Chapter 1 - Introduction

Contents

Introduction

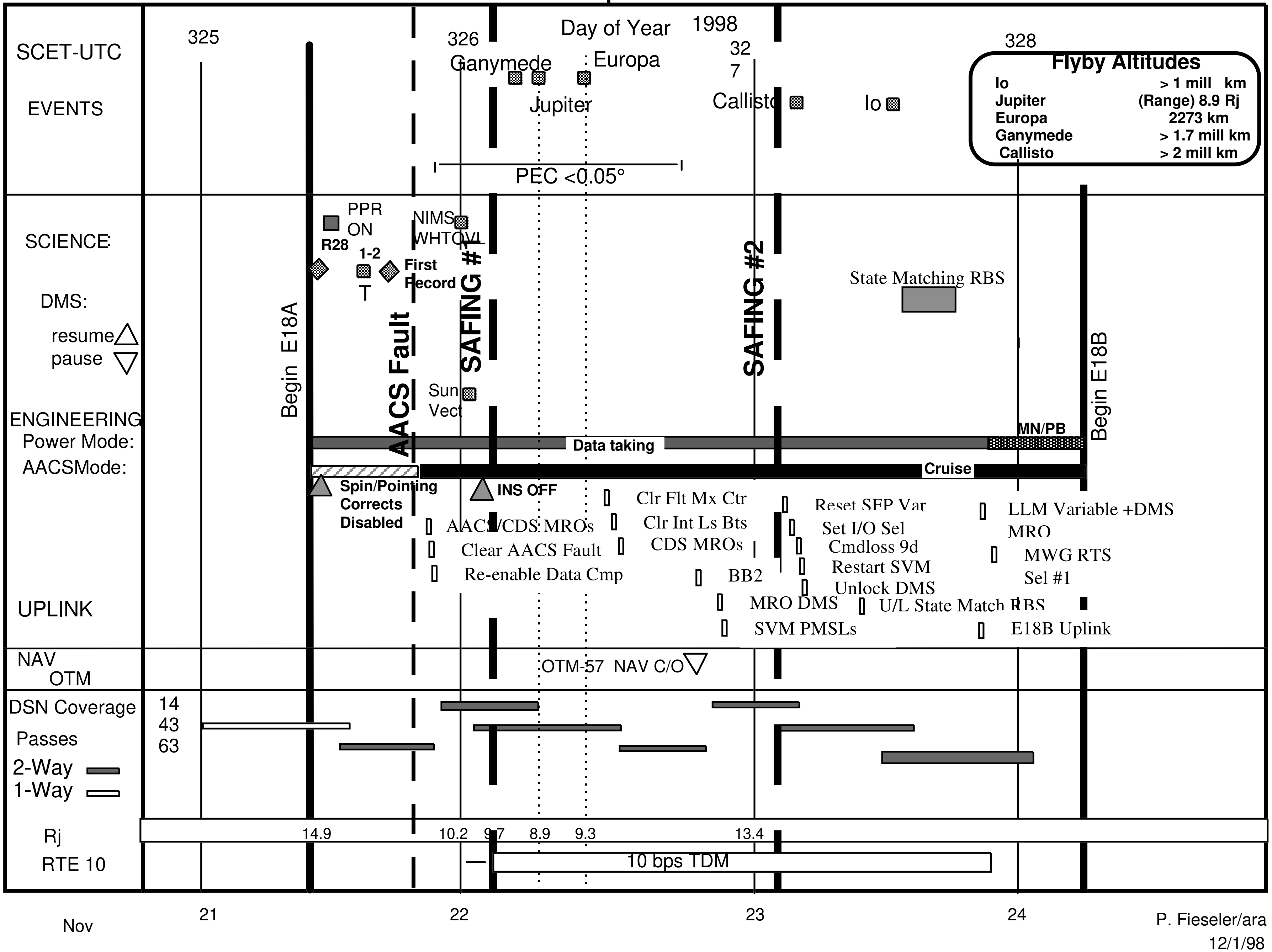
This E18 orbit is the eighteenth of twenty-five orbits in Galileo's Tour of the Jovian system and the seventh orbit in the Galileo Europa Mission (GEM). This orbit has a targetted satellite flyby of Europa. NIMS will make observations of Jupiter and Io in this orbit.

There are 9 autonomous reloads of the NIMS RAM code from CDS planned during the E18A 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 E18 orbit is divided into 2 sequence loads: one Encounter Load (E18A) and one Orbital Cruise Load (E18B). The E18A load begins on D325 (11/21/98) and ends on D328 (11/24/98). This load contains the flybys of Jupiter, Europa and Io. The Cruise Load E18B runs from D328 to D031. Playback of the recorded data takes place during the Cruise phase, E18B. A high-level overview timeline of the E18 orbit can be found on the following three pages.

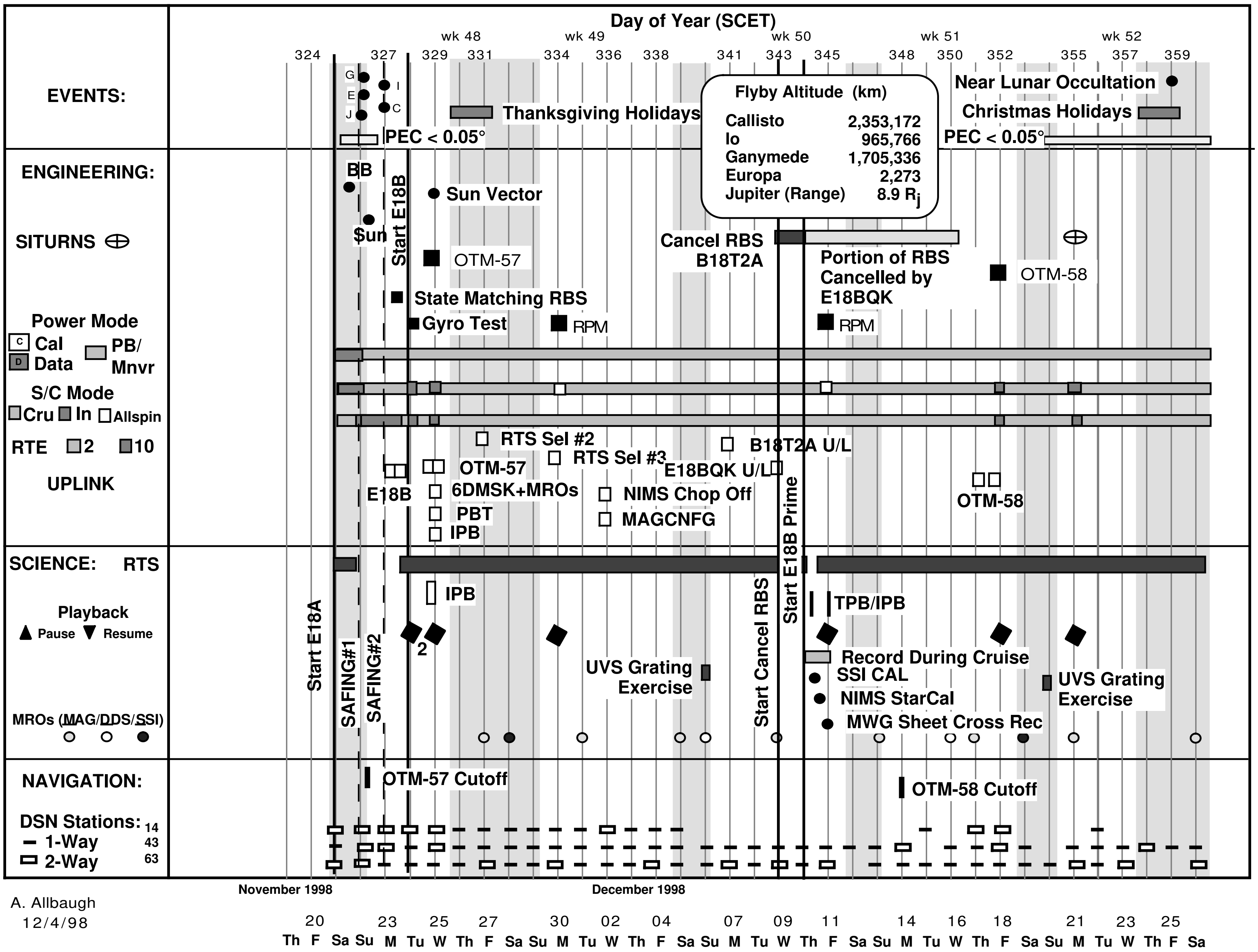
Due to spacecraft safing just before perijove in the E18 encounter, a large portion of the E18 encounter sequence was lost. Additional NIMS calibration observations were added after the fact to take advantage of the extra tape and bits to ground. Some E17 observations were not recorded over in E18 as planned. Therefore, these E17 observations were available for playback during E18 cruise.

E18A Sequence Oveview

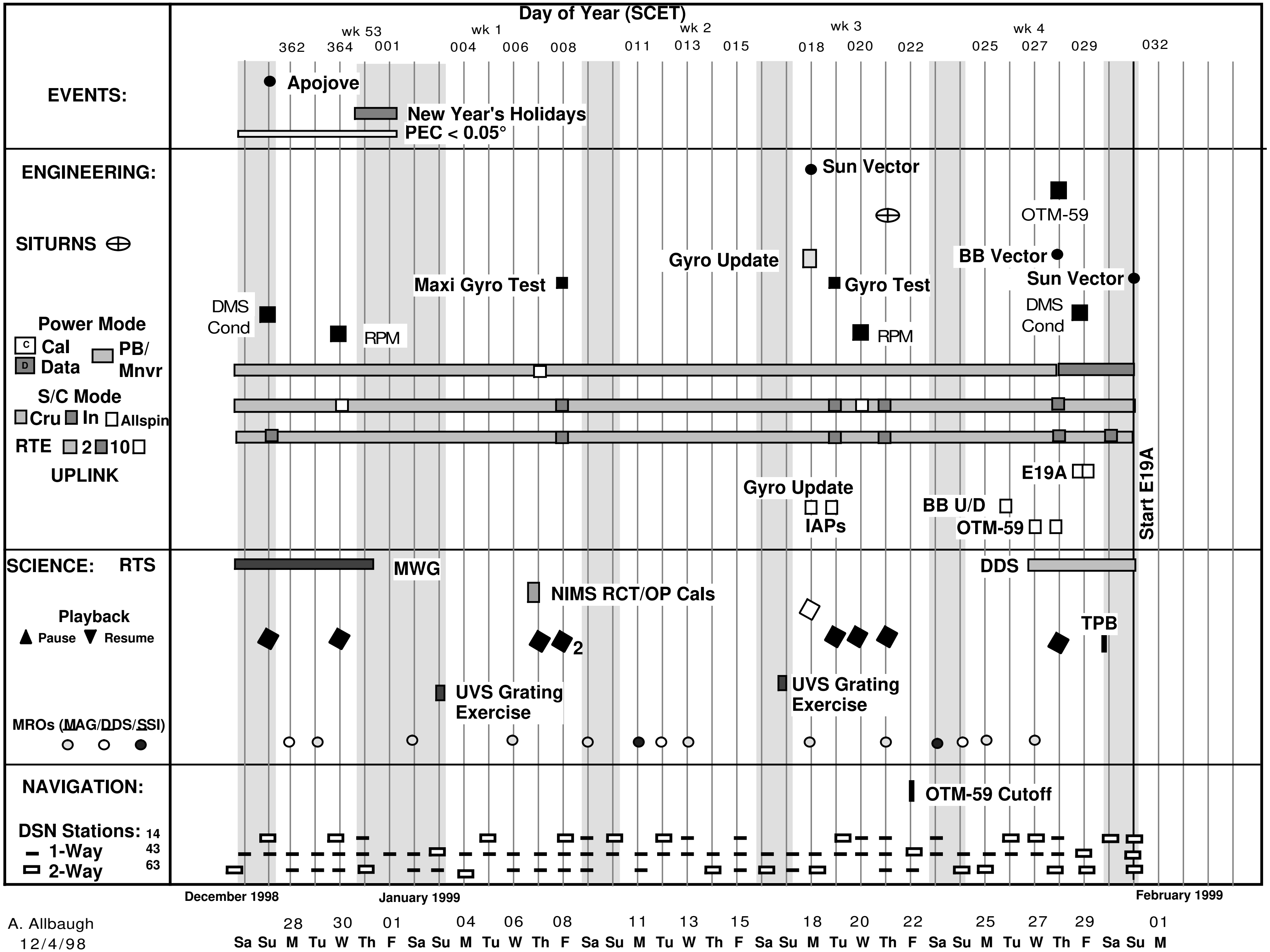


P. Fieseler/ara
12/1/98

E18 Overview (Part 1)



E18 Overview (Part 2)



A. Allbaugh
12/4/98

Introduction

The following table lists the major events during E18, including NIMS Real Time observations, in UTC.

11/21/98	98-325/12:00:00	E18 Encounter Start
11/21/98	98-325/17:59:17	NIMS RAM Reload 01
11/21/98	98-325/18:05:07	NIMS R/T Jupiter 01
11/22/98	98-326/00:24:31	NIMS RAM Reload 02
11/22/98	98-326/01:54:31	NIMS RAM Reload 03
11/22/98	98-326/02:01:21	NIMS R/T Jupiter 02
11/22/98	98-326/05:34:00	SPACECRAFT SAFED
11/23/98	98-327/18:20:00	NIMS Power ON
11/24/98	98-328/01:07:00	Start E18 Playback
12/10/98	98-344/17:39:04	NIMS RAM Reload
12/10/98	98-344/17:41:00	NIMS Star Cal
01/07/99	99-007/14:00:00	NIMS R/T RCT CAL
01/29/99	99-029/07:26:50	End E18 Playback