Chapter 1 - Introduction

Contents

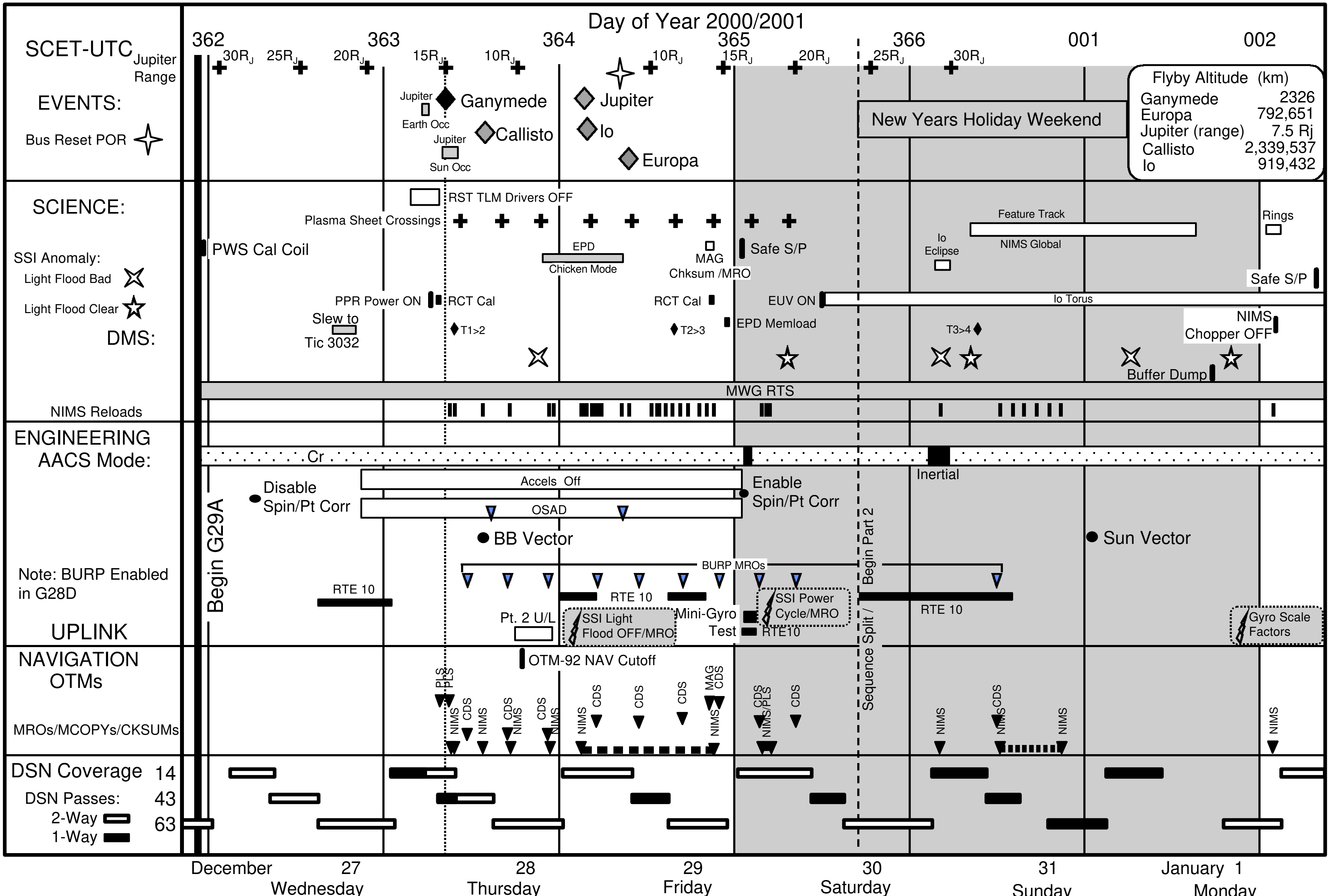
Introduction

This G29 orbit is the twenty-ninth of twenty-nine orbits in Galileo's Tour of the Jovian system and the third orbit in the Galileo Millennium Mission (GMM). G29 is a Ganymede Flyby.

There are 36 autonomous reloads of the NIMS RAM code from CDS planned during the G29A 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 G29 orbit is divided into 4 sequence loads: one Encounter Load (G29A) and three Orbital Cruise Loads (G29B, G29C and G29D). The G29A load begins on D361 (12/26/00) and ends on D036 (02/05/01). This load contains the flyby of Ganymede. The Cruise Loads G29B, G29C and G29D run from D036 to D142. Playback of the recorded data takes place during the Cruise phase, G29B, G29C and G29D. A high-level overview timeline of the G29 orbit can be found on the following eight pages.

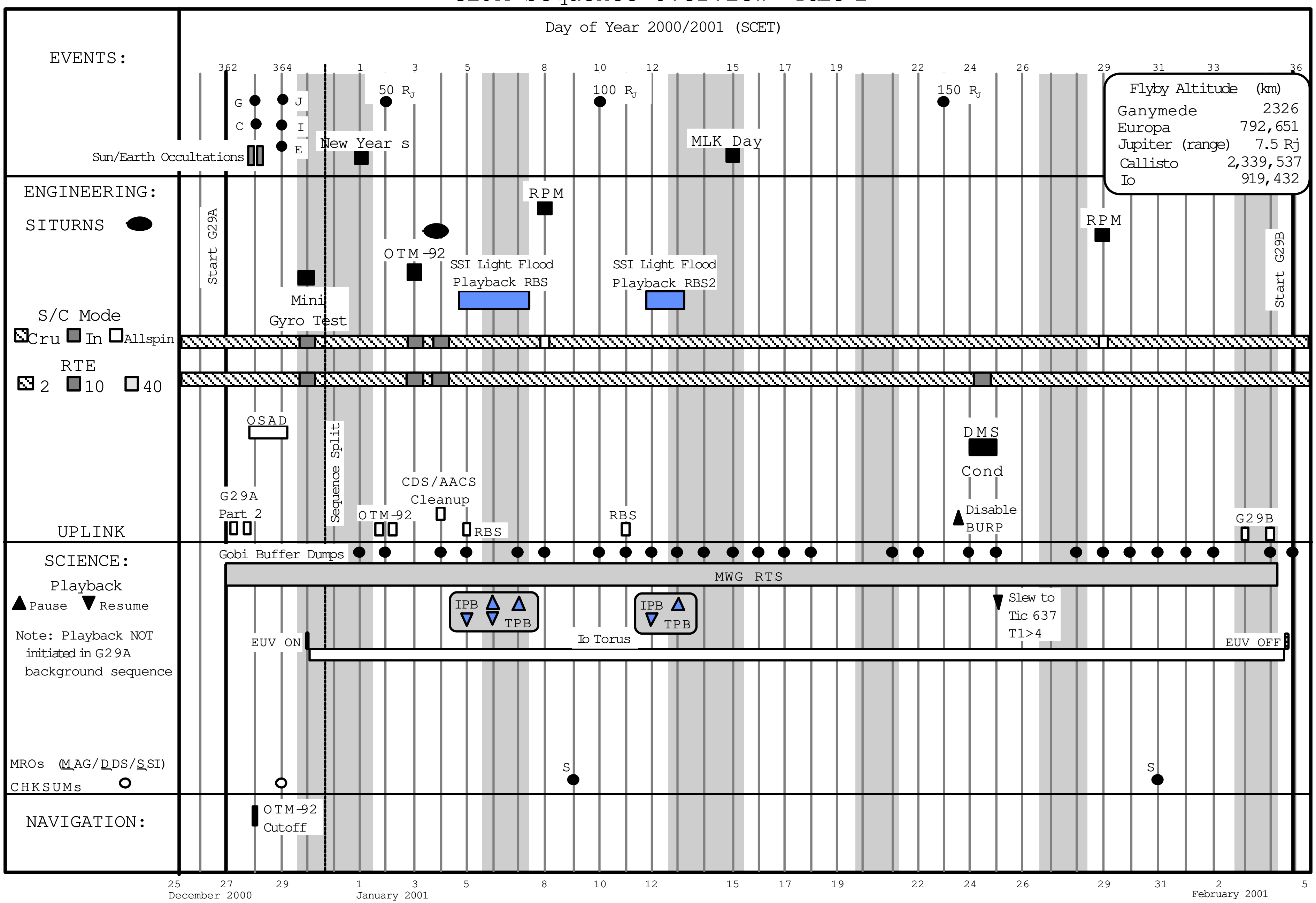
G29A Encounter Overview



Note: One Bus Reset POR occurred during the encounter time period, which was properly handled by the on-board recovery routine.
The time was: 00-364/08:35:00 SCET.
SSI Light Flood Anomaly changes occurred at 363/~2130 (bad), 365/~0730 (good), 366/~0409 (bad), 364/~0848 (good), 001/~0626 (bad), and 001/~1946 (good).

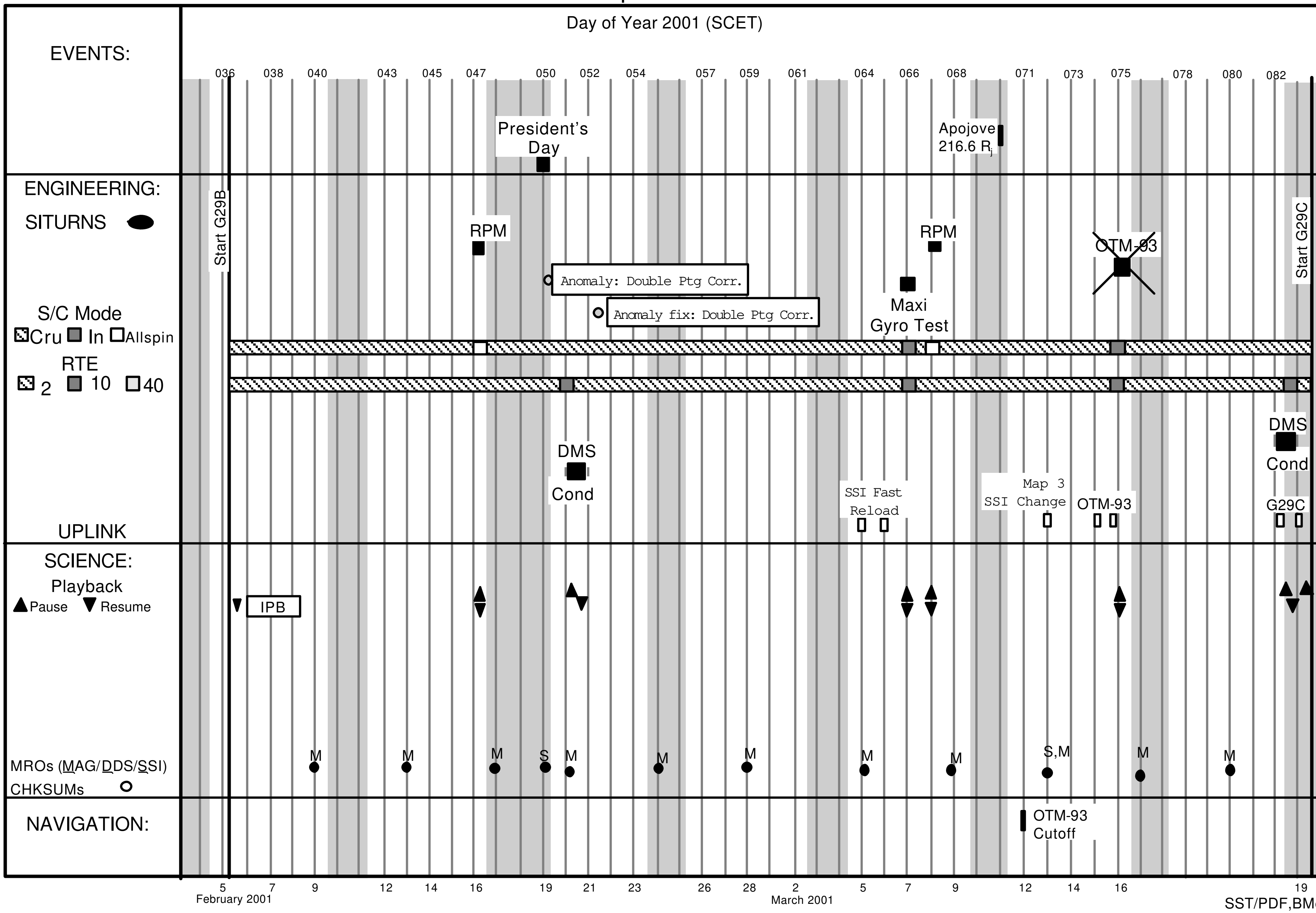
BMcL/SST
01/02/01

G29A Sequence Overview –Part 2



SST/BMcL
01/31/01

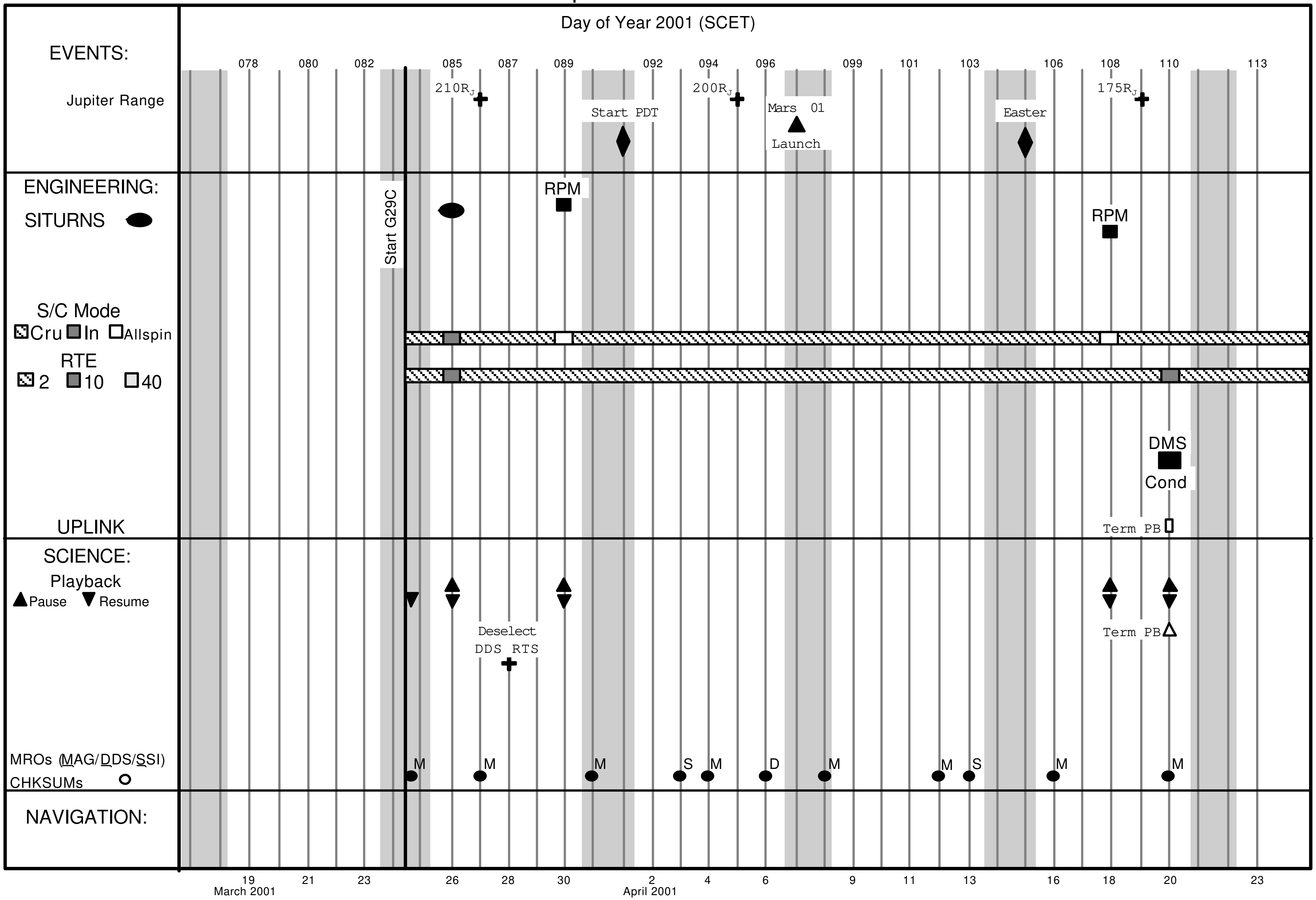
G29B Sequence Overview



SST/PDF,BMcL

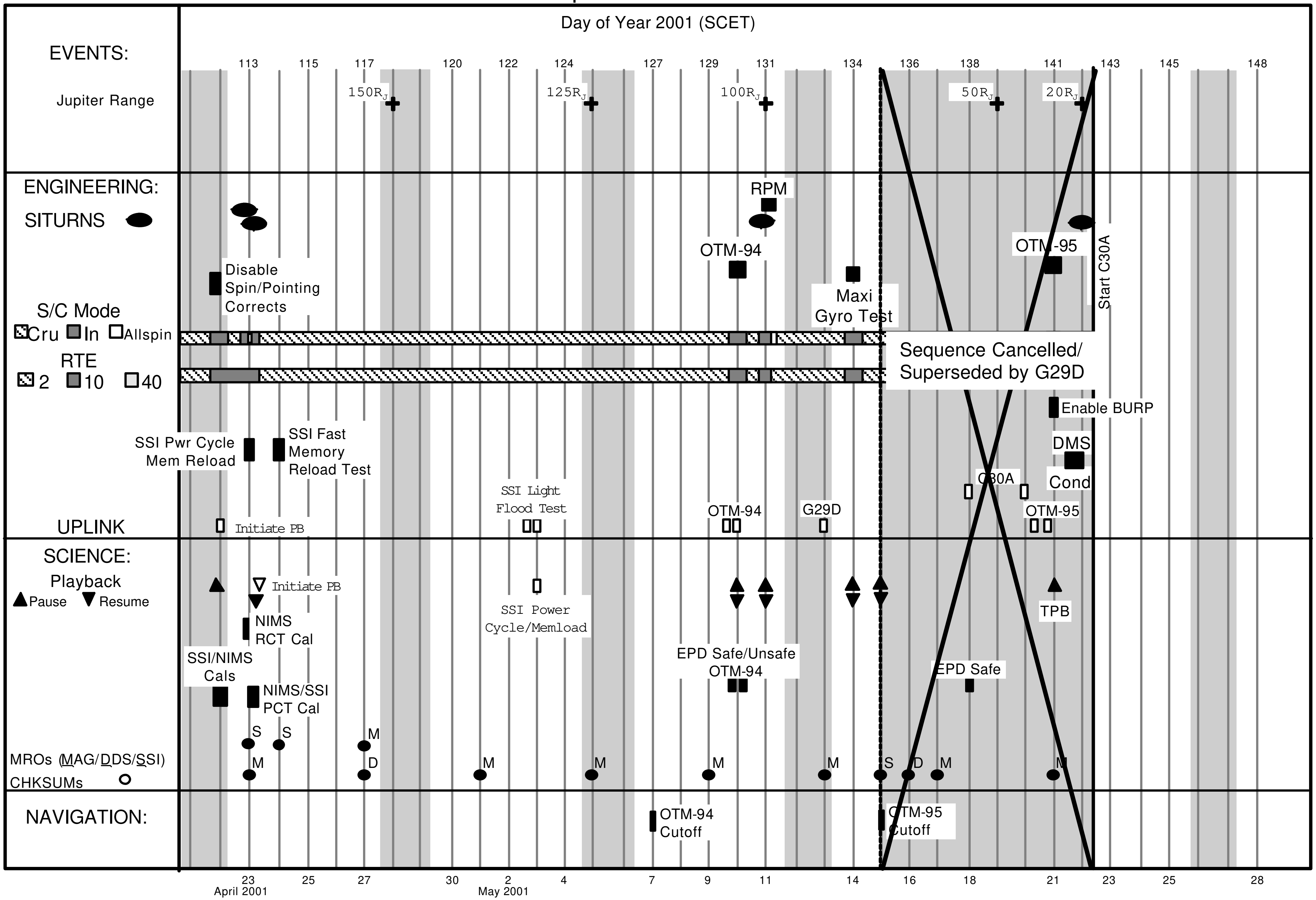
3/16/01

G29C Sequence Overview - Part 1



SST/BMcL
05/08/01

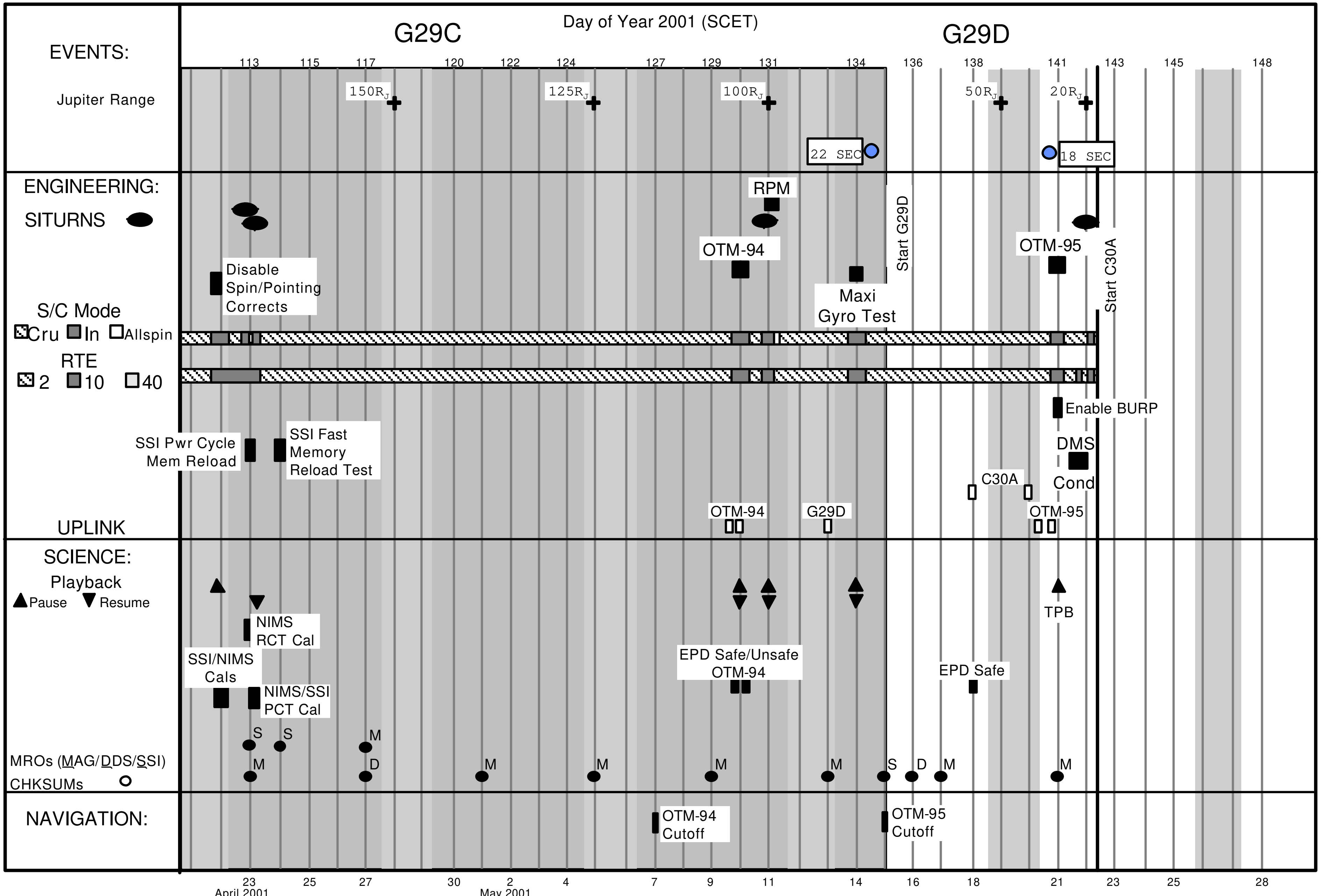
G29C Sequence Overview - Part 2



Note: This sequence was superceded (6CANCL) by G29D at 01-135/00:05:10.066 to update telemetry for solar conjunction and changes in station coverage.

SST/BMcL
06/05/01

G29D Sequence Overview



Introduction

The following table lists the major events during G29, including NIMS Real Time observations, in UTC.

12/26/00	00-361/22:30:00	G29 Encounter Start
12/28/00	00-363/09:03:07	NIMS RAM Reload 01
12/28/00	00-363/08:25:05	G28 Ganymede Closest Approach
12/28/00	00-363/10:30:09	NIMS RAM Reload 02
12/28/00	00-363/13:40:37	NIMS RAM Reload 03
12/28/00	00-363/13:42:35	Callisto Closest Approach
12/28/00	00-363/17:13:35	NIMS RAM Reload 04
12/28/00	00-363/22:33:06	NIMS RAM Reload 05
12/28/00	00-363/23:12:01	NIMS RAM Reload 06
12/29/00	00-364/03:33:43	Io Closest Approach
12/29/00	00-364/03:34:38	PJ-29 Jupiter Closest Approach
12/29/00	00-364/03:04:34	NIMS RAM Reload 07
12/29/00	00-364/03:47:33	NIMS RAM Reload 08
12/29/00	00-364/03:56:39	NIMS RAM Reload 09
12/29/00	00-364/04:21:14	NIMS R/T Select 29JNNEBRLT01
12/29/00	00-364/04:40:08	NIMS RAM Reload 10
12/29/00	00-364/04:46:31	NIMS R/T Select 29JNNTZRLT01
12/29/00	00-364/05:00:21	NIMS RAM Reload 11
12/29/00	00-364/05:06:44	NIMS R/T Select 29JNSTZRLT01
12/29/00	00-364/05:21:35	NIMS RAM Reload 12
12/29/00	00-364/05:56:59	NIMS RAM Reload 13
12/29/00	00-364/09:40:26	NIMS RAM Reload 14
12/29/00	00-364/03:37:43	Europa Closest Approach
12/29/00	00-364/09:46:49	NIMS R/T Select 29JNNTZRLT02
12/29/00	00-364/10:01:59	NIMS R/T Select 29JNSTZRLT02
12/29/00	00-364/12:43:27	NIMS RAM Reload 15
12/29/00	00-364/13:07:01	NIMS R/T Select 29JNLIMBRT01
12/29/00	00-364/13:24:54	NIMS RAM Reload 16
12/29/00	00-364/13:46:08	NIMS RAM Reload 17
12/29/00	00-364/14:07:41	NIMS R/T Select 29JNLIMBRT02
12/29/00	00-364/14:46:48	NIMS RAM Reload 18
12/29/00	00-364/15:08:21	NIMS R/T Select 29JNLIMBRT03
12/29/00	00-364/15:47:28	NIMS RAM Reload 19
12/29/00	00-364/16:47:07	NIMS RAM Reload 20
12/29/00	00-364/17:50:49	NIMS RAM Reload 21
12/29/00	00-364/18:10:21	NIMS R/T Select 29JNLIMBRT06
12/29/00	00-364/19:09:41	NIMS RAM Reload 22
12/29/00	00-364/19:31:14	NIMS R/T Select 29JNLIMBRT07
12/29/00	00-364/20:10:21	NIMS RAM Reload 23
12/29/00	00-364/21:10:01	NIMS RAM Reload 24
12/29/00	00-364/22:10:41	NIMS RAM Reload 25
12/30/00	00-365/04:24:47	NIMS RAM Reload 26
12/30/00	00-365/04:30:09	NIMS R/T Select 29JNSTZRLT03
12/30/00	00-365/04:41:59	NIMS RAM Reload 27
12/30/00	00-366/04:00:21	NIMS RAM Reload 28
12/30/00	00-366/12:26:55	NIMS RAM Reload 29
12/30/00	00-366/14:08:01	NIMS RAM Reload 30
12/30/00	00-366/15:49:08	NIMS RAM Reload 31
12/30/00	00-366/17:28:13	NIMS RAM Reload 32
12/30/00	00-366/19:08:19	NIMS RAM Reload 33
12/30/00	00-366/20:49:26	NIMS RAM Reload 34
01/02/01	01-002/01:56:32	NIMS RAM Reload 35

02/05/01	**01-036/20:20:00**	**Start G29 Playback**
04/22/01	**01-112/20:02:08**	**NIMS RAM Reload 36**
04/22/01	**01-112/20:03:00**	**NIMS CRUISE CALIBRATION**
05/21/01	**01-141/12:44:27**	**End G29 Playback**