PFR-229   Title: Memory Check Sum Errors during Maneuver Sims

Assembly : BAU	SubAssembly : FSW		
Component :	Units Affected:		Units fixed:
Originator: Bryce Roberts	– | – | – | – | – | –		– | – | – | – | – | –
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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

While running some maneuver simulations on both the flatsat and the Probe, SC Event Message: CS Memory Scrub Failure was logged several times.

Analyses Performed to Determine Cause

Event logs were sent to Hammers and Swales for further analysis. The problem was re-created at will on both FlatSat East and West when running the following proc, breakit2

```
-----------------------------------
 speed 0
restart:
;; clean up virtual recorders
/CDSRLSDS DSID=1, VRID=1
wait 1
/CDSRLSDS DSID=1, VRID=2
wait 1
/CDSRLSDS DSID=1, VRID=3
wait 1
;; clear out current (DS0) by rewinding
/CDSREWIND VRID=1
wait 1
/CDSREWIND VRID=2
wait 1
/CDSREWIND VRID=3
wait 10
/CSCRTSENA RTSID=34
wait 1
/CSCSTARTRTS RTSID=34
wait 1
wait 300
;; go back to default filter table
/CDSCHGFLTR FILTERTABLEID=1
wait 300
goto restart;
return;
```

Corrective Action/ Resolution

As described in Hammers Issue Tracking System (ITS) ID 450, the problem was caused by not clearing all 3 recorder copies upon rewind. A one-line fix in the code corrects the issue and has been implemented in FSW V3.35.

After discussions with the UCB Operations Team, Hammers and Swales, it was decided that this problem did not warrant an upgrade on the flight Probes to the new FSW build. The issue is easily avoided by not using the rewind command (a command that was never planned to be used on orbit anyways).

This PFR can be closed as it has been moved to the Operational Work-Around List, and the rewind command removed from the ITOS database.

Acceptance:
MAM: Ron Jackson_____; MSE: Ellen Taylor_____

PM: Peter Harvey_____; Cognizant Engineer_____

Date of Closure_____