



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



Flight Software Office (FSO) STS-119 In-Flight Anomaly Review SR 4432

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FSO STS-119 IFA Review, Overview

Presenter **E. JONES**

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Tracking #	Description	IFA?	IIFA?
AR 3861	KFX (STS-3) PGSC Laptop Lock Up	N	N
STS-119-S-001 (AR 3868)	Corrupt .DLL for SpawnPrt Application on STS3/KFX	Y	N
AR 3878	TCS Activation Unexpected Message	N	N



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- **AR 3861 – KFX (STS-3) PGSC Laptop Lock Up**

- Crew call indicated the Ku-Band File Xfer (KFX) PGSC locked up during a print job attempt. “Ctrl Alt Delete” and the primary power button did not reboot. Crew unplugged the laptop from the network and unplugged the laptop from the primary power source.
- The PGSC lead advised that the crew should remove the battery to power cycle the PGSC then reconnect the PGSC back to the primary power source and to the network, which successfully restored PGSC operation.
- Unable to perform OCA uplinks through the KFX (STS-3) PGSC laptop during the interruption.
 - **IFA?** – No, occasional PGSC lock-ups are an expected (infrequent) behavior . Failure to reboot before battery removal attributed to software lock-up condition and configuration of power button as a soft-reset.
 - **IIFA?** – No, does not impact integrated hazards or multiple elements (per NSTS 08126), no mission impact due to prompt recovery
 - **Post flight plan** – standard post-flight equipment testing



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- **STS-119-S-001 (AR 3868) – Corrupt .DLL for SpawnPrt Application on STS3/KFX**
 - STS OCA attempted to print from STS3/KFX and received an error from the SpawnPrt application that indicated that the WBDBV32I.DLL was corrupt. All print jobs (which use the SpawnPrt application) initiated from STS3/KFX failed. (Note: RPOP PGSC system printed without problem.)
 - The corrupted SprawnPrt Dynamic Link Library (DLL) on the KFX PGSC was replaced with a known good DLL from RPOP PGSC. Print functionality from the KFX PGSC was confirmed to be successful at crew wakeup on FD 10.
 - **IFA?** – Yes. Currently suspect KFX lockup that occurred during print job (AR3861) to have caused corruption in DLL file.
 - **IIFA?** – No, does not impact integrated hazards or multiple elements (per NSTS 08126), no mission impact due to redundant PGSCs available for printing
 - **Post flight plan** – Testing expected to simulate a lockup during printing to reproduce DLL corruption. Also, possible addition of DLL to “critical” list of DLLs that are verified during bootup.



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- **AR 3878 – TCS Activation Unexpected Message**

- During TCS Activation before undocking at approximately GMT 084/19:17 (MET 009/19:33), the crew called down that they received a “Checksum Error Re-transmit Command” message in TCS CADS which they had never seen before. This message was immediately followed by the nominal "Initialization Complete" message. TCS performance was nominal during undock and flyaround with no additional messages reported by the crew.
- Error message is an explained condition. Initialization software is designed to retry command that fails due to bad checksum twice before aborting command.
- This error has been seen during ground testing and one other time in flight during one of the Mir rendezvous and docking missions. In all cases, the TCS CAD immediately retransmitted the failed command and normal operation resumed.
 - **IFA/IIFA?** – No. Explained condition
 - **Post flight plan** – none