Chapter 1 - Introduction

Contents

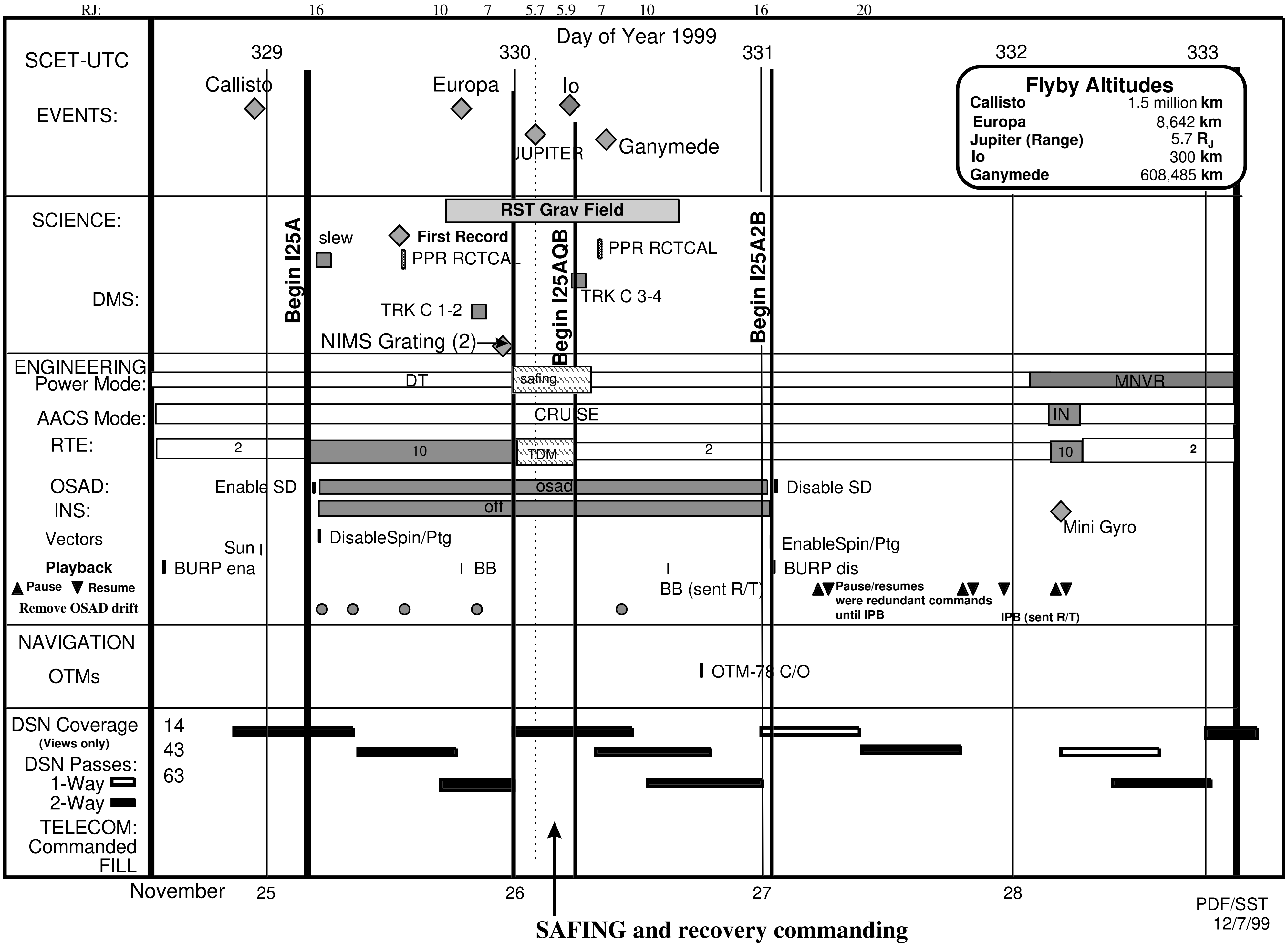
Introduction

This I25 orbit is the twenty-fifth of twenty-five orbits in Galileo's Tour of the Jovian system and the fourteenth orbit in the Galileo Europa Mission (GEM). I25 is the second Io Flyby of GEM. This orbit has a targetted satellite flyby of Io.

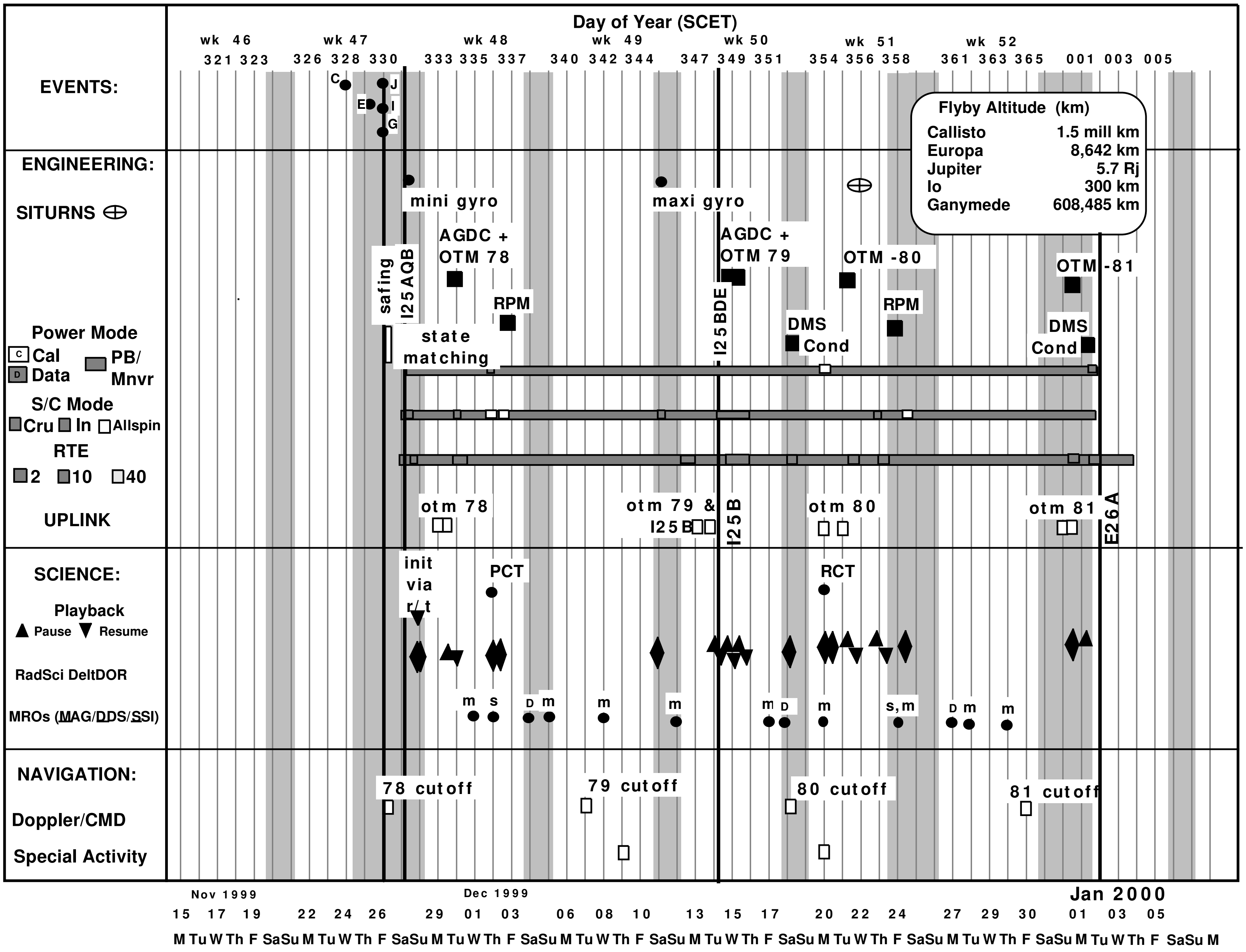
There are 12 autonomous reloads of the NIMS RAM code from CDS planned during the I25A encounter period, one just before each science observation. These reloads are in response to the on-going flight-anomalies where the NIMS RAM code takes some bit hits and halts the instrument during when the spacecraft is close to Jupiter. NIMS personnel will monitior the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

The I25 orbit is divided into 2 sequence loads: one Encounter Load (I25A) and one Orbital Cruise Load (I25B). The I25A load begins on D329 (11/25/99) and ends on D348 (12/14/99). This load contains the flyby of Io. The Cruise Load I25B runs from D348 to D001. Playback of the recorded data takes place during the Cruise phase, I25B. A high-level overview timeline of the I25 orbit can be found on the following two pages.

I25A Sequence Overview



I25B Overview



Note: I25A S/C activities were interrupted by safing at ~99-330/00:02 SCET
due to a CDS memory protection error.

SST-PDF
03/17/00

Introduction

The following table lists the major events during I25, including NIMS Real Time observations, in UTC.

11/25/99	99-329/04:00:00	I25 Encounter Start
11/25/99	99-329/16:23:59	NIMS RAM Reload 01
11/25/99	99-329/16:28:52	E25 Europa Closest Approach
11/25/99	99-329/17:09:22	NIMS RAM Reload 02
11/25/99	99-329/19:16:46	NIMS RAM Reload 03
11/25/99	99-329/19:40:01	NIMS RAM Reload 04
11/26/99	99-330/00:02:00	S/C Safed
11/26/99	99-330/02:09:58	PJ-25 Jupiter Closest Approach
11/26/99	99-330/04:06:37	I25 Io Closest Approach
11/26/99	99-330/04:28:00	I25 Recovery Sequence Online
11/26/99	99-330/04:46:18	NIMS RAM Reload 09
11/26/99	99-330/04:53:39	NIMS RAM Reload 10
11/26/99	99-330/05:01:45	NIMS RAM Reload 11
11/26/99	99-330/05:07:49	NIMS RAM Reload 12
11/26/99	99-330/16:00:00	S/C Safed Again
11/27/99	99-331/01:38:40	Start I25 Playback
12/02/99	99-336/04:28:59	NIMS R/T PCT CAL (lost)
12/15/99	99-349/21:32:40	NIMS Optics Heaters Cycled
12/20/99	99-354/06:34:11	NIMS R/T RCT CAL
12/31/99	99-365/23:55:21	End I25 Playback