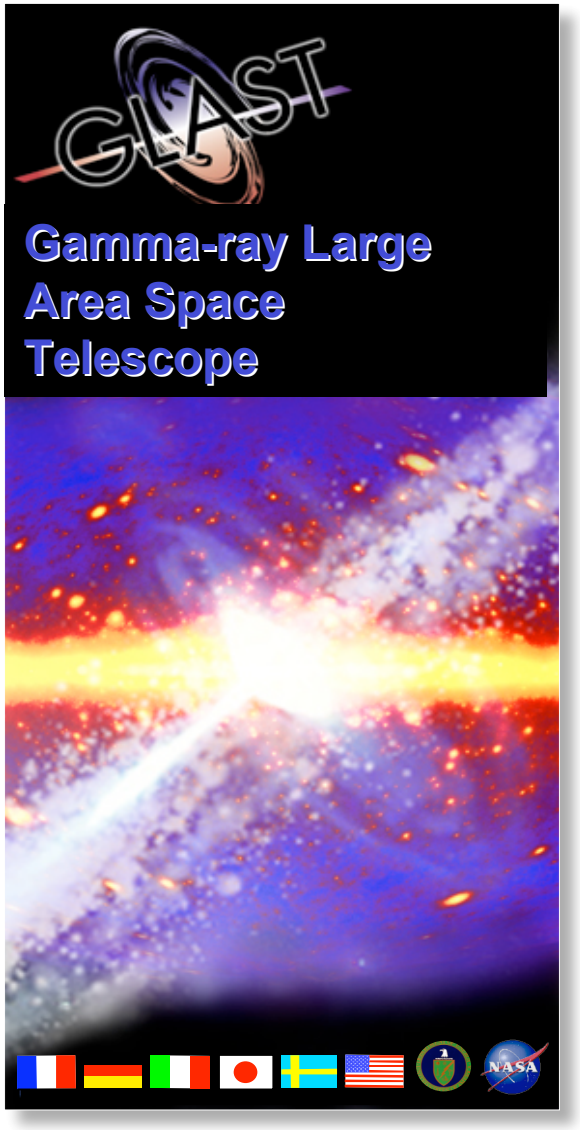

ISOC Status:

Richard Dubois
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Sci Ops Status (1)

- Defined high level tasks for SciOps, currently working on WBS
- Initiated VRVS meetings for SciOps (Sep 8) with an ISOC agenda: attendance on average 30-40 people
  - Organizing people into working groups: soon to be able to engage collaboration
- Instrument monitoring
  - Investigated bright gamma-ray pulsars to monitor the instrument response functions and absolute timing and position accuracy for the LAT. Some of the procedures that he developed will translate directly to instrument monitoring tasks to be run on the pipeline: Luigi Tibaldo (INFN/SLAC)
  - Data Monitoring working group has been identified for Service Challenge
- Calibrations and Configurations
  - SciOps discussions Flight Ops to define most likely reasons for changing configurations
    - trigger mask may require faster turn around (raised at TIM with MOC)
    - CAL pedestals next priority
    - other items see longer time scale for latency
  - Calibration working group has been identified for Service Challenge
- Instrument Optimization and Anomaly Resolution
  - Investigating how to improve offline cuts for GRBs after discussions with Julie McEnery
  - Collecting instrument anomalies from pre-launch data to proposed scenarios to be simulated for on orbit data taking

Sci Ops Status (2)

- **Automated Science Processing**
  - Implemented working prototypes for GRB search and refinement in the L1 data and tasks for spectral analyses and afterglow detection have been partially implemented in the pipeline framework; this work is providing feedback to the pipeline developers about functionality needed: Jim Chiang (UMBC/SLAC)

- **Event classification & IRFs**
  - Bill Atwood (UCSC) has refined the event classification to include energy-dependent cuts that preserve the effective area at high energies. Toby Burnett (UW) has implemented a semi-automatic procedure for translating an AllGamma run and event classification cuts into a set of IRFs that can be used by the science tools. This will greatly improve the ease of investigating new IRFs for science analyses.

- **Background monitoring/modeling**
  - Investigating enhancing the charged-particle background model that we use for instrument simulations to allow for azimuthal variation of the background components: Jonathan Ormes (Denver)
    - The effect is quite strong and is relevant for, e.g., detailed estimates of the orientation-dependent trigger rate.
  - Start to look at the work done by others to learn how to characterize the SAA

SAS Status

- **Beam test support**
  - Data taking complete. Some 100M events processed in the pipeline. Reprocessing with new calibrations about to begin.
  - Mostly things look good with a few things to track down (like excess energy seen at high energies). In progress.
- **Tvac support**
  - Done. Moving on to Spectrum Astro.
- **Compute Resources**
  - IFC will cough up 50 TB disk for CY06
    - 80 TB expected for 07
    - Allows us to concentrate on CPU purchases in 07
  - Italy and France pursuing 100 cpu/50 TB compute farms for simulations
    - Plan to extend Pipeline 2 to run jobs in all 3 places

More SAS Status

- **Service Challenge Prep**
  - We have a logo!
  - Dual effort on science and ISOC prep
    - Planning to test GCR calibs in October
    - Apply different calibs in sim and recon
      - TKR mostly there now
    - Ability to simulate pointed observation
    - Working towards "IRF on demand"
      - Allow custom IRF based on user's cuts
  - Working with CHS and FSW for a more complete simulation of L0 files
  - DataServer & Shift Log working groups commissioned with due dates of mid to end October
  - Data Monitoring group about to be started

CHS Testing

- GRT 5
  - Very successful test
    - fed telemetry from 3 long contacts through upstream ground systems to ISOC (~10 Gbytes of cleanroom data)
    - processed HK, Diag, Alert & Science data
    - generated level 1 event summary data product & forwarded to GSSC
    - received RT housekeeping and alert telemetry from MOC & BAP (Burst Alert Processor)
      - sets stage for LICOS use in GRT 6 to display RT telemetry
    - no ISOC problems identified

- CHS 2.1 Acceptance Tests I/P
  - new features being tested include
    - LICOS display of RT telemetry
    - automatic daily report of product delivery info
    - enhanced log viewer (adds time & message type filtering)
    - tape archive functions
    - anomaly monitoring & notification functions (sends text messages to cell phones/beepers)
  - testing ~60% complete – to finish by 6 Oct (CHS 2.1 release date)

Requirements Tracking

	Release									
Requirement Category	1 6/05 GRT2	1.2 11/05 GRT3	1.3 2/06	1.4 5/06	2 7/06 GRT5	2.1 10/06 GRT6	2.2 12/06 DITL	3 2/07 GRT7 ETE2-3	4 5/07 ETE4-6	total
Misc (Facility, Redundancy, Security, Doc, etc.)	4	1		2	6	2	3	18	26	62
Mission Planning	2	2					60			64
Telemetry Processing	4	3	1	7	3	13	6	4	3	44
Science Data Processing				1	2	4	1	28		36
Telemetry Monitoring		1	1	2	1	22	4	4		35
Logging			3			4	2	1		10
Trending			12		6	3		1		22
Anomaly Tracking & Notification						8	8	1		17
# new reqts verified	10	7	17	12	18	56	84	57	29	290
cumulative total	10	17	34	46	64	120	204	261	290	

Key:	
	Incremental release (tests only new requirements)
	Major release (tests all requirements satisfied to date)

CHS: Software Development Team Activity

- **Software Releases**
  - Release 2.1 of CHS Core S/W undergoing acceptance test.
- **Data Handling**
  - Supported startup of LAT activities at GD/SASS.
  - Completed implementation of data-transfer mechanisms for LAT data during Observatory I&T.
- **Software Development**
  - Improvements in current trending & logging web apps.
  - Improved framework for web-based trending.
  - Mission-planning table-definition and -population code.
  - Configuration of LICOS real-time displays for on-orbit operations usage.
  - Update LICOS stripchart display to use an improved drawing package.

Real-Time Data Monitoring

- Two components of real-time data:
  - HSK/DIAG data during passes
  - Alerts
- Both are handled by a real-time data concentrator application ("MocTicker") that provides socket interfaces for packet sources and sinks
  - Implements the ITOS frame_sorter packet interface input from the MOC and the BAP
  - Implements the VSC network interface for "proxy" clients (LICOS).
    - Plan to re-use LICOS real-time display capability
      - LICOS used for LAT real-time monitoring at SLAC, NRL, SASS
- In addition to receiving packets and forwarding them to network clients, MocTicker decodes alert packets internally and logs them to the database
  - Allows us to alert local staff or trigger prompt processing for bursts.
- Tested successfully in GRT5 for receipt of real-time housekeeping and burst alerts from MOC and BAP

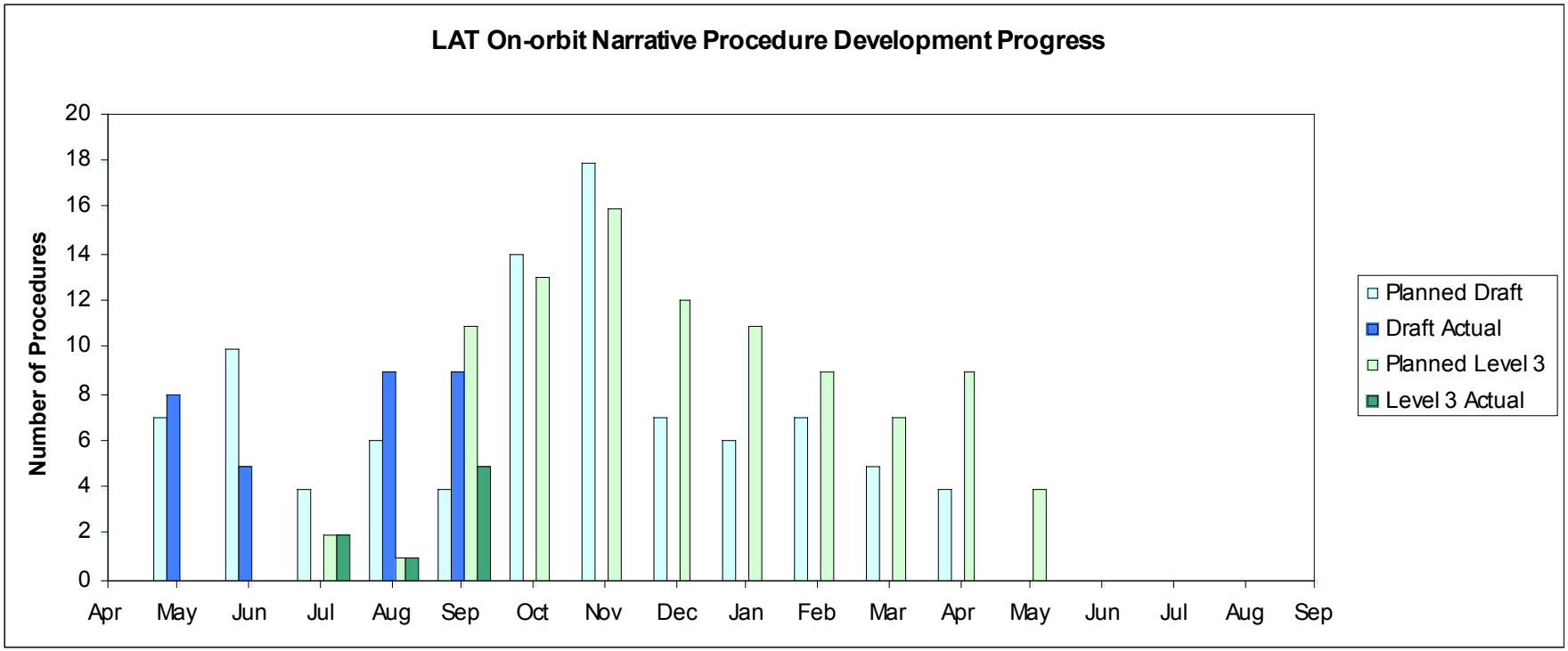
CHS Procedure Development Status

- 32 of 73 on-orbit procedures are in draft form
  - 8 procedures ready for PROC development (level 3)
  - All procedures for ETE1 and ETE2, except for one, are at least in draft form
- 3 of 22 LEO procedures are in review
  - L-LEO-1 LAT Turn On – Level 2
  - L-LEO-2 LAT SIU/EPU Hardware Functional – Level 2
  - L-LEO-4 HVPS Turn On – Level 2
  - Work on on-orbit procedures: L-LPA-01 Initiate Physics Observations and L-LPA-02 Terminate Physics Observations relates directly to early orbit physics obs
- Four authors working on procedures: Bator, Pineau, Condamoor, G. Thayer
  - Shantha Condamoor is also informally testing the narrative procedures against the testbed prior to PROC development
- Development schedule available at: https://sharepoint.slac.stanford.edu/sites/ISOC/default.aspx (must have SLAC account for access)

Procedure Status by ETE

Status by ETE								
ETE	Date	# of Procedures	Level					
			1	**2**	**3**	**4**	**5**	**6**
ETE 1	**Dec-06**	**4**	**0**	**0**	**3**	**0**	**0**	**0**
ETE 2	**Mar-07**	**23**	**11**	**7**	**5**	**0**	**0**	**0**
ETE 3	**Apr-07**	**37**	**0**	**6**	**0**	**0**	**0**	**0**
ETE 4	**Jun-07**	**31**	**0**	**3**	**0**	**0**	**0**	**0**
Totals		**95**	**11**	**16**	**8**	**0**	**0**	**0**

NP Development: Current Progress



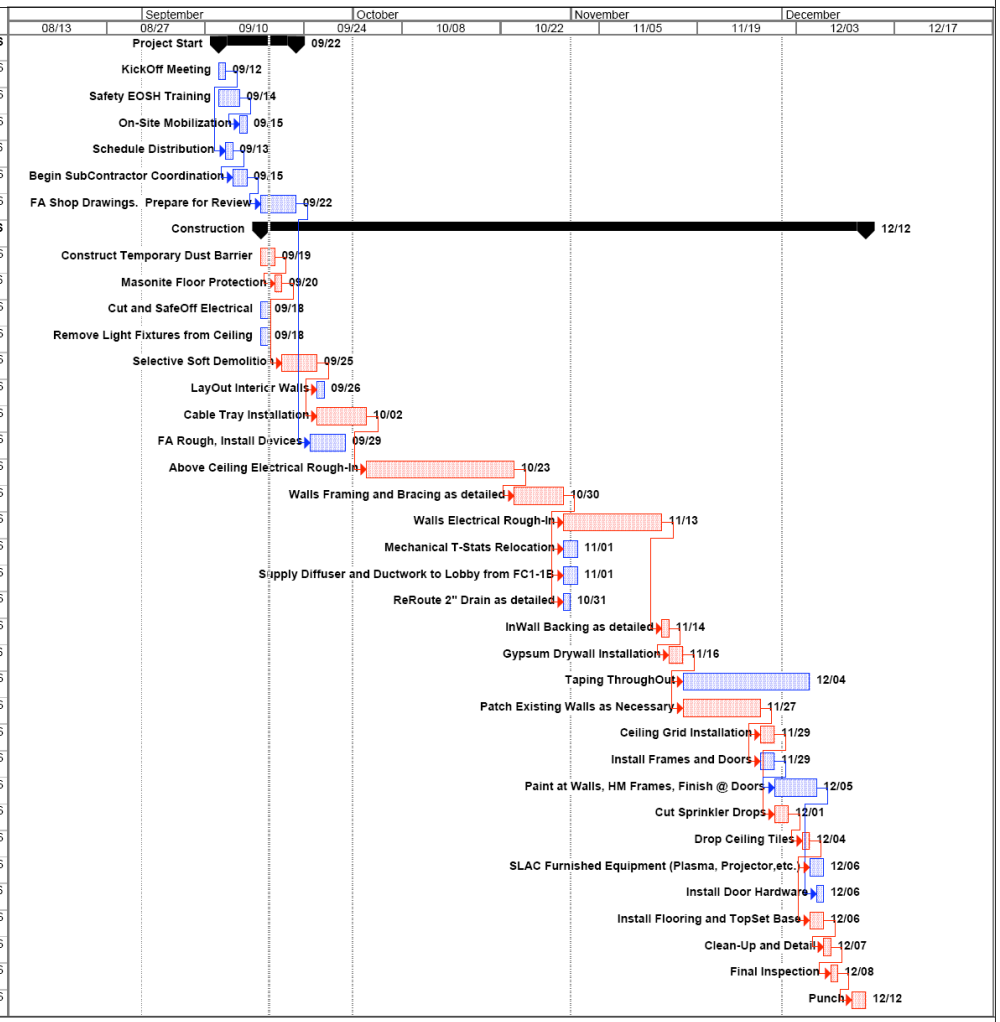
ISOC Operations Facility

- ISOC Operations Facility
  - Construction underway
    - Cubicle area in Building 84 gutted
      - New walls around the area going up this week
    - Dataflow lab
      - Asbestos removal from pipe elbows complete
      - Wall between B101 and B105 removed
      - No interruption to testbed operations
- Construction phase scheduled to end in mid December
  - Work is on schedule
- 5 workstations purchased for ops control room

Ops Facility: Preliminary Schedule

Stanford Linear Accelerator Center
Building 084 GLAST Operations Facility
Gordon-Prill, Inc. Project 0610169

ID	Task Name	Duration	Start
1	**Project Start**	**9 days**	**Tue 09/12/06**
2	KickOff Meeting	1 day	Tue 09/12/06
3	Safety EOSH Training	3 days	Tue 09/12/06
4	On-Site Mobilization	1 day	Fri 09/15/06
5	Schedule Distribution	1 day	Wed 09/13/06
6	Begin SubContractor Coordination	2 days	Thu 09/14/06
7	FA Shop Drawings. Prepare for Review	5 days	Mon 09/18/06
8	**Construction**	**60 days**	**Mon 09/18/06**
9	Construct Temporary Dust Barrier	2 days	Mon 09/18/06
10	Masonite Floor Protection	1 day	Wed 09/20/06
11	Cut and SafeOff Electrical	1 day	Mon 09/18/06
12	Remove Light Fixtures from Ceiling	1 day	Mon 09/18/06
13	Selective Soft Demolition	3 days	Thu 09/21/06
14	LayOut Interior Walls	1 day	Tue 09/26/06
15	Cable Tray Installation	5 days	Tue 09/26/06
16	FA Rough, Install Devices	5 days	Mon 09/25/06
17	Above Ceiling Electrical Rough-In	15 days	Tue 10/03/06
18	Walls Framing and Bracing as detailed	5 days	Tue 10/24/06
19	Walls Electrical Rough-In	10 days	Tue 10/31/06
20	Mechanical T-Stats Relocation	2 days	Tue 10/31/06
21	Supply Diffuser and Ductwork to Lobby from FC1-1B	2 days	Tue 10/31/06
22	ReRoute 2" Drain as detailed	1 day	Tue 10/31/06
23	InWall Backing as detailed	1 day	Tue 11/14/06
24	Gypsum Drywall Installation	2 days	Wed 11/15/06
25	Taping ThroughOut	10 days	Fri 11/17/06
26	Patch Existing Walls as Necessary	5 days	Fri 11/17/06
27	Ceiling Grid Installation	2 days	Tue 11/28/06
28	Install Frames and Doors	2 days	Tue 11/28/06
29	Paint at Walls, HM Frames, Finish @ Doors	4 days	Thu 11/30/06
30	Cut Sprinkler Drops	2 days	Thu 11/30/06
31	Drop Ceiling Tiles	1 day	Mon 12/04/06
32	SLAC Furnished Equipment (Plasma, Projector,etc.)	2 days	Tue 12/05/06
33	Install Door Hardware	1 day	Wed 12/06/06
34	Install Flooring and TopSet Base	2 days	Tue 12/05/06
35	Clean-Up and Detail	1 day	Thu 12/07/06
36	Final Inspection	1 day	Fri 12/08/06
37	Punch	2 days	Mon 12/11/06



Stanford Linear Accelerator Center
Bldg 084 **GLAST** Operations Facility
Date: Tue 09/19/06

Task | Milestone | Rolled Up Critical Task | Split | Group By Summary
Critical Task | Summary | Rolled Up Milestone | External Tasks
Progress | Rolled Up Task | Rolled Up Progress | Project Summary

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