STEREO IMPACT

PROBLEM REPORT
PR-4004
von Rosenvinge
06/26/05

PR Numbers: 1xxx=UCB, 2xxx=Caltech/JPL, 3xxx=UMd, 4xxx=GSFC/SEP, 5xxx=GSFC/Mag, 6xxx=CESR, 7xxx=Keil, 8xxx=ESTEC, 9xxx=MPAe

Assembly : HET Instrument	**SubAssembly :**
Component/Part Number:	**Serial Number:**
Originator: von Rosenvinge	**Organization: GSFC**
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Failure Occurred During (Check one √)

X Functional test □ Qualification test □ S/C Integration □ Launch operations

Environment when failure occurred:

□ Ambient □ Vibration □ Shock □ Acoustic
□ Thermal □ Vacuum x Thermal-Vacuum □ EMI/EMC

Problem Description

During a comprehensive performance test, commands were sent to the HET phasic chip to configure all the detectors to use the stim pulser to produce an event with a particular gain and offset. The resulting event was not correct, the HET H4 detector was not responding properly to the commands. After 20 minutes, the phasic commands for the H4 detector were resent and the expected stim event was produced.

Analyses Performed to Determine Cause

The SEP command log was analyzed to reproduce the phasic chip command sequence that was sent by the user during the CPT. A typo was discovered in the subsequent command sequence used to configure the H6 detector. The command parameters need to be separated with blanks, a blank was missing between the second and third parameter. The software interpreted the second command parameter correctly (using the last 4 bits for the second parameter and then a default of 0 for the third parameter). This command reconfigured the H4 detector as instructed, which cancelled out the correct previously sent H4 command. The software and hardware worked correctly to interpret all commands; the error was caused by the user entering one command with incorrect parameter spacing.

Corrective Action/ Resolution

□ Rework □ Repair X Use As Is □ Scrap

Verify the commands and parameters are entered correctly, with blanks separating the parameters, before sending to the HET phasic chip.

Date Action Taken:____no action needed. **Retest Results**:_____n/a_____

Corrective Action Required/Performed on other Units □ Serial Number(s): ___n/a_____

Closure Approvals

Subsystem Lead: _____ Date:_____
IMPACT Project Manager: _____ Date _____
IMPACT QA: _____ Date:_____
NASA IMPACT Instrument Manager: _____ Date:_____