GLAST Large Area Telescope

WBS 4.1.B
Instrument Science Operations Center
Monthly Status Review
30 June 2005

Lori Bator
lbator@slac.stanford.edu
650-926-5352

ISOC Management

- LAT operations overview at SLAC presented for DOE annual review of SLAC research
- ISOC staff hiring
  - Offer made for Software Developer position to support ISOC software releases and database development and maintenance, not accepted
  - Interviews are continuing for Test Engineer position to support ISOC software releases and lead ISOC participation in GLAST ground system tests
  - Interviews are being scheduled for a short list of candidates for SVAC/PVO Engineering Physicist for instrument analysis support; replacement for Xin Chen

ISOC Software Development

- **ISOC software development**
  - **Acceptance testing completed 3 June 2005**
    - **Minor discrepancies identified in JIRA**
  - **Software release 1 completed 3 June 2005; ISOCV1R1P0 committed to CVS. Functions:**
    - **Ingest Level 0 data into archive format**
    - **Create and ingest mission planning data products**
    - **Receipt of real-time data from MOC**
    - **Ingest orbit products (TDRS ephemerides)**
    - **File retransmission request**
    - **File send/receive monitoring via web**
  - **Next release, to support GRT3, is planned for 31 August 2005**
    - **Create LDF from Level 0**
    - **Increased mission planning functionality**

Ground Readiness Tests (GRTs)

- GRT 2 completed 28 June 2005
  - Products sent/received per Ops Data Product ICD
    - Received simulated real-time housekeeping data packets
    - Received simulated Level 0 housekeeping package
    - Received sample MOC command logs
    - Sent, received and serviced file retransmission requests
    - Received sample preliminary science timeline from GSSC
    - Sent sample LAT timeline (ATS commands) and memory load to GSSC
    - Received TDRS ephemerides
    - Received project database and sent LAT update
  - Issues for LAT
- GRT 3 planned for October 2005
  - Level 0 to Level 1 processing
    - FSW readiness/availability is key
    - Use FES plus FSW running on testbed to generate ~ 3 hours of Level 0 science data
    - Have science data decompression and “de-packetize” tools in place in pipeline to recover LDF for offline processing and event reconstruction

GOWG Activity

- Ops TIM planned for September 14-15, 2005 at SLAC
  - Security status of ground system
  - Procedures development/validation
  - GLAST testing
  - Science Data Products ICD
  - Database management and control
  - Mission Planning
  - Planning for GRB alerts and diagnostics
  - Data management
  - L&EO
  - MOR planning
- Other GOWG Discussion topics
  - GRTs
  - Leap seconds
  - L&EO hardware requirements and mission planning
  - Procedure development

ISOC Database Activities

- ISOC trending database development
  - Continuing redesign of Oracle table schemas
- Database interface development
  - ColdFusion trend-related pages were updated to use the new "v3" table structure on the local developer PC
    - This proved to be an expedient way to test SQL queries in order to help Karen H. and Max T. develop equivalent JSP pages
- LAT Config and Calib DB information gathering proceeding
  - Initial step in LAT configuration management task
  - Goal is to have db ready for integration (late 2005)

LAT Operations Planning

- At 9 June operations planning meeting, an agreement was reached on the configuration contained in the LAT science stream
  - LDF will contain configuration file names and checksums for each run
  - Offline will use ground configuration db to recover configuration for science processing
  - Ground config db will track upload file names against xml configuration tree
- FSW will provide a science data decoding tool, to generate an in-memory representation of EBF events, as an intermediate data format for offline processing

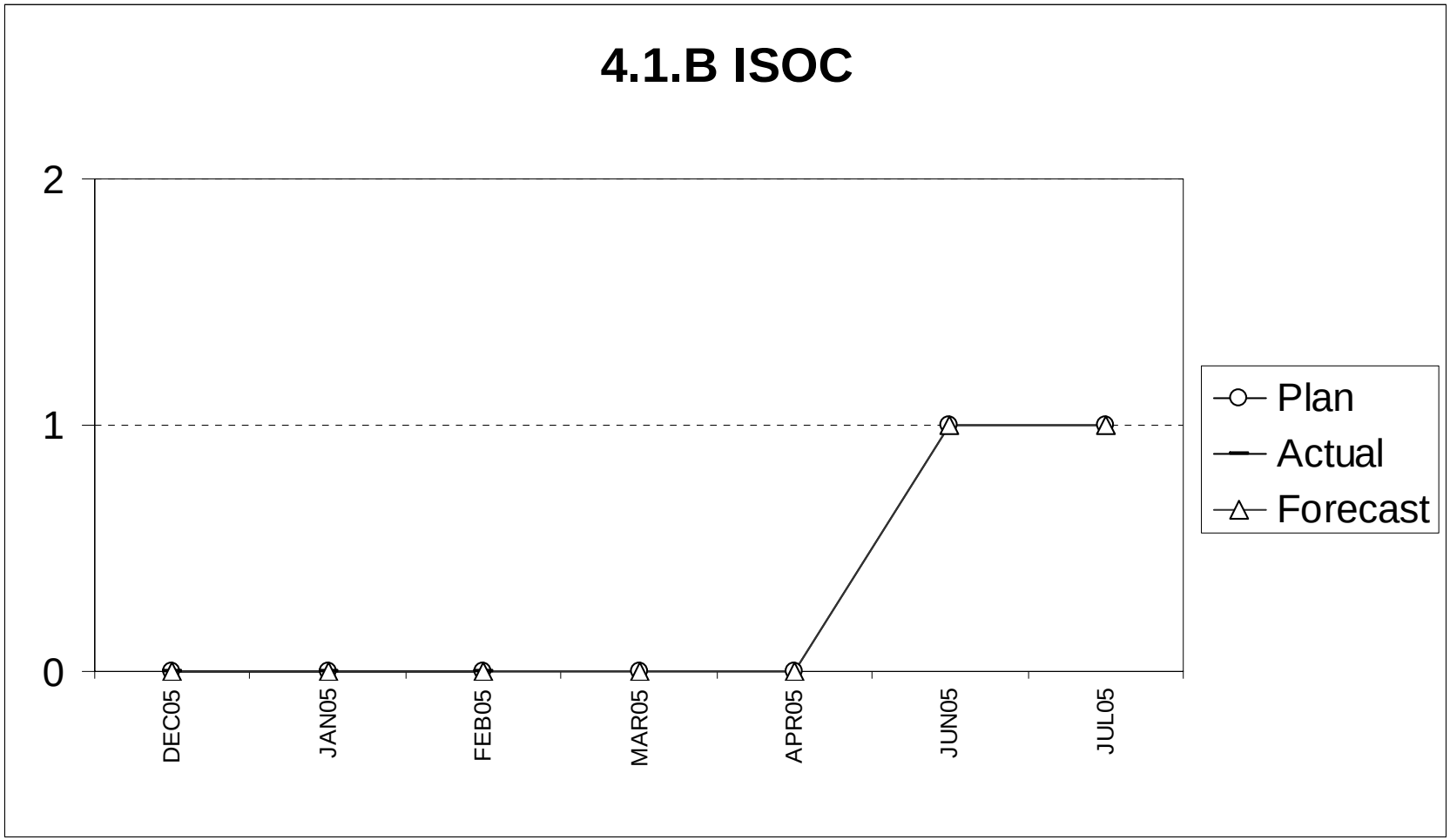
SCS Operations Support for the ISOC

- Biweekly meetings have started with SLAC computer services group (SCCS) to coordinate computer/service support issues for GLAST
  - Delivery status for 32TB disk array and Oracle servers (should be arriving soon)
  - Discussion on extent of 24x7 support within SCCS
  - Impact of SLAC division restructuring
  - Details on Windows and UNIX/Linux support

Near Future Activities

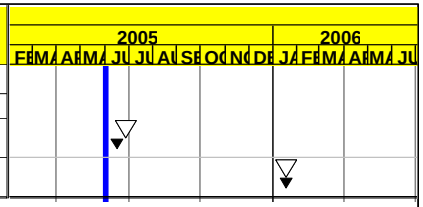
- ISOC Software Release 1.1 – late August 2005
- Ops TIM – 14-15 September 2005
- GRT #3 – October 2005
- MOR – 31 March 2006

Level 3 Milestone Count



Level 3 Milestone List

Activity Description	Baseline Finish	-2m Var	-1m Var	Bsln Var	Early Finish
4.1.B ISOC					
Ground System Interface Test start	06/15/05*	0	0	-9	06/28/05*
Mission Operations Review	01/17/06*	0	0	0	01/17/06*



Run Date 06/23/05 16:47 Data Date 06/01/05 © Primavera Systems, Inc.	**GLAST LAT PROJECT** **Level 3 Milestones** **Baseline Variance (Organized by Subsystem)**	LT-DZ: Baseline Variance FL-D4: AV: Level 3 Milestones	Report #10 Sheet 12

Milestone Variance Explanation

- Schedule Impact
- Cost Impact
- Corrective Action
  - None required

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	JUN05	JUL05				
4.1.B LAT INSTRUMENT SCIENCE OPERATIONS CENTER										
4.1.B.1 PROJECT MANAGEMENT	7	5	167	170	5	5	11	188	188	0
4.1.B.2 PERFORMANCE ASSURANCE	6	0	12	6	0	0	-6	6	6	0
4.1.B.3 MISSION & OPERATIONS PLANNING	0	0	101	101	0	0	0	101	101	0
4.1.B.4 LAT OPERATIONS FACILITY	0	0	16	16	0	0	0	16	16	0
4.1.B.5 IOC TEST	0	0	0	0	0	0	0	0	0	
4.1.B.6 LAT PERFORMANCE VERIFICATION	0	0	24	24	0	0	0	24	24	0
CAPW[3]Totals:	13	5	319	317	5	5	5	334	334	0