



PFR-039 Title: FGM TMH bit errors

Assembly :FGM/IDPU	SubAssembly : FSW?	
Component : n/a.	Units Affected:	Units fixed:
Originator: John Bonnell	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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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

(In this section it is important to document the specific symptoms which exhibited the problem. In the event we see it happen again, we would like to know as much as possible.)

During a pre-EMC CPT of the F1 instrument suite, it was found that the highest bit of the FGM TMH data was being set sporadically. The frequency of this bit error was once every few seconds, increasing to a rate of many times a second before the end of the data taking session. This error was not associated with any obvious change in the state of the IDPU or instrument suite. When the IDPU and GSE system were power-cycled, and the CPT re-run, the error did not recur.

Analyses Performed to Determine Cause

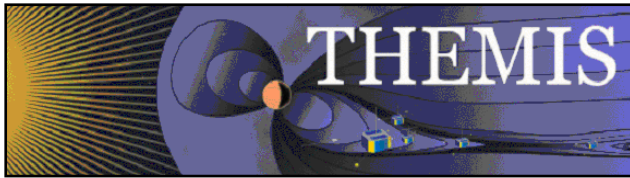
(How do we know how the failure happened? Was it a bad part, bad handling, what?)

The IDPU and GSE system were power-cycled to determine if the bad data was due to inadvertent misconfiguration of the FGM and IDPU. A CPT was run, and the FGM and IDPU produced data nominally. No attempt was made to reproduce the apparently bad configuration of the FGM and IDPU.

Corrective Action/ Resolution

(How do we fix the unit? And how do we make sure it doesn't happen again?)

FGM data from subsequent functional tests has been examined, and the problem has not recurred.



Problem/Failure Report
THM_PFR_0

Acceptance:

MAM: Ron Jackson _____; MSE: Ellen Taylor _____

PM: Peter Harvey _____; Cognizant Engineer _____

Date of Closure _____