
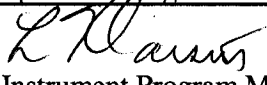
 <h2 style="text-align: center;">GLAST Mission Interface Change Notice (ICN)</h2>		ICN No. 031
		SHEET 1 OF 2
ORIGINATOR: Tim Morse	PHONE: 480-892-8200	DATE: 10-2-03
CHANGE TITLE: Define length of LAT Science data packet		ORG: Spectrum Astro
<b>DOCUMENT NUMBER</b>	<b>TITLE</b>	<b>VERSION</b>
1196-EI-Y46311-000	LAT-SC ICD	A
<b>REASON FOR CHANGE:</b> The size of the science data packet was undefined. This change sets that length so the SC knows when to stop reading the data after de-asserting the SC_RDY* line to ensure no data is lost.		
<b>PROPOSED CHANGE:</b>  See next page.		
<b>INSTRUMENT IMPACT</b> <input type="checkbox"/> Cost <input type="checkbox"/> Schedule		
<b>SPACECRAFT IMPACT</b> <input type="checkbox"/> Cost <input type="checkbox"/> Schedule		
ORIGINATOR SIGNATURE:		
APPROVAL SIGNATURES:		
Spectrum Instrument Interface Lead – Tim Morse		Spectrum Program Manager – Al Lepore
 10/13/03 Instrument Systems Engineer – Dick Horn		 10/13/03 Instrument Program Manager – Lowell Klaisner

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#### 6.4.1.1 LVDS Science Data Interface Timing

The LAT/GBM Input/Output (LGIO) shall receive data from the LAT at a rate up to 66Mbps.

The timing operation of the LAT interface is described below and shown in Figure 6-12 and Table 6-2.

- a. The LGIO shall indicate that it is ready to receive a data “block” by activating the LAT\_SC\_RDY signal on the falling edge of LAT\_CLK.
- b. The LAT may start to transmit data any time after the LAT\_SC\_RDY signal is active on the rising edge of the LAT\_CLK.
- c. The LAT places data on LAT\_DATA lines and activates LAT\_VAL on rising edge of LAT\_CLK.
- d. The LGIO latches the data on the falling edge of LAT\_CLK when LAT\_VAL is active.
- e. When the LAT needs to pause data flow it shall negate LAT\_VAL on the rising edge of LAT\_CLK.
- f. The LGIO shall not latch data when the LAT\_VAL is not asserted during the falling edge of LAT\_CLK.
- g. When the LGIO cannot receive a new “block” of data, it shall negate the LAT\_SC\_RDY signal on the falling edge of LAT\_CLK.
- h. The LGIO shall continue to receive data from the current “block”, not to exceed 4 kBytes, after negating the LAT\_SC\_RDY.
- i. The LAT shall delay the start of a new block transfer until LAT\_SC\_RDY signal is asserted.