GLAST Mission
Interface Change Notice (ICN)

ORIGINATOR: Tim Morse     PHONE: 480-892-8200     DATE: 10-2-03
CHANGE TITLE: Define length of LAT Science data packet     ORG: Spectrum Astro

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<td>1196-EJ-Y46311-000</td>
<td>LAT-SC ICD</td>
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REASON FOR CHANGE:
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.

PROPOSED CHANGE:
See next page.

INSTRUMENT IMPACT
☐ Cost
☐ Schedule

SPACECRAFT IMPACT
☐ Cost
☐ Schedule

ORIGINATOR SIGNATURE:

APPROVAL SIGNATURES:

Spectrum Instrument Interface Lead – Tim Morse
Spectrum Program Manager – Al Lepore

F. Haskell  10/3/03
Instrument Systems Engineer – Dick Horn

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Instrument Program Manager – Lowell Klaisner
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.