

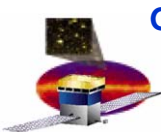
GLAST Large Area Telescope

Systems Engineering

NCRs and Waivers Verification Status

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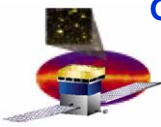
Stanford Linear Accelerator Center



NCR Category Definitions

Open NCR's classified into categories for discussion purposes:

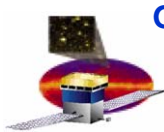
Category	Definition	Count
Hardware Discrepancy	H/W Issue, One QAR (blanket velcro), Tower 10 phasing errors (closing), Helium exposure (closing)	3
FSW Discrepancy	FSW issue	5
Known Feature	Specification not violated, but trending or changes required to accommodate behavior	2
EGSE/Data Processing	NCR has been isolated to EGSE/Data Processing	9
CND	Could not duplicate	7



NCR Resolution Definitions

Open NCR's classified into categories for discussion purposes:

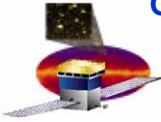
Closure Plan	Definition	Count
Issue resolved, closure plan in place or no impact to LAT		
Closing	Issue resolved, documentation required to close	2
B0.7.0	Resolved with FSW release B0.7.0	1
Closure deferred	EGSE issues, low priority to fix or hold open to track repeats	8
Work continuing		
B1.0.0	Resolved with FSW release B1.0.0 or later	1
QAR	CND or other issue expected to be transferred to a QAR	9
In process	Investigation ongoing	5



NCR 991

MIP and Gamma Filters

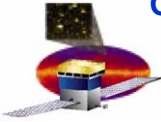
- **Issue**
 - **MIP and gamma filter throughput changes over time**
- **Analysis**
 - **Traced to a memory overwrite of the energy calculation coefficients**
 - **JIRA FSW-786**
- **Resolution Plan**
 - **Fix implemented successfully in B0.6.15, NCR closed**



NCR 992

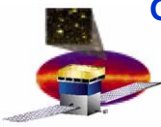
Tower 10 Phasing Errors

- **Issue**
 - **Phasing errors seen on Tower 10, Layer 0, left side readout**
- **Analysis**
 - **1 in 4 events had phasing errors indicating the event readout had an internal inconsistency**
 - **Probable cause is a problem in GTFE 0 on that layer**
 - **Investigation to refine the diagnosis is continuing**
 - **Looking at MCM test station to test theories**
- **Resolution Plan**
 - **Configuration changed to read out that layer from the right, NCR closing**



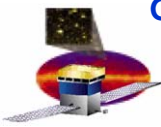
Open NCRs

NCR	Date Opened	Affected Hardware	Problem Description	NCR Category	Resolution	Could Not Duplicate
852	3/16/06	EGSE	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
859	3/23/06	FSW	CAL LCI data compression less than expected, results in very large datagrams	FSW Discrepancy	B0.7.0	
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	B1.0.,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	QAR	
902	5/9/06	DAQ	EPU 0 unexpected reboot	CND	QAR	CND
922	6/5/06	DAQ	Housekeeping telemetry stopped	FSW Discrepancy	in process	
933	6/22/06	EGSE	EGSE overwrites timetone messages	EGSE	Closure deferred	



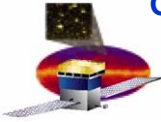
Open NCRs

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	
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
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	
983	9/27/06	DAQ	LTC file changed in B0.6.12, need to update LICOS files	EGSE	In process	
989	10/4/06	DAQ	1553 Bus Timeoiut (EGSE did not read in a timely manner) coupled with SIU time tag offset	FSW Discrepancy	In process	
990	10/4/06	DAQ	Watchdog timer can be one of 2 values, EGSE checks only for one	EGSE	In process	
992	10/17/06	DAQ	Tower 10, plane 0, left side readout shows phasing errors	Hardware Discrepancy	In process	
994	10/20/06	LAT	LAT exposed to helium	Hardware Discrepancy	Closing	



LAT Level Verification Status

Category	Verification Method					Totals	
	Test	Demo	Analysis	Inspection	Children	Complete	% Comp
	# Comp	# Comp	# Comp	# Comp	# Comp		
Requirement Identified	124	73	203	36	22	458	100.0%
Flow Down Complete	124	73	203	36	22	458	100.0%
Draft Verification Plans	124	73	203	36	22	458	100.0%
Final Verification Plans	124	73	203	36	22	458	100.0%
Verification Plans Executed	89	55	159	22	13	338	73.8%
Verification Reports Submitted	89	55	159	22	13	338	73.8%
Requirements Sold	77	52	138	21	12	300	65.5%
Expect Compliance	16	0	22	12	1	51	11.1%
Verifications Plan Deferred	18	18	19	2	8	65	14.2%
Requirements Issues	1	0	3	0	0	4	0.9%
Total VPs	124	73	203	36	22	458	

- **Progress this month**
 - All 458 VPs are Final
 - All VPs planned for execution to this point have been performed
 - 333 VPs have been executed to date
 - An additional 24 requirements have been sold in the last month
 - ~90% of the executed VPs have been approved
- **Status**
 - VCRM version 23 released
 - All deferred GRB reqts will be sold post FSW B1.0 installation