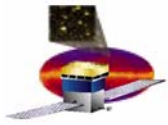


# GLAST Large Area Telescope

**WBS 4.1.B ISOC  
GSFC Monthly Review  
June 30<sup>th</sup>, 2004**

**Bill Craig  
ISOC Lead (Acting)**



## May/June Accomplishments: Overview

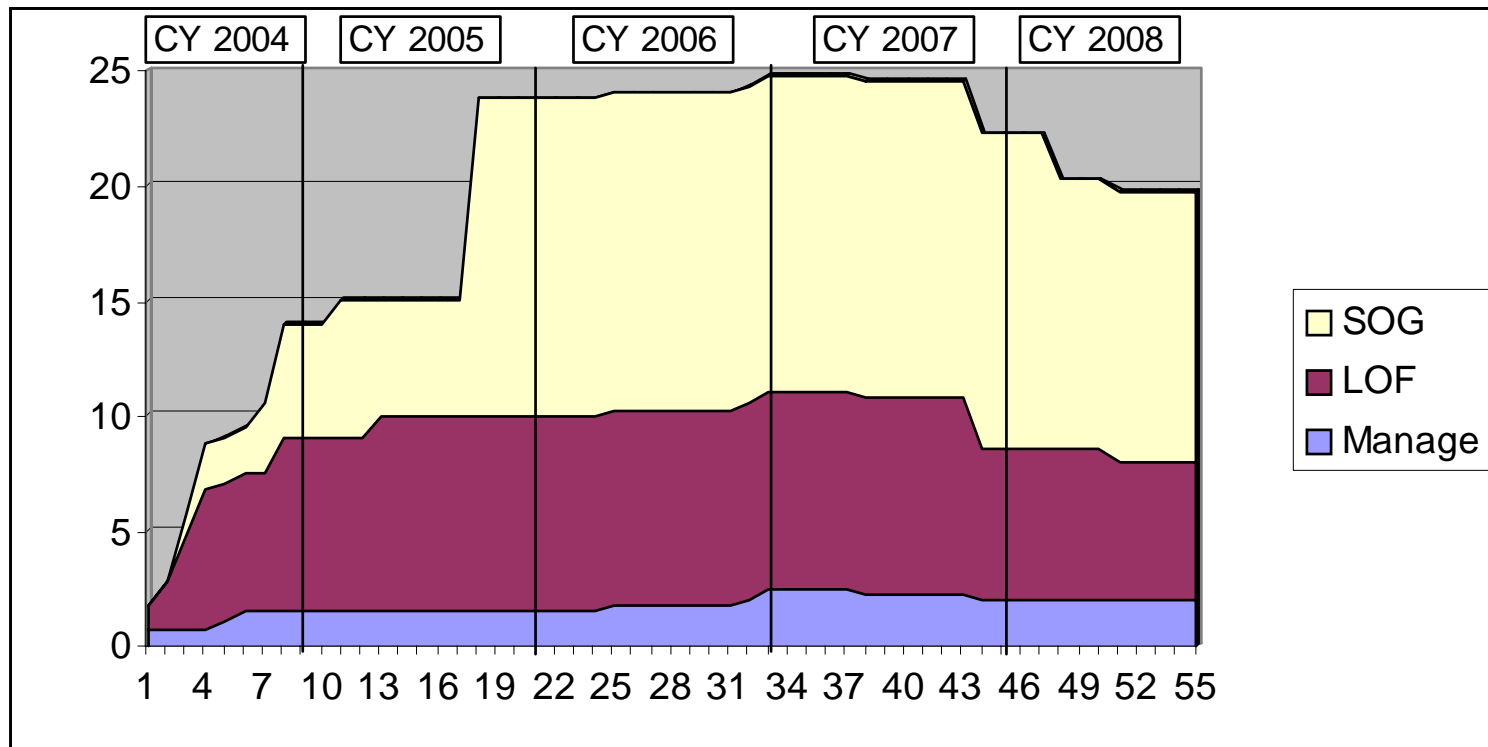
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- We have developed an organization and staffing plan in concert with the SLAC management.
  - **ISOC buildup started, rapid ramp up over next year**
- We have completed initial work on an operations architecture.
- We have made good progress in addressing peer review RFAs
- Substantial work remains before CDR but we believe we will be ready by late July.

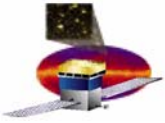


# May/June Accomplishments

- We have developed an organization and staffing plan in concert with SLAC management.



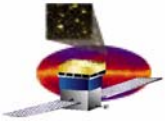
**Excludes SAS and SAC.**



# Staffing

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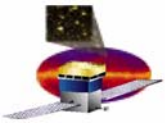
- **Rob Cameron signs on as ISOC lead, to start on August 16<sup>th</sup>.**
- **Software developer Steve Culp joins in June**
- **Database developer posting out now**
- **Technical writer posting out now**



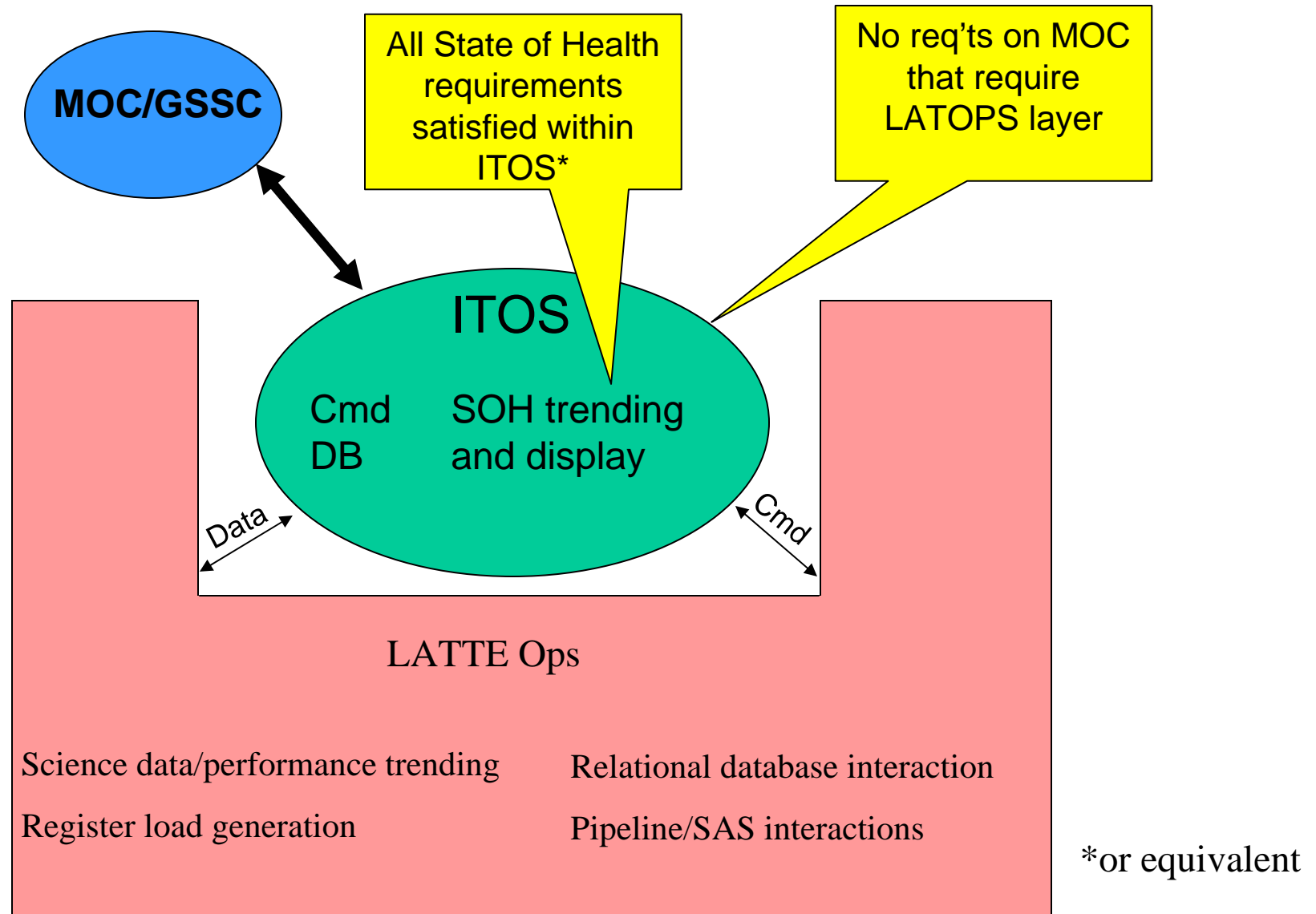
## May/June Accomplishments

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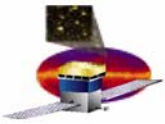
- **We have completed initial work on an operations architecture.**
- **Drivers**
  - **Minimize V&V burden and total cost**
  - **Maintain all science capabilities**
  - **Simplify interfaces and allow early testing**
- **Recognized that neither of the previously considered options were particularly attractive**
  - **ITOS/Commercial packages don't accommodate complexities of science data**
  - **Homegrown system doesn't have heritage, not ready in time to make project timelines.**
    - **Most of additional code needed duplicates that in existing packages**
  - **→ Studied hybrid solutions**



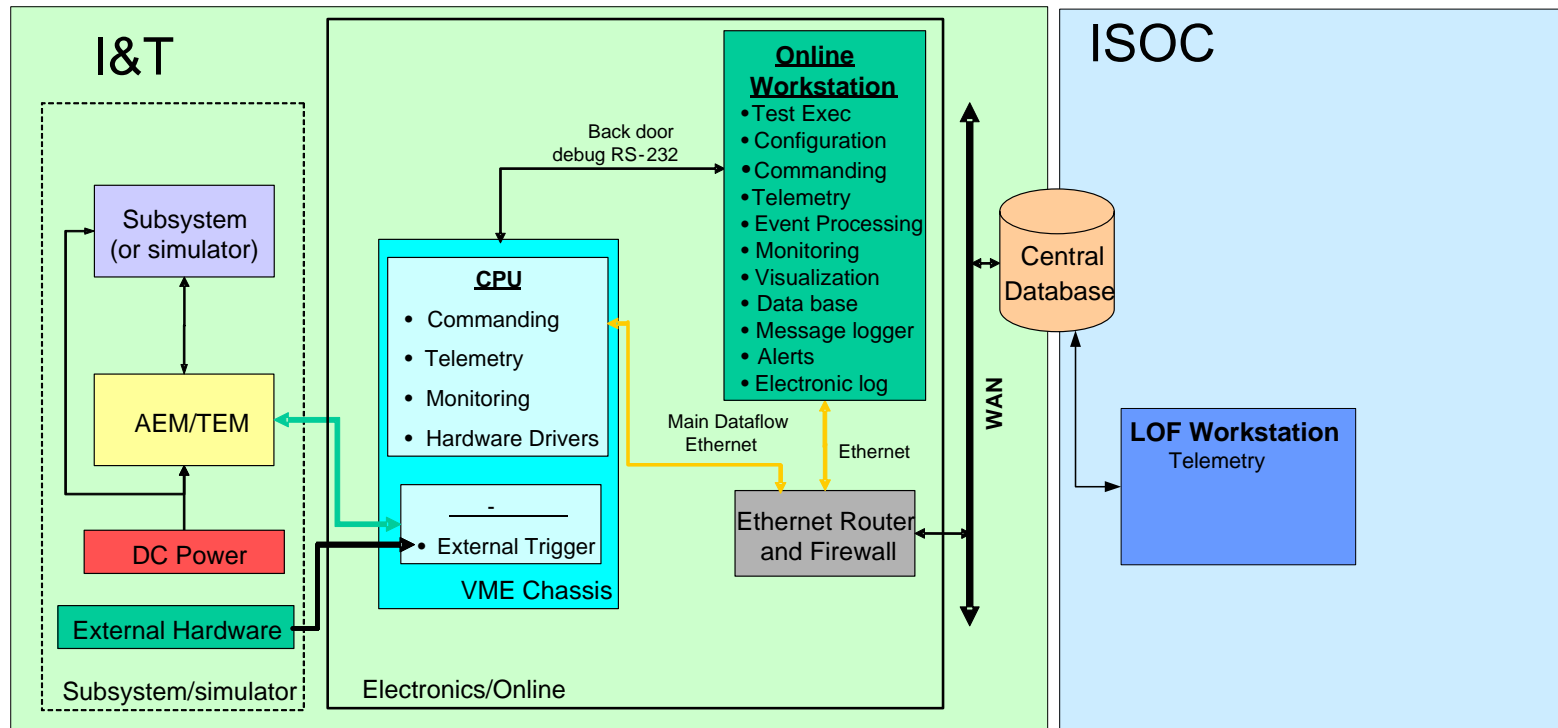
# Proposed ISOC S/W Architecture



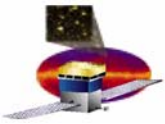
\*or equivalent



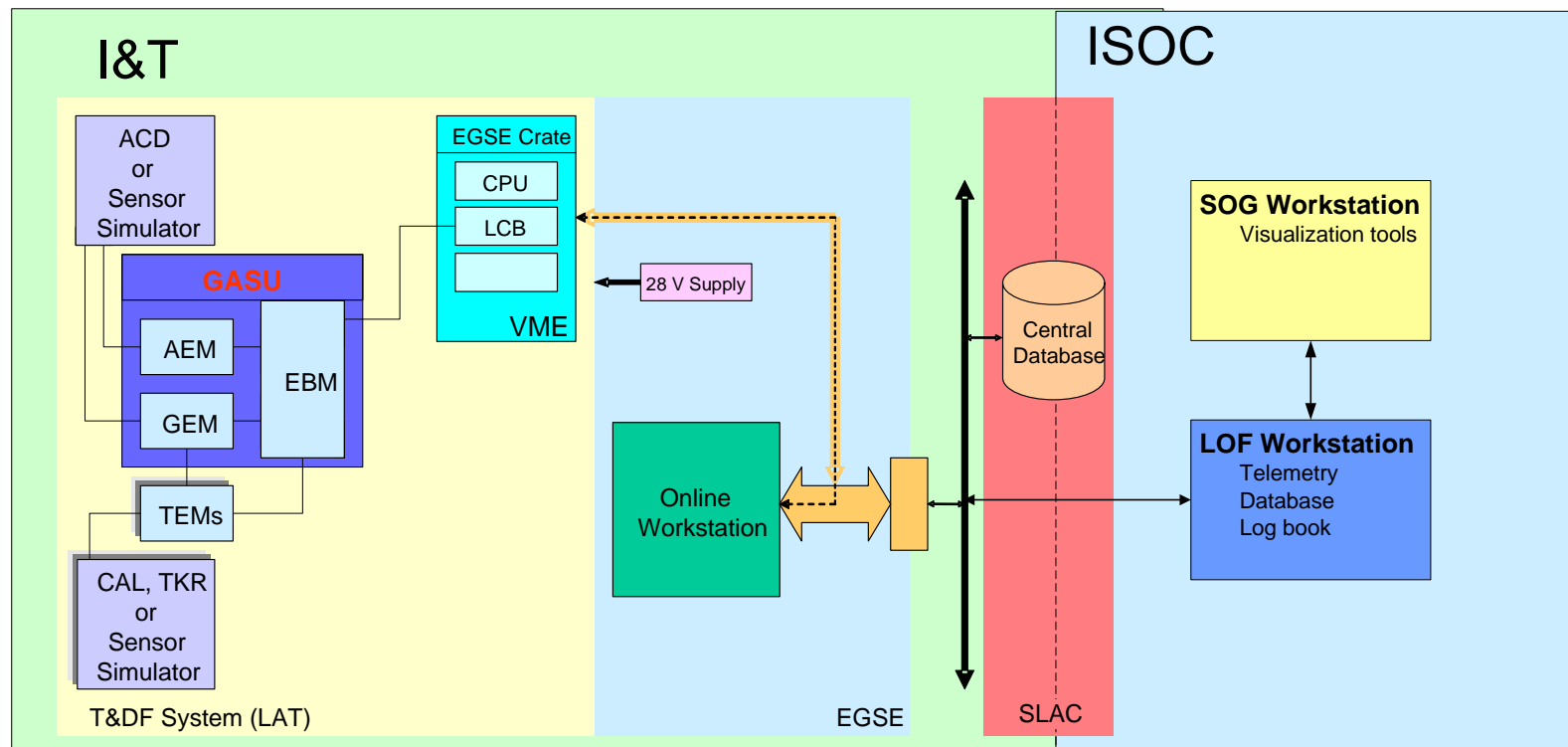
# ISOC Dataflow During I&T Single Tower Testing



- Obtain data during I&T EM2 testing
- Goal is to read houskeeping data off flat file produced by Online
- Database development and maintenance is shared between I&T and ISOC



# ISOC Dataflow During I&T Multi-Tower Testing

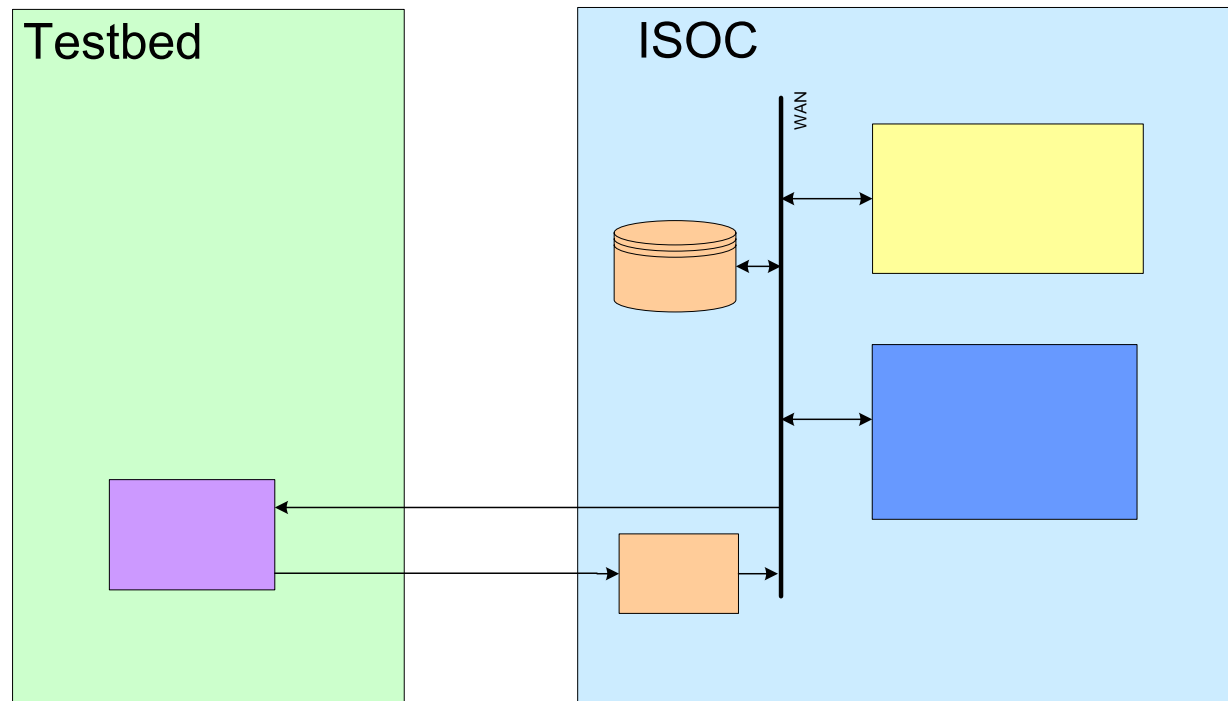


- Obtain data during I&T testing
- Increase in ISOC functionality





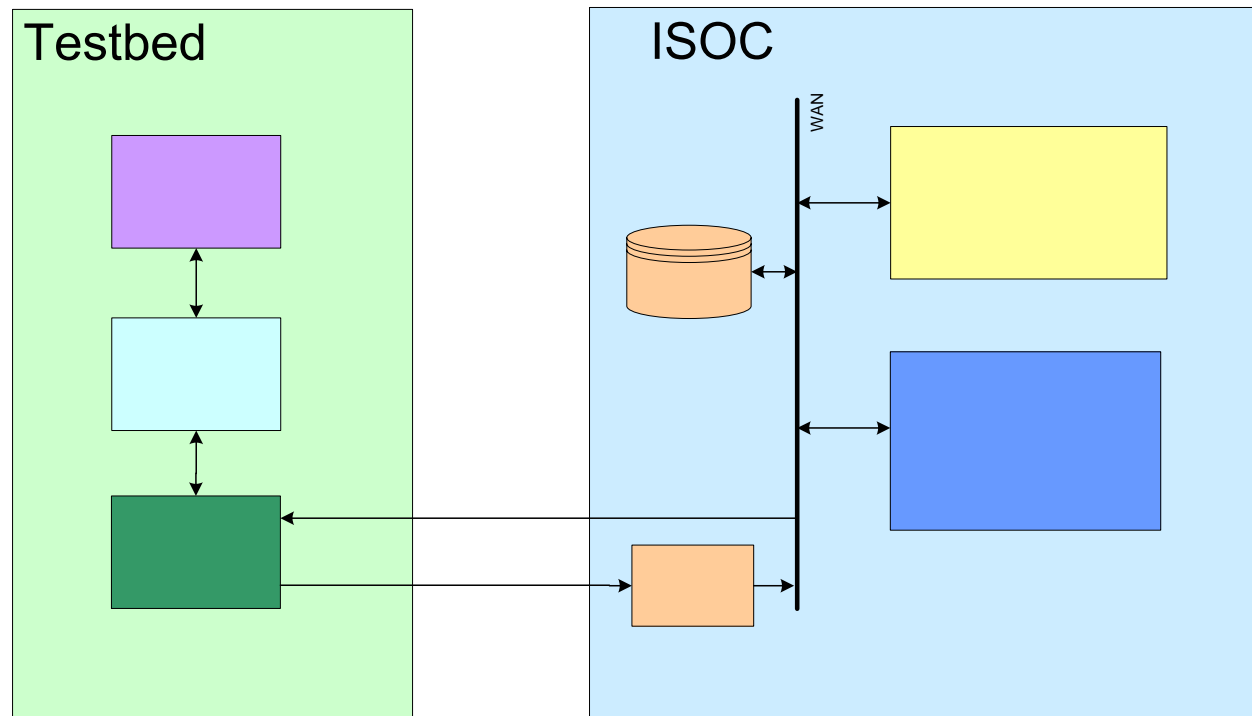
# ISOC Dataflow with TestBed - Direct to SIU



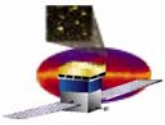
- **Direct interface with SIU for CCSDS command and telemetry packets**
- **Obtain testbed simulated data via SIU**
- **Demonstration of ISOC capability increases as functionality is developed**



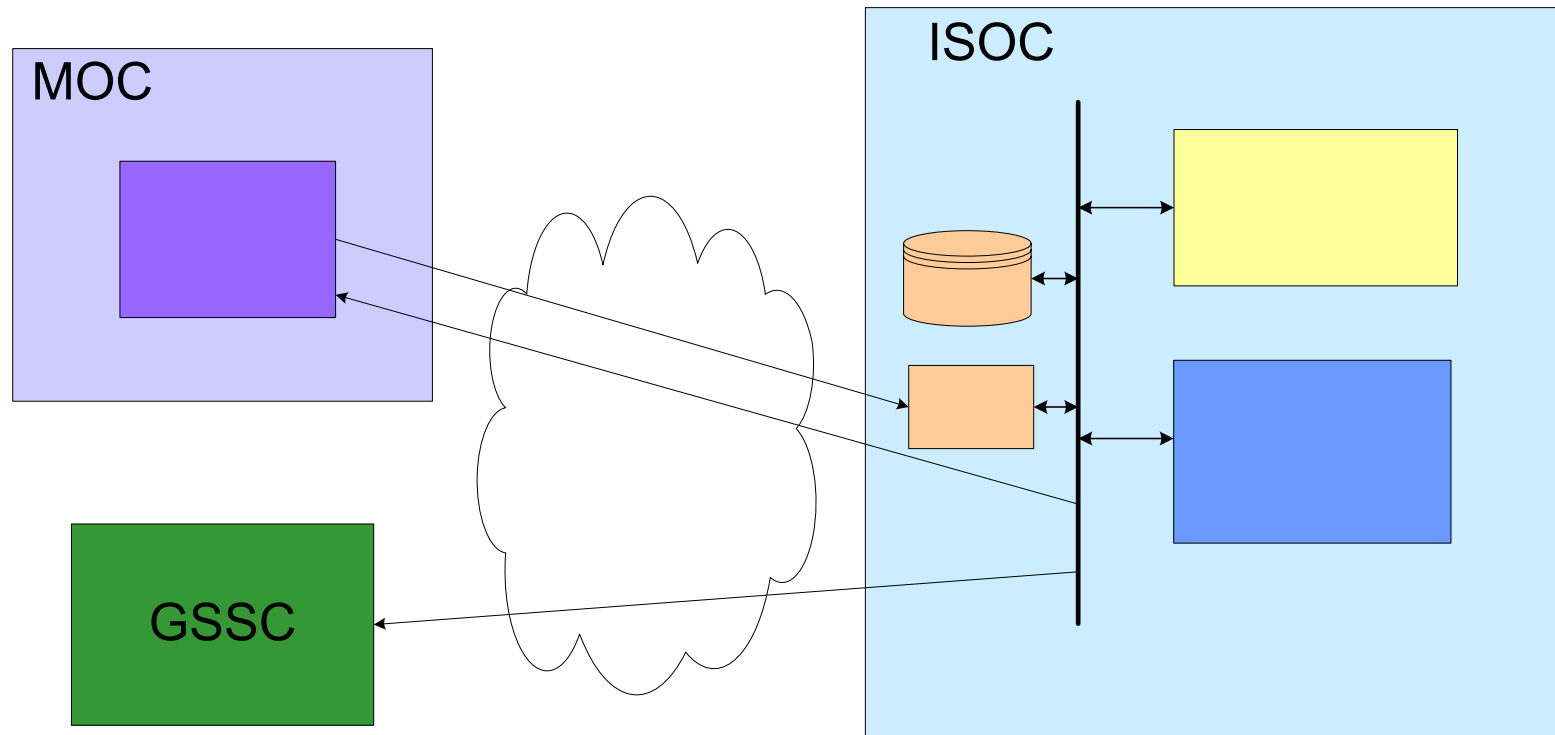
# ISOC Dataflow with TestBed - With SIIS



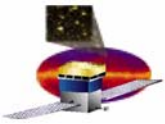
- **Interface with SIIS/AstroRT for telemetry packets and commanding**
- **Obtain testbed simulated data via SIU and SIIS**
- **Demonstration of ISOC capability increases as functionality is developed**



## ISOC Dataflow During GRTs, L&EO and On-orbit



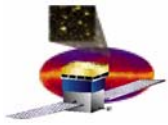
- Shows full ISOC capability for L&EO and On-orbit
- GRTs will test capabilities as they are available



## Architecture status

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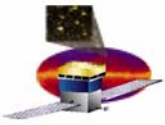
- Ops plan in review by GSFC
  - Many good comments received
- Level II and III requirements in review by GSFC
  - Comments expected this week
- Management & Ops plan, and Level II/III requirements to be in near final form at CDR.
- ITOS evaluation underway, ITAR issues being worked.



## May/June Accomplishments: RFAs

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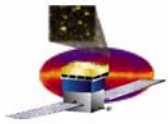
- We have made good progress in addressing peer review RFAs
  - 7 of 20 now submitted for closure
  - 7 of remaining to be submitted in next week
- All RFAs will be submitted for closure by end of July.



## May/June Accomplishments: Other

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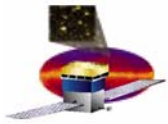
- **Database working group convened (with I&T)**
  - **6 meetings of broad group**
  - **Examined needs, possible solutions, basic requirements**
  - **Concluded that a SQL relational database, nominally Oracle, would suffice for both I&T and Ops.**
  - **Database developer position now posted.**



## May/June Accomplishments: Other

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- **Scenarios working group convened (with FSW, I&T)**
  - **Define ops scenarios by phase**
    - I&T (both pre and post FSW)
    - Launch & on-orbit checkout
    - Survey
    - Pointed
  - **Will begin meeting with subsystems next week**
    - Examine assumptions for each by phase
    - FSW, I&T to attend all meetings
- **Mnemonic naming convention discussion initiated**
- **Attended S/C CDR**



## Near Term Milestones

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- **ISOC CDR, August 3<sup>rd</sup>**
  - **Primary effort of ISOC staff for next month**
  - **Weekly tagup with GSFC MOC/GDS to review docs, progress...substantial assistance from the project.**
- **Ground System Detailed Review August 18-19, 2004**
- **LOF SW Release 1 March 15, 2005**
  - **Support GRT #2**
- **LOF SW Release 2 October 14, 2005**
  - **Support GRT #5**
- **Mission Operations Review October 18, 2005**





## CDR Prep Schedule

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- **July 8<sup>th</sup>** Revisit roadmap with project management
- **July 21<sup>st</sup>** Draft slide review
- **July 26<sup>th</sup>** Slides to GSFC
- **July 29<sup>th</sup>** Dry Run
- **Aug 3<sup>rd</sup>** ISOC Peer Level CDR
- **Aug 18<sup>th</sup>** GDS CDR



## Issues and Concerns

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- **Staffing profile is steep over next few months and coincident with management change.**
  - **Transition plan in work, new manager Cameron to receive weekly briefings on progress, plans.**
  - **Some near term help may be contract to reduce hire cycle time.**
- **Development of ISOC software will require close collaboration with I&T and FSW.**
  - **Working relationship has been good, regular forums for interchange on areas of common concern now in place.**
- **Work required for CDR prep is formidable for 3 person team**



## Budget & Schedule

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- **ISOC effort is off project**
- **Detailed development schedule in work for CDR, no issues foreseen in meeting '05 milestones for readiness**