

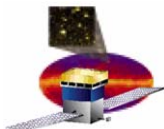
GLAST Large Area Telescope

GSFC Monthly Review
3 November 2004

ISIS Development Status

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ISIS – front view

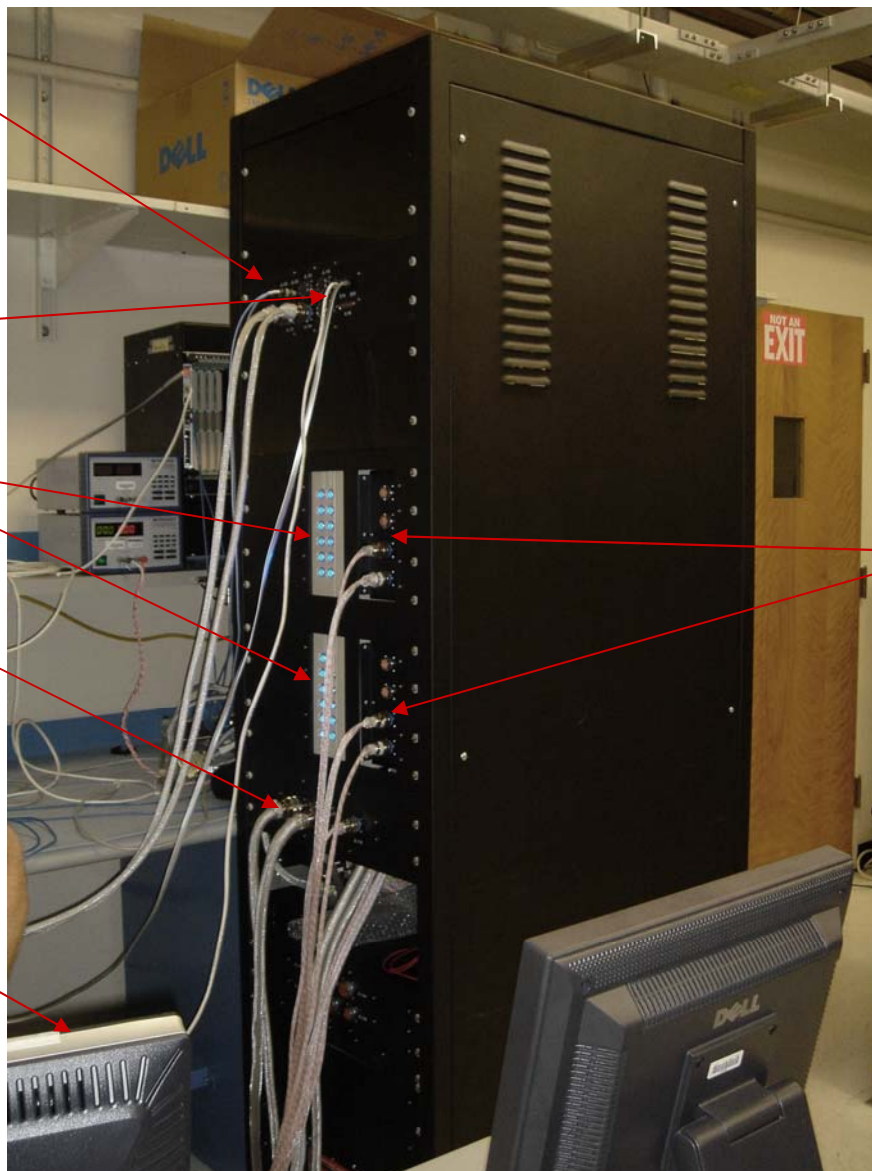
Connections to SDIS:
1553, SSR, and Discretes

Ethernet and Serial
Connections

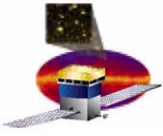
Heater Loads

Power feeds (SIU, PDU)

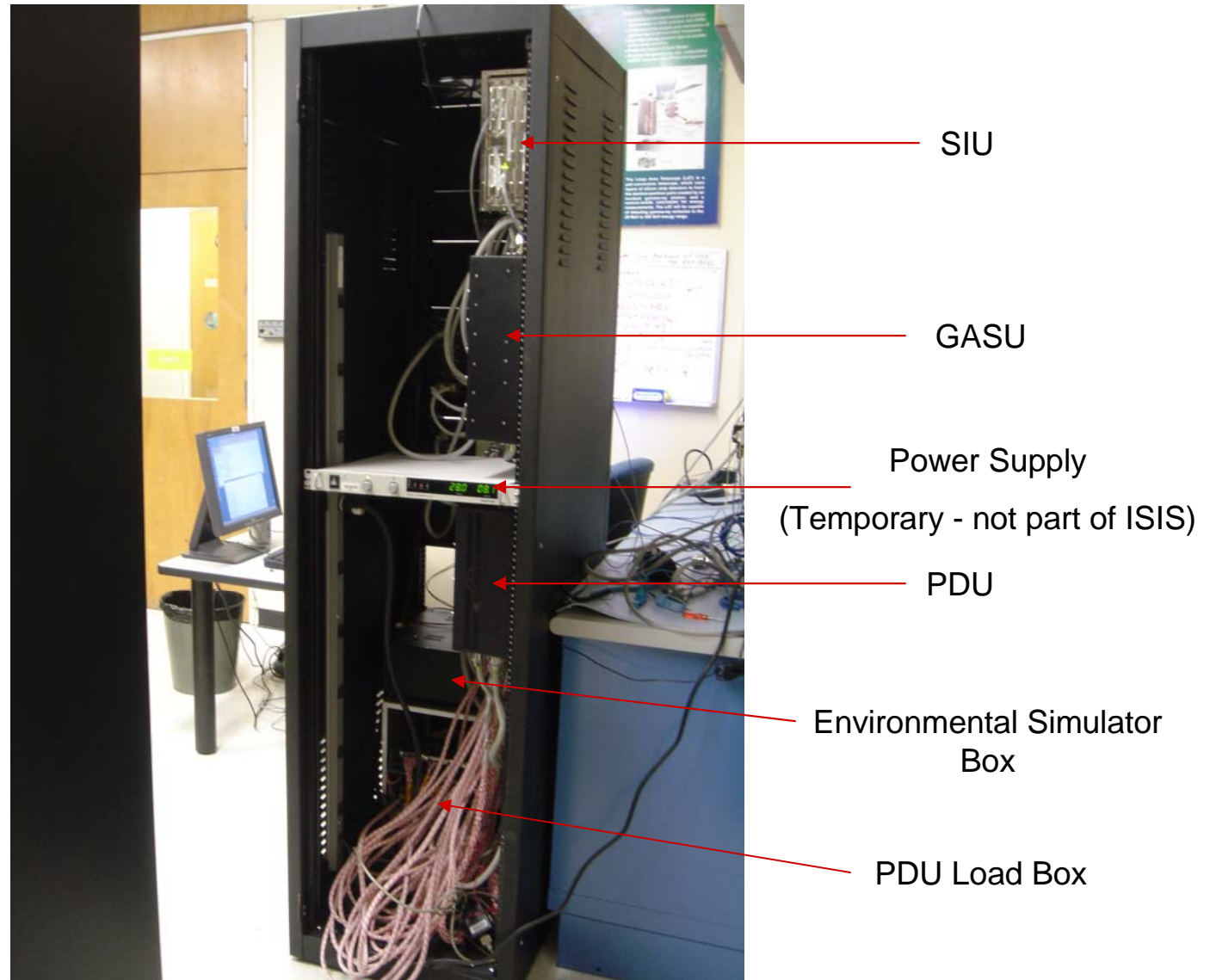
PC running
AstroRT

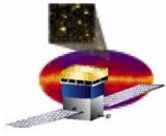


Heater Controls



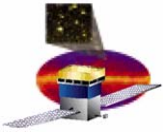
ISIS – rear view





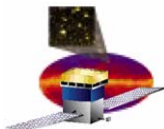
ISIS Progress

- **Hardware delivered**
 - Fully tested
 - Assembled in black enclosure
- **Software build delivered**
 - Fully tested against old LCB
 - Mostly tested against new LCB
 - Additional code added at QA's request (SW/HW version rpt)
 - Still missing:
 - ITC Command Verification
 - Several unexpected bugs identified and fixed
- **Documentation to be written**
 - ISIS Safe-to-Mate: waiting for final revision
 - ISIS Acceptance Test Procedures
 - Majority of scripts are written, with procedures in progress
 - ISIS Build Description
- **ISIS Acceptance Test Development**
 - Main focus of present effort
- **Schedule Concerns**
 - Safety stand-down extended the ISIS schedule
 - Possibly more with some SLAC groups still suspended
 - Portion of testing effort underestimated



ISIS Formal Test Procedure

- **Note: Almost all of the ISIS hardware and software has been informally tested for functionality**
- **Formally testing the ISIS means developing the following:**
 - **Description of required hardware and connections**
 - **Description of required software setup**
 - **Displays needed**
 - **Software initialization procedure**
 - **List of steps necessary to initialize and run test script**
 - **Test scripts (stored in CVS)**
 - **Location for log file(s) and any analysis file(s)**
 - **Description of how to interpret results**
 - **Description of pass/fail criteria**
- **Intent is to allow someone without intimate knowledge of the system to perform the test**



ISIS testing

Color coding represents relative effort required to complete the test:



= Small Effort Required

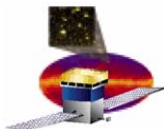


= Medium Effort Required



= Large Effort Required

Test Categories	Tested?		Remaining Work
	Informally	Formally	
1553 Command Reception, Delivery, Verification	✓		2 days
Attitude, Ancillary, TimeTone Command Processing	✓		½ day
HSK, Alert, and Diagnostic Telemetry	✓	✓	½ day
Science Data Interface	✓		5 days
Data integrity (patterns)	✓		3 days
Transmission rate/duration	✓		1 day
Packet length	✓		1 day
Test commands for discrete outputs	✓	✓	None
Monitoring of input discrete lines	✓	✓	None
Cold boot on discrete reset signal	✓	✓	½ day
Test commands for ARR	✓	✓	None
Boot commands/telemetry	✓	✓	1 day
Power Control (TEM, ACD, EPU)	✓	✓	½ day
Voltage Monitors	✓		½ day
Heater Control	✓	✓	½ day
Temperature Sensors	No Script	No Script	None



Schedule - November

Nov 2004

Nov 2004

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	1	2	3	4	5	6
		Continued Test Development				
7	8	9	10	11	12	13
		Continued Test Development				
14	15	16	17	18	19	20
		Circulation of ISIS Test Procedures for Comments				
21	22	23	24	25	26	27
		ISIS Test Procedure Comment Integration + Thanksgiving				
28	29	30	1	2	3	4
	ISIS TRR	SIIS Acceptance Testing				
5	6	7	8	9	10	11
		ISIS FQT				