

# CSR

ENGINEERING CHANGE ORDER  
CENTER FOR SPACE RESEARCH  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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ECO 36-789

DWG. NO.	NEW REV.	DRAWING TITLE
36-02406	01	SOFTWARE REQUIREMENTS VERIFICATION MATRIX
36-		
36-		
36-		

REASON FOR CHANGE:

INITIAL

DESCRIPTION OF CHANGE:

	SIGNATURE	DATE	REMARKS:
ORIGINATOR			PETER FORD
R Blozie	<i>R Blozie</i>	OCT 17, 1996	
FLIGHT SOFTWARE	<i>[Signature]</i>	10/17/96	
FABRICATION MGR			
STRUCTURE			
QUALITY ASSURANCE			Structural Category
DEPUTY PROJECT MGR			
PROJECT MGR			

SRS-TestRequirements

Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
1	3.1.1 User Interfaces		No human interfaces	0		Verifiable Items found in Software Requirements Specification					
2	3.1.2 Hardware Interfaces		No requirements, just definition	0							
3	3.1.3 External SW Interfaces		No requirements, just definition	0							
4	3.1.4.1 Serial Commands	T2-1	Packet word length	1	15						
5		T2-2	Packet Identifier	1	15						
6	3.1.4.2 Discrete Commands	T3-1	Ground Reset	1	6		1	Load From Rom	1		
7		T3-2	Boot Modifier	1	7		1	Load From Command	1		
8		T3-4	Radiation Monitor	1	15						
9	3.1.4.3 Spacecraft Telemetry Formats		No requirements for SI SW. Needed for EGSE	0							
10	3.1.4.4 Serial Telemetry	T5-2	Packet Data count	1	10						
11		T5-4	Sequence Number	1	10						
12	3.1.4.5 Discrete Telemetry		Boot LEDs	1	6	Make part of Boot test	1				
13	3.1.4.6 Timestamps & Appendix D	Eq-1	if dataTimeStamp < reference	1	11	For TE single exp., dual exp. & CC					
14		Eq-2	if dataTimeStamp > reference	1	11	For TE single exp., dual exp. & CC					
15	3.2.1.1 Config ACIS Science Run Purpose		Description	0							
16	3.2.1.2 Config ACIS Science Run Scenario		Description. Radiation monitor discussed	0							
17	3.2.1.3.1 Parameter Block Identifiers		Assigned by user	1	15	As part of any other test					
18	3.2.1.3.2 Parameter Block Commands	T6-5	Checksum	1	8	As part of PostLaunch	1				

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	36-02405-01	Oct 17, 1996									
19	3.2.1.3.3 After launch Parameter Blocks	T6-4	Slot ID	1	8		1	PostLaunch	1		
20	3.2.1.3.4 Pre-Launch Parameter Blocks	See 3.2.1.3.4	4 parameter blocks	1	8	As part of PostLaunch					
21	3.2.1.3.5 Start Science Run	T7-4	Slot ID	1	12						
22	3.2.1.3.6 Stop Science Run		Timed exposure & Continuous clocking	1	12	As part of Start 3.2.1.3.5		ParamSlotId			
23	3.2.1.3.7 Compute Bias Command	T9-4	One run for each slot	1	12						
24	3.2.1.3.8 Parameter Dump Telemetry		Long and short	1	3	Part of Window2D					
25	3.2.1.3.9 Science Time Stamping		Use logic analyzer. Need to investigate	1	98						
26			Provide time stamp on current run and on bias	1	14						
27			Appearance of counter shall permit user to correlate start of run with S/C clock	1	14	For (Eq1 & Eq2)x TEs,TEd,CC.					
28	3.2.1.3.10 Science Data Telemetry	Data packets	Data packets may contain no data	1	14						
29		Exposure Records	See T32,T34	1							
30	3.2.1.3.11 Telemetry Performance	BEP Overflow	FEP ensures that complete CCD Frames are sent to BEP. New data is lost.	1	4	For raw, histo, faint, faintWbias,graded,CC	1	Threshold			
31		Exposure number gap	In some run, cause exposure number gaps	1	4						
32	3.2.1.3.12 Post-Science Run Reports	T10-7	Reason for termination. Stop, Radiation Monitor	1	15						
33		T10-9	Number of events	1	99	For raw, histo, faint, faintWbias,graded,CC		Let Science do this One			
34		T10-10	Pixel map parity errors or others	1	9	Demo 1 error verify remainder by insp.	1	BadPixel			

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35	3.2.2.1 Timed Exposure Mode	Purpose	Description	0							
36	3.2.2.2 Timed Exposure Mode	Scenario	Exposure sequence verified. Verify that all bias gets telemetered	1	99			Let Science do this One			
37			Recompute bias, verify compressed bias	1	99			Let Science do this One			
38	3.2.2.3.1 Timed Exposure Para Block Content	T11-2	Verify that each FEP can address every CCD	1	16						
39			Verify that non powered FEPs are ignored	1	16						
40			Verify that if NO FEPs are powered, run is aborted.	1	16						
41		T11-3	Sub array read-out	1	98						
42		T11-4	Primary exposure times .1 to 10 secs	1	17						
43			Secondary exposure times .1 to 10 secs	1	17	.1,.2,5,9.9,10 5 cases					
44			Accuracy ~10usecs	1	98	??					
45			Short exposure time overwritten	1	99						
46		T11-5	Exposure Duty Cycle	1	99	1-15 cases					
47		T11-6	Output Clocking modes	1	99						
48		T11-7	Overclock Pairs	1	35						
49		T11-8	Video Chain Response	1	99	Need 4 images					
50		T11-9	On chip summing	1	98	XRCF test					
51		T11-10	Upload DEA SRAM/PRAM	1	99	Unique1 for each FEP					
52		T11-11	FEP Histo Selection	1	99						
53		T11-12	Threshold Set points	1	5	Up range Lo range	1	Threshold			
54		T11-13	FEP Special code	1	8			PostLaunch			
55		T11-14	Event List Packing Code	1	99	Faint, faintWbias, graded					
56		T11-15	Reference 2-d windows	1	3	Faint, faintWbias, graded		Window2D			
57		T11-16	Split Threshold	1	5	Faint, faintWbias, graded		Threshold			
58		T11-17	Ignore Bad pixels	1	9		1	Bad Pixels			
59		T11-18	Graded Bit Map Selection	1	18	Image with all grades, select first, last, middle		Graded			
60		T11-19	Event amplitude Lower Bound	1	18	Faint, faintWbias, graded					

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	36-02405-01	Oct 17, 1996									
61		T11-20	Re-Compute Bias Flag	1	99						
62		T11-21	Trickle Bias Flag	1	99						
63		T11-22	Bias Algorithm Mode	1	99	as part of T11-23 and T11-28					
64		T11-23	Whole Frame Conditioning Count	1	5	3 cases		Threshold			
65		T11-24	Whole Frame Approximation Count	1	5	5 cases		Threshold			
66		T11-25	Whole Frame low pixel Rejection Threshold	1	5	5 cases		Threshold			
67		T11-26	Whole Frame Event Rejection Threshold	1	5	5 cases		Threshold			
68		T11-27	Whole Frame Reject Threshold for Approx-to-mean	1	99	5 cases		Threshold			
69		T11-28	Strip mode Exposure count	1	99	3 cases					
70		T11-29	Strip Mode Mean/Median Selection	1	99						
71		T11-30	Strip mode mean Sigma Rejection Median Index	1	99	3 cases each for median 3 for sorted list					
72		T11-31	Raw Histo Exposure Count	1	99						
73		T11-32	Bias Compression Flag	1	99						
74		T11-33	Bias Compression Selection	1	99						
75		T11-34	Raw Compression	1	99						
76		T11-35	Raw Compression Selection	1	99						
77	3.2.2.3.2 2-D Window Lists	T12-1	CCD Selection	1	3	See tests for T12-2, T12-	1	Window2D			
78		T12-2	Window position	1	3	5 cases	1	Window2D			
79		T12-3	Window Width	1	3	See T12-4	1	Window2D			
80		T12-4	Window Height	1	3	5 cases	1	Window2D			
81		T12-5	Sample Cycle	1	3	for event and raw modes	1	Window2D			
82		T12-6	Lower event Amplitude Range	1	3		1	Window2D			
83	3.2.2.3.2 Dimensional Window List Parameter block	T13-1	Para Block Identifier	0		Inspection					
84		T13-2	Window Count	1	3	3 cases		Window2D			
85		T13-3	Window definition	1	3	Gets used		Window2D			
86	3.2.2.3.3 DEA PRAM and SRAM Loads	Para 4	Prevent transfers of different CCDs from overlapping	1	100	No idea					
87		Para 11	Do we have the optional SRAM/PRAM override ?	1	100						

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88			Verify PRAM and SRAM primitives	1	100	IAW T28 of the TE PRAM Builder Class there will be 12 cases		Problem: Don't see how to verify deterministically			
89	3.2.2.3.4 Normal Exposure CCD Clocking operation		Test cases include AC and BD modes of operation	1	99	Can only be verified with operation CCDs and known data					
90			Framestore to output registers shall be less then 60Msecs	1	98						
91			Register and overclock clearing	1	98						
92			Framestore reading less then 6.5 secs	1	98						
93	3.2.2.3.5 Short Exposure CCD Clocking operation		Extra flush at begin of run	1	99						
94	3.2.2.3.6 Overclock Processing	Eq-3	Report overclock levels	1	99	TE and CC test cases see 3.2.3.3.5					
95	3.2.2.3.7 Pixel Map Determination	Eq-4	Verify real time bias calculation when on board pixel map is indicated bad.	1	5	Problem: Science must verify that bias results are valid.		Threshold			
96	3.2.2.3.8 Threshold Determination	Eq-5		1	5						
97	3.2.2.3.9 Pixel Threshold Processing	Eq-6		1	5						
98			Thresholding for event modes only	1	5						
99	3.2.2.3.10 Front End Event Finding Mode		Handle events at 4 corners -1 row and -1 column. Same data at corners not reported.	1	99	As part of test below					
100			Out of possible 6000 events, system must process 750 events/sec	1	19						
101	3.2.2.3.11 Front End Raw Mode		Description	0							
102	3.2.2.3.12Front end Histogram Mode		1 histo for each active node	1	99						
103			Each histo =4094 bins 32 bits	1	99						
104			Calculate overclock, min., max, mean, var. for each exposure	1	99						
105			If duty cycle not zero, secondary exposure time used.	1	99						

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	36-02405-01	Oct 17, 1996									
106			Process pixels from every other 2.65 second exposure	1	99						
107	3.2.2.3.13 Bad Pixel and Column Map	T14-1 T14-2	Ignore bad pixel map processing works when events centered on bad pixel.	1	9	Verify Table as well as requirement					
108		T15-1 T15-2	Bad Pixels surrounding event shall be set to zero for event detection	1	9	Verify table as well as requirement					
109			Bad pixels ignored for raw and diag. modes	1	9						
110	3.2.2.3.14 Pulse Height Bias Corr. Event Amp	Eq-7	Corrected Pulse Height Check interactions between various thresholds.	1	5						
111			Handling of corner pixels	0							
112	3.2.2.3.15 Event Selection by event amplitude		Verify bumping of rejection counter	1	99						
113	3.2.2.3.16 Event grade Computation		Verify interaction between various thresholds when determining an event grade.	1	5						
114	3.2.2.3.17 Event grade selection		Verify graded event selection	1	18						
115	3.2.2.3.18 2-D Window Event Processing		Verify window position on a CCD	1	3		1				
116			Verify window overlap	1	3		1				
117	3.2.2.3.19 Raw mode Telemetry	T16-1 threw T16-4	Verified by its use in the following	0							
118		T16-5 T16-6	Verify that each CCD and every FEP can generate RAW mode data. Cause multiple packets to be produced so that T16-6 can be verified.	1	20						
119		T16-7	Verify that raw data can be generated and transmitted in non compressed mode.	1	20						
120		T16-8 T16-9	Verify that raw data can be windowed and pixel position is correct	1	20						

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121		T17-1 threw T17-6 T17-8 Threw T17-10	Raw Mode Exposure Record ID Info	1	20	Verified because the rest of the table is present					
122		T17-7 T17-11	Verify that all data is transmitted when no window list is specified.	1	20						
123	3.2.2.3.20 Histogram Telemetry	T18-1 threw T18-4	Histogram Data Content	0	0	Verified through use of the following					
124		T18-5 T18-6	Verify that the system can generate Histogram data. Cause multiple packets to be produced so that T18-6 can be verified.	1	99			Is packet production dependent on type of data ??			
125		T18-7 threw T18-9	Record the Output node, Start Bin, and data	1	99	Part of T18-5 and T18-6 test results					
126		T19-1 threw T19-7	Record identifier data is recorded with this test	1	99	Verified by other tests					
127		T19-8	First Exposure Number from 1 to ??	1	99	What ever can be tested in 53 hours ~ 17200					
128		T19-9	Last Exposure Number from 1 to ??	1	99	What ever can be tested in 53 hours ~ 17200					
129		T19-10	Histogram for each node from 1 CCD	1	99						
130		T19-11	Number of Exposures processed. Drop a predetermined amount. Verify that the count agrees	1	99						
131		T19-12	Verify that min,max,mean and var. are calculated correctly	1	99						
132	3.2.2.3.21 Faint mode Telemetry		Faint mode only works in Event Finding Modes	1	99						
133		T20-1 threw T20-6	Faint Exposure Mode Event Data record identification is recorded here	0		Record the data identification					
134		T20-7 T20-8	Use data from graded Event mode (265) events of different pulse heights	1	18	Verify that 256 events are generated. Ensure events are at corners of CCD and in the middle.					



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135		T21-1 threw T21-7	Faint mode exposure record Identification	1	99	Record the identification data with test for T20-7,8					
136		T21-8	Bias Time	1	99	Take two bias runs. Verify that last one is recorded with data.					
137		T21-9 T21-10	Bias Parameter Block Id CCD/FEP identifiers	0		Verify identifiers goes with bias of T21-8					
138		T21-11 T21-12	Time stamp and exposure Number	1	11	Verify that a time stamp and exposure number are within IP&CL limits					
139		T21-13	Number of event	1	3	Verify that the number of events as needed for 2D Window					
140		T21-14	Number of pixels above threshold. Generate data with a known number of pixels above threshold	1	5	Verify the number of events over threshold is correct.					
141		T21-15	Number of pixels discarded. Generate data so that all 1M pixels are below threshold.	1	99	Verify that 1024*1024 pixels are reported under. Case 1					
142			Number of pixels discarded. Generate data so that some pixels are below threshold.	1	5	Verify that expected number of pixels are reported under. Case 2					
143		T21-16	Number of Events discarded by Grade	1	18	Check in graded mode					
144		T21-17	Number of event discarded by window. Set up a window that masks off events.	1	3	Verify that known number of event are masked off.					
145		T21-18	Overclock Levels	1	35	Record values. Ensure that they are in IP&CL range.	97				
146		T21-19	Bias Map Parity Hit	1	31	Verify in Bias Map tests.					
147	3.2.2.3.22 Faint-Bias Mode Telemetry		Faint mode only works in Event Finding Modes	0		By inference					
148		T22-1 threw T22-6	Faint Exposure Mode Event Data record identification is recorded here	1	99	Record the data identification					

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149		T22-7 T22-8	Use data from graded Event mode (265) events of different pulse heights	1	18	Verify that 256 events are generated. Ensure events are at corners of CCD and in the middle.					
150		T23-1 threw T23-7	Faint mode exposure record Identification	1	3	Record the identification data with test for T21-7,8					
151		T23-8	Bias Time	1	14	Take two bias runs. Verify that last one is recorded with data.					
152		T23-9 T23-10	Bias Parameter Block Id CCD/FEP identifiers	1	99	Verify identifiers goes with bias of T22-8					
153		T23-11 T23-12	Time stamp and exposure Number	1	11	Verify that a time stamp and exposure number are within IP&CL limits					
154		T23-13	Number of event	0	18	Verify that the number of events is 256 as used with T21-7,8					
155		T23-14	Number of pixels above threshold. Generate data with a known number of pixels above threshold	1	5	Verify the number of events over threshold is correct.					
156		T23-15	Number of pixels discarded. Generate data so that all 1M pixels are below threshold.	1	99	Verify that 1024*1024 pixels are reported under. Case 1					
157			Number of pixels discarded. Generate data so that some pixels are below threshold.	1	5	Verify that expected number of pixels are reported under. Case 2					
158		T23-16	Number of Events discarded by Grade	1	18	Check in graded mode					
159		T23-17	Number of event discarded by window. Set up a window that masks off events.	1	3	Verify that known number of event are masked off.					
160		T23-18	Overclock Levels	1	35	Record values. Ensure that they are in IP&CL range.					
161		T23-19	Bias Map Parity Hit	1	31	Verify in Bias Map tests.					
162		T23-20	Initial Overclock	1	99	Record overlocks					
163	3.2.2.3.23 Graded Event Telemetry		Graded mode only works in Event Finding 3x3 Mode	0		By inference					

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Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
164		T24-1 threw T24-6	Faint Exposure Mode Event Data record identification is recorded here	1	99	Record the data identification					
165		T24-7 T24-8 T24-9	Use data from graded Event mode (265) events of different pulse heights	1	18	Verify that 256 events are generated. Ensure events are at corners of CCD and in the middle.					
166		T24-10	Corner Pulse Height Mean. Generate data that results in limits as specified in IP&CL	1	18						
167	NOTE: This table has the subscript "g" to identify graded event data.	T21g-1 threw T21g-7	Faint mode exposure record Identification	1	99	Record the identification data with test for T24-7,8,9,10					
168		T21g-8	Bias Time	1	14	Take two bias runs. Verify that last one is recorded with data.					
169		T21g-9 T21g-10	Bias Parameter Block Id CCD/FEP identifiers	0		Verify identifiers goes with bias of T24-8					
170		T21g-11 T21g-12	Time stamp and exposure Number	1	11	Verify that a time stamp and exposure number are within IP&CL limits					
171		T21g-13	Number of event	1	3	Verify that the number of events is 256 as used with T24-7,8					
172		T21g-14	Number of pixels above threshold. Generate data with a known number of pixels above threshold	1	5	Verify the number of events over threshold is correct.					
173		T21g-15	Number of pixels discarded. Generate data so that all 1M pixels are below threshold.	1	99	Verify that 1024*1024 pixels are reported under. Case 1					
174			Number of pixels discarded. Generate data so that some pixels are below threshold.	1	5	Verify that expected number of pixels are reported under. Case 2					
175		T21g-16	Number of Events discarded by Grade	1	18	Check in graded mode					
176		T21g-17	Number of event discarded by window. Set up a window that masks off events.	1	3	Verify that known number of event are masked off.					

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177		T21g-18	Overclock Levels	1	35	Record values. Ensure that they are in IP&CL range.					
178		T21g-19	Bias Map Parity Hit	1	31	Verify in Bias Map tests.					
179	3.2.2.3.24 Pixel Bias Map telemetry	Trickle Mode	When configured, Bias Data will use not more then 10% of the telemetry stream.	1	37	Telemetry data will be compressed.					
180		T25-1 threw T25-8	Pixel map identifiers	1	99	Record identifiers					
181		T25-9	Initial Overclock	1	35	Overclock values					
182		T25-10	Compression Selection. Look at IP&CL for values	1	99	Feed the same data through all compression modes. Verify that the restored data is the same.					
183		T25-11 threw T25-13	Row identifier, Row count, Pixel/row	1	99	Verify that identifiers are testes at limits of IP&CL					
184		T25-14		1	99	Verified as part of T25-10					
185	3.2.2.3.25 Pixel Bias Map Parity Error Telemetry	T26-1 Threw T26-6	Bias Map parity Error Identifiers	1	99	Record identifiers					
186		T26-7 T26-8	Position and value	1	30	Verify that all four corners of a CCD bias can be identified as bad.					
187	3.2.2.3.26 Diagnostic Features	Refer to 3.2.5		0							
188	3.2.3.1 Continuous Clocking Mode	Purpose	Description	0							
189	3.2.3.2 Continuous Clocking Mode	Scenario	Telemetry Saturation results in loss of full 1024x512 pixel rows.	1	19	During saturation verify that full blocks are lost.					
190			Recompute CC Bias	1	31	Verify that recompute CC bias command results in a new bias and data telemetry.					
191	3.2.3.3.1 Continuous Clocking param Block	T27-1 T27-2	Parameter Block ID and FEP/CCD selection	0		Record during subsequent tests		FEP-CCD selection Verified in Timed exposure modes			
192		T27-3	Number of Rows to Sum	1	97	Verify at 0,1,4,8,9		5 cases. Need working CCDs			

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194		T27-4	Numbered of Columns to sum	1	97	Verify at 0,1,2,3,4,5,6		7 cases. Need working CCDs			
194		T27-5	Output register Clocking CCDs	1	97	Verify at Full,AC,BD,Diag		4 Cases. Need working CCDs			
195		T27-6	Number of overclocking pairs	1	97	Verify at 0,1,15,30		4 Cases			
196		T27-7	Video Chain Response	1	97	Verify at 1,2,3,4		4 cases Need working CCDs			
197		T27-8	Explicit DEA load	1	97	Verify none, and uploaded					
198		T27-9	Front End Selection Algorithm	1	99	Verify with selection and without. Verify as part of T27-10					
199		T27-10	Threshold Set points	1	5	Measure threshold range.					
200		T27-11	Reference to FEP Code	1	97	Verify that a uploaded function can be executed from CC processing.					
201		T27-12	Event List Packing Code	1	99	Verify that every CC data mode is executed in subsequent tests					
202		T27-13	Reference 1-D window selection	1	33	Verify as part of T-28 tests					
203		T27-14	Split Threshold set-points	1	5	Verify threshold limits for each FEP.		At least 6 cases			
204		T27-15	Ignore Bad Column Map	1	30	Run with invoked and not					
205		T27-16	Grading Selection Bit Map	1	18	Test with event graded mode 3.2.3.3.14					
206		T27-17	Event Amplitude Lower Bound and Range	1	32	Verify event rejected at min-1, max+1					
207		T27-18	Re-Compute Bias Flag	1	31	Verify that bias performed just prior to data taking.					
208		T27-19	Bias Algorithm Mode	1	99	Verify that both modes are used					
209		T27-20	Bias Rejection Criteria	1	99	Verify at range limits		5 Cases			
210		T27-21	Compression Flag	1	99	To be verified in 3.2.3.3.10					
211		T27-22	Compression Selection	1	99	To be verified in 3.2.3.3.10					
212	3.2.3.3.2.1 1-D Window Lists	T28-1	CCD Identifier	1		Record the CCD used in tests for T28-2					
213		T28-2	Window Column	1	33	Verify at left most column position and right most column 1 column wide					
214		T28-3	Window width	1	33	Verify at max width. Min. done in T28-2					
215		T28-4	Sample Cycle Event Mode	1	33	Verify at sample limits					
216			Sample Cycle Raw Mode	1	33	Verify at 0 and 1					

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217	36-02405-01	T28-5	Local Event Amplitude Range	1	33	Verify at range limits					
218		T29-1	Parameter Block Id	1	33	Record with following tests					
219		T29-2	Window Count	1	33	Verify that the number of windows can range from 0 to 36					
220		T29-3	Widow definitions	1	33	Verify that windows can be placed at corners of CCD.					
221			Window definitions	1	33	Verify that windows can overlap leaving 1 column wide area.					
222			Window definitions	1	33	Verify that a staircase can be produced					
223	3.2.3.3.3 Building DEA PRAM SRAM loads		Verify PRAM and SRAM primitives	1	98	IAW T28 of the CC PRAM Builder Class there will be 12 cases		Problem .Don't see how to verify deterministically			
224	3.2.3.3.4 Continuous Clocking Requirements		Clocking of 1 row from output registers shall be not GT 6.5 Msecs	1	98	Need working CCDs.		If time is within 20% of 6.5Msecs, then all CCDs need to be measured.			
225	3.2.3.3.5 Overclock Processing	Eq-3 from 3.2.2.3.6	Report Overclock levels	1	98	Additional test case for 3.2.2.3.6					
226	3.2.3.3.6 Pixel Bias Map Determination	Eq-8	Verify real time bias calculation when on board pixel map is indicated bad.	1	30	Problem: Science must verify that bias results are valid.					
227	3.2.3.3.7 Threshold Determination	Eq-9		1	32	Verify that Threshold register is set prior to use of each set of 512 rows.		Verify by inspection. If close then use logic analyzer.			
228	3.2.3.3.8 Pixel Threshold Processing	Eq-10		1	32						
229	3.2.3.3.9 Front End Event Finding Mode		Handle events at 4 corners -1 row and -1 column. Same data at corners not reported.	0		AS part of test below					
230			Out of possible 6000 events, system must process 750 events/sec	1	19						
231	3.2.3.3.10 Front End Raw Mode		Description	0							

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Seq Num	SRS Reference	Table Oct 17, 1996	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
232	3.2.3.3.11 Bad Column Map	T30-1 T30-2	Ignore bad pixel map processing works when events centered on bad pixel.	1	30	Verify Table as well as requirement					
233			Bad Pixels surrounding event shall be set to zero for event detection	1	30	Verify table as well as requirement					
234			Bad pixels ignored for raw mode	1	30						
235	3.2.3.3.13 Event Selection by event amplitude		Verify bumping of rejection counter	1	99						
236	3.2.3.3.14 Event grade Computation		Verify interaction between various thresholds when determining an event grade.	1	32						
237	3.2.3.3.15 Event grade selection		Verify graded event selection	1	18						
238	3.2.3.3.16 1-D Window Event Processing		Verify window position on a CCD	1	34						
239	3.2.3.3.17 Raw mode Telemetry	T31-1 threw T31-4	Verified by its use in the following	1	20						
240		T31-5 T31-6	Verify that a CCD and a FEP can generate RAW mode data.	1	20						
241		T31-7	Verify that raw data can be generated and transmitted in non compressed mode.	1	20						
242		T31-8 T31-9	Verify that first pixel position is reported correctly and that it is windowed correctly.	1	20						
243		T32-1 threw T32-6 T32-8 Threw T32-10	Raw Mode Exposure Record ID Info	1	20	Verified because the rest of the table is present					
244		T32-7 T32-11	Verify that all data is transmitted when no window list is specified.	1	20						
245	3.2.3.3.18 Faint mode Telemetry		Faint mode only works in Event Finding Modes	1	20						
256		T33-1 threw T33-6	Faint Exposure Mode Event Data record identification is recorded here	1	99	Record the data identification					

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Seq Num	SRS Reference	Table Oct 17, 1996	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
247	36-02405-01	T33-7 T33-8	Row and column identifiers.	1	99	Verify at 0,1,511,512 row and 0,1,511,512 columns					
248		T33-9	Uncorrected Pulse Heights	1	99	Verify that pulse heights can be at min. max and middle					
249		T34-1 threw T34-6	Faint mode exposure record Identification	1	99	Record the identification data with test for T33-7,8					
250		T34-7	Window Block Identifier	1	1	Record the window list parameter block identifier used for T29-3					
251		T34-8	Bias Time	1	14	Take two bias runs. Verify that last one is recorded with data.					
252		T34-9 T34-10	Bias Parameter Block Id CCD/FEP identifiers	1	99	Verify identifiers goes with bias of T34-8					
253		T34-11	Time stamp	1	11	Verify that the time stamp is correct					
254		T34-12	Exposure Number	1	21	Verify that number can be 130,000 different numbers.		Set up to run for 72 hours at 2 second exposures.			
255		T34-13	Number of events. Data has known number of events	1	18	Verify that the number of events in test agrees with image data					
256		T34-14	Number of pixels above threshold. Generate data with a known number of pixels above threshold	1	5	Verify the number of events over threshold is correct.					
257		T34-15	Number of pixels discarded. Generate data with a known number of pixels below threshold	1	99	Verify that known number of pixels are reported.					
258			Number of pixels discarded. Generate data so that some pixels are below threshold.	1	32	Verify that known number of pixels are reported.					
259		T34-16	Number of Events discarded by Grade	1	18	Check in graded mode					



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Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
260		T34-17	Number of event discarded by window. Set up a window that masks off events.	1	3	Verify that known number of event are masked off.					
261		T34-18	Overclock Levels	1	35	Record values. Ensure that they are in IP&CL range.					
262		T34-19	Bias Map Parity Hit. Generate a known number of hits	1	31	Verify in number of hits.					
263	3.2.3.3.23 Graded Event Telemetry		Graded mode only works in Event Finding 1x3 Mode	1	99						
264		T35-1 threw T35-6	Faint Exposure Mode Event Data record identification is recorded here	1	99	Record the data identification					
265		T35-7 T35-8 T35-9	Use data from graded Event mode (4) events of different pulse heights	1	18	Verify that 4 event types are generated. Ensure events are at corners of CCD and in the middle.					
266		T35-10	Corner Pulse Height Mean. Generate data that results in limits as specified in IP&CL	1	18						
267	NOTE: This table has the subscript "g" to identify graded event data.	T33g-1 threw T33g-7	Faint mode exposure record Identification	0		Record the identification data with test for T24-7,8,9,10					
268		T33g-8	Bias Time	1	14	Take two bias runs. Verify that last one is recorded with data.					
269		T33g-9 T33g-10	Bias Parameter Block Id CCD/FEP identifiers	1	99	Verify identifiers goes with bias of T24-8					
270		T33g-11 T33g-12	Time stamp and exposure Number	1	99	Verify that a time stamp and exposure number are within IP&CL limits					
271		T33g-13	Number of event	1	18	Verify that the number of events is 256 as used with T24-7,8					
272		T33g-14	Number of pixels above threshold. Generate data with a known number of pixels above threshold	1	32	Verify the number of events over threshold is correct.					
273		T33g-15	Number of pixels discarded. Generate data so that all 1M pixels are below threshold.	1	32	Verify that 1024*1024 pixels are reported under. Case 1					

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Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
274			Number of pixels discarded. Generate data so that some pixels are below threshold.	1	32	Verify that expected number of pixels are reported under. Case 2					
275		T33g-16	Number of Events discarded by Grade	1	18	Check in graded mode					
276		T33g-17	Number of event discarded by window. Set up a window that masks off events.	1	3	Verify that known number of event are masked off.					
277		T33g-18	Overclock Levels	1	99	Record values. Ensure that they are in IP&CL range.					
278		T33g-19	Bias Map Parity Hit	1	0	Verify in Bias Map tests.					
279	3.2.3.3.20 Pixel Bias Map telemetry	Trickle Mode	When configured, Bias Data will use not more then 10% of the telemetry stream.	1	99	Telemetry data will be compressed.					
280		T36-1 threw T36-7	Pixel map identifiers	1	99	Record identifiers					
281		T35-8	Initial Overclock	1	99	Overclock values					
282		T35-9	Pixel/row	1	99	Verify that identifiers are testes at limits of IP&CL					
283		T35-10	Bias Map Data	1	99	Verified as part of T25-10					
284	3.2.3.3.26 Diagnostic Features	Refer to 3.2.5		0							
285	3.2.4.1 Spectroscopy Modes	Purpose	Description	0							
286	3.2.4.2 Spectroscopy Modes	Scope	Verify that all CCDs are clocked in unison	1	98	Need to check with scope or other hardware device.					
287	3.2.4.3 Spectroscopy Modes	Functional Requirements	Covered in 3.2.2	0							
288	3.2.5.1 Diagnostic modes	Purpose	Description	0							
289	3.2.5.2 Diagnostic Modes	Scenario	Description	0							
290	3.2.5.3 Diagnostic Modes	Functional Requirements	Description	0							
291	3.2.5.3.1 Raw Modes	Raw Mode	See 3.2.2.3.10 and 3.2.3.3.10	0							
292	3.2.5.3.2 Reverse Clocking		Verify that reverse clocking data can be read on every node of at least 1 DEA in both TE and CC modes..	1	28						
293	3.2.5.3.3 Histogram Mode		See 3.2.2.3.12								

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Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
294	3.2.6 Calibration Modes		Description	0							
295	3.2.6.1 Calibration Modes	Purpose	Description	0							
296	3.2.6.1 Calibration Modes	Scenario	Description	0							
297	3.2.6.3 Calibration Modes	Functional Requirements	Description	0							
298	3.2.6.3.1 CCD Charge transfer efficiency		Description	0							
299	3.2.6.3.2 CCD Dark Current		Description	0							
300	3.2.6.3.3 Other Calibration Functions		Description	0							
301	3.2.7 Hardware Configurations		Description	0							
302	3.2.7.1 Hardware Configurations	Purpose	Description	0							
303	3.2.7.2 Hardware Configurations	Scenario	Description	0							
304	3.2.7.3 Hardware Configurations	Functional Requirements	Description	0							
305	3.2.7.3.1 System Configuration Parameters	T37-1	DEA CCD Controller Power Selection	1	13	Get limits from DEA Hardware spec		SystemConfig			
306		T37-2	FEP Power Selection	1	13	Get limits from DEA Hardware spec		SystemConfig			
307		T37-3	Image section phase clocks high levels	1	13	Get limits from DEA Hardware spec		SystemConfig			
308		T37-4	Image section phase clocks low levels	1	13	Get limits from DEA Hardware spec		SystemConfig			
309		T37-5	Framestore phase clocks high levels	1	13	Get limits from DEA Hardware spec		SystemConfig			
310		T37-6	Framestore phase clocks low levels	1	13	Get limits from DEA Hardware spec		SystemConfig			
311		T37-7	Serial output register phase clock high level	1	13	Get limits from DEA Hardware spec		SystemConfig			
312		T37-8	Serial output register phase clock low level	1	13	Get limits from DEA Hardware spec		SystemConfig			
313		T37-9	Output node reset gate high level	1	13	Get limits from DEA Hardware spec		SystemConfig			

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Seq Num	SRS Reference	Table Oct 17, 1996	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
314	36-02405-01	T37-10	Output node reset gate low level	1	13	Get limits from DEA Hardware spec		SystemConfig			
315		T37-11	Output node reset diodes	1	13	Get limits from DEA Hardware spec		SystemConfig			
316		T37-12	Output Node Drains	1	13	Get limits from DEA Hardware spec		SystemConfig			
317		T37-13	Output Node output gates	1	13	Get limits from DEA Hardware spec		SystemConfig			
318		T37-14	Output Node bias offsets	1	13	Get limits from DEA Hardware spec		SystemConfig			
319		T37-15	Scuppers	1	13	Get limits from DEA Hardware spec		SystemConfig			
320		T37-16	Back junction Diodes	1	13	Get limits from DEA Hardware spec		SystemConfig			
321		T37-17	Focal Plain Temperature Setting	1	13	Get limits from DEA Hardware spec		SystemConfig			
322		T37-18	Bakeout mode switch	1	13	Get limits from DEA Hardware spec		SystemConfig			
323		T37-19	Focal Plain Temperature Set point	1	13	Get limits from DEA Hardware spec		SystemConfig			
324		T37-20	Housing Temperature Set point	1	13	Get limits from DEA Hardware spec		SystemConfig			
325	3.2.7.3.2 Change system configuration	T38-1 threw T38-3	Packet identifiers	1	13	Record with following tests		SystemConfig			
326		T38-4 threw T38-6	Configuration setting and value	1	13	Verified by 3.2.7.3.1		SystemConfig			
327	3.2.7.3.3 Dump System Configuration Settings		Verified by 3.2.8 Memory Commands	1	13	Used in verifying 3.2.7.3.2		SystemConfig			
328	3.2.7.3.4 Add Bad Pixel	T39-1 Threw T39-3	Packet Length,identifier,opcode	1	9		1	BadPix			
329		T39-4	Number of bad pixels	1	9	Verify at 0,1 9999,10000	1	BadPix	1	36-57302.09	
330		T39-5 T39-6	CCD Identifier and pixel address. Implemented as a list.	1	9	Verify 100 at random locations	1	BadPix	1	36-57302.09	
331	3.2.7.3.5 Reset Bad Pixel Map	T40-1 threw T40-3	Packet length, seq number,opcode	1	9	Verify map is clean	1	BadPix			
332	3.2.7.3.6 Dump Bad Pixels	T41-1 threw T41-3	Packet length, seq number,opcode	1	9	Used in verifying T39	1	BadPix			
333		T42-1 threw T42-5	Packet Synch, length,tag,seq-num,ID	1	9	Used in verifying T39	1	BadPix			

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Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
334		T42-6 threw T42-8	Column position	1	9	Verify that the 0 and 1024 Column in every CCD can be identified as a bad Column		BadPix			
335	3.2.7.3.7 Add Bad Column	T43-1 Threw T43-3	Packet Length,identifier,opcode	1	9			BadPix			
336		T43-4	Number of bad Columns	1	9	Verify at 0,1 9999,10000	1	BadPix			
337		T43-5 T43-6	CCD Identifier and Column address. Implemented as a list.	1	9	Verify 100 at random locations	1	BadPix			
338	3.2.7.3.8 Reset Bad Column Map	T44-1 threw T44-3	Packet length, seq number,opcode	1	9	Verify map is clean	1	BadPix			
339	3.2.7.3.9 Dump Bad Columns	T45-1 threw T45-3	Packet length, seq number,opcode	1	9	Used in verifying T41	1	BadPix			
340		T46-1 threw T46-5	Packet Synch, length,tag,seq-num,ID	1	9	Used in verifying T41	1	BadPix			
341		T46-6 threw T46-8	Column position	1	9	Verify that the 0 and 1024 Columns in every CCD can be identified as a bad Column		BadPix			
342	3.2.8 Memory Commands		Description	0							
343	3.2.8 Memory Commands	Purpose	Description	0							
344	3.2.8 Memory Commands	Scenario	Memory addressing shall be partitioned by memory type	0							
345	3.2.8 Memory Commands	Functional Requirements	Description	0							
346	3.2.8.3.1 Read BEP Memory	T47-1 threw T47-3	Read BEP memory identifiers	1	1	Record as part of following tests	1	MemBep			
347		T47-4 T47-5	Addresses	1	1	Verify that memory can be addressed at limits of lcache,Dcache, Bulk, and Rom	1	MemBep			
348		T48-1 threw T48-11	Memory Data	1	1	Verify that address contents are read.	1	MemBep			
349	3.2.8.3.2 Write BEP Memory	T49-1 threw T49-3	Read BEP memory identifiers	1	1	Record as part of following tests	1	MemBep			
350		T49-4 T49-5	Address and Data	1	1	Verify that memory can be written at limits of lcache, Dcache, Bulk, and Rom	1	MemBep			
351	3.2.8.3.3 Execute BEP Memory	T50-1 threw T50-3	Read BEP memory identifiers	1	1	Record as part of following tests	1	MemBep			

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Seq Num	SRS Reference	Table Oct 17, 1996	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
352	36-02405-01	T50-4	Address	1	1	Verify that memory can be written at limits of lcache, Dcache, Bulk, and Rom	1	MemBep			
353		T50-5	Arguments	1	1	Verify that 0,1,20 argument can be passed.	1	MemBep			
354		T51-1 threw T51-8	Return Value	1	1	Verify that expected return value is received.	1	MemBep			
355	3.2.8.3.4 Read FEP Memory	T52-1 threw T52-3	Read FEP memory identifiers	1	2	Record as part of following tests	1	MemFep			
356		T52-4 T52-5	Addresses	1	2	Verify that memory can be addressed at limits of lcache,Dcache, Bulk, and Rom	1	MemFep			
357		T53-1 threw T53-12	Memory Data	1	2	Verify that address contents are read.	1	MemFep			
358	3.2.8.3.5 Write FEP Memory	T54-1 threw T54-3	Read FEP memory identifiers	1	2	Record as part of following tests	1	MemFep			
359		T54-4 T54-5	Address and Data	1	2	Verify that memory can be written at limits of lcache, Dcache, Bulk, and Bias map and image	1	MemFep			
360	3.2.8.3.6 Execute FEP Memory	T55-1 threw T55-4	Read FEP memory identifiers	1	2	Record as part of following tests	1	MemFep			
361		T55-5	Address	1	2	Verify that memory can be written at limits of lcache, Bulk	1	MemFep			
362		T55-6	Arguments	1	2	Verify that 0,1,20 arguments can be passed.	1	MemFep			
363		T56-1 threw T56-9	Return Value	1	2	Verify that expected return value is received.	1	MemFep			
364	3.2.8.3.7 Read SRAM	T57-1 threw T57-3	Identifiers	1	27						
365		T57-4	DEA Board ID	1	27	Verify all 12 boards					
366		T57-5	SRAM Index	1	27	Index ranges IAW IP&CL					
367		T57-6	Length to read	1	27						
368		T58-1 threw T58-6	Identifiers	1	27						
369		T58-7	DEA Board ID	1	27						
370		T58-8 threw T58-12	Data	1	27						

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Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
371	3.2.8.3.8 Write SRAM	T59-1 threw T59-3		1	27						
372		T59-4	DEA Board ID	1	27						
373		T59-5 T59-6	Data	1	27						
374	3.2.8.3.9 Read PRAM	T60-1 threw T60-3	Identifiers	1	27						
375		T60-4	DEA Board ID	1	27	Verify all 12 boards					
376		T60-5	SRAM Index	1	27	Index ranges IAW IP&CL					
377		T60-6	Length to read	1	27						
378		T61-1 threw T61-6	Identifiers	1	27						
379		T61-7	DEA Board ID	1	27						
380		T61-8 threw T61-12	Data	1	27						
381	3.2.8.3.10 Write PRAM	T62-1 threw T62-3		1	27						
382		T62-4	DEA Board ID	1	27						
383		T62-5 T62-6	Data	1	27						
384	3.2.9 Software Housekeeping			0							
385	3.2.9.1 Software Housekeeping	Purpose	Description	0							
386	3.2.9.2 Software Housekeeping	Scenario	Found in engineering portion of telemetry	0							
387	3.2.9.3 Software Housekeeping	Functional Requirements	Description	0							
388	3.2.9.3.1 Command Indicators	T63-1 threw T63-7	Command Echo	1	24	Verified as part of all other tests					
389	3.2.9.3.2 Status Indicators		The 4 LEDs	1	7	Verified as part of Load from command and Boot tests					
390	3.2.9.3.3 Run-time status monitoring	T64-1 Threw T64-5	SW Housekeeping Identifiers	1	24	Test as part of test for T64-6 & T64-7					
391		T64-6 T64-7	SW Housekeeping parameters	1	24	Verify that 64 housekeeping parameters can be generated and telemetered					
392	3.2.9.3.4 Watchdog Maintenance		SW resets WatchDog after WD reset.	1	25	Verify that SW resets Watchdog and that watchdog functions					

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Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
393	3.2.9.3.5 Startup Reporting	T65-1 threw 65-5	Startup reporting identifiers	1	25	Record during following tests					
394		T65-6 T65-7	Reset Reason code and parameters	1	25	Verify that both reset reasons are demonstrated.					
395				1	25	Verify that parameters are correct					
396	3.2.9.3.6 Fatal Error Reporting	T66-1 threw T66-5	Fatal error codes	0							
397		T66-6 T66-7	We should do them all	1	26	Verify that 0-2 and max threw max-2 are verified					
398	3.2.10 DEA Housekeeping		Description	0							
399	3.2.10 Dea Housekeeping	Purpose	Description	0							
400	3.2.10 Dea Housekeeping	Scenario	Description	0							
401	3.2.10 Dea Housekeeping	Functional Requirements	Description	0							
402	3.2.10.3.1 DEA Parameter Block	T67-1 threw T67-6	DEA Parameter Block Identifiers	1	22	Record with the following tests					
403		T67-7	Sampling Rate	1	22	Verify at 1,2,63,64 seconds					
404		T67-8	Parameter List	1	23	Verify that all parameters can be acquired and telemetered.					
405	3.2.10.3.2 Start DEA Housekeeping	T68-1 threw T68-3	Start DEA Housekeeping Command identifiers	1	22	Verify with the following test					
406		T68-4	Slot ID	1	22	Verify the all slots work					
407	3.2.10.3.3 Stop DEA Housekeeping	T69-1 threw T69-3	DEA Housekeeper Run Command Identifiers	1	22	Verify with preceding test					
408	3.2.10.3.4 Dea Housekeeping telemetry	T70-1 threw T70-6	Dea Housekeeping telemetry Identifiers	1	22	Verify with following test					
409		T70-7 threw T70-9	Housekeeping parameters	1	23	Verify that at least one of every parameter can be acquired and telemetered					
410	3.2.11 Post Launch Replacement		Description	0							
411	3.2.11 Post Launch Replacement	Purpose	Description	0							



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Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
412	3.2.11 Post Launch Replacement	Scenario	Description	0							
413	3.2.11 Post Launch Replacement	Functional Requirements	Description	0							
414	3.2.11.3 Add a patch	T71-1 Threw T71-3	Add a patch Identifiers	1	8	Record with following tests	1	PostLaunch			
415		T71-4	Patch ID	1	8	Verify that the highest patch number as indicated in IP&CL can be added BEP.	1	PostLaunch			
416		T71-5 T71-6	Patch address and data	1	8	Verify that at the extreme limits of Bulk, lcache and dcache can be patched BEP.	1	PostLaunch			
417	3.2.11.3.2 Remove a patch	T72-1 threw T72-3	Remove a patch Identifiers	1	8	Record with following tests	1	PostLaunch			
418		T72-4	Patch ID	1	8	Verify that the highest patch number as indicated in IP&CL can be deleted BEP.	1	PostLaunch			
419	3.2.11.3.3 Dump a Patch	T73-1 threw T73-3	Dump a patch Identifiers	1	8	Record with preceding tests	1	PostLaunch			
420		T74-4 threw T74-9	Dumped patch data	1	8	Verify that patches at memory limits can be dumped	1	PostLaunch			
421	3.2.12 Load from ROM		Description	0							
422	3.2.12.1 Load from ROM	Purpose	Description	0							
423	3.2.12.2 Load from ROM	Scenario	Description	0							
424	3.2.12.3 Load from ROM	Functional Requirements	Description	0							
425	3.2.12.3.1 Copy code		After reset, data copied from bulkROM to RAM	1	6	Verify that contents of first and last address is copied correctly.	1	LoadFromROM			
426	3.2.12.3.2 Execute Loaded Code		Verify that BEP A and BEP B can be booted.	1	6		1	LoadFromROM			
427			Verify that FEP 1-6 can be booted.	1	6		1	LoadFromROM			
428	3.2.13 Load from Command		Description	0							
429	3.2.13.1 Load From Command	Purpose	Description	0							
430	3.2.13.2 Load From Command	Scenario	Description	0							

SRS-TestRequirements

Seq Num	SRS Reference	Table	Description	Test Needed	Test Proc #	Comments	TP Done	Test Procedure	TS Done	Test Script	Status
	36-02405-01	Oct 17, 1996									
431	3.2.13.3 Load From Command	Functional Requirements	Description	0							
432	3.2.13.3.1 Start from uplink	Start Uplink	After reset, data copied from bulkROM to RAM	1	7	Verify that contents of first and last address is copied correctly.	1	LoadFromCommand			
433		T75-1 threw T75-3	Uplink Load Command packet Identifiers	1	7	Record with tests for following	1	LoadFromCommand			
434		T75-4 threw T75-7	Load data	1	7	Verify that one packet works	1	LoadFromCommand			
435	3.2.13.3.2 Continue from uplink	T76-1 threw T76-4	Continuation packets	1	7	Verify that 2 packets work. Verify that 3 packets work with only 1 byte used in the 3rd packet.	1	LoadFromCommand			
436			Two BEPS	1	7	Verify that both BEPs can be loaded	1	LoadFromCommand			
437	3.2.14 Radiation Monitoring		Description	0							
438	3.2.14.1 Radiation Monitoring	Purpose	Description	0							
439	3.2.14.2 Radiation Monitoring	Scenario	Assertion during Boot is ignored	1	15	Verify correct operation when radiation asserted during boot.					
440	3.2.14.3 Radiation Monitoring	Functional Requirements	Description	0							
441	3.2.14.3.1 Disable CCD Power			1	15	Verify correct operation					
442	3.2.14.3.2 Re-enable CCD Power			1	15	Verify correct operation					
443			Number of testable items	371	9999		158				
444			Number of tests	742	9999						Last cell

TestNames

Oct 17,1996	List of Test Procedures to be produced by ACIS test team		
Part Numb	Name	Priority	
01	MemBep	A	
02	MemFep	A	
03	Window2D	B	
04	OverFlow	B	
05	Threshold	B	
06	LoadFromROM	A	
07	LoadFromCommand	A	
08	PostLaunch	A	
09	BadPix	B	
10	Packet	A	
11	TimeStamp	B	
12	RunFromSlot	B	
13	SystemConfig	A	
14	TimeOnBias	C	
15	RadiationMon	C	
16	FepPowerTest	A	
17	ExposureTime	B	
18	Graded Events	C	
19	Performance	C	
20	RawMode	B	
21	Endurance	B	
22	DEA HK Operation	B	
23	DEA HK Parameters	B	
24	SW Housekeeping	B	
25	BootReset	A	
26	FatalErrorReport	A	
27	SRAM-PRAM RW	B	
28	Diagostic Mode	B	
29	DEA TherCtrl	B	
30	Ignore Bad Pixel	A	
31	Recompute Bias	A	
32	Event Process	B	
33	Window1D	B	
34	Window Position	B	
35	Overclock	B	
36	Histogram Mode	B	
37	Bias Trickle	C	
38			
39			
40			
97	Need Full Operational ACIS		
98	Hardware		
99	Science		
100	Help		