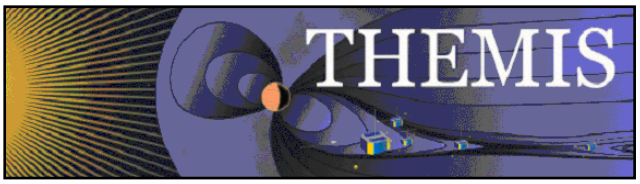

Problem/Failure Report
THM_PFR_111

PFR-111 Title: Accidental Connection of FM3 MAG Boom Actuator Power to Axial Boom Actuator Power

Assembly : IDPU	**SubAssembly : PCB**	
Component : Actuator Supply Switches	**Units Affected:**	**Units fixed:**
Originator: Michael Ludlam	0 0 x 0 0 0	0 0 x 0 0 0
Organization: UCB	**Date: 13/OCT/05**	
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 (Flight Assy)

Environment when failure occurred:

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

Problem Description

During the Boom Deploy test on the FM3 unit in Suite Thermal Vacuum at hot soak #3 the MAG Boom extension harness connected to the MAG Boom Connectors P222 and P423 was accidentally connected to the Axial Boom Enable Plug connector J535. An attempt to run a simulated mag boom deployment was made in this configuration. No current was drawn on the 28V Actuator supply as a result of this.

Analyses Performed to Determine Cause

Analysis of the connector mating showed that when power was applied to the MAG Boom Actuator pins the power was returned to the PCB Connector J204 to the axial boom pins for Door 5 and Door 6 power. Power applied to these pins meant that no damage could result from the configuration as these pins go to the power FETs to enable these services. The only difference between the configuration and a normal Axial boom deployment is that the gate is enable in the correct configuration.

Corrective Action/ Resolution

Whilst no damage resulted from this mistake more care should be taken to ensure correct set up. Harnesses were labeled and procedures were clear, the engineer was at fault.

Acceptance:

MAM: Ron Jackson_____; MSE: Ellen Taylor_____

PM: Peter Harvey_____; Cognizant Engineer_____

Date of Closure_____