

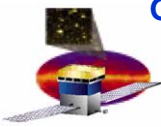
GLAST Large Area Telescope

Systems Engineering

NCRs and Waivers Verification Status

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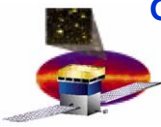
Stanford Linear Accelerator Center



NCR Category Definitions

Open NCR's classified into categories for discussion purposes:

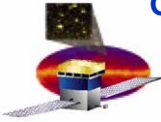
Category	Definition	Count
Hardware Discrepancy	H/W Issue, One QAR	4
FSW Discrepancy	Identified FSW bug, FSW JIRA in work or completed	6
Monitor for Verification	Likely test issue, trending for repeat	1
Known Feature	Specification not violated, but trending or changes required to accommodate behavior	6
EGSE/Data Processing	NCR has been isolated to EGSE/Data Processing	8
CND	Could not duplicate	7



NCR Resolution Definitions

Open NCR's classified into categories for discussion purposes:

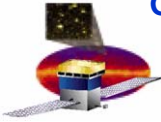
Closure Plan	Definition	Count
Issue resolved, closure plan in place or no impact to LAT		
Closing	Issue resolved, documentation required to close	5
Close after TV	Analysis completed, no issues seen, writeups in work	2
B0.6.10	Resolved with FSW release B0.6.11, waiting confirmation from CPT	1
B0.7.0	Resolved with FSW release B0.7.0	2
Closure deferred	EGSE issues, low priority to fix or hold open to track repeats	8
Work continuing		
B1.0.0	Resolved with FSW release B1.0.0 or later	1
QAR	CND or other issue expected to be transferred to a QAR	8
In process	Investigation ongoing	5



NCR 981

B0.6.12 FSW Load Incomplete

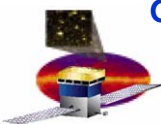
- **Issue**
 - Loading to final bank in redundant SIU did not complete
- **Analysis**
 - The partition/bank was full
 - Murphy struck – NCR 945 documented these extra files, and an MRB was scheduled for that afternoon to determine approach
- **Resolution Plan**
 - Redundant SIU second bank was successfully uploaded by clearing out the bank, loading B0.6.9, then loading B0.6.12 deltas
 - Will apply the same process to the remaining processors/banks before integration with the spacecraft (possibly during B0.7.0 load)



NCR 982

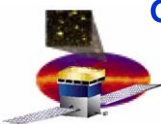
B0.6.12 FSW Does Not Reset GTRC

- **Issue**
 - **GTRC LATC verify errors seen during B0.6.12 regression test**
- **Analysis**
 - **GTRC power-on reset was not performed by PIG**
 - **Code was in B0.6.7 and following, but a programming error removed it from B0.6.13**
- **Resolution Plan**
 - **Release B0.6.13 to correct**



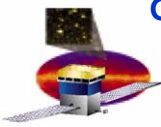
Open NCRs

NCR	Date Opened	Affected Hardware	Problem Description	NCR Category	Resolution	Could Not Duplicate
626	8/27/05	ACD	ACDMonitor script high counts during T/V (originally ACD PR)	Monitor for Verification	Close after TV	
718	10/27/05	ACD	VETO threshold for channel 1123 can't be set below minimum value of 0.45pC (originally an ACD PR)	Known Feature	Close after TV	
806	1/17/06	Trigger	CAL is retriggering during SVAC run	Known Feature	Closing	
840	3/8/06	DAQ	RunControl software problems observed on spare PDU during T/V test (NCR #794); opened NCR to track FSW updates	Known Feature	B0.7.0	
852	3/16/06	DAQ	LCB errors observed during muon run	EGSE	Closure deferred	
855	3/23/06	FSW	LATC verify occasionally reports errors in CRC, SPT, ARC	CND	QAR	CND



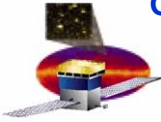
Open NCRs

NCR	Date Opened	Affected Hardware	Problem Description	NCR Category	Resolution	Could Not Duplicate
859	3/23/06	FSW	CAL LCI data compression less than expected, results in very large datagrams	FSW Discrepancy	B0.6.11	
880	4/12/06	Integration	SIU Spontaneous Reboot	CND	QAR	CND
881	4/12/06	Integration	EPU Spontaneous Reboot	CND	QAR	CND
882	4/12/06	DAQ	GLAT2525 power up software crash due to Result FIFO not empty.	Known Feature	B0.7.0	
884	4/15/06	Integration	VSC errors observed during LAT power on	EGSE	Closure deferred	
894	4/29/06	Integration	LATC dump GTFE mask error	FSW Discrepancy	in process	
902	5/9/06	DAQ	EPU 0 unexpected reboot	CND	QAR	CND
913	5/23/06	DAQ	FSW error in packing ACD charge injection data	FSW Discrepancy	B0.7.0	
922	6/5/06	DAQ	Housekeeping telemetry stopped	FSW Discrepancy	in process	
933	6/22/06	EGSE	EGSE overwrites timetone messages	EGSE	Closure deferred	



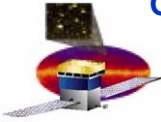
Open NCRs

NCR	Date Opened	Affected Hardware	Problem Description	NCR Category	Resolution	Could Not Duplicate
936	6/24/06	EGSE	EGSE timed out on the 1553 bus	EGSE	Closure deferred	
941	6/28/06	Mech	Temperature sensors swapped	Hardware Discrepancy	Closing	
942	6/29/06	Mech	ACT to LAT blanket interface not consistent	Hardware Discrepancy	Close after TV	
946	7/11/06	ACD	ACD FREE board 5 not responsive after power up	CND	QAR	CND
948	7/19/06	DAQ	EPU 1 reboot, EPU 2 reboot	CND	QAR	CND
949	7/21/06	DAQ	Primary SIU reboot, redundant SIU reboot	CND	QAR	CND
957	8/4/06	DAQ	EPU 0 CPU junction temperature higher than expected in vacuum	Hardware Discrepancy	Closing	
958	8/7/06	DAQ	GTRC phase error induced by FPGA bug	Known Feature	Closure deferred	
959	8/8/06	EGSE	EGSE VSC crashes	EGSE	Closure deferred	
960	8/8/06	EGSE	Script missed an LPA stop command, resulting in test error	EGSE	Closure deferred	



Open NCRs

NCR	Date Opened	Affected Hardware	Problem Description	NCR Category	Resolution	Could Not Duplicate
963	8/10/06	ACD	ACD inner shell at 42 deg vs limit of 40	EGSE	Closing	
966	8/14/06	EGSE	EGSE current measurement scale incorrect	EGSE	Closing	
967	8/14/06	EGSE	EGSE temperature measurements inaccurate over temp	EGSE	Closure deferred	
975	9/1/06	DAQ	Datagram timetag error	FSW Discrepancy	in process	
976	9/2/06	DAQ	Watchdog reboot at hot induces correctable memory errors	Known Feature	Closing	
981	9/26/06	DAQ	FSW B0.6.12 incomplete	Known Feature	In process	
982	9/27/06	DAQ	FSW B0.6.12 does not reset GTRC	FSW Discrepancy	In process	



LAT Level Verification Status

Category	Verification Method					Totals	
	Test	Demo	Analysis	Inspection	Children	Complete	% Comp
	# Comp	# Comp	# Comp	# Comp	# Comp		
Requirement Identified	124	73	204	36	22	459	100.0%
Flow Down Complete	124	73	204	36	22	459	100.0%
Draft Verification Plans	124	73	204	36	22	459	100.0%
Final Verification Plans	124	73	204	36	22	459	100.0%
Verification Plans Executed	82	54	156	23	14	329	71.7%
Verification Reports Submitted	82	54	156	23	14	329	71.7%
Requirements Sold	62	43	118	16	13	252	54.9%
Expect Compliance	23	0	25	12	2	62	13.5%
Verifications Plan Deferred	18	19	19	1	6	63	13.7%
Requirements Issues	1	0	4	0	0	5	1.1%
Total VPs	124	73	204	36	22	459	

- **Progress this month**
 - All 459 VPs are Final
 - All VPs planned for execution to this point have been performed
 - 329 VPs have been executed to date
 - An additional 33 requirements have been sold since PSR
 - ~77% of the executed VPs have been approved
- **Status**
 - VCRM version 23 released
 - All deferred GRB reqts will be sold post FSW B1.0 installation