Chapter 1 - Introduction

Contents

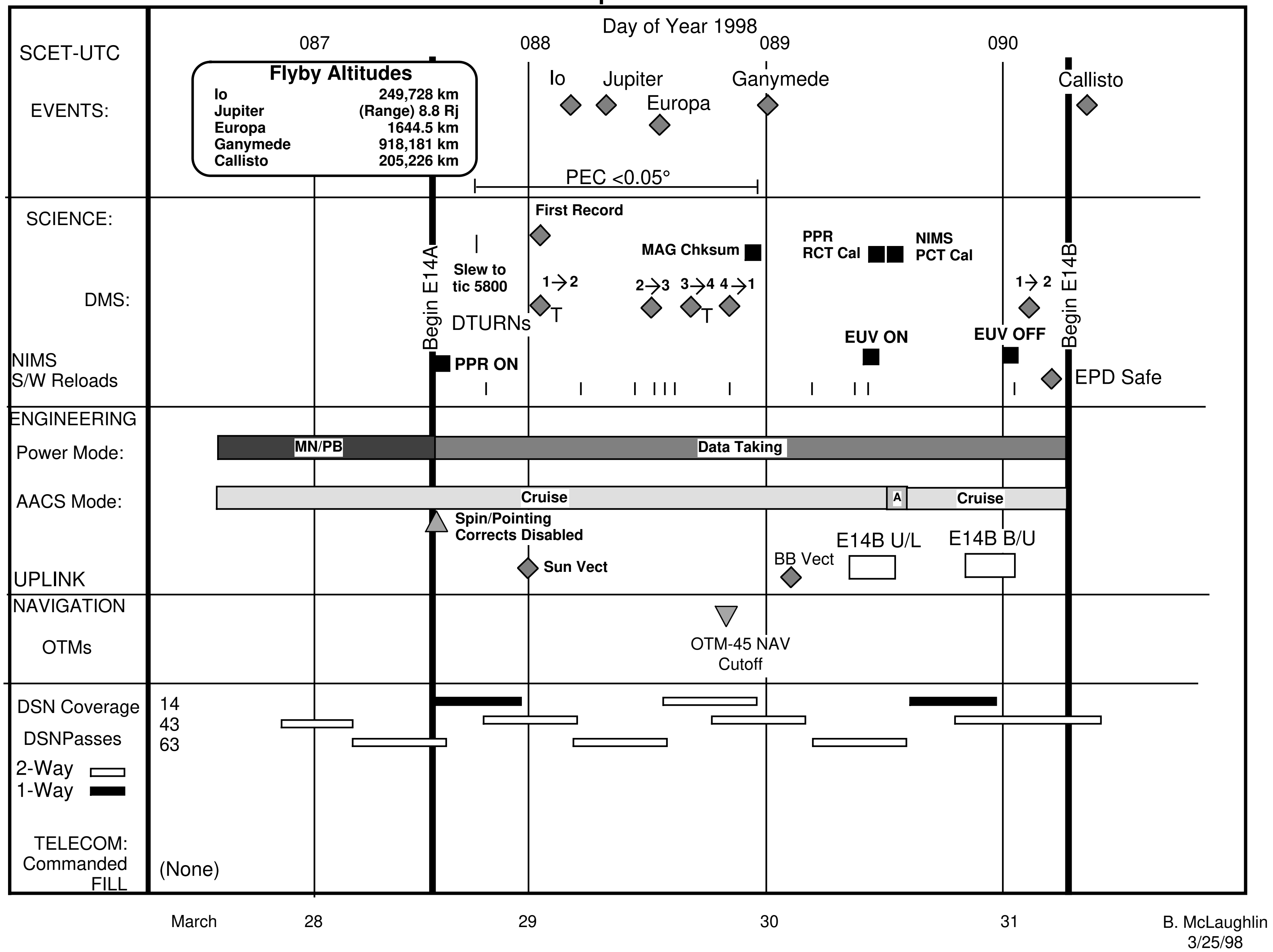
Introduction

This E14 orbit is the fourteenth of twenty-five orbits in Galileo's Tour of the Jovian system and the third 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.

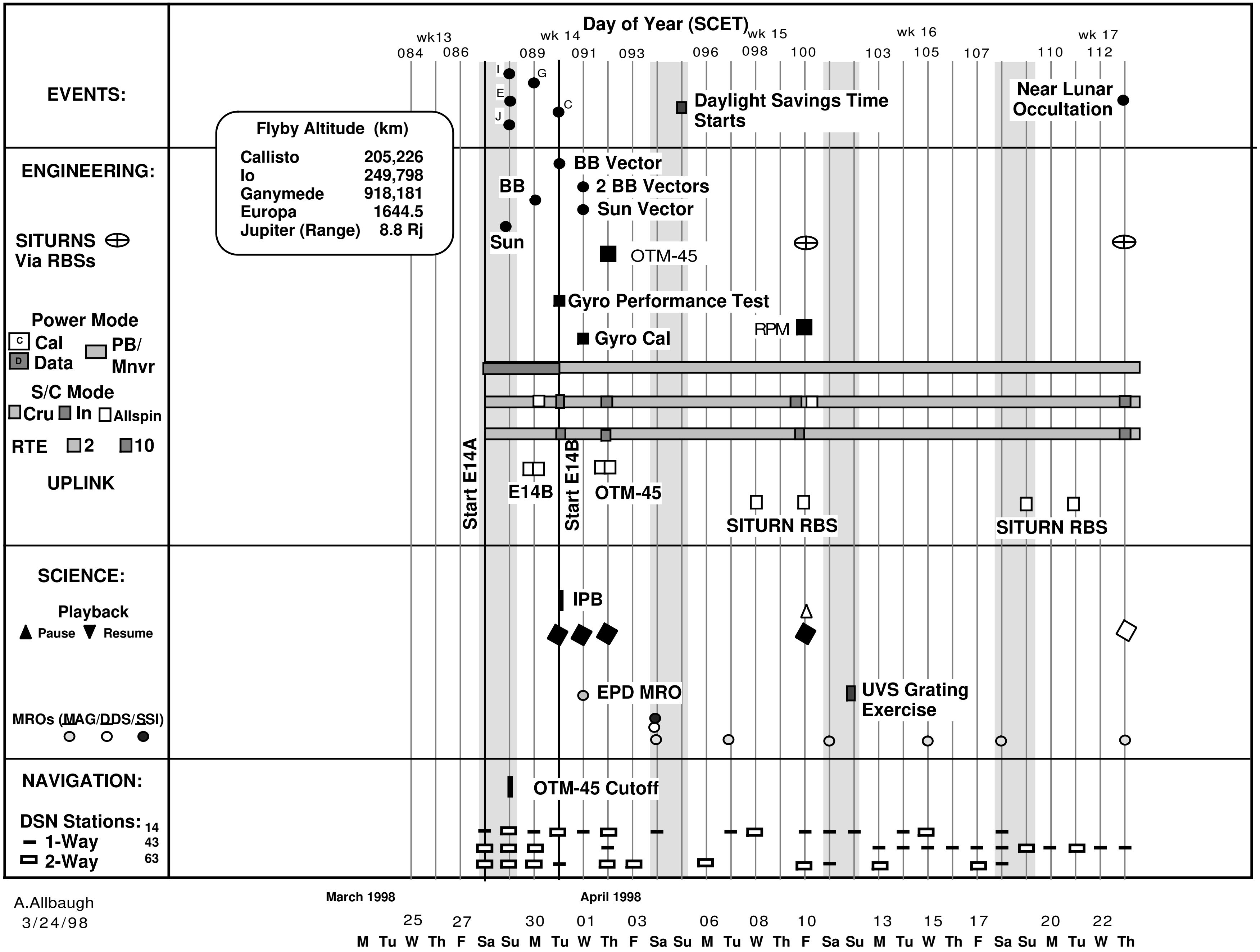
There are 12 autonomous reloads of the NIMS RAM code from CDS planned during the E14A encounter period, one just before each science observation. These reloads are in response to the on-going flight-anomalies where the NIMS RAM code takes some bit hits and halts the instrument during when the spacecraft is close to Jupiter. NIMS personnel will monitior the NIMS engineering telemetry data on a regular schedule to track the instrument's status.

The E14 orbit is divided into 2 sequence loads: one Encounter Load (E14A) and one Orbital Cruise Load (E14B). The E14A load begins on D087 (03/28/98) and ends on D090 (03/30/98). This load contains the flybys of Jupiter, Europa, Io and Callisto. The Cruise Load E14B runs from D090 to D150. Playback of the recorded data takes place during the Cruise phase, E14B. A high-level overview timeline of the E14 orbit can be found on the following three pages.

E14A Sequence Oveview

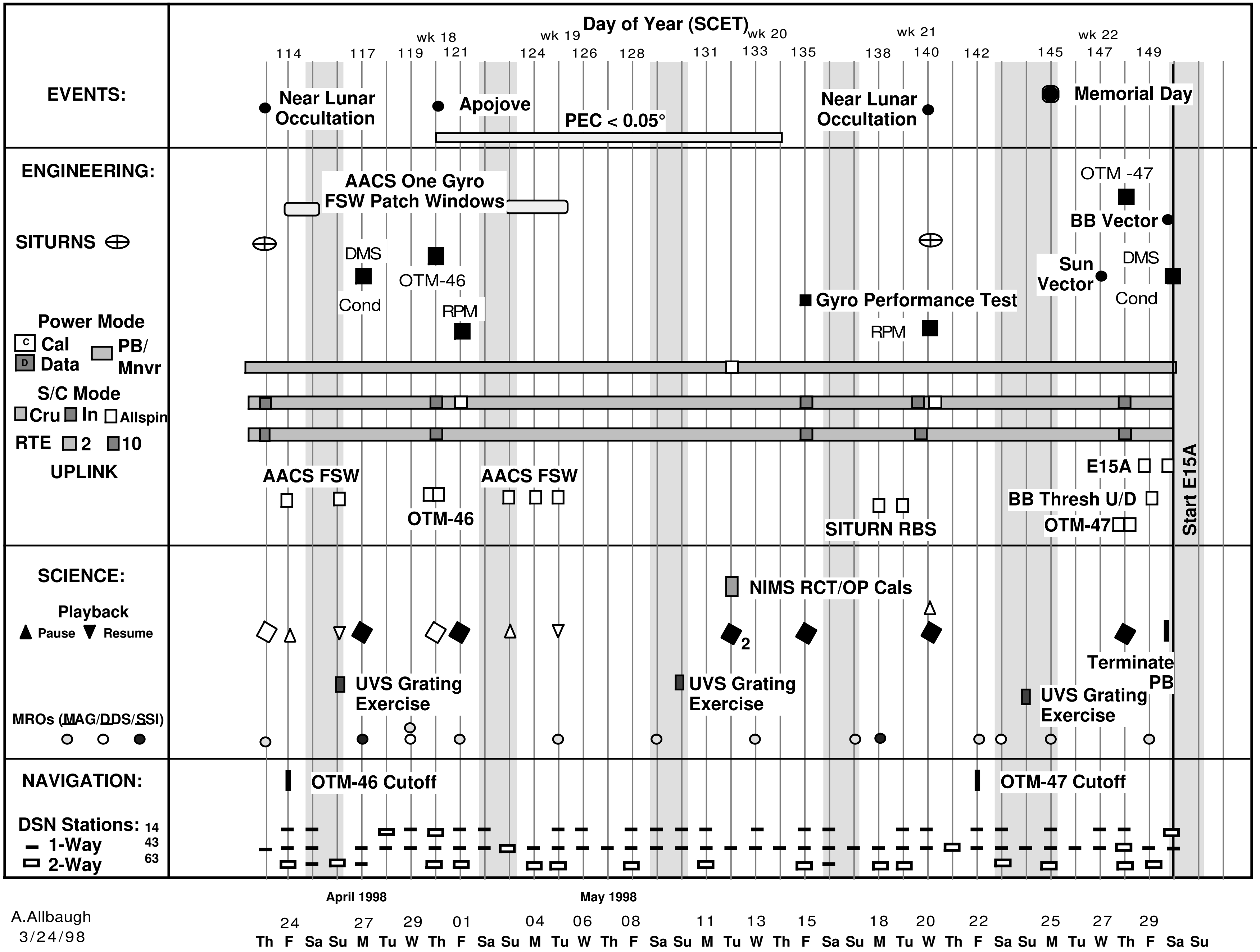


E14 Overview (Part 1)



A.Allbaugh
3/24/98

E14 Overview (Part 2)



A.Allbaugh
3/24/98

Introduction

The following table lists the major events during E14, including NIMS Real Time observations, in UTC.

03/28/98	98-087/13:00:00	E14 Encounter Start
03/28/98	98-087/18:20:20	NIMS RAM Reload 01
03/28/98	98-087/18:28:25	NIMS R/T Jupiter 01
03/29/98	98-088/04:42:10	NIMS RAM Reload 02
03/29/98	98-088/04:48:00	Io Closest Approach
03/29/98	98-088/08:01:26	Jupiter Closest Approach
03/29/98	98-088/11:59:59	NIMS RAM Reload 03
03/29/98	98-088/13:24:05	Europa Closest Approach
03/29/98	98-088/13:25:55	NIMS RAM Reload 04
03/29/98	98-088/14:01:19	NIMS RAM Reload 05
03/29/98	98-088/14:20:31	NIMS RAM Reload 06
03/29/98	98-088/21:41:22	NIMS R/T Jupiter 02
03/30/98	98-089/04:10:39	NIMS RAM Reload 07
03/30/98	98-089/07:10:37	NIMS RAM Reload 08
03/30/98	98-089/09:10:57	NIMS RAM Reload 09
03/30/98	98-089/13:36:05	NIMS R/T PCT CAL
03/30/98	98-089/17:49:39	NIMS RAM Reload 10
03/31/98	98-090/00:57:21	NIMS RAM Reload 11
03/31/98	98-090/04:31:00	Callisto Closest Approach
03/30/98	98-090/02:15:00	Start E14 Playback
05/12/98	98-132/07:59:34	NIMS R/T RCT CAL
05/31/98	98-151/00:00:00	End E14 Playback