Chapter 1 - Introduction

Contents

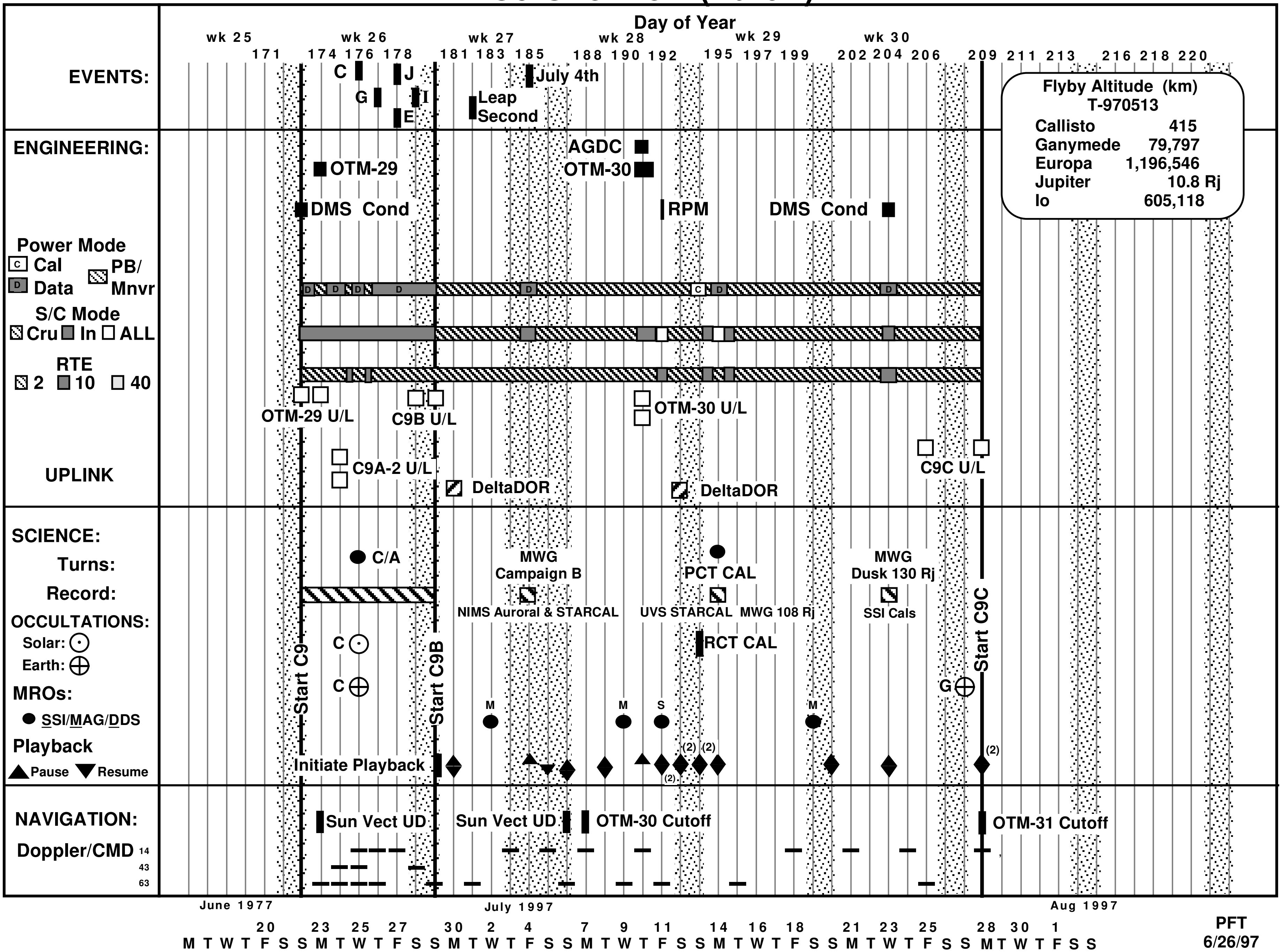
Introduction

This C9 orbit is the ninth of eleven orbits in Galileo's Tour of the Jovian system. This orbit has a targetted satellite flyby of Callisto. NIMS will make observations of Jupiter, Io, Europa, Ganymede and Callisto in this orbit. NIMS will also perform some calibrations in this orbit. This orbit is this first orbit to record science data during cruise. This required creative use of the recorder resources.

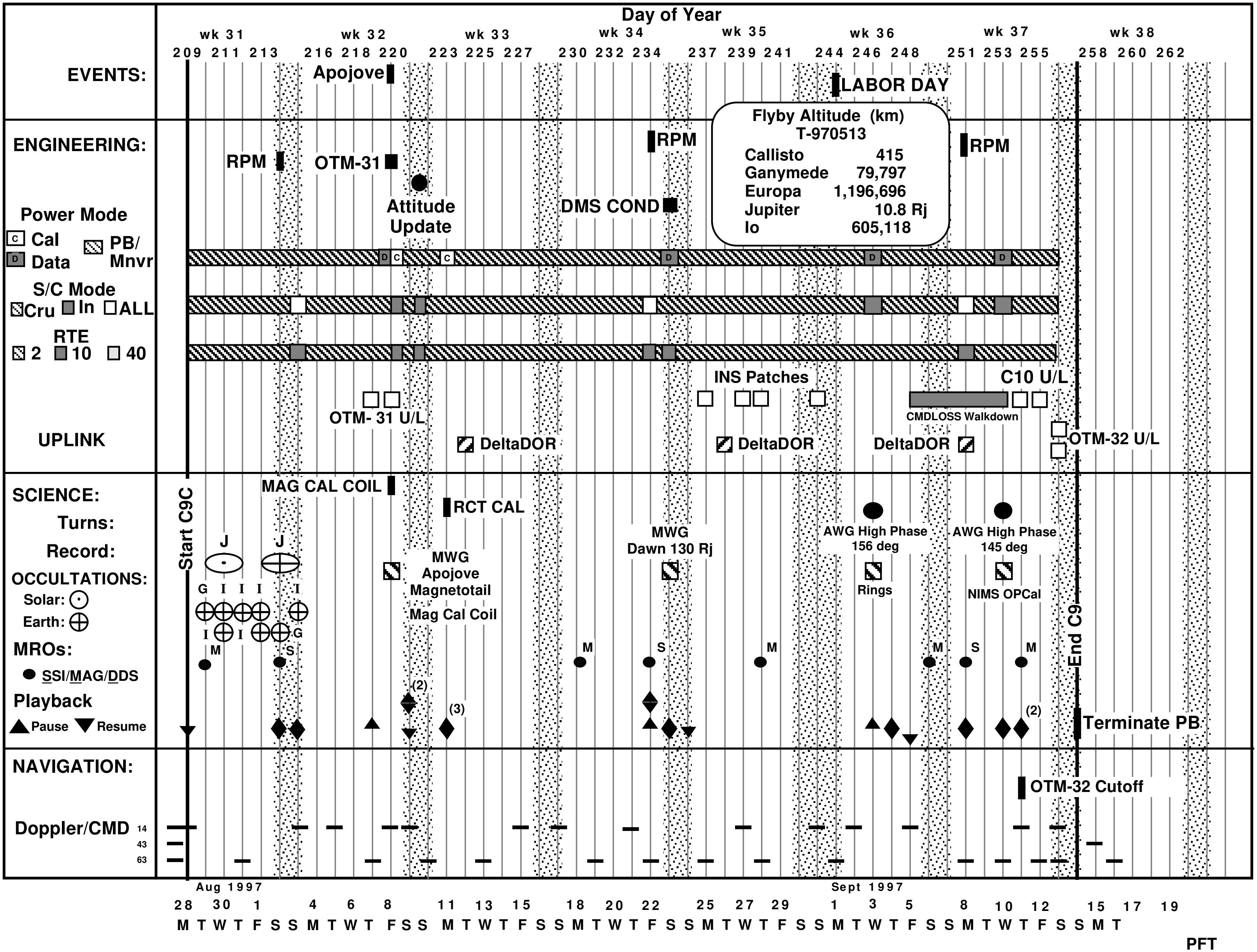
There are 10 autonomous reloads of the NIMS RAM code from CDS planned during the C9A encounter period with checksums of the NIMS RAM code before each reload. These reloads are in response to the on-going flight-anomalies where the NIMS RAM code takes some bit hits and halts the instrument during when the spacecraft is close to Jupiter. NIMS NIMS will also return realtime data on a daily basis during the C9A encounter period as a means of monitoring the instrument's status. NIMS personnel will also monitior the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

The C9 orbit is divided into 3 sequence loads: one Encounter Load (C9A) and two Orbital Cruise Load (C9B and C9C). The C9A load begins on D173 of 1997 (06/22/97) and ends on D180 of 1997 (06/29/97) This load contains the flybys of Jupiter, Europa, Io, Ganymede and Callisto. The Cruise Load C9B runs from D180 to D209 and Cruise Load C9C runs from D209 to D257. Playback of the recorded data takes place during the Cruise phases, C9B and C9C. Also, data is recorded during the cruise phase on recorder tracks that have already been played back. A high-level overview timeline of the C9 orbit can be found on the following two pages.

C9 Overview (Part 1)



C9 Overview (Part 2)



Introduction

The following table lists the major events during C9, including NIMS Real Time observations, in UTC.

06/22/97	97-173/17:00:00	C9 Encounter Start
06/25/97	97-176/13:48:07	Callisto Closest Approach
06/25/97	97-176/21:31:12	NIMS R/T Jupiter Aurora
06/25/97	97-176/21:47:23	NIMS R/T Jupiter Aurora
06/25/97	97-176/22:04:34	NIMS R/T Hotspot
06/25/97	97-176/22:17:43	NIMS R/T Jupiter Aurora
06/26/97	97-177/01:34:53	NIMS R/T Hotspot
06/26/97	97-177/03:27:07	NIMS R/T Jupiter Aurora
06/26/97	97-177/05:52:43	NIMS R/T Hotspot
06/26/97	97-177/07:33:50	NIMS R/T Jupiter Aurora
06/26/97	97-177/11:21:20	NIMS RAM Reload 01
06/26/97	97-177/13:20:38	NIMS R/T Jupiter Aurora
06/26/97	97-177/16:06:28	NIMS R/T Europa
06/26/97	97-177/17:20:16	Ganymede Closest Approach
06/26/97	97-177/17:55:00	NIMS R/T Ganymede
06/26/97	97-177/18:55:19	NIMS R/T Europa
06/26/97	97-177/20:07:06	NIMS RAM Reload 02
06/26/97	97-177/23:20:00	NIMS R/T Ganymede
06/27/97	97-178/05:53:33	NIMS RAM Reload 03
06/27/97	97-178/10:10:22	Europa Closest Approach
06/27/97	97-178/11:57:33	Jupiter Closest Approach
06/27/97	97-178/14:12:02	NIMS RAM Reload 04
06/27/97	97-178/17:55:29	NIMS RAM Reload 05
06/27/97	97-178/21:16:42	NIMS RAM Reload 06
06/28/97	97-179/00:17:41	NIMS RAM Reload 07
06/28/97	97-179/02:31:09	Io Closest Approach
06/28/97	97-179/04:28:26	NIMS RAM Reload 08
06/28/97	97-179/08:37:10	NIMS R/T Jupiter Aurora
06/28/97	97-179/08:46:16	NIMS RAM Reload 09
06/28/97	97-179/12:04:27	NIMS RAM Reload 10
06/28/97	97-179/14:05:47	NIMS R/T Jupiter Aurora
06/29/97	97-180/17:00:00	Start C9 Playback
07/04/97	97-185/14:09:45	NIMS R/T Jupiter Aurora
07/04/97	97-185/14:19:41	NIMS STAR CAL
07/04/97	97-185/14:39:04	NIMS R/T Jupiter Aurora
07/04/97	97-185/15:10:25	NIMS R/T Jupiter Aurora
07/04/97	97-185/15:30:38	NIMS R/T Jupiter Aurora
07/04/97	97-185/15:40:35	NIMS STAR CAL
07/04/97	97-185/16:00:58	NIMS R/T Jupiter Aurora
07/13/97	97-194/09:13:54	NIMS R/T RCT CAL
07/14/97	97-195/04:10:24	NIMS R/T PCT CAL
08/11/97	97-223/01:00:21	NIMS R/T RCT CAL
09/10/97	97-253/12:04:21	NIMS R/T OPCAL
09/14/97	97-257/00:00:00	END C9 Playback