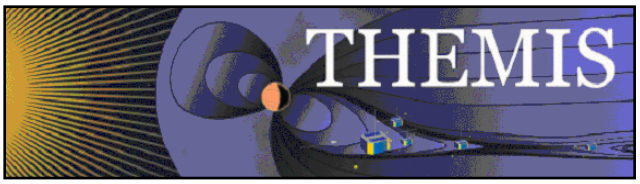

Problem/Failure Report
THM_PFR_130

PFR-130 Title: BAU corrupted IDPU command

Assembly : BAU	**SubAssembly :** DCM	
Component :	**Units Affected:**	**Units fixed:**
Originator: Bryce Roberts	- X - - - - **IDPU Simulator**	- 0 - - - -
Organization: Swales/UCB	**Date:** 1/3/06	
Phone: (510) 642-8030	**Email :** cchen@ssl.berkeley.edu	

Failure Occurred During (Check one √)

√ Functional test □ Qualification test □ S/C Integration □ Launch operations □ Other (Flight Assy)

Environment when failure occurred:

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

Problem Description

During further investigation on 1/3/06 of the IDPU reset problem noted in PFR 127, there was one instance of a corrupted command arriving at the IDPU and triggering a checksum error. It was determined that this was not related to the ITOS command problem, as the sent command and the command echo were verified to both be correct.

Command checksumming was not enabled, so there's some possibility that the command arrived garbled and was routed to the IDPU. It also should be noted that a breakout box and longer cables between IDPU and BAU had been added.

Analyses Performed to Determine Cause

Analysis of the diagnostic program on the IDPU that records telecommand packets as soon as they arrive from the BAU showed that the last three bytes of one of the commands got mangled by the time the packet was recorded by RECDCMDS. The IDPU recorded a checksum error at this time as well.

Corrective Action/ Resolution

As of 3/12/06, this problem has not been seen again. The most probable cause of this failure is that the break-out configuration was putting noise on the line between the IDPU and BAU. As such, this PFR can be closed and moved to the unverifiable failure list.

Acceptance:
MAM: Ron Jackson_____; MSE: Ellen Taylor_____

PM: Peter Harvey_____; Cognizant Engineer_____

Date of Closure_____