Chapter 1 - Introduction

Contents

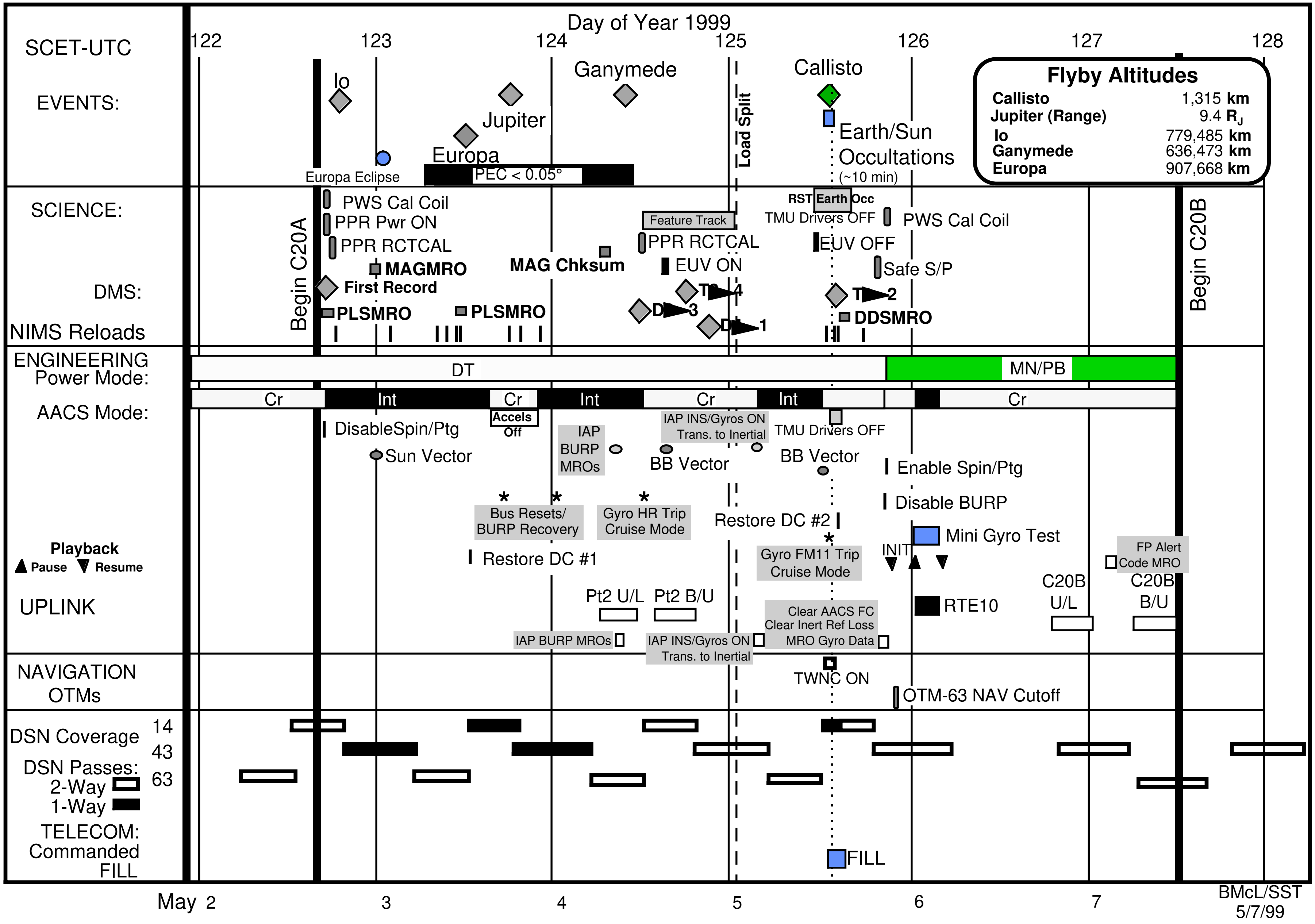
Introduction

This C20 orbit is the twentieth of twenty-five orbits in Galileo's Tour of the Jovian system and the ninth orbit in the Galileo Europa Mission (GEM). C20 starts the perijove reduction part of the GEM. This orbit has a targetted satellite flyby of Callisto. NIMS will also make observations of Jupiter and Io in this orbit.

There are 14 autonomous reloads of the NIMS RAM code from CDS planned during the C20A encounter period, one just before each science observation. 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 personnel will monitior the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

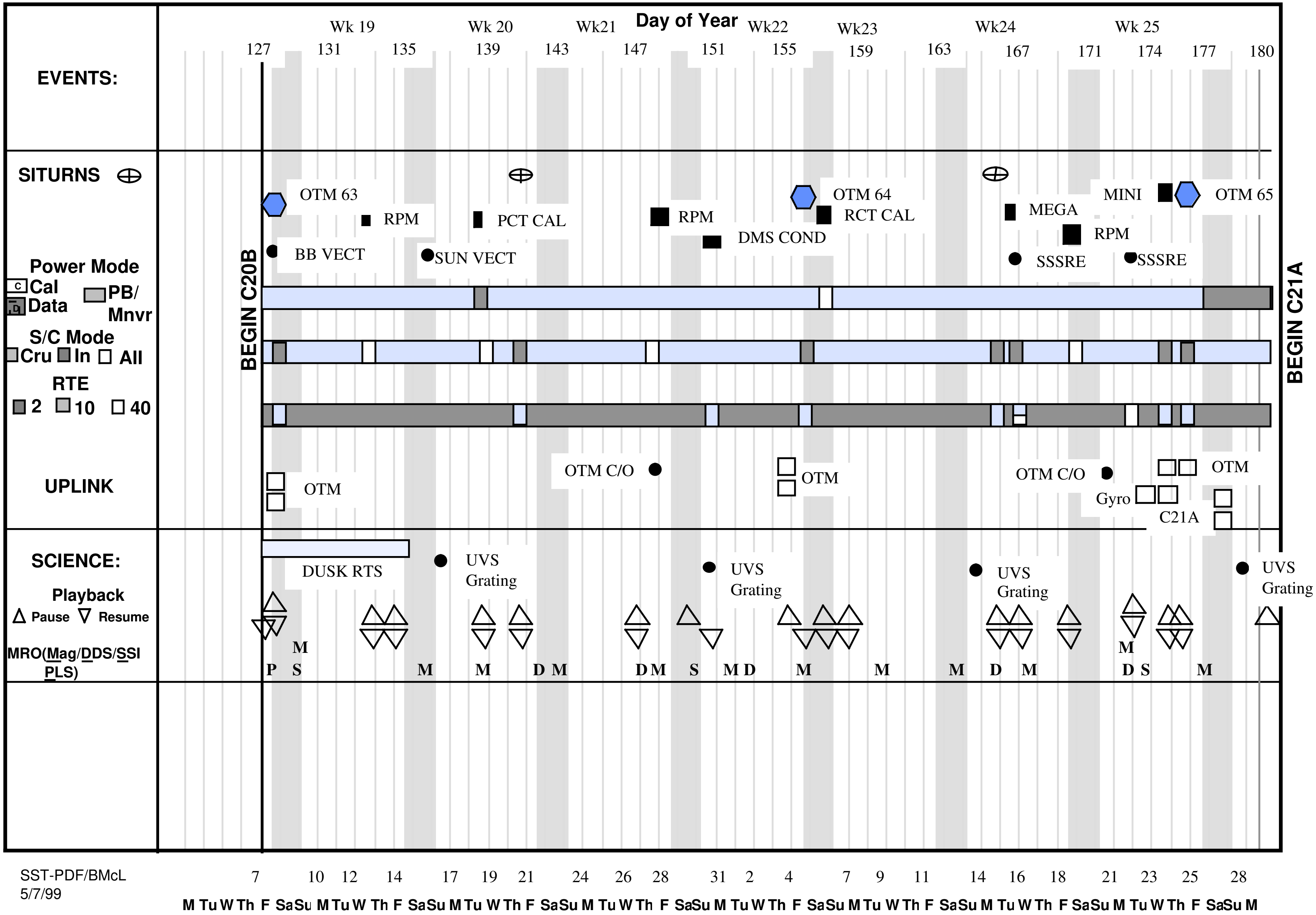
The C20 orbit is divided into 2 sequence loads: one Encounter Load (C20A) and one Orbital Cruise Load (C20B). The C20A load begins on D122 (05/02/99) and ends on D127 (05/07/99). This load contains the flybys of Jupiter and Callisto. The Cruise Load C20B runs from D127 to D180. Playback of the recorded data takes place during the Cruise phase, C20B. A high-level overview timeline of the C20 orbit can be found on the following two pages.

C20A Sequence Overview



1-03

C20B Overview



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Introduction

The following table lists the major events during C20, including NIMS Real Time observations, in UTC.

05/02/99	99-122/17:00:00	C20 Encounter Start
05/02/99	99-122/19:47:48	NIMS RAM Reload 01
05/02/99	99-122/19:48:37	Io Closest Approach
05/03/99	99-123/01:01:14	NIMS RAM Reload 02
05/03/99	99-123/04:28:31	NIMS RAM Reload 03
05/03/99	99-123/04:35:25	NIMS R/T Jupiter 01
05/03/99	99-123/06:30:52	NIMS RAM Reload 04
05/03/99	99-123/06:36:45	NIMS R/T Jupiter 02
05/03/99	99-123/09:57:11	NIMS RAM Reload 05
05/03/99	99-123/10:55:52	NIMS RAM Reload 06
05/03/99	99-123/11:55:29	NIMS RAM Reload 07
05/03/99	99-123/12:31:53	NIMS RAM Reload 08
05/03/99	99-123/17:12:24	PJ-20 Jupiter Closest Approach
05/03/99	99-123/17:57:00	CDS BUS Reset 01
05/03/99	99-123/22:57:38	NIMS RAM Reload 09
05/03/99	99-123/23:04:36	NIMS R/T Jupiter 03
05/04/99	99-124/00:08:00	CDS BUS Reset 02
05/04/99	99-124/00:08:00	NIMS Processor Halt 01
05/05/99	99-125/14:07:24	C20 Callisto Closest Approach
05/05/99	99-125/14:21:37	NIMS RAM Reload 10
05/05/99	99-125/14:48:55	NIMS RAM Reload 11
05/05/99	99-125/15:27:20	NIMS RAM Reload 12
05/05/99	99-125/15:57:40	NIMS RAM Reload 13
05/05/99	99-125/19:43:09	NIMS RAM Reload 14
05/07/99	99-127/12:06:36	Start C20 Playback
05/19/99	99-139/00:58:28	NIMS R/T PCT CAL
06/07/99	99-158/00:33:51	NIMS R/T RCT CAL
06/29/99	99-180/06:24:29	End C20 Playback