



GLAST Monthly PSR

Flight Software / Simulation

April 2004

Erik Andrews / John Teter
Software & Simulator Systems

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S/C Flight Software

April 2004



u **Progress**

1. *FSW CDR Dry Run held. Comments incorporated for the FSW CDR on 4/15-4/16*
2. *Many of the RFAs have closed or are close to closure*
3. *IV&V biweekly telecon continues, working Requirements \ Interface Analyses*
4. *No code review, none likely until after Peer Reviews*

u **Plans**

1. *FSW CDR scheduled for 4/15-4/16*
2. *Working RFAs to closure*
3. *Support Design / Code Reviews as they occur*
4. *Address IV&V TIMs against the Requirements and Design Document*



LAT Flight Software



u **Recent Accomplishments**

- *Lehman Review.*
- *4/02/04 – 3rd monthly FSW Demo*
 - *Configured GASU – big deal. Limited display of it, but successful.*
 - *Last timing and data corruption errors being wiggled out of the LCB*
 - *Watchdog demo (from last month) performed.*
 - *CCSDS framing demo postponed until SIIS arrives.*
- *Telemetry Design Discussions –*
 - *APID uses evaluated and agreed upon internally. (Will be asking for some)*
 - *Science Telemetry stream intends to use ‘self-describing’ packets.*
- *Decision: LAT FSW boot will wait for (ground command before full boot.*
- *Draft of updated FSW SRS approved by LAT FSW CCB 4/6*
 - *Will be released after signature cycle.*
 - *Other material to come under CCB control reviewed and made action for next.*

u **Plans/Upcoming Events**

- *4/14/04 – ISIS Plan to be completed*
- *4/30/04 – FSW Test Plan updates, SRS requirements traceability updates*



GBM Flight Software



Status -

- *EM-1 Build development and testing continues.*
- *DPU #1 delivered from SwRI to MSFC. DPU #2 sent back to SwRI for updates.*
 - *Schedule of re-delivery of DPU #2 unknown (by me).*
- *SDIS delivery, checkout and training executed on week of March 15-18*
 - *Some problems with property forms cost a day delay, otherwise went well.*
- *Several capabilities that were scheduled originally in Build 2 are now being incorporated into Build 1.*
 - *What: Primarily Hardware interfaces and checkout.*
 - *Why: This was done to support the SwRI troubleshooting on the DPU.*
 - *When: Delayed FSW Build #1 delivery from 11/03 to 3/04*
- *3/31: missing capability: Housekeeping Telemetry stream not populated.*

Upcoming: EM-1 Build Testing begins late this month.

- *EM FSW Build 1 Test Procedures being worked*
- *FSW Build #1 code and testing complete target April 20 (approx).*
- *Build 1 FSW load is the basis for the GSIS delivery in summer (June'04 ?) to Spectrum Astro.*



Issues/Problems

u **LAT FSW**

- *I&T coordination with FSW:*
 - *Last Month: weekly meeting established*
 - *This Month: Not so sure we're in sync.*
 - *Two "requests" made last week were 'new' reqmts for FSW inputs to I&T*
- *Testing of builds with adequate formality remains a concern.*
 - *Working to address this. Ramp up formality on demo's over time.*
- *SIIS delivery moving out complicates testing plans for LAT DAQ.*

u **SC FSW**

- *Software Design Document delivered so early (Oct for CDR) that it really needs to be re-released. Have notified Joy of this problem.*
 - *Some code being reviewed has no counterpart in [the current] SDD*
- *Some code declared exempt from formal peer – Reuse portions.*

u **GBM FSW**

- *None major – moving more slowly than schedule indicated.*



Rolling Wave Schedule



u *Included with SC and Instrument Rolling Wave...*



S/C & Instrument Simulators



07 April 2004

v **Accomplishments**

– **GBM SIIS/SDIS**

- **GBM SDIS delivered to MSFC during week of 3/15-18**

– **LAT SIIS / SIIS Harness**

- **Buildup continues; Harness design complete and being reviewed by project and LAT.**
- **Risk: Contractual issues with harness may slow down its build.**
- **Agreement with Spectrum to perform LAT ISIS acceptance on-site @ SLAC!**

– **MOC Training Simulator (MTS) / Command-Telemetry Simulator (CTS)**

- **CCRs drafted for MOC Simulators to:**
- **Remove CTS delivery**
 - **CTS is a duplicate of PSS**
 - **PSS is delivered earlier**
- **Change MTS delivery and break into two drops**
- **Add Instrument simulation capability to MTS**

– **LAT, GBM ISIS delivery dates updated on GFE list**



S/C Simulators

07 April 2004



u **Plans**

- *Board MOC simulator CCRs*
- *Support GBM, LAT ISIS interface meetings*
- *Continue to work LAT SIIS schedule with SAI*



S/C Simulators

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u **Issues**

- *LAT SIIS is being worked. Need to turn around harness proposal. Delivery now scheduled for end of May during CDR timeframe.*
- *Collateral Damage (ie. Associated Risk): LAT (DAQ) team needs SIIS to checkout the LAT ISIS. Could / Will push back the delivery of the ISIS to Spectrum.*
- *Looking ahead to the LAT ISIS delivery to Spectrum – the LAT ISIS's GSE is in fact the LAT SIIS!*
 - *To remove the LAT SIIS from SLAC to take it to Spectrum for LAT ISIS checkout would have significant impact on the LAT DAQ Integration of the Elex Subsystem...*
 - *Consider: Some use of future (MTS, SDMS) equipment that could act as LAT ISIS GSE for the LAT ISIS at Spectrum... To be worked. Stay tuned.*



Sim Status

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<i>Simulator</i>	<i>Function</i>	<i>Delivery</i>	<i>Issues/Comments</i>
CTS	Basic C&T Testing	L-18	CCR written to remove CTS. Functions provided by PSS.
MTS	MOC Training and GS Testing	L-12	CCR written to move to L-17 w/ second drop at L-12
GBM SDIS	GBM EM Checkout	3/15/04	Delivery complete.
LAT SIIS	LAT EM Checkout	5/19	Proposal not submitted.
GBM ISIS	SC Integration Testing	SCCDR + 3 months	GFE dates updated
LAT ISIS	SC Integration Testing	7/15	GFE dates updated
SDMS	Software Development	L-12	