
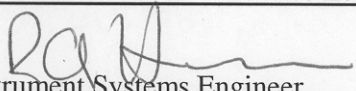
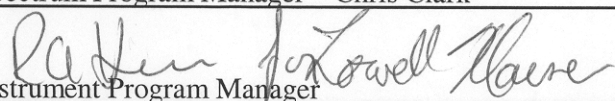


rec'd - 8-18-03
 approved - AUG 25 2003

 <h2 style="text-align: center;">GLAST Mission Interface Change Notice (ICN)</h2>		ICN No. 004 r1
		SHEET 1 of 2
ORIGINATOR: Tim Morse	PHONE: 480-892-8200	DATE: 8-15-03
CHANGE TITLE: LAT Instrument Interface Simulator Requirements		ORG: Spectrum Astro
DOCUMENT NUMBER	TITLE	VERSION
1196-EI-Y46311-000	LAT-SC ICD	Rev A
REASON FOR CHANGE: LAT Instrument Interface Simulator Requirements were never defined. Document needs to be updated to allow LAT to develop the interface simulator to support early electrical interface testing to the SC Hotbench.		
PROPOSED CHANGE: Was: 8.2 LAT Instrument to Spacecraft Interface Simulator TBD (GLAST Project Office to Provide) Proposed: See attached page.		
INSTRUMENT IMPACT <input type="checkbox"/> Cost <input type="checkbox"/> Schedule		
SPACECRAFT IMPACT <input type="checkbox"/> Cost <input type="checkbox"/> Schedule	No SC Impact.	
ORIGINATOR SIGNATURE:		
APPROVAL SIGNATURES:		
Spectrum Instrument Interface Lead – Tim Morse  Instrument Systems Engineer		Spectrum Program Manager – Chris Clark  Instrument Program Manager

8.2 LAT Instrument to Spacecraft Interface Simulator

The LAT Instrument to Spacecraft Interface Simulator (ISIS) will be used to support the development of the Spacecraft C&DH and Power systems with early testing of the electrical interfaces. The ISIS provides for separately testing each side of the redundant Spacecraft systems with simulations of one side of the redundant LAT. The ISIS should be able to represent the data flow that will be used to calibrate the instrument as well as the diagnostic data that will be generated to troubleshoot any problems with the instrument.

8.2.1 1553 Interface

The ISIS shall send simulated telemetry packets per the 1553 protocol document.

The ISIS shall receive telecommand packets per the 1553 protocol document. The ISIS shall indicate whether the command was successfully received.

The ISIS shall generate telecommands per the 1553 protocol document.

8.2.2 Science Data Interface

The ISIS shall provide 1 clock, 8 data and 1 data_valid signals using the protocols in the ICD.

The ISIS shall receive one SC Ready signal.

The ISIS shall send representative (verifiable) data over the interface at rates defined by the instrument.

8.2.3 Pulse per Second

The ISIS is not required to receive the SC PPS signal.

8.2.4 Discrete Commands

The ISIS shall receive four discrete commands using the protocols as defined in the ICD.

The ISIS shall indicate successful reception of command signal.

8.2.5 Discrete Monitors

The ISIS shall send two simulated signals using the protocols defined in the ICD upon request.

8.2.6 Analog Temperatures

The ISIS shall provide sixty-four channels consisting of at least one (1) temperature sensor of each type as defined in the ICD and the rest that replicate the characteristics nominal resistance at room temperature of the ~~thermistors~~ sensors (i.e. fixed resistors).

8.2.7 Analog Voltages

The ISIS shall generate forty-eight voltage signals, sized to the expected magnitudes as defined in the ICD.

8.2.8 Power

The ISIS shall provide loads that replicate the instrument power demands.