SSVEO IFA List

Date:02/27/2003

STS - 97, OV - 105, Endeavour (15)

Time:03:50:PM

Tracking No	Time	Classification	Documentation		Subsystem
MER - 10	**MET:** 002:13:54:00.000	Problem	**FIAR**	**IFA** STS-V-97-01	OMS/RCS
PROP-02	**GMT:** 338:17:00:00.000		**SPR** 97RF02	**UA**	**Manager:** Brian Werner
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Title: Vernier Thruster F5R Fuel Injector Temperature Sensor Failed Off Scale High (ORB)

Summary: While docked to the ISS, the vernier reaction control subsystem (RCS) thruster F5R fuel-injector temperature stopped tracking the oxidizer injector temperature as expected. When this thruster was fired, the fuel injector temperature measurement went off-scale high at a higher rate than the oxidizer injector temperature. Also, during periods of thruster inactivity, the fuel injector temperature lagged behind the oxidizer injector temperature as the temperatures returned to the nominal range. This behavior was indicative of a temperature sensor problem, and thruster operation was not impacted by this condition.

Following undocking from the ISS, the F5R fuel-injector temperature failed off-scale-high. Owing to the GMEM implemented earlier in the flight because of the vernier thruster L5D oxidizer-injector temperature sensor problem (MER-03), this left thruster F5R without leak detection. As a result, the verniers will not be used for attitude control for the remainder of the mission. The mission impact at this point is minimal. An MDM FF3 BITE 4 test was performed and did not indicate a problem with the MDM. Post flight troubleshooting has isolated the problem to the thruster transducer. The FRCS module has been removed and will be routed to the HMF for thruster replacement.