

625-610: SIS 211-05 P2, Rev. A

# Galileo

Software Interface Specification

Spacecraft Event File (SEF)

## PHASE 2



Jet Propulsion Laboratory  
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264-419

PROJECT GALILEO  
SOFTWARE INTERFACE SPECIFICATION

625-610:  
NUMBER: 211-05 P2  
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Phase 2  
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Cover Sheet

SIS NAME: Spacecraft Event File (SEF)

DOMAIN:

System	Subsystem	Program	Make/Use
MSS	Sequence Generation	SEQGEN	Make
MSS	Sequence of Events Gen	SEG	Use
MSS	Scan Platform Modeling	SCANOPS	Use
MSS	Command Generation	SEQTRAN	Use
SVC	Science VAX Cluster	C-Kernel	Use
	SNIPGEN	SNIPGEN	Use
OES	G&C Analysis	GCFS	Use
OES	Power Analysis	RSEF	Use
NAV	OMAS	OMAS	Use
DMS	Utilities	AQOC/SCEGEN	Use

Computer System: Unisys 1100, Varian

PURPOSE OF INTERFACE (SUMMARY): This interface provides a people-oriented form of sequence data at the individual event (i.e. command) level intended for use in the mission operations environment. The format for the following interface is fully defined by SIS 211-59, Ground Event File.

INTERFACE MEDIUM:

Disk File: [X]  
Magnetic Tape: [ ] Tracks: \_\_\_\_\_ Density: \_\_\_\_\_ Data Code: \_\_\_\_\_  
Other: [ ]:

SIS COORDINATOR: A. Amador

SIGNATURES:

Approval Position	Name	Date
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Concurrence:

System:	Program	Position	Name	Date
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	SEQGEN	COG E	V. Wang	<i>[Signature]</i> 7-9-95
	SEQGEN	COG P	J. Dale	<i>[Signature]</i> 7/10/95
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	SEG	COG P	K. Miller	<i>[Signature]</i> 7/14/95
	SCANOPS	COG E/COG P	S. Javidnia	<i>[Signature]</i> 7/14/95
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	C-Kernel	COG E	K. Deutsch	<i>[Signature]</i> 9/18/95
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	SNIPGEN	COG E/P	K. Deutsch	<i>[Signature]</i> 9/18/95

SIS 211-05  
 (Continued)

OES:	SYS E	J. Hofman	<i>J. Hofman</i>	<u>9/25/95</u>
RSEF	COG E/COG P	B. Rein	<i>Barty S Rein</i>	<u>9/20/95</u>
NAV:	SYS E	J. Ekelund	<i>J. Ekelund</i>	<u>9/26/95</u>
OMAS	COG E	R. P. Davis	<i>R. P. Davis</i>	<u>9/26/95</u>
OMAS	COG P	W.M. Owen	<i>William M. Owen Jr</i>	<u>9/26/95</u>
DMS:	SYS E	C. Hidalgo	<i>Cristian Hidalgo</i>	<u>10/5/95</u>
AQOC	COG E/COG P	T. Specht	<i>T. Specht</i>	<u>10/5/95</u>
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625-610

SIS 211-05 P2  
Rev. A

Custodian: V. Wang

625-610

PROJECT GALILEO  
SOFTWARE INTERFACE SPECIFICATION

S/C Event File (SEF)

SIS #211-05 P2

June 07, 1994

ABSTRACT: This SIS describes the form and syntax of each S/C Event File (SEF) which is a product of the Mission Sequence System (MSS). Each SEF will contain a header that identifies and describes the scope of the file, plus a body which provides a time ordered list of events occurring in a particular sequence.

CHANGE CONTROL: The Galileo change control procedures specified in STAP 2.17 apply to this document.

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JPL D-296

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## DOCUMENT CHANGE LOG

Change	Date	Affected Portions
Original	07/24/81	All
Change 1	05/17/83	Indicated by change bars
Original Phase 2 Build C	2/5/85	All
Change 1	07/10/85	Indicated by change bars per SCR 749
Change 2	02/19/86	Indicated by change bars per SCR 693
Change 3	09/10/86	Indicated by change bars per SCR 919
Change 4	06/03/87	Indicated by change bars per SCR A298
Change 5	09/01/88	Indicated by change bars per SCRs 715A, 881, A361 and A583
Change 6	11/09/89	Indicated by change bars per SCR A764
Rev. A, Phase 2	06/07/94	Indicated by change bars per SCR B400

## List of TBD Items

Page	Resolution Date	Item
None		

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## SECTION 1

## GENERAL DESCRIPTION

## 1.1 CONTENT OVERVIEW

This Software Interface Specification (SIS) provides a people-oriented form and syntax for displaying sequence data within the Mission Operation System (MOS) environment. The header section identifies the type of file, its creation date, scope and genealogical ancestry. The body section lists sequence components, special subsystem status summaries and other events.

## 1.2 SCOPE

The format and syntax specifications in this document apply to all phases of the Galileo Mission.

## 1.3 APPLICABLE DOCUMENTS

625-640-211031	SEQGEN SRD
625-645-211031	Sequence GENeration User's Guide
MOS-GLL-4-211	Functional Requirement, Galileo Mission Sequence System
625-640-211061	MCHS SRD
625-640-211101	SEG SRD
SIS 211-13	Standard Sequence Data File (SSDF)
625-540	Sequence Component Definition Document
Volume 2:	Profile Activity Catalog
Volume 3:	Block Dictionary
625-675-211031	Algorithm Dictionary
GLL-3-290	Command Structure and Assignments
MCCC1843-1	LIB*CLIB\$ Special Feature Library, Sections 3.1 - 3.3
UP 4144.31	Sperry Univac 1100 Series Executive, Volume 3, Section 11.2.3, System Data Formats



UP 8478

Sperry Univac 1100 Series Processor Common  
Input/Output System (PCIOS), Section 5.2, System  
Data Format

## 1.4 SUBSYSTEM SITING

## 1.4.1 Interface Location, Medium

This interface shall be implemented in an ASCII element of a program file in Univac Standard Data File Format (SDFF). It will be in human-readable form and printouts will be generated.

## 1.4.2 Data Source, Destinations and Transfer Method

The S/C Event File (SEF) is generated by the CHECKER processor of the SEQGEN Program. It is read by the MCHS-SETUP Program (in SEQTRAN) which generates "PREDICTS" for sequences simulated in the MCHS. It is also read by SEG in order to create a Sequence Of Events (SOE). SNIP reads the SEF to obtain SSI shutter time and PWS event time, NIMS OBSTAB reads the SEF to obtain NIMS events, and, SNIP, OBSTAB and DMT AQQC all read the SEF for playback process predicts. C-KERNEL reads SCANOPS Predicts file. The SEF is read by E-Kernel generation software (name TBD), which is operated by GLL SDT.

## 1.4.3 Pertinent Relationships with Other Interfaces

N/A

## 1.4.4 Labeling and Identification (Internal/External)

The original file name will be written into the header in the form:

Qualifier\*File.Element/Version

## SECTION 2

## INTERFACE CHARACTERISTICS

## 2.1 HARDWARE CHARACTERISTICS

## 2.1.1 Special Equipment and Device Interfaces

None.

## 2.1.2 Special Setup Requirements

None.

## 2.2 VOLUME AND SIZE

Each SEF shall be limited to 10000 parameter sets. A parameter set contains all the data necessary to invoke a given sequence component.

Parameter sets shall conform to the requirements of the Standard Sequence Data File, see SIS 211-13.

There shall be no more than 15 EPOCH header records (see 4.2-1).

## 2.3 INTERFACE MEDIUM CHARACTERISTICS

The file shall be written in Univac Standard Data File Format (SDFF). This is the format described in the Univac Executive manual and used by Univac Fortran V, Athena Fortran and LIB\*CLIB\$ routines ELT READ and ELT WRITE. It is not the format described in the Univac PCIOS manual and used by Univac FTN and PL/1.

## 2.4 FAILURE PROTECTION, DETECTION AND RECOVERY FEATURES

## 2.4.1 File Backup Requirements

This is handled by the individual software systems, e.g. the MSS ARCHIVE subsystem.

## 2.4.2 Security/Integrity Measures

These files have no inherent security because they are directly text editable using system routines.

## 2.5 END-OF-FILE (OR MEDIUM) CONVENTIONS

End-of-File conventions shall be in accordance with Univac Standard Data File Format (SDFF).

## SECTION 3

## ACCESS

## 3.1 PROGRAMS USING THE INTERFACE

It is required for SEQTRAN, SCANOPS and SEG to access this file.

## 3.2 SYNCHRONIZATION CONSIDERATIONS

## 3.2.1 Timing and Sequencing Characteristics.

There shall be a BEGIN and a CUTOFF time in the header section. Each event in the body of the file shall have a time which falls in between BEGIN and CUTOFF.

In this document "time" refers to Spacecraft Event Time, which is Universal Time (UT, also referred to as GMT) of execution on the spacecraft bus. Unless otherwise specified, "time" is expressed in the form "yy-ddd/hh:mm:ss.fff, i.e. years, days of year, hours, minutes, seconds and fractions of a second.

Within the body of the file the events shall be arranged in time order.

## 3.2.2 Effective Duration

The effective duration is the difference between the BEGIN and the CUTOFF times of the header section.

## 3.2.3 Priority Interrupts

N/A

## 3.3 INPUT/OUTPUT PROTOCOLS, CALLING SEQUENCES

N/A

B400

## SECTION 4

## DETAILED INTERFACE SPECIFICATIONS

B400

## 4.1 STRUCTURE AND ORGANIZATION OVERVIEW

The SEF file shall consist of an ASCII element of a program file. There will be exactly one file per element. The element shall consist of 132- character images. The file shall be organized into a header section and a body section as follows:

	<u>Keyword</u>	<u>Data Content</u>
	# \$SGLL	SPACECRAFT EVENT FILE
	# *<Acronym>	<Qual*File.Element/Version>
	# *LEVEL	<Level>
	# *PREP	<Preparer's name and extension>
	# *RUNID	<Run ID of job generating file>
	# *PROGRAM	<Program name and version>
	# *CREATION	<Time the file was created>
	# *BEGIN	<Begin time of sequence>
	# *EPOCH	<EPOCH name>, <EPOCH time>
	#	.
	#	.
	#	.
Header	# *CUTOFF	<Cutoff time of sequence>
Section	# *TITLE	<Title of sequence>
	# *<Acronym>	<Q*F.E/V of file used by program generating this file>
	# *<Acronym>	<Q*F.E/V of ancestor file not directly used by program using this file>
	#	.
	#	.
	#	.
	# \$SEOH	
	#	Combinations of:
	#	Sequence Components
Body	#	Subsystem Status Summaries
Section	#	Other events
	#	.

The Header Data content begins in column 13.

## 4.2 SUBSTRUCTURE DEFINITION AND FORMAT

### 4.2.1 Header

The descriptive name on the \$\$GLL record shall be "S/C EVENT FILE".

The remainder of the header shall conform to the Standard Sequence Data File conventions specified in section 4.2.1 of SIS 211-13.

### 4.2.2 Body

The body of the SEF file shall consist of event lines and continuation lines of up to 132 characters in length.

Event lines shall have a full Spacecraft CLoCK (SCLK) time in decimal, followed by SpaceCraft Event Time (SCET), followed by event content in the following format:

<u>Columns</u>	<u>Content</u>
1 - 8	Major frame count
9	":"
10, 11	Minor frame count
12	":"
13	Real Time Interrupt (RTI)
14	Blank
15, 16	Year
17	"-"
18-20	Day of year
21	"/"

22-33	hh:mm:ss.fff (hours, minutes, seconds and fractions of seconds)
34	Blank
35-131 +	Event content

**Continuations:**

Continuation lines shall have columns 1 - 34 blank. Any number of continuation lines may follow an event line.

Event content starting in column 35, shall consist of one of the following:

- a) A verbatim copy of a parameter set (see 211-13), followed by '<<' title-of-parameter-set '>>', optionally followed by state-change-list, ','.

There are always two semicolons: one at the end of the parameter set and one after everything else. The state-change-list is made up of state-changes separated by commas. A state-change is free form, except that it may not contain a comma or semi-colon.

State-changes are generated by SEQGEN Event Logic when some parameter set causes the value of a node having an SEF trigger to change value.

- b) A Status-Event, consisting of a status-event-name ':', followed by a status-item-list ','.

The status-item-list is made up of status-items, separated by commas. A status-item can be defined to have both fixed and variable content. An '\*' before one of the variable parts shall indicate that it is a changed value.

The status-events that appear in the SEF shall be defined in this SIS document. In these definitions undefined columns shall be blank and strings shall be left justified.

As a rule, all status-events will appear at the start and end of the SEF, and when some value in a status-event changes.

- c) A Comment, consisting of a ';' in column 35, followed by free form text.

d) A Status-Comment, consisting of '< state-description >', followed in column 70 by the command that produces that state.

These commands can be continued in column 70 of a continuation line, but shall not exceed 80 characters in length or 20 fields, including the five standard parameters (Level, Name, ID, Prcsr, Time).

Status-comments are generated by SEQGEN (CHECKER) at the BEGIN and CUTOFF times of the sequence, and as instructed by the use of the SEQGEN \*SCSTATE,E instruction. The selection of status-comments to be generated is specified in the S/C Status Criteria File (SCSC). See SEQGEN User's Guide section 4.2.

4.2.2.1 DMS Status Event. This event shall be generated each start and finish of a runup, rundown or reversal and any other 6DMSC/6DMSR commands.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-38	"DMS:" Status Event Name
40	"*" if following is a change since last report
41-48	Choice of: "RUNUP," "RECORD," "RUNDOWN," "READY," "REWIND," "PLAYBACK," "SLEW," "SLEW-TIC," "REVERSE," "AUTOSTOP," "RUNNING," "RESUME,"
51-54	Choice of: "RDY," "P7," "R7," "R28," "R115," "R403," "R806," "S7," "S28," "S115," "S403," "S806,"
57-61	"TRACK"
63	"*" if following is a change since last report
64	Choice of "0" "1" "2" "3" "4"
65	","
67	"*" if following is a change since last report

68-70 "FWD," or "REV,"  
 73-75 "TIC"  
 77 "\*" if following is a change since last report  
 78-84 Tape Increment Count (TIC) in the format of NNNN.NN  
 86-88 "+/-"  
 91-96 Uncertainty TICs in the format of NNN.NN  
 97 ";

The DMS continuation line will show if there is any change in the DMS status event:

Continuation Line:

35-43 "DMS USED:"  
 45-52 Start stop cycles, real number with 1 decimal place (Format NNNNNN.N)  
 54-71 "START STOP CYCLES,"  
 73-76 Tape passes, integer (up to 4 digits)  
 78-89 "TAPE PASSES,"  
 91-97 Tracks of tape across the heads, real number with 2 decimal places (Format NNNN.NN)  
 99-129 "TRACKS OF TAPE ACROSS THE HEADS"  
 130 ";

Continuation Line:

35-40 Negator spring cycles, real number with 1 decimal place (Format NNNN.N)  
 42-62 "NEGATOR SPRING CYCLES"  
 63 ";



4.2.2.2 TVSHUT Status Event. This event shall be in Post Expansion checks each time a shutter opens or for a 36IP command with an exposure of 29.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-41	"TVSHUT:" Status Event Name
43-46	"FILT"
48	Choice of "0" thru "7" Filter Number modeled in response to the 36IP command
50-52	Filter Name corresponding to the Filter Number: 0-CLR, 1-GRN, 2-RED, 3-VLT, 4-NIR, 5-1MC, 6-MT1, 7-MT2
53	","
55-57	"EXP"
59-60	Choice of " 0" thru "31" Exposure Number in response to the 36IP command, right justified.
61	","
63-66	"GAIN"
68	"*" if following is a change since last report
69	Choice of "1" thru "4"
70	","
72-75	"XTND"
77	"0" "1" "2" Extension code
78	","

80-82 "TLM" Telemetry

84 "\*" if following is a change since last report

85-90 Left justified 6TMREC command parameter (23 values defined)

91 " , "

93-99 "PICOUNT" Cumulative picture count

101-106 Six digit integer

107 " , " Picture Number

109-113 "PICNO" Picture identification number

115-116 Orbit number, numeric

117 Target designation

118-121 Frame No. (SSICNTRL will generate consecutive frame numbers for consecutive shutters.)

122 " , "

## TVSHUT

Continuation Line:

42-47 "FL/ERS" FLOOD/ERASE

49 "\*" If following is a change since last report

50-52 Choice of "ENA" "DIS"

53 " , "

55-59 "RDOUT" READ OUT

61 "\*" If following is a change since last report

62-64 Choice of "ENA" "DIS"  
65 ",

4.2.2.3 SSIMODE Status Event. This event shall be generated for each 36IM command.  
Note: The last field RFMT (RECORD FORMAT) in the SSIMODE Status Event is derived from 3 params (The Imaging Rate, OP Mode and Compressor Mode) of the 36IM CMD. If the 3 params are not coherent, the RFMT will show a "???".

<u>Columns</u>	<u>Content</u>
1-34	TIMES, See 4.2.2
35-42	"SSIMODE:" Status Event Name
44-55	"IMAGING RATE"
57	"*" if following is a change since last report
58-62	Choice of "LOW" "INTER" "HIGH" "RAD" "FAST"
63	", "
65-74	"COMPRESSOR"
76	"*" if following is a change since last report
77-79	Choice of "ON" or "OFF"
80	", "
82-90	"COMP MODE" Compression mode
92	"*" if following is a change since last report
93-102	Choice of "INFO PRES" or "RATE CNTRL"
103	", "

105-115 "LIGHT FLOOD"

117 "\*" if following is a change since last report

118-120 Choice of "ON" or "OFF"

121 " ; "

SSIMode  
Continuation Line:

42-46 "RDOUT" Read Out

48 "\*" If following is a change since last report

49-52 Choice of "CONT" or "SAMP"

53 " ; "

55-58 "MODE"

60 "\*" If following is a change since last report

61-63 Choice of "LGA" or "HGA"

64 " ; "

66-69 "RFMT" Record Format

71 "\*" If following is a change since last report.

72-74 Choice of "HIM" "HMA" "IM8" "HCA" "IM4" "HIS" "AI8" "???"

75 " ; "

4.2.2.4 RFS Status Event This event is affected by the following commands: 2E, 2ER, 2LGA1, 2LGA2, 2KP, 2KPR, 2KS, 2KSR, 2N, 2D, 2H, 2DHR, 2T, 3TLM, 2A, 2ANPTR, 2P, 42AP, 42APR, 42AS, 42ASR, 2GP, 2GPR, 2GS and 2GSR. This event shall also be generated at 12 hours before the cutoff time, in addition to the occasions described in 4.2.2b.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-38	"RFS:" Status-Event Name
40	"*" if following is a change since last report
41-43	"LG1", "LG2", or "HGA"
44	","
46-49	"STWT" S-Band Travelling Wave Tube
50	"*" if following is a change since last report
51-54	One of "OFF" "LOW" "HIGH" Power
55	","
57-59	"SMI" S-Band Modulation Index
60	"*" if following is a change since last report
61-62	Numerical value of modulation index from 3TLM command, right justified.
63	","
65-68	"XTWT" X-Band Travelling Wave Tube
69	"*" if following is a change since last report
70-73	One of "OFF" "LOW" "HIGH" Power
74	","

76-78 "XMI" X-Band Modulation Index

79 "\*" if following is a change since last report

80-81 Numerical value of modulation index from 3TLM command, right justified.

82 ", "

84-87 "SRNG" S-Band Ranging

88 "\*" if following is a change since last report

89-91 "ON" or "OFF"

92 ", "

94-97 "XRNG" X-Band Ranging

98 "\*" if following is a change since last report

99-101 "ON" or "OFF"

102 ", "

104-106 "DOR" Delta Oneway Ranging

107 "\*" if following is a change since last report

108-110 "ON" or "OFF"

111 ", "

113-116 "TWNC" Two Way Non Coherent mode

117 "\*" if following is a change since last report

118-120 "ON" or "OFF"

121 ", "

123-126 "XSDC" X to S Down Converter  
 127 "\*" if following is a change since last report  
 128-130 "ON" or "OFF"  
 131 ";

4.2.2.5 MDS Status-Event. The SEG Program will use the information from this status-event plus that from 4.2.2.4 to create several DSN SOE keywords.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-38	"MDS:" Status-Event Name
40-42	"FMT" Telemetry Format
43	"*" if following is a change since last report
44-46	Any real-time (i.e. down link) telemetry format that can be in the first three characters of the 6th parameter of the 6TMSSED command (e.g., "BL3"). The most recently specified value shall be used. In addition 'ESS' will be printed when 40 b/s coded or 40 b/s uncoded data has been selected via the 3TLM or 6CS commands.
47	;"
49-52	"SBIT" S-Band Bit Rate
53	"*" if following is a change since last report
54-59	One of " 0", " 10", " 40 CD", " 40 UC", " 1200", " 7680", " 28800", " 67200", " 80640", "115200", "134400"
60	;"
62-66	"STYPE" S-Band Data Type
67	"*" if following is a change since last report

- 68-73 One of "HIFHIR", "HIFLOR", "LOFHIR", "LOFLOR" the SUB-CARR parameter of the 3TLM command, left justified, specified together with a value of "S" for the BAND parameter.
- 74 ","
- 76-79 "SDRV" S-Band Driver
- 80 "\*" if following is a change since last report
- 81-83 One of "OFF", "1", "2", "BTH". This consists of all after the first three characters ("DRV") of the DRIVER parameter of the 3TLM command specified together with a value of "S" for the BAND parameter.
- 84 ","
- 86-89 "SEXC" S-Band Exciter
- 90 "\*" if following is a change since last report
- 91-93 "ON" or "OFF"
- 94 ","
- 96-99 "XBIT" X-Band Bit Rate
- 100 "\*" if following is a change since last report
- 101-106 One of " 0", " 10", " 40 CD", " 1200", " 7680", " 28800", " 80640", "115200", "134400"
- 107 ","
- 109-113 "XTYPE" X-Band Data Type
- 114 "\*" if following is a change since last report
- 115-120 Value of SUB-CARR parameter of 3TLM command specified together with value of "X" for the BAND parameter.



- 121           ", "
- 123-126       "XDRV" X-Band Driver
- 127           "\*" if following is a change since last report
- 128-130       One of "OFF" "1" "2" "BTH". This consists of all after the first three characters of the DRIVER parameter of the 3TLM command specified together with a value of "X" for the BAND parameter.

131           ", "

### MDS

#### Continuation Line

- 42-47        "RTFILL" R/T Fill
- 48           "\*)"
- 49-53        Choice of "FILL," "NORM"
- 55-62        "DLKCAP\_S" D/L capability s-band
- 63           "\*)"
- 64-66        "0," "8," "10," "20," "32," "40," "60," "80," "120," "160,"
- 69-76        "DLKCAP\_X" D/L Capability x-band
- 77           "\*)"
- 78-80        "0," "8," "10," "20," "32," "40," "60," "80," "120," "160,"
- 81           ", "

4.2.2.6 AACS Status Event. This event is affected by the following commands: 7MODE 7SRDB 7PTDB 7SUN 7BIGZ 7NEGZ 7TURN 7BURN. Prior to expansion the 7MODE command will normally be encountered.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-39	"AACS:" Status-Event Name
41-44	"MODE"
45	*** if following is a change since last report
46-53	One of "CRUISE" "INERTIAL" "ALL_SPIN"
54	","
56-59	"TASK"
60	*** if following is a change since last report
61-72	One of "LAUNCH" "DEPLOYMENT" "ENTRY" "AXIAL-10-N" "SPIN-UD" "SPIN-HIGH" "BURN-400-N" "HI-RATE-CORR" "SPIN-CORR" "HGA-CORR" "SUN-ACQ" "TRANSITION" "TURN-BURN"
73	","
75-79	"ACCEL"
80	*** if following is a change since last report
81-83	"ON" or "OFF"
84	","
86-89	"LBA1" Linear Boom Actuator 1
90	*** if following is a change since last report

91-96 [-]dddd Position change as a result of command Range: -32768 to 32767

98-101 dddd Absolute position of LBA1 Range: 0 to 1023

103-104 "DN"

105 ", "

107-110 "LBA2" Linear Boom Actuator 2

111 "\*" if following is a change since last report

112-117 [-]dddd Position change as a result of command Range: -32768 to 32767

119-122 dddd Absolute position of LBA2 Range: 0 to 1023

124-125 "DN"

126 ", "

## Continuation Line:

41-45 "GYROS"

46 "\*" if following is a change since last report

47-49 "ON" or "OFF"

50 ", "

52-55 "PTDB"

56 "\*" if following is a change since last report

57-63 Value from 0.96 to 785.299 with at least one digit before and after the decimal point.

64 ", "

66-69 "TMOT"

- 70            "\*\*\*" if following is a change since last report
- 71-73        One of "RTH" "MVR" "SUN" "BB1" "BB2" "TMC"
- 74            ":",

4.2.2.7 PB (Playback) STATUS EVENT. This event shall be generated by 6TMREC, 6BUFHI, 6BUFLO CMDs & Low Rate Playback (LRPB) Model.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-37	"PB:" Status Event Name
39	"***" if following is a change since last report
40-46	Choice of: "INIT," "PAUSE," "RESUME," "TERM,"
48-50	"PRB" Priority buffer
51	"***" if following is a change since last report
53	Water level of PRB in VCDU (1 digit)
54-58	", MUB" Multi-use Buffer
59	"***" if following is a change since last report
60-62	Water level of MUB in VCDU (up to 3 digits)
63-69	", TRACK"
70	"***" if following is a change since last report
71	Choice of "0" "1" "2" "3" "4"
72-76	", TIC"
77	"***" if following is a change since last report

- 78-84 Tape Increment Count (TIC) of up to 4 digits, a decimal point, and 2 digits to the right of the decimal point.
- 85-91 ", BUFHI"
- 92 "\*\*\* if following is a change since last report
- 93 the commanded high water level limit (choice of 1 thru 9), representing tenths of buffer size. Effective limit is integer product of buffer size in VCDUs times limit divided by ten.
- 94-100 ", BUFLO"
- 101 "\*\*\* if following is a change since last report
- 102 the commanded low water level limit (choice of 1 thru 9), representing tenths of buffer size. Effective limit is integer product of buffer size in VCDUs times limit divided by ten.
- 103 ",."

4.2.2.8 **BITS STATUS EVENT.** This event provides the number of bits that were packetized during the past interval. The interval is user specified. By default, it is an 12 hour interval. (Please refer to \*PBTINT Instruction in the SEQGEN User's Guide.)

Interval measurements will be in integer bits. Cumulative measurements will be reset at low rate playback initiation and termination. Cumulative values will be expressed as megabit floating point numbers with six digits to the right of the decimal point.

The BITS status event will be printed before and after low rate playback is initiated and terminated, and at the end of each incremental interval from such juncture.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-39	"BITS:" Status Event Name
41-47	"INTRVL+" time interval
48-55	Time interval in the format of hh:mm:ss

68-70	"PRB"
72	"+"
73-81	Priority buffer data packetized during the past interval
82	"="
83-92	Accumulated priority buffer data
93	","
95-97	"RTS" Real Time Science Data
99	"+"
100-108	Real time science data packetized during the past interval
109	"="
110-119	Accumulated real time science data
120	","

## Continuation Line:

41-42	"PB" Playback Data
45	"+"
46-54	Playback data packetized during the past interval
55	"="
56-65	Accumulated playback data
66	","
68-71	"RRCC" Record Rate Change Coverage
72	"+"
73-81	RRCC data packetized during the past interval

82           "="

83-92       Accumulated RRCC data

93           ", "

95-96       "DL" Downlink data

99           "+"

100-108     Downlink data framed during the past interval, including coding, overhead and fill

109          "="

110-119     Accumulated downlink data

120          ", "

## Continuation Line:

41-43       "BDT" Buffer Dump to Tape data

45           "+"

46-54       BDT data recorded during past interval

55           "="

56-65       Accumulated BDT data

66           “, ”

68-71       “CFIL” Commanded fill data (6TMSED Command)

72           “+”

73-81       Commanded fill data downlinked during the past interval

82           “=”

83-92       Accumulated commanded fill data

93           “, ”

95-98	"AFIL" Autonomous fill data
99	"+"
100-108	Autonomous fill downlinked during the past interval
109	"="
110-119	Accumulated autonomous fill data
120	","

## Continuation Line:

41-44	"LOST" Bits lost due to PRB or MUB overflow
45	"+"
46-54	Lost bits during the past interval
55	"="
56-65	Accumulated lost bits
66	","

4.2.2.9 INST\_REC\_SEL STATUS EVENT. This event shall be triggered by the commands 6RCSEL, 6RCDSL for selecting or deselecting instruments from record.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-47	"INST_REC_SEL:" Status Event Name
49-51	"DDS"
52	"*" if following is a change since last report
53-56	Choice of: "SEL," "DSL,"
58-60	"EPD"



61        \*\*\* if following is a change since last report

62-65     Choice of: "SEL," "DSL,"

67-69     "EUV"

70        \*\*\* if following is a change since last report

71-74     Choice of: "SEL," "DSL,"

76-78     "HIC"

79        \*\*\* if following is a change since last report

80-83     Choice of: "SEL," "DSL,"

85-87     "PLS"

88        \*\*\* if following is a change since last report

89-91     Choice of: "SEL" "DSL"

92        ";"

4.2.2.10   INST\_RT\_SEL STATUS EVENT. This event shall be triggered by the commands 6RTSL1, 6RTDS1, 6RTSL2, 6RTDS2 for selecting or deselecting instruments and real time engineering from the R/T downlink.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-46	"INST_RT_SEL:" Status Event Name
48-50	"DDS"
51	*** if following is a change since last report
52-55	Choice of: "SEL," "DSL,"
57-59	"EPD"
60	*** if following is a change since last report

61-64 Choice of: "SEL," "DSL,"  
66-68 "EUV"  
69 "\*" if following is a change since last report  
70-73 Choice of: "SEL," "DSL,"  
75-77 "HIC"  
78 "\*" if following is a change since last report  
79-82 Choice of: "SEL," "DSL,"  
84-86 "MAG"  
87 "\*" if following is a change since last report  
88-91 Choice of: "SEL," "DSL,"  
93-96 "NIMS"  
97 "\*" if following is a change since last report  
98-101 Choice of: "SEL," "DSL,"

## Continuation Line:

48-50 "PLS"  
51 "\*" if following is a change since last report  
52-55 Choice of: "SEL," "DSL,"  
57-59 "PWS"  
60 "\*" if following is a change since last report  
61-64 Choice of: "SEL," "DSL,"  
66-68 "UVS"  
69 "\*" if following is a change since last report

- 70-73 Choice of: "SEL," "DSL,"
- 75-77 "RTE"
- 78 "\*" if following is a change since last report
- 79-82 Choice of: "SEL," "DSL,"
- 84-87 "AACS"
- 88 "\*" if following is a change since last report
- 89-91 Choice of: "SEL," "DSL,"
- 92 ";
- 4.2.2.11 RRCC STATUS EVENT. This event shall be generated when there is a change from one record rate to another while RRCC is set to > 0 minor frame. It will report the actual gap and the number of RRCC minor frames.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-39	"RRCC:" Status Event Name
41-63	"Minor Frames Collected:" controlled by 6RCSET & 6RCCLR commands
65-66	Number of mf collected (2 digits)
67	","
69-82	"VCDUs created:"
84-85	2 digit #VCDUs
86	","

4.2.2.12 PBSELVECT STATUS EVENT per ECR 35566, Table 4.3.2. This event displays the current location in the current segment, record time, together with the integrated PBT selection status of all selectable "instruments". When several PBT entries have the same record time, this event will be issued only after the last such entry is encountered. Therefore several instruments could be marked as changed. This event will be generated by the Low Rate Playback process.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-44	PBSELVECT: Status Event Name
46-50	"SEGNO"
51	*** if following is a change since last report
52-54	Number of current segment, 1 to 255
55	","
57-61	"ENTRY"
63-64	Entry number in the current segment of the current PBT entry. Always changes. (1-62)
65	","
67-70	"RECT"
72-90	Record time from current PBT entry.
91	","
93-98	"RECFMT"
99	*** if following is a change since last report
100-102	Record format from most recent SINGLE, RECFMT entry. While this does not match record format of the corresponding ECMD RECRC the effect will be that <u>nothing</u> is selected. 3 chars.
103	","

105-109 "AACS2"  
110 "\*" if following is a change since last report  
111-114 "Choice of "SEL," or "DSL,"  
116-119 "DDS2"  
120 "\*" if following is a change since last report  
121-124 "Choice of "SEL," or "DSL,"

## Continuation Line:

41-44 "ENG2"  
45 "\*" if following is a change since last report  
46-49 "Choice of "SEL," or "DSL,"  
51-54 "EPD2"  
55 "\*" if following is a change since last report  
56-59 "Choice of "SEL," or "DSL,"  
61-64 "EUV2"  
65 "\*" if following is a change since last report  
66-69 "Choice of "SEL," or "DSL,"  
71-74 "HIC2"  
75 "\*" if following is a change since last report  
76-79 "Choice of "SEL," or "DSL,"  
81-84 "MAG2"  
85 "\*" if following is a change since last report  
86-89 "Choice of "SEL," or "DSL,"

91-95 "NIMS2"  
96 "\*" if following is a change since last report  
97-100 "Choice of "SEL," or "DSL,"  
102-105 "PLS2"  
106 "\*" if following is a change since last report  
107-110 "Choice of "SEL," or "DSL,"

## Continuation Line:

41-44 "PPR1"  
45 "\*" if following is a change since last report  
46-49 "Choice of "SEL," or "DSL,"  
51-54 "PPR3"  
55 "\*" if following is a change since last report  
56-59 "Choice of "SEL," or "DSL,"  
61-64 "PWH2"  
65 "\*" if following is a change since last report  
66-69 "Choice of "SEL," or "DSL,"  
71-74 "PWH5"  
75 "\*" if following is a change since last report  
76-79 "Choice of "SEL," or "DSL,"  
81-84 "PWL3"  
85 "\*" if following is a change since last report  
86-89 "Choice of "SEL," or "DSL,"

91-94	"SSI1"
95	"*" if following is a change since last report
96-99	"Choice of "SEL," or "DSL,"
101-104	"UVS2"
105	"*" if following is a change since last report
106-108	"Choice of "SEL" or "DSL"
109	","

4.2.2.13 TLMFRAME STATUS EVENT. This event provides the count of telemetry frames since the previous TLMFRAME event, the number of VCDU from each type of data and the water levels of the priority buffer and the multi-use buffer. The sum of the VCDU counts will always be exactly 4 (the number of VCDUs in a telemetry frame) times the number of frames in the reporting interval (\*TLMFRM command).

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-43	"TLMFRAME:" Status Event Name
45-49	Count of telemetry frames from sequence start (up to 4 digits) or PB init.
50	","
52-54	"PRB"
56-59	Number of VCDUs from the Priority buffer
60	","
62-63	"PB"
65-68	Number of VCDUs from the playback data
69	","
71-73	"BDT"

75-78	Number of VCDUs from the buffer dump to tape data
79	","
81-83	"PAD"
85-88	Number of PAD VCDUs originating from the SET_BUF ECMD
89	","
92-95	"RRCC"
97-100	Number of VCDUs from the RRCC data
101	","
103-105	"RTS"
107-110	Number of VCDUs from the Real time science data
111	","
113-116	"FILL"
118-121	Number of VCDUs from the fill data
122	","

## Continuation Line:

35-51	"WATER LEVEL: PRB"      Priority buffer
53-55	Water level of PRB in VCDU (up to 3 digits)
56	","
58-60	"MUB"      Multi-use Buffer
62-64	Water level of MUB in VCDU (up to 3 digits)
65	","



- 4.2.2.14 **INST\_RT\_DATA EVENT.** This event shall accompany each BITS EVENT (See 4.2.2.8). It presents cumulative values of bits packetized for each instrument or engineering source.

Cumulative values will be reset at low rate playback initiation and termination. Cumulative values will be expressed as megabit floating point numbers with six digits to the right of the decimal point.

The INST\_RT\_DATA status event will be printed before and after low rate playback is initiated and terminated, and at the end of each incremental interval from such juncture.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-47	"INST_RT_DATA:" Status Event Name
49-51	FMT
52	*** if following is a change since last report
53-55	<Current realtime format> e.g. DL4
56-61	", DDS"
62	*** if following is a change since last report
64-73	Accumulated data
74-78	", EPD"
79	*** if following is a change since last report
81-90	Accumulated data
91-95	", EUV"
96	*** if following is a change since last report
98-107	Accumulated data
108-112	", HIC"

113        "\*\*\* if following is a change since last report

115-124   Accumulated data

125        ", "

Continuation Line:

42-44     "MAG"

45        "\*\*\* if following is a change since last report

47-56     Accumulated data

57-62     ", NIMS"

63        "\*\*\* if following is a change since last report

64-73     Accumulated data

74-78     ", PLS"

79        "\*\*\* if following is a change since last report

81-90     Accumulated data

91-95     ", PWS"

96        "\*\*\* if following is a change since last report

98-107   Accumulated data

108-112   ", UVS"

113        "\*\*\* if following is a change since last report

115-124   Accumulated data

125        ", "

Continuation line:

42-45     "AACS"

46	*** if following is a change since last report
47-56	Accumulated data
57-61	", RTE"
62	*** if following is a change since last report
64-73	Accumulated data
74-85	", LRPB state"
87-89	"IPB", "TPB", "PPB", or "RPB"
90	","

4.2.2.15 INST\_PB\_DATA EVENT per ECR 35566, Table 4.3.2. This event presents cumulative values of bits packetized for each kind of instrument or engineering data that can be selected in a playback table (PBT).

Cumulative values will be reset at low rate playback initiation and termination. Cumulative values will be expressed as megabit floating point numbers with six digits to the right of the decimal point.

The INST\_PB\_DATA status event will be printed after low rate playback is initiated, before it is terminated, and any time the ACT\_NAME in an expiring RECREC ECMD is about to be replaced by an new ACT\_NAME in the next RECREC.

The cumulative data values will be zero in the first INST\_PB\_DATA event after playback initialization. They will contain the accumulations from initialization through the end of the named ACT\_NAME, or for the entire playback at playback termination.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-47	"INST_PB_DATA:" Status Event Name
50-68	<record time at playback initiation, at playback termination, or when ACT_NAME in RECREC ECMD is about to be replaced>

71-84 <PB\_INITIATION or PB\_TERMINATION or ACT\_NAME in REC  
ECMD that is about to be replaced by another ACT\_NAME in another  
ECMD>

96-100 "AACS?"

101 "\*\*\* if following is a change since last report

102-111 Accumulated data

112-117 ", DDS2"

118 "\*\*\* if following is a change since last report

120-129 Accumulated data

130 ", "

Continuation Line:

42-45 "ENG2"

46 "\*\*\* if following is a change since last report

48-57 Accumulated data

58-63 ", EPD2"

64 "\*\*\* if following is a change since last report

66-75 Accumulated data

76-81 ", EUV2"

82 "\*\*\* if following is a change since last report

84-93 Accumulated data

94-99 ", HIC2"

100 "\*\*\* if following is a change since last report

102-111 Accumulated data

112-117 ", MAG2"  
118 "\*\*\* if following is a change since last report  
120-129 Accumulated data  
130 ", "

## Continuation line:

42-46 "NIMS2"  
47 "\*\*\* if following is a change since last report  
48-57 Accumulated data  
58-63 ", PLS2"  
64 "\*\*\* if following is a change since last report  
66-75 Accumulated data  
76-81 ", PPR1"  
82 "\*\*\* if following is a change since last report  
84-93 Accumulated data  
94-99 ", PPR3"  
100 "\*\*\* if following is a change since last report  
102-111 Accumulated data  
112-117 ", PWH2"  
118 "\*\*\* if following is a change since last report  
120-129 Accumulated data  
130 ", "

## Continuation line:

42-45 "PWH5"  
46 "\*" if following is a change since last report  
48-57 Accumulated data  
58-63 ", PWL3"  
64 "\*" if following is a change since last report  
66-75 Accumulated data  
76-81 ", SSI1"  
82 "\*" if following is a change since last report  
84-93 Accumulated data  
94-99 ", UVS2"  
100 "\*" if following is a change since last report  
102-111 Accumulated data  
112-117 ", BDTT"  
118 "\*" if following is a change since last report  
120-129 Accumulated data  
130 ",."

4.2.2.16 BDTT EVENT. This event presents the duration of the RECREC, the net VCDUs and the gross VCDUs from the MUB. It appears in the SEQGEN SEF at the completion of a Buffer Dump to Tape. It is coincident with the creation of a BDT RECREC.

<u>Columns</u>	<u>Content</u>
1-34	Times, see 4.2.2
35-40	"BDTT: " Status Event Name
41-51	"Lasted for"
52-60	Duration in the format of +hh:mm:ss (i.e., duration of the RECREC)
61-74	", Net VCDUS = " Net VCDUs are from the formula $\text{MAX}(0, \langle \text{Gross} \rangle - \langle \text{MUB} \rangle)$ , where $\langle \text{MUB} \rangle$ represents the current contents of the MUB, which consists of the sum of the types of VCDUs that can occupy the MUB (such as Playback, Pad, RRCC, RTS), except for PWS fill.
75-TBD	Net VCDUS in integer, not in fixed format
TBD	", Gross VCDUS = " Gross VCDUs are computed from the duration, using 7680 bits per second and 446 bytes per VCDU.
TBD	Gross VCDUS in integer, not in fixed format
TBD	","





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PLS DSL, PWS DSL, UVS DSL, RTE DSL, AACS DSL;

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01943566:64:0 93-183/01:59:58.733 CMD,6TMSED,20C68,,93-183/01:59:58.733,NORM,CL8; << SC ENG D/L MODE SELECT >>;
01943566:64:0 93-183/01:59:58.733 INST_RT_DATA: FMT*CL3, DDS 0.000000, EPD 0.000000, EUV 0.000000, HIC 0.000000,
MAG 0.000000, NIMS 0.000000, PLS 0.000000, PWS 0.000000, UVS 0.000000,
AACS 0.000000, RTE 0.000000, LRPB state TPB;
01943566:64:0 93-183/01:59:58.733 INST_RT_DATA: FMT CL3, DDS 0.000000, EPD 0.000000, EUV 0.000000, HIC 0.000000,
MAG 0.000000, NIMS 0.000000, PLS 0.000000, PWS 0.000000, UVS 0.000000,
AACS 0.000000, RTE 0.000000, LRPB state TPB;
01943567:00:0 93-183/02:00:16.733 ECHD,TIMER,50Z212UF,PRI,93-183/02:00:16.733,UVS_TMSED;;
01943567:00:0 93-183/02:00:16.733 ECHD,TIMER,50Z212EF,PRI,93-183/02:00:16.733,EUV_TMSED;;
01943567:43:0 93-183/02:00:45.400 ECHD,DLCHG,20C6812A,PRI,93-183/02:00:45.400,8;;
01943567:43:0 93-183/02:00:45.400 INST_RT_DATA: FMT*CL8, DDS 0.000000, EPD 0.000000, EUV 0.000000, HIC 0.000000,
MAG 0.000000, NIMS 0.000000, PLS 0.000000, PWS 0.000000, UVS 0.000000,
AACS 0.000000, RTE 0.000000, LRPB state TPB;
01943567:43:0 93-183/02:00:45.400 MDS: FMT*CL8, SBIT 0, STYPE HIFHIR, SDRV OFF, SEXC OFF, XBIT 0, XTYPE HIFHIR, XDRV OFF,
RTFILL NORM, DLKCAP_S 0, DLKCAP_X 0;
01943576:54:0 93-183/02:09:58.733 CMD,6TMREC,20C6C,,93-183/02:09:58.733,1PB; << RECORD MODE CHANGE >>;
01943576:54:0 93-183/02:09:58.733 BITS: INTRVL+12:00:00 PRB + 0= 0.000000, RTS + 0= 0.000000,
PB + 0= 0.000000, RRCC+ 0= 0.000000, DL + 320383= 0.320383,
BDT + 0= 0.000000, CFIL+ 0= 0.000000, AFIL+ 268736= 0.268736,
LOST+ 0= 0.000000;
01943576:54:0 93-183/02:09:58.733 INST_RT_DATA: FMT CL8, DDS 0.000000, EPD 0.000000, EUV 0.000000, HIC 0.000000,
MAG 0.000000, NIMS 0.000000, PLS 0.000000, PWS 0.000000, UVS 0.000000,
AACS 0.000000, RTE 0.000000, LRPB state*1PB;
01943576:54:0 93-183/02:09:58.733 TLMFRAME: 19, PRB 0, PB 0, BDT 0, PAD 0, RRCC 0, RTS 0, FILL 76,
WATER LEVEL: PRB 0, MUB 0;
01943576:54:0 93-183/02:09:58.733 LRPB: LOW RATE DMS PLAYBACK STARTING;
01943576:54:0 93-183/02:09:58.733 INST_PB_DATA: PB_INITIATION, AACS2 0.000000, DDS2 0.000000,
ENG2 0.000000, EPD2 0.000000, EUV2 0.000000, HIC2 0.000000, MAG2 0.000000,
NIMS2 0.000000, PLS2 0.000000, PPR1 0.000000, PPR3 0.000000, PWH2 0.000000,
PWH5 0.000000, PWL3 0.000000, SS11 0.000000, UVS2 0.000000, BDTT 0.000000;
01943576:54:0 93-183/02:09:58.733 BITS: INTRVL+12:00:00 PRB + 0= 0.000000, RTS + 0= 0.000000,
PB + 0= 0.000000, RRCC+ 0= 0.000000, DL + 0= 0.000000,
BDT + 0= 0.000000, CFIL+ 0= 0.000000, AFIL+ 0= 0.000000,
LOST+ 0= 0.000000;
01943576:54:0 93-183/02:09:58.733 INST_RT_DATA: FMT CL8, DDS 0.000000, EPD 0.000000, EUV 0.000000, HIC 0.000000,
MAG 0.000000, NIMS 0.000000, PLS 0.000000, PWS 0.000000, UVS 0.000000,
AACS 0.000000, RTE 0.000000, LRPB state IPB;
01943576:54:0 93-183/02:09:58.733 TLMFRAME: 0, PRB 0, PB 0, BDT 0, PAD 0, RRCC 0, RTS 0, FILL 0,
WATER LEVEL: PRB 0, MUB 0;
01943576:54:0 93-183/02:09:58.733 PB: *INIT, PRB 0, MUB 0, TRACK 1, TIC 201.00, BUFHI 8, BUFLO 2;
01943576:54:0 93-183/02:09:58.733 DMS: *RUNUP, P7, TRACK 1, FWD, TIC 201.00 +/- 0.00;
01943576:54:0 93-183/02:09:58.733 DCMD,60MSC,50Z26RC,,93-183/02:09:58.733,P7,0; << DMS CONTROL >>;
01943576:54:0 93-183/02:09:58.733 ECHD,DMS_STAT,50Z212DS,PRI,93-183/02:09:58.733,RUNNING,201;;
01943576:56:2 93-183/02:10:00.200 DMS: *PLAYBACK, P7, TRACK 1, FWD, TIC * 202.00 +/- 0.10;
01943576:56:2 93-183/02:10:00.200 ECHD,DMS_COMP,50Z212DC,PRI,93-183/02:10:00.200,P7,202;;
01943576:56:2 93-183/02:10:00.200 ECHD,RECRES,20B6DA12A,PRI,93-171/03:00:03.733,HIM,93-171/03:03:39.733,207.,1,
966.,NONE,SEL,SEL,SEL,SEL,DSL,0;
01943576:88:1 93-183/02:10:21.466 SINGLE,BEGSEG,303A,,93-171/02:59:59.733,1,HARD;
01943576:88:1 93-183/02:10:21.466 SINGLE,REFCMT,309A,PRI,93-171/02:59:59.733,RSST,S.DOWN,DESC,,,,,,,,ACT,HIM;
01943576:88:1 93-183/02:10:21.466 SINGLE,NIMPBK,301A,PRI,93-171/02:59:59.733,RSST,S.DOWN,DESC,,,,,,,,ACT,MWG,6.0,
.2,1,1,0,5,4,F413,2,055,056;
01943576:88:1 93-183/02:10:21.466 SINGLE,SSICT,308A,PRI,93-171/02:59:59.733,RSST,S.DOWN,DESC,,,,,,,,ACT,MWG,3.5,
.2,1,80,1,1,80,60,50,50,0,42,25,30,7.6,0,.33;
01943576:88:1 93-183/02:10:21.466 PBSLVECT: SEGNO 1, ENTRY 4, RECT 93-171/02:59:59.733, RECFMT HIM, AACS2 DSL, DDS2 DSL,
ENG2 DSL, EPD2 DSL, EUV2 DSL, HIC2 DSL, MAG2 DSL, NIMS2 SEL, PLS2 DSL,
PPR1 DSL, PPR3 DSL, PWH2 DSL, PWH5 DSL, PWL3 DSL, SS11 SEL, UVS2 DSL;

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01943581:44:1 93-183/02:14:55.466 Start compression & packetizing of 59 raw VCDUs from DMS run, which also made 83 SSI VCDUs;
01943581:45:0 93-183/02:14:56.066 DMS: *RUNDOWN, RDY, TRACK 1, FWD, TIC @ 271.35 +/- 0.10;
01943581:45:0 93-183/02:14:56.066 DCMD,6DMSC,50ZZ26RD,,93-183/02:14:56.066,RDY,0; << DMS CONTROL >>;
01943581:45:0 93-183/02:14:56.066 ECMD,DMS_COMP,50ZZ12DD,PRI,93-183/02:14:56.066,RDY,271;;
01943581:46:9 93-183/02:14:57.333 DMS: *READY, RDY, TRACK 1, FWD, TIC @ 272.35 +/- 0.20;
01943581:46:9 93-183/02:14:57.333 ECMD,DMS_STAT,50ZZ12DT,PRI,93-183/02:14:57.333,RDY,272;;
01943581:47:0 93-183/02:14:57.400 DMS: *RUNUP, S7, TRACK *2, *REV, TIC 272.35 +/- 0.20;
DMS USED: 1.0 START STOP CYCLES, 0 TAPE PASSES, 0.04 TRACKS OF TAPE ACROSS THE HEADS,
0.0 NEGATOR SPRING CYCLES;
01943581:47:0 93-183/02:14:57.400 DCMD,6DMSC,50ZZ26SL,,93-183/02:14:57.400,S7,2; << DMS CONTROL >>;
01943581:47:0 93-183/02:14:57.400 ECMD,DMS_STAT,50ZZ12DS,PRI,93-183/02:14:57.400,RUNNING,272;;
01943581:49:2 93-183/02:14:58.866 DMS: *SLEW, S7, TRACK 2, REV, TIC @ 271.35 +/- 0.30;
01943581:49:2 93-183/02:14:58.866 ECMD,DMS_COMP,50ZZ12DC,PRI,93-183/02:14:58.866,S7,271;;
01943581:54:0 93-183/02:15:02.066 DMS: *RUNDOWN, RDY, TRACK 2, REV, TIC @ 270.60 +/- 0.30;
01943581:54:0 93-183/02:15:02.066 DCMD,6DMSC,50ZZ26RE,,93-183/02:15:02.066,RDY,1; << DMS CONTROL >>;
01943581:54:0 93-183/02:15:02.066 ECMD,DMS_COMP,50ZZ12DD,PRI,93-183/02:15:02.066,RDY,270;;
01943581:55:9 93-183/02:15:03.333 DMS: *READY, RDY, TRACK *1, *FWD, TIC @ 269.60 +/- 0.40;
DMS USED: 2.0 START STOP CYCLES, 0 TAPE PASSES, 0.04 TRACKS OF TAPE ACROSS THE HEADS,
0.0 NEGATOR SPRING CYCLES;
01943581:55:9 93-183/02:15:03.333 ECMD,DMS_STAT,50ZZ12DT,PRI,93-183/02:15:03.333,RDY,269;;
01943582:48:0 93-183/02:15:58.733 CMD,6RTDS1,20C6P,,93-183/02:15:58.733,MAGDSL,DDSDSL,PWSDSL,HICNCG,EUVDSL,EPDSSL,PLSDSL,UVSNCG;
<< DESELECT INSTRUMENTS FROM R/T >>;
01943582:48:0 93-183/02:15:58.733 INST_RT_SEL: DDS DSL, EPD DSL, EUV DSL, HIC DSL, MAG DSL, NIMS DSL,
PLS DSL, PWS DSL, UVS DSL, RTE DSL, AACS DSL;
01943587:43:0 93-183/02:20:58.733 CMD,6RTSL1,20C6A,,93-183/02:20:58.733,MAGSEL,DDSNCG,PWSSEL,HICSEL,EUVSEL,EPDSEL,PLSNCG,UVSEL;
<< SELECT INSTRUMENTS FROM R/T >> R/T MAG SELECT, R/T PWSL SELECT, R/T HIC SELECT,
R/T EUV SELECT, R/T EPD SELECT, R/T UVS SELECT;
01943587:43:0 93-183/02:20:58.733 INST_RT_SEL: DDS DSL, EPD*SEL, EUV*SEL, HIC*SEL, MAG*SEL, NIMS DSL,
PLS DSL, PWS*SEL, UVS*SEL, RTE DSL, AACS DSL;
01943597:33:0 93-183/02:30:58.733 CMD,6RTDS2,20C6V,,93-183/02:30:58.733,NIMNCG,AACNCG,RTEDSL; << DESELECT INSTRUMENTS AND RTE >>;
01943597:33:0 93-183/02:30:58.733 INST_RT_SEL: DDS DSL, EPD SEL, EUV SEL, HIC SEL, MAG SEL, NIMS DSL,
PLS DSL, PWS SEL, UVS SEL, RTE DSL, AACS DSL;
01943602:28:0 93-183/02:35:58.733 CMD,6RTSL2,20C6W,,93-183/02:35:58.733,NIMNCG,AACNCG,RTESEL; << SELECT INSTRUMENTS AND RTE >>
R/T RTE SELECT;
01943602:28:0 93-183/02:35:58.733 INST_RT_SEL: DDS DSL, EPD SEL, EUV SEL, HIC SEL, MAG SEL, NIMS DSL,
PLS DSL, PWS SEL, UVS SEL, RTE*SEL, AACS DSL;
01943607:23:0 93-183/02:40:58.733 CMD,6RCSEL,20C6X,,93-183/02:40:58.733,DDSEL,PLSNCG,EPDSEL,HICSEL,EUVSEL; << RECORD SELECT >>
REC DDS SEL, REC EPD SEL, REC HIC SEL, REC EUV SEL;
01943607:23:0 93-183/02:40:58.733 INST_REC_SEL: DDS*SEL, EPD*SEL, EUV*SEL, HIC*SEL, PLS DSL;
01943612:18:0 93-183/02:45:58.733 CMD,6RCDSL,20C6Y,,93-183/02:45:58.733,DDSDSL,PLSDSL,EPDNCG,HICDSL,EUVDSL; << RECORD DE-SELECT >>
REC DDS DSL, REC HIC DSL, REC EUV DSL;
01943612:18:0 93-183/02:45:58.733 INST_REC_SEL: DDS*DSL, EPD SEL, EUV*DSL, HIC*DSL, PLS DSL;
01943616:75:9 93-183/02:50:40.000 Completed compression & packetization. 10 VCDUs made;
01943617:13:0 93-183/02:50:58.733 CMD,6RCSEL,20C6F,,93-183/02:50:58.733,DDSEL,PLSNCG,EPDSEL,HICNCG,EUVNCG; << RECORD SELECT >>
REC DDS SEL;
01943617:13:0 93-183/02:50:58.733 INST_REC_SEL: DDS*SEL, EPD SEL, EUV DSL, HIC DSL, PLS DSL;
01943617:79:0 93-183/02:51:42.733 DMS: *RUNUP, P7, TRACK 1, FWD, TIC 269.60 +/- 0.40;
01943617:79:0 93-183/02:51:42.733 DCMD,6DMSC,50ZZ26RC,,93-183/02:51:42.733,P7,0; << DMS CONTROL >>;
01943617:79:0 93-183/02:51:42.733 ECMD,DMS_STAT,50ZZ12DS,PRI,93-183/02:51:42.733,RUNNING,269;;
01943617:81:2 93-183/02:51:44.200 DMS: *PLAYBACK, P7, TRACK 1, FWD, TIC @ 270.60 +/- 0.50;
01943617:81:2 93-183/02:51:44.200 ECMD,DMS_COMP,50ZZ12DC,PRI,93-183/02:51:44.200,P7,270;;
01943620:89:5 93-183/02:54:51.733 Start compression & packetizing of 40 raw VCDUs from DMS run, which also made 94 SSI VCDUs;
01943620:90:0 93-183/02:54:52.066 DMS: *RUNDOWN, RDY, TRACK 1, FWD, TIC @ 314.64 +/- 0.50;
01943620:90:0 93-183/02:54:52.066 DCMD,6DMSC,50ZZ26RD,,93-183/02:54:52.066,RDY,0; << DMS CONTROL >>;
01943620:90:0 93-183/02:54:52.066 ECMD,DMS_COMP,50ZZ12DD,PRI,93-183/02:54:52.066,RDY,314;;
01943621:00:9 93-183/02:54:53.333 DMS: *READY, RDY, TRACK 1, FWD, TIC @ 315.64 +/- 0.60;
01943621:00:9 93-183/02:54:53.333 ECMD,DMS_STAT,50ZZ12DT,PRI,93-183/02:54:53.333,RDY,315;;

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01943621:01:0 93-183/02:54:53.400 DMS: *RUNUP, S7, TRACK *2, *REV, TIC 315.64 +/- 0.60;
DMS USED: 3.0 START STOP CYCLES, 0 TAPE PASSES, 0.05 TRACKS OF TAPE ACROSS THE HEADS,
0.0 NEGATOR SPRING CYCLES;
01943621:01:0 93-183/02:54:53.400 DCMD,60MSC,50ZZ6SL,,93-183/02:54:53.400,S7,2; << DMS CONTROL >>;
01943621:01:0 93-183/02:54:53.400 ECMD,DMS_STAT,50ZZ12DS,PRI,93-183/02:54:53.400,RUNNING,315;;
01943621:03:2 93-183/02:54:54.866 DMS: *SLEW, -S7, TRACK 2, REV, TIC * 314.64 +/- 0.70;
01943621:03:2 93-183/02:54:54.866 ECMD,DMS_COMP,50ZZ12DC,PRI,93-183/02:54:54.866,S7,314;;
01943621:08:0 93-183/02:54:58.066 DMS: *RUNDOWN, RDY, TRACK 2, REV, TIC * 313.89 +/- 0.70;
01943621:08:0 93-183/02:54:58.066 DCMD,60MSC,50ZZ6RE,,93-183/02:54:58.066,RDY,1; << DMS CONTROL >>;
01943621:08:0 93-183/02:54:58.066 ECMD,DMS_COMP,50ZZ12DD,PRI,93-183/02:54:58.066,RDY,313;;
01943621:09:9 93-183/02:54:59.333 DMS: *READY, RDY, TRACK *1, *FWD, TIC * 312.89 +/- 0.80;
DMS USED: 4.0 START STOP CYCLES, 0 TAPE PASSES, 0.05 TRACKS OF TAPE ACROSS THE HEADS,
0.0 NEGATOR SPRING CYCLES;
01943621:09:9 93-183/02:54:59.333 ECMD,DMS_STAT,50ZZ12DT,PRI,93-183/02:54:59.333,RDY,312;;
01943626:06:0 93-183/03:00:00.066 CMD,6THSED,20C6FF,,93-183/03:00:00.066,NORM,CL7; << SC ENG D/L MODE SELECT >>;
01943626:50:0 93-183/03:00:29.400 ECMD,DLCHG,20C6FF12A,PRI,93-183/03:00:29.400,7;;
01943626:50:0 93-183/03:00:29.400 INST_RT_DATA: FMT*CL7, DDS 0.000000, EPD* 0.010388, EUV 0.000000, HIC 0.000000,
MAG* 0.004409, NIMS 0.000000, PLS 0.000000, PWS* 0.010384, UVS 0.000000,
AACS 0.000000, RTE 0.000000, LRPB state IPB;
01943626:50:0 93-183/03:00:29.400 MDS: FMT*CL7, SBIT 0, STYPE HIFHIR, SDRV OFF, SEX OFF, XBIT 0, XTYPE HIFHIR, XDRV OFF,
RTFILL NORM, DLKCAP_S 0, DLKCAP_X 0;
01943627:57:0 93-183/03:01:34.733 DCMD,24CLR,50ZZ4CY,PRI,93-183/03:01:34.733; << GO TO >>;
01943631:01:0 93-183/03:05:00.066 CMD,60MSC,20C6DD,,93-183/03:05:00.066,RDY,0; << DMS CONTROL >>;
01943635:87:0 93-183/03:10:00.066 LRPB: TERMINATING ALL AUTONOMOUS DMS ACTIVITY.
01943635:87:0 93-183/03:10:00.066 Terminated compression & packetization. 5 VCDUs made 0 raw VCDUs trashed;
01943635:87:0 93-183/03:10:00.066 CMD,6THREC,20C6EE,,93-183/03:10:00.066,TPB; << RECORD MODE CHANGE >>;
01943635:90:0 93-183/03:10:02.066 GE,UTILITY,20C11A,,93-183/03:10:02.066; << GROUP END 062183 151531 >> active programs = 0;
01943636:08:0 93-183/03:10:08.066 ECMD,TIMER,50ZZ12XX,PRI,93-183/03:10:08.066,SET_PPB TT,312;;
01943636:08:0 93-183/03:10:08.066 LRPB: TERMINATED LOW RATE PLAYBACK. Made 99 SSI vcdus and 0 raw psuedo vcdus;
01943636:08:0 93-183/03:10:08.066 INST_PB_DATA: 93-171/03:03:39.733 PB_TERMINATION, AACS2 0.000000, DDS2 0.000000,
ENG2 0.000000, EPD2 0.000000, EUV2 0.000000, HIC2 0.000000, MAG2 0.000000,
NIMS2* 0.049392, PLS2 0.000000, PPR1 0.000000, PPR3 0.000000, PWH2 0.000000,
PWH5 0.000000, PWL3 0.000000, SS11* 0.629824, UVS2 0.000000, BDTT 0.000000;
01943636:08:0 93-183/03:10:08.066 BITS: INTRVL+12:00:00 PRB + 0= 0.000000, RTS + 60333= 0.060333,
PB + 679216= 0.679216, RRCC+ 0= 0.000000, DL + 554346= 0.554346,
BDT + 0= 0.000000, CFIL+ 0= 0.000000, AFIL+ 7072= 0.007072,
LOST+ 0= 0.000000;
01943636:08:0 93-183/03:10:08.066 INST_RT_DATA: FMT CL7, DDS 0.000000, EPD* 0.012466, EUV* 0.015498, HIC 0.000000,
MAG 0.004409, NIMS 0.000000, PLS 0.000000, PWS* 0.012461, UVS* 0.015498,
AACS 0.000000, RTE 0.000000, LRPB state*TPB;
01943636:08:0 93-183/03:10:08.066 TLMFRAME: 34, PRB 0, PB 129, BDT 0, PAD 0, RRCC 0, RTS 5, FILL 2,
WATER LEVEL: PRB 0, MJB 76;
01943636:08:0 93-183/03:10:08.066 INST_PB_DATA: 93-171/03:03:39.733 PB_TERMINATION, AACS2 0.000000, DDS2 0.000000,
ENG2 0.000000, EPD2 0.000000, EUV2 0.000000, HIC2 0.000000, MAG2 0.000000,
NIMS2* 0.000000, PLS2 0.000000, PPR1 0.000000, PPR3 0.000000, PWH2 0.000000,
PWH5 0.000000, PWL3 0.000000, SS11* 0.000000, UVS2 0.000000, BDTT 0.000000;
01943636:08:0 93-183/03:10:08.066 BITS: INTRVL+12:00:00 PRB + 2880= 0.000000, RTS + 5624= 0.005624,
PB + 0= 0.000000, RRCC+ 0= 0.000000, DL + 0= 0.000000,
BDT + 0= 0.000000, CFIL+ 0= 0.000000, AFIL+ 0= 0.000000,
LOST+ 0= 0.000000;
01943636:08:0 93-183/03:10:08.066 INST_RT_DATA: FMT CL7, DDS 0.000000, EPD* 0.000000, EUV* 0.000000, HIC 0.000000,
MAG* 0.000000, NIMS 0.000000, PLS 0.000000, PWS* 0.000000, UVS* 0.000000,
AACS 0.000000, RTE 0.000000, LRPB state TPB;
01943636:08:0 93-183/03:10:08.066 TLMFRAME: 0, PRB 0, PB 0, BDT 0, PAD 0, RRCC 0, RTS 0, FILL 0,
WATER LEVEL: PRB 0, MJB 76;
01943636:08:0 93-183/03:10:08.066 PB: *TERM, PRB 0, MJB* 76, TRACK 1, TIC* 312.89, BUFHI 8, BUFLO 2;
01943645:77:0 93-183/03:20:00.066 GS,UTILITY,20A,,93-183/03:20:00.066; << GROUP START 062283 093002 >> active programs = 1;

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01943646:01:0 93-183/03:20:10.066 CMD,16AP,20A3A,,93-183/03:20:10.066,1; << DMS PWR ON >>;
01943646:18:0 93-183/03:20:21.400 CMD,36AP,20A3B,,93-183/03:20:21.400,1; << SSI PWR ON >> SSI PWR ON;
01943647:17:0 93-183/03:21:21.400 GE,UTILITY,20A11A,,93-183/03:21:21.400; << GROUP END 062183 151531 >> active programs = 0;
01943660:73:0 93-183/03:35:07.400 CMD,36IM,128JA130A4A,PRI,93-183/03:35:07.400,HGA,CNTG,0,OUT,ON,HIGH; << IMAGING MODE >>;
01943660:73:0 93-183/03:35:07.400 SSIMODE: IMAGING RATE *HIGH , COMPRESSOR *OUT, COMP MODE RATE CNTRL, LIGHT FLOOD *ON ,
RDOUT *CNTG, MODE *HGA, RFMT *IM8;
01943661:72:0 93-183/03:36:07.400 CMD,36IP,147JA4A,PRI,93-183/03:36:07.400,BCN,1,12,0,0,0,3,0,0; << IMAGE PARAMETERS >>;
01943661:77:0 93-183/03:36:10.733 CMD,6THREC,176JA6A,PRI,93-183/03:36:10.733,IM8; << RECORD MODE CHANGE >>;
01943661:78:0 93-183/03:36:11.400 ECMD,TIMER,50ZZ12FS,PRI,93-183/03:36:11.400,IMG_FRM_STR;;
01943661:81:0 93-183/03:36:13.400 ECMD,TIMER,50ZZ12PE,PRI,93-183/03:36:13.400,IMG_PRP_END;;
01943661:81:0 93-183/03:36:13.400 TVSHUT: FILT 2 RED, EXP 12, GAIN *2, XTND 0, TLM *IM8 , PICOUNT 1, PICNO 0001,
FL/ERS ENA, RDOUT ENA;
01943663:40:0 93-183/03:37:47.400 CMD,36IM,147JC4H,,93-183/03:37:47.400,HGA,CNTG,0,OUT,OFF,RAD; << IMAGING MODE >>;
01943663:40:0 93-183/03:37:47.400 SSIMODE: IMAGING RATE *RAD , COMPRESSOR OUT, COMP MODE RATE CNTRL, LIGHT FLOOD *OFF,
RDOUT CNTG, MODE HGA, RFMT *A18;
01943663:41:0 93-183/03:37:48.066 CMD,6THREC,176JX6A,PRI,93-183/03:37:48.066,A18; << RECORD MODE CHANGE >>;
01943663:60:0 93-183/03:38:00.733 CMD,36IP,147JC4G,PRI,93-183/03:38:00.733,BCN,0,13,0,0,0,3,1,0; << IMAGE PARAMETERS >>;
01943663:63:0 93-183/03:38:02.733 ECMD,TIMER,50ZZ12FS,PRI,93-183/03:38:02.733,IMG_FRM_STR;;
01943663:63:9 93-183/03:38:03.333 ECMD,TIMER,50ZZ12PE,PRI,93-183/03:38:03.333,IMG_PRP_END;;
01943663:63:9 93-183/03:38:03.333 TVSHUT: FILT 3 VLT, EXP 13, GAIN *1, XTND 0, TLM *A18 , PICOUNT 2, PICNO 0002,
FL/ERS *DIS, RDOUT ENA;
01943666:72:0 93-183/03:41:10.733 CMD,36IM,128JE130A4C,PRI,93-183/03:41:10.733,LGA,CNTG,0,OUT,ON,INTER; << IMAGING MODE >>;
01943666:72:0 93-183/03:41:10.733 SSIMODE: IMAGING RATE *INTER, COMPRESSOR OUT, COMP MODE RATE CNTRL, LIGHT FLOOD *ON ,
RDOUT CNTG, MODE *LGA, RFMT *HMA;
01943668:71:0 93-183/03:43:11.400 CMD,36IP,147JE4C,PRI,93-183/03:43:11.400,BCN,1,14,0,0,0,3,1,0; << IMAGE PARAMETERS >>;
01943668:78:0 93-183/03:43:16.066 CMD,6THREC,176JY6A,PRI,93-183/03:43:16.066,HMA; << RECORD MODE CHANGE >>;
01943669:00:0 93-183/03:43:24.733 ECMD,TIMER,50ZZ12FS,PRI,93-183/03:43:24.733,IMG_FRM_STR;;
01943669:05:5 93-183/03:43:28.400 ECMD,TIMER,50ZZ12PE,PRI,93-183/03:43:28.400,IMG_PRP_END;;
01943669:05:5 93-183/03:43:28.400 TVSHUT: FILT 3 VLT, EXP 14, GAIN *2, XTND 0, TLM *HMA , PICOUNT 3, PICNO 0003,
FL/ERS DIS, RDOUT ENA;
01943685:37:0 93-183/04:00:00.066 ECMD,CUTOFF,50ZZ12B,BOTH,93-183/04:00:00.066;;
01943685:37:0 93-183/04:00:00.066 DMS: READY, RDY, TRACK 1, FWD, TIC 312.89 +/- 0.80;
DMS USED: 4.0 START STOP CYCLES, 0 TAPE PASSES, 0.05 TRACKS OF TAPE ACROSS THE HEADS,
0.0 NEGATOR SPRING CYCLES;
01943685:37:0 93-183/04:00:00.066 TLMFRAME: 22, PRB 2, PB 63, BDT 0, PAD 0, RRCC 0, RTS 23, FILL 0,
WATER LEVEL: PRB 0, MJB 0;
01943685:37:0 93-183/04:00:00.066 INST_REC_SEL: DDS SEL, EPD SEL, EUV DSL, HIC DSL, PLS DSL;
01943685:37:0 93-183/04:00:00.066 INST_RT_SEL: DDS DSL, EPD SEL, EUV SEL, HIC SEL, MAG SEL, NIMS DSL,
PLS DSL, PWS SEL, UVS SEL, RTE SEL, AACS DSL;
01943685:37:0 93-183/04:00:00.066 PB: TERM, PRB 0, MUB* 10, TRACK 1, TIC 312.89, BUFHI 8, BUFLO 2;
01943685:37:0 93-183/04:00:00.066 BITS: INTRVL+12:00:00 PRB + 5760= 0.005760, RTS + 70385= 0.076009,
PB + 0= 0.000000, RRCC+ 0= 0.000000, DL + 354144= 0.354144,
BDT + 0= 0.000000, CFIL+ 0= 0.000000, AFIL+ 0= 0.000000,
LOST+ 0= 0.000000;
01943685:37:0 93-183/04:00:00.066 INST_RT_DATA: FMT CL7, DDS 0.000000, EPD* 0.014544, EUV* 0.017712, HIC 0.000000,
MAG* 0.005879, NIMS 0.000000, PLS 0.000000, PWS* 0.014538, UVS* 0.017712,
AACS 0.000000, RTE* 0.005760, LRPB state TPB;
01943685:37:0 93-183/04:00:00.066 RFS: LG2, STWT OFF , SMI 0, XTWT OFF , XMI 0, SRNG OFF, XRNG OFF, DOR OFF, TWNC OFF, XSDC OFF;
01943685:37:0 93-183/04:00:00.066 MDS: FMT CL7, SBIT 0, STYPE HIFHIR, SDRV OFF, SEXC OFF, XBIT 0, XTYPE HIFHIR, XDRV OFF,
RTFILL NORM, DLKCAP_S 0, DLKCAP_X 0;
01943685:37:0 93-183/04:00:00.066 TVSHUT: FILT 3 VLT, EXP 14, GAIN 2, XTND 0, TLM HMA , PICOUNT 3, PICNO 0003,
FL/ERS DIS, RDOUT ENA;
01943685:37:0 93-183/04:00:00.066 SSIMODE: IMAGING RATE INTER, COMPRESSOR OUT, COMP MODE RATE CNTRL, LIGHT FLOOD ON ,
RDOUT CNTG, MODE LGA, RFMT HMA;
01943685:37:0 93-183/04:00:00.066 AACS: MODE -----, TASK , ACCEL ---, LBA1 0 400 DN, LBA2 0 400 DN,
GYROS ---, PTDB 0.0 , TMOT ---;

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D:TEST8

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SSGLL      SPACECRAFT EVENT FILE
*SEF       WANG*TEST8.SEF/TEST8OUT
*LEVEL     SEB
*PREP      FRED CHRISNEY
*RUMID     VICKIE
*PROGRAM   SEQGEN 95-020/17:31:26.000
*CREATION  95-040/08:48:19.835
*BEGIN     90-100/23:58:00.000
*CUTOFF    90-101/05:11:00.000
*TITLE     TEST CASE #8 - RRCC
*SCLK      TEST8.SCLK/SCET-89
*LITIME    TEST8.LITIME
*SSF       WANG*DAY.SSF/TEST8
*SSF       SGLL*F1-DATA-OUT.SSF/TEST8
*SSF       WANG*TEMP.SSF/RRCC-P2
*SOP       SGLL*FJC.SOP/RRCC-P2
*SOP       SEQCOMP*UTEST.SOP/RRCC-P2
$SEOH
00261061:29:0 90-100/23:58:00.066 GS,UTILITY,20A,,90-100/23:58:00.066; << GROUP START 062283 093002 >> active programs = 1;
00261061:29:0 90-100/23:58:00.066 ECMD,BEGIN,50ZZ12A,BOTH,90-100/23:58:00.066,90-101/05:11:00.000;;
00261061:29:0 90-100/23:58:00.066 DMS: READY, RDY, TRACK 1, FWD, TIC 201.00 +/- 0.00;
DMS USED: 0.0 START STOP CYCLES, 0 TAPE PASSES, 0.0 TRACKS OF TAPE ACROSS THE HEADS,
0.0 NEGATOR SPRING CYCLES;
00261061:29:0 90-100/23:58:00.066 TLMFRAME: 0, PRB 0, PB 0, BDT 0, PAD 0, RRCC 0, RTS 0, FILL 0,
WATER LEVEL: PRB 0, MUB 0;
MUB VCDUs: PB 0, BDT 0, PAD 0, RRCC 0, RTS 0, RAW 0;
00261061:29:0 90-100/23:58:00.066 BITS: INTRVL+10:00:00 PRB + 0= 0.000000, RTS + 0= 0.000000,
PB + 0= 0.000000, RRCC+ 0= 0.000000, DL + 0= 0.000000,
BDT + 0= 0.000000, CFIL+ 0= 0.000000, AFIL+ 0= 0.000000,
LOST+ 0= 0.000000;
00261061:29:0 90-100/23:58:00.066 INST_RT_DATA: FMT BL3, DDS 0.000000, EPD 0.000000, EUV 0.000000, HIC 0.000000,
MAG 0.000000, NIMS 0.000000, PLS 0.000000, PWS 0.000000, UVS 0.000000,
ACS 0.000000, RTE 0.000000, LRPB state TPB;
00261061:29:0 90-100/23:58:00.066 INST_REC_SEL: DDS DSL, EPD DSL, EUV DSL, HIC DSL, PLS DSL;
00261061:29:0 90-100/23:58:00.066 INST_RT_SEL: DDS DSL, EPD DSL, EUV DSL, HIC DSL, MAG DSL, NIMS DSL,
PLS DSL, PWS DSL, UVS DSL, RTE DSL, ACS DSL;
00261061:29:0 90-100/23:58:00.066 PB: TERM, PRB 0, MUB 0, TRACK 1, TIC 201.00, BUFHI 8, BUFLO 1;
00261061:29:0 90-100/23:58:00.066 RFS: LG2, STWT OFF, SMI 0, XTWT OFF, XMI 0, SRNG OFF, XRNG OFF, DOR OFF, TWNC OFF, XSDC OFF;
00261061:29:0 90-100/23:58:00.066 MDS: FMT, SBIT 0, STYPE HIFHIR, SDRV OFF, SEXC OFF, XBIT 0, XTYPE HIFHIR, XDRV OFF,
RTFILL NORM, DLKCAP_S 0, DLKCAP_X 0;
00261061:29:0 90-100/23:58:00.066 TVSHUT: FILT 0 CLR, EXP 0, GAIN 0, XTND 0, TLM, PICOUNT 0, PICNO 0000,
FL/ERS ENA, RDOUT ENA;
00261061:29:0 90-100/23:58:00.066 SSIMODE: IMAGING RATE, COMPRESSOR, COMP MODE RATE CNTRL, LIGHT FLOOD,
RDOUT, MODE, RFMT;
00261061:29:0 90-100/23:58:00.066 AACS: MODE -----, TASK, ACCEL ---, LBA1 0 400 DN, LBA2 0 400 DN,
GYROS ---, PTDB 0.0, TMOT ---;
00261061:44:0 90-100/23:58:10.066 CMD,25A,20A3A,,90-100/23:58:10.066,1; << EPD PWR ON >> EPD POWER ON;
00261061:59:0 90-100/23:58:20.066 CMD,27A,20A3B,,90-100/23:58:20.066,1; << PPR PWR ON >> PPR POWER ON;
00261061:74:0 90-100/23:58:30.066 CMD,16AP,20A3C,,90-100/23:58:30.066,1; << DMS PWR ON >> DMS PWR ON;
00261061:76:0 90-100/23:58:31.400 GE,UTILITY,20A11A,,90-100/23:58:31.400; << GROUP END 062183 151531 >> active programs = 0;
00261180:00:0 90-101/01:58:00.066 GS,UTILITY,20B,,90-101/01:58:00.066; << GROUP START 062283 093002 >> active programs = 1;
00261181:89:0 90-101/02:00:00.066 CMD,6RCSET,20B6A,PRI,90-101/02:00:00.066,18; << ENABLE RECORD RATE CHANGE >> RRCC 18;
00261218:44:0 90-101/02:36:54.733 DMS: *RUNUP, R806, TRACK 1, FWD, TIC 201.00 +/- 0.00;
00261218:44:0 90-101/02:36:54.733 CMD,6DMS,20B6B,,90-101/02:36:54.733,R806,0; << DMS CONTROL >>;
00261218:44:0 90-101/02:36:54.733 ECMD,DMS_STAT,50ZZ12DS,PRI,90-101/02:36:54.733,RUNNING,201;;
00261218:51:8 90-101/02:36:59.933 DMS: *RECORD, R806, TRACK 1, FWD, TIC * 266.00 +/- 3.00;
00261218:51:8 90-101/02:36:59.933 ECMD,DMS_COMP,50ZZ12DC,PRI,90-101/02:36:59.933,R806,266;;

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00261218:75:0 90-101/02:37:15.400 DMS: *RUNDOWN, R806, TRACK 1, FWD, TIC * 646.63 +/- 3.00;
00261218:75:0 90-101/02:37:15.400 CMD,6DMSC,20B6D,,90-101/02:37:15.400,R403,0; << DMS CONTROL >>;
00261218:75:0 90-101/02:37:15.400 ECMD,DMS_COMP,50ZZ12DD,PRI,90-101/02:37:15.400,RDY,646;;
RRCC START;
00261218:79:0 90-101/02:37:18.066 DMS: *RUNUP, R403, TRACK 1, FWD, TIC * 657.63 +/- 4.00;
00261218:84:7 90-101/02:37:21.866 DMS: *RECORD, R403, TRACK 1, FWD, TIC * 679.63 +/- 7.00;
00261218:84:7 90-101/02:37:21.866 ECMD,DMS_COMP,50ZZ12DC,PRI,90-101/02:37:21.866,R403,679;;
00261219:02:0 90-101/02:37:27.400 ECMD,TIMER,50ZZ12DD12A,PRI,90-101/02:37:27.400,RRCC_E R403;;
00261219:02:0 90-101/02:37:27.400 RRCC: Minor Frames Collected: 18, VCDUs Created: 9;
00261225:45:0 90-101/02:44:00.066 DMS: *RUNDOWN, R403, TRACK 1, FWD, TIC *5579.49 +/- 7.00;
00261225:45:0 90-101/02:44:00.066 CMD,6DMSC,20B6E,,90-101/02:44:00.066,R7,0; << DMS CONTROL >>;
00261225:45:0 90-101/02:44:00.066 ECMD,DMS_COMP,50ZZ12DD,PRI,90-101/02:44:00.066,RDY,5579;;
RRCC START;
00261225:49:2 90-101/02:44:02.866 DMS: *RUNUP, R7, TRACK 1, FWD, TIC *5583.49 +/- 8.00;
00261225:51:4 90-101/02:44:04.333 DMS: *RECORD, R7, TRACK 1, FWD, TIC *5584.49 +/- 8.10;
00261225:51:4 90-101/02:44:04.333 ECMD,DMS_COMP,50ZZ12DC,PRI,90-101/02:44:04.333,R7,5584;;
00261225:63:0 90-101/02:44:12.066 ECMD,TIMER,50ZZ12DD12B,PRI,90-101/02:44:12.066,RRCC_E R7;;
00261225:63:0 90-101/02:44:12.066 RRCC: Minor Frames Collected: 18, VCDUs Created: 9;
00261243:27:0 90-101/03:02:00.066 GE,UTILITY,20B11A,PRI,90-101/03:02:00.066; << GROUP END 062183 151531 >> active programs = 0;
00261246:24:0 90-101/03:05:00.066 GS,UTILITY,20C,,90-101/03:05:00.066; << GROUP START 062283 093002 >> active programs = 1;
00261277:75:0 90-101/03:36:54.733 DMS: *RUNDOWN, R7, TRACK 1, FWD, TIC *6327.63 +/- 8.10;
00261277:75:0 90-101/03:36:54.733 CMD,6DMSC,20C68,,90-101/03:36:54.733,R806,0; << DMS CONTROL >>;
00261277:75:0 90-101/03:36:54.733 ECMD,DMS_COMP,50ZZ12DD,PRI,90-101/03:36:54.733,RDY,6327;;
RRCC START;
00261277:76:0 90-101/03:36:55.400 CMD,6RCCLR,20C6A,,90-101/03:36:55.400; << DISABLE RECORD RATE CHANGE >> RRCC 0;
00261277:76:9 90-101/03:36:56.000 DMS: *RUNUP, R806, TRACK 1, FWD, TIC *6328.63 +/- 8.20;
00261277:84:7 90-101/03:37:01.200 DMS: *RECORD, R806, TRACK 1, FWD, TIC *6393.63 +/- 11.20;
00261277:84:7 90-101/03:37:01.200 ECMD,DMS_COMP,50ZZ12DC,PRI,90-101/03:37:01.200,R806,6393;;
00261278:02:0 90-101/03:37:06.733 ECMD,TIMER,50ZZ12DD12C,PRI,90-101/03:37:06.733,RRCC_E R806;;
00261278:02:0 90-101/03:37:06.733 RRCC: Minor Frames Collected: 18, VCDUs Created: 9;
00261278:15:0 90-101/03:37:15.400 CMD,6DMSC,20C6D,,90-101/03:37:15.400,R806,0; << DMS CONTROL >>;
00261278:41:4 90-101/03:37:33.000 DMS: *REVERSE, R806, TRACK 1, FWD, TIC *7177.00 +/- 11.20;
00261278:53:2 90-101/03:37:40.866 DMS: *RESUME, R806, TRACK *2, *REV, TIC *7123.00 +/- 15.20;
DMS USED: 4.5 START STOP CYCLES, 0 TAPE PASSES, 1.03 TRACKS OF TAPE ACROSS THE HEADS,
1.0 NEGATOR SPRING CYCLES;
00261281:79:0 90-101/03:41:00.066 GE,UTILITY,20C11A,PRI,90-101/03:41:00.066; << GROUP END 062183 151531 >> active programs = 0;
00261283:20:1 90-101/03:42:22.133 DMS: *REVERSE, R806, TRACK 2, REV, TIC * 201.00 +/- 15.20;
00261283:31:9 90-101/03:42:30.000 DMS: *RESUME, R806, TRACK *3, *FWD, TIC * 255.00 +/- 19.20;
DMS USED: 5.5 START STOP CYCLES, 2 TAPE PASSES, 2.03 TRACKS OF TAPE ACROSS THE HEADS,
2.0 NEGATOR SPRING CYCLES;
00261287:89:8 90-101/03:47:11.266 DMS: *REVERSE, R806, TRACK 3, FWD, TIC *7177.00 +/- 19.20;
00261288:10:6 90-101/03:47:19.133 DMS: *RESUME, R806, TRACK *4, *REV, TIC *7123.00 +/- 23.20;
DMS USED: 6.5 START STOP CYCLES, 2 TAPE PASSES, 3.04 TRACKS OF TAPE ACROSS THE HEADS,
3.0 NEGATOR SPRING CYCLES;
00261292:68:5 90-101/03:52:00.400 DMS: *AUTOSTOP, R806, TRACK 4, REV, TIC * 201.00 +/- 23.20;
00261292:68:5 90-101/03:52:00.400 DMS: *RUNDOWN, RDY, TRACK 4, REV, TIC 201.00 +/- 23.20;
00261292:68:5 90-101/03:52:00.400 ECMD,DMS_COMP,50ZZ12DD,PRI,90-101/03:52:00.400,RDY,201;;
00261292:72:5 90-101/03:52:03.066 DMS: *READY, RDY, TRACK 4, REV, TIC * 190.00 +/- 24.20;
00261292:72:5 90-101/03:52:03.066 ECMD,DMS_STAT,50ZZ12DT,PRI,90-101/03:52:03.066,BOT-EOT,190;;
00261300:60:0 90-101/04:00:00.066 GS,UTILITY,20D,,90-101/04:00:00.066; << GROUP START 062283 093002 >> active programs = 1;
00261302:58:0 90-101/04:02:00.066 CMD,6RCSET,20D6A,PRI,90-101/04:02:00.066,12; << ENABLE RECORD RATE CHANGE >> RRCC 12;
00261339:13:0 90-101/04:38:54.733 CMD,6DMSC,20D68,,90-101/04:38:54.733,R806,0; << DMS CONTROL >>;
00261339:44:0 90-101/04:39:15.400 CMD,6DMSC,20D6D,,90-101/04:39:15.400,RDY,0; << DMS CONTROL >>;
00261346:14:0 90-101/04:46:00.066 CMD,6DMSC,20D6E,,90-101/04:46:00.066,R7,0; << DMS CONTROL >>;
00261363:87:0 90-101/05:04:00.066 GE,UTILITY,20D11A,PRI,90-101/05:04:00.066; << GROUP END 062183 151531 >> active programs = 0;
00261370:80:0 90-101/05:11:00.066 ECMD,CUTOFF,50ZZ12B,BOTH,90-101/05:11:00.066;;
00261370:80:0 90-101/05:11:00.066 DMS: READY, RDY, TRACK 4, REV, TIC 190.00 +/- 24.20;

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DMS USED: 7.0 START STOP CYCLES, 4 TAPE PASSES, 4.04 TRACKS OF TAPE ACROSS THE HEADS,  
4.0 NEGATOR SPRING CYCLES;

00261370:80:0 90-101/05:11:00.066 TLMFRAME: 36, PRB 0, PB 0, BDT 0, PAD 0, RRCC 27, RTS 0, FILL 117,  
WATER LEVEL: PRB 0, MUB 0;

MUB VCDUs: PB 0, BDT 0, PAD 0, RRCC 0, RTS 0, RAW 0;

00261370:80:0 90-101/05:11:00.066 INST\_REC\_SEL: DDS DSL, EPD DSL, EUV DSL, HIC DSL, PLS DSL;

00261370:80:0 90-101/05:11:00.066 INST\_RT\_SEL: DDS DSL, EPD DSL, EUV DSL, HIC DSL, MAG DSL, NIMS DSL,  
PLS DSL, PWS DSL, UVS DSL, RTE DSL, AACS DSL;

00261370:80:0 90-101/05:11:00.066 PB: TERM, PRB 0, MUB 0, TRACK\*4, TIC\* 190.00, BUFHI 8, BUFLO 1;

00261370:80:0 90-101/05:11:00.066 BITS: INTRVL+10:00:00 PRB + 0= 0.000000, RTS + 0= 0.000000,  
PB + 0= 0.000000, RRCC+ 96336= 0.096336, DL + 589845= 0.589845,  
BDT + 0= 0.000000, CFIL+ 0= 0.000000, AFIL+ 413712= 0.413712,  
LOST+ 0= 0.000000;

00261370:80:0 90-101/05:11:00.066 INST\_RT\_DATA: FMT BL3, DDS 0.000000, EPD 0.000000, EUV 0.000000, HIC 0.000000,  
MAG 0.000000, NIMS 0.000000, PLS 0.000000, PWS 0.000000, UVS 0.000000,  
AACS 0.000000, RTE 0.000000, LRPB state TPB;

00261370:80:0 90-101/05:11:00.066 RFS: LG2, STWT OFF, SMI 0, XTWT OFF, XMI 0, SRNG OFF, XRNG OFF, DOR OFF, TWNC OFF, XSDC OFF;

00261370:80:0 90-101/05:11:00.066 MDS: FMT, SBIT 0, STYPE HIFHIR, SDRV OFF, SEXC OFF, XBIT 0, XTYPE HIFHIR, XDRV OFF,  
RTFILL NORM, DLKCAP\_S 0, DLKCAP\_X 0;

00261370:80:0 90-101/05:11:00.066 TVSHUT: FILT 0 CLR, EXP 0, GAIN 0, XTND 0, TLM, PICOUNT 0, PICNO 0000,  
FL/ERS ENA, RDOU ENA;

00261370:80:0 90-101/05:11:00.066 SSIMODE: IMAGING RATE, COMPRESSOR, COMP MODE RATE CNTRL, LIGHT FLOOD,  
RDOU, MODE, RFMT;

00261370:80:0 90-101/05:11:00.066 AACS: MODE, TASK, ACCEL ---, LBA1 0 400 DN, LBA2 0 400 DN,  
GYROS ---, PTDB 0.0, TMOT ---;

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