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SPECTRUMASTRO

GLAST Mission Interface Change Notice (ICN)

ICN No. 014draft2

SHEET 1 **OF** 2

ORIGINATOR: Tim Morse	**PHONE:** 480-892-8200	**DATE:** 9-16-03
CHANGE TITLE: LAT PPS Signal		**ORG:** Spectrum Astro

DOCUMENT NUMBER	TITLE	VERSION
1196-EI-Y46311-000	LAT-SC ICD	A

REASON FOR CHANGE:

Details were lacking on PPS LVDS signal timing. This ICN clarifies that the timing is referenced to the falling edge of the pulse and the SC will hold the high voltage for a minimum duration to assure the LAT will recognize the timing.

PROPOSED CHANGE:

See attached pages.

INSTRUMENT IMPACT ☐ Cost ☐ Schedule	
SPACECRAFT IMPACT ☐ Cost ☐ Schedule	

ORIGINATOR SIGNATURE:

APPROVAL SIGNATURES:

Spectrum Instrument Interface Lead – Tim Morse	Spectrum Program Manager – Chris Clark
9/26/03 Instrument Systems Engineer	for Instrument Program Manager

6.4.3.1 Discrete Time Pulse

The SC shall provide a Pulse Per Second (PPS) signal to the LAT at a nominal frequency of 1 Hz continuously during normal operations.

The PPS signal falling edges shall be accurate to ±1.5 usec when the SC is receiving Global Positioning System (GPS) updates.

The PPS signal shall not drift more than ±1 usec in any given 100 second period when GPS signals are unavailable.

The PPS signal characteristics shall be of LVDS type, negative logic (falling edge) with a minimum low duration of 1 msec as shown in Figure 6-15. The LAT shall have a 100 Ω ±10 Ω terminator on the differential input signals as shown ~~in Figure 6-15~~.

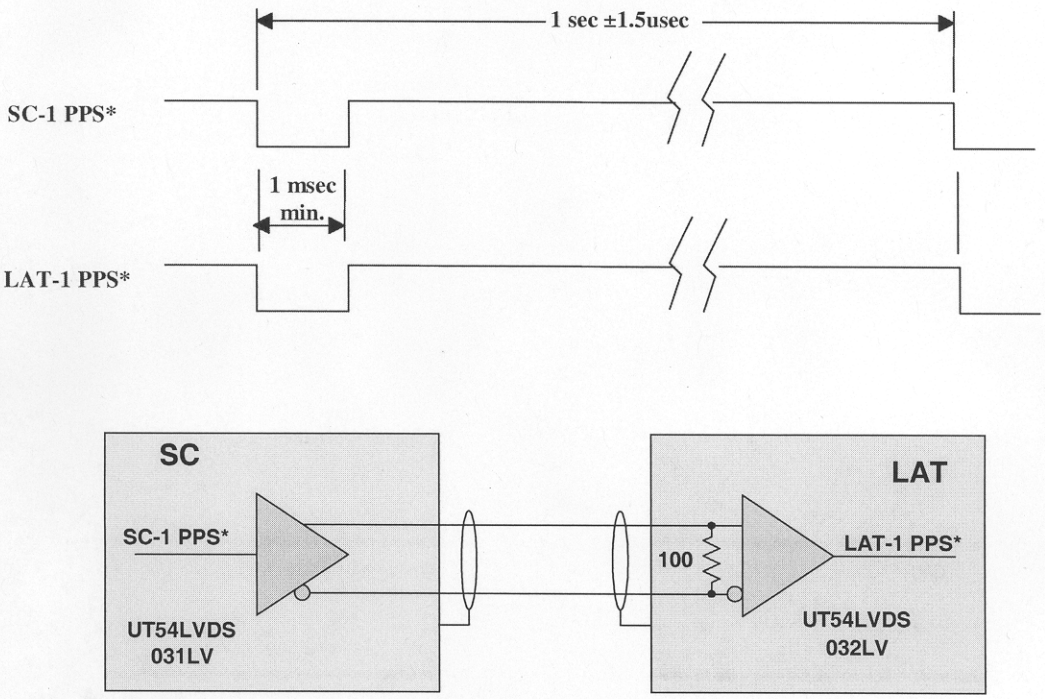

Figure 6-15. PPS Signal Circuit