GLAST Large Area Telescope

WBS 4.1.B
Instrument Science Operations Center
Monthly Status Review
5 January 2005

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December Activity

- **Management**
  - ISOC development schedule being tracked in MS project
  - Offices in Building 210 ready for ISOC occupancy
  - Continuing to support DC2 planning: definition of SAA boundary for incorporating SAA data gaps in DC2

- **Requirements**
  - ISOC mission planning requirements revised and internally reviewed
    - will coordinate with GSSC for use of common mission planning tools where appropriate, e.g. target visibility prediction
  - Refining new requirements on TKR and CAL calibration products (moved from FSW to ISOC)
December Activity (cont.)

- **ISOC architecture**
  - Completed more detailed data flow diagrams for ISOC elements, to coordinate with other ground software development by SAS, SVAC etc.
  - already reviewed with ISOC team, will be reviewed with other ground elements in January

- **GOWGs**
  - ISOC staff will support GOWG TIM at GSFC in the first week of February

- **Fastcopy**
  - Received 2 Fastcopy licenses for ISOC. Checking with vendor about portability of licences and needed privileges before installing them on servers
  - ISOC development and testing is using temporary Fastcopy licences
December Activity (cont.)

- **SAA boundary definition study**
  - First work on realistic SAA boundary definition performed, to support DC2 planning
  - Uses AP8MIN trapped radiation model from NSSDC
  - SAA boundary defined by 12-segment polygon hand fit to proton flux = 1 p/cm^2/s for protons with E > 10MeV. This roughly corresponds to ~doubled LAT background rate of 10kHz, for Aeff = 10,000cm^2
  - Although realistic, there are planned updates:
    - update IGRF from 2005 epoch to 2007/8 epoch
    - investigate higher fidelity radiation models, e.g. TPM from MSFC
  - study details at [http://www.slac.stanford.edu/~rac/SAA](http://www.slac.stanford.edu/~rac/SAA)
  - Next step: confirm LAT tracker data to be used for in-flight refinement of SAA boundary
December Activity (cont.)

- SVAC coordination meetings
  - ISOC supports SVAC-driven move to incorporate sub-system config data in UDF elements in LDF data files

- Database development
  - improved web interfaces to databases
  - static trending web pages generated from Perl replaced with dynamic ColdFusion pages
  - working with SLAC Java experts on using JAS3/AIDA tags in ColdFusion pages, to include better graphics capability (ColdFusion graphics are too primitive for LAT needs)
  - debugging ITOS dbx database file compatibility problems for loading into SCS Oracle
  - some early work on display of TKR ToT, dead/noisy channel information
  - still awaiting real data from Flight Cal tests
December Activity (cont.)

- **Flight Software coordination**
  - Web-based documentation system for FSW C&T handbook is largely finished
  - More details of use of FSW diagnostic data being gathered. Need to clarify typical and atypical uses of diag telemetry, for future discussion with MOC reps at GOWG TIM
Early 2005 Activities

- Ground Operations TIM at GSFC delayed to February 2005
- Installation of 2 ISOC development workstations
- Continue work on Kavli building usage for ISOC
  - Cost estimate for build-out of light lab area in Kavli for ISOC operations area: working with KIPAC and Stanford Department of Capital Planning which will produce cost estimate
  - Move ISOC staff and computers into offices in Building 210 as short-term ISOC office space and operations workstation area
- Key milestones for ISOC:
  - ISOC s/w release 1: 28 April 2005
  - GRT#2: 15 June 2005