Chapter 5 - EE9

Contents

Chapter 5

EE9

The EE9 sequence is the first of three sequences in the second Galileo Earth/Moon Encounter (E2). The EE9 sequence takes place when the Galileo spacecraft is approaching the Earth. At this time the spacecraft is close enough to the Earth to provide high-rate real-time transmission of data. This sequence is used for calibration purposes. NIMS took advantage of this sequence to do extensive RCT and PCT calibrations as well as star calibrations on two stars: Sirius (boresight calibration) and Betelgeuse (spectral calibration).

This chapter is divided into four parts: The NIMS Sequence Summary, The NIMS PA Summary, The NIMS Obstab, and the NIMS Detailed Observation Designs.

The NIMS Sequence Summary is a time-ordered listing of all spacecraft activity pertinent to NIMS operations for the EE9 Sequence. The information in this summary is derived from the EE9 SEF (Spacecraft Event File) with inputs from the NIMS Science Coordinators regarding the start time and duration of the NIMS observations.

The NIMS PA Summary is a time-ordered list of all Profile Activities (PAs) listed in the EE9 SEF which affect NIMS observations.

The NIMS Obstab is a time-ordered table of the NIMS observation parameters for use by downlink data processing. It is also derived from the EE9 SEF. The Calibration observations have been expanded to show details of each Calibration sequence (mode change, gain change, etc.).

Each NIMS Detailed Observation Design consists of an OAPEL form and a Pointer plot. The OAPEL form is a brief description of the design of the observation. The Pointer plot is a plot of the target body with the NIMS footprint incorporated in the mosaic design superimposed on the target body. The size and orientation of the target body is plotted as it appears at the time of the first NIMS footprint plotted. For long observations, the target body may rotate or move relative to the spacecraft during the observation. Some observations, such as calibrations, do not have Pointer plots.

NIMS SEQUENCE SUMMARY

EE9

The NIMS Sequence Summary is a time-ordered listing of all spacecraft activity pertinent to NIMS operations for the EE9 Sequence. The information in this summary is derived from the EE9 SEF (Spacecraft Event File) with inputs from the NIMS Science Coordinators regarding the start time and duration of the NIMS observations.

There are 6 columns of information in this table:

DOY	-	Day of Year
Time	-	SCET Time (UTC)
PSID	-	Parameter Set ID of the SEF line
Command	-	Command name from the SEF
Parameters	-	Parameters from the above Command Line
Description	-	Description of the above Command for NIMS
GCM	-	NIMS Gain, Chopper Mode, Instrument Mode Gain = 1,2,3 or 4 Chopper Mode = R (Reference) or 6 (63Hz) Instrument Mode = 0-15
RIM	-	SCLK of the Command Line (RIM:MF)

Also, an additional line is inserted into this table at the start and stop times of each NIMS Observation (Oapel) to bracket the commands which affect each NIMS Observation

Sequence: EE09GK   Created: 09/18/92   Begin: 92-328/14:00:00.000   Finish: 92-340/07:00:01.000

DOY	Time	PSID	Command	Parameters	Description	GCM	RIM
328	14:14:24.933	192MA4A	7CONE	17.45,165.0	Check S/P Position		1,629,550:00
328	14:59:57.000	E2NNNIMSON01	-21372	-----START------			1,629,595:01
	15:00:02.933	20ZU3Q	37HR	CMD,37HR,20ZU3Q,	Replacement Heaters OFF		1,629,595:12
	15:00:30.933	20ZU3R	37A	CMD,37A,20ZU3R,,	NIMS Power ON	260	1,629,595:54
328	15:02:32.266	20ZU4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	2R0	1,629,597:54
		E2NNNIMSON01		-----STOP-------		2R0	1,629,605:01
328	15:10:05.600	20C3A	37F2PR	1	Shield Flash Heater OFF (primary relay)	2R0	1,629,605:06
328	15:10:10.933	20C3B	37F2PR	2	Shield Flash Heater OFF (primary relay)	2R0	1,629,605:14
328	15:11:54.266	260PA476A6A	6TMCHG	MPP	NO DNLNK	2R0	1,629,606:78
328	16:07:56.933	424NA476A6A	6TMCHG	MPB	NO DNLNK	2R0	1,629,662:26
328	17:19:26.933	192MB4A	7CONE	17.45,30.0	Check S/P Position	2R0	1,629,733:00
328	21:10:04.266	20Q4B	7SAFE	UNSTOW	Check S/P Position	2R0	1,629,961:08
328	23:34:34.266	192MD4A	7CONE	17.45,75.0	Check S/P Position	2R0	1,630,104:00
329	02:24:52.200	424NB476A6A	6TMCHG	MPB	NO DNLNK	2R0	1,630,272:39
329	02:39:36.200	192ME4A	7CONE	17.45,105.0	Check S/P Position	2R0	1,630,287:00
329	05:44:38.200	192MF4A	7CONE	17.45,135.0	Check S/P Position	2R0	1,630,470:00
329	08:03:00.866	260PB476A6A	6TMCHG	MPP	NO DNLNK	2R0	1,630,606:78
329	14:59:44.200	192MG4A	7CONE	17.45,179.0	Check S/P Position	2R0	1,631,019:00
329	18:13:51.533	190PA4B	7MODE	CRU	Dual-Spin Mode	2R0	1,631,210:90
329	18:13:52.200	190PA4C	7SAFE	UNSTOW	Check S/P Position	2R0	1,631,211:00
329	18:17:48.866	190PA4D	7MODE	SPNL	All-Spin Mode	2R0	1,631,214:82
329	18:25:54.200	190PA4E	7SAFE	UNSTOW	Check S/P Position	2R0	1,631,222:82
329	18:30:54.866	260PC476A6A	6TMCHG	MPP	NO DNLNK	2R0	1,631,227:78
329	18:34:05.533	192PA4A	7CONE	17.4,70.2	Check S/P Position	2R0	1,631,231:00
329	18:34:06.200	192PA4B	7CLK	17.4,180.0	Check S/P Position	2R0	1,631,231:01
329	18:39:04.200	157KR156A121A4A	37IST	0,0,0,OFF,0,1,1	Gain State 4	4R0	1,631,235:84
329	19:58:00.866	192PA4C	7CONE	17.4,80.0	Check S/P Position	4R0	1,631,314:00
329	21:16:52.866	192PA4D	7CONE	17.4,90.0	Check S/P Position	4R0	1,631,392:00
329	22:35:44.866	192PA4E	7CONE	17.4,90.5	Check S/P Position	4R0	1,631,470:00
329	23:16:11.533	192PA4F	7CONE	17.4,100.0	Check S/P Position	4R0	1,631,510:00
330	00:35:03.533	192PA4G	7CONE	17.4,110.0	Check S/P Position	4R0	1,631,588:00
330	01:29:56.866	424NC476A6A	6TMCHG	MPB	NO DNLNK	4R0	1,631,642:26
330	01:53:55.533	192PA4H	7CONE	17.4,130.0	Check S/P Position	4R0	1,631,666:00
330	03:12:47.533	192PA4I	7CONE	17.4,140.0	Check S/P Position	4R0	1,631,744:00
330	04:31:39.533	192PA4J	7CONE	17.4,150.0	Check S/P Position	4R0	1,631,822:00
330	05:50:31.466	192PA4K	7CONE	17.4,120.0	Check S/P Position	4R0	1,631,900:00
330	05:55:05.466	20D3A	40T1PR	1	PCT Heater 1 OFF (primary relay)	4R0	1,631,904:47
330	05:55:10.800	20D3B	40T1PR	2	PCT Heater 1 OFF (primary relay)	4R0	1,631,904:55
330	05:58:06.133	20D3C	40T2R	1	PCT Heater 2 OFF	4R0	1,631,907:45
330	05:58:11.466	20D3D	40T2R	2	PCT Heater 2 OFF	4R0	1,631,907:53

DOY	Time	PSID	Command	Parameters	Description	GCM	RIM
330	06:58:07.466	260PD476A6A	6TMCHG	MPP	NO DNLNK	4R0	1,631,966:78
330	15:57:54.800	260PE476A6A	6TMCHG	MPW	Dnlnk OK	4R0	1,632,500:65
330	15:59:12.800	192PB4A	7CONE	17.4,160.0	Check S/P Position	4R0	1,632,502:00
330	16:00:15.667	E2NNQUICAL01	-18464	-----START------		4R0	1,632,503:01
330	17:15:02.800	192PB4B	7CONE	17.4,170.0	Check S/P Position	4R0	1,632,577:00
		E2NNQUICAL01		-----STOP-------		4R0	1,632,651:01
330	18:35:45.466	20PB4B	7SAFE	UNSTOW	Check S/P Position	4R0	1,632,656:75
330	18:39:58.800	192JA4A	7CONE	17.0,120.0	Check S/P Position	4R0	1,632,661:00
330	18:39:59.466	192JA4B	7CLK	17.0,244.07	Check S/P Position	4R0	1,632,661:01
330	18:40:10.000	E2NNPCT 01	-18306	-----START------		4R0	1,632,661:01
330	18:45:58.133	157JA156A121A4A	37IOP	4,0	Long Spectrometer, Grating Start Position =0	4R4	1,632,666:84
330	18:46:58.800	157JA156A121B4A	37IST	1,0,0,OFF,0,1,0	Chopper ON, Sync, 63Hz (Ref) Gain State 2	264	1,632,667:84
330	18:50:00.800	157JA156A121C4A	37IST	0,0,0,OFF,0,1,1	Gain State 4	464	1,632,670:84
330	18:53:02.800	157JA156A121D4A	37IST	0,0,0,OFF,0,1,3	Gain State 1	164	1,632,673:84
330	18:56:04.800	157JA156A121E4A	37IST	0,0,0,OFF,0,1,2	Gain State 3	364	1,632,676:84
330	18:59:06.800	157JA156A121F4A	37IST	0,0,1,OFF,1,1,1	OPCAL Gain State 4	464	1,632,679:84
330	19:02:08.800	157JA156A121G4A	37IST	0,0,1,ON,0,1,3	ECAL Gain State 1	164	1,632,682:84
330	19:05:10.800	157JA156A121H4A	37IST	0,0,1,ON,0,1,0	ECAL Gain State 2	264	1,632,685:84
330	19:08:12.800	157JA156A121I4A	37IST	1,2,0,OFF,0,1,0	Chopper ON, Sync, Chopper (Ref) Gain State 2	2R4	1,632,688:84
330	19:15:17.466	157JA156A121J4A	37IST	0,0,0,OFF,0,1,1	Gain State 4	4R4	1,632,695:84
330	19:18:19.466	157JA156A121K4A	37IST	0,0,0,OFF,0,1,3	Gain State 1	1R4	1,632,698:84
330	19:21:21.466	157JA156A121L4A	37IST	0,0,0,OFF,0,1,2	Gain State 3	3R4	1,632,701:84
330	19:24:23.466	157JA156A121M4A	37IST	0,0,1,OFF,1,1,1	OPCAL Gain State 4	4R4	1,632,704:84
330	19:27:25.466	157JA156A121N4A	37IST	0,0,1,ON,0,1,0	ECAL Gain State 2	2R4	1,632,707:84
330	19:31:28.133	157JA156A121O4A	37IST	0,0,1,ON,0,1,3	ECAL Gain State 1	1R4	1,632,711:84
330	19:34:30.133	157JA156A121P4A	37IOP	3,0	Long Map, Grating Start Position =0	1R3	1,632,714:84
330	19:37:32.133	157JA156A121Q4A	37GOF	3	Sets the Grating Offset reference	1R3	1,632,717:84
330	19:41:34.800	157JB156A121A4A	37GOF	5	Sets the Grating Offset reference	1R3	1,632,721:84
330	19:44:36.800	157JB156A121B4A	37GOF	6	Sets the Grating Offset reference	1R3	1,632,724:84
330	19:47:38.800	157JB156A121C4A	37GOF	4	Sets the Grating Offset reference	1R3	1,632,727:84
330	19:48:39.466	157JB156A121D4A	37IOP	1,0	Full Map, Grating Start Position =0	1R1	1,632,728:84
330	19:51:41.466	157JB156A121E4A	37IOP	5,0	Short Map, Grating Start Position =0	1R5	1,632,731:84
330	19:54:43.466	157JB156A121F4A	37IOP	8,0	Band Edge Map, Grating Start Position =0	1R8	1,632,734:84
330	19:57:45.466	157JB156A121G4A	37IOP	7,0	Fixed Map, Grating Start Position =0	1R7	1,632,737:84
330	20:00:52.133	192JA4C	7CONE	13.0,54.88	Check S/P Position	1R7	1,632,741:00
330	20:00:52.800	192JA4D	7CLK	13.0,244.07	Check S/P Position	1R7	1,632,741:01
330	20:06:51.466	157JB156A121H4A	37IST	0,0,1,ON,0,1,3	ECAL Gain State 1	1R7	1,632,746:84
330	20:09:53.466	157JB156A121I4A	37IST	0,0,1,OFF,1,1,1	OPCAL Gain State 4	4R7	1,632,749:84
330	20:12:55.466	157JB156A121J4A	37IST	0,0,0,OFF,0,1,2	Gain State 3	3R7	1,632,752:84
330	20:15:57.466	157JB156A121K4A	37IST	0,0,0,OFF,0,1,1	Gain State 4	4R7	1,632,755:84
330	20:18:59.466	157JB156A121L4A	37IST	0,0,0,OFF,0,1,0	Gain State 2	2R7	1,632,758:84
330	20:22:01.466	157JB156A121M4A	37IST	0,0,0,OFF,0,1,3	Gain State 1	1R7	1,632,761:84

DOY	Time	PSID	Command	Parameters	Description	GCM	RIM
330	20:25:03.466	157JB156A121N4A	37IOP	3,0	Long Map, Grating Start Position =0	1R3	1,632,764:84
330	20:28:05.466	157JB156A121O4A	37GOF	3	Sets the Grating Offset reference	1R3	1,632,767:84
330	20:31:07.466	157JB156A121P4A	37GOF	5	Sets the Grating Offset reference	1R3	1,632,770:84
330	20:34:09.466	157JB156A121Q4A	37GOF	6	Sets the Grating Offset reference	1R3	1,632,773:84
330	20:37:11.466	157JB156A121R4A	37GOF	4	Sets the Grating Offset reference	1R3	1,632,776:84
330	20:39:12.800	157JC156A121A4A	37IOP	1,0	Full Map, Grating Start Position =0	1R1	1,632,778:84
330	20:42:14.800	157JC156A121B4A	37IOP	5,0	Short Map, Grating Start Position =0	1R5	1,632,781:84
330	20:45:16.800	157JC156A121C4A	37IOP	8,0	Band Edge Map, Grating Start Position =0	1R8	1,632,784:84
330	20:48:18.800	157JC156A121D4A	37IOP	7,0	Fixed Map, Grating Start Position =0	1R7	1,632,787:84
330	20:51:20.800	157JC156A121E4A	37IOP	4,0	Long Spectrometer, Grating Start Position =0	1R4	1,632,790:84
330	20:55:23.466	157JC156A121F4A	37IST	1,0,0,OFF,0,1,0	Chopper ON, Sync, 63Hz (Ref) Gain State 2	264	1,632,794:84
330	20:58:25.466	157JC156A121G4A	37IST	0,0,0,OFF,0,1,3	Gain State 1	164	1,632,797:84
330	21:01:27.466	157JC156A121H4A	37IST	0,0,0,OFF,0,1,2	Gain State 3	364	1,632,800:84
330	21:04:29.466	157JC156A121I4A	37IST	0,0,1,OFF,1,1,1	OPCAL Gain State 4	464	1,632,803:84
330	21:07:31.466	157JC156A121J4A	37IST	0,0,1,ON,0,1,3	ECAL Gain State 1	164	1,632,806:84
330	21:10:33.466	157JC156A121K4A	37IST	0,0,1,ON,0,1,0	ECAL Gain State 2	264	1,632,809:84
330	21:13:35.466	157JC156A121L4A	37IST	0,0,0,OFF,0,1,1	Gain State 4	464	1,632,812:84
330	21:16:37.466	157JC156A121M4A	37IOP	7,0	Fixed Map, Grating Start Position =0	467	1,632,815:84
330	21:17:38.133	157JC156A121N4A	37IST	0,0,0,OFF,0,1,3	Gain State 1	167	1,632,816:84
330	21:19:44.133	192JA4E	7CONE	0.6,54.88	Check S/P Position	167	1,632,819:00
330	21:19:44.800	192JA4F	7CLK	0.6,264.0	Check S/P Position	167	1,632,819:01
330	21:30:51.466	192JA4G	7CONE	0.6,54.88	Check S/P Position	167	1,632,830:00
330	21:30:52.133	192JA4H	7CLK	0.6,224.0	Check S/P Position	167	1,632,830:01
330	21:52:05.466	192JA4I	7CONE	13.0,66.0	Check S/P Position	167	1,632,851:00
330	21:52:06.133	192JA4J	7CLK	13.0,244.07	Check S/P Position	167	1,632,851:01
330	21:54:06.800	192JA4K	7CONE	0.6,36.0	Check S/P Position	167	1,632,853:00
330	21:54:07.466	192JA4L	7CLK	0.6,244.07	Check S/P Position	167	1,632,853:01
		E2NNPCT 01		-----STOP-------		167	1,632,878:01
330	22:20:06.133	20E3A	40T1P	1	PCT Heater 1 ON (primary relay)	167	1,632,878:64
330	22:20:11.466	20E3B	40T1P	2	PCT Heater 1 ON (primary relay)	167	1,632,878:72
330	22:20:24.133	192RB4A	7CONE	17.0,60.36	Check S/P Position	167	1,632,879:00
330	22:20:24.800	192RB4B	7CLK	17.0,243.619999	Check S/P Position	167	1,632,879:01
330	22:20:26.333	E2SAFE 01	-18088	-----START------		167	1,632,879:01
330	22:24:22.133	128AG149A131A4A	37IOP	0,0	Safe, Grating Start Position =0	160	1,632,882:84
330	22:25:22.800	128AG149A131B4A	37IST	1,2,0,OFF,0,0,0	Chopper ON, Sync, Chopper (Ref)	1R0	1,632,883:84
330	22:25:27.466	176RA476A6A	6TMCHG	XPWHCM	Dnlnk OK	1R0	1,632,884:00
330	22:49:43.466	192LE4A	7CONE	17.45,46.82	Check S/P Position	1R0	1,632,908:00
330	22:49:44.133	192LE4B	7CLK	17.45,250.929998	Check S/P Position	1R0	1,632,908:01
330	22:50:44.133	192LE4C	7CONE	0.16,54.82	Check S/P Position	1R0	1,632,909:00
330	22:57:48.800	424RA476A6A	6TMCHG	XPB	NO DNLNK	1R0	1,632,916:00
330	23:08:56.133	192LE4D	7CONE	17.45,50.82	Check S/P Position	1R0	1,632,927:00
330	23:08:56.800	192LE4E	7CLK	17.45,240.929998	Check S/P Position	1R0	1,632,927:01

DOY	Time	PSID	Command	Parameters	Description	GCM	RIM
330	23:09:57.466	192LE4F	7CLK	0.16,260.929996	Check S/P Position	1R0	1,632,928:01
330	23:49:22.800	192RC4A	7CONE	17.0,60.36	Check S/P Position	1R0	1,632,967:00
330	23:49:23.466	192RC4B	7CLK	17.0,243.619999	Check S/P Position	1R0	1,632,967:01
330	23:50:23.466	176RC6A	6TMCHG	XCM	Dnlnk OK	1R0	1,632,968:00
331	01:41:36.800	176RD6A	6TMCHG	XPWAI8	Dnlnk OK	1R0	1,633,078:00
331	01:46:40.133	191RA4A	7SAFE	UNSTOW	Check S/P Position	1R0	1,633,083:00
331	01:50:42.800	191RA4B	7MODE	CRU	Dual-Spin Mode	1R0	1,633,087:00
331	02:02:50.800	424RB476A6A	6TMCHG	XPB	NO DNLNK	1R0	1,633,099:00
331	02:40:00.800	498A4B	7SAFE	UNSTOW	Check S/P Position	1R0	1,633,135:69
331	02:44:00.133	498A4D	7MODE	SPNL	All-Spin Mode	1R0	1,633,139:64
331	03:04:20.800	498A4H	7MODE	SPNH	All-Spin Mode	1R0	1,633,159:75
331	03:14:38.133	176YA6A	6TMCHG	XPW	Dnlnk OK	1R0	1,633,170:00
331	03:16:40.800	498A4I	7MODE	SPNL	All-Spin Mode	1R0	1,633,172:02
331	03:29:00.800	498A4K	7MODE	SPNH	All-Spin Mode	1R0	1,633,184:20
331	03:41:20.800	498A4L	7MODE	SPNL	All-Spin Mode	1R0	1,633,196:38
331	03:53:40.800	498A4M	7MODE	CRU	Dual-Spin Mode	1R0	1,633,208:56
331	04:21:40.800	498A4O	7MODE	INT	Dual-Spin Mode	1R0	1,633,236:28
331	04:28:42.133	498A4Q	7BURN	LAT,179.745998,-	ALERT -- Thruster firing	1R0	1,633,243:23
331	04:42:06.800	498A4R	7BURN	LAT,0.0,90.0,1,0	ALERT -- Thruster firing	1R0	1,633,256:47
331	04:55:32.133	498A4T	7BURN	PULZ,0.0,90.0,1,	ALERT -- Thruster firing	1R0	1,633,269:72
331	05:08:52.133	498A4V	7BURN	PULZ,0.0,90.0,1,	ALERT -- Thruster firing	1R0	1,633,282:89
331	05:50:03.466	20T4A	7MODE	CRU	Dual-Spin Mode	1R0	1,633,323:65
331	07:24:22.800	176PB476A6A	6TMCHG	MPP	NO DNLNK	1R0	1,633,417:00
333	14:20:53.333	476A6A	6TMCHG	LRS	NO DNLNK	1R0	1,636,677:26
334	00:35:04.600	20AH4B	7SAFE	UNSTOW	Check S/P Position	1R0	1,637,284:66
334	05:29:35.266	176PC476A6A	6TMCHG	XPW	Dnlnk OK	1R0	1,637,576:00
335	15:20:03.200	20U4B	7SAFE	UNSTOW	Check S/P Position	1R0	1,639,584:14
335	16:27:00.533	490A412A4C	7MODE	INT	Dual-Spin Mode	1R0	1,639,650:34
335	16:29:57.200	490A476A6A	6TMCHG	EHRLRS	NO DNLNK	1R0	1,639,653:26
335	16:30:05.866	176YB476A6A	6TMCHG	HPWHPW	Dnlnk OK	1R0	1,639,653:39
335	16:32:00.533	490A412A4E	7SAFE	UNSTOW	Check S/P Position	1R0	1,639,655:29
335	16:36:14.533	490A412A4G	7TURN	2,MVR	ALERT -- Thruster firing	1R0	1,639,659:46
335	18:20:03.866	20R4B	7CONE	17.45,175.0	Check S/P Position	1R0	1,639,762:17
335	18:21:50.533	20R4C	7CONE	5.236,145.0	Check S/P Position	1R0	1,639,763:86
335	18:24:50.533	20R4D	7CONE	5.236,0.0	Check S/P Position	1R0	1,639,766:83
335	18:33:50.533	20R4E	7CONE	6.981,124.0	Check S/P Position	1R0	1,639,775:74
335	18:40:00.533	20R4F	7CONE	6.981,175.0	Check S/P Position	1R0	1,639,781:83
335	18:40:05.866	20F3A	40T1PR	1	PCT Heater 1 OFF (primary relay)	1R0	1,639,782:00
335	18:40:11.200	20F3B	40T1PR	2	PCT Heater 1 OFF (primary relay)	1R0	1,639,782:08
335	18:43:00.533	20R4G	7SAFE	UNSTOW	Check S/P Position	1R0	1,639,784:80
335	18:49:11.866	192MC4A	7CONE	17.45,60.0	Check S/P Position	1R0	1,639,791:00
335	23:12:05.200	176LA476A6A	6TMCHG	HIM	Dnlnk OK	1R0	1,640,051:00

DOY	Time	PSID	Command	Parameters	Description	GCM	RIM
335	23:14:05.866	165NK4B	7SCAN	NORM,100.813,-16	Check S/P Position	1R0	1,640,052:90
335	23:17:03.866	128CS149A131A4A	37IOP	7,6	Fixed Map, Grating Start Position =6	1R7	1,640,055:84
335	23:18:04.533	128CS149A131B4A	37IST	0,0,0,OFF,0,1,1	Gain State 4	4R7	1,640,056:84
		E2SAFE 01		-----STOP-------		4R7	1,640,058:01
335	23:20:13.000	E2STAR/FLOOD	-10908	-----START------		4R7	1,640,059:01
		E2STAR/FLOOD		-----STOP-------		4R7	1,640,157:01
336	01:00:15.866	165LO4B	7SCAN	NORM,88.417999,7	Check S/P Position	4R7	1,640,157:90
336	01:00:19.000	E2NNSTAR 01	-10809	-----START------		4R7	1,640,158:01
336	01:04:19.200	176RF6A	6TMCHG	HCM	Dnlnk OK	4R7	1,640,162:00
		E2NNSTAR 01		-----STOP-------		4R7	1,640,248:01
336	02:32:16.533	165LS4B	7SCAN	NORM,24.168,-58.	Check S/P Position	4R7	1,640,248:90
336	02:34:21.000	E2NNMRO 01	-10716	-----START------		4R7	1,640,251:01
336	02:36:15.200	128BH149A131A4A	37IOP	0,0	Safe, Grating Start Position =0	4R0	1,640,252:84
		E2NNMRO 01		-----STOP-------		4R0	1,640,255:01
336	03:56:12.533	176YR6A	6TMCHG	HPWIM4	Dnlnk OK	4R0	1,640,332:00
336	04:02:16.533	176RG6A	6TMCHG	NCGIM8	Dnlnk OK	4R0	1,640,338:00
336	04:22:29.866	176RH6A	6TMCHG	NCGAI8	Dnlnk OK	4R0	1,640,358:00
336	05:20:12.533	20PC4A	7SAFE	UNSTOW	Check S/P Position	4R0	1,640,415:07
336	07:02:58.466	260PH476A6A	6TMCHG	HPW	Dnlnk OK	4R0	1,640,516:65
336	14:35:14.466	276MA4A	7CONE	17.45,120.0	Check S/P Position	4R0	1,640,964:01
336	15:43:59.133	424RL476A6A	6TMCHG	HPB	NO DNLNK	4R0	1,641,032:00
336	16:42:40.333	E2NNRCTON 01	-9877	-----START------		4R0	1,641,090:01
336	16:43:38.466	185JA10A3A	40HRP	1	RCT Heater ON (primary relay)	4R0	1,641,091:00
336	21:23:43.133	176PF6A	6TMCHG	HPW	Dnlnk OK	4R0	1,641,368:00
336	21:27:48.333	E2NNQUICAL02	-9595	-----START------		4R0	1,641,372:01
336	23:07:51.133	165JA4B	7SCAN	NORM,60.0,81.0,1	Check S/P Position	4R0	1,641,470:90
		E2NNQUICAL02		-----STOP-------		4R0	1,641,472:01
336	23:11:49.800	128A149A131A4A	37IST	1,0,0,OFF,0,1,1	Chopper ON, Sync, 63Hz (Ref) Gain State 4	460	1,641,474:84
		E2NNRCTON 01		-----STOP-------		460	1,641,476:01
336	23:13:58.333	E2NNRCTCAL01	-9490	-----START------		460	1,641,477:01
336	23:14:51.800	157JD156A121A4A	37IOP	4,0	Long Spectrometer, Grating Start Position =0	464	1,641,477:84
336	23:15:52.466	157JD156A121B4A	37IST	0,0,1,OFF,1,0,1	OPCAL	464	1,641,478:84
336	23:16:53.133	157JD156A121C4A	37IST	0,0,0,OFF,0,1,0	Gain State 2	264	1,641,479:84
336	23:18:54.466	157JD156A121D4A	37IST	0,0,1,ON,0,1,3	ECAL Gain State 1	164	1,641,481:84
336	23:19:55.133	157JD156A121E4A	37IST	0,0,0,OFF,0,1,2	Gain State 3	364	1,641,482:84
336	23:21:56.466	157JD156A121F4A	37IST	0,0,1,ON,0,1,0	ECAL Gain State 2	264	1,641,484:84
336	23:22:57.133	157JD156A121G4A	37IST	0,0,0,OFF,0,1,1	Gain State 4	464	1,641,485:84
336	23:24:58.466	157JD156A121H4A	37IST	0,0,0,OFF,0,1,3	Gain State 1	164	1,641,487:84
336	23:27:04.466	192JB4A	7CONE	14.0,0.0	Check S/P Position	164	1,641,490:00
336	23:32:03.133	157JD156A121I4A	37IST	0,0,0,OFF,0,1,0	Gain State 2	264	1,641,494:84
336	23:34:04.466	157JD156A121J4A	37IST	0,0,0,OFF,0,1,2	Gain State 3	364	1,641,496:84
336	23:36:05.800	157JD156A121K4A	37IST	0,0,0,OFF,0,1,1	Gain State 4	464	1,641,498:84

DOY	Time	PSID	Command	Parameters	Description	GCM	RIM
336	23:38:11.800	192JB4B	7CONE	14.0,122.879999	Check S/P Position	464	1,641,501:00
336	23:59:21.133	157JD156A121L4A	37IST	1,2,0,OFF,0,1,1	Chopper ON, Sync, Chopper (Ref) Gain State 4	4R4	1,641,521:84
337	00:03:23.800	157JD156A121M4A	37IST	0,0,1,OFF,1,0,1	OPCAL	4R4	1,641,525:84
337	00:04:24.466	157JD156A121N4A	37IST	0,0,0,OFF,0,1,0	Gain State 2	2R4	1,641,526:84
337	00:06:25.800	157JD156A121O4A	37IST	0,0,1,ON,0,1,3	ECAL Gain State 1	1R4	1,641,528:84
337	00:07:26.466	157JD156A121P4A	37IST	0,0,0,OFF,0,1,2	Gain State 3	3R4	1,641,529:84
337	00:09:27.800	157JD156A121Q4A	37IST	0,0,1,ON,0,1,0	ECAL Gain State 2	2R4	1,641,531:84
337	00:10:33.133	192JB4C	7CONE	14.0,0.0	Check S/P Position	2R4	1,641,533:00
337	00:15:31.800	157JD156A121R4A	37IST	0,0,0,OFF,0,1,2	Gain State 3	3R4	1,641,537:84
337	00:17:33.133	157JE156A121A4A	37IST	0,0,0,OFF,0,1,1	Gain State 4	4R4	1,641,539:84
337	00:19:39.133	192JB4D	7CONE	14.0,122.879999	Check S/P Position	4R4	1,641,542:00
337	00:37:46.466	157JE156A121B4A	37IST	0,0,0,OFF,0,1,3	Gain State 1	1R4	1,641,559:84
337	00:39:47.800	157JE156A121C4A	37IOP	3,0	Long Map, Grating Start Position =0	1R3	1,641,561:84
337	00:41:49.133	157JE156A121D4A	37GOF	3	Sets the Grating Offset reference	1R3	1,641,563:84
337	00:43:55.133	192JB4E	7CONE	14.0,0.0	Check S/P Position	1R3	1,641,566:00
337	00:48:53.800	157JE156A121E4A	37GOF	4	Sets the Grating Offset reference	1R3	1,641,570:84
337	00:50:55.133	157JE156A121F4A	37IOP	4,0	Long Spectrometer, Grating Start Position =0	1R4	1,641,572:84
337	00:53:01.133	192JB4F	7CONE	14.0,122.879999	Check S/P Position	1R4	1,641,575:00
337	01:11:08.466	157JE156A121G4A	37IOP	3,1	Long Map, Grating Start Position =1	1R3	1,641,592:84
337	01:13:09.800	157JE156A121H4A	37IOP	3,2	Long Map, Grating Start Position =2	1R3	1,641,594:84
337	01:15:11.133	157JE156A121I4A	37IOP	1,0	Full Map, Grating Start Position =0	1R1	1,641,596:84
337	01:17:17.133	192JB4G	7CONE	14.0,0.0	Check S/P Position	1R1	1,641,599:00
337	01:22:15.800	157JE156A121J4A	37IOP	3,2	Long Map, Grating Start Position =2	1R3	1,641,603:84
337	01:24:17.133	157JE156A121K4A	37IOP	3,1	Long Map, Grating Start Position =1	1R3	1,641,605:84
337	01:26:23.133	192JB4H	7CONE	14.0,122.879999	Check S/P Position	1R3	1,641,608:00
337	01:44:30.466	157JE156A121L4A	37IOP	5,2	Short Map, Grating Start Position =2	1R5	1,641,625:84
337	01:46:31.800	157JE156A121M4A	37IOP	7,6	Fixed Map, Grating Start Position =6	1R7	1,641,627:84
337	01:48:33.133	157JE156A121N4A	37IOP	8,0	Band Edge Map, Grating Start Position =0	1R8	1,641,629:84
337	01:50:39.133	192JB4I	7CONE	14.0,0.0	Check S/P Position	1R8	1,641,632:00
337	01:55:37.800	157JE156A121O4A	37IOP	5,2	Short Map, Grating Start Position =2	1R5	1,641,636:84
337	01:57:39.133	157JE156A121P4A	37IOP	7,6	Fixed Map, Grating Start Position =6	1R7	1,641,638:84
337	01:59:45.133	192JB4J	7CONE	14.0,122.879999	Check S/P Position	1R7	1,641,641:00
337	02:17:52.466	157JE156A121Q4A	37IST	0,0,0,OFF,0,1,0	Gain State 2	2R7	1,641,658:84
337	02:17:57.133	192JB4K	7CONE	14.0,30.0	Check S/P Position	2R7	1,641,659:00
337	02:20:59.133	192JB4L	7CONE	0.15,0.0	Check S/P Position	2R7	1,641,662:00
337	03:40:51.800	192JB4M	7CONE	17.0,153.0	Check S/P Position	2R7	1,641,741:00
337	03:43:53.800	185JA10B3A	40HRPR	1	RCT Heater OFF (primary relay)	2R7	1,641,744:00
		E2NNRCTCAL01		-----STOP-------		2R7	1,641,744:01
337	03:44:54.466	192LC4A	7CONE	17.45,113.0	Check S/P Position	2R7	1,641,745:00
337	03:45:50.466	157LA156A121A4A	37IOP	0,0	Safe, Grating Start Position =0	2R0	1,641,745:84
337	03:45:55.133	192LC4B	7CONE	1.12,0.0	Check S/P Position	2R0	1,641,746:00
337	04:31:25.133	192LC4C	7CONE	17.45,120.0	Check S/P Position	2R0	1,641,791:00

DOY	Time	PSID	Command	Parameters	Description	GCM	RIM
337	04:48:36.466	192LC4D	7CONE	17.45,0.0	Check S/P Position	2R0	1,641,808:00
337	05:15:59.133	20LB4A	7SAFE	UNSTOW	Check S/P Position	2R0	1,641,835:07
337	05:16:57.667	E2NNLOAD 01	-9131	-----START------		2R0	1,641,836:01
	05:17:55.133	20JA5A	37PL	CMD,37PL,20JA5A,	Program Load (halts microprocessor & unwrite-protec)	2R0	1,641,836:90
		E2NNLOAD 01		-----STOP-------		2R0	1,641,838:01
		20JA4B	37DML		Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,838:03
		20JA4C	37DML		Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,838:49
		20JA4D	37DML		Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,839:03
		20JA4E	37DML		Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,839:49
337	05:20:59.800	20JA4F	37DML	1100,1E,C0,10,51	Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,840:03
		20JA4G	37DML		Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,840:49
		20JA4H	37DML		Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,841:03
		20JA4I	37DML		Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,841:49
		20JA4J	37DML		Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,842:03
		20JA4K	37DML		Direct Memory Load (loads data into NIMS RAM)	2R0	1,641,842:49
337	05:24:01.800	20JA5G	37IRT		Instrument Reset (goes into POR state)	260	1,641,843:03
337	05:27:57.800	128B149A131A4A	37IST	1,2,0,OFF,0,1,1	Chopper ON, Sync, Chopper (Ref) Gain State 4	4R0	1,641,846:84
337	16:49:34.333	E2NNQUICAL03	-8446	-----START------		4R0	1,642,521:01
		E2NNQUICAL03		-----STOP-------		4R0	1,642,547:01
337	17:29:58.400	176YG476A6A	6TMCHG	MPRMPR	Dnlnk OK	4R0	1,642,561:00
337	18:21:58.400	450XJ476A6A	6TMCHG	MPRMPR	Dnlnk OK	4R0	1,642,612:39
337	21:29:36.400	176PG476A6A	6TMCHG	HPW	Dnlnk OK	4R0	1,642,798:00
338	14:00:32.333	E2NNQUICAL04	-7189	-----START------		4R0	1,643,778:01
338	14:06:33.066	165JL4B	7SCAN	NORM,25.417,-16.	Check S/P Position	4R0	1,643,783:90
338	14:10:36.400	176RJ6A	6TMCHG	HPWIM4	Dnlnk OK	4R0	1,643,788:00
338	14:24:45.733	176RK6A	6TMCHG	HCM	Dnlnk OK	4R0	1,643,802:00
338	14:33:51.066	165JM4B	7SCAN	NORM,339.742996,	Check S/P Position	4R0	1,643,810:90
338	15:20:21.733	165JN4B	7SCAN	NORM,141.282,-8.	Check S/P Position	4R0	1,643,856:90
338	15:37:42.400	176RL6A	6TMCHG	HPWIM4	Dnlnk OK	4R0	1,643,874:13
338	15:47:39.733	165JO4B	7SCAN	NORM,11.522,7.31	Check S/P Position	4R0	1,643,883:90
		E2NNQUICAL04		-----STOP-------		4R0	1,643,892:01
338	15:59:51.000	E2NNQUICAL05	-7071	-----START------		4R0	1,643,896:01
338	16:03:51.066	176RM6A	6TMCHG	HCM	Dnlnk OK	4R0	1,643,900:00
338	16:22:02.333	165JP4B	7SCAN	NORM,95.710999,-	Check S/P Position	4R0	1,643,917:90
338	17:00:27.666	165LQ4B	7SCAN	NORM,56.17,23.78	Check S/P Position	4R0	1,643,955:90
338	17:00:28.333	176GA6A	6TMCHG	HCMNCG	Dnlnk OK	4R0	1,643,956:00
338	17:32:23.000	165NO4B	7SCAN	NORM,55.72,24.17	Check S/P Position	4R0	1,643,987:51
338	17:51:35.666	165NP4B	7SCAN	NORM,55.48,24.17	Check S/P Position	4R0	1,644,006:51
338	17:52:02.333	176RN6A	6TMCHG	HPWAI8	Dnlnk OK	4R0	1,644,007:00
338	17:56:04.333	165JR4B	7SCAN	NORM,27.969,20.5	Check S/P Position	4R0	1,644,010:90
338	18:01:03.666	128J149A131A4A	37IST	1,0,0,ON,0,1,3	Chopper ON, Sync, 63Hz (Ref) Gain State 1	160	1,644,015:84
338	18:02:04.333	128J149A131B4A	37IOP	7,0	Fixed Map, Grating Start Position =0	167	1,644,016:84

DOY	Time	PSID	Command	Parameters	Description	GCM	RIM
338	18:02:09.000	176RO6A	6TMCHG	HCM	Dnlnk OK	167	1,644,017:00
		E2NNQUICAL05		-----STOP-------		167	1,644,017:01
338	18:48:39.000	165LU4B	7SCAN	NORM,189.289999,	Check S/P Position	167	1,644,062:90
338	18:48:39.666	176GB6A	6TMCHG	HCMNCG	Dnlnk OK	167	1,644,063:00
338	20:07:31.666	176PH6A	6TMCHG	HPW	Dnlnk OK	167	1,644,141:00
338	20:10:36.333	E2BOOM 01	-6823	-----START------		167	1,644,144:01
338	20:24:43.000	192MH4A	7CONE	17.45,0.0	Check S/P Position	167	1,644,158:00
338	20:26:05.666	20G3A	40T1P	1	PCT Heater 1 ON (primary relay)	167	1,644,159:33
338	20:26:11.000	20G3B	40T1P	2	PCT Heater 1 ON (primary relay)	167	1,644,159:41
338	20:29:06.333	20G3C	40T2	1	PCT Heater 2 ON	167	1,644,162:31
338	20:29:11.666	20G3D	40T2	2	PCT Heater 2 ON	167	1,644,162:39
338	23:29:45.000	192MI4A	7CONE	17.45,120.0	Check S/P Position	167	1,644,341:00
339	00:00:05.000	424RC476A6A	6TMCHG	HPB	NO DNLNK	167	1,644,371:00
339	02:34:47.000	192MJ4A	7CONE	0.07,90.0	Check S/P Position	167	1,644,524:00
339	02:44:53.666	176PI6A	6TMCHG	HPW	Dnlnk OK	167	1,644,534:00
		E2BOOM 01		-----STOP-------		167	1,644,683:01
339	14:29:38.333	192MK4A	7CONE	0.07,45.0	Check S/P Position	167	1,645,231:00
339	14:30:39.000	176RQ6A	6TMCHG	HCM	Dnlnk OK	167	1,645,232:00
339	14:30:41.667	E2BOOM 02	-5735	-----START------		167	1,645,232:01
339	18:34:19.666	176PJ6A	6TMCHG	HPW	Dnlnk OK	167	1,645,473:00
339	22:04:38.266	192ML4A	7CONE	0.07,15.0	Check S/P Position	167	1,645,681:00
340	00:05:03.600	20AZ4A	7MODE	CRU	Dual-Spin Mode	167	1,645,800:09
340	03:13:57.600	128C149A131A4A	37IOP	0,0	Safe, Grating Start Position =0	160	1,645,986:84
340	03:14:58.266	128C149A131B4A	37IST	1,2,0,OFF,0,1,1	Chopper ON, Sync, Chopper (Ref) Gain State 4	4R0	1,645,987:84
340	03:15:04.266	20NK4A	7SAFE	UNSTOW	Check S/P Position	4R0	1,645,988:02
		E2BOOM 02		-----STOP-------		4R0	1,646,004:01

PA SUMMARY TABLE

This summary is a listing of the PAs (Profile Activities) used by NIMS during EE9.

INPUT SEF FILE: EE9_920918.SEF

OAPEL	PA	PSID	SCLK1	SCLK2	SCET1	TARGET
ENGR	UTILITY	20ZU	01629595:08	01629597:74	92-328/15:00:00	NIMS_ON
ENGR	UTILITY	20C	01629604:89	01629606:87	92-328/15:10:00	SHIELD HTR
	ALSPINSP	192JA	01632661:00	01632878:00	92-330/18:39:58	PCT
E2NNPCT___01	CMDRS	157JA	01632665:00	01632721:00	92-330/18:44:01	PCT
E2NNPCT___01	CMDRS	157JB	01632721:00	01632778:00	92-330/19:40:38	PCT
E2NNPCT___01	CMDRS	157JC	01632778:00	01632819:00	92-330/20:38:16	PCT
E2HPTSTARS02	SCITLM	176LA	01640051:00	01640054:00	92-335/23:12:05	SKY
E2HPTSTARS02	TARGET	165NK	01640052:89	01640058:00	92-335/23:14:05	SKY
E2HPTSTARS02	INITRS	128CS	01640055:84	01640057:03	92-335/23:17:03	SKY
E2HPTSTARS02	SSI	147EH	01640056:76	01640156:89	92-335/23:17:59	SKY
E2HPTSTARS02	CSMOS	117BD	01640056:77	01640064:87	92-335/23:17:59	SKY
E2HPTSTARS02	CSMOS	117BE	01640065:77	01640156:08	92-335/23:27:05	SKY
E2HPTSTARS02	CMDRS	157MA	01640156:00	01640158:00	92-336/00:58:15	SKY
E2HNNSTAR_01	TARGET	165LO	01640157:89	01640163:00	92-336/01:00:15	SKY
E2HNNSTAR_01	INITRS	128BC	01640160:89	01640162:03	92-336/01:03:17	SKY
E2HNNSTAR_01	SSI	147CD	01640161:76	01640245:89	92-336/01:04:09	SKY
E2HNNSTAR_01	CSMOS	117AC	01640161:77	01640245:38	92-336/01:04:09	SKY
E2HUUSTAR_01	TARGET	165LS	01640248:89	01640253:00	92-336/02:32:15	SKY
E2HUUSTAR_01	INITRS	128BH	01640251:90	01640253:03	92-336/02:35:18	SKY
E2HUUSTAR_01	CSMOS	117AG	01640252:77	01640411:71	92-336/02:36:10	SKY
E2HUUSTAR_01	SSI	147CJ	01640331:76	01640334:63	92-336/03:56:02	SKY
E2HUUSTAR_01	CMDRS	157LQ	01640413:00	01640415:00	92-336/05:18:06	SKY
E2HUUSTAR_01	UTILITY	20PC	01640415:03	01640416:03	92-336/05:20:09	SKY
E2NNRCTCAL01	TARGET	165JA	01641470:89	01641475:00	92-336/23:07:50	RCT
E2NNRCTCAL01	INITRS	128A	01641474:84	01641475:04	92-336/23:11:49	RCT
E2NNRCTCAL01	CMDRS	157JD	01641477:00	01641539:00	92-336/23:13:55	RCT
	ALSPINSP	192JB	01641477:00	01641744:00	92-336/23:13:55	RCT
E2NNRCTCAL01	CMDRS	157JE	01641539:00	01641665:00	92-337/00:16:37	RCT
E2NNLOAD__01	UTILITY	20JA	01641836:03	01641844:03	92-337/05:16:57	LOAD
E2NNLOAD__01	INITRS	128B	01641846:84	01641847:03	92-337/05:27:57	LOAD
E2NNSAFE__01	INITRS	128C	01645986:84	01645988:86	92-340/03:13:57	NIMS_SAFE

```
 Heading            Columns     Comments
-----------------------------------------------------------------------------
  OAPEL               1 -  12     .Oapel Name from SEF (no aliases yet)
  EXT                14 -  14     .Extension (allow for split OAPELs)
  PSID               16 -  17     .2 Letter ID for the OAPEL
  SCLK1              19 -  29     .Start time of OBS in SCLK
  SCLK2              31 -  41     .STOP time of OBS in SCLK
  MODE               43 -  44     .NIMS Instrument MODE
  GAIN               46 -  47     .Gain State (true value)
  CHOP               49 -  50     .Chopper State (1=Ref,2=63Hz,3=FreeRun,4=Off)
  GRAT_OFF           52 -  53     .Grating Offset
  PTAB_A(6)          55 -  71     .First PTAB  (repeat count,mirror op,autobias...
  PTAB_B(6)          73 -  89     .Second PTAB (...grating start, grating delta...
                                  .             (...number of grating postions)
  ECAL               92 -  92     .Electronics Calibration Active (1=yes)
  OPCAL              94 -  94     .Optics Calibration active (1=yes)
  UTC1               96 - 112     .Start time of OBS in UTC (from SEF - ISO STANDARD)
  REAL_TIME         115 - 115     .NIMS in Real-Time Telemetry (1=yes)
  RECORD            117 - 117     .NIMS in Record Telemetry(1=yes)
  TARGET            120 - 127     .Primary Target of OBS
                                   CALIBRATION - N - Non-Science
  (the single letter abbreviation appears as the third character in the OBSNAME (OAPEL Name) ).
 INPUT SEF FILE: EE9_920918.SEF
-----------------------------------------------------------------------------------------------------------------------------
OAPEL, EXT, PSID, SCLK1, SCLK2, MODE, GAIN, CHOP, GRAT_OFF, PTAB_A(6), PTAB_B(6), ECAL, OPCAL, UTC1, REAL_TIME, RECORD, TARGET

OAPEL      EXT PSID SCLK1       SCLK2      M  G  C  O  |    PTAB A     |  |    PTAB B     |  E O      UTC1          R T  TARGET
-----------------------------------------------------------------------------------------------------------------------------
E2NWPWUMAP01 G KR 01632500:65 01632660:63  0  4  1  4  1  0  0  0  0 12  1  0  0  0  0 12  0 0 1992-330T15:57:54  1 0  CAL
E2NNPCT___01 A JA 01632665:00 01632666:90  0  4  1  4  1  0  0  0  0 12  1  0  0  0  0 12  0 0 1992-330T18:44:01  1 0  DARK
E2NNPCT___01 B JA 01632667:00 01632667:90  4  4  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T18:45:58  1 0  DARK
E2NNPCT___01 C JA 01632668:00 01632670:90  4  2  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T18:46:58  1 0  DARK
E2NNPCT___01 D JA 01632671:00 01632673:90  4  4  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T18:50:00  1 0  DARK
E2NNPCT___01 E JA 01632674:00 01632676:90  4  1  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T18:53:02  1 0  DARK
E2NNPCT___01 F JA 01632677:00 01632679:90  4  3  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T18:56:04  1 0  DARK
E2NNPCT___01 G JA 01632680:00 01632680:90  4  4  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 1 1992-330T18:59:06  1 0  DARK
E2NNPCT___01 H JA 01632681:00 01632682:90  4  4  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:00:06  1 0  DARK
E2NNPCT___01 I JA 01632683:00 01632683:90  4  1  2  4  1  0  0  0  1 24  1  0  0  0  1 24  1 0 1992-330T19:02:08  1 0  DARK
E2NNPCT___01 J JA 01632684:00 01632685:90  4  1  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:03:08  1 0  DARK
E2NNPCT___01 K JA 01632686:00 01632686:90  4  2  2  4  1  0  0  0  1 24  1  0  0  0  1 24  1 0 1992-330T19:05:10  1 0  DARK
E2NNPCT___01 L JA 01632687:00 01632688:90  4  2  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:06:10  1 0  DARK
E2NNPCT___01 M JA 01632689:00 01632695:90  4  2  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:08:12  1 0  DARK
E2NNPCT___01 N JA 01632696:00 01632698:90  4  4  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:15:17  1 0  DARK
E2NNPCT___01 O JA 01632699:00 01632701:90  4  1  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:18:19  1 0  DARK
-----------------------------------------------------------------------------------------------------------------------------
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OAPEL      EXT PSID SCLK1        SCLK2       M  G  C  O  |    PTAB A     |  |    PTAB B     |  E O      UTC1            R T  TARGET
-----------------------------------------------------------------------------------------------------------------------------------
E2NNPCT___01 P JA 01632702:00 01632704:90  4  3  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:21:21  1 0  DARK
E2NNPCT___01 Q JA 01632705:00 01632705:90  4  4  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 1 1992-330T19:24:23  1 0  DARK
E2NNPCT___01 R JA 01632706:00 01632707:90  4  4  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:25:23  1 0  DARK
E2NNPCT___01 S JA 01632708:00 01632708:90  4  2  1  4  1  0  0  0  1 24  1  0  0  0  1 24  1 0 1992-330T19:27:25  1 0  DARK
E2NNPCT___01 T JA 01632709:00 01632711:90  4  2  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:28:25  1 0  DARK
E2NNPCT___01 U JA 01632712:00 01632712:90  4  1  1  4  1  0  0  0  1 24  1  0  0  0  1 24  1 0 1992-330T19:31:28  1 0  DARK
E2NNPCT___01 V JA 01632713:00 01632714:90  4  1  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T19:32:28  1 0  DARK
E2NNPCT___01 W JA 01632715:00 01632717:90  3  1  1  4  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T19:34:30  1 0  DARK
E2NNPCT___01 X JA 01632718:00 01632721:90  3  1  1  3  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T19:37:32  1 0  DARK
E2NNPCT___01 Y JA 01632722:00 01632724:90  3  1  1  5  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T19:41:34  1 0  DARK
E2NNPCT___01 Z JA 01632725:00 01632727:90  3  1  1  6  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T19:44:36  1 0  DARK
E2NNPCT___01 A JA 01632728:00 01632728:90  3  1  1  4  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T19:47:38  1 0  DARK
E2NNPCT___01 B JA 01632729:00 01632731:90  1  1  1  4  1  1  0  0  2 12  1  1  0  0  2 12  0 0 1992-330T19:48:39  1 0  DARK
E2NNPCT___01 C JA 01632732:00 01632734:90  5  1  1  4  1  1  0  0  4  6  1  1  0  0  4  6  0 0 1992-330T19:51:41  1 0  DARK
E2NNPCT___01 D JA 01632735:00 01632737:90  8  1  1  4  1  1  0  0  0  1  1  1  0  0  0  1  0 0 1992-330T19:54:43  1 0  DARK
E2NNPCT___01 E JA 01632738:00 01632740:90  7  1  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 0 1992-330T19:57:45  1 0  DARK
E2NNPCT___01 F JA 01632741:00 01632746:90  7  1  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 0 1992-330T20:00:52  1 0  PCT
E2NNPCT___01 G JA 01632747:00 01632747:90  7  1  1  4  1  1  0  0  0 12  1  1  0  0  0 12  1 0 1992-330T20:06:51  1 0  PCT
E2NNPCT___01 H JA 01632748:00 01632749:90  7  1  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 0 1992-330T20:07:51  1 0  PCT
E2NNPCT___01 I JA 01632750:00 01632750:90  7  4  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 1 1992-330T20:09:53  1 0  PCT
E2NNPCT___01 J JA 01632751:00 01632752:90  7  4  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 0 1992-330T20:10:53  1 0  PCT
E2NNPCT___01 K JA 01632753:00 01632755:90  7  3  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 0 1992-330T20:12:55  1 0  PCT
E2NNPCT___01 L JA 01632756:00 01632758:90  7  4  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 0 1992-330T20:15:57  1 0  PCT
E2NNPCT___01 M JA 01632759:00 01632761:90  7  2  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 0 1992-330T20:18:59  1 0  PCT
E2NNPCT___01 N JA 01632762:00 01632764:90  7  1  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 0 1992-330T20:22:01  1 0  PCT
E2NNPCT___01 O JA 01632765:00 01632767:90  3  1  1  4  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T20:25:03  1 0  PCT
E2NNPCT___01 P JA 01632768:00 01632770:90  3  1  1  3  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T20:28:05  1 0  PCT
E2NNPCT___01 Q JA 01632771:00 01632773:90  3  1  1  5  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T20:31:07  1 0  PCT
E2NNPCT___01 R JA 01632774:00 01632776:90  3  1  1  6  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T20:34:09  1 0  PCT
E2NNPCT___01 S JA 01632777:00 01632778:90  3  1  1  4  1  1  0  0  1 24  1  1  0  0  1 24  0 0 1992-330T20:37:11  1 0  PCT
E2NNPCT___01 T JA 01632779:00 01632781:90  1  1  1  4  1  1  0  0  2 12  1  1  0  0  2 12  0 0 1992-330T20:39:12  1 0  PCT
E2NNPCT___01 U JA 01632782:00 01632784:90  5  1  1  4  1  1  0  0  4  6  1  1  0  0  4  6  0 0 1992-330T20:42:14  1 0  PCT
E2NNPCT___01 V JA 01632785:00 01632787:90  8  1  1  4  1  1  0  0  0  1  1  1  0  0  0  1  0 0 1992-330T20:45:16  1 0  PCT
E2NNPCT___01 W JA 01632788:00 01632790:90  7  1  1  4  1  1  0  0  0 12  1  1  0  0  0 12  0 0 1992-330T20:48:18  1 0  PCT
E2NNPCT___01 X JA 01632791:00 01632794:90  4  1  1  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T20:51:20  1 0  PCT
E2NNPCT___01 Y JA 01632795:00 01632797:90  4  2  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T20:55:23  1 0  PCT
E2NNPCT___01 Z JA 01632798:00 01632800:90  4  1  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T20:58:25  1 0  PCT
E2NNPCT___01 A JA 01632801:00 01632803:90  4  3  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T21:01:27  1 0  PCT
E2NNPCT___01 B JA 01632804:00 01632804:90  4  4  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 1 1992-330T21:04:29  1 0  PCT
E2NNPCT___01 C JA 01632805:00 01632806:90  4  4  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T21:05:29  1 0  PCT
E2NNPCT___01 D JA 01632807:00 01632807:90  4  1  2  4  1  0  0  0  1 24  1  0  0  0  1 24  1 0 1992-330T21:07:31  1 0  PCT
E2NNPCT___01 E JA 01632808:00 01632809:90  4  1  2  4  1  0  0  0  1 24  1  0  0  0  1 24  0 0 1992-330T21:08:31  1 0  PCT
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```

OAPEL	EXT	PSID	SCLK1	SCLK2	M	G	C	O	PTAB A						PTAB B						E	O	UTC1	R	T	TARGET
E2NNPCT___01	F	JA	01632810:00	01632810:90	4	2	2	4	1	0	0	0	1	24	1	0	0	0	1	24	1	0	1992-330T21:10:33	1	0	PCT
E2NNPCT___01	G	JA	01632811:00	01632812:90	4	2	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-330T21:11:33	1	0	PCT
E2NNPCT___01	H	JA	01632813:00	01632815:90	4	4	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-330T21:13:35	1	0	PCT
E2NNPCT___01	I	JA	01632816:00	01632816:90	7	4	2	4	1	1	0	0	0	12	1	1	0	0	0	12	0	0	1992-330T21:16:37	1	0	PCT
E2NNPCT___01	J	JA	01632817:00	01632819:00	7	1	2	4	1	1	0	0	0	12	1	1	0	0	0	12	0	0	1992-330T21:17:38	1	0	PCT
E2HPTSTARS02	A	LA	01640051:00	01640055:90	0	1	1	4	1	0	0	0	0	12	1	0	0	0	0	12	0	0	1992-335T23:12:05	1	0	SKY
E2HPTSTARS02	B	LA	01640056:00	01640056:90	7	1	1	4	1	1	0	6	0	12	1	1	0	6	0	12	0	0	1992-335T23:17:03	1	0	SKY
E2HPTSTARS02	C	LA	01640057:04	01640158:00	7	4	1	4	1	1	0	6	0	12	1	1	0	6	0	12	0	0	1992-335T23:18:04	1	0	SKY
E2HNNSTAR_01	A	LO	01640157:89	01640245:89	7	4	1	4	1	1	0	6	0	12	1	1	0	6	0	12	0	0	1992-336T01:00:15	1	0	SKY
E2HUUSTAR_01	A	LS	01640248:89	01640252:90	7	4	1	4	1	1	0	6	0	12	1	1	0	6	0	12	0	0	1992-336T02:32:15	1	0	SKY
E2HUUSTAR_01	B	LS	01640253:00	01640416:03	0	4	1	4	1	0	0	0	0	12	1	0	0	0	0	12	0	0	1992-336T02:36:15	1	0	SKY
E2NNRCTCAL01	A	JA	01641470:89	01641474:90	0	4	1	4	1	0	0	0	0	12	1	0	0	0	0	12	0	0	1992-336T23:07:50	1	0	DARK
E2NNRCTCAL01	B	JA	01641475:00	01641477:90	0	4	2	4	1	0	0	0	0	12	1	0	0	0	0	12	0	0	1992-336T23:11:49	1	0	DARK
E2NNRCTCAL01	C	JA	01641478:00	01641478:90	4	4	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:14:51	1	0	DARK
E2NNRCTCAL01	D	JA	01641479:00	01641479:90	4	4	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	1	1992-336T23:15:52	1	0	DARK
E2NNRCTCAL01	E	JA	01641480:00	01641481:90	4	2	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:16:53	1	0	DARK
E2NNRCTCAL01	F	JA	01641482:00	01641482:90	4	1	2	4	1	0	0	0	1	24	1	0	0	0	1	24	1	0	1992-336T23:18:54	1	0	DARK
E2NNRCTCAL01	G	JA	01641483:00	01641484:90	4	3	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:19:55	1	0	DARK
E2NNRCTCAL01	H	JA	01641485:00	01641485:90	4	2	2	4	1	0	0	0	1	24	1	0	0	0	1	24	1	0	1992-336T23:21:56	1	0	DARK
E2NNRCTCAL01	I	JA	01641486:00	01641487:90	4	4	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:22:57	1	0	DARK
E2NNRCTCAL01	J	JA	01641488:00	01641489:90	4	1	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:24:58	1	0	DARK
E2NNRCTCAL01	K	JA	01641490:00	01641494:90	4	1	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:27:04	1	0	RCT
E2NNRCTCAL01	L	JA	01641495:00	01641496:90	4	2	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:32:03	1	0	RCT
E2NNRCTCAL01	M	JA	01641497:00	01641498:90	4	3	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:34:04	1	0	RCT
E2NNRCTCAL01	N	JA	01641499:00	01641500:90	4	4	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:36:05	1	0	RCT
E2NNRCTCAL01	O	JA	01641501:00	01641521:90	4	4	2	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:38:11	1	0	DARK
E2NNRCTCAL01	P	JA	01641522:00	01641525:90	4	4	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-336T23:59:21	1	0	DARK
E2NNRCTCAL01	Q	JA	01641526:00	01641526:90	4	4	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	1	1992-337T00:03:23	1	0	DARK
E2NNRCTCAL01	R	JA	01641527:00	01641528:90	4	2	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-337T00:04:24	1	0	DARK
E2NNRCTCAL01	S	JA	01641529:00	01641529:90	4	1	1	4	1	0	0	0	1	24	1	0	0	0	1	24	1	0	1992-337T00:06:25	1	0	DARK
E2NNRCTCAL01	T	JA	01641530:00	01641531:90	4	3	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-337T00:07:26	1	0	DARK
E2NNRCTCAL01	U	JA	01641532:00	01641532:90	4	2	1	4	1	0	0	0	1	24	1	0	0	0	1	24	1	0	1992-337T00:09:27	1	0	DARK
E2NNRCTCAL01	V	JA	01641533:00	01641537:90	4	2	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-337T00:10:33	1	0	RCT
E2NNRCTCAL01	W	JA	01641538:00	01641539:90	4	3	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-337T00:15:31	1	0	RCT
E2NNRCTCAL01	X	JA	01641540:00	01641541:90	4	4	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-337T00:17:33	1	0	RCT
E2NNRCTCAL01	Y	JA	01641542:00	01641559:90	4	4	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-337T00:19:39	1	0	DARK
E2NNRCTCAL01	Z	JA	01641560:00	01641561:90	4	1	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-337T00:37:46	1	0	DARK
E2NNRCTCAL01	A	JA	01641562:00	01641563:90	3	1	1	4	1	1	0	0	1	24	1	1	0	0	1	24	0	0	1992-337T00:39:47	1	0	DARK
E2NNRCTCAL01	B	JA	01641564:00	01641565:90	3	1	1	3	1	1	0	0	1	24	1	1	0	0	1	24	0	0	1992-337T00:41:49	1	0	DARK
E2NNRCTCAL01	C	JA	01641566:00	01641570:90	3	1	1	3	1	1	0	0	1	24	1	1	0	0	1	24	0	0	1992-337T00:43:55	1	0	RCT
E2NNRCTCAL01	D	JA	01641571:00	01641572:90	3	1	1	4	1	1	0	0	1	24	1	1	0	0	1	24	0	0	1992-337T00:48:53	1	0	RCT
E2NNRCTCAL01	E	JA	01641573:00	01641574:90	4	1	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-337T00:50:55	1	0	RCT

OAPEL	EXT	PSID	SCLK1	SCLK2	M	G	C	O	PTAB A						PTAB B						E	O	UTC1	R	T	TARGET
E2NNRCTCAL01	F	JA	01641575:00	01641592:90	4	1	1	4	1	0	0	0	1	24	1	0	0	0	1	24	0	0	1992-337T00:53:01	1	0	DARK
E2NNRCTCAL01	G	JA	01641593:00	01641594:90	3	1	1	4	1	1	0	1	1	24	1	1	0	1	1	24	0	0	1992-337T01:11:08	1	0	DARK
E2NNRCTCAL01	H	JA	01641595:00	01641596:90	3	1	1	4	1	1	0	2	1	24	1	1	0	2	1	24	0	0	1992-337T01:13:09	1	0	DARK
E2NNRCTCAL01	I	JA	01641597:00	01641598:90	1	1	1	4	1	1	0	0	2	12	1	1	0	0	2	12	0	0	1992-337T01:15:11	1	0	DARK
E2NNRCTCAL01	J	JA	01641599:00	01641603:90	1	1	1	4	1	1	0	0	2	12	1	1	0	0	2	12	0	0	1992-337T01:17:17	1	0	RCT
E2NNRCTCAL01	K	JA	01641604:00	01641605:90	3	1	1	4	1	1	0	2	1	24	1	1	0	2	1	24	0	0	1992-337T01:22:15	1	0	RCT
E2NNRCTCAL01	L	JA	01641606:00	01641607:90	3	1	1	4	1	1	0	1	1	24	1	1	0	1	1	24	0	0	1992-337T01:24:17	1	0	RCT
E2NNRCTCAL01	M	JA	01641608:00	01641625:90	3	1	1	4	1	1	0	1	1	24	1	1	0	1	1	24	0	0	1992-337T01:26:23	1	0	DARK
E2NNRCTCAL01	N	JA	01641626:00	01641627:90	5	1	1	4	1	1	0	2	4	6	1	1	0	2	4	6	0	0	1992-337T01:44:30	1	0	DARK
E2NNRCTCAL01	O	JA	01641628:00	01641629:90	7	1	1	4	1	1	0	6	0	12	1	1	0	6	0	12	0	0	1992-337T01:46:31	1	0	DARK
E2NNRCTCAL01	P	JA	01641630:00	01641631:90	8	1	1	4	1	1	0	0	0	1	1	1	0	0	0	1	0	0	1992-337T01:48:33	1	0	DARK
E2NNRCTCAL01	Q	JA	01641632:00	01641636:90	8	1	1	4	1	1	0	0	0	1	1	1	0	0	0	1	0	0	1992-337T01:50:39	1	0	RCT
E2NNRCTCAL01	R	JA	01641637:00	01641638:90	5	1	1	4	1	1	0	2	4	6	1	1	0	2	4	6	0	0	1992-337T01:55:37	1	0	RCT
E2NNRCTCAL01	S	JA	01641639:00	01641640:90	7	1	1	4	1	1	0	6	0	12	1	1	0	6	0	12	0	0	1992-337T01:57:39	1	0	RCT
E2NNRCTCAL01	T	JA	01641641:00	01641658:90	7	1	1	4	1	1	0	6	0	12	1	1	0	6	0	12	0	0	1992-337T01:59:45	1	0	DARK
E2NNRCTCAL01	U	JA	01641659:00	01641665:00	7	2	1	4	1	1	0	6	0	12	1	1	0	6	0	12	0	0	1992-337T02:17:52	1	0	RCT MAP
E2NNLOAD__01	A	A	01641836:03	01641844:03	0	2	1	4	1	0	0	0	0	12	1	0	0	0	0	12	0	0	1992-337T05:16:57	1	0	CAL
E2NNLOAD__01	A	B	01641846:84	01641847:03	0	4	1	4	1	0	0	0	0	12	1	0	0	0	0	12	0	0	1992-337T05:27:57	1	0	CAL
E2NNBOOM__01	A	MC	01644534:00	01645986:90	7	1	2	4	1	1	0	0	0	12	1	1	0	0	0	12	0	0	1992-339T02:44:53	1	0	CAL
E2NNSAFE__01	A	C	01645987:00	01645987:90	0	1	2	4	1	0	0	0	0	12	1	0	0	0	0	12	0	0	1992-340T03:13:57	1	0	CAL
E2NNSAFE__01	B	C	01645988:00	01645988:86	0	4	1	4	1	0	0	0	0	12	1	0	0	0	0	12	0	0	1992-340T03:14:58	1	0	CAL