Chapter 1 - Introduction

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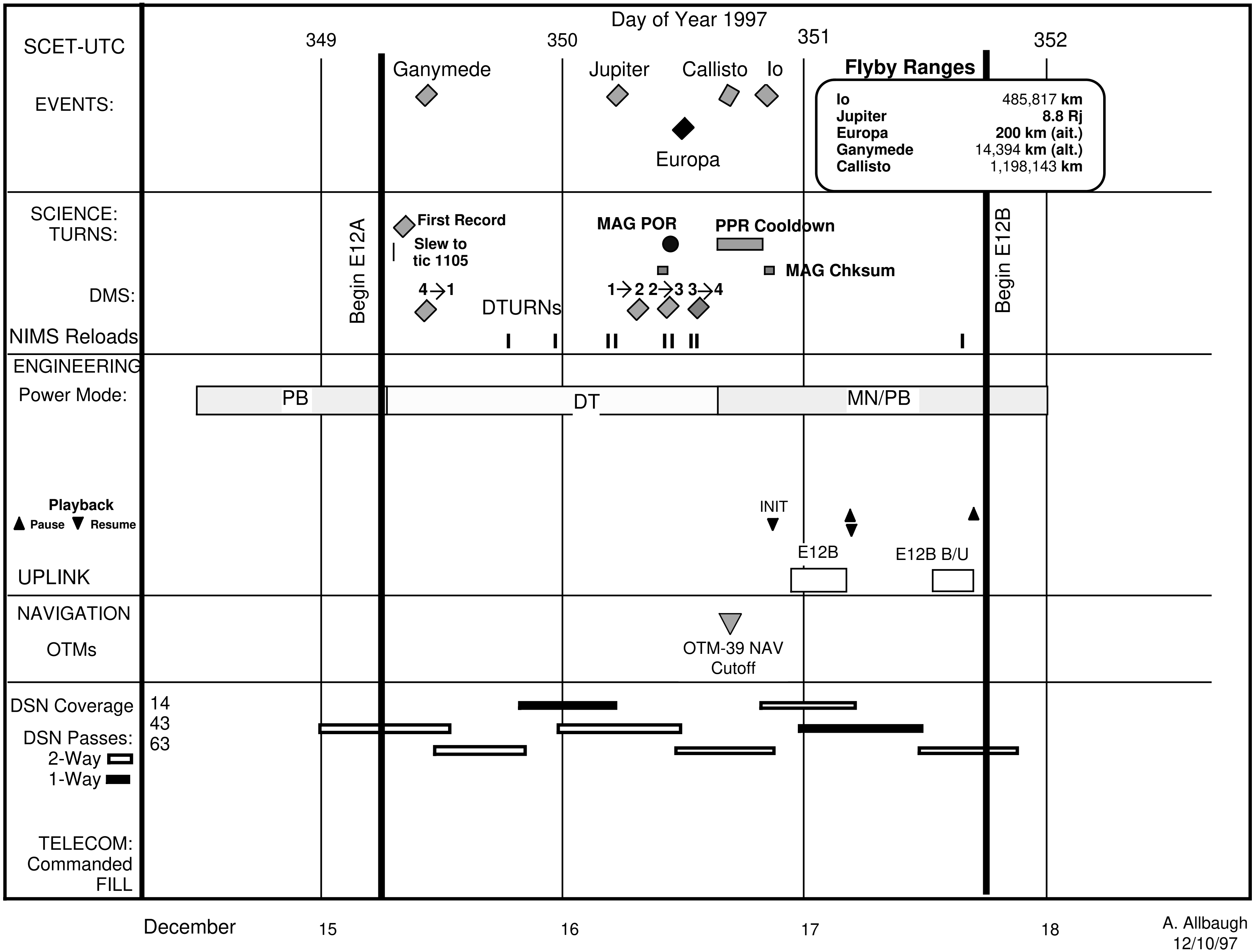
Introduction

This E12 orbit is the twelfth of twenty-five orbits in Galileo's Tour of the Jovian system and the first orbit in the Galileo Europa Mission (GEM). This orbit has a targetted satellite flyby of Europa. NIMS will make observations of Jupiter, Io and Europa in this orbit.

There are 9 autonomous reloads of the NIMS RAM code from CDS planned during the E12A 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.

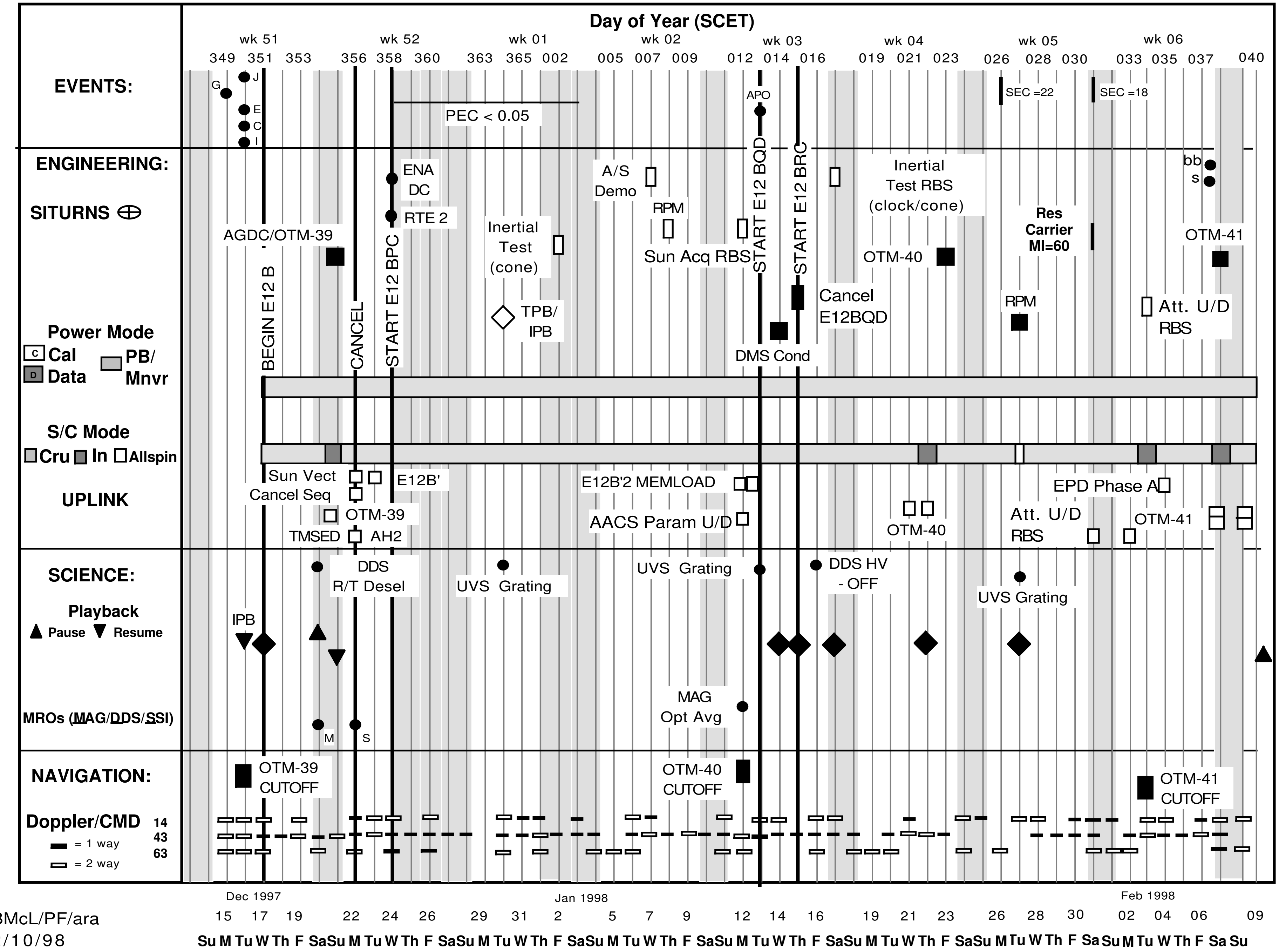
The E12 orbit is divided into 3 sequence loads: one Encounter Load (E12A) and two Orbital Cruise Load (E12B and E12C). The E12A load begins on D349 of 1997 (12/15/97) and ends on D351 of 1997 (12/17/97). This load contains the flybys of Jupiter, Europa and Io. The Cruise Load E12B runs from D351 to D040 of 1998 and the Cruise Load E12C runs from D040 to D087. Playback of the recorded data takes place during the Cruise phase, E12B and E12C. A high-level overview timeline of the E12 orbit can be found on the following three pages.

E12A Sequence Overview



A. Allbaugh
12/10/97

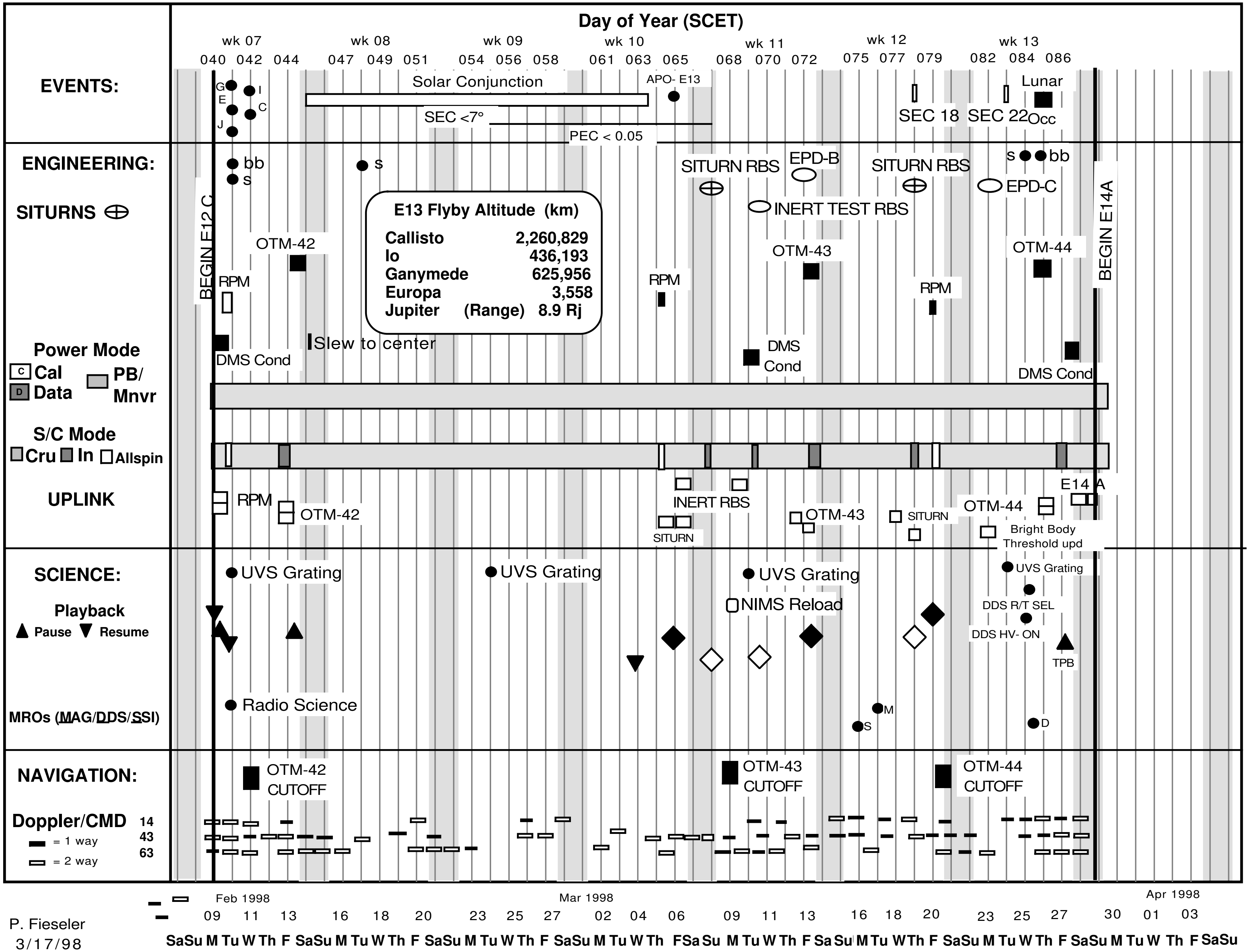
E-12B' Overview



1-04

BMcL/PF/ara
2/10/98

E-12C Overview



P. Fieseler
3/17/98

Introduction

The following table lists the major events during E12, including NIMS Real Time observations, in UTC.

12/15/97	97-349/08:00:00	E12 Encounter Start
12/15/97	97-349/17:45:09	NIMS RAM Reload 01
12/15/97	97-349/17:55:15	NIMS R/T Jupiter
12/15/97	97-349/23:39:02	NIMS RAM Reload 02
12/15/97	97-349/23:49:09	NIMS R/T Jupiter
12/16/97	97-350/06:12:21	NIMS RAM Reload 03
12/16/97	97-350/06:22:28	NIMS R/T Jupiter
12/16/97	97-350/06:36:46	Jupiter Closest Approach
12/16/97	97-350/06:48:45	NIMS RAM Reload 04
12/16/97	97-350/11:05:35	NIMS RAM Reload 05
12/16/97	97-350/11:31:52	NIMS RAM Reload 06
12/16/97	97-350/12:05:46	Europa Closest Approach
12/16/97	97-350/12:32:32	NIMS RAM Reload 07
12/16/97	97-350/13:58:29	NIMS RAM Reload 08
12/16/97	97-350/19:10:00	Io Closest Approach
12/17/97	97-351/12:00:00	Start E12 Playback
12/17/97	97-351/17:29:37	NIMS RAM Reload 09
01/28/97	98-028/10:00:00	NIMS R/T RCT CAL
02/04/97	98-035/00:00:00	NIMS R/T PCT CAL
03/28/98	98-117/13:00:00	End E12 Playback