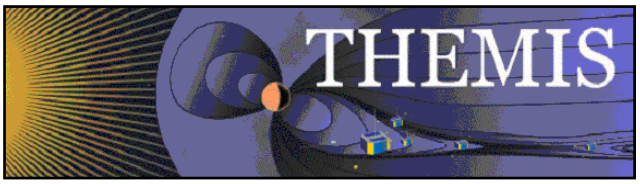

Problem/Failure Report
THM_PFR_214

PFR-214 Title: Full scale readback (FF) of ESA MCP Voltage at nominal setting

Assembly : EGSE	**SubAssembly :** ITOS database
Component : ESA Readback	**Units Affected:** - - - - - - **Units fixed:** - - - - - -
Originator: Ellen Taylor	
Organization: UCB	**Date:** 8/1/06 (date found)
Phone: (510) 643-4054	**Email :** ertaylor@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 the F3/4 ESA HV test, the ESA MCP analog voltage read full scale (FF) when the MCP was set to nominal voltage.

Analyses Performed to Determine Cause

The observed problem was a combination of two problems: 1) the ITOS database decom'd the ESA mnemonics as signed bytes, and 2) apparently ITOS is not particularly good at printing a negative number in raw hex.

Corrective Action/ Resolution

The ITOS database record was changed to use UB (unsigned bytes) and the saved data ran through ITOS simulator. Expected raw values for the ESA mnemonics was observed at nominal MCP setting, 0x88 instead of 0xFF.

This change has been incorporated into the released databases on all ITOS machines. The readback was again tested during the F1,5 ESA HV test with no issue.

Acceptance:

MAM: Ron Jackson_____; MSE: Ellen Taylor_____

PM: Peter Harvey_____; Cognizant Engineer_____

Date of Closure_____