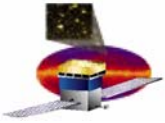


GLAST Large Area Telescope: Performance & Safety Assurance

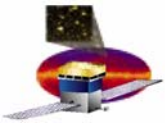
Joseph Cullinan
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Performance & Safety Assurance Manager

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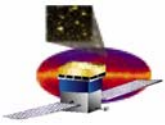
4.1.A P&SA – Accomplishments May 2005

- Integration and Test
 - Supported 2 -tower testing of Towers A and B in flight grid
 - Working to close 4 open NCRs related to 2-tower testing
 - Supporting efforts to develop 4-tower testing
 - Coordinated hand-off of two TEM/TPS assemblies from DAQ to I&T



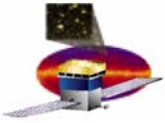
4.1.A P&SA – Accomplishments May 2005

- DAQ Electronics –
 - Continued to support TEM and TPS CCA testing, rework, inspection, test data review efforts
 - Supported environmental testing and hand-off of TEM/TPS assemblies
 - Dual TEM/TPS assembly T/V testing successfully completed
 - 3 T/V test NCRs related to EGSE cables
 - 1 T/V test NCR written against start of bakeout before vacuum reached 5×10^{-5} torr
 - Supporting testing, troubleshooting, rework, data review and documentation of PDU assembly testing.
 - Coordinating NCRs, work orders and MRB activity to document these issues
 - GSFC QA noted some assembly concerns on PDU CCAs. These have been documented and will be addressed with Aeroflex prevent problems from being repeated on future boards to be built



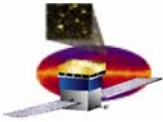
4.1.A P&SA – Accomplishments May 2005

- DAQ Cables
 - Rejected 31 cables from Cicon at receiving inspection in early May. Final inspection showed workmanship problems with bent connector pins, contamination, unapproved and unreported rework
 - LAT QA began working on site at Cicon 2 days per week over last two weeks to improve Cicon's assembly and inspection processes.
 - Improvements have been successfully implemented.
 - LAT QA accepted 37 of 38 completed cables last week during final inspection at Cicon
 - All internal harnesses have now been received from Glenair
 - Need to complete final inspection of last cables delivered



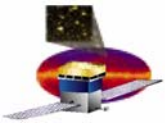
4.1.A P&SA – Accomplishments May 2005

- Teledyne TMCM Production -
 - Supported on site review of TMCM production equipment validation following relocation of equipment.
 - TMCM production was quickly re-established; no quality issues associated with equipment move have been observed to date
 - Finalizing requirements of conformal coating by Teledyne's vendor (Plasma Systems)
 - Qty = 4 first article flight TMCMs were rejected by LAT QA and Teledyne QA yesterday for various workmanship issues
 - LAT QA will continue to work closely on site with Teledyne this week to resolve Plasma Systems conformal coating problems
 - LAT QA continues to prioritize MCM and pitch adapter inspection at SLAC to support production schedule



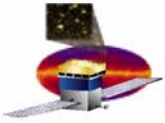
4.1.A P&SA – Accomplishments May 2005

- TKR Flex Cables -
 - Supported manufacturing readiness review at Pioneer Circuits 12 May with DAQ and GSFC engineering and QA participation.
 - Pioneer has been selected as second source for flex cables.
 - Reviewed and approved assembly and test coupon requirements and production work orders
 - Qualification testing of Pioneer flex cables will follow the same plan (LAT-PS-01132) as for Parlex cables
 - GSFC will perform independent evaluation of test coupons from Pioneer panels to determine flight acceptability. GSFC performs this evaluation for Parlex flex cables and all other PWBs used on the project.



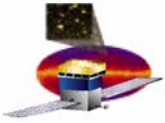
4.1.A P&SA – Accomplishments May 2005

- PSA Management Transition
 - LAT QA personnel responsibilities have been shifted to support DAQ hardware testing. A high level of effort on QA's part will remain to support future DAQ CCA and box-level testing
 - Dorrene Ross from Stanford's HEPL lab was brought on last week to support DAQ hardware testing and bonded stores coordination.
 - Doreen has experience as a QA manager supporting Gravity Probe B and ST7/GRS
 - Planned support is 80% for at least three months



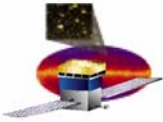
Issues and Concerns

- Pioneer Flex cables
 - Pioneer is still developing Omnetics connector bonding process using autoclave. If this approach proves unsuccessful, a second process will have to be quickly developed and qualified.
 - Panels from which flex cables are cut will be made in batch process, so we will have a great number of test coupons for GSFC evaluation all at one time sometime in late June, with high urgency for results.
- Plasma Systems conformal coating of TMCMs
 - Process still not developed to yield acceptable conformal coating



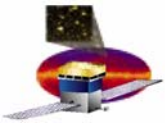
4.1.A P&SA – Planned Accomplishments June 2005

- Support TEM/TPS and PDU testing
- Work directly with Aeroflex to resolve workmanship issues observed on PDU CCAs to ensure problems are corrected for future boards
- Ensure TMCM conformal coating process at Plasma Systems is approved and yields acceptable results
- Closely follow Cicon cable production with auditing and inspection on-site as required to ensure cables meet all workmanship and testing requirements

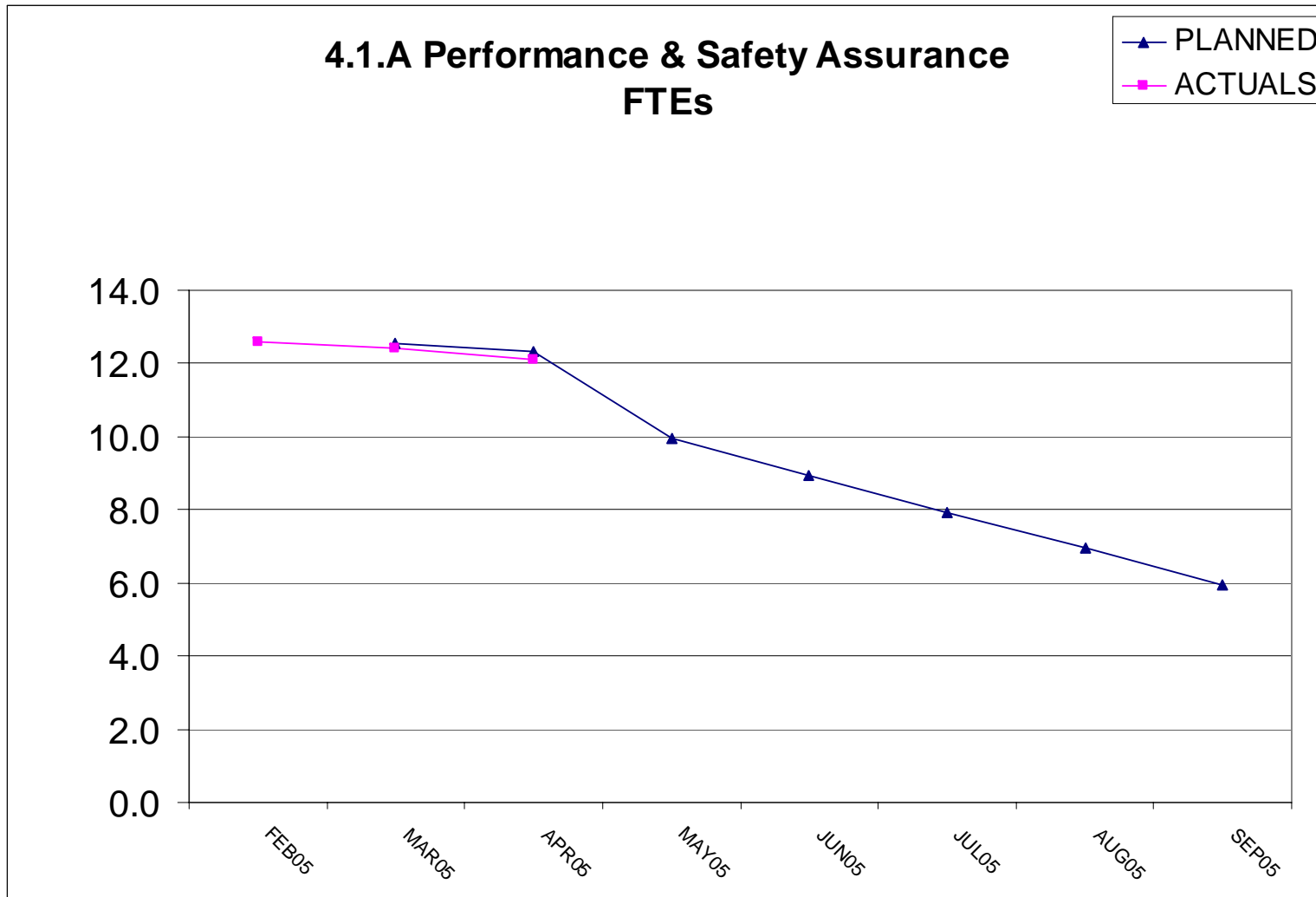


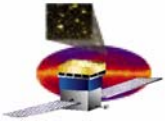
Cost Report

Reporting Category	Cost Incurred				Estimated Cost			Estimated Final Cost		Unfilled Orders Outstanding
	During Month		Cum. to Date		Detail		Balance of Contract	Contractor Estimate	Contract Value	
	Actual	Planned	Actual	Planned	MAY05	JUN05				
4.1.A PERFORMANCE AND SAFETY ASSURANCE										
4.1.A.1 PERFORMANCE ASSURANCE MANAGEMENT	14	19	760	789	19	20	86	885	885	
4.1.A.2 QUALITY ASSURANCE	162	161	2,294	2,319	84	91	227	2,696	2,696	1
4.1.A.3 TRAINING			14	14			0	14	14	
4.1.A.4 RECORDS MANAGEMENT			42	42			0	42	42	
4.1.A.5 SYSTEMS SAFETY			0	0			0	0	0	
4.1.A.6 EEE PARTS CONTROL PROGRAM			210	210			0	210	210	
CAPW[3]Totals:	176	179	3,320	3,374	103	111	312	3,846	3,846	1



4.1.A FTE Chart





Cost Variance Explanation

- **Why underrun?**
 - **Performance Assurance Management is underrunning because Darren Marsh was only 50% in May**
 - **Quality Assurance underrun due to late contractor invoices**
- **What will be done to correct?**
 - **No corrective action planned**