



COS
Monthly Status Review
February 26, 2003
Ball



COS
Monthly Status Review



Agenda

Progress Summary Since Last Monthly	J. Andrews
UCB FUV Detector Programmatic Status	J. Andrews
UCB FUV Detector Technical Status	O. Siegmund
Software/Ops	J. Andrews
Schedules	J. Andrews
Upcoming Events/Activities	J. Andrews
CU Issues & Resolution Plan	J. Andrews
STScI Presentation	STScI
BATC Presentation	R. Higgins
Financial Splinter	GSFC/Ball/CU



Progress Summary Since Last MSR

- Completed FUV-02 TV test.
- Completed Cal/FF sub-system testing.
- Continued working COS TV test procedure.
- Continued supporting I&T at Ball.



FUV Detector Overview

- FUV-01 was delivered to Ball on Wednesday, July 31st.
- FUV-01 has operated flawlessly since its integration into the instrument and has accumulated > 72 hours of instrument level run-time (>50% of that time was with HV on).
- FUV-02 has completed its qualification program:
 - Unit is available for delivery to Ball at their request.
- FUV-02 swap planned before start of COS environmentals.



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FUV Detector Verification Testing Summary

Unit	Functional Testing	Performance Testing	EMI/EMC	Sine Burst	Random Vibe	Thermal-Vac	Contamination Certification
FUV-01 DVA	C	C	@SS	A - C	A - C	@SS	@SS
FUV-01 DEB	C	C	@SS	Q - C	Q - C	@SS	@SS
FUV-01 SS	C	C	C	@Comp	@Comp	8-cycles	C
FUV-02 DVA	C	C	N/R	Q - C	Q - C	@SS	@SS
FUV-02 DEB	C	C	N/R	A - C	A - C	@SS	@SS
FUV-02 SS	C	C	N/R	@Comp	@Comp	8-cycles	P
DVA Surrogate (1)	C	N/R	N/R	C	C	N/R	N/R
DVA Surrogate (2)	C	N/R	N/R	C	C	C	N/R

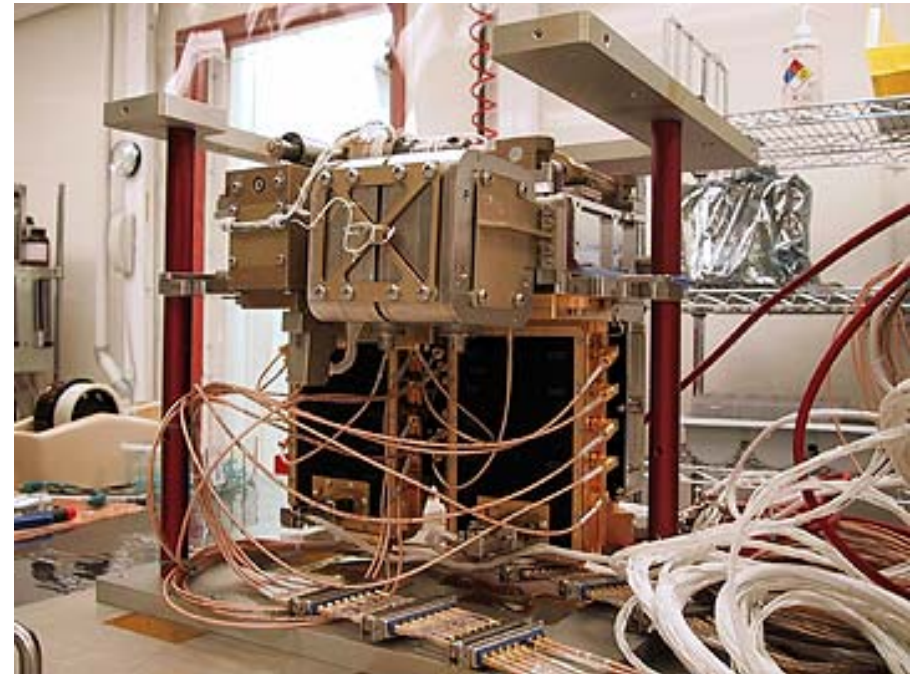
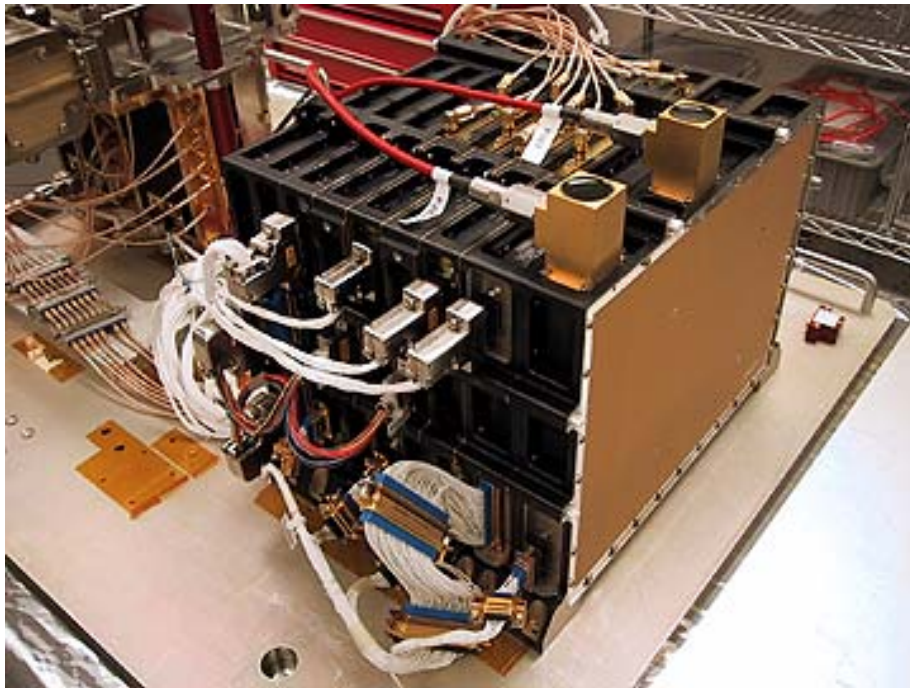
C Complete
 @Comp At Component
 @SS At Subsystem
 A Acceptance Levels
 Q Qualification Levels
 N/R Not Required
 P Planned
 (1) Old Door Mechanism
 (2) New Door Mechanism

— ETU DVA w/shaped o-ring qual vibed at NASA Ames
 — DVA-02 saw qual-level vibe at Ball
 — FUV-02 completing 6 cycle T/V at CU
 — DEB-01 saw 1-axis workmanship vibe at Ball
 — FUV-02 DEB & harness contamination certification planned at Ball



COS FUV Detector Systems

- Detector DEB
- Detector Head



Flight FUV01 Detector System

Completed thermal vacuum at CU,
delivered to Ball 7/31.

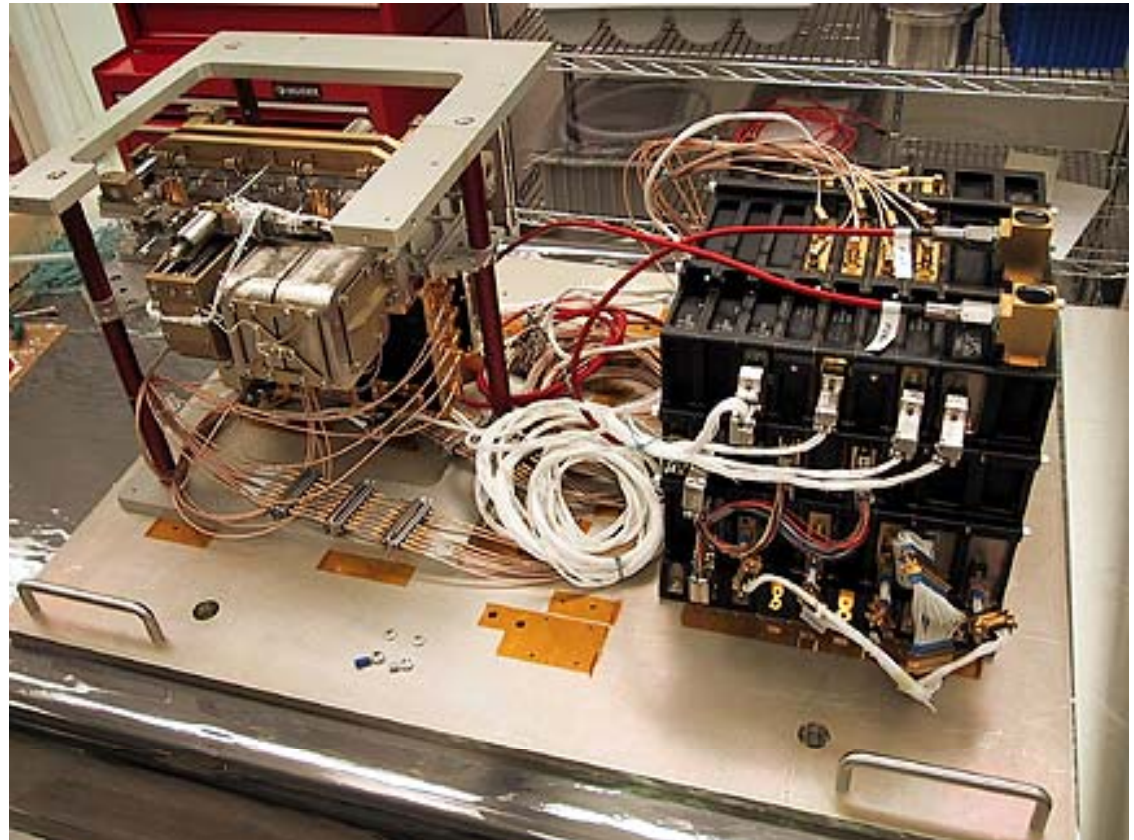
Post delivery functional tests
nominal.

Cleanliness certification at Ball
completed successfully.

Harnesses were routed and
connected in flight configuration.

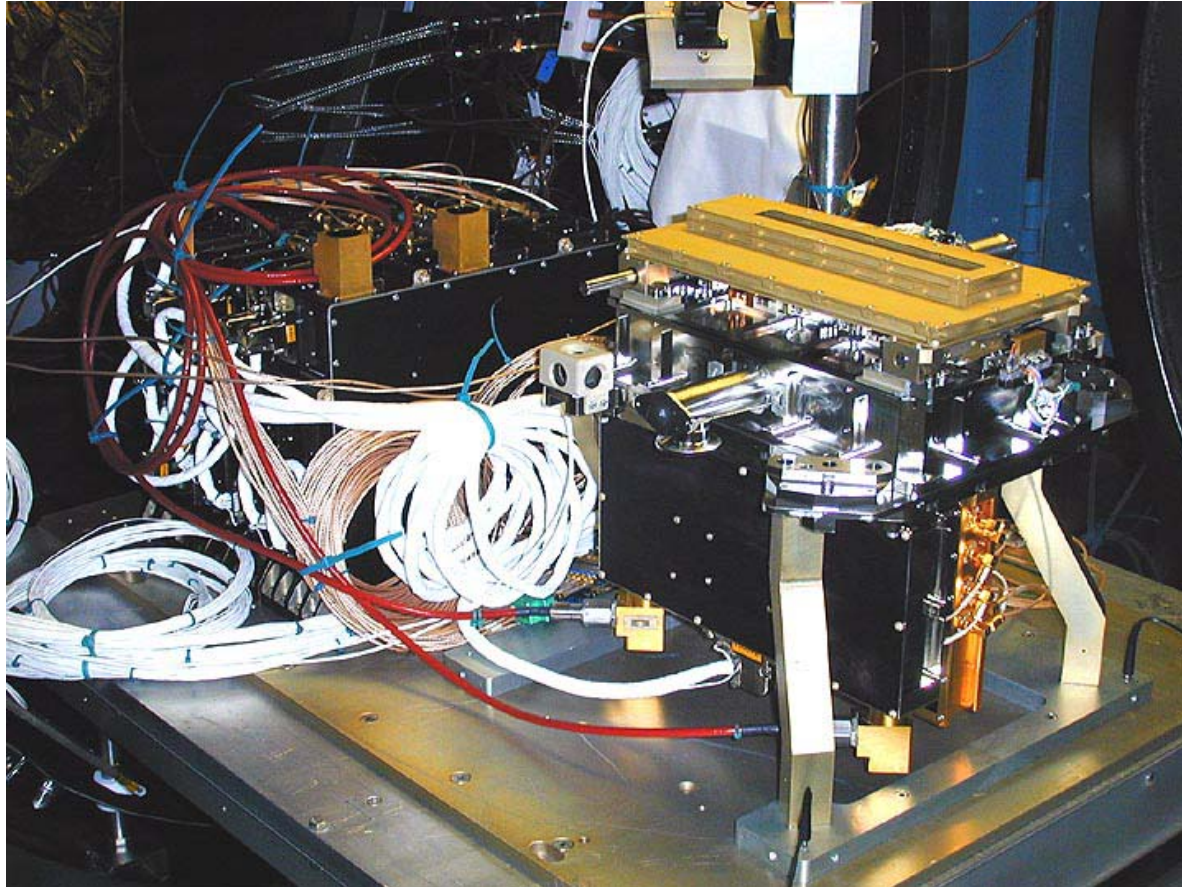
Alignment tests done.

Will be swapped for FUV02
at earliest opportunity.





FUV02, Flight Backup Detector

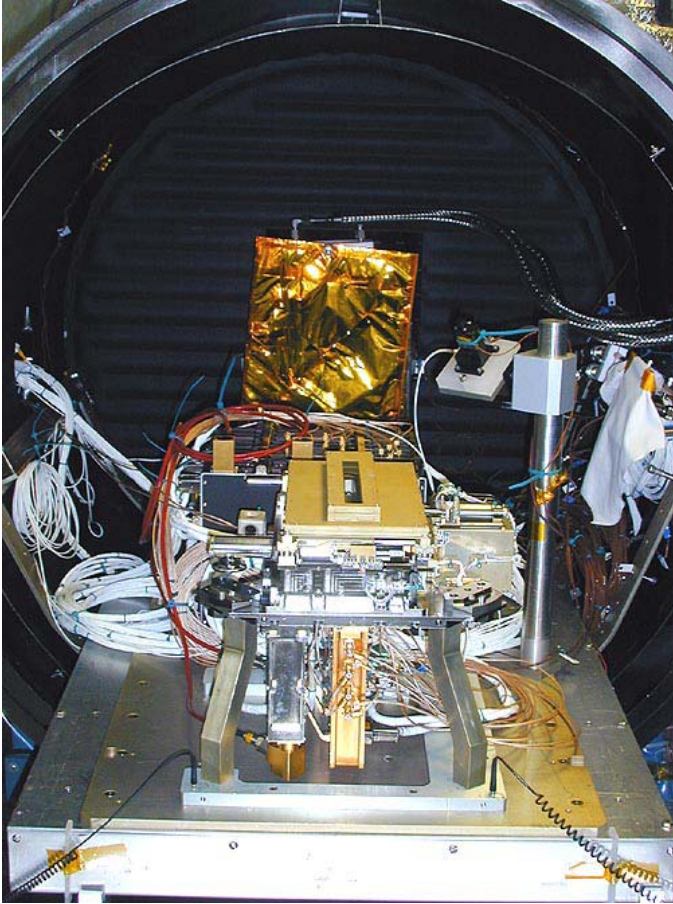




FUV02, Flight Backup Detector Status/Actions

- QDE calibration and full functional test done
- Deep flat field test done
- Packed and shipped to CU 1/3/03
- Vibration test and post vibration functional done
- Thermal vacuum test at CU successfully completed
- Under purge in cal tank awaiting delivery to Ball
- **Next - delivery to Ball and cleanliness certification**
- **Installation preparations & changeout with FUV01**
- **Alignment verification**

FUV02, Flight Backup Detector, thermal vac



Thermal vac test completed successfully. Hot & cold soaks (+50 °C to -25 °C) done, 8 cycles +40 °C to 0 °C done. Door openings / closings with motor and actuator firings all done successfully, at ambient, hot and cold. Detector operation at ambient, hot and cold with data collection allowed nominal commandable settings of electronics stretch and shift to be established and tested. TQCM readings at 40°C were low (6.3 Hz/hr).



Detector Ongoing Actions

- Reviewing all test data from FUV01 and FUV02
- Reviewing and closing out all documentation items
- Looking at small power draw differences between FUV02 and FUV01, will test - but seems to be an EGSE artifact.
- Scrutinizing thermal vacuum data for temperature dependencies and trendings. (eg stimulation pin data, background rates, flat field images, etc).
- Updated Ball thermal model with measured component power consumption data (minor changes).
- Support of detector changeout and I&T flow.



Software/Ops Update

- Brownsberger and Béland continue their presence at Ball supporting the SW/OPS efforts – both are qualified COS instrument operators.
- CEDAR has been stable for some months, is supporting instrument I&T, and is ready to support upcoming I&T activities.



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COS Schedule Milestones for CU/UCB

Task	Status
Cal/FF SS Retest	Complete
Deliver FUV-02 to Ball	Ready
Complete COS TV Procedure	3/03
Support Sys. Functional at Ball	On-going
Support GSFC Activities	4/03 – 5/03
Science Cal Prep	2 – 5/03



Upcoming Events/Activities

- Continue support of system functional test.
- Support FUV detector swap.
- Support GSFC I&T activities.
- Prepare for and support COS PER.
- Calibrate RASCAL PMTs at CU.



Issues

- None