	17:55:48	0:46	6337	99/01/03 17:03:58.648	~ 99/01/03 18:35:17.125	
99/01/03	18:41:40	18:42:16	0:36	6338	99/01/03 18:35:17.125	~ 99/01/03 20:06:36.386	
99/01/06	19:15:00	19:15:34	0:34	6385	99/01/06 18:06:46.821	~ 99/01/06 19:38:04.710	
99/01/06	19:55:00	19:55:49	0:49	6386	99/01/06 19:38:04.710	~ 99/01/06 21:09:24.768	
99/01/11	18:01:30	18:02:17	0:47	6463	99/01/11 16:49:31.979	~ 99/01/11 18:20:50.179	
99/01/11	18:47:20	18:47:46	0:26	6464	99/01/11 18:20:50.179	~ 99/01/11 19:52:10.156	
99/01/16	16:48:07	16:48:51	0:44	6541	99/01/16 15:32:24.701	~ 99/01/16 17:03:42.859	
99/01/16	17:35:00	17:35:29	0:29	6542	99/01/16 17:03:42.859	~ 99/01/16 18:35:02.849	
99/01/20	18:13:00	18:13:39	0:39	6605	99/01/20 16:56:58.384	~ 99/01/20 18:28:16.850	
99/01/20	18:58:27	18:58:58	0:31	6606	99/01/20 18:28:16.850	~ 99/01/20 19:59:36.994	
99/01/24	16:46:29	16:47:12	0:43	6667	99/01/24 15:18:56.103	~ 99/01/24 16:50:14.358	
99/01/24	17:32:25	17:32:54	0:29	6668	99/01/24 16:50:14.358	~ 99/01/24 18:21:34.286	
99/01/29	17:21:48	17:22:35	0:47	6747	99/01/29 17:04:19.356	~ 99/01/29 18:35:38.639	
99/01/29	18:07:32	18:08:00	0:28	6747	99/01/29 17:04:19.356	~ 99/01/29 18:35:38.639	
99/02/02	15:49:00	15:49:37	0:37	6809	99/02/02 15:26:19.875	~ 99/02/02 16:57:39.495	
99/02/02	16:37:00	16:37:17	0:17	6809	99/02/02 15:26:19.875	~ 99/02/02 16:57:39.495	
99/02/06	15:51:27	15:51:57	0:30	6872	99/02/06 15:19:52.653	~ 99/02/06 16:51:12.099	
99/02/06	16:37:12	16:37:29	0:17	6872	99/02/06 15:19:52.653	~ 99/02/06 16:51:12.099	
99/02/10	15:45:13	15:45:45	0:32	6935	99/02/10 15:13:21.178	~ 99/02/10 16:44:40.740	
99/02/10	16:30:56	16:31:15	0:19	6935	99/02/10 15:13:21.178	~ 99/02/10 16:44:40.740	
99/02/14	17:03:00	17:03:37	0:37	6999	99/02/14 16:38:06.753	~ 99/02/14 18:09:26.352	
99/02/14	17:41:45	17:42:07	0:22	6999	99/02/14 16:38:06.753	~ 99/02/14 18:09:26.352	
99/02/18	17:09:26	17:10:03	0:37	7062	99/02/18 16:31:16.956	~ 99/02/18 18:02:35.696	
99/02/18	17:55:07	17:55:40	0:33	7062	99/02/18 16:31:16.956	~ 99/02/18 18:02:35.696	
99/02/22	15:52:55	15:53:45	0:50	7124	99/02/22 14:52:44.802	~ 99/02/22 16:24:03.024	
99/02/22	16:40:00	16:40:29	0:29	7125	99/02/22 16:24:03.024	~ 99/02/22 17:55:23.138	
99/02/26	16:09:00	16:09:38	0:38	7187	99/02/26 14:45:54.161	~ 99/02/26 16:17:12.536	
99/02/26	16:53:46	16:54:13	0:27	7188	99/02/26 16:17:12.536	~ 99/02/26 17:48:32.438	
99/03/02	15:51:58	15:52:39	0:41	7250	99/03/02 14:39:11.141	~ 99/03/02 16:10:29.651	
99/03/02	16:37:49	16:38:05	0:16	7251	99/03/02 16:10:29.651	~ 99/03/02 17:41:49.505	
99/03/06	15:47:44	15:48:20	0:36	7313	99/03/06 14:32:12.700	~ 99/03/06 16:03:30.979	
99/03/06	16:33:28	16:33:59	0:31	7314	99/03/06 16:03:30.979	~ 99/03/06 17:34:50.940	
99/03/10	15:46:13	15:46:52	0:39	7376	99/03/10 14:25:22.824	~ 99/03/10 15:56:41.135	
99/03/10	16:32:00	16:32:28	0:28	7377	99/03/10 15:56:41.135	~ 99/03/10 17:28:01.192	
99/03/14	16:10:07	16:10:42	0:35	7440	99/03/14 15:49:53.779	~ 99/03/14 17:21:13.046	
99/03/14	16:55:47	16:56:17	0:30	7440	99/03/14 15:49:53.779	~ 99/03/14 17:21:13.046	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
99/03/18	16:05:24	16:06:09	0:45	7503	99/03/18 15:42:52.533	~ 99/03/18 17:14:11.762	
99/03/18	16:51:07	16:51:35	0:28	7503	99/03/18 15:42:52.533	~ 99/03/18 17:14:11.762	
99/03/22	16:04:30	16:05:20	0:50	7566	99/03/22 15:35:54.351	~ 99/03/22 17:07:13.519	
99/03/22	16:50:00	16:50:21	0:21	7566	99/03/22 15:35:54.351	~ 99/03/22 17:07:13.519	
99/03/27	16:22:35	16:23:25	0:50	7645	99/03/27 15:49:58.994	~ 99/03/27 17:21:18.116	
99/03/27	17:08:24	17:08:50	0:26	7645	99/03/27 15:49:58.994	~ 99/03/27 17:21:18.116	
99/04/02	17:01:02	17:01:53	0:51	7740	99/04/02 16:25:11.112	~ 99/04/02 17:56:30.113	
99/04/02	17:46:52	17:47:23	0:31	7740	99/04/02 16:25:11.112	~ 99/04/02 17:56:30.113	
99/04/06	17:02:46	17:03:21	0:35	7803	99/04/06 16:18:38.342	~ 99/04/06 17:49:57.479	
99/04/06	17:48:30	17:48:55	0:25	7803	99/04/06 16:18:38.342	~ 99/04/06 17:49:57.479	
99/04/10	15:39:49	15:40:33	0:44	7865	99/04/10 14:40:30.050	~ 99/04/10 16:11:48.587	
99/04/10	16:25:36	16:26:00	0:24	7866	99/04/10 16:11:48.587	~ 99/04/10 17:43:08.675	
99/04/14	15:48:25	15:49:08	0:43	7928	99/04/14 14:33:30.019	~ 99/04/14 16:04:48.181	
99/04/14	16:34:13	16:34:44	0:31	7929	99/04/14 16:04:48.181	~ 99/04/14 17:36:08.159	
99/04/19	16:04:32	16:05:21	0:49	8007	99/04/19 14:47:26.107	~ 99/04/19 16:18:43.937	
99/04/19	16:50:22	16:50:52	0:30	8008	99/04/19 16:18:43.937	~ 99/04/19 17:50:03.816	
99/04/25	15:10:25	15:11:09	0:44	8101	99/04/25 13:51:12.359	~ 99/04/25 15:22:30.568	
99/04/25	15:56:14	15:56:42	0:28	8102	99/04/25 15:22:30.568	~ 99/04/25 16:53:50.630	
99/05/02	15:17:31	15:18:13	0:42	8212	99/05/02 14:47:32.233	~ 99/05/02 16:18:51.086	
99/05/02	16:03:13	16:03:52	0:39	8212	99/05/02 14:47:32.233	~ 99/05/02 16:18:51.086	
99/05/07	15:32:46	15:33:37	0:51	8291	99/05/07 15:01:48.190	~ 99/05/07 16:33:07.338	
99/05/07	16:18:37	16:18:56	0:19	8291	99/05/07 15:01:48.190	~ 99/05/07 16:33:07.338	
99/05/11	15:25:20	15:26:08	0:48	8354	99/05/11 14:54:48.368	~ 99/05/11 16:26:07.463	
99/05/11	16:11:07	16:11:29	0:22	8354	99/05/11 14:54:48.368	~ 99/05/11 16:26:07.463	
99/05/15	16:55:00	16:55:47	0:47	8418	99/05/15 16:19:07.847	~ 99/05/15 17:50:26.863	
99/05/15	17:41:44	17:42:14	0:30	8418	99/05/15 16:19:07.847	~ 99/05/15 17:50:26.863	
99/05/21	16:01:29	16:02:22	0:53	8512	99/05/21 15:22:53.721	~ 99/05/21 16:54:12.523	
99/05/21	16:47:18	16:47:51	0:33	8512	99/05/21 15:22:53.721	~ 99/05/21 16:54:12.523	
99/05/27	15:28:23	15:29:06	0:43	8606	99/05/27 14:26:54.668	~ 99/05/27 15:58:12.915	
99/05/27	16:14:09	16:14:39	0:30	8607	99/05/27 15:58:12.915	~ 99/05/27 17:29:32.917	
99/06/01	15:49:46	15:50:35	0:49	8685	99/06/01 14:40:54.670	~ 99/06/01 16:12:12.795	
99/06/01	16:34:00	16:34:25	0:25	8686	99/06/01 16:12:12.795	~ 99/06/01 17:43:32.838	
99/06/06	14:41:17	14:42:08	0:51	8763	99/06/06 13:23:32.123	~ 99/06/06 14:54:49.963	
99/06/06	15:27:08	15:27:37	0:29	8764	99/06/06 14:54:49.963	~ 99/06/06 16:26:09.886	
99/06/11	14:52:18	14:53:05	0:47	8842	99/06/11 13:37:33.966	~ 99/06/11 15:08:51.992	
99/06/11	15:39:00	15:39:35	0:35	8843	99/06/11 15:08:51.992	~ 99/06/11 16:40:12.131	
99/06/16	16:06:28	16:07:05	0:37	8922	99/06/16 15:23:13.517	~ 99/06/16 16:54:32.323	
99/06/16	16:52:10	16:52:41	0:31	8922	99/06/16 15:23:13.517	~ 99/06/16 16:54:32.323	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
99/06/21	16:05:59	16:06:42	0:43	9001	99/06/21 15:37:29.329	~ 99/06/21 17:08:48.536	
99/06/21	16:53:15	16:53:35	0:20	9001	99/06/21 15:37:29.329	~ 99/06/21 17:08:48.536	
99/06/26	14:52:18	14:53:11	0:53	9079	99/06/26 14:20:12.629	~ 99/06/26 15:51:31.673	
99/06/26	15:38:09	15:38:32	0:23	9079	99/06/26 14:20:12.629	~ 99/06/26 15:51:31.673	
99/06/30	14:50:48	14:51:31	0:43	9142	99/06/30 14:13:15.840	~ 99/06/30 15:44:34.719	
99/06/30	15:36:36	15:37:01	0:25	9142	99/06/30 14:13:15.840	~ 99/06/30 15:44:34.719	
99/07/04	14:45:50	14:46:37	0:47	9205	99/07/04 14:06:10.763	~ 99/07/04 15:37:29.485	
99/07/04	15:31:37	15:32:08	0:31	9205	99/07/04 14:06:10.763	~ 99/07/04 15:37:29.485	
99/07/08	14:44:06	14:44:50	0:44	9268	99/07/08 13:59:18.039	~ 99/07/08 15:30:36.947	
99/07/08	15:29:53	15:30:20	0:27	9268	99/07/08 13:59:18.039	~ 99/07/08 15:30:36.947	
99/07/14	15:32:58	15:33:51	0:53	9363	99/07/14 14:34:14.164	~ 99/07/14 16:05:32.214	
99/07/14	16:18:45	16:19:19	0:34	9364	99/07/14 16:05:32.214	~ 99/07/14 17:36:52.353	
99/07/21	15:22:54	15:23:45	0:51	9473	99/07/21 13:58:55.051	~ 99/07/21 15:30:12.809	
99/07/21	16:08:44	16:09:15	0:31	9474	99/07/21 15:30:12.809	~ 99/07/21 17:01:32.673	
99/07/28	14:48:22	14:49:15	0:53	9583	99/07/28 13:23:26.813	~ 99/07/28 14:54:44.343	
99/07/28	15:37:00	15:37:31	0:31	9584	99/07/28 14:54:44.343	~ 99/07/28 16:26:04.020	
99/08/02	15:48:18	15:49:07	0:49	9663	99/08/02 15:08:26.355	~ 99/08/02 16:39:44.705	
99/08/02	16:34:00	16:34:41	0:41	9663	99/08/02 15:08:26.355	~ 99/08/02 16:39:44.705	
99/08/07	15:50:28	15:51:22	0:54	9742	99/08/07 15:22:23.964	~ 99/08/07 16:53:42.969	
99/08/07	16:36:19	16:36:40	0:21	9742	99/08/07 15:22:23.964	~ 99/08/07 16:53:42.969	
99/08/12	14:38:13	14:39:02	0:49	9820	99/08/12 14:04:55.096	~ 99/08/12 15:36:13.981	
99/08/12	15:24:03	15:24:28	0:25	9820	99/08/12 14:04:55.096	~ 99/08/12 15:36:13.981	
99/08/23	15:33:29	15:34:17	0:48	9994	99/08/23 14:54:10.614	~ 99/08/23 16:25:29.522	
99/08/23	16:18:30	16:18:56	0:26	9994	99/08/23 14:54:10.614	~ 99/08/23 16:25:29.522	
99/08/27	15:48:43	15:49:28	0:45	10057	99/08/27 14:47:07.968	~ 99/08/27 16:18:26.126	
99/08/27	16:34:27	16:34:58	0:31	10058	99/08/27 16:18:26.126	~ 99/08/27 17:49:46.135	
99/08/31	15:46:44	15:47:33	0:49	10120	99/08/31 14:39:53.883	~ 99/08/31 16:11:11.662	
99/08/31	16:32:31	16:33:03	0:32	10121	99/08/31 16:11:11.662	~ 99/08/31 17:42:31.463	
99/09/04	15:50:20	15:51:14	0:54	10183	99/09/04 14:32:28.137	~ 99/09/04 16:03:45.726	
99/09/04	16:34:39	16:35:08	0:29	10184	99/09/04 16:03:45.726	~ 99/09/04 17:35:05.543	
99/09/09	16:02:25	16:03:10	0:45	10262	99/09/09 14:46:22.775	~ 99/09/09 16:17:40.821	
99/09/09	16:48:14	16:48:48	0:34	10263	99/09/09 16:17:40.821	~ 99/09/09 17:49:00.927	
99/09/15	15:16:20	15:17:08	0:48	10356	99/09/15 13:50:22.958	~ 99/09/15 15:21:40.865	
99/09/15	16:02:07	16:02:42	0:35	10357	99/09/15 15:21:40.865	~ 99/09/15 16:53:00.797	
99/09/20	16:02:52	16:03:38	0:46	10436	99/09/20 15:35:58.033	~ 99/09/20 17:07:17.206	
99/09/20	16:48:51	16:49:15	0:24	10436	99/09/20 15:35:58.033	~ 99/09/20 17:07:17.206	
99/09/25	14:43:43	14:44:38	0:55	10514	99/09/25 14:18:25.356	~ 99/09/25 15:49:44.359	
99/09/25	15:29:35	15:30:02	0:27	10514	99/09/25 14:18:25.356	~ 99/09/25 15:49:44.359	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
99/09/30	15:10:27	15:11:22	0:55	10593	99/09/30 14:32:14.942	~ 99/09/30 16:03:33.492	
99/09/30	15:56:17	15:56:46	0:29	10593	99/09/30 14:32:14.942	~ 99/09/30 16:03:33.492	
99/10/04	14:58:00	14:58:44	0:44	10656	99/10/04 14:25:14.444	~ 99/10/04 15:56:33.488	
99/10/04	15:44:30	15:45:00	0:30	10656	99/10/04 14:25:14.444	~ 99/10/04 15:56:33.488	
99/10/08	15:00:38	15:01:23	0:45	10719	99/10/08 14:18:17.664	~ 99/10/08 15:49:36.436	
99/10/08	15:46:24	15:46:55	0:31	10719	99/10/08 14:18:17.664	~ 99/10/08 15:49:36.436	
99/10/12	15:09:23	15:10:18	0:55	10782	99/10/12 14:11:10.244	~ 99/10/12 15:42:28.217	
99/10/12	15:55:11	15:55:47	0:36	10783	99/10/12 15:42:28.217	~ 99/10/12 17:13:48.392	
99/10/15	14:55:29	14:56:11	0:42	10829	99/10/15 13:43:08.848	~ 99/10/15 15:14:27.042	
99/10/15	15:41:12	15:41:44	0:32	10830	99/10/15 15:14:27.042	~ 99/10/15 16:45:47.096	
99/10/19	14:48:32	14:49:25	0:53	10892	99/10/19 13:35:57.653	~ 99/10/19 15:07:15.437	
99/10/19	15:34:21	15:34:52	0:31	10893	99/10/19 15:07:15.437	~ 99/10/19 16:38:35.393	
99/10/23	14:46:13	14:47:03	0:50	10955	99/10/23 13:28:48.189	~ 99/10/23 15:00:05.832	
99/10/23	15:32:03	15:32:32	0:29	10956	99/10/23 15:00:05.832	~ 99/10/23 16:31:25.574	
99/10/27	14:39:26	14:40:14	0:48	11018	99/10/27 13:21:32.723	~ 99/10/27 14:52:50.459	
99/10/27	15:25:12	15:25:47	0:35	11019	99/10/27 14:52:50.459	~ 99/10/27 16:24:10.409	
99/10/30	15:54:26	15:55:04	0:38	11066	99/10/30 14:24:54.402	~ 99/10/30 15:56:12.731	
99/10/30	16:40:09	16:40:38	0:29	11067	99/10/30 15:56:12.731	~ 99/10/30 17:27:32.624	
99/11/03	16:08:11	16:08:54	0:43	11130	99/11/03 15:49:12.812	~ 99/11/03 17:20:31.945	
99/11/03	16:53:54	16:54:26	0:32	11130	99/11/03 15:49:12.812	~ 99/11/03 17:20:31.945	
99/11/07	16:03:16	16:04:12	0:56	11193	99/11/07 15:42:03.215	~ 99/11/07 17:13:22.429	
99/11/07	16:50:06	16:50:33	0:27	11193	99/11/07 15:42:03.215	~ 99/11/07 17:13:22.429	
99/11/10	15:40:20	15:41:05	0:45	11240	99/11/10 15:14:00.271	~ 99/11/10 16:45:19.344	
99/11/10	16:26:06	16:26:33	0:27	11240	99/11/10 15:14:00.271	~ 99/11/10 16:45:19.344	
99/11/13	16:48:08	16:48:54	0:46	11288	99/11/13 16:17:07.781	~ 99/11/13 17:48:26.588	
99/11/13	17:33:52	17:34:26	0:34	11288	99/11/13 16:17:07.781	~ 99/11/13 17:48:26.588	
99/11/16	16:21:18	16:22:08	0:50	11335	99/11/16 15:48:55.794	~ 99/11/16 17:20:14.749	
99/11/16	17:07:07	17:07:41	0:34	11335	99/11/16 15:48:55.794	~ 99/11/16 17:20:14.749	
99/11/19	15:55:03	15:55:52	0:49	11382	99/11/19 15:20:50.779	~ 99/11/19 16:52:09.713	
99/11/19	16:40:52	16:41:25	0:33	11382	99/11/19 15:20:50.779	~ 99/11/19 16:52:09.713	
99/11/22	17:01:39	17:02:26	0:47	11430	99/11/22 16:24:03.349	~ 99/11/22 17:55:22.030	
99/11/22	17:47:24	17:47:58	0:34	11430	99/11/22 16:24:03.349	~ 99/11/22 17:55:22.030	
99/11/25	16:49:58	16:50:48	0:50	11477	99/11/25 15:55:50.331	~ 99/11/25 17:27:08.474	
99/11/25	17:35:45	17:36:22	0:37	11478	99/11/25 17:27:08.474	~ 99/11/25 18:58:28.717	
99/11/28	16:30:57	16:31:38	0:41	11524	99/11/28 15:27:50.136	~ 99/11/28 16:59:08.541	
99/11/28	17:16:44	17:17:09	0:25	11525	99/11/28 16:59:08.541	~ 99/11/28 18:30:28.531	
99/12/01	16:14:42	16:15:21	0:39	11571	99/12/01 14:59:44.685	~ 99/12/01 16:31:02.850	
99/12/01	17:00:26	17:00:57	0:31	11572	99/12/01 16:31:02.850	~ 99/12/01 18:02:22.770	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
99/12/05	16:08:20	16:09:17	0:57	11634	99/12/05 14:52:31.306	~ 99/12/05 16:23:48.971	
99/12/05	16:54:14	16:54:43	0:29	11635	99/12/05 16:23:48.971	~ 99/12/05 17:55:08.908	
99/12/09	15:58:24	15:59:08	0:44	11697	99/12/09 14:45:28.368	~ 99/12/09 16:16:46.347	
99/12/09	16:44:12	16:44:47	0:35	11698	99/12/09 16:16:46.347	~ 99/12/09 17:48:06.407	
99/12/13	16:00:27	16:01:16	0:49	11760	99/12/13 14:38:24.983	~ 99/12/13 16:09:42.732	
99/12/13	16:46:17	16:46:48	0:31	11761	99/12/13 16:09:42.732	~ 99/12/13 17:41:02.551	
99/12/16	15:55:34	15:56:13	0:39	11808	99/12/16 15:41:41.936	~ 99/12/16 17:13:01.440	
99/12/16	16:41:16	16:41:46	0:30	11808	99/12/16 15:41:41.936	~ 99/12/16 17:13:01.440	
99/12/19	16:57:14	16:57:52	0:38	11856	99/12/19 16:45:05.085	~ 99/12/19 18:16:24.577	
99/12/19	17:42:58	17:43:26	0:28	11856	99/12/19 16:45:05.085	~ 99/12/19 18:16:24.577	
99/12/22	16:36:13	16:36:55	0:42	11903	99/12/22 16:17:07.344	~ 99/12/22 17:48:26.787	
99/12/22	17:21:58	17:22:21	0:23	11903	99/12/22 16:17:07.344	~ 99/12/22 17:48:26.787	
99/12/26	16:36:33	16:37:25	0:52	11966	99/12/26 16:10:03.163	~ 99/12/26 17:41:22.248	
99/12/26	17:22:21	17:22:48	0:27	11966	99/12/26 16:10:03.163	~ 99/12/26 17:41:22.248	
99/12/29	16:04:02	16:05:17	1:15	12013	99/12/29 15:42:13.968	~ 99/12/29 17:13:34.960	
99/12/29	16:49:45	16:50:49	1:04	12013	99/12/29 15:42:13.968	~ 99/12/29 17:13:34.960	
00/01/09	15:50:58	15:51:55	0:57	12186	00/01/09 15:04:18.142	~ 00/01/09 16:35:36.805	
00/01/09	16:36:54	16:37:21	0:27	12187	00/01/09 16:35:36.805	~ 00/01/09 18:06:57.148	
00/01/13	16:00:28	16:01:16	0:48	12249	00/01/13 14:57:23.135	~ 00/01/13 16:28:41.238	
00/01/13	16:46:16	16:46:46	0:30	12250	00/01/13 16:28:41.238	~ 00/01/13 18:00:01.335	
00/01/17	16:05:16	16:06:08	0:52	12312	00/01/17 14:50:09.783	~ 00/01/17 16:21:27.442	
00/01/17	16:51:06	16:51:40	0:34	12313	00/01/17 16:21:27.442	~ 00/01/17 17:52:47.327	
00/01/21	15:59:14	16:00:05	0:51	12375	00/01/21 14:42:59.490	~ 00/01/21 16:14:17.313	
00/01/21	16:45:05	16:45:34	0:29	12376	00/01/21 16:14:17.313	~ 00/01/21 17:45:37.252	
00/01/25	15:55:12	15:55:54	0:42	12438	00/01/25 14:35:58.546	~ 00/01/25 16:07:16.602	
00/01/25	16:43:20	16:43:49	0:29	12439	00/01/25 16:07:16.602	~ 00/01/25 17:38:36.477	
00/01/29	16:00:06	16:00:41	0:35	12501	00/01/29 14:29:09.351	~ 00/01/29 16:00:27.705	
00/01/29	16:47:09	16:47:36	0:27	12502	00/01/29 16:00:27.705	~ 00/01/29 17:31:47.513	
00/02/03	16:34:10	16:34:49	0:39	12581	00/02/03 16:14:36.502	~ 00/02/03 17:45:55.685	
00/02/03	17:19:35	17:20:04	0:29	12581	00/02/03 16:14:36.502	~ 00/02/03 17:45:55.685	
00/02/07	16:30:30	16:31:19	0:49	12644	00/02/07 16:07:29.771	~ 00/02/07 17:38:48.754	
00/02/07	17:15:39	17:16:05	0:26	12644	00/02/07 16:07:29.771	~ 00/02/07 17:38:48.754	
00/02/10	16:01:04	16:01:49	0:45	12691	00/02/10 15:39:20.664	~ 00/02/10 17:10:39.803	
00/02/10	16:46:49	16:47:12	0:23	12691	00/02/10 15:39:20.664	~ 00/02/10 17:10:39.803	
00/02/13	15:44:14	15:45:03	0:49	12738	00/02/13 15:11:06.454	~ 00/02/13 16:42:25.169	
00/02/13	16:30:03	16:30:31	0:28	12738	00/02/13 15:11:06.454	~ 00/02/13 16:42:25.169	
00/02/16	16:46:37	16:47:21	0:44	12786	00/02/16 16:14:13.533	~ 00/02/16 17:45:32.426	
00/02/16	17:35:02	17:35:36	0:34	12786	00/02/16 16:14:13.533	~ 00/02/16 17:45:32.426	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
00/02/19	16:27:13	16:27:56	0:43	12833	00/02/19 15:46:19.065	~ 00/02/19 17:17:38.330	
00/02/19	17:13:30	17:13:55	0:25	12833	00/02/19 15:46:19.065	~ 00/02/19 17:17:38.330	
00/02/23	16:21:44	16:22:27	0:43	12896	00/02/23 15:39:35.755	~ 00/02/23 17:10:54.647	
00/02/23	17:07:31	17:08:03	0:32	12896	00/02/23 15:39:35.755	~ 00/02/23 17:10:54.647	
00/02/26	16:07:14	16:07:53	0:39	12943	00/02/26 15:11:43.279	~ 00/02/26 16:43:01.889	
00/02/26	16:53:00	16:53:29	0:29	12944	00/02/26 16:43:01.889	~ 00/02/26 18:14:22.114	
00/02/29	15:50:57	15:51:41	0:44	12990	00/02/29 14:43:40.935	~ 00/02/29 16:14:59.119	
00/02/29	16:36:45	16:37:12	0:27	12991	00/02/29 16:14:59.119	~ 00/02/29 17:46:19.072	
00/03/03	16:56:07	16:56:58	0:51	13038	00/03/03 15:46:43.579	~ 00/03/03 17:18:01.351	
00/03/03	17:41:55	17:42:27	0:32	13039	00/03/03 17:18:01.351	~ 00/03/03 18:49:21.245	
00/03/06	16:31:03	16:31:53	0:50	13085	00/03/06 15:18:30.802	~ 00/03/06 16:49:48.605	
00/03/06	17:15:00	17:15:30	0:30	13086	00/03/06 16:49:48.605	~ 00/03/06 18:21:08.497	
00/03/09	16:02:13	16:03:04	0:51	13132	00/03/09 14:50:09.519	~ 00/03/09 16:21:27.034	
00/03/09	16:48:03	16:48:40	0:37	13133	00/03/09 16:21:27.034	~ 00/03/09 17:52:46.941	
00/03/12	15:41:55	15:42:44	0:49	13179	00/03/12 14:21:56.952	~ 00/03/12 15:53:14.608	
00/03/12	16:28:02	16:28:34	0:32	13180	00/03/12 15:53:14.608	~ 00/03/12 17:24:34.416	
00/03/15	16:49:01	16:49:45	0:44	13227	00/03/15 15:25:02.800	~ 00/03/15 16:56:20.609	
00/03/15	17:34:46	17:35:26	0:40	13228	00/03/15 16:56:20.609	~ 00/03/15 18:27:40.527	
00/03/18	16:33:37	16:34:15	0:38	13275	00/03/18 16:28:29.342	~ 00/03/18 17:59:49.142	
00/03/18	17:19:21	17:19:48	0:27	13275	00/03/18 16:28:29.342	~ 00/03/18 17:59:49.142	
00/03/21	16:21:40	16:22:24	0:44	13322	00/03/21 16:00:29.450	~ 00/03/21 17:31:48.746	
00/03/21	17:07:24	17:07:51	0:27	13322	00/03/21 16:00:29.450	~ 00/03/21 17:31:48.746	
00/03/24	15:54:02	15:54:56	0:54	13369	00/03/24 15:32:18.379	~ 00/03/24 17:03:37.516	
00/03/24	16:39:51	16:40:17	0:26	13369	00/03/24 15:32:18.379	~ 00/03/24 17:03:37.516	
00/03/26	16:37:13	16:37:49	0:36	13401	00/03/26 16:14:32.910	~ 00/03/26 17:45:52.231	
00/03/26	17:22:55	17:23:19	0:24	13401	00/03/26 16:14:32.910	~ 00/03/26 17:45:52.231	
00/03/29	16:16:33	16:17:27	0:54	13448	00/03/29 15:46:17.922	~ 00/03/29 17:17:36.697	
00/03/29	17:02:21	17:02:50	0:29	13448	00/03/29 15:46:17.922	~ 00/03/29 17:17:36.697	
00/04/01	15:53:22	15:54:23	1:01	13495	00/04/01 15:17:47.748	~ 00/04/01 16:49:05.944	
00/04/01	16:39:09	16:39:45	0:36	13495	00/04/01 15:17:47.748	~ 00/04/01 16:49:05.944	
00/04/03	19:24:25	19:25:17	0:52	13529	00/04/03 19:02:23.392	~ 00/04/03 20:33:42.533	
00/04/03	20:10:12	20:10:46	0:34	13529	00/04/03 19:02:23.392	~ 00/04/03 20:33:42.533	
00/04/05	15:55:35	15:56:19	0:44	13558	00/04/05 15:10:40.056	~ 00/04/05 16:41:58.971	
00/04/05	16:41:25	16:41:48	0:23	13558	00/04/05 15:10:40.056	~ 00/04/05 16:41:58.971	
00/04/07	14:58:58	14:59:36	0:38	13589	00/04/07 14:21:33.585	~ 00/04/07 15:52:52.312	
00/04/07	15:44:44	15:45:11	0:27	13589	00/04/07 14:21:33.585	~ 00/04/07 15:52:52.312	
00/04/09	15:40:48	15:41:33	0:45	13621	00/04/09 15:03:36.986	~ 00/04/09 16:34:55.826	
00/04/09	16:26:31	16:27:06	0:35	13621	00/04/09 15:03:36.986	~ 00/04/09 16:34:55.826	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
00/04/11	15:04:02	15:04:39	0:37	13652	00/04/11 14:14:35.120	~ 00/04/11 15:45:53.943	
00/04/11	15:49:48	15:50:14	0:26	13653	00/04/11 15:45:53.943	~ 00/04/11 17:17:14.082	
00/04/13	15:51:30	15:52:10	0:40	13684	00/04/13 14:56:49.047	~ 00/04/13 16:28:07.723	
00/04/13	16:37:15	16:37:46	0:31	13685	00/04/13 16:28:07.723	~ 00/04/13 17:59:28.105	
00/04/15	15:04:34	15:05:05	0:31	13715	00/04/15 14:07:55.171	~ 00/04/15 15:39:14.222	
00/04/15	15:50:20	15:50:40	0:20	13716	00/04/15 15:39:14.222	~ 00/04/15 17:10:34.402	
00/04/17	15:58:36	15:59:14	0:38	13747	00/04/17 14:50:11.595	~ 00/04/17 16:21:30.088	
00/04/17	16:44:22	16:44:43	0:21	13748	00/04/17 16:21:30.088	~ 00/04/17 17:52:50.061	
00/04/20	15:30:00	15:30:49	0:49	13794	00/04/20 14:21:55.877	~ 00/04/20 15:53:13.650	
00/04/20	16:15:51	16:16:20	0:29	13795	00/04/20 15:53:13.650	~ 00/04/20 17:24:33.485	
00/04/23	15:07:51	15:08:35	0:44	13841	00/04/23 13:53:37.659	~ 00/04/23 15:24:55.364	
00/04/23	15:52:33	15:53:07	0:34	13842	00/04/23 15:24:55.364	~ 00/04/23 16:56:15.138	
00/04/26	14:41:36	14:42:27	0:51	13888	00/04/26 13:25:21.883	~ 00/04/26 14:56:39.680	
00/04/26	15:27:26	15:27:57	0:31	13889	00/04/26 14:56:39.680	~ 00/04/26 16:27:59.682	
00/04/29	15:47:04	15:47:45	0:41	13936	00/04/29 14:28:39.934	~ 00/04/29 15:59:58.038	
00/04/29	16:32:50	16:33:23	0:33	13937	00/04/29 15:59:58.038	~ 00/04/29 17:31:18.099	
00/05/03	15:53:16	15:54:03	0:47	14000	00/05/03 15:52:47.097	~ 00/05/03 17:24:06.636	
00/05/03	16:39:01	16:39:38	0:37	14000	00/05/03 15:52:47.097	~ 00/05/03 17:24:06.636	
00/05/06	15:49:03	15:49:40	0:37	14047	00/05/06 15:24:49.684	~ 00/05/06 16:56:09.000	
00/05/06	16:34:45	16:35:10	0:25	14047	00/05/06 15:24:49.684	~ 00/05/06 16:56:09.000	
00/05/10	15:43:50	15:44:35	0:45	14110	00/05/10 15:17:45.369	~ 00/05/10 16:49:04.319	
00/05/10	16:29:40	16:30:06	0:26	14110	00/05/10 15:17:45.369	~ 00/05/10 16:49:04.319	
00/05/13	15:15:34	15:16:18	0:44	14157	00/05/13 14:49:37.753	~ 00/05/13 16:20:56.790	
00/05/13	16:01:15	16:01:39	0:24	14157	00/05/13 14:49:37.753	~ 00/05/13 16:20:56.790	
00/05/16	14:57:30	14:58:19	0:49	14204	00/05/16 14:21:27.704	~ 00/05/16 15:52:46.468	
00/05/16	15:43:18	15:43:43	0:25	14204	00/05/16 14:21:27.704	~ 00/05/16 15:52:46.468	
00/05/19	15:59:22	16:00:12	0:50	14252	00/05/19 15:24:32.481	~ 00/05/19 16:55:51.295	
00/05/19	16:45:30	16:46:02	0:32	14252	00/05/19 15:24:32.481	~ 00/05/19 16:55:51.295	
00/05/22	15:32:16	15:32:59	0:43	14299	00/05/22 14:56:33.384	~ 00/05/22 16:27:52.433	
00/05/22	16:18:02	16:18:29	0:27	14299	00/05/22 14:56:33.384	~ 00/05/22 16:27:52.433	
00/05/26	15:29:50	15:30:47	0:57	14362	00/05/26 14:49:12.095	~ 00/05/26 16:20:30.457	
00/05/26	16:16:11	16:16:51	0:40	14362	00/05/26 14:49:12.095	~ 00/05/26 16:20:30.457	
00/05/30	15:36:39	15:37:22	0:43	14425	00/05/30 14:42:20.204	~ 00/05/30 16:13:38.704	
00/05/30	16:22:26	16:22:54	0:28	14426	00/05/30 16:13:38.704	~ 00/05/30 17:44:58.866	
00/06/04	14:36:48	14:37:34	0:46	14503	00/06/04 13:24:55.029	~ 00/06/04 14:56:12.889	
00/06/04	15:22:37	15:23:07	0:30	14504	00/06/04 14:56:12.889	~ 00/06/04 16:27:32.793	
00/06/08	16:05:14	16:06:00	0:46	14567	00/06/08 14:49:07.821	~ 00/06/08 16:20:25.769	
00/06/08	16:51:05	16:51:31	0:26	14568	00/06/08 16:20:25.769	~ 00/06/08 17:51:45.636	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
00/06/12	15:57:00	15:57:47	0:47	14630	00/06/12 14:41:57.531	~ 00/06/12 16:13:15.344	
00/06/12	16:44:12	16:44:44	0:32	14631	00/06/12 16:13:15.344	~ 00/06/12 17:44:35.304	
00/06/16	15:55:00	15:55:44	0:44	14693	00/06/16 14:34:52.884	~ 00/06/16 16:06:10.703	
00/06/16	16:42:00	16:42:35	0:35	14694	00/06/16 16:06:10.703	~ 00/06/16 17:37:30.579	
00/06/20	14:41:18	14:42:00	0:42	14756	00/06/20 14:27:52.942	~ 00/06/20 15:59:12.357	
00/06/20	15:27:01	15:27:31	0:30	14756	00/06/20 14:27:52.942	~ 00/06/20 15:59:12.357	
00/06/24	14:48:07	14:48:50	0:43	14819	00/06/24 14:20:52.452	~ 00/06/24 15:52:11.439	
00/06/24	15:33:53	15:34:21	0:28	14819	00/06/24 14:20:52.452	~ 00/06/24 15:52:11.439	
00/06/28	14:43:00	14:43:50	0:50	14882	00/06/28 14:13:43.318	~ 00/06/28 15:45:02.325	
00/06/28	15:28:18	15:28:44	0:26	14882	00/06/28 14:13:43.318	~ 00/06/28 15:45:02.325	
00/07/03	15:05:42	15:06:33	0:51	14961	00/07/03 14:27:37.498	~ 00/07/03 15:58:56.237	
00/07/03	15:51:34	15:51:59	0:25	14961	00/07/03 14:27:37.498	~ 00/07/03 15:58:56.237	
00/07/07	14:57:00	14:57:44	0:44	15024	00/07/07 14:20:43.337	~ 00/07/07 15:52:02.392	
00/07/07	15:46:10	15:46:35	0:25	15024	00/07/07 14:20:43.337	~ 00/07/07 15:52:02.392	
00/07/11	14:59:55	15:00:42	0:47	15087	00/07/11 14:13:42.056	~ 00/07/11 15:45:00.520	
00/07/11	15:46:24	15:46:55	0:31	15088	00/07/11 15:45:00.520	~ 00/07/11 17:16:20.692	
00/07/14	16:02:32	16:03:13	0:41	15135	00/07/14 15:16:56.733	~ 00/07/14 16:48:15.338	
00/07/14	16:48:17	16:48:52	0:35	15136	00/07/14 16:48:15.338	~ 00/07/14 18:19:35.617	
00/07/17	15:47:14	15:48:04	0:50	15182	00/07/17 14:48:49.303	~ 00/07/17 16:20:07.583	
00/07/17	16:33:01	16:33:36	0:35	15183	00/07/17 16:20:07.583	~ 00/07/17 17:51:28.008	
00/07/21	15:50:22	15:51:14	0:52	15245	00/07/21 14:41:50.027	~ 00/07/21 16:13:07.772	
00/07/21	16:36:12	16:36:37	0:25	15246	00/07/21 16:13:07.772	~ 00/07/21 17:44:27.578	
00/07/24	15:27:00	15:27:47	0:47	15292	00/07/24 14:13:32.401	~ 00/07/24 15:44:50.190	
00/07/24	16:11:45	16:12:16	0:31	15293	00/07/24 15:44:50.190	~ 00/07/24 17:16:10.112	
00/07/27	14:56:35	14:57:12	0:37	15339	00/07/27 13:45:31.288	~ 00/07/27 15:16:49.564	
00/07/27	15:42:21	15:42:49	0:28	15340	00/07/27 15:16:49.564	~ 00/07/27 16:48:09.589	
00/07/31	14:59:23	15:00:08	0:45	15402	00/07/31 13:38:24.517	~ 00/07/31 15:09:42.393	
00/07/31	15:45:12	15:45:44	0:32	15403	00/07/31 15:09:42.393	~ 00/07/31 16:41:02.374	
00/08/04	15:03:04	15:03:43	0:39	15466	00/08/04 15:02:45.274	~ 00/08/04 16:34:04.918	
00/08/04	15:48:48	15:49:19	0:31	15466	00/08/04 15:02:45.274	~ 00/08/04 16:34:04.918	
00/08/08	15:24:00	15:24:45	0:45	15529	00/08/08 14:55:38.037	~ 00/08/08 16:26:56.974	
00/08/08	16:09:43	16:10:16	0:33	15529	00/08/08 14:55:38.037	~ 00/08/08 16:26:56.974	
00/08/12	15:15:23	15:16:17	0:54	15592	00/08/12 14:48:27.454	~ 00/08/12 16:19:46.091	
00/08/12	16:01:12	16:01:37	0:25	15592	00/08/12 14:48:27.454	~ 00/08/12 16:19:46.091	
00/08/15	16:23:59	16:24:48	0:49	15640	00/08/15 15:51:21.576	~ 00/08/15 17:22:40.311	
00/08/15	17:09:45	17:10:13	0:28	15640	00/08/15 15:51:21.576	~ 00/08/15 17:22:40.311	
00/08/18	15:56:02	15:56:43	0:41	15687	00/08/18 15:23:18.511	~ 00/08/18 16:54:37.611	
00/08/18	16:41:48	16:42:13	0:25	15687	00/08/18 15:23:18.511	~ 00/08/18 16:54:37.611	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
00/08/22	15:52:00	15:52:47	0:47	15750	00/08/22 15:16:13.512	~ 00/08/22 16:47:32.327	
00/08/22	16:39:17	16:39:48	0:31	15750	00/08/22 15:16:13.512	~ 00/08/22 16:47:32.327	
00/08/27	14:45:33	14:46:23	0:50	15828	00/08/27 13:58:45.964	~ 00/08/27 15:30:04.367	
00/08/27	15:31:22	15:31:54	0:32	15829	00/08/27 15:30:04.367	~ 00/08/27 17:01:24.578	
00/08/31	14:51:49	14:52:31	0:42	15891	00/08/31 13:51:45.940	~ 00/08/31 15:23:04.140	
00/08/31	15:37:36	15:38:06	0:30	15892	00/08/31 15:23:04.140	~ 00/08/31 16:54:24.168	
00/09/04	14:52:27	14:53:17	0:50	15954	00/09/04 13:44:31.518	~ 00/09/04 15:15:49.335	
00/09/04	15:38:17	15:38:48	0:31	15955	00/09/04 15:15:49.335	~ 00/09/04 16:47:09.309	
00/09/07	16:00:49	16:01:34	0:45	16002	00/09/07 14:47:45.921	~ 00/09/07 16:19:04.064	
00/09/07	16:46:39	16:47:04	0:25	16003	00/09/07 16:19:04.064	~ 00/09/07 17:50:24.057	
00/09/10	15:37:15	15:37:56	0:41	16049	00/09/10 14:19:42.829	~ 00/09/10 15:51:01.027	
00/09/10	16:23:03	16:23:28	0:25	16050	00/09/10 15:51:01.027	~ 00/09/10 17:22:21.043	
00/09/14	15:32:00	15:32:45	0:45	16112	00/09/14 14:12:43.116	~ 00/09/14 15:44:01.117	
00/09/14	16:17:49	16:18:19	0:30	16113	00/09/14 15:44:01.117	~ 00/09/14 17:15:21.201	
00/09/18	15:31:55	15:32:38	0:43	16175	00/09/18 14:05:50.983	~ 00/09/18 15:37:08.859	
00/09/18	16:17:41	16:18:12	0:31	16176	00/09/18 15:37:08.859	~ 00/09/18 17:08:28.612	
00/09/21	15:41:18	15:41:51	0:33	16223	00/09/21 15:09:14.572	~ 00/09/21 16:40:33.778	
00/09/21	16:26:57	16:27:26	0:29	16223	00/09/21 15:09:14.572	~ 00/09/21 16:40:33.778	
00/09/25	15:24:27	15:25:14	0:47	16286	00/09/25 15:02:16.615	~ 00/09/25 16:33:35.734	
00/09/25	16:10:13	16:10:37	0:24	16286	00/09/25 15:02:16.615	~ 00/09/25 16:33:35.734	
00/09/28	15:00:58	15:01:47	0:49	16333	00/09/28 14:34:01.594	~ 00/09/28 16:05:20.545	
00/09/28	15:46:46	15:47:11	0:25	16333	00/09/28 14:34:01.594	~ 00/09/28 16:05:20.545	
00/10/01	16:07:00	16:07:49	0:49	16381	00/10/01 15:37:04.942	~ 00/10/01 17:08:23.657	
00/10/01	16:52:50	16:53:17	0:27	16381	00/10/01 15:37:04.942	~ 00/10/01 17:08:23.657	
00/10/04	15:42:03	15:42:55	0:52	16428	00/10/04 15:08:40.834	~ 00/10/04 16:39:59.312	
00/10/04	16:27:49	16:28:24	0:35	16428	00/10/04 15:08:40.834	~ 00/10/04 16:39:59.312	
00/10/06	17:48:35	17:49:20	0:45	16461	00/10/06 17:22:05.078	~ 00/10/06 18:53:24.396	
00/10/06	18:34:22	18:34:52	0:30	16461	00/10/06 17:22:05.078	~ 00/10/06 18:53:24.396	
00/10/10	14:58:26	14:59:14	0:48	16522	00/10/10 14:12:25.816	~ 00/10/10 15:43:44.233	
00/10/10	15:45:43	15:46:17	0:34	16523	00/10/10 15:43:44.233	~ 00/10/10 17:15:04.459	
00/10/13	16:01:40	16:02:28	0:48	16570	00/10/13 15:15:40.242	~ 00/10/13 16:46:58.874	
00/10/13	16:48:50	16:49:25	0:35	16571	00/10/13 16:46:58.874	~ 00/10/13 18:18:19.317	
00/10/15	15:28:52	15:29:20	0:28	16601	00/10/15 14:26:45.912	~ 00/10/15 15:58:04.819	
00/10/15	16:13:00	16:13:19	0:19	16602	00/10/15 15:58:04.819	~ 00/10/15 17:29:24.813	
00/10/17	16:05:59	16:06:32	0:33	16633	00/10/17 15:09:01.482	~ 00/10/17 16:40:20.289	
00/10/17	16:51:46	16:52:13	0:27	16634	00/10/17 16:40:20.289	~ 00/10/17 18:11:40.457	
00/10/19	15:28:23	15:28:54	0:31	16664	00/10/19 14:20:05.087	~ 00/10/19 15:51:23.997	
00/10/19	16:14:10	16:14:27	0:17	16665	00/10/19 15:51:23.997	~ 00/10/19 17:22:44.021	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
00/10/22	15:01:44	15:02:29	0:45	16711	00/10/22 13:51:58.945	~ 00/10/22 15:23:17.082	
00/10/22	15:47:33	15:48:01	0:28	16712	00/10/22 15:23:17.082	~ 00/10/22 16:54:37.115	
00/10/25	14:41:35	14:42:24	0:49	16758	00/10/25 13:23:47.794	~ 00/10/25 14:55:05.596	
00/10/25	15:27:27	15:27:57	0:30	16759	00/10/25 14:55:05.596	~ 00/10/25 16:26:25.506	
00/10/28	15:43:31	15:44:19	0:48	16806	00/10/28 14:26:56.096	~ 00/10/28 15:58:13.891	
00/10/28	16:29:21	16:29:52	0:31	16807	00/10/28 15:58:13.891	~ 00/10/28 17:29:33.886	
00/10/30	15:00:09	15:00:44	0:35	16837	00/10/30 13:37:52.867	~ 00/10/30 15:09:11.238	
00/10/30	15:45:56	15:46:17	0:21	16838	00/10/30 15:09:11.238	~ 00/10/30 16:40:31.133	
00/11/01	15:36:30	15:37:06	0:36	16869	00/11/01 14:20:05.855	~ 00/11/01 15:51:24.245	
00/11/01	16:23:54	16:24:26	0:32	16870	00/11/01 15:51:24.245	~ 00/11/01 17:22:44.418	
00/11/04	16:57:09	16:57:52	0:43	16918	00/11/04 16:54:42.428	~ 00/11/04 18:26:02.045	
00/11/04	17:42:53	17:43:27	0:34	16918	00/11/04 16:54:42.428	~ 00/11/04 18:26:02.045	
00/11/06	16:13:18	16:13:51	0:33	16949	00/11/06 16:05:41.100	~ 00/11/06 17:37:00.727	
00/11/06	16:59:01	16:59:25	0:24	16949	00/11/06 16:05:41.100	~ 00/11/06 17:37:00.727	
00/11/08	17:05:20	17:05:59	0:39	16981	00/11/08 16:47:51.586	~ 00/11/08 18:19:10.959	
00/11/08	17:51:05	17:51:29	0:24	16981	00/11/08 16:47:51.586	~ 00/11/08 18:19:10.959	
00/11/10	16:10:35	16:11:04	0:29	17012	00/11/10 15:58:52.368	~ 00/11/10 17:30:11.873	
00/11/10	16:56:34	16:56:56	0:22	17012	00/11/10 15:58:52.368	~ 00/11/10 17:30:11.873	
00/11/13	15:56:36	15:57:21	0:45	17059	00/11/13 15:30:42.709	~ 00/11/13 17:02:01.819	
00/11/13	16:42:23	16:42:48	0:25	17059	00/11/13 15:30:42.709	~ 00/11/13 17:02:01.819	
00/11/17	15:56:00	15:56:53	0:53	17122	00/11/17 15:23:33.986	~ 00/11/17 16:54:52.919	
00/11/17	16:42:27	16:42:53	0:26	17122	00/11/17 15:23:33.986	~ 00/11/17 16:54:52.919	
00/11/20	16:53:23	16:54:06	0:43	17170	00/11/20 16:26:53.780	~ 00/11/20 17:58:13.091	
00/11/20	17:39:08	17:39:41	0:33	17170	00/11/20 16:26:53.780	~ 00/11/20 17:58:13.091	
00/11/23	16:31:00	16:31:45	0:45	17217	00/11/23 15:59:00.610	~ 00/11/23 17:30:19.790	
00/11/23	17:16:50	17:17:16	0:26	17217	00/11/23 15:59:00.610	~ 00/11/23 17:30:19.790	
00/11/26	16:11:27	16:12:22	0:55	17264	00/11/26 15:30:49.014	~ 00/11/26 17:02:07.632	
00/11/26	16:57:14	16:57:53	0:39	17264	00/11/26 15:30:49.014	~ 00/11/26 17:02:07.632	
00/11/28	17:02:40	17:03:18	0:38	17296	00/11/28 16:13:10.007	~ 00/11/28 17:44:28.840	
00/11/28	17:48:26	17:48:58	0:32	17297	00/11/28 17:44:28.840	~ 00/11/28 19:15:49.336	
00/11/30	16:22:48	16:23:23	0:35	17327	00/11/30 15:24:11.003	~ 00/11/30 16:55:29.718	
00/11/30	17:08:33	17:08:56	0:23	17328	00/11/30 16:55:29.718	~ 00/11/30 18:26:49.791	
00/12/03	15:57:14	15:58:00	0:46	17374	00/12/03 14:55:56.321	~ 00/12/03 16:27:14.252	
00/12/03	16:43:00	16:43:34	0:34	17375	00/12/03 16:27:14.252	~ 00/12/03 17:58:34.300	
00/12/06	15:39:53	15:40:38	0:45	17421	00/12/06 14:27:43.655	~ 00/12/06 15:59:01.641	
00/12/06	16:25:43	16:26:12	0:29	17422	00/12/06 15:59:01.641	~ 00/12/06 17:30:21.664	
00/12/10	15:36:10	15:36:59	0:49	17484	00/12/10 14:20:32.228	~ 00/12/10 15:51:49.967	
00/12/10	16:22:01	16:22:30	0:29	17485	00/12/10 15:51:49.967	~ 00/12/10 17:23:09.846	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
00/12/14	17:04:33	17:05:16	0:43	17548	00/12/14 15:44:48.186	~ 00/12/14 17:16:06.225	
00/12/14	17:50:21	17:50:53	0:32	17549	00/12/14 17:16:06.225	~ 00/12/14 18:47:26.223	
00/12/18	15:33:31	15:34:15	0:44	17610	00/12/18 14:06:31.889	~ 00/12/18 15:37:49.709	
00/12/18	16:19:20	16:19:47	0:27	17611	00/12/18 15:37:49.709	~ 00/12/18 17:09:09.407	
00/12/21	15:18:51	15:19:34	0:43	17658	00/12/21 15:09:38.332	~ 00/12/21 16:40:57.872	
00/12/21	16:04:35	16:05:08	0:33	17658	00/12/21 15:09:38.332	~ 00/12/21 16:40:57.872	
00/12/24	14:55:07	14:55:49	0:42	17705	00/12/24 14:41:37.142	~ 00/12/24 16:12:56.531	
00/12/24	15:40:54	15:41:20	0:26	17705	00/12/24 14:41:37.142	~ 00/12/24 16:12:56.531	
00/12/27	16:04:25	16:05:13	0:48	17753	00/12/27 15:44:44.344	~ 00/12/27 17:16:03.548	
00/12/27	16:50:11	16:50:37	0:26	17753	00/12/27 15:44:44.344	~ 00/12/27 17:16:03.548	
00/12/30	15:41:32	15:42:17	0:45	17800	00/12/30 15:16:35.783	~ 00/12/30 16:47:54.849	
00/12/30	16:27:16	16:27:43	0:27	17800	00/12/30 15:16:35.783	~ 00/12/30 16:47:54.849	
01/01/02	15:17:31	15:18:08	0:37	17847	01/01/02 14:48:36.329	~ 01/01/02 16:19:55.476	
01/01/02	16:03:15	16:03:39	0:24	17847	01/01/02 14:48:36.329	~ 01/01/02 16:19:55.476	
01/01/06	15:16:50	15:17:42	0:52	17910	01/01/06 14:41:25.764	~ 01/01/06 16:12:44.554	
01/01/06	16:03:20	16:03:51	0:31	17910	01/01/06 14:41:25.764	~ 01/01/06 16:12:44.554	
01/01/09	16:17:08	16:17:47	0:39	17958	01/01/09 15:44:50.777	~ 01/01/09 17:16:10.026	
01/01/09	17:02:53	17:03:20	0:27	17958	01/01/09 15:44:50.777	~ 01/01/09 17:16:10.026	
01/01/13	14:53:40	14:54:24	0:44	18020	01/01/13 14:06:33.058	~ 01/01/13 15:37:51.565	
01/01/13	15:39:16	15:39:50	0:34	18021	01/01/13 15:37:51.565	~ 01/01/13 17:09:11.848	
01/01/17	15:02:44	15:03:27	0:43	18083	01/01/17 13:59:30.588	~ 01/01/17 15:30:48.639	
01/01/17	15:48:29	15:48:59	0:30	18084	01/01/17 15:30:48.639	~ 01/01/17 17:02:08.635	
01/01/21	15:02:29	15:03:15	0:46	18146	01/01/21 13:52:19.932	~ 01/01/21 15:23:37.801	
01/01/21	15:48:19	15:48:49	0:30	18147	01/01/21 15:23:37.801	~ 01/01/21 16:54:57.733	
01/01/24	16:14:48	16:15:35	0:47	18194	01/01/24 14:55:33.477	~ 01/01/24 16:26:51.614	
01/01/24	17:00:06	17:00:29	0:23	18195	01/01/24 16:26:51.614	~ 01/01/24 17:58:11.638	
01/01/28	16:02:56	16:03:42	0:46	18257	01/01/28 14:48:24.791	~ 01/01/28 16:19:42.564	
01/01/28	16:48:45	16:49:16	0:31	18258	01/01/28 16:19:42.564	~ 01/01/28 17:51:02.563	
01/01/31	15:40:30	15:41:06	0:36	18304	01/01/31 14:20:29.381	~ 01/01/31 15:51:47.863	
01/01/31	16:28:30	16:28:54	0:24	18305	01/01/31 15:51:47.863	~ 01/01/31 17:23:07.948	
01/02/04	15:51:29	15:52:10	0:41	18368	01/02/04 15:44:50.497	~ 01/02/04 17:16:10.079	
01/02/04	16:37:37	16:38:06	0:29	18368	01/02/04 15:44:50.497	~ 01/02/04 17:16:10.079	
01/02/08	15:56:03	15:56:46	0:43	18431	01/02/08 15:37:46.072	~ 01/02/08 17:09:05.268	
01/02/08	16:41:37	16:42:09	0:32	18431	01/02/08 15:37:46.072	~ 01/02/08 17:09:05.268	
01/02/12	15:56:20	15:57:09	0:49	18494	01/02/12 15:30:41.402	~ 01/02/12 17:02:00.468	
01/02/12	16:42:08	16:42:30	0:22	18494	01/02/12 15:30:41.402	~ 01/02/12 17:02:00.468	
01/02/18	15:10:50	15:11:30	0:40	18588	01/02/18 14:34:41.653	~ 01/02/18 16:06:00.858	
01/02/18	15:56:10	15:56:30	0:20	18588	01/02/18 14:34:41.653	~ 01/02/18 16:06:00.858	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
01/02/22	15:02:30	15:03:12	0:42	18651	01/02/22 14:27:44.766	~ 01/02/22 15:59:03.629	
01/02/22	15:48:15	15:48:45	0:30	18651	01/02/22 14:27:44.766	~ 01/02/22 15:59:03.629	
01/02/25	16:07:14	16:07:54	0:40	18699	01/02/25 15:31:05.099	~ 01/02/25 17:02:24.267	
01/02/25	16:53:00	16:53:26	0:26	18699	01/02/25 15:31:05.099	~ 01/02/25 17:02:24.267	
01/03/01	16:15:00	16:15:41	0:41	18762	01/03/01 15:24:10.061	~ 01/03/01 16:55:28.500	
01/03/01	17:00:47	17:01:20	0:33	18763	01/03/01 16:55:28.500	~ 01/03/01 18:26:48.702	
01/03/05	16:21:54	16:22:41	0:47	18825	01/03/05 15:17:03.068	~ 01/03/05 16:48:20.889	
01/03/05	17:07:16	17:07:45	0:29	18826	01/03/05 16:48:20.889	~ 01/03/05 18:19:40.749	
01/03/11	15:41:45	15:42:27	0:42	18919	01/03/11 14:20:48.138	~ 01/03/11 15:52:06.277	
01/03/11	16:27:32	16:27:59	0:27	18920	01/03/11 15:52:06.277	~ 01/03/11 17:23:26.192	
01/03/15	15:31:21	15:32:10	0:49	18982	01/03/15 14:13:33.045	~ 01/03/15 15:44:50.541	
01/03/15	16:17:12	16:17:42	0:30	18983	01/03/15 15:44:50.541	~ 01/03/15 17:16:10.337	
01/03/18	15:11:15	15:11:56	0:41	19029	01/03/18 13:45:31.132	~ 01/03/18 15:16:49.387	
01/03/18	15:58:22	15:58:46	0:24	19030	01/03/18 15:16:49.387	~ 01/03/18 16:48:09.477	
01/03/21	16:08:14	16:08:49	0:35	19077	01/03/21 14:48:51.475	~ 01/03/21 16:20:09.456	
01/03/21	16:53:59	16:54:31	0:32	19078	01/03/21 16:20:09.456	~ 01/03/21 17:51:29.199	
01/03/24	15:55:11	15:55:52	0:41	19125	01/03/24 15:52:01.197	~ 01/03/24 17:23:20.780	
01/03/24	16:40:54	16:41:26	0:32	19125	01/03/24 15:52:01.197	~ 01/03/24 17:23:20.780	
01/03/27	15:43:11	15:43:55	0:44	19172	01/03/27 15:23:52.266	~ 01/03/27 16:55:11.320	
01/03/27	16:28:46	16:29:15	0:29	19172	01/03/27 15:23:52.266	~ 01/03/27 16:55:11.320	
01/03/29	14:56:00	14:56:45	0:45	19203	01/03/29 14:34:37.166	~ 01/03/29 16:05:56.339	
01/03/29	15:42:00	15:42:28	0:28	19203	01/03/29 14:34:37.166	~ 01/03/29 16:05:56.339	
01/03/31	15:40:47	15:41:30	0:43	19235	01/03/31 15:16:45.608	~ 01/03/31 16:48:04.670	
01/03/31	16:26:30	16:26:56	0:26	19235	01/03/31 15:16:45.608	~ 01/03/31 16:48:04.670	
01/04/02	14:53:53	14:54:44	0:51	19266	01/04/02 14:27:23.777	~ 01/04/02 15:58:42.718	
01/04/02	15:39:37	15:40:11	0:34	19266	01/04/02 14:27:23.777	~ 01/04/02 15:58:42.718	
01/04/04	14:00:00	14:00:35	0:35	19297	01/04/04 13:38:24.106	~ 01/04/04 15:09:43.481	
01/04/04	14:45:41	14:46:02	0:21	19297	01/04/04 13:38:24.106	~ 01/04/04 15:09:43.481	
01/04/06	15:02:55	15:03:38	0:43	19329	01/04/06 14:20:36.099	~ 01/04/06 15:51:54.863	
01/04/06	15:48:41	15:49:07	0:26	19329	01/04/06 14:20:36.099	~ 01/04/06 15:51:54.863	
01/04/08	14:01:52	14:02:28	0:36	19360	01/04/08 13:31:34.862	~ 01/04/08 15:02:54.115	
01/04/08	14:47:23	14:47:44	0:21	19360	01/04/08 13:31:34.862	~ 01/04/08 15:02:54.115	
01/04/10	14:52:00	14:52:36	0:36	19392	01/04/10 14:13:49.702	~ 01/04/10 15:45:08.804	
01/04/10	15:39:25	15:39:48	0:23	19392	01/04/10 14:13:49.702	~ 01/04/10 15:45:08.804	
01/04/12	14:10:06	14:10:39	0:33	19423	01/04/12 13:24:49.090	~ 01/04/12 14:56:08.031	
01/04/12	14:55:51	14:56:13	0:22	19423	01/04/12 13:24:49.090	~ 01/04/12 14:56:08.031	
01/04/14	14:40:53	14:41:26	0:33	19455	01/04/14 14:07:03.641	~ 01/04/14 15:38:22.900	
01/04/14	15:26:36	15:27:02	0:26	19455	01/04/14 14:07:03.641	~ 01/04/14 15:38:22.900	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
01/04/17	14:22:22	14:22:57	0:35	19502	01/04/17 13:39:11.232	~ 01/04/17 15:10:30.250	
01/04/17	15:08:07	15:08:35	0:28	19502	01/04/17 13:39:11.232	~ 01/04/17 15:10:30.250	
01/04/20	14:10:28	14:11:05	0:37	19549	01/04/20 13:11:20.539	~ 01/04/20 14:42:39.273	
01/04/20	14:56:17	14:56:36	0:19	19550	01/04/20 14:42:39.273	~ 01/04/20 16:13:59.356	
01/04/23	15:18:00	15:18:38	0:38	19597	01/04/23 14:14:35.062	~ 01/04/23 15:45:53.120	
01/04/23	16:01:00	16:01:28	0:28	19598	01/04/23 15:45:53.120	~ 01/04/23 17:17:12.953	
01/04/26	14:52:52	14:53:35	0:43	19644	01/04/26 13:46:17.795	~ 01/04/26 15:17:35.736	
01/04/26	15:38:40	15:39:08	0:28	19645	01/04/26 15:17:35.736	~ 01/04/26 16:48:55.617	
01/04/29	14:38:00	14:38:45	0:45	19691	01/04/29 13:18:04.830	~ 01/04/29 14:49:22.592	
01/04/29	15:23:00	15:23:27	0:27	19692	01/04/29 14:49:22.592	~ 01/04/29 16:20:42.355	
01/05/02	14:11:00	14:11:42	0:42	19738	01/05/02 12:49:57.974	~ 01/05/02 14:21:16.030	
01/05/02	14:56:45	14:57:10	0:25	19739	01/05/02 14:21:16.030	~ 01/05/02 15:52:35.954	
01/05/05	15:08:00	15:08:39	0:39	19786	01/05/05 13:53:15.731	~ 01/05/05 15:24:33.944	
01/05/05	15:53:46	15:54:17	0:31	19787	01/05/05 15:24:33.944	~ 01/05/05 16:55:54.116	
01/05/09	15:14:39	15:15:18	0:39	19849	01/05/09 13:46:20.251	~ 01/05/09 15:17:38.092	
01/05/09	16:00:23	16:00:55	0:32	19850	01/05/09 15:17:38.092	~ 01/05/09 16:48:57.776	
01/05/12	15:10:55	15:11:28	0:33	19897	01/05/12 14:49:40.023	~ 01/05/12 16:20:59.374	
01/05/12	15:56:37	15:57:01	0:24	19897	01/05/12 14:49:40.023	~ 01/05/12 16:20:59.374	
01/05/16	15:12:47	15:13:31	0:44	19960	01/05/16 14:42:37.470	~ 01/05/16 16:13:56.571	
01/05/16	15:58:33	15:58:54	0:21	19960	01/05/16 14:42:37.470	~ 01/05/16 16:13:56.571	
01/05/20	15:05:23	15:06:05	0:42	20023	01/05/20 14:35:41.936	~ 01/05/20 16:07:01.036	
01/05/20	15:51:08	15:51:25	0:17	20023	01/05/20 14:35:41.936	~ 01/05/20 16:07:01.036	
01/05/24	15:07:04	15:07:46	0:42	20086	01/05/24 14:28:34.154	~ 01/05/24 15:59:52.872	
01/05/24	15:52:49	15:53:16	0:27	20086	01/05/24 14:28:34.154	~ 01/05/24 15:59:52.872	
01/05/28	14:58:00	14:58:42	0:42	20149	01/05/28 14:21:32.871	~ 01/05/28 15:52:51.753	
01/05/28	15:45:00	15:45:28	0:28	20149	01/05/28 14:21:32.871	~ 01/05/28 15:52:51.753	
01/06/01	14:59:39	15:00:21	0:42	20212	01/06/01 14:14:33.114	~ 01/06/01 15:45:51.893	
01/06/01	15:45:26	15:45:54	0:28	20212	01/06/01 14:14:33.114	~ 01/06/01 15:45:51.893	
01/06/05	15:05:34	15:06:11	0:37	20275	01/06/05 14:07:42.020	~ 01/06/05 15:39:00.547	
01/06/05	15:51:20	15:51:45	0:25	20276	01/06/05 15:39:00.547	~ 01/06/05 17:10:20.639	
01/06/10	13:57:20	13:58:06	0:46	20353	01/06/10 12:50:09.947	~ 01/06/10 14:21:27.629	
01/06/10	14:43:10	14:43:39	0:29	20354	01/06/10 14:21:27.629	~ 01/06/10 15:52:47.432	
01/06/14	13:58:53	13:59:35	0:42	20416	01/06/14 12:42:57.960	~ 01/06/14 14:14:15.854	
01/06/14	14:44:53	14:45:19	0:26	20417	01/06/14 14:14:15.854	~ 01/06/14 15:45:35.669	
01/06/18	13:57:08	13:57:52	0:44	20479	01/06/18 12:35:47.477	~ 01/06/18 14:07:05.243	
01/06/18	14:42:56	14:43:24	0:28	20480	01/06/18 14:07:05.243	~ 01/06/18 15:38:25.047	
01/06/22	13:54:22	13:55:02	0:40	20542	01/06/22 12:28:35.631	~ 01/06/22 13:59:53.342	
01/06/22	14:42:30	14:43:03	0:33	20543	01/06/22 13:59:53.342	~ 01/06/22 15:31:12.986	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
01/06/26	14:11:32	14:12:12	0:40	20606	01/06/26 13:52:43.094	~ 01/06/26 15:24:02.200	
01/06/26	14:57:13	14:57:46	0:33	20606	01/06/26 13:52:43.094	~ 01/06/26 15:24:02.200	
01/06/30	14:15:55	14:16:34	0:39	20669	01/06/30 13:45:43.133	~ 01/06/30 15:17:02.264	
01/06/30	15:01:41	15:02:06	0:25	20669	01/06/30 13:45:43.133	~ 01/06/30 15:17:02.264	
01/07/04	14:09:05	14:09:46	0:41	20732	01/07/04 13:38:52.300	~ 01/07/04 15:10:11.572	
01/07/04	14:54:53	14:55:10	0:17	20732	01/07/04 13:38:52.300	~ 01/07/04 15:10:11.572	
01/07/09	14:32:25	14:33:06	0:41	20811	01/07/09 13:52:54.440	~ 01/07/09 15:24:13.196	
01/07/09	15:17:17	15:17:40	0:23	20811	01/07/09 13:52:54.440	~ 01/07/09 15:24:13.196	
01/07/14	14:45:54	14:46:41	0:47	20890	01/07/14 14:06:50.372	~ 01/07/14 15:38:09.204	
01/07/14	15:31:44	15:32:12	0:28	20890	01/07/14 14:06:50.372	~ 01/07/14 15:38:09.204	
01/07/19	15:08:46	15:09:27	0:41	20969	01/07/19 14:20:57.170	~ 01/07/19 15:52:15.714	
01/07/19	15:54:32	15:55:04	0:32	20970	01/07/19 15:52:15.714	~ 01/07/19 17:23:36.004	
01/07/25	14:31:21	14:32:01	0:40	21063	01/07/25 13:24:42.450	~ 01/07/25 14:56:00.413	
01/07/25	15:17:31	15:17:51	0:20	21064	01/07/25 14:56:00.413	~ 01/07/25 16:27:20.370	
01/07/31	15:20:08	15:20:53	0:45	21158	01/07/31 13:59:36.732	~ 01/07/31 15:30:54.589	
01/07/31	16:05:58	16:06:20	0:22	21159	01/07/31 15:30:54.589	~ 01/07/31 17:02:14.416	
01/08/05	14:01:21	14:01:39	0:18	21236	01/08/05 12:42:27.150	~ 01/08/05 14:13:45.382	
01/08/05	14:47:06	14:47:29	0:23	21237	01/08/05 14:13:45.382	~ 01/08/05 15:45:05.342	
01/08/07	14:54:47	14:57:42	2:55	21268	01/08/07 13:24:54.947	~ 01/08/07 14:56:14.185	
01/08/07	15:40:30	15:43:25	2:55	21269	01/08/07 14:56:14.185	~ 01/08/07 16:27:43.914	
01/08/08	16:51:04	16:53:55	2:51	21285	01/08/08 15:20:57.054	~ 01/08/08 16:52:29.781	
01/08/08	17:36:53	17:39:44	2:51	21286	01/08/08 16:52:29.781	~ 01/08/08 18:24:12.638	
01/08/09	15:47:32	1:50:24	2:52	21300	01/08/09 14:17:12.510	~ 01/08/09 15:48:58.557	
01/08/09	16:33:28	16:36:20	2:52	21301	01/08/09 15:48:58.557	~ 01/08/09 17:20:54.927	
01/08/21	14:24:44	14:27:39	2:55	21487	01/08/21 12:54:15.819	~ 01/08/21 14:26:11.670	
01/08/21	15:10:46	15:13:40	2:54	21488	01/08/21 14:26:11.670	~ 01/08/21 15:58:18.101	
01/08/22	18:03:50	18:06:23	2:33	21505	01/08/22 16:32:56.595	~ 01/08/22 18:05:06.383	
01/08/22	18:49:58	18:52:30	2:32	21506	01/08/22 18:05:06.383	~ 01/08/22 19:37:25.484	
01/08/24	13:41:48	13:42:25	0:37	21534	01/08/24 13:11:17.711	~ 01/08/24 14:43:40.790	
01/08/24	14:12:30	14:13:01	0:31	21534	01/08/24 13:11:17.711	~ 01/08/24 14:43:40.790	
01/09/01	14:21:28	14:22:05	0:37	21659	01/09/01 13:40:15.411	~ 01/09/01 15:12:38.740	
01/09/01	15:07:38	15:07:58	0:20	21659	01/09/01 13:40:15.411	~ 01/09/01 15:12:38.740	
01/09/08	14:35:31	14:36:03	0:32	21768	01/09/08 13:30:52.575	~ 01/09/08 15:03:15.164	
01/09/08	15:21:47	15:22:12	0:25	21769	01/09/08 15:03:15.164	~ 01/09/08 16:35:39.270	
01/09/13	14:54:44	14:55:23	0:39	21846	01/09/13 13:37:10.128	~ 01/09/13 15:09:32.622	
01/09/13	15:41:05	15:41:26	0:21	21847	01/09/13 15:09:32.622	~ 01/09/13 16:41:56.827	
01/09/18	15:04:10	15:04:43	0:33	21924	01/09/18 13:43:39.722	~ 01/09/18 15:16:02.361	
01/09/18	15:50:31	15:50:50	0:19	21925	01/09/18 15:16:02.361	~ 01/09/18 16:48:26.528	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
01/09/23	15:17:24	15:17:55	0:31	22002	01/09/23 13:50:10.817	~ 01/09/23 15:22:33.439	
01/09/23	16:03:40	16:04:04	0:24	22003	01/09/23 15:22:33.439	~ 01/09/23 16:54:57.537	
01/09/26	14:24:00	14:24:27	0:27	22049	01/09/26 14:12:42.722	~ 01/09/26 15:45:06.718	
01/09/26	15:11:10	15:11:29	0:19	22049	01/09/26 14:12:42.722	~ 01/09/26 15:45:06.718	
01/09/30	14:02:30	14:03:01	0:31	22111	01/09/30 13:40:57.603	~ 01/09/30 15:13:21.113	
01/09/30	14:48:45	14:49:09	0:24	22111	01/09/30 13:40:57.603	~ 01/09/30 15:13:21.113	
01/10/03	14:28:33	14:29:03	0:30	22158	01/10/03 14:03:20.975	~ 01/10/03 15:35:44.526	
01/10/03	15:14:48	15:15:06	0:18	22158	01/10/03 14:03:20.975	~ 01/10/03 15:35:44.526	
01/10/06	14:56:07	14:56:37	0:30	22205	01/10/06 14:25:45.578	~ 01/10/06 15:58:09.167	
01/10/06	15:42:20	15:42:33	0:13	22205	01/10/06 14:25:45.578	~ 01/10/06 15:58:09.167	
01/10/10	14:23:52	14:24:25	0:33	22267	01/10/10 13:53:58.757	~ 01/10/10 15:26:22.124	
01/10/10	15:10:00	15:10:18	0:18	22267	01/10/10 13:53:58.757	~ 01/10/10 15:26:22.124	
01/10/13	14:54:51	14:55:23	0:32	22314	01/10/13 14:16:21.417	~ 01/10/13 15:48:44.856	
01/10/13	15:41:08	15:41:27	0:19	22314	01/10/13 14:16:21.417	~ 01/10/13 15:48:44.856	
01/10/17	14:19:08	14:19:42	0:34	22376	01/10/17 13:44:36.395	~ 01/10/17 15:16:59.790	
01/10/17	15:05:25	15:05:48	0:23	22376	01/10/17 13:44:36.395	~ 01/10/17 15:16:59.790	
01/10/20	14:50:23	14:50:51	0:28	22423	01/10/20 14:07:08.099	~ 01/10/20 15:39:31.468	
01/10/20	15:36:38	15:37:01	0:23	22423	01/10/20 14:07:08.099	~ 01/10/20 15:39:31.468	
01/10/23	13:53:13	13:53:46	0:33	22469	01/10/23 12:57:06.759	~ 01/10/23 14:29:29.538	
01/10/23	14:39:32	14:39:54	0:22	22470	01/10/23 14:29:29.538	~ 01/10/23 16:01:53.639	
01/10/26	14:29:33	14:30:09	0:36	22516	01/10/26 13:19:20.884	~ 01/10/26 14:51:43.481	
01/10/26	15:15:50	15:16:16	0:26	22517	01/10/26 14:51:43.481	~ 01/10/26 16:24:07.795	
01/10/29	14:53:45	14:54:20	0:35	22563	01/10/29 13:41:45.791	~ 01/10/29 15:14:08.483	
01/10/29	15:40:00	15:40:19	0:19	22564	01/10/29 15:14:08.483	~ 01/10/29 16:46:32.645	
01/11/01	15:24:55	15:25:27	0:32	22610	01/11/01 14:04:07.293	~ 01/11/01 15:36:29.977	
01/11/01	16:11:12	16:11:32	0:20	22611	01/11/01 15:36:29.977	~ 01/11/01 17:08:54.046	
01/11/04	15:43:03	15:43:31	0:28	22657	01/11/04 14:26:31.646	~ 01/11/04 15:58:54.522	
01/11/04	16:29:20	16:29:40	0:20	22658	01/11/04 15:58:54.522	~ 01/11/04 17:31:18.724	
01/11/07	16:10:43	16:11:15	0:32	22704	01/11/07 14:48:55.644	~ 01/11/07 16:21:18.334	
01/11/07	16:57:01	16:57:25	0:24	22705	01/11/07 16:21:18.334	~ 01/11/07 17:53:42.603	
01/11/11	15:46:30	15:47:03	0:33	22766	01/11/11 14:17:16.427	~ 01/11/11 15:49:39.114	
01/11/11	16:32:11	16:32:36	0:25	22767	01/11/11 15:49:39.114	~ 01/11/11 17:22:03.327	
01/11/15	15:32:41	15:33:11	0:30	22829	01/11/15 15:18:05.631	~ 01/11/15 16:50:29.429	
01/11/15	16:18:56	16:19:15	0:19	22829	01/11/15 15:18:05.631	~ 01/11/15 16:50:29.429	
01/11/19	15:11:16	15:11:54	0:38	22891	01/11/19 14:46:12.751	~ 01/11/19 16:18:36.241	
01/11/19	15:57:34	15:57:52	0:18	22891	01/11/19 14:46:12.751	~ 01/11/19 16:18:36.241	
01/11/24	15:19:45	15:20:28	0:43	22969	01/11/24 14:52:18.208	~ 01/11/24 16:24:41.398	
01/11/24	16:06:03	16:06:26	0:23	22969	01/11/24 14:52:18.208	~ 01/11/24 16:24:41.398	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
01/11/28	14:55:03	14:55:36	0:33	23031	01/11/28 14:20:24.771	~ 01/11/28 15:52:48.162	
01/11/28	15:41:20	15:41:40	0:20	23031	01/11/28 14:20:24.771	~ 01/11/28 15:52:48.162	
01/12/02	15:53:27	15:54:00	0:33	23094	01/12/02 15:21:07.366	~ 01/12/02 16:53:30.926	
01/12/02	16:39:44	16:40:07	0:23	23094	01/12/02 15:21:07.366	~ 01/12/02 16:53:30.926	
01/12/06	15:34:45	15:35:18	0:33	23156	01/12/06 14:49:25.214	~ 01/12/06 16:21:48.310	
01/12/06	16:21:02	16:21:29	0:27	23156	01/12/06 14:49:25.214	~ 01/12/06 16:21:48.310	
01/12/10	15:17:33	15:18:06	0:33	23218	01/12/10 14:17:38.745	~ 01/12/10 15:50:01.530	
01/12/10	16:03:50	16:04:13	0:23	23219	01/12/10 15:50:01.530	~ 01/12/10 17:22:25.775	
01/12/14	14:58:15	14:58:52	0:37	23280	01/12/14 13:45:43.862	~ 01/12/14 15:18:06.402	
01/12/14	15:44:36	15:45:00	0:24	23281	01/12/14 15:18:06.402	~ 01/12/14 16:50:30.633	
01/12/19	15:17:38	15:18:21	0:43	23358	01/12/19 13:51:54.230	~ 01/12/19 15:24:16.375	
01/12/19	16:03:59	16:04:24	0:25	23359	01/12/19 15:24:16.375	~ 01/12/19 16:56:40.426	
01/12/23	16:11:38	16:12:13	0:35	23421	01/12/23 14:52:31.991	~ 01/12/23 16:24:54.629	
01/12/23	16:57:57	16:58:20	0:23	23422	01/12/23 16:24:54.629	~ 01/12/23 17:57:18.976	
01/12/27	15:45:23	15:45:54	0:31	23483	01/12/27 14:20:52.777	~ 01/12/27 15:53:15.476	
01/12/27	16:31:41	16:32:04	0:23	23484	01/12/27 15:53:15.476	~ 01/12/27 17:25:39.633	
01/12/30	14:48:17	14:48:44	0:27	23530	01/12/30 14:43:24.673	~ 01/12/30 16:15:48.647	
01/12/30	15:34:33	15:34:50	0:17	23530	01/12/30 14:43:24.673	~ 01/12/30 16:15:48.647	
02/01/02	15:27:10	15:27:39	0:29	23577	02/01/02 15:05:48.676	~ 02/01/02 16:38:12.333	
02/01/02	16:13:23	16:13:43	0:20	23577	02/01/02 15:05:48.676	~ 02/01/02 16:38:12.333	
02/01/05	15:52:48	15:53:15	0:27	23624	02/01/05 15:28:19.434	~ 02/01/05 17:00:43.113	
02/01/05	16:39:02	16:39:16	0:14	23624	02/01/05 15:28:19.434	~ 02/01/05 17:00:43.113	
02/01/09	15:22:40	15:23:13	0:33	23686	02/01/09 14:56:32.609	~ 02/01/09 16:28:56.101	
02/01/09	16:07:16	16:07:33	0:17	23686	02/01/09 14:56:32.609	~ 02/01/09 16:28:56.101	
02/01/12	15:53:42	15:54:13	0:31	23733	02/01/12 15:18:58.797	~ 02/01/12 16:51:22.323	
02/01/12	16:39:59	16:40:16	0:17	23733	02/01/12 15:18:58.797	~ 02/01/12 16:51:22.323	
02/01/16	15:20:27	15:21:01	0:34	23795	02/01/16 14:47:10.659	~ 02/01/16 16:19:34.070	
02/01/16	16:06:45	16:07:07	0:22	23795	02/01/16 14:47:10.659	~ 02/01/16 16:19:34.070	
02/01/20	14:55:13	14:55:47	0:34	23857	02/01/20 14:15:25.720	~ 02/01/20 15:47:49.003	
02/01/20	15:41:29	15:41:52	0:23	23857	02/01/20 14:15:25.720	~ 02/01/20 15:47:49.003	
02/01/23	15:19:12	15:19:39	0:27	23904	02/01/23 14:37:55.156	~ 02/01/23 16:10:18.565	
02/01/23	16:05:25	16:05:48	0:23	23904	02/01/23 14:37:55.156	~ 02/01/23 16:10:18.565	
02/01/27	15:14:37	15:15:16	0:39	23966	02/01/27 14:06:03.386	~ 02/01/27 15:38:25.855	
02/01/27	16:00:57	16:01:21	0:24	23967	02/01/27 15:38:25.855	~ 02/01/27 17:10:50.069	
02/01/30	15:43:51	15:44:20	0:29	24013	02/01/30 14:28:27.210	~ 02/01/30 16:00:50.019	
02/01/30	16:30:08	16:30:31	0:23	24014	02/01/30 16:00:50.019	~ 02/01/30 17:33:14.257	
02/02/03	15:14:42	15:15:21	0:39	24075	02/02/03 13:56:35.933	~ 02/02/03 15:28:58.381	
02/02/03	16:01:04	16:01:23	0:19	24076	02/02/03 15:28:58.381	~ 02/02/03 17:01:22.480	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
02/02/07	14:43:40	14:44:16	0:36	24137	02/02/07 13:24:41.743	~ 02/02/07 14:57:04.149	
02/02/07	15:29:59	15:30:20	0:21	24138	02/02/07 14:57:04.149	~ 02/02/07 16:29:28.236	
02/02/11	15:47:44	15:48:14	0:30	24200	02/02/11 14:25:15.989	~ 02/02/11 15:57:38.606	
02/02/11	16:34:00	16:34:27	0:27	24201	02/02/11 15:57:38.606	~ 02/02/11 17:30:02.760	
02/02/15	15:32:05	15:32:32	0:27	24263	02/02/15 15:25:58.885	~ 02/02/15 16:58:22.751	
02/02/15	16:18:19	16:18:41	0:22	24263	02/02/15 15:25:58.885	~ 02/02/15 16:58:22.751	
02/02/19	15:17:43	15:18:18	0:35	24325	02/02/19 14:54:13.001	~ 02/02/19 16:26:36.644	
02/02/19	16:04:01	16:04:18	0:17	24325	02/02/19 14:54:13.001	~ 02/02/19 16:26:36.644	
02/02/23	16:20:30	16:21:07	0:37	24388	02/02/23 15:54:46.748	~ 02/02/23 17:27:10.253	
02/02/23	17:06:49	17:07:07	0:18	24388	02/02/23 15:54:46.748	~ 02/02/23 17:27:10.253	
02/02/26	15:11:07	15:11:36	0:29	24434	02/02/26 14:44:52.710	~ 02/02/26 16:17:16.345	
02/02/26	15:57:20	15:57:33	0:13	24434	02/02/26 14:44:52.710	~ 02/02/26 16:17:16.345	
02/03/01	15:47:29	15:48:00	0:31	24481	02/03/01 15:07:12.584	~ 02/03/01 16:39:35.788	
02/03/01	16:33:45	16:34:04	0:19	24481	02/03/01 15:07:12.584	~ 02/03/01 16:39:35.788	
02/03/04	16:00:23	16:00:54	0:31	24528	02/03/04 15:29:36.519	~ 02/03/04 17:02:00.100	
02/03/04	16:46:37	16:46:58	0:21	24528	02/03/04 15:29:36.519	~ 02/03/04 17:02:00.100	
02/03/07	14:59:34	15:00:03	0:29	24574	02/03/07 14:19:45.107	~ 02/03/07 15:52:08.670	
02/03/07	15:46:04	15:46:24	0:20	24574	02/03/07 14:19:45.107	~ 02/03/07 15:52:08.670	
02/03/12	15:16:20	15:16:56	0:36	24652	02/03/12 14:26:08.604	~ 02/03/12 15:58:31.392	
02/03/12	16:02:38	16:03:05	0:27	24653	02/03/12 15:58:31.392	~ 02/03/12 17:30:55.728	
02/03/16	14:58:51	14:59:23	0:32	24714	02/03/16 13:54:21.714	~ 02/03/16 15:26:44.511	
02/03/16	15:45:09	15:45:30	0:21	24715	02/03/16 15:26:44.511	~ 02/03/16 16:59:08.692	
02/03/20	16:12:40	16:13:20	0:40	24777	02/03/20 14:54:51.026	~ 02/03/20 16:27:13.521	
02/03/20	16:59:00	16:59:19	0:19	24778	02/03/20 16:27:13.521	~ 02/03/20 17:59:37.687	
02/03/24	15:38:16	15:38:49	0:33	24839	02/03/24 14:23:02.371	~ 02/03/24 15:55:24.926	
02/03/24	16:24:34	16:24:54	0:20	24840	02/03/24 15:55:24.926	~ 02/03/24 17:27:49.004	
02/03/29	15:52:22	15:53:00	0:38	24917	02/03/29 14:29:07.772	~ 02/03/29 16:01:30.056	
02/03/29	16:38:42	16:39:08	0:26	24918	02/03/29 16:01:30.056	~ 02/03/29 17:33:54.170	
02/04/02	15:29:31	15:29:57	0:26	24979	02/04/02 13:57:27.111	~ 02/04/02 15:29:49.856	
02/04/02	16:15:44	16:16:09	0:25	24980	02/04/02 15:29:49.856	~ 02/04/02 17:02:13.850	
02/04/07	16:00:49	16:01:24	0:35	25058	02/04/07 15:36:15.182	~ 02/04/07 17:08:38.640	
02/04/07	16:47:05	16:47:25	0:20	25058	02/04/07 15:36:15.182	~ 02/04/07 17:08:38.640	
02/04/12	14:37:42	14:38:23	0:41	25135	02/04/12 14:09:58.382	~ 02/04/12 15:42:21.602	
02/04/12	15:23:59	15:24:20	0:21	25135	02/04/12 14:09:58.382	~ 02/04/12 15:42:21.602	
02/04/16	14:12:04	14:12:41	0:37	25197	02/04/16 13:37:59.980	~ 02/04/16 15:10:23.143	
02/04/16	14:58:22	14:58:42	0:20	25197	02/04/16 13:37:59.980	~ 02/04/16 15:10:23.143	
02/04/20	15:17:26	15:18:07	0:41	25260	02/04/20 14:38:24.173	~ 02/04/20 16:10:47.374	
02/04/20	16:03:47	16:04:09	0:22	25260	02/04/20 14:38:24.173	~ 02/04/20 16:10:47.374	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
02/04/25	15:19:31	15:20:05	0:34	25338	02/04/25 14:44:52.330	~ 02/04/25 16:17:15.726	
02/04/25	16:05:48	16:06:12	0:24	25338	02/04/25 14:44:52.330	~ 02/04/25 16:17:15.726	
02/05/01	14:50:01	14:50:37	0:36	25431	02/05/01 13:57:09.385	~ 02/05/01 15:29:32.263	
02/05/01	15:36:18	15:36:44	0:26	25432	02/05/01 15:29:32.263	~ 02/05/01 17:01:56.713	
02/05/07	14:25:43	14:26:20	0:37	25524	02/05/07 13:09:27.013	~ 02/05/07 14:41:49.452	
02/05/07	15:12:03	15:12:24	0:21	25525	02/05/07 14:41:49.452	~ 02/05/07 16:14:13.542	
02/05/12	14:39:16	14:39:52	0:36	25602	02/05/12 13:15:44.565	~ 02/05/12 14:48:06.928	
02/05/12	15:25:37	15:25:57	0:20	25603	02/05/12 14:48:06.928	~ 02/05/12 16:20:30.905	
02/05/18	15:18:25	15:18:59	0:34	25696	02/05/18 14:00:10.860	~ 02/05/18 15:32:33.434	
02/05/18	16:07:00	16:07:25	0:25	25697	02/05/18 15:32:33.434	~ 02/05/18 17:04:57.686	
02/05/25	14:23:14	14:23:51	0:37	25805	02/05/25 13:50:48.492	~ 02/05/25 15:23:11.926	
02/05/25	15:09:32	15:09:55	0:23	25805	02/05/25 13:50:48.492	~ 02/05/25 15:23:11.926	
02/06/01	14:16:17	14:16:56	0:39	25914	02/06/01 13:41:23.071	~ 02/06/01 15:13:46.372	
02/06/01	15:01:50	15:02:05	0:15	25914	02/06/01 13:41:23.071	~ 02/06/01 15:13:46.372	
02/06/08	14:16:00	14:16:39	0:39	26023	02/06/08 13:31:38.026	~ 02/06/08 15:04:01.114	
02/06/08	15:05:00	15:05:20	0:20	26024	02/06/08 15:04:01.114	~ 02/06/08 16:36:25.442	
02/06/19	15:17:17	15:17:58	0:41	26195	02/06/19 14:21:56.972	~ 02/06/19 15:54:19.519	
02/06/19	16:03:37	16:04:05	0:28	26196	02/06/19 15:54:19.519	~ 02/06/19 17:26:43.853	
02/07/02	14:56:28	14:57:03	0:35	26397	02/07/02 13:24:13.400	~ 02/07/02 14:56:35.865	
02/07/02	15:42:49	15:43:10	0:21	26398	02/07/02 14:56:35.865	~ 02/07/02 16:28:59.871	
02/07/19	14:05:00	14:05:32	0:32	26662	02/07/19 13:27:52.338	~ 02/07/19 15:00:15.587	
02/07/19	14:48:00	14:48:19	0:19	26662	02/07/19 13:27:52.338	~ 02/07/19 15:00:15.587	
02/07/28	15:18:36	15:19:18	0:42	26803	02/07/28 14:34:44.336	~ 02/07/28 16:07:07.442	
02/07/28	16:04:59	16:05:20	0:21	26803	02/07/28 14:34:44.336	~ 02/07/28 16:07:07.442	
02/08/05	14:19:10	14:19:41	0:31	26927	02/08/05 13:31:05.489	~ 02/08/05 15:03:28.437	
02/08/05	15:05:25	15:05:54	0:29	26928	02/08/05 15:03:28.437	~ 02/08/05 16:35:52.903	
02/08/18	14:03:49	14:04:35	0:46	27129	02/08/18 12:33:20.256	~ 02/08/18 14:05:42.252	
02/08/18	14:50:13	14:50:37	0:24	27130	02/08/18 14:05:42.252	~ 02/08/18 15:38:06.312	
02/08/27	14:12:17	14:12:47	0:30	27270	02/08/27 13:40:18.599	~ 02/08/27 15:12:41.910	
02/08/27	14:58:29	14:58:54	0:25	27270	02/08/27 13:40:18.599	~ 02/08/27 15:12:41.910	
02/09/07	15:13:04	15:13:49	0:45	27442	02/09/07 14:31:18.977	~ 02/09/07 16:03:42.053	
02/09/07	15:59:29	15:59:46	0:17	27442	02/09/07 14:31:18.977	~ 02/09/07 16:03:42.053	
02/09/14	14:57:16	14:57:52	0:36	27551	02/09/14 14:21:45.267	~ 02/09/14 15:54:08.615	
02/09/14	15:43:34	15:43:59	0:25	27551	02/09/14 14:21:45.267	~ 02/09/14 15:54:08.615	
02/09/23	14:49:14	14:49:47	0:33	27691	02/09/23 13:56:14.949	~ 02/09/23 15:28:37.767	
02/09/23	15:35:28	15:35:59	0:31	27692	02/09/23 15:28:37.767	~ 02/09/23 17:01:02.196	
02/10/04	14:46:18	14:46:59	0:41	27862	02/10/04 13:15:02.165	~ 02/10/04 14:47:24.478	
02/10/04	15:32:41	15:32:59	0:18	27863	02/10/04 14:47:24.478	~ 02/10/04 16:19:48.518	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
02/10/12	15:00:53	15:01:24	0:31	27987	02/10/12 13:43:41.350	~ 02/10/12 15:16:03.788	
02/10/12	15:47:08	15:47:37	0:29	27988	02/10/12 15:16:03.788	~ 02/10/12 16:48:27.850	
02/10/18	14:59:48	15:00:27	0:39	28081	02/10/18 14:28:10.976	~ 02/10/18 16:00:34.235	
02/10/18	15:46:06	15:46:27	0:21	28081	02/10/18 14:28:10.976	~ 02/10/18 16:00:34.235	
02/10/24	14:16:56	14:17:34	0:38	28174	02/10/24 13:40:24.634	~ 02/10/24 15:12:47.919	
02/10/24	15:03:17	15:03:35	0:18	28174	02/10/24 13:40:24.634	~ 02/10/24 15:12:47.919	
02/10/31	14:10:00	14:10:39	0:39	28283	02/10/31 13:30:43.535	~ 02/10/31 15:03:06.705	
02/10/31	14:57:00	14:57:23	0:23	28283	02/10/31 13:30:43.535	~ 02/10/31 15:03:06.705	
02/11/06	14:58:24	14:58:57	0:33	28377	02/11/06 14:15:21.146	~ 02/11/06 15:47:44.167	
02/11/06	15:44:39	15:45:07	0:28	28377	02/11/06 14:15:21.146	~ 02/11/06 15:47:44.167	
02/11/13	15:24:51	15:25:35	0:44	28486	02/11/13 14:05:38.364	~ 02/11/13 15:38:00.638	
02/11/13	16:11:13	16:11:36	0:23	28487	02/11/13 15:38:00.638	~ 02/11/13 17:10:24.778	
02/11/21	15:56:56	15:57:36	0:40	28611	02/11/21 14:34:06.956	~ 02/11/21 16:06:29.221	
02/11/21	16:43:17	16:43:41	0:24	28612	02/11/21 16:06:29.221	~ 02/11/21 17:38:53.341	
02/11/29	15:32:49	15:33:20	0:31	28736	02/11/29 15:02:54.058	~ 02/11/29 16:35:17.441	
02/11/29	16:19:02	16:19:26	0:24	28736	02/11/29 15:02:54.058	~ 02/11/29 16:35:17.441	
02/12/07	16:02:25	16:03:05	0:40	28861	02/12/07 15:31:41.297	~ 02/12/07 17:04:04.703	
02/12/07	16:49:25	16:49:41	0:16	28861	02/12/07 15:31:41.297	~ 02/12/07 17:04:04.703	
02/12/15	15:04:05	15:04:44	0:39	28985	02/12/15 14:27:49.607	~ 02/12/15 16:00:12.940	
02/12/15	15:55:29	15:55:50	0:21	28985	02/12/15 14:27:49.607	~ 02/12/15 16:00:12.940	
02/12/22	16:18:58	16:19:31	0:33	29095	02/12/22 15:50:50.392	~ 02/12/22 17:23:13.769	
02/12/22	17:05:12	17:05:38	0:26	29095	02/12/22 15:50:50.392	~ 02/12/22 17:23:13.769	
02/12/30	16:09:16	16:09:49	0:33	29219	02/12/30 14:46:53.017	~ 02/12/30 16:19:15.489	
02/12/30	16:55:35	16:55:51	0:16	29220	02/12/30 16:19:15.489	~ 02/12/30 17:51:39.611	
03/01/10	15:33:21	15:33:55	0:34	29390	03/01/10 14:05:46.575	~ 03/01/10 15:38:09.125	
03/01/10	16:19:39	16:20:03	0:24	29391	03/01/10 15:38:09.125	~ 03/01/10 17:10:33.203	
03/01/19	15:43:00	15:43:35	0:35	29531	03/01/19 15:12:37.998	~ 03/01/19 16:45:01.304	
03/01/19	16:31:00	16:31:21	0:21	29531	03/01/19 15:12:37.998	~ 03/01/19 16:45:01.304	
03/01/30	15:15:00	15:15:39	0:39	29702	03/01/30 14:31:00.239	~ 03/01/30 16:03:23.310	
03/01/30	16:02:42	16:03:01	0:19	29702	03/01/30 14:31:00.239	~ 03/01/30 16:03:23.310	
03/02/09	15:30:41	15:31:18	0:37	29858	03/02/09 14:43:32.723	~ 03/02/09 16:15:55.600	
03/02/09	16:16:58	16:17:26	0:28	29859	03/02/09 16:15:55.600	~ 03/02/09 17:48:19.996	
03/02/18	15:43:58	15:44:37	0:39	29998	03/02/18 14:18:06.525	~ 03/02/18 15:50:29.032	
03/02/18	16:30:20	16:30:41	0:21	29999	03/02/18 15:50:29.032	~ 03/02/18 17:22:53.187	
03/03/03	15:11:44	15:12:16	0:32	30201	03/03/03 14:53:34.564	~ 03/03/03 16:25:58.099	
03/03/03	15:59:26	15:59:50	0:24	30201	03/03/03 14:53:34.564	~ 03/03/03 16:25:58.099	
03/03/11	15:57:20	15:58:00	0:40	30326	03/03/11 15:22:08.709	~ 03/03/11 16:54:31.937	
03/03/11	16:45:40	16:45:58	0:18	30326	03/03/11 15:22:08.709	~ 03/03/11 16:54:31.937	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
03/03/21	16:13:04	16:13:45	0:41	30482	03/03/21 15:34:31.441	~ 03/03/21 17:06:54.689	
03/03/21	16:59:25	16:59:48	0:23	30482	03/03/21 15:34:31.441	~ 03/03/21 17:06:54.689	
03/04/02	15:13:32	15:14:10	0:38	30668	03/04/02 13:59:19.729	~ 03/04/02 15:31:42.092	
03/04/02	15:59:49	16:00:16	0:27	30669	03/04/02 15:31:42.092	~ 03/04/02 17:04:06.220	
03/04/12	14:06:47	14:07:22	0:35	30823	03/04/12 12:39:21.109	~ 03/04/12 14:11:43.530	
03/04/12	14:53:06	14:53:30	0:24	30824	03/04/12 14:11:43.530	~ 03/04/12 15:44:07.609	
03/04/24	14:43:50	14:44:22	0:32	31011	03/04/24 14:09:06.370	~ 03/04/24 15:41:29.668	
03/04/24	15:30:04	15:30:28	0:24	31011	03/04/24 14:09:06.370	~ 03/04/24 15:41:29.668	
03/05/04	15:04:47	15:05:27	0:40	31167	03/05/04 14:21:54.696	~ 03/05/04 15:54:17.941	
03/05/04	15:51:12	15:51:29	0:17	31167	03/05/04 14:21:54.696	~ 03/05/04 15:54:17.941	
03/05/20	14:43:26	14:44:02	0:36	31416	03/05/20 13:46:38.530	~ 03/05/20 15:19:01.294	
03/05/20	15:29:44	15:30:11	0:27	31417	03/05/20 15:19:01.294	~ 03/05/20 16:51:25.710	
03/06/01	15:17:32	15:18:05	0:33	31604	03/06/01 15:16:18.343	~ 03/06/01 16:48:42.388	
03/06/01	16:03:50	16:04:10	0:20	31604	03/06/01 15:16:18.343	~ 03/06/01 16:48:42.388	
03/06/17	13:54:33	13:55:07	0:34	31852	03/06/17 13:09:05.591	~ 03/06/17 14:41:28.555	
03/06/17	14:40:55	14:41:10	0:15	31852	03/06/17 13:09:05.591	~ 03/06/17 14:41:28.555	
03/07/03	14:56:34	14:57:12	0:38	32102	03/07/03 14:06:29.644	~ 03/07/03 15:38:52.634	
03/07/03	15:42:52	15:43:17	0:25	32103	03/07/03 15:38:52.634	~ 03/07/03 17:11:17.047	
03/07/19	15:07:57	15:08:30	0:33	32352	03/07/19 15:04:23.524	~ 03/07/19 16:36:47.475	
03/07/19	15:54:14	15:54:35	0:21	32352	03/07/19 15:04:23.524	~ 03/07/19 16:36:47.475	
03/08/06	15:02:51	15:03:34	0:43	32632	03/08/06 14:13:06.034	~ 03/08/06 15:45:28.984	
03/08/06	15:49:16	15:49:35	0:19	32633	03/08/06 15:45:28.984	~ 03/08/06 17:17:53.339	
03/08/21	15:22:05	15:22:40	0:35	32866	03/08/21 14:32:31.532	~ 03/08/21 16:04:54.549	
03/08/21	16:07:00	16:07:23	0:23	32867	03/08/21 16:04:54.549	~ 03/08/21 17:37:18.894	
03/09/04	14:22:02	14:22:35	0:33	33084	03/09/04 14:13:44.882	~ 03/09/04 15:46:08.808	
03/09/04	15:08:21	15:08:42	0:21	33084	03/09/04 14:13:44.882	~ 03/09/04 15:46:08.808	
03/09/21	15:02:04	15:02:46	0:42	33349	03/09/21 14:17:15.909	~ 03/09/21 15:49:39.030	
03/09/21	15:48:27	15:48:44	0:17	33349	03/09/21 14:17:15.909	~ 03/09/21 15:49:39.030	
03/10/04	14:05:06	14:05:46	0:40	33551	03/10/04 13:19:53.676	~ 03/10/04 14:52:16.691	
03/10/04	14:51:25	14:51:51	0:26	33551	03/10/04 13:19:53.676	~ 03/10/04 14:52:16.691	
03/10/19	15:11:01	15:11:40	0:39	33785	03/10/19 13:39:05.962	~ 03/10/19 15:11:28.335	
03/10/19	15:57:22	15:57:43	0:21	33786	03/10/19 15:11:28.335	~ 03/10/19 16:43:52.366	
03/10/28	15:21:13	15:21:44	0:31	33926	03/10/28 14:46:21.916	~ 03/10/28 16:18:45.225	
03/10/28	16:07:26	16:07:51	0:25	33926	03/10/28 14:46:21.916	~ 03/10/28 16:18:45.225	
03/11/03	14:45:18	14:45:47	0:29	34019	03/11/03 13:58:30.608	~ 03/11/03 15:30:53.467	
03/11/03	15:42:20	15:42:46	0:26	34020	03/11/03 15:30:53.467	~ 03/11/03 17:03:17.578	
03/11/15	16:10:06	16:10:46	0:40	34207	03/11/15 15:27:23.436	~ 03/11/15 16:59:46.654	
03/11/15	17:02:06	17:02:28	0:22	34208	03/11/15 16:59:46.654	~ 03/11/15 18:32:11.075	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
03/11/25	15:33:51	15:34:26	0:35	34362	03/11/25 14:08:09.160	~ 03/11/25 15:40:31.677	
03/11/25	16:20:39	16:21:04	0:25	34363	03/11/25 15:40:31.677	~ 03/11/25 17:12:55.738	
03/12/06	16:24:41	16:25:18	0:37	34534	03/12/06 14:58:52.167	~ 03/12/06 16:31:14.566	
03/12/06	17:09:49	17:10:15	0:26	34535	03/12/06 16:31:14.566	~ 03/12/06 18:03:38.697	
03/12/23	15:46:26	15:47:09	0:43	34799	03/12/23 15:02:36.009	~ 03/12/23 16:34:59.127	
03/12/23	16:36:07	16:36:26	0:19	34800	03/12/23 16:34:59.127	~ 03/12/23 18:07:23.520	
04/01/08	15:13:27	15:14:04	0:37	35864	04/02/29 22:57:50.593	~ 04/03/01 00:30:13.163	
04/01/08	15:56:51	15:57:16	0:25	35864	04/02/29 22:57:50.593	~ 04/03/01 00:30:13.163	
04/01/25	16:03:50	16:04:25	0:35	35864	04/02/29 22:57:50.593	~ 04/03/01 00:30:13.163	
04/01/25	16:46:21	16:46:48	0:27	35864	04/02/29 22:57:50.593	~ 04/03/01 00:30:13.163	
04/02/13	15:03:10	15:03:51	0:41	35864	04/02/29 22:57:50.593	~ 04/03/01 00:30:13.163	
04/02/13	15:47:39	15:48:00	0:21	35864	04/02/29 22:57:50.593	~ 04/03/01 00:30:13.163	
04/03/02	16:25:02	16:25:39	0:37	35890	04/03/02 14:59:35.163	~ 04/03/02 16:31:57.581	
04/03/02	17:14:22	17:14:47	0:25	35891	04/03/02 16:31:57.581	~ 04/03/02 18:04:21.572	
04/03/20	16:28:04	16:28:34	0:30	36171	04/03/20 15:41:30.609	~ 04/03/20 17:13:53.434	
04/03/20	17:20:57	17:21:26	0:29	36172	04/03/20 17:13:53.434	~ 04/03/20 18:46:17.641	
04/04/03	16:06:13	16:06:54	0:41	36389	04/04/03 15:22:23.551	~ 04/04/03 16:54:46.743	
04/04/03	16:55:46	16:56:07	0:21	36390	04/04/03 16:54:46.743	~ 04/04/03 18:27:11.165	
04/04/20	15:19:01	15:19:39	0:38	36653	04/04/20 13:53:05.628	~ 04/04/20 15:25:28.067	
04/04/20	16:04:25	16:04:48	0:23	36654	04/04/20 15:25:28.067	~ 04/04/20 16:57:52.189	
04/05/11	14:09:42	14:10:17	0:35	36980	04/05/11 13:24:19.368	~ 04/05/11 14:56:42.313	
04/05/11	15:01:49	15:02:14	0:25	36981	04/05/11 14:56:42.313	~ 04/05/11 16:29:06.582	
04/06/02	14:58:44	14:59:15	0:31	37323	04/06/02 13:34:10.176	~ 04/06/02 15:06:32.735	
04/06/02	15:54:49	15:55:16	0:27	37324	04/06/02 15:06:32.735	~ 04/06/02 16:38:56.618	
04/08/12	14:31:57	14:33:02	1:05	38430	04/08/12 13:43:11.519	~ 04/08/12 15:15:31.770	
04/08/12	15:26:15	15:26:59	0:44	38431	04/08/12 15:15:31.770	~ 04/08/12 16:47:54.721	
04/08/20	14:56:38	14:57:13	0:35	38555	04/08/20 14:10:35.282	~ 04/08/20 15:42:58.248	
04/08/20	15:47:12	15:47:39	0:27	38556	04/08/20 15:42:58.248	~ 04/08/20 17:15:22.567	
04/09/12	14:51:19	14:51:56	0:37	38913	04/09/12 13:26:10.190	~ 04/09/12 14:58:32.643	
04/09/12	15:41:26	15:41:49	0:23	38914	04/09/12 14:58:32.643	~ 04/09/12 16:30:56.731	
04/10/05	14:58:45	14:59:26	0:41	39272	04/10/05 14:13:59.183	~ 04/10/05 15:46:22.374	
04/10/05	15:46:23	15:46:45	0:22	39273	04/10/05 15:46:22.374	~ 04/10/05 17:18:46.686	
04/10/25	14:32:50	14:33:25	0:35	39583	04/10/25 13:07:40.066	~ 04/10/25 14:40:02.539	
04/10/25	15:24:58	15:25:25	0:27	39584	04/10/25 14:40:02.539	~ 04/10/25 16:12:26.473	
04/11/11	14:37:43	14:38:18	0:35	39848	04/11/11 13:10:08.055	~ 04/11/11 14:42:29.947	
04/11/11	15:17:24	15:18:02	0:38	39849	04/11/11 14:42:29.947	~ 04/11/11 16:14:53.835	
04/11/28	13:58:14	13:58:53	0:39	40113	04/11/28 13:13:41.700	~ 04/11/28 14:46:04.863	
04/11/28	14:45:02	14:45:24	0:22	40113	04/11/28 13:13:41.700	~ 04/11/28 14:46:04.863	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
04/12/17	14:31:17	14:31:50	0:33	40409	04/12/17 13:01:01.066	~ 04/12/17 14:33:23.594	
04/12/17	15:14:48	15:15:12	0:24	40410	04/12/17 14:33:23.594	~ 04/12/17 16:05:47.676	
05/01/08	13:55:46	13:56:25	0:39	40752	05/01/08 13:10:59.765	~ 05/01/08 14:43:22.797	
05/01/08	14:43:20	14:43:41	0:21	40752	05/01/08 13:10:59.765	~ 05/01/08 14:43:22.797	
05/01/27	15:56:06	15:56:35	0:29	41049	05/01/27 14:30:57.907	~ 05/01/27 16:03:20.400	
05/01/27	16:47:57	16:48:20	0:23	41050	05/01/27 16:03:20.400	~ 05/01/27 17:35:44.346	
05/02/19	16:05:02	16:05:39	0:37	41408	05/02/19 15:19:48.296	~ 05/02/19 16:52:11.280	
05/02/19	17:00:08	17:00:34	0:26	41409	05/02/19 16:52:11.280	~ 05/02/19 18:24:35.585	
05/03/17	16:18:59	16:19:34	0:35	41813	05/03/17 14:58:14.316	~ 05/03/17 16:30:36.740	
05/03/17	17:12:02	17:12:18	0:16	41814	05/03/17 16:30:36.740	~ 05/03/17 18:03:00.821	
05/04/11	14:42:28	14:43:09	0:41	42202	05/04/11 13:57:50.320	~ 05/04/11 15:30:13.393	
05/04/11	15:31:00	15:31:21	0:21	42203	05/04/11 15:30:13.393	~ 05/04/11 17:02:37.779	
05/05/10	15:22:22	15:23:04	0:42	42654	05/05/10 13:57:24.954	~ 05/05/10 15:29:47.232	
05/05/10	16:11:46	16:12:11	0:25	42655	05/05/10 15:29:47.232	~ 05/05/10 17:02:11.342	
05/06/02	13:59:09	13:59:44	0:35	43012	05/06/02 13:13:21.477	~ 05/06/02 14:45:44.689	
05/06/02	14:38:20	14:38:42	0:22	43012	05/06/02 13:13:21.477	~ 05/06/02 14:45:44.689	
05/07/06	14:52:05	14:52:36	0:31	43543	05/07/06 14:51:40.281	~ 05/07/06 16:24:04.106	
05/07/06	15:34:31	15:35:01	0:30	43543	05/07/06 14:51:40.281	~ 05/07/06 16:24:04.106	
05/08/06	14:28:42	14:29:22	0:40	44025	05/08/06 13:03:12.985	~ 05/08/06 14:35:35.465	
05/08/06	15:17:32	15:17:54	0:22	44026	05/08/06 14:35:35.465	~ 05/08/06 16:07:59.577	
05/09/10	14:34:06	14:34:43	0:37	44571	05/09/10 13:48:50.096	~ 05/09/10 15:21:13.168	
05/09/10	15:18:36	15:19:01	0:25	44571	05/09/10 13:48:50.096	~ 05/09/10 15:21:13.168	
05/10/06	14:12:15	14:12:47	0:32	44976	05/10/06 13:25:50.136	~ 05/10/06 14:58:13.123	
05/10/06	15:03:17	15:03:45	0:28	44977	05/10/06 14:58:13.123	~ 05/10/06 16:30:37.436	
05/11/06	14:35:24	14:36:04	0:40	45459	05/11/06 13:10:11.564	~ 05/11/06 14:42:34.087	
05/11/06	15:25:45	15:26:07	0:22	45460	05/11/06 14:42:34.087	~ 05/11/06 16:14:58.185	
05/12/06	14:33:26	14:34:07	0:41	45927	05/12/06 13:49:19.209	~ 05/12/06 15:21:42.447	
05/12/06	15:21:25	15:21:44	0:19	45927	05/12/06 13:49:19.209	~ 05/12/06 15:21:42.447	
06/01/10	14:31:17	14:31:50	0:33	46472	06/01/10 13:01:47.674	~ 06/01/10 14:34:10.095	
06/01/10	15:13:23	15:13:52	0:29	46473	06/01/10 14:34:10.095	~ 06/01/10 16:06:34.088	
06/02/25	14:33:07	14:33:34	0:27	47189	06/02/25 13:05:22.976	~ 06/02/25 14:37:45.423	
06/02/25	15:14:12	15:14:48	0:36	47190	06/02/25 14:37:45.423	~ 06/02/25 16:10:09.426	
06/04/12	14:37:05	14:37:34	0:29	47906	06/04/12 13:09:15.496	~ 06/04/12 14:41:37.784	
06/04/12	15:17:46	15:18:22	0:36	47907	06/04/12 14:41:37.784	~ 06/04/12 16:14:01.727	
06/05/12	15:12:49	15:13:28	0:39	48374	06/05/12 13:47:43.944	~ 06/05/12 15:20:06.487	
06/05/12	16:04:38	16:05:01	0:23	48375	06/05/12 15:20:06.487	~ 06/05/12 16:52:30.548	
06/07/04	15:06:55	15:07:35	0:40	49200	06/07/04 13:41:00.854	~ 06/07/04 15:13:23.296	
06/07/04	15:51:36	15:51:59	0:23	49201	06/07/04 15:13:23.296	~ 06/07/04 16:45:47.419	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
06/09/03	15:32:08	15:32:36	0:28	50151	06/09/03 14:05:20.280	~ 06/09/03 15:37:42.775	
06/09/03	16:13:37	16:14:09	0:32	50152	06/09/03 15:37:42.775	~ 06/09/03 17:10:06.749	
06/10/20	14:01:18	14:01:49	0:31	50883	06/10/20 13:14:18.274	~ 06/10/20 14:46:41.176	
06/10/20	14:54:46	14:55:17	0:31	50884	06/10/20 14:46:41.176	~ 06/10/20 16:19:05.484	
06/11/29	15:32:01	15:32:38	0:37	51507	06/11/29 14:05:16.190	~ 06/11/29 15:37:38.581	
06/11/29	16:11:56	16:12:24	0:28	51508	06/11/29 15:37:38.581	~ 06/11/29 17:10:02.738	
07/01/06	15:05:34	15:06:10	0:36	52099	07/01/06 13:39:33.839	~ 07/01/06 15:11:56.344	
07/01/06	15:52:58	15:53:24	0:26	52100	07/01/06 15:11:56.344	~ 07/01/06 16:44:20.371	
07/02/25	14:36:50	14:37:30	0:40	52878	07/02/25 13:11:04.073	~ 07/02/25 14:43:26.574	
07/02/25	15:23:56	15:24:20	0:24	52879	07/02/25 14:43:26.574	~ 07/02/25 16:15:50.694	
07/04/14	14:26:34	14:27:11	0:37	53626	07/04/14 12:59:10.766	~ 07/04/14 14:31:33.286	
07/04/14	15:15:06	15:15:29	0:23	53627	07/04/14 14:31:33.286	~ 07/04/14 16:03:57.309	
07/06/09	14:41:47	14:42:19	0:32	54499	07/06/09 13:15:23.235	~ 07/06/09 14:47:45.764	
07/06/09	15:25:40	15:26:08	0:28	54500	07/06/09 14:47:45.764	~ 07/06/09 16:20:09.819	
07/08/28	14:51:20	14:51:53	0:33	55746	07/08/28 13:24:42.262	~ 07/08/28 14:57:04.731	
07/08/28	15:35:41	15:36:11	0:30	55747	07/08/28 14:57:04.731	~ 07/08/28 16:29:28.755	
07/10/31	14:57:45	14:58:17	0:32	56744	07/10/31 14:11:21.845	~ 07/10/31 15:43:44.875	
07/10/31	15:46:42	15:47:10	0:28	56745	07/10/31 15:43:44.875	~ 07/10/31 17:16:09.190	
08/01/01	14:25:56	14:26:37	0:41	57710	08/01/01 13:40:30.370	~ 08/01/01 15:12:53.471	
08/01/01	15:06:58	15:07:19	0:21	57710	08/01/01 13:40:30.370	~ 08/01/01 15:12:53.471	
08/03/06	14:56:40	14:57:16	0:36	58723	08/03/06 13:31:58.579	~ 08/03/06 15:04:21.102	
08/03/06	15:51:33	15:51:58	0:25	58724	08/03/06 15:04:21.102	~ 08/03/06 16:36:45.040	
08/04/25	14:31:17	14:31:55	0:38	59502	08/04/25 13:03:31.183	~ 08/04/25 14:35:53.680	
08/04/25	15:20:05	15:20:28	0:23	59503	08/04/25 14:35:53.680	~ 08/04/25 16:08:17.725	
08/07/25	15:12:45	15:13:22	0:37	60921	08/07/25 14:03:01.666	~ 08/07/25 15:35:24.174	
08/07/25	15:58:51	15:59:16	0:25	60922	08/07/25 15:35:24.174	~ 08/07/25 17:07:46.671	
08/10/28	14:31:17	14:31:53	0:36	62401	08/10/28 13:02:41.015	~ 08/10/28 14:35:03.481	
08/10/28	15:21:03	15:21:31	0:28	62402	08/10/28 14:35:03.481	~ 08/10/28 16:07:27.417	
09/01/09	14:07:18	14:07:56	0:38	63539	09/01/09 13:21:59.672	~ 09/01/09 14:54:22.708	
09/01/09	14:55:43	14:56:08	0:25	63540	09/01/09 14:54:22.708	~ 09/01/09 16:26:46.971	
09/03/30	15:00:56	15:01:29	0:33	64786	09/03/30 13:34:01.312	~ 09/03/30 15:06:23.862	
09/03/30	15:40:05	15:40:31	0:26	64787	09/03/30 15:06:23.862	~ 09/03/30 16:38:47.984	
09/06/23	15:15:18	15:15:52	0:34	66111	09/06/23 13:49:04.718	~ 09/06/23 15:21:27.226	
09/06/23	16:01:57	16:02:25	0:28	66112	09/06/23 15:21:27.226	~ 09/06/23 16:53:51.273	
09/10/03	15:38:05	15:38:41	0:36	67701	09/10/03 14:11:37.334	~ 09/10/03 15:43:59.817	
09/10/03	16:20:39	16:21:05	0:26	67702	09/10/03 15:43:59.817	~ 09/10/03 17:16:23.974	
09/12/04	14:27:47	14:28:19	0:32	68667	09/12/04 13:41:29.009	~ 09/12/04 15:13:51.953	
09/12/04	15:20:16	15:20:45	0:29	68668	09/12/04 15:13:51.953	~ 09/12/04 16:46:16.179	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
10/02/02	14:12:55	14:13:34	0:39	69602	10/02/02 13:27:16.434	~ 10/02/02 14:59:39.611	
10/02/02	14:52:34	14:52:55	0:21	69602	10/02/02 13:27:16.434	~ 10/02/02 14:59:39.611	
10/03/10	15:15:00	15:15:34	0:34	70164	10/03/10 14:50:37.387	~ 10/03/10 16:23:00.842	
10/03/10	15:55:44	15:56:11	0:27	70164	10/03/10 14:50:37.387	~ 10/03/10 16:23:00.842	
10/04/10	17:31:36	17:32:16	0:40	70648	10/04/10 16:07:40.030	~ 10/04/10 17:40:02.579	
10/04/10	18:20:31	18:20:52	0:21	70649	10/04/10 17:40:02.579	~ 10/04/10 19:12:26.726	
10/05/21	14:31:15	14:31:50	0:35	71285	10/05/21 12:59:50.023	~ 10/05/21 14:32:12.550	
10/05/21	15:19:06	15:19:32	0:26	71286	10/05/21 14:32:12.550	~ 10/05/21 16:04:36.527	
10/07/23	14:33:57	14:34:26	0:29	72267	10/07/23 13:06:41.180	~ 10/07/23 14:39:03.696	
10/07/23	15:16:03	15:16:35	0:32	72268	10/07/23 14:39:03.696	~ 10/07/23 16:11:27.671	
10/09/07	16:09:25	16:09:53	0:28	72985	10/09/07 14:41:45.938	~ 10/09/07 16:14:08.353	
10/09/07	16:51:10	16:51:45	0:35	72986	10/09/07 16:14:08.353	~ 10/09/07 17:46:32.319	
10/10/14	18:08:44	18:09:27	0:43	73563	10/10/14 16:43:13.500	~ 10/10/14 18:15:35.930	
10/10/14	18:54:33	18:54:56	0:23	73564	10/10/14 18:15:35.930	~ 10/10/14 19:48:00.092	
10/11/15	14:46:25	14:47:03	0:38	74060	10/11/15 14:00:57.976	~ 10/11/15 15:33:21.023	
10/11/15	15:33:51	15:34:18	0:27	74061	10/11/15 15:33:21.023	~ 10/11/15 17:05:45.434	
10/12/21	14:36:52	14:37:31	0:39	74621	10/12/21 13:51:29.908	~ 10/12/21 15:23:52.873	
10/12/21	15:25:35	15:26:00	0:25	74622	10/12/21 15:23:52.873	~ 10/12/21 16:56:17.146	
11/02/02	16:33:09	16:33:32	0:23	75292	11/02/02 15:05:09.319	~ 11/02/02 16:37:31.790	
11/02/02	17:11:38	17:12:15	0:37	75293	11/02/02 16:37:31.790	~ 11/02/02 18:09:55.663	
11/03/02	15:48:46	15:49:25	0:39	75728	11/03/02 14:27:40.590	~ 11/03/02 16:00:03.192	
11/03/02	16:41:57	16:42:18	0:21	75729	11/03/02 16:00:03.192	~ 11/03/02 17:32:27.271	
11/03/18	15:19:29	15:19:58	0:29	75977	11/03/18 13:53:06.938	~ 11/03/18 15:25:29.645	
11/03/18	16:01:54	16:02:21	0:27	75978	11/03/18 15:25:29.645	~ 11/03/18 16:57:53.721	
11/04/05	13:48:25	13:49:10	0:45	76257	11/04/05 13:02:51.117	~ 11/04/05 14:35:14.213	
11/04/05	14:28:37	14:28:57	0:20	76257	11/04/05 13:02:51.117	~ 11/04/05 14:35:14.213	
11/04/19	15:41:23	15:41:59	0:36	76476	11/04/19 14:15:47.311	~ 11/04/19 15:48:09.762	
11/04/19	16:30:17	16:30:44	0:27	76477	11/04/19 15:48:09.762	~ 11/04/19 17:20:33.783	
11/05/07	14:51:44	14:52:14	0:30	76756	11/05/07 13:24:59.977	~ 11/05/07 14:57:22.389	
11/05/07	15:33:29	15:34:02	0:33	76757	11/05/07 14:57:22.389	~ 11/05/07 16:29:46.340	
11/05/31	14:03:11	14:03:44	0:33	77130	11/05/31 13:18:34.140	~ 11/05/31 14:50:57.166	
11/05/31	14:41:52	14:42:23	0:31	77130	11/05/31 13:18:34.140	~ 11/05/31 14:50:57.166	
11/06/28	13:24:13	13:24:53	0:40	77566	11/06/28 12:39:59.447	~ 11/06/28 14:12:22.503	
11/06/28	14:14:36	14:14:58	0:22	77567	11/06/28 14:12:22.503	~ 11/06/28 15:44:46.727	
11/07/30	14:28:25	14:29:06	0:41	78065	11/07/30 13:02:46.738	~ 11/07/30 14:35:09.262	
11/07/30	15:13:03	15:13:23	0:20	78066	11/07/30 14:35:09.262	~ 11/07/30 16:07:33.458	
11/08/26	14:05:11	14:05:45	0:34	78486	11/08/26 13:19:48.624	~ 11/08/26 14:52:11.830	
11/08/26	14:48:39	14:49:02	0:23	78486	11/08/26 13:19:48.624	~ 11/08/26 14:52:11.830	

# TRMM Delta-V Maneuver Operation

May 2, 2012

Delta-V information				Orbit Information			comments
Date	Start Time	End Time	Duration	Orbit No.	Observation Time		
11/09/15	15:11:07	15:11:48	0:41	78798	11/09/15 13:45:28.103	~ 11/09/15 15:17:50.470	
11/09/15	15:58:04	15:58:31	0:27	78799	11/09/15 15:17:50.470	~ 11/09/15 16:50:14.634	
11/09/29	14:12:38	14:13:14	0:36	79016	11/09/29 13:26:36.304	~ 11/09/29 14:58:59.197	
11/09/29	15:05:09	15:05:37	0:28	79017	11/09/29 14:58:59.197	~ 11/09/29 16:31:23.427	
11/10/11	14:07:25	14:08:10	0:45	79203	11/10/11 13:23:31.857	~ 11/10/11 14:55:55.050	
11/10/11	14:56:11	14:56:32	0:21	79204	11/10/11 14:55:55.050	~ 11/10/11 16:28:19.473	
11/10/20	13:44:31	13:45:01	0:30	79343	11/10/20 12:58:33.514	~ 11/10/20 14:30:56.657	
11/10/20	14:29:49	14:30:15	0:26	79343	11/10/20 12:58:33.514	~ 11/10/20 14:30:56.657	
11/10/27	14:14:30	14:15:08	0:38	79452	11/10/27 12:49:19.359	~ 11/10/27 14:21:42.172	
11/10/27	15:02:19	15:02:38	0:19	79453	11/10/27 14:21:42.172	~ 11/10/27 15:54:06.396	
11/11/07	15:06:20	15:06:59	0:39	79624	11/11/07 13:40:20.481	~ 11/11/07 15:12:42.777	
11/11/07	15:51:00	15:51:29	0:29	79625	11/11/07 15:12:42.777	~ 11/11/07 16:45:06.818	
11/11/15	15:37:17	15:37:40	0:23	79749	11/11/15 14:09:00.333	~ 11/11/15 15:41:22.630	
11/11/15	16:16:56	16:17:39	0:43	79750	11/11/15 15:41:22.630	~ 11/11/15 17:13:46.485	
11/11/22	13:15:00	13:15:29	0:29	79857	11/11/22 12:27:24.710	~ 11/11/22 13:59:47.791	
11/11/22	14:15:53	14:16:18	0:25	79858	11/11/22 13:59:47.791	~ 11/11/22 15:32:11.977	
11/11/30	13:40:31	13:41:06	0:35	79982	11/11/30 12:56:23.455	~ 11/11/30 14:28:46.739	
11/11/30	14:34:21	14:34:45	0:24	79983	11/11/30 14:28:46.739	~ 11/11/30 16:01:11.162	
11/12/07	15:45:22	15:45:53	0:31	80092	11/12/07 14:19:40.116	~ 11/12/07 15:52:02.980	
11/12/07	16:35:34	16:35:58	0:24	80093	11/12/07 15:52:02.980	~ 11/12/07 17:24:27.098	
11/12/16	15:19:18	15:19:57	0:39	80232	11/12/16 13:54:27.896	~ 11/12/16 15:26:50.595	
11/12/16	16:06:40	16:07:00	0:20	80233	11/12/16 15:26:50.595	~ 11/12/16 16:59:14.808	
11/12/29	15:56:38	15:57:07	0:29	80435	11/12/29 14:29:44.511	~ 11/12/29 16:02:06.965	
11/12/29	16:37:51	16:38:25	0:34	80436	11/12/29 16:02:06.965	~ 11/12/29 17:34:30.935	
12/01/10	15:09:11	15:09:51	0:40	80622	12/01/10 14:26:52.359	~ 12/01/10 15:59:15.694	
12/01/10	16:02:44	16:03:02	0:18	80623	12/01/10 15:59:15.694	~ 12/01/10 17:31:40.072	
12/01/24	14:54:38	14:55:11	0:33	80840	12/01/24 14:08:23.929	~ 12/01/24 15:40:47.023	
12/01/24	15:38:36	15:39:03	0:27	80840	12/01/24 14:08:23.929	~ 12/01/24 15:40:47.023	
12/02/08	15:54:08	15:54:41	0:33	81074	12/02/08 14:27:35.101	~ 12/02/08 15:59:57.708	
12/02/08	16:35:30	16:35:55	0:25	81075	12/02/08 15:59:57.708	~ 12/02/08 17:32:21.807	
12/02/23	15:30:47	15:31:31	0:44	81308	12/02/23 14:47:11.752	~ 12/02/23 16:19:34.980	
12/02/23	16:19:10	16:19:26	0:16	81308	12/02/23 14:47:11.752	~ 12/02/23 16:19:34.980	
12/03/08	15:14:01	15:14:42	0:41	81526	12/03/08 14:28:29.298	~ 12/03/08 16:00:52.444	
12/03/08	16:00:16	16:00:40	0:24	81526	12/03/08 14:28:29.298	~ 12/03/08 16:00:52.444	
12/03/21	15:00:37	15:01:18	0:41	81728	12/03/21 13:30:59.376	~ 12/03/21 15:03:21.789	
12/03/21	15:45:55	15:46:18	0:23	81729	12/03/21 15:03:21.789	~ 12/03/21 16:35:45.876	
12/04/04	17:56:01	17:56:27	0:26	81949	12/04/04 17:49:21.329	~ 12/04/04 19:21:45.025	
12/04/04	18:34:43	18:35:19	0:36	81949	12/04/04 17:49:21.329	~ 12/04/04 19:21:45.025	

