



SPACE SHUTTLE PROGRAM
Flight Software Office
NASA Johnson Space Center, Houston, Texas



Flight Software Office (FSO) STS-129 In-Flight Anomaly Review

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FSO STS-129 IFA Review/Discussion STS-129-S-001: OCA 48 Mbps Not functional	Presenter	E. Jones	
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▪ PROBLEM DESCRIPTION\ROOT CAUSE

• “Two Failures Deep” –

1. Originally, the **DTV-MUX was not properly configured** for 48M OCA operations.
2. After the DTV-MUX was properly configured, the 48M remained inoperable due to a **failed OCA cable**.
 - **In-flight loopback test** and **post-flight continuity test** confirmed the 48M cable extension failure

▪ CORRECTIVE ACTION

- Reverted to standard OCA operations at 2Mbps for FD2 Data Retrieval
 - For Late Inspection, backup OCA cable was retrieved from locker where 48M performed successfully.
- **IFA? – Yes.** PRACA-reportable failed PGSC hardware during flight.
 - **IIFA? – No.** Does not impact integrated hazards or multiple elements (per NSTS 08126).
 - Imagery and Inspection analysis proceeded as required.

▪ PREVENTATIVE ACTION PLANS (Preliminary)

1. **Pre-flight Training** –
 - a. **Update Pre-flight Training Objectives** to emphasize DTV-MUX behavior
2. **Procedure Review\Update** – determine if procedures are confusing and can be simplified in any manner
3. **Perform post-installation (in vehicle) cable test.**
(Note: Standard pre\post-flight testing to be performed as well)
4. Investigate possible DTV-MUX “signatures” for more configuration insight