STEREO IMPACT

PROBLEM REPORT
PR-2010
LET Not Rebooting
5/19/2005

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

Assembly: SEP	**SubAssembly: LET**
Component/Part Number:	**Serial Number: FM1**
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Failure Occurred During (Check one √)

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

Environment when failure occurred:

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

Problem Description

During thermal balance test on 5/19/2005, at -15 ºC as the temperature rose, a reboot of LET was attempted and the sensor would not reboot. A subsequent LET reboot attempt solved the problem.

Analyses Performed to Determine Cause

Command log reviewed for command syntax and command sequence, but no issues were found.
As part of PFR 2014 investigation it was determined that a bit-flip problem in SEP Central memory could cause a symptom like this.

Corrective Action/ Resolution

√ Rework □ Repair □ Use As Is □ Scrap

1. 5/28/2005 Retested FM1 SEP Main Assembly at -10 ºC in thermal chamber at Caltech, but could not reproduce the anomaly during 100 times that LET was rebooted. The assembly wasn't able to get colder than -10 ºC due to the insulation provided by bagging and purging.
2. 7/31/2005 Memory chip replaced on SEP Central Logic Board and it apparently solved this problem for good (Reference PFR 2014). The FM1 unit passed re-qualification T/V test between 8/8/2005 – 8/11/2005.

Date Action Taken: 5/28/2005 – 7/31/2005 **Retest Results**: Passed
Corrective Action Required/Performed on other Units □ Serial Number(s): N/A

Closure Approvals

Subsystem Lead: _Branislav Kecman_____ Date:__8/31/05____
IMPACT Project Manager: _____ Date _____
IMPACT QA: _____ Date:_____
NASA IMPACT Instrument Manager: _____ Date:_____