Chapter 1 - Introduction

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Introduction

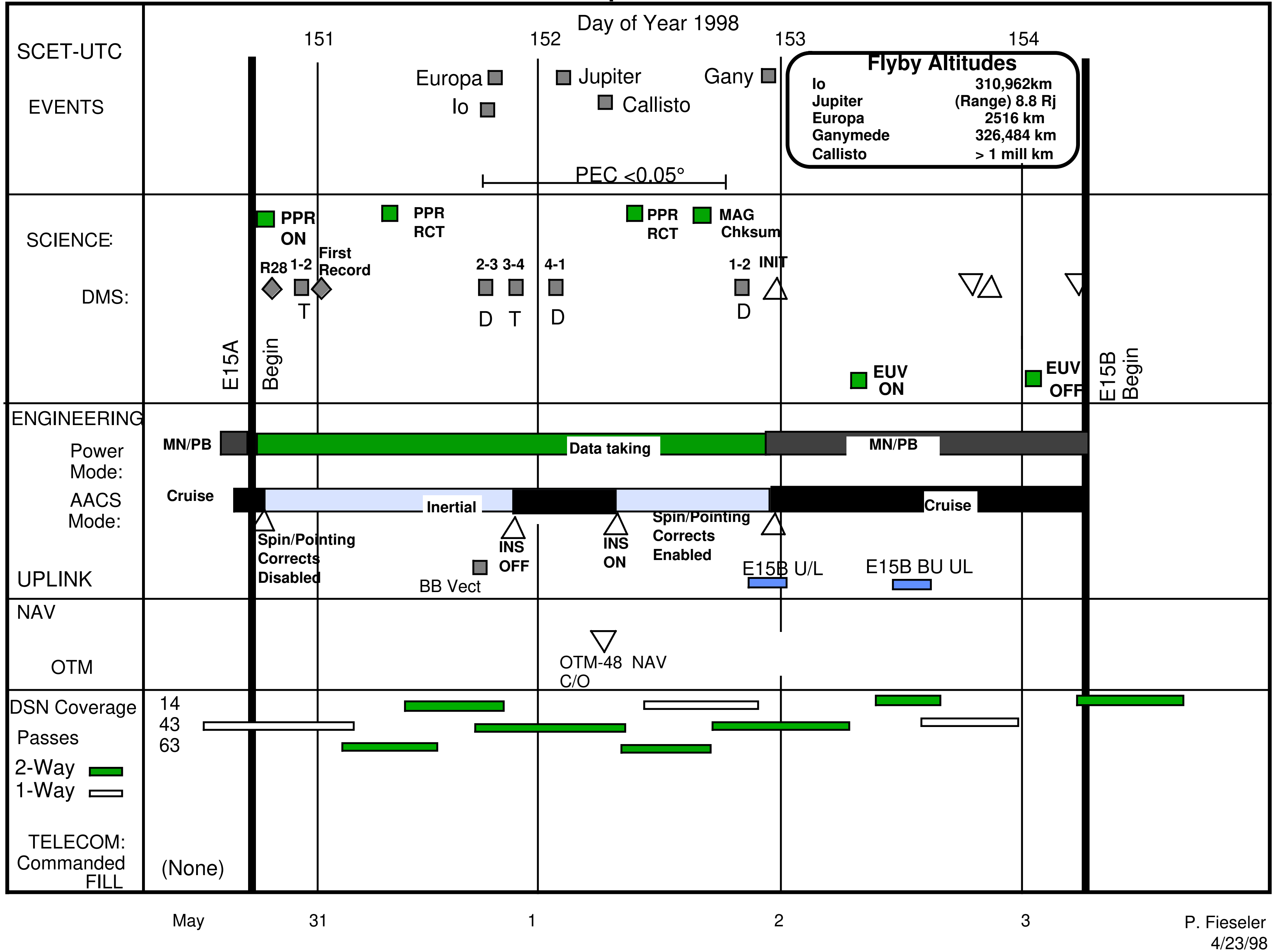
This E15 orbit is the fifteenth of twenty-five orbits in Galileo's Tour of the Jovian system and the fourth orbit in the Galileo Europa Mission (GEM). This orbit has a targetted satellite flyby of Europa. NIMS will make observations of Jupiter, Io, Europa and Callisto in this orbit.

There are 15 autonomous reloads of the NIMS RAM code from CDS planned during the E15A 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 E15 orbit is divided into 2 sequence loads: one Encounter Load (E15A) and one Orbital Cruise Load (E15B). The E15A load begins on D150 (05/30/98) and ends on D154 (06/03/98). This load contains the flybys of Jupiter, Europa, Io and Callisto. The Cruise Load E15B runs from D154 to D201. Playback of the recorded data takes place during the Cruise phase, E15B. A high-level overview timeline of the E15 orbit can be found on the following two pages.

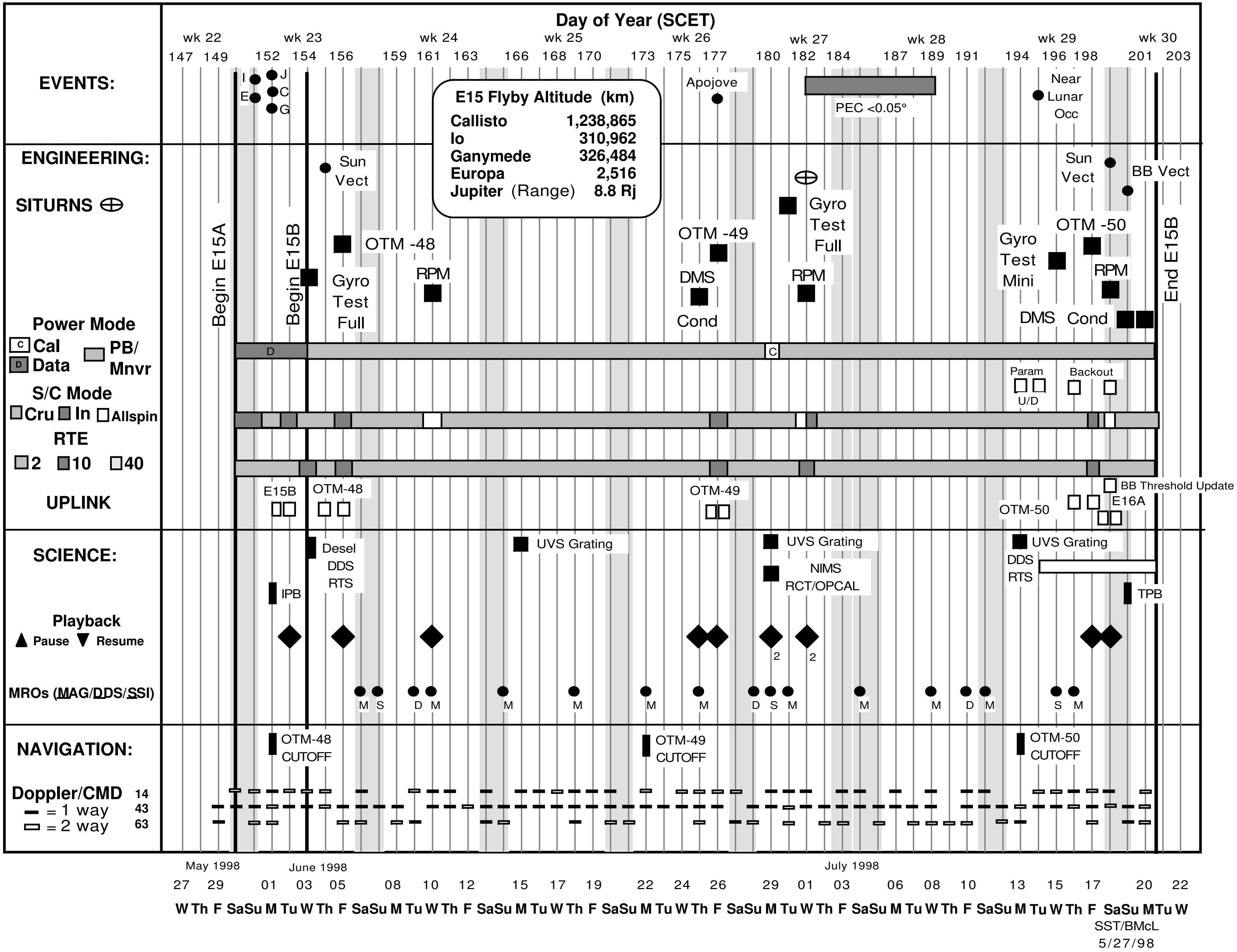
Due to spacecraft safing during E16, many E15 observations were not recorded over in E16 as planned. Therefore, these E15 observations were available for playback during E16 cruise. The playback portion of this guide corresponds to playback of E15 data during E15 and E16 cruise.

E15A Sequence Oveview



P. Fieseler
4/23/98

E-15 Overview



Introduction

The following table lists the major events during E15, including NIMS Real Time observations, in UTC.

05/30/98	98-150/21:00:00	E15 Encounter Start
05/30/98	98-151/02:49:48	NIMS RAM Reload 01
05/30/98	98-151/02:58:10	NIMS R/T Jupiter 01
05/30/98	98-151/13:10:37	NIMS RAM Reload 02
05/30/98	98-151/17:29:28	NIMS RAM Reload 03
05/30/98	98-151/20:35:31	NIMS RAM Reload 04
05/30/98	98-151/20:58:47	Io Closest Approach
05/30/98	98-151/21:12:56	Europa Closest Approach
05/30/98	98-151/21:15:39	NIMS RAM Reload 05
05/30/98	98-151/21:43:57	NIMS RAM Reload 06
05/30/98	98-151/22:14:17	NIMS RAM Reload 07
05/31/98	98-152/02:14:56	NIMS RAM Reload 08
05/31/98	98-152/02:34:28	Jupiter Closest Approach
05/31/98	98-152/13:06:05	NIMS RAM Reload 09
05/31/98	98-152/14:24:57	NIMS RAM Reload 10
05/31/98	98-152/14:29:35	NIMS R/T Jupiter 02
05/31/98	98-152/16:39:26	NIMS RAM Reload 11
05/31/98	98-152/16:59:13	NIMS R/T Jupiter 03
05/31/98	98-152/17:10:19	NIMS RAM Reload 12
05/31/98	98-152/17:37:04	NIMS RAM Reload 13
05/31/98	98-152/18:04:22	NIMS RAM Reload 14
05/31/98	98-152/18:51:53	NIMS RAM Reload 15
05/31/98	98-152/22:06:16	Start E15 Playback
06/29/98	98-180/20:34:39	NIMS R/T RCT CAL
07/19/98	98-200/15:56:43	End E15 Playback