

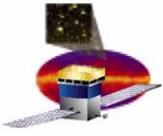
# GLAST Large Area Telescope

GSFC Monthly Review  
1 September 2004

ISIS Development Status

Jana Thayer  
Stanford Linear Accelerator Center




[jana@slac.stanford.edu](mailto:jana@slac.stanford.edu)  
(650) 926-4956



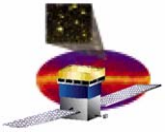
# ISIS Hardware Chunks

- Three phases of hardware completion
  - In progress
  - Commissioning/Testing (C/T)
  - Complete
- **Note: All hardware items have been previously prototyped and tested**

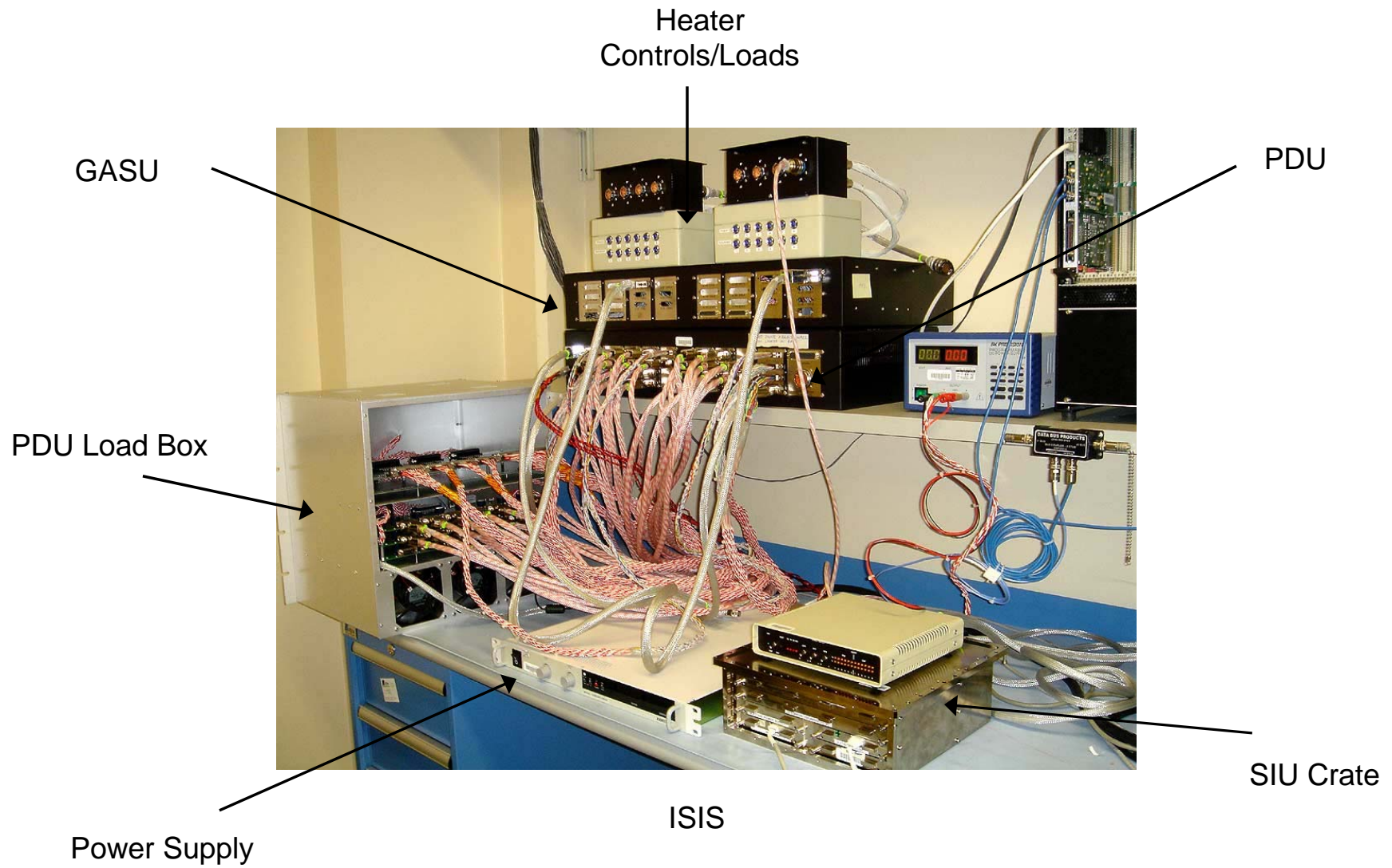
Copy of Object for ISIS	Status	Remaining in Phase	Relative Effort
SIU	C/T	10%	Small
RAD750	Complete	0%	None
SIB	Complete	0%	None
LCB*	C/T	10%	Small
Backplane	Complete	0%	None
RS-232 Serial Board	Complete	0%	None
Ethernet Board	Complete	0%	None
GASU	Complete	0%	None
PDU	Complete	0%	None
Heater Control Box	Complete	0%	None
PDU Load Box	Complete	0%	None
Heater Loads	Complete	0%	None
Cables	Complete	0%	None
Temp. Sensor Box	In progress	10%	Small
Assembly, panels, etc.	In progress	0%	None

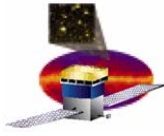
 = Low Risk  
 = Medium Risk  
 = High Risk

\* OLD LCB has been fully tested; work remaining represents the effort to integrate the NEW LCB






# ISIS

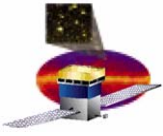




# ISIS Major Software Components Provided by FSW

	FSW Responsible Party and Remaining Work	Relative Effort Required
<ul style="list-style-type: none"><li>• <b>Telecommand Infrastructure</b><ul style="list-style-type: none"><li>– <b>Routing of commands</b></li></ul></li></ul>	Tony Waite – 10%	Small
<ul style="list-style-type: none"><li>• <b>Solid State Recorder (SSR) Infrastructure</b><ul style="list-style-type: none"><li>– <b>Science Data</b></li></ul></li></ul>	Ed Bacho/Mark McDougald – 25%	Small
<ul style="list-style-type: none"><li>• <b>Power Management Infrastructure</b><ul style="list-style-type: none"><li>– <b>Ability to dynamically modify power profile</b></li></ul></li></ul>	James Swain – 0%	None
<ul style="list-style-type: none"><li>• <b>Telemetry Infrastructure</b><ul style="list-style-type: none"><li>– <b>Diagnostic</b></li><li>– <b>Housekeeping</b></li></ul></li></ul>	Tony Waite – 25% Sergio Maldonado – 0%	Small None




-  = Low Risk
-  = Medium Risk
-  = High Risk

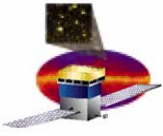


# ISIS Telecommands

- **ISIS functionality is fundamentally defined by the telecommands available to the 1553 interface. Command progress gives insight into ISIS Software completion.**

Command	Responsible FSW Party	Remaining Work	Relative Effort
Boot Commands	Dan Wood	0%	None
Memory Commands	Dan Wood	0%	None
No-op	Steve Mazzoni	0%	None
Reboot	Steve Mazzoni	0%	None
S/C Load Shed Notification	James Swain	0%	None
S/Ct Broadcast (TT/Att/Anc.)	Tony Waite	10%	Small
TCS Command HP Heater On/Off	Steve Mazzoni	0%	None
ISIS Request ARR Generation	Steve Mazzoni	0%	None
ISIS Discrete Management	Steve Mazzoni	0%	None
ISIS Science Data Commands	Ed Bacho	25%	Small
ISIS Report Counts	Tony Waite	75%	Small
ISIS PDU-based Power Switching	James Swain	0%	None
Send Diagnostic Packet	Sergio M.	0%	None
Set Task-Level Command Verification	Tony Waite	100%	Small
GBM message from S/C (1553)	Tony Waite	100%	Small

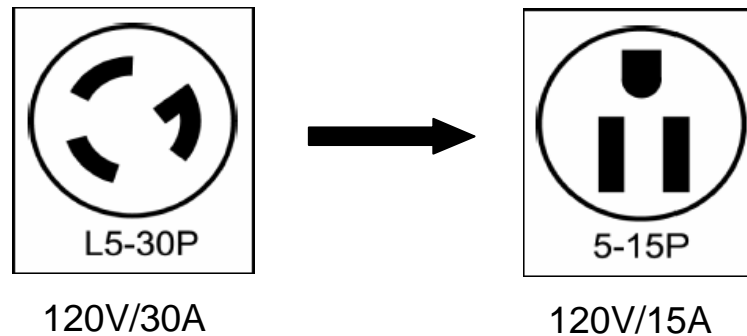
 = Low Risk  
 = Medium Risk  
 = High Risk



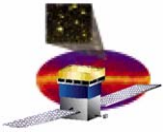
# SIIS preparation

---

- Prior to SIIS arrival, ensure that Specrum changes plug on power feeds



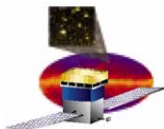
- Create room in dataflow lab for SIIS-sized object
- String GPS cable
- Upon SIIS arrival, test the following:
  - SSR interface
  - Commanding
  - Discretes
  - Behavior of unsigned int/short
  - Other miscellaneous



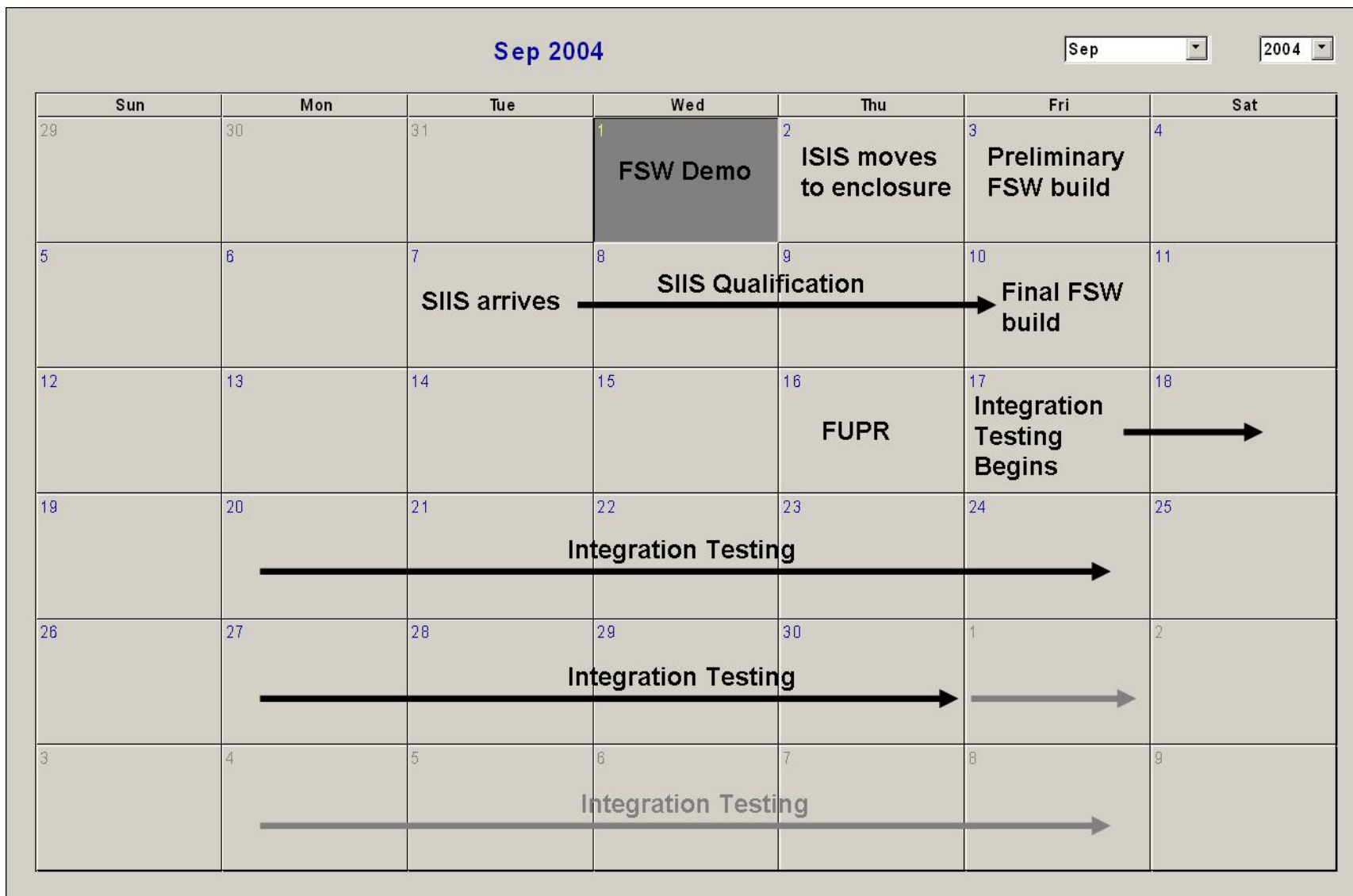
# ISIS Action Items

---

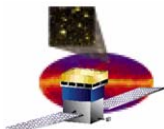
- **Assemble ISIS in rack enclosure**
  - **Total time required: ~3 hours**
  - **Expected date: 9/1/04**
- **Package a build of the ISIS software and burn into EEPROM**
  - **Preliminary build anticipated: 9/3/04**
  - **Final build anticipated: 9/10/04**
- **ISIS testing**
  - **Integration testing begins: 9/17/04**
  - **Acceptance testing: 10/19/04 – 10/21/04**
- **Documentation**
  - **ISIS Safe-to-Mate: 9/24/04**
  - **ISIS Acceptance Test Procedures**
    - **Written as ISIS SW is delivered and tested**
  - **Test Readiness Review documentation**
  - **ISIS Build Description**
- **This schedule represents an aggressive approach to ISIS production!**



# Schedule - September







# Schedule - October

Oct 2004 Oct 2004

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	1	2
	Integration Testing					
3	4	5	6	7	8	9
	Integration Testing					
10	11	12	13	14	15	16
	Integration Testing					
17	18	19	20	21	22	23
	Acceptance Testing					
24	25	26	27	28	29	30
31	1	2	3	4	5	6