Chapter 1 - Introduction

Contents

Introduction

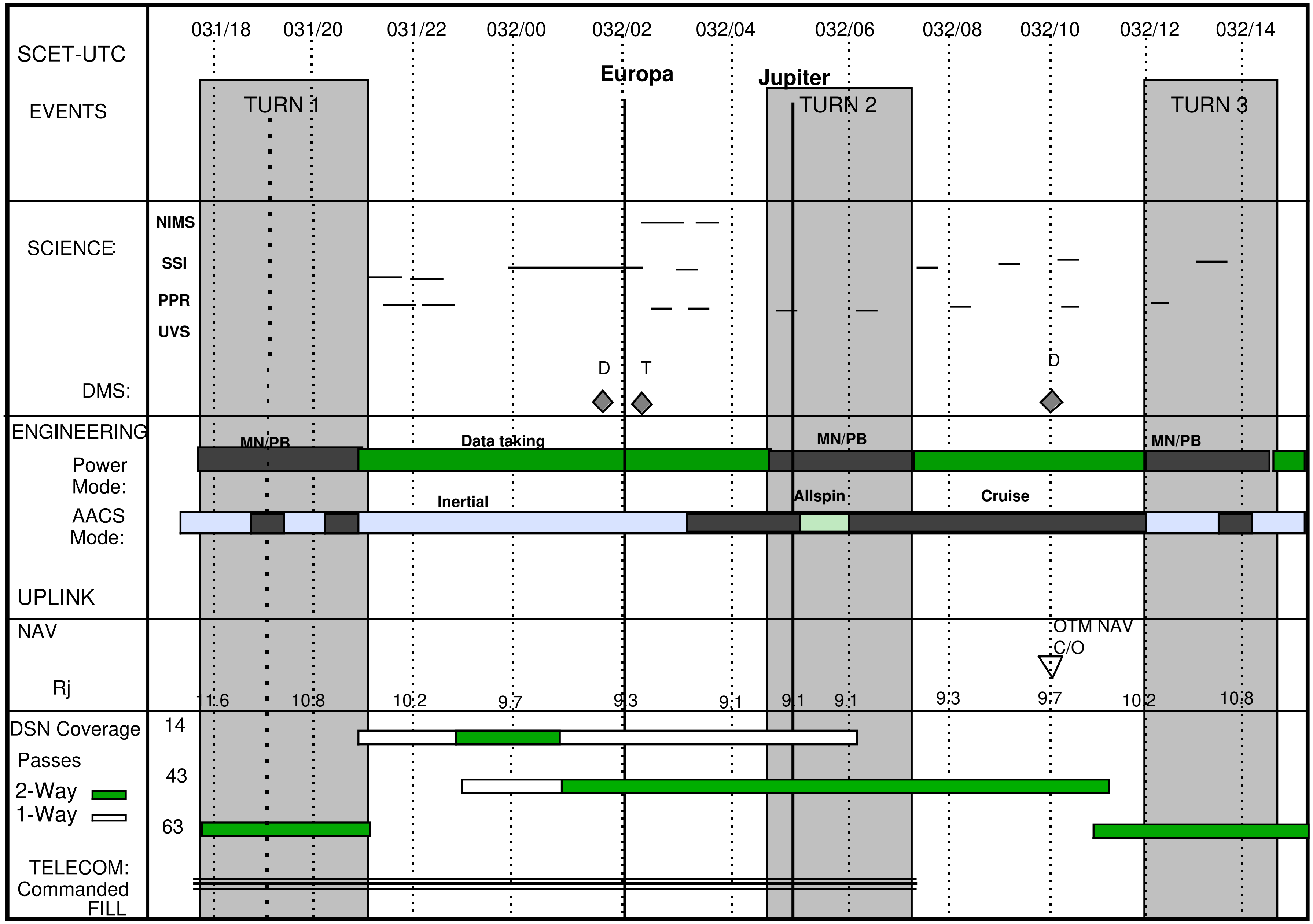
This E19 orbit is the nineteenth of twenty-five orbits in Galileo's Tour of the Jovian system and the eighth orbit in the Galileo Europa Mission (GEM). This orbit has a targetted satellite flyby of Europa. NIMS will make observations of Jupiter and Ganymede in this orbit.

There are 11 autonomous reloads of the NIMS RAM code from CDS planned during the E19A 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 E19 orbit is divided into 3 sequence loads: one Encounter Load (E19A) and two Orbital Cruise Loads (E19B and E19C). The E19A load begins on D031 (01/31/99) and ends on D042 (02/11/99). This load contains the flybys of Jupiter, Europa and Ganymede. The Cruise Load E19B runs from D042 to D081. The Cruise Load E19C run from D081 to D122. The E19 Cruise period was split into two loads because of solar conjunction. Playback of the recorded data takes place during the Cruise phase, E19B and E19C. A high-level overview timeline of the E19 orbit can be found on the following three pages.

Due to spacecraft safing just after perijove in the E19 encounter, some of the E19 encounter sequence was lost.

E19A TURNS



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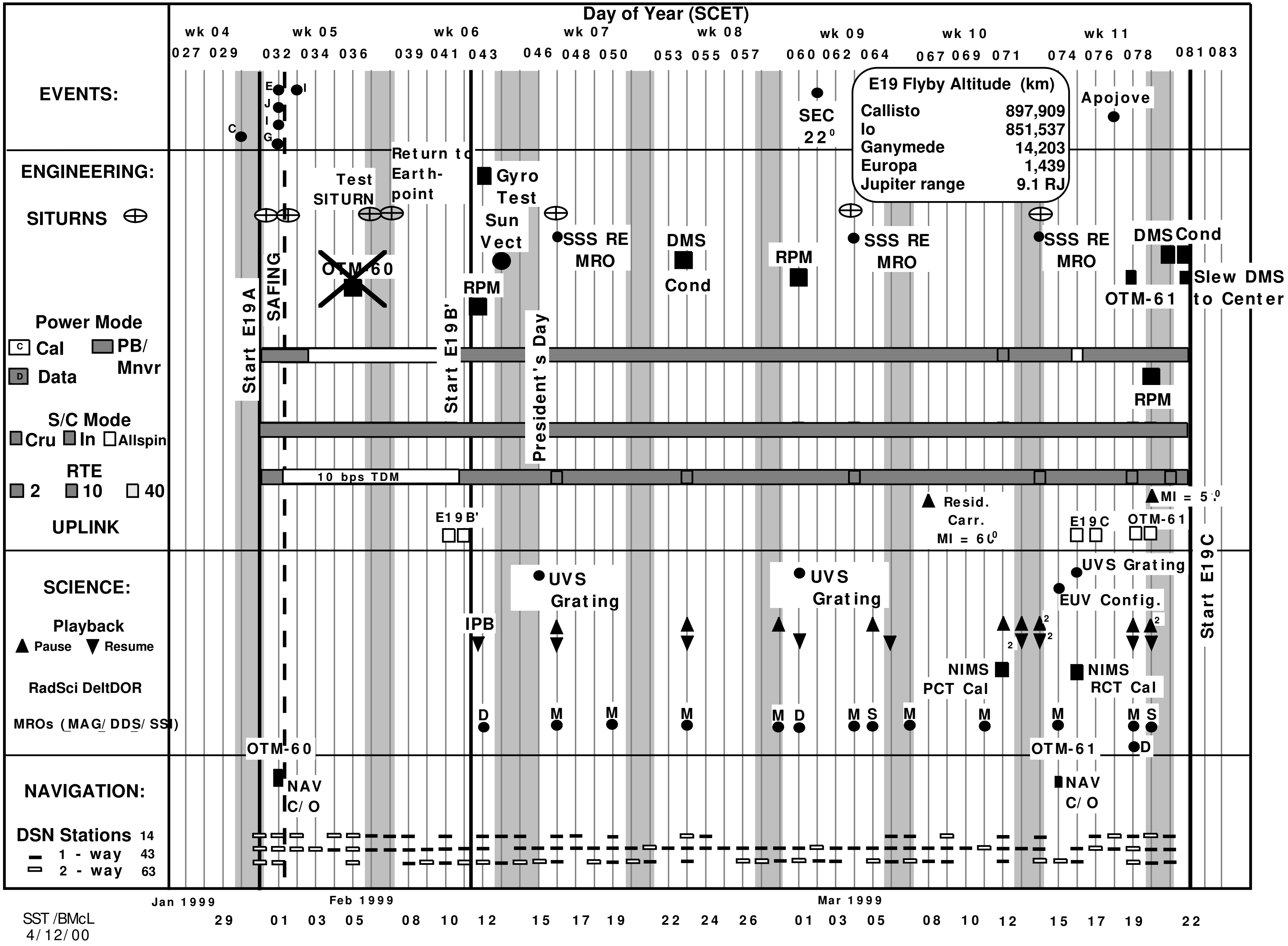
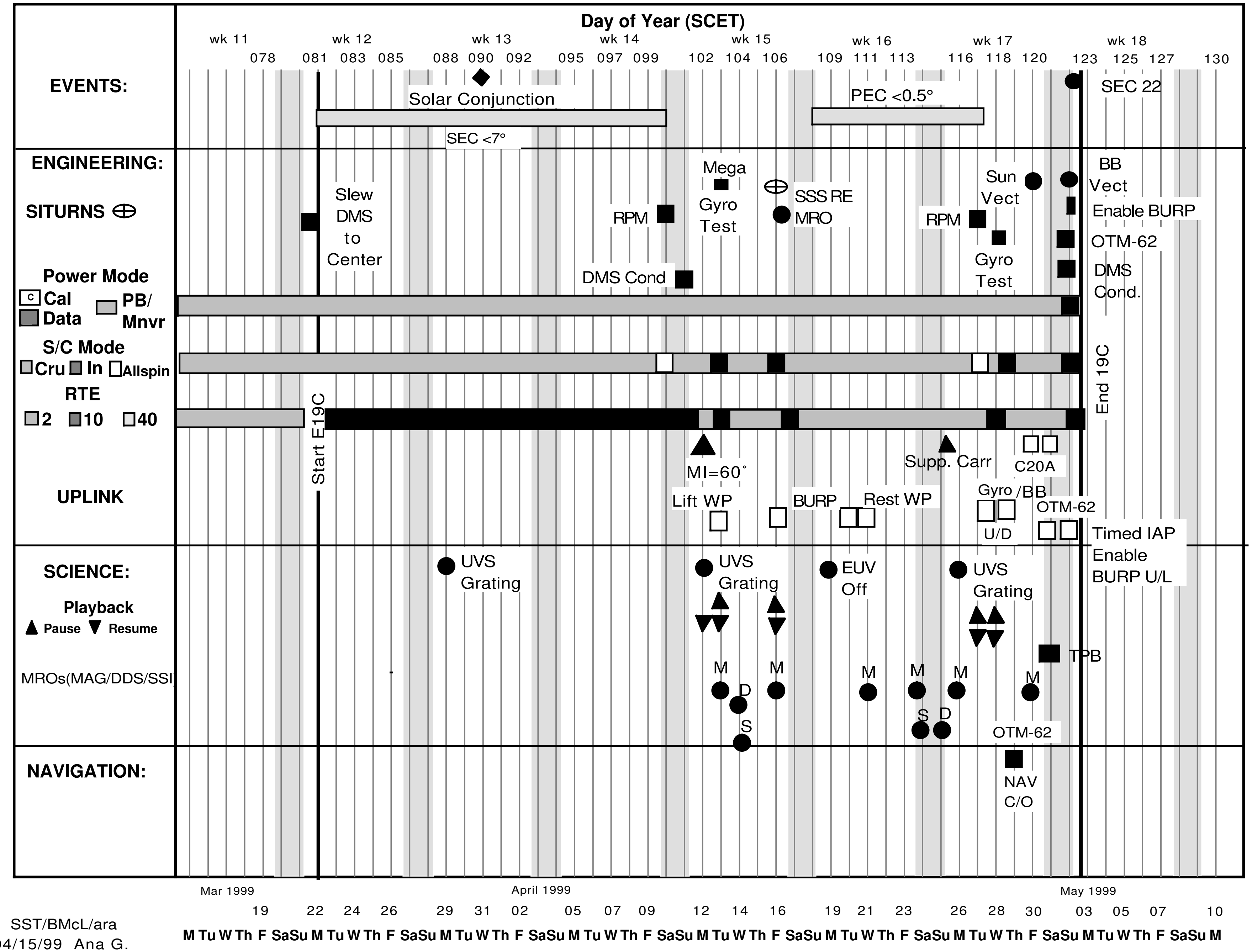
E-19 Overview (Pt1)



E-19 Overview (Pt 2)



SST/BMcL/ara
04/15/99 Ana G.

Introduction

The following table lists the major events during E19, including NIMS Real Time observations, in UTC.

01/31/99	99-031/02:00:00	E19 Encounter Start
01/31/99	99-031/02:59:51	NIMS RAM Reload 01
01/31/99	99-031/03:07:42	NIMS R/T Jupiter 01
01/31/99	99-031/03:28:10	NIMS RAM Reload 02
01/31/99	99-031/03:34:00	NIMS R/T Jupiter 02
01/31/99	99-031/13:30:47	NIMS RAM Reload 03
01/31/99	99-031/14:00:06	NIMS RAM Reload 04
01/31/99	99-031/15:24:02	NIMS RAM Reload 05
01/32/99	99-032/02:10:57	E19 Europa Closest Approach
01/32/99	99-032/02:21:04	NIMS RAM Reload 06
01/32/99	99-032/02:39:55	NIMS RAM Reload 07
01/32/99	99-032/05:00:50	PJ-19 Jupiter Closest Approach
01/32/99	99-032/05:41:00	SPACECRAFT SAFED
02/11/99	99-042/02:58:28	NIMS Power ON
02/11/99	99-042/03:02:06	NIMS RAM Reload
02/11/99	99-042/17:12:59	Start E19 Playback
03/12/99	99-071/23:28:19	NIMS R/T PCT CAL
03/17/99	99-076/00:34:20	NIMS R/T RCT CAL
03/22/99	99-081/05:00:00	Start Solar Conjunction
04/10/99	99-100/05:00:00	End Solar Conjunction
05/01/99	99-121/05:11:06	End E19 Playback