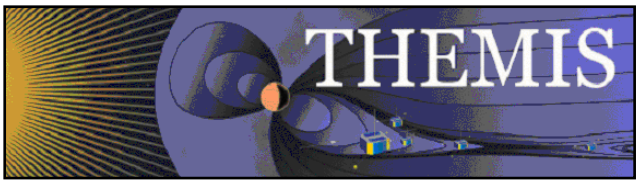

Problem/Failure Report
THM_PFR_204

PFR-204 Title:FM3 noise problems seen during pre-ship CPT

Assembly : Instruments	**SubAssembly : FGM**	
Component : FGS	**Units Affected:**	**Units fixed:**
Originator: Michael Ludlam	o o x o o o	o o x o o o
Organization: SSL	**Date: 15 Aug 2006**	
Phone: 510-642-7732	**Email : mludlam@ssl.berkeley.edu**	

Failure Occurred During (Check one √)

x Functional test □ Qualification test □ S/C Integration □ Launch operations □ Other

Environment when failure occurred:

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

Problem Description

During pre-ship CPT the FGM FM3 sensor (serial number 2) showed higher noise levels.

Analyses Performed to Determine Cause

Another CPT was performed to see if the problem could be repeated.
The second CPT was performed and the noise improved but there were still some issues with the data leading to the theory that there are some grounding issues that need to be solved with running the FGS in the TCU. A further CPT and noise investigation was run on F3. The noise levels on these tests were within expected noise levels.
After further consultation it was remembered that the TCU extension harness did not have the feedback shield (pin 12) connected to a ground as when it is connected to the boom harness pin 12 is not connected at that end. A modification needs to be made to the TCU harness to ground the feedback shield. Once this is done and further test will be run with the FGM on F3.

Corrective Action/ Resolution

The harness modification was made to the FGM harness on all units to ground the feedback shield at the boom shoulder end connecting pin 12 to pin 11 and to the shield of the feedback lines on the IDPU to Shoulder harness. A CPT was performed on all units and the noise was not seen on any unit (caveat see PFR 228). This PFR is closed.

Acceptance:
MAM: Ron Jackson_____; MSE: Ellen Taylor_____

PM: Peter Harvey_____; Cognizant Engineer_____

Date of Closure_____