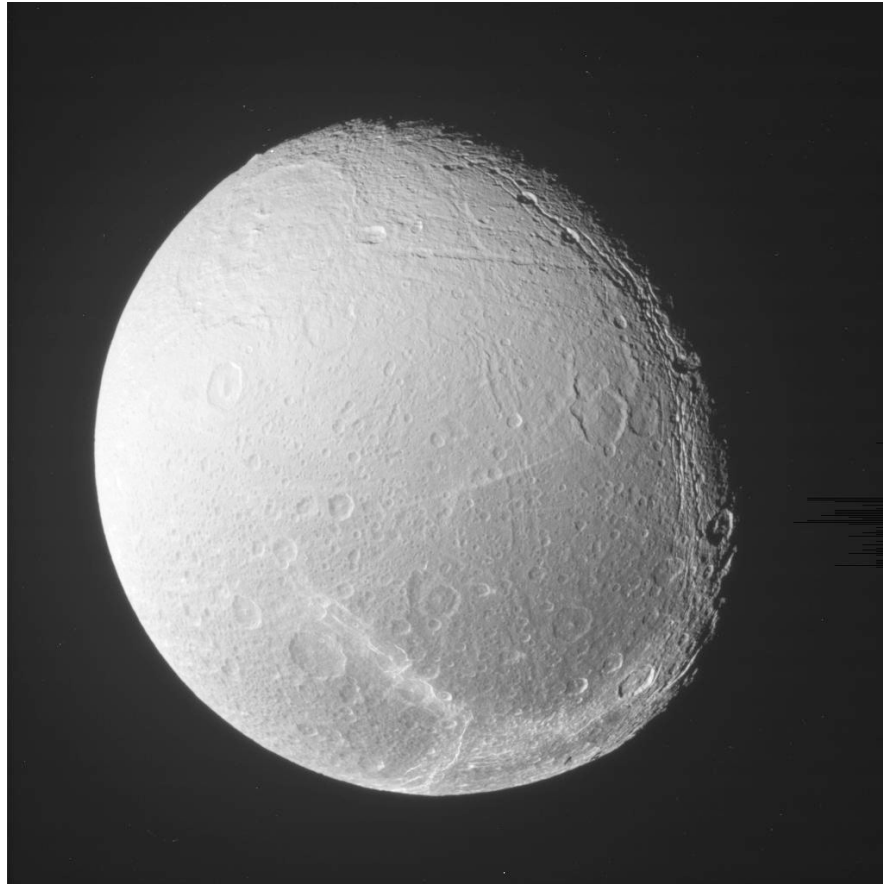


CASSINI



DIONE - 1

MISSION DESCRIPTION

October 2005

Jet Propulsion Laboratory
California Institute of Technology

1.0 OVERVIEW

October of 2005 continues with the amazing string of close icy satellite encounters. As September included closest-ever encounters with Tethys and Hyperion, October contains the single targeted encounter at Dione. Dione is uniquely identified with its curious wispy terrain (see cover) and was discovered in 1684. Mythically, Dione is a bit complicated. She was identified as a daughter of Tethys as one of the Okeanides (the “light-stepping” sea nymphs), but also mentioned as a daughter of Ouranos and Gaea (making her a Titaness) and even the wife of Zeus. Dione was discovered by Jean-Dominique Cassini (after whom our orbiter is named) in 1684.

The closest approach to Dione occurs on Tuesday, October 11th, at 17:52 spacecraft time (12:10 PM Pacific Time) at an altitude of 500 km (310 miles) above the surface and at a speed of 9 kilometers per second (20,000 mph). Dione has a diameter of 1120 km (700 miles), making it the third-largest icy satellite (after Iapetus and Rhea). Dione is spherical in shape.

This encounter is set up with two maneuvers: an apoapsis maneuver scheduled for October 1st, and an approach maneuver, scheduled for October 8th. The encounter itself occurs very near periapsis to Saturn. The cleanup maneuver for the flyby contains a large deterministic component (targeting for future encounters) and occurs less than a day after the encounter.

Occurring on orbit 16, Dione will be the seventh close encounter with icy satellites, after Phoebe, Enceladus (orbit 3, non-targeted), Enceladus (orbit 4), Enceladus again (orbit 11), Tethys (orbit 15, non-targeted) and Hyperion (also orbit 15). (It could be argued that the study of Iapetus on orbit C was intense enough even at 120,000 km to merit inclusion in this list, making this encounter the eighth.)

1.1 ABOUT DIONE

Dione is one of the suite of medium-sized icy moons in orbit around Saturn. Dione orbits Saturn at 6.26 Saturn radii, or 377,400 km. Like most of the other icy saturnian satellites, Dione’s surface is heavily cratered, suggesting that recent resurfacing has not occurred over most of the body, and that it is geologically old. However, Dione is unique among the icy satellites because of its “wispy terrain” that dominates the trailing hemisphere. This terrain is characterized by white streaks that are in striking contrast to the surrounding darker icy surface. The wispy terrain was first seen in Voyager images and was proposed to be due to endogenic activity such as ice volcanism that emplaced material onto the surface; this suggested that Dione was geologically active in the relatively recent past. Cassini images from the December 2004 (84,000 km) showed that, contrary to being due to volcanic activity, the streaks on Dione were a complex series of cracks and fractures, likely due to tectonic activity at some point in the past. The fracturing of this region on Dione must have occurred more recently than much of the heavy bombardment of the body, as the cracks cut across existing craters in some places.

Dione’s primary surface constituent is water ice, similar to the other icy satellites of Saturn. There is a distinct brightness difference between leading and trailing hemispheres, where the leading trailing is significantly brighter than the trailing hemisphere at visible wavelengths. With a density of 1.47 g/cm³, Dione is denser than most of the other icy satellites and may have experienced the effects of internal heat in its past.

Dione orbits Saturn within the broad, tenuous E-ring. At this point, it is not believed that Dione is a source of the E ring particles. However, Dione’s surface is likely affected by bombardment and/or coating of the surface by the tiny E ring grains.

1.2 DIONE SCIENCE ACTIVITIES

The October 11 2005 flyby of Dione represents the single close encounter to Dione during the Cassini mission, and will provide the best-ever views of this curious satellite. The flyby geometry is oriented such that Dione's wispy terrain is easily observable by the remote-sensing instruments on Cassini. The primary science investigations will be centered around the following questions: What is the compositional makeup of Dione, other than water ice? Did resurfacing occur early in Dione's history? What do the cracks and fractures tell us about the recent geologic history of Dione? How does Dione interact with Saturn's rings and magnetosphere?

CAPS will make measurements of the plasma environment around Dione to understand its effects, if any, on the surround Saturn magnetosphere. During this upstream flyby, CAPS will control the pointing of the spacecraft during the closest-approach period, in order to obtain the most diagnostic measurements possible, close to the surface.

CIRS will perform scans of the disk of Dione to measure daytime and nighttime temperatures. These measurements will constrain the bolometric albedo, the thermal inertial and volatile stability of the surface. In particular, given the relatively fresh fractures across one hemisphere of Dione, endogenic emission would be an exciting find.

For ISS, this Dione flyby provides an opportunity to capture the best images of the cracked wispy terrain to get a better idea of the scale of the features and grain size variations that may be causing the dramatic brightness differences. Furthermore, high resolution images of Dione will enable researchers to study other areas of the body that have not been well observed by Cassini or Voyager. ISS will perform a mosaic on the inbound leg (111,000 km) for regional mapping. Closer to the surface, ISS will obtain images in different filter of the anti-Saturnian hemisphere and will perform crescent imaging on the outbound leg.

RPWS will look for evidence of a plasma source at Dione. The RPWS data will be used to examine the plasma wave spectrum for evidence of magnetosphere-moon interactions. RPWS measurements will also be used to look for the signature of dust impacts.

UVIS will observe Dione to look for evidence of a tenuous atmosphere. UVIS will also map the surface to look for brightness variations at far-UV wavelenegths, indicative of compositional variations and/or grain size variations.

Measurements by VIMS will investigate surface composition. VIMS will identify minerals and other non-water ice species in the surface of Dione. VIMS measurements will also be used to understand grain size variations across the surface.

1.3 DIONE DATA PRODUCTS

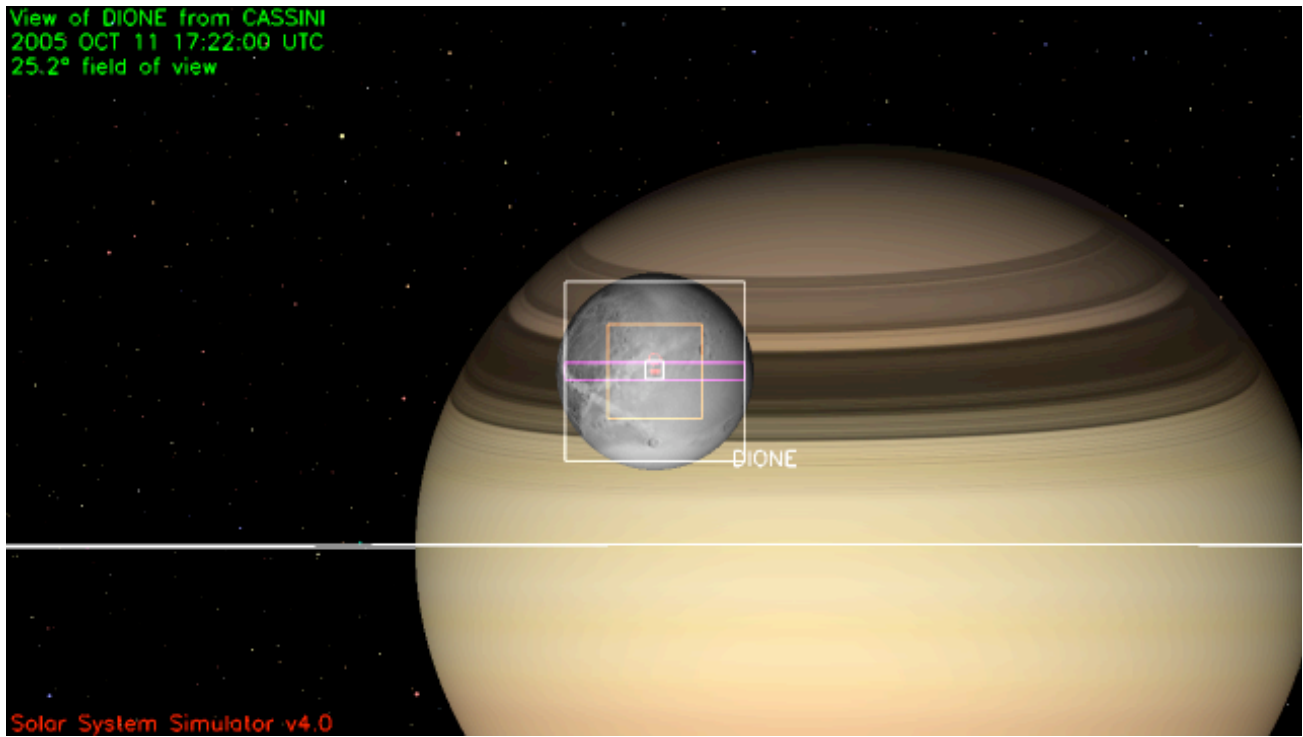
A time ordered description of the Dione activities, sample snapahots from the encounter, and data playback schedule are shown on the following pages.

One-way light time at the time of the encounters is 1 hour and 18 minutes.

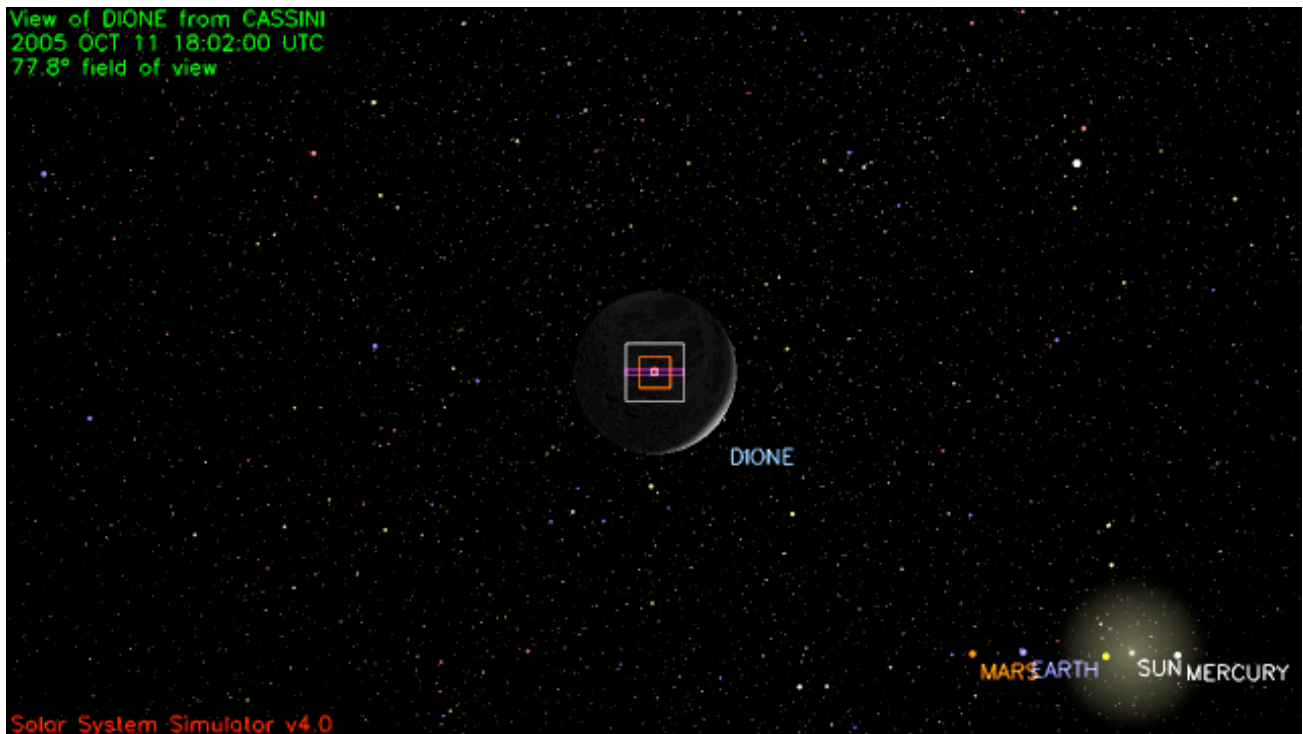
Cassini Dione-15 Timeline - October 2005

Colors: yellow = maneuvers; blue = geometry; pink = 016DI-ORS-related; light green=non-satellite science; orange=RADAR; green = data playbacks

Orbiter UTC	Ground UTC	Pacific Time	Time wrt 016DI	Activity	Description
281T12:30:00	Oct 08 13:48	Sat Oct 08 06:48 AM	DI-03d05h	Start of Sequence S15	Start of Sequence which contains Dione-16.
281T03:30:00	Oct 08 04:48	Fri Oct 07 09:48 PM	DI-03d14h	OTM #37 Prime	Dione-16 approach targeting maneuver
282T09:11:00	Oct 09 10:29	Sun Oct 09 03:29 AM	DI-02d09h	OTM #37 Backup	
283T18:27:00	Oct 10 19:45	Mon Oct 10 12:45 PM	DI-23h25m	Start of the SOST Segment	
283T20:26:00	Oct 10 21:44	Mon Oct 10 02:44 PM	DI-21h26m	turn cameras to Dione	
283T20:27:00	Oct 10 21:45	Mon Oct 10 02:45 PM	DI-21h25m	Saturn observation	UVIS EUV-FUV map
283T23:00:00	Oct 11 00:18	Mon Oct 10 05:18 PM	DI-18h52m	Inbound Dione ORS observations (distant)	Images, compositional and temperature maps between 805,000 km and 265,000 km
284T10:28:00	Oct 11 11:46	Tue Oct 11 04:46 AM	DI-07h24m	Deadtime	15 minutes long; used to accommodate changes in flyby time
284T10:43:06	Oct 11 12:01	Tue Oct 11 05:01 AM	DI-07h09m	turn to Earth	
284T11:02:06	Oct 11 12:20	Tue Oct 11 05:20 AM	DI-06h50m	short downlink of data	2 hr downlink - Goldstone 34M; also Radio Science Dione Mass determination
284T13:04:02	Oct 11 14:22	Tue Oct 11 07:22 AM	DI-04h48m	turn to Telesto	Telesto is used as the waypoint during Dione flyby period
284T13:22:02	Oct 11 14:40	Tue Oct 11 07:40 AM	DI-04h30m	turn to Dione and begin high-res ORS observations	Compositional information and maps between 150,000 km and 3500 km
284T17:44:02	Oct 11 19:02	Tue Oct 11 12:02 PM	DI-00h08m	CAPS Dione measurements	
284T17:52:01.82	Oct 11 19:10	Tue Oct 11 12:10 PM	DI+00h00m	Dione-16 Flyby Closest Approach Time	Altitude = 500 km (310.7 miles), speed = 9.1 km/s (20,356 mph); low phase inbound, 66.4 deg phase at closest approach, high phase outbound
284T18:07:22	Oct 11 19:25	Tue Oct 11 12:25 PM	DI+00h15m	outbound Dione ORS	crest images and nightside temperature map between 12,000 km and 49,000 km
284T19:22:02	Oct 11 20:40	Tue Oct 11 01:40 PM	DI+01h30m	ORS Telesto observations	best Telesto opportunity in the tour: observations as closes as 9750 km
284T20:22:02	Oct 11 21:40	Tue Oct 11 02:40 PM	DI+02h30m	turn HGA to Dione	
284T20:52:02	Oct 11 22:10	Tue Oct 11 03:10 PM	DI+03h00m	RADAR scatterometry and radiometry of Dione	
284T20:36:02	Oct 11 21:54	Tue Oct 11 02:54 PM	DI+02h44m	Deadtime	15 minutes long; used to accommodate changes in flyby time
284T23:50:56	Oct 12 01:08	Tue Oct 11 06:08 PM	DI+05h58m	turn to Earth	
285T00:00:56	Oct 12 01:18	Tue Oct 11 06:18 PM	DI+06h08m	Begin playback of Dione data	8.5 hr downlink - Canberra + Madrid 34M; also Radio Science Dione Mass determination
285T08:25:00	Oct 12 09:43	Wed Oct 12 02:43 AM	DI+14h33m	turn to safe spacecraft attitude	dust crossing - HGA to dust ram direction



Approach (closest approach – 30 min)



Departure (closest approach + 10 min)

016DI (D1) Playback Timeline

Created Sept. 29, 2005

Event or Observation	Observation Type (APGEN)	Observation Record Start Time (yyyy-dddThh:mm:ss) (SCET)	Start Time - Reference Epoch (ddThh:mm)	Start Playback (Ground UTC)		Start Playback (Pacific Time)	
				Best Estimate	Latest Possible	Best Estimate	Latest Possible
CAPS_016SA_SURVEY001_RIDER	CAPS_16000	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
CAPS_016SA_SURVEY003_RIDER	CAPS_16000	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
CDA_016RI_1600RINGM011_RIDER	CDA_524	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
INMS_016SA_SURVEY002_RIDER	INMS_1498	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
INMS_016SA_SURVEY005_RIDER	INMS_1498	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
MAG_016OT_SURVEY002_PRIME	MAG_1976	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
MAG_016OT_SURVEY004_PRIME	MAG_1976	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
MIMI_016CO_SURVEY001_RIDER	MIMI_8000	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
RPWS_016SA_OUTSURVEY003_PRIME	RPWS_30464	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
RPWS_016SA_OUTSURVEY005_PRIME	RPWS_30464	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
RSS_016DI_KADOWN001_RSS	RSS_Activity	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
UVIS_016SW_IPHSURVEY014_RIDER	UVIS_5032	2005-283T18:27:00	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
CDA_016DR_1500DUST074_RIDER	CDA_524	2005-283T18:27:01	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
MIMI_016CO_SURVEY004_RIDER	MIMI_8000	2005-283T18:27:01	-00T23:25	11-Oct Tue 12:47 PM	Tue 12:48 PM	11-Oct Tue 05:47 AM	Tue 05:48 AM
UVIS_016SA_EUVFUV001_PRIME	UVIS_5032	2005-283T20:27:00	-00T21:25	11-Oct Tue 01:12 PM	Tue 01:16 PM	11-Oct Tue 06:12 AM	Tue 06:16 AM
VIMS_016SA_EUVFUV001_UVIS	VIMS_18432	2005-283T20:27:00	-00T21:25	11-Oct Tue 01:12 PM	Tue 01:16 PM	11-Oct Tue 06:12 AM	Tue 06:16 AM
RPWS_016SA_INSURVEY001_PRIME	RPWS_30464	2005-283T22:45:00	-00T19:07	11-Oct Tue 02:13 PM	Wed 02:30 AM	11-Oct Tue 07:13 AM	Tue 07:30 PM
ISS_016DI_ICYLON001_UVIS	ISS_Phot_1_by_1	2005-283T23:00:00	-00T18:52	11-Oct Tue 02:19 PM	Wed 02:45 AM	11-Oct Tue 07:19 AM	Tue 07:45 PM
UVIS_016DI_ICYLON001_PRIME	UVIS_5032	2005-283T23:00:00	-00T18:52	11-Oct Tue 02:19 PM	Wed 02:45 AM	11-Oct Tue 07:19 AM	Tue 07:45 PM
CDA_016RI_1400RINGM009_RIDER	CDA_524	2005-283T23:07:56	-00T18:44	12-Oct Wed 01:26 AM	Wed 02:49 AM	11-Oct Tue 06:26 PM	Tue 07:49 PM
CIRS_016DI_ICYLON001_UVIS	CIRS_4000	2005-284T00:00:00	-00T17:52	12-Oct Wed 02:08 AM	Wed 03:17 AM	11-Oct Tue 07:08 PM	Tue 08:17 PM
CDA_016DR_1300DUST075_RIDER	CDA_524	2005-284T01:08:56	-00T16:43	12-Oct Wed 02:48 AM	Wed 03:53 AM	11-Oct Tue 07:48 PM	Tue 08:53 PM
UVIS_016DI_ICYLON003_VIMS	UVIS_5032	2005-284T01:45:00	-00T16:07	12-Oct Wed 03:07 AM	Wed 04:10 AM	11-Oct Tue 08:07 PM	Tue 09:10 PM
VIMS_016DI_DIONE201_PRIME	VIMS_18432	2005-284T01:45:00	-00T16:07	12-Oct Wed 03:07 AM	Wed 04:10 AM	11-Oct Tue 08:07 PM	Tue 09:10 PM
CDA_016RI_1200RINGM009_RIDER	CDA_524	2005-284T04:07:25	-00T13:44	12-Oct Wed 03:53 AM	Wed 05:19 AM	11-Oct Tue 08:53 PM	Tue 10:19 PM
CIRS_016DI_FP3INT001_PRIME	CIRS_4000	2005-284T05:15:00	-00T12:37	12-Oct Wed 04:14 AM	Wed 05:51 AM	11-Oct Tue 09:14 PM	Tue 10:51 PM
UVIS_016DI_ICYLON004_CIRS	UVIS_5032	2005-284T05:15:00	-00T12:37	12-Oct Wed 04:14 AM	Wed 05:51 AM	11-Oct Tue 09:14 PM	Tue 10:51 PM
VIMS_016DI_DIONE313_CIRS	VIMS_18432	2005-284T05:15:00	-00T12:37	12-Oct Wed 04:14 AM	Wed 05:51 AM	11-Oct Tue 09:14 PM	Tue 10:51 PM
INMS_016DI_DIIBNSURV001_RIDER	INMS_1498	2005-284T05:51:56	-00T12:00	12-Oct Wed 04:29 AM	Wed 06:11 AM	11-Oct Tue 09:29 PM	Tue 11:11 PM
CIRS_016DI_DIONE302_VIMS	CIRS_4000	2005-284T05:58:00	-00T11:54	12-Oct Wed 04:32 AM	Wed 06:14 AM	11-Oct Tue 09:32 PM	Tue 11:14 PM
UVIS_016DI_ICYLON005_VIMS	UVIS_5032	2005-284T05:58:00	-00T11:54	12-Oct Wed 04:32 AM	Wed 06:14 AM	11-Oct Tue 09:32 PM	Tue 11:14 PM
VIMS_016DI_DIONE302_PRIME	VIMS_18432	2005-284T05:58:00	-00T11:54	12-Oct Wed 04:32 AM	Wed 06:14 AM	11-Oct Tue 09:32 PM	Tue 11:14 PM
CDA_016DR_1100DUST076_RIDER	CDA_524	2005-284T06:08:24	-00T11:43	12-Oct Wed 04:36 AM	Wed 06:22 AM	11-Oct Tue 09:36 PM	Tue 11:22 PM
CIRS_016DI_FP3MAP004_PRIME	CIRS_4000	2005-284T07:38:00	-00T10:14	12-Oct Wed 05:18 AM	Wed 07:24 AM	11-Oct Tue 10:18 PM	Wed 12:24 AM
UVIS_016DI_ICYLON006_CIRS	UVIS_5032	2005-284T07:38:00	-00T10:14	12-Oct Wed 05:18 AM	Wed 07:24 AM	11-Oct Tue 10:18 PM	Wed 12:24 AM
VIMS_016DI_DIONE101_CIRS	VIMS_18432	2005-284T07:38:00	-00T10:14	12-Oct Wed 05:18 AM	Wed 07:24 AM	11-Oct Tue 10:18 PM	Wed 12:24 AM
CIRS_016DI_OR001_RIDER	CIRS_4000	2005-284T08:38:00	-00T09:14	12-Oct Wed 05:47 AM	Wed 08:07 AM	11-Oct Tue 10:47 PM	Wed 01:07 AM
UVIS_016DI_ICYLON007_VIMS	UVIS_5032	2005-284T08:38:00	-00T09:14	12-Oct Wed 05:47 AM	Wed 08:07 AM	11-Oct Tue 10:47 PM	Wed 01:07 AM
VIMS_016DI_DIONE002_PRIME	VIMS_18432	2005-284T08:38:00	-00T09:14	12-Oct Wed 05:47 AM	Wed 08:07 AM	11-Oct Tue 10:47 PM	Wed 01:07 AM
RSS_016DI_THERMAL001_RSS	RSS_Activity	2005-284T09:02:06	-00T08:49	12-Oct Wed 05:58 AM	Wed 08:24 AM	11-Oct Tue 10:58 PM	Wed 01:24 AM

016DI (D1) Playback Timeline

Created Sept. 29, 2005

Event or Observation	Observation Type (APGEN)	Observation Record Start Time (yyyy-dddThh:mm:ss) (SCET)	Start Time - Reference Epoch (ddThh:mm)	Start Playback (Ground UTC)		Start Playback (Pacific Time)	
				Best Estimate	Latest Possible	Best Estimate	Latest Possible
CDA_016RI_1000RINGM009_RIDER	CDA_524	2005-284T09:15:19	-00T08:36	12-Oct Wed 06:05 AM	Wed 08:34 AM	11-Oct Tue 11:05 PM	Wed 01:34 AM
UVIS_016DI_ICYLON008_PRIME	UVIS_5032	2005-284T09:28:00	-00T08:24	12-Oct Wed 06:11 AM	Wed 08:43 AM	11-Oct Tue 11:11 PM	Wed 01:43 AM
VIMS_016DI_DIONE103_UVIS	VIMS_18432	2005-284T09:28:00	-00T08:24	12-Oct Wed 06:11 AM	Wed 08:43 AM	11-Oct Tue 11:11 PM	Wed 01:43 AM
ISS_016DI_GLOCOL001_PRIME	ISS_Phot_1_by_1	2005-284T09:48:00	-00T08:04	12-Oct Wed 06:23 AM	Wed 09:01 AM	11-Oct Tue 11:23 PM	Wed 02:01 AM
UVIS_016DI_ICYLON009_ISS	UVIS_5032	2005-284T09:48:00	-00T08:04	12-Oct Wed 06:23 AM	Wed 09:01 AM	11-Oct Tue 11:23 PM	Wed 02:01 AM
VIMS_016DI_DIONE104_ISS	VIMS_18432	2005-284T09:48:00	-00T08:04	12-Oct Wed 06:23 AM	Wed 09:01 AM	11-Oct Tue 11:23 PM	Wed 02:01 AM
CDA_016DR_1000DUST077_RIDER	CDA_524	2005-284T10:06:19	-00T07:45	12-Oct Wed 07:43 AM	Wed 11:31 AM	12-Oct Wed 12:43 AM	Wed 04:31 AM
CIRS_016DI_FP3MAP005_PRIME	CIRS_4000	2005-284T10:08:00	-00T07:44	12-Oct Wed 07:51 AM	Wed 11:33 AM	12-Oct Wed 12:51 AM	Wed 04:33 AM
UVIS_016DI_ICYLON010_CIRS	UVIS_5032	2005-284T10:08:00	-00T07:44	12-Oct Wed 07:51 AM	Wed 11:33 AM	12-Oct Wed 12:51 AM	Wed 04:33 AM
VIMS_016DI_DIONE105_CIRS	VIMS_18432	2005-284T10:08:00	-00T07:44	12-Oct Wed 07:51 AM	Wed 11:33 AM	12-Oct Wed 12:51 AM	Wed 04:33 AM
RPWS_016SA_EQPWDUST001_RPWS	RPWS_30464	2005-284T10:32:34	-00T07:19	12-Oct Wed 08:03 AM	Wed 11:37 AM	12-Oct Wed 01:03 AM	Wed 04:37 AM
RSS_016DI_MASS001_PRIME	RSS_Activity	2005-284T11:02:06	-00T06:49	11-Oct Tue 12:38 PM	Tue 12:38 PM	11-Oct Tue 05:38 AM	Tue 05:38 AM
CDA_016RI_0900RINGM009_RIDER	CDA_524	2005-284T11:24:55	-00T06:27	11-Oct Tue 12:46 PM	Tue 12:46 PM	11-Oct Tue 05:46 AM	Tue 05:46 AM
CDA_016DR_0900DUST078_RIDER	CDA_524	2005-284T12:15:55	-00T05:36	12-Oct Wed 08:28 AM	Wed 11:42 AM	12-Oct Wed 01:28 AM	Wed 04:42 AM
CDA_016RH_0900RHORX009_RIDER	CDA_524	2005-284T12:59:58	-00T04:52	12-Oct Wed 08:42 AM	Wed 11:45 AM	12-Oct Wed 01:42 AM	Wed 04:45 AM
CDA_016OT_DATAVOL001_RIDER	CDA_524	2005-284T13:04:00	-00T04:48	12-Oct Wed 08:43 AM	Wed 11:46 AM	12-Oct Wed 01:43 AM	Wed 04:46 AM
CIRS_016DI_FP3MAP006_PRIME	CIRS_4000	2005-284T13:22:02	-00T04:29	12-Oct Wed 08:52 AM	Wed 11:48 AM	12-Oct Wed 01:52 AM	Wed 04:48 AM
UVIS_016DI_ICYMAP001_CIRS	UVIS_32096	2005-284T13:22:02	-00T04:29	12-Oct Wed 08:52 AM	Wed 11:48 AM	12-Oct Wed 01:52 AM	Wed 04:48 AM
VIMS_016DI_DIONE202_CIRS	VIMS_18432	2005-284T13:22:02	-00T04:29	12-Oct Wed 08:52 AM	Wed 11:48 AM	12-Oct Wed 01:52 AM	Wed 04:48 AM
CDA_016DR_0800DUST079_RIDER	CDA_524	2005-284T13:50:58	-00T04:01	12-Oct Wed 09:20 AM	Wed 11:56 AM	12-Oct Wed 02:20 AM	Wed 04:56 AM
CIRS_016DI_ISSUVIS001_RIDER	CIRS_4000	2005-284T14:22:02	-00T03:29	12-Oct Wed 11:23 AM	Wed 12:05 PM	12-Oct Wed 04:23 AM	Wed 05:05 AM
ISS_016DI_REGMAPA001_PRIME	ISS_Phot_1_by_1	2005-284T14:22:02	-00T03:29	12-Oct Wed 11:23 AM	Wed 12:05 PM	12-Oct Wed 04:23 AM	Wed 05:05 AM
UVIS_016DI_ICYMAP002_ISS	UVIS_32096	2005-284T14:22:02	-00T03:29	12-Oct Wed 11:23 AM	Wed 12:05 PM	12-Oct Wed 04:23 AM	Wed 05:05 AM
VIMS_016DI_DIONE203_ISS	VIMS_18432	2005-284T14:22:02	-00T03:29	12-Oct Wed 11:23 AM	Wed 12:05 PM	12-Oct Wed 04:23 AM	Wed 05:05 AM
UVIS_016DI_ICYMAP003_PRIME	UVIS_32096	2005-284T14:42:02	-00T03:09	12-Oct Wed 11:35 AM	Wed 12:19 PM	12-Oct Wed 04:35 AM	Wed 05:19 AM
VIMS_016DI_DIONE204_UVIS	VIMS_18432	2005-284T14:42:02	-00T03:09	12-Oct Wed 11:35 AM	Wed 12:19 PM	12-Oct Wed 04:35 AM	Wed 05:19 AM
CDA_016RE_0800ERNGX009_PRIME	CDA_524	2005-284T14:49:24	-00T03:02	12-Oct Wed 11:37 AM	Wed 12:23 PM	12-Oct Wed 04:37 AM	Wed 05:23 AM
MIMI_016DR_INCADUST001_PRIME	MIMI_8000	2005-284T14:55:00	-00T02:57	12-Oct Wed 11:39 AM	Wed 12:25 PM	12-Oct Wed 04:39 AM	Wed 05:25 AM
CIRS_016DI_FP3DISCSC002_PRIME	CIRS_4000	2005-284T15:27:02	-00T02:24	12-Oct Wed 11:50 AM	Wed 12:39 PM	12-Oct Wed 04:50 AM	Wed 05:39 AM
VIMS_016DI_DIONE342_CIRS	VIMS_18432	2005-284T15:27:02	-00T02:24	12-Oct Wed 11:50 AM	Wed 12:39 PM	12-Oct Wed 04:50 AM	Wed 05:39 AM
CDA_016DR_0700DUST089_RIDER	CDA_524	2005-284T15:40:23	-00T02:11	12-Oct Wed 11:52 AM	Wed 12:42 PM	12-Oct Wed 04:52 AM	Wed 05:42 AM
CIRS_016DI_TARGFLYBY001_ISS	CIRS_4000	2005-284T15:42:02	-00T02:09	12-Oct Wed 11:52 AM	Wed 12:42 PM	12-Oct Wed 04:52 AM	Wed 05:42 AM
ISS_016DI_TARGFLYBY001_PRIME	ISS_Phot_1_by_1	2005-284T15:42:02	-00T02:09	12-Oct Wed 11:52 AM	Wed 12:42 PM	12-Oct Wed 04:52 AM	Wed 05:42 AM
UVIS_016DI_ICYMAP005_ISS	UVIS_32096	2005-284T15:42:02	-00T02:09	12-Oct Wed 11:52 AM	Wed 12:42 PM	12-Oct Wed 04:52 AM	Wed 05:42 AM
VIMS_016DI_DIONE205_ISS	VIMS_18432	2005-284T15:42:02	-00T02:09	12-Oct Wed 11:52 AM	Wed 12:42 PM	12-Oct Wed 04:52 AM	Wed 05:42 AM
MAG_016DI_DITAR001_RIDER	MAG_1976	2005-284T15:52:02	-00T01:59	12-Oct Wed 12:03 PM	Wed 12:56 PM	12-Oct Wed 05:03 AM	Wed 05:56 AM
INMS_016DI_DIONECLOS001_RIDER	INMS_1498	2005-284T16:52:02	-00T00:59	12-Oct Wed 01:11 PM	Wed 02:12 PM	12-Oct Wed 06:11 AM	Wed 07:12 AM
CDA_016RE_0700ERNGX009_PRIME	CDA_524	2005-284T16:54:36	-00T00:57	12-Oct Wed 01:14 PM	Wed 03:18 PM	12-Oct Wed 06:14 AM	Wed 08:18 AM
CAPS_016DI_ENCOUNTER001_RIDER	CAPS_16000	2005-284T17:22:02	-00T00:29	12-Oct Wed 01:44 PM	Wed 03:51 PM	12-Oct Wed 06:44 AM	Wed 08:51 AM
MIMI_016DI_ENCOUNTER001_ISS	MIMI_8000	2005-284T17:22:02	-00T00:29	12-Oct Wed 01:44 PM	Wed 03:51 PM	12-Oct Wed 06:44 AM	Wed 08:51 AM

016DI (D1) Playback Timeline

Created Sept. 29, 2005

Event or Observation	Observation Type (APGEN)	Observation Record Start Time (yyyy-dddThh:mm:ss) (SCET)	Start Time - Reference Epoch (ddThh:mm)	Start Playback (Ground UTC)		Start Playback (Pacific Time)	
				Best Estimate	Latest Possible	Best Estimate	Latest Possible
RPWS_016DI_DICA001_PRIME	RPWS_182784	2005-284T17:22:02	-00T00:29	12-Oct Wed 01:44 PM	Wed 03:51 PM	12-Oct Wed 06:44 AM	Wed 08:51 AM
CDA_016DR_0600DUST090_RIDER	CDA_524	2005-284T17:25:35	-00T00:26	12-Oct Wed 01:50 PM	Wed 03:58 PM	12-Oct Wed 06:50 AM	Wed 08:58 AM
1WAY_TO_2WAY_G70METOTB285	P/B PAUSE	5 min. Prevents Gap	n/a	12-Oct Wed 02:01 PM	Wed 02:01 PM	12-Oct Wed 07:01 AM	Wed 07:01 AM
CDA_016DI_DIODUST001_PRIME	CDA_524	2005-284T17:37:02	-00T00:14	12-Oct Wed 02:10 PM	Wed 04:21 PM	12-Oct Wed 07:10 AM	Wed 09:21 AM
CAPS_016DI_DIONEPTG001_PRIME	CAPS_16000	2005-284T17:44:02	-00T00:07	12-Oct Wed 03:19 PM	Wed 04:35 PM	12-Oct Wed 08:19 AM	Wed 09:35 AM
CIRS_016DI_DIONEPTG001_CAPS	CIRS_4000	2005-284T17:44:02	-00T00:07	12-Oct Wed 03:19 PM	Wed 04:35 PM	12-Oct Wed 08:19 AM	Wed 09:35 AM
ISS_016DI_DIONEPTG001_CAPS	ISS_Phot_1_by_1	2005-284T17:44:02	-00T00:07	12-Oct Wed 03:19 PM	Wed 04:35 PM	12-Oct Wed 08:19 AM	Wed 09:35 AM
UVIS_016DI_ICYMAP006_CAPS	UVIS_32096	2005-284T17:44:02	-00T00:07	12-Oct Wed 03:19 PM	Wed 04:35 PM	12-Oct Wed 08:19 AM	Wed 09:35 AM
VIMS_016DI_DIONE343_CAPS	VIMS_18432	2005-284T17:44:02	-00T00:07	12-Oct Wed 03:19 PM	Wed 04:35 PM	12-Oct Wed 08:19 AM	Wed 09:35 AM
CDA_016DI_0600DIORX010_PRIME	CDA_524	2005-284T17:57:14	00T00:05	12-Oct Wed 03:34 PM	Wed 04:53 PM	12-Oct Wed 08:34 AM	Wed 09:53 AM
CIRS_016DI_CRESCENT001_ISS	CIRS_4000	2005-284T18:07:22	00T00:15	12-Oct Wed 03:46 PM	Wed 05:07 PM	12-Oct Wed 08:46 AM	Wed 10:07 AM
ISS_016DI_CRESCENT001_PRIME	ISS_Phot_1_by_1	2005-284T18:07:22	00T00:15	12-Oct Wed 03:46 PM	Wed 05:07 PM	12-Oct Wed 08:46 AM	Wed 10:07 AM
UVIS_016DI_ICYMAP007_ISS	UVIS_32096	2005-284T18:07:22	00T00:15	12-Oct Wed 03:46 PM	Wed 05:07 PM	12-Oct Wed 08:46 AM	Wed 10:07 AM
VIMS_016DI_DIONE341_ISS	VIMS_18432	2005-284T18:07:22	00T00:15	12-Oct Wed 03:46 PM	Wed 05:07 PM	12-Oct Wed 08:46 AM	Wed 10:07 AM
CAPS_016SA_SURVEY002_RIDER	CAPS_16000	2005-284T18:22:02	00T00:30	12-Oct Wed 04:05 PM	Wed 05:28 PM	12-Oct Wed 09:05 AM	Wed 10:28 AM
MIMI_016DR_INCADUST002_PRIME	MIMI_8000	2005-284T18:22:02	00T00:30	12-Oct Wed 04:05 PM	Wed 05:28 PM	12-Oct Wed 09:05 AM	Wed 10:28 AM
CDA_016DR_0600DUST091_RIDER	CDA_524	2005-284T18:28:14	00T00:36	12-Oct Wed 04:08 PM	Wed 05:32 PM	12-Oct Wed 09:08 AM	Wed 10:32 AM
CIRS_016DI_FP1DISCSC001_PRIME	CIRS_4000	2005-284T18:39:02	00T00:47	12-Oct Wed 04:14 PM	Wed 05:39 PM	12-Oct Wed 09:14 AM	Wed 10:39 AM
ISS_016DI_FP1DISCSC001_CIRS	ISS_Phot_1_by_1	2005-284T18:39:02	00T00:47	12-Oct Wed 04:14 PM	Wed 05:39 PM	12-Oct Wed 09:14 AM	Wed 10:39 AM
VIMS_016DI_DIONE344_CIRS	VIMS_18432	2005-284T18:39:02	00T00:47	12-Oct Wed 04:14 PM	Wed 05:39 PM	12-Oct Wed 09:14 AM	Wed 10:39 AM
INMS_016DI_DIOTBSURV001_RIDER	INMS_1498	2005-284T18:52:02	00T01:00	12-Oct Wed 04:16 PM	Wed 05:42 PM	12-Oct Wed 09:16 AM	Wed 10:42 AM
RADAR_016OT_WARMUP4DI001_RIDER	RADAR_364800	2005-284T19:07:02	00T01:15	12-Oct Wed 04:18 PM	Wed 05:45 PM	12-Oct Wed 09:18 AM	Wed 10:45 AM
CIRS_016TL_ISSTELEST001_ISS	CIRS_4000	2005-284T19:22:02	00T01:30	12-Oct Wed 04:21 PM	Wed 05:49 PM	12-Oct Wed 09:21 AM	Wed 10:49 AM
ISS_016TL_MORPHO001_PRIME	ISS_Phot_1_by_1	2005-284T19:22:02	00T01:30	12-Oct Wed 04:21 PM	Wed 05:49 PM	12-Oct Wed 09:21 AM	Wed 10:49 AM
UVIS_016TL_ICYLON001_ISS	UVIS_5032	2005-284T19:22:02	00T01:30	12-Oct Wed 04:21 PM	Wed 05:49 PM	12-Oct Wed 09:21 AM	Wed 10:49 AM
VIMS_016TL_TELESTO001_ISS	VIMS_18432	2005-284T19:22:02	00T01:30	12-Oct Wed 04:21 PM	Wed 05:49 PM	12-Oct Wed 09:21 AM	Wed 10:49 AM
CDA_016RE_0500ERNX009_PRIME	CDA_524	2005-284T19:22:11	00T01:30	12-Oct Wed 04:21 PM	Wed 05:49 PM	12-Oct Wed 09:21 AM	Wed 10:49 AM
MAG_016OT_SURVEY006_PRIME	MAG_1976	2005-284T19:52:02	00T02:00	12-Oct Wed 04:30 PM	Wed 06:00 PM	12-Oct Wed 09:30 AM	Wed 11:00 AM
CDA_016DR_0500DUST092_RIDER	CDA_524	2005-284T19:53:11	00T02:01	12-Oct Wed 04:30 PM	Wed 06:00 PM	12-Oct Wed 09:30 AM	Wed 11:00 AM
CDA_016TE_0500TEORX009_PRIME	CDA_524	2005-284T20:35:31	00T02:43	12-Oct Wed 04:40 PM	Wed 06:11 PM	12-Oct Wed 09:40 AM	Wed 11:11 AM
RADAR_016DI_SCATTRAD001_PRIME	RADAR_364800	2005-284T20:52:02	00T03:00	12-Oct Wed 04:42 PM	Wed 06:13 PM	12-Oct Wed 09:42 AM	Wed 11:13 AM
CDA_016DR_0500DUST093_RIDER	CDA_524	2005-284T20:56:41	00T03:04	12-Oct Wed 04:43 PM	Wed 06:14 PM	12-Oct Wed 09:43 AM	Wed 11:14 AM
CDA_016RE_0400ERNX009_PRIME	CDA_524	2005-284T21:20:10	00T03:28	12-Oct Wed 04:51 PM	Wed 06:24 PM	12-Oct Wed 09:51 AM	Wed 11:24 AM
MAG_016OT_INTFLD001_PRIME	MAG_1976	2005-284T21:28:00	00T03:35	12-Oct Wed 04:53 PM	Wed 06:27 PM	12-Oct Wed 09:53 AM	Wed 11:27 AM
CDA_016DR_0400DUST094_RIDER	CDA_524	2005-284T21:41:20	00T03:49	12-Oct Wed 04:58 PM	Wed 06:32 PM	12-Oct Wed 09:58 AM	Wed 11:32 AM
CDA_016EN_0400ENORX016_PRIME	CDA_524	2005-284T22:30:42	00T04:38	12-Oct Wed 05:14 PM	Wed 06:52 PM	12-Oct Wed 10:14 AM	Wed 11:52 AM
CDA_016DR_0400DUST095_RIDER	CDA_524	2005-284T22:50:25	00T04:58	12-Oct Wed 05:21 PM	Wed 06:59 PM	12-Oct Wed 10:21 AM	Wed 11:59 AM
CDA_016RE_0300ERNX006_PRIME	CDA_524	2005-284T23:25:28	00T05:33	12-Oct Wed 05:33 PM	Wed 07:13 PM	12-Oct Wed 10:33 AM	Wed 12:13 PM
RSS_016DI_MASS002_PRIME	RSS_Activity	2005-285T00:00:56	00T06:08	12-Oct Wed 05:38 PM	Wed 02:15 PM	12-Oct Wed 10:38 AM	Wed 07:15 AM
CDA_016DR_0300DUST096_RIDER	CDA_524	2005-285T00:01:00	00T06:08	12-Oct Wed 02:15 PM	Wed 02:15 PM	12-Oct Wed 07:15 AM	Wed 07:15 AM

016DI (D1) Playback Timeline

Created Sept. 29, 2005

Event or Observation	Observation Type (APGEN)	Observation Record Start Time (yyyy-dddThh:mm:ss) (SCET)	Start Time - Reference Epoch (ddThh:mm)	Start Playback (Ground UTC)		Start Playback (Pacific Time)	
				Best Estimate	Latest Possible	Best Estimate	Latest Possible
CDA_016MI_0300MIORX002_PRIME	CDA_524	2005-285T01:24:57	00T07:32	12-Oct Wed 02:21 PM	Wed 02:21 PM	12-Oct Wed 07:21 AM	Wed 07:21 AM
CDA_016DR_0300DUST097_RIDER	CDA_524	2005-285T02:20:39	00T08:28	12-Oct Wed 02:25 PM	Wed 02:26 PM	12-Oct Wed 07:25 AM	Wed 07:26 AM
CDA_016RE_0300ERNGX007_PRIME	CDA_524	2005-285T03:40:21	00T09:48	12-Oct Wed 02:31 PM	Wed 02:32 PM	12-Oct Wed 07:31 AM	Wed 07:32 AM
CDA_016DR_0400DUST098_RIDER	CDA_524	2005-285T04:15:52	00T10:23	12-Oct Wed 02:33 PM	Wed 02:35 PM	12-Oct Wed 07:33 AM	Wed 07:35 AM
CDA_016EN_0400ENORX017_PRIME	CDA_524	2005-285T04:55:11	00T11:03	12-Oct Wed 02:36 PM	Wed 02:38 PM	12-Oct Wed 07:36 AM	Wed 07:38 AM
CDA_016DR_0400DUST099_RIDER	CDA_524	2005-285T05:16:20	00T11:24	12-Oct Wed 02:38 PM	Wed 02:40 PM	12-Oct Wed 07:38 AM	Wed 07:40 AM
MAG_016OT_SURVEY005_PRIME	MAG_1976	2005-285T05:37:00	00T11:44	12-Oct Wed 02:39 PM	Wed 02:41 PM	12-Oct Wed 07:39 AM	Wed 07:41 AM
INMS_016SA_INMAGSURV002_RIDER	INMS_1498	2005-285T05:52:02	00T12:00	12-Oct Wed 02:40 PM	Wed 02:42 PM	12-Oct Wed 07:40 AM	Wed 07:42 AM
CDA_016RE_0400ERNGX010_PRIME	CDA_524	2005-285T06:00:00	00T12:07	12-Oct Wed 02:40 PM	Wed 02:43 PM	12-Oct Wed 07:40 AM	Wed 07:43 AM
CDA_016DR_0500DUST100_RIDER	CDA_524	2005-285T06:25:28	00T12:33	12-Oct Wed 02:42 PM	Wed 02:45 PM	12-Oct Wed 07:42 AM	Wed 07:45 AM
CDA_016TE_0500TEORX010_PRIME	CDA_524	2005-285T06:44:39	00T12:52	12-Oct Wed 02:43 PM	Wed 02:46 PM	12-Oct Wed 07:43 AM	Wed 07:46 AM
CDA_016DR_0500DUST101_RIDER	CDA_524	2005-285T07:05:48	00T13:13	12-Oct Wed 02:44 PM	Wed 02:47 PM	12-Oct Wed 07:44 AM	Wed 07:47 AM
CDA_016RE_0500ERNGX010_PRIME	CDA_524	2005-285T07:50:16	00T13:58	12-Oct Wed 02:47 PM	Wed 02:50 PM	12-Oct Wed 07:47 AM	Wed 07:50 AM
CDA_016DR_0600DUST102_RIDER	CDA_524	2005-285T08:21:16	00T14:29	12-Oct Wed 02:49 PM	Wed 02:52 PM	12-Oct Wed 07:49 AM	Wed 07:52 AM
INMS_016SA_POTM38PRM007_RIDER	INMS_1498	2005-285T08:57:00	00T15:04	12-Oct Wed 02:51 PM	Wed 02:55 PM	12-Oct Wed 07:51 AM	Wed 07:55 AM
CDA_016DI_0600DIORX011_PRIME	CDA_524	2005-285T09:15:15	00T15:23	12-Oct Wed 02:52 PM	Wed 02:56 PM	12-Oct Wed 07:52 AM	Wed 07:56 AM
CDA_016DR_0600DUST103_RIDER	CDA_524	2005-285T09:46:15	00T15:54	12-Oct Wed 02:55 PM	Wed 02:59 PM	12-Oct Wed 07:55 AM	Wed 07:59 AM
UVIS_016SW_IPHSURVEY028_RIDER	UVIS_5032	2005-285T09:58:00	00T16:05	12-Oct Wed 02:55 PM	Wed 02:59 PM	12-Oct Wed 07:55 AM	Wed 07:59 AM
CDA_016RE_0700ERNGX010_PRIME	CDA_524	2005-285T10:15:00	00T16:22	12-Oct Wed 02:56 PM	Wed 03:01 PM	12-Oct Wed 07:56 AM	Wed 08:01 AM
CDA_016DR_0700DUST104_RIDER	CDA_524	2005-285T10:46:00	00T16:53	12-Oct Wed 02:59 PM	Wed 03:04 PM	12-Oct Wed 07:59 AM	Wed 08:04 AM
CDA_016RE_0800ERNGX010_PRIME	CDA_524	2005-285T12:02:23	00T18:10	12-Oct Wed 03:04 PM	Wed 03:09 PM	12-Oct Wed 08:04 AM	Wed 08:09 AM
CDA_016RE_ECCENDV001_RIDER	CDA_524	2005-285T12:40:00	00T18:47	12-Oct Wed 03:07 PM	Wed 03:12 PM	12-Oct Wed 08:07 AM	Wed 08:12 AM
MIMI_016CO_SURVEY002_MAPS	MIMI_8000	2005-285T12:45:00	00T18:52	12-Oct Wed 03:08 PM	Wed 03:13 PM	12-Oct Wed 08:08 AM	Wed 08:13 AM
INMS_016SA_PTOTM38BU001_RIDER	INMS_1498	2005-285T18:58:00	01T01:05	12-Oct Wed 08:16 PM	Wed 08:16 PM	12-Oct Wed 01:16 PM	Wed 01:16 PM