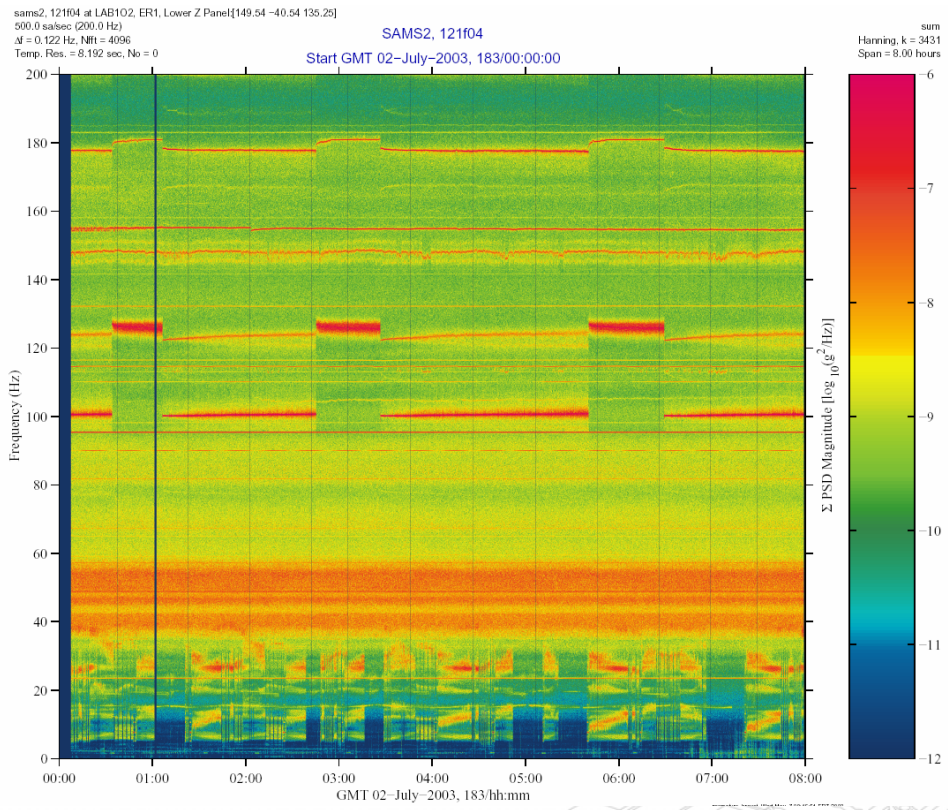
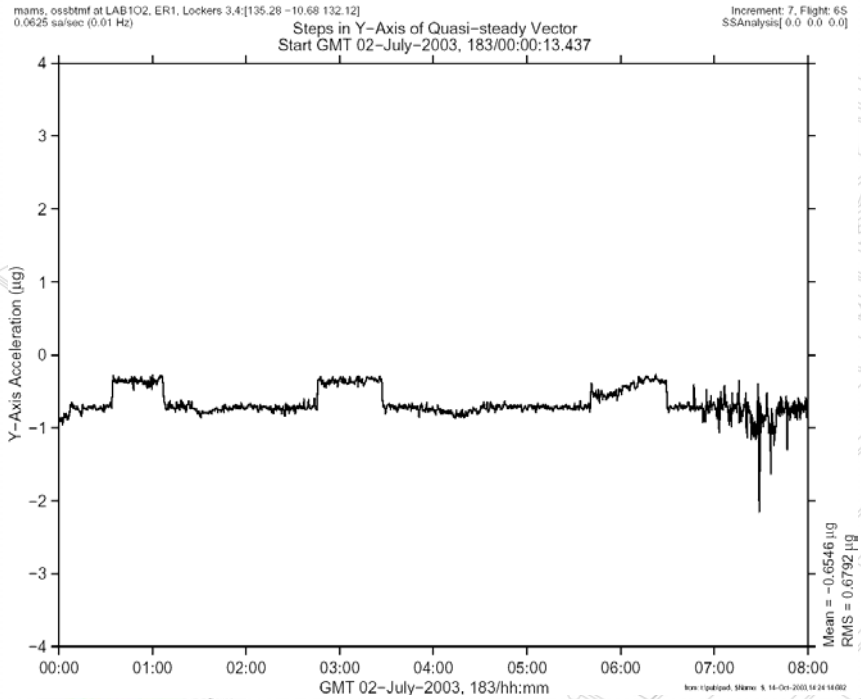
Unknown Quasi-steady Y-Axis Step





Description	
Sensor	MAMS,ossbtmf 0.0625 sa/sec (0.01 Hz)
Location	LAB1O2, ER1, Lockers 3,4
Orientation	Space Station Analysis (SSA)
Inc/Flight	Increment: 7, Flight: 6S
Plot Type	Time Series

NOTES:

- An as-yet unidentified disturbance source(s) that manifests itself as a 100Hz signal introduces an approximately -0.4 µg step in the Y-axis (SSA) of MAMS OSS data.
- The disturbance source(s) operate continuously at 160 Hz, 120 Hz, or 100 Hz, but its effect on the Y-axis in the quasi-steady regime is only seen during the 100 Hz. mode.
- The system will often exhibit a mode where it cycles between 100Hz and 120-130Hz for long periods of time. This will result in a "square wave" look to the quasi-steady profile. (see plots)
- By calculating gravity gradient + rotational components at the OSS location an estimate of the Y-axis component was calculated to be -0.34 µg.

Mode	Mean (µg)
100 Hz	-0.74
120-130 Hz	-0.35
Estimated	-0.34

Regime:	Quasi-steady
Category:	Vehicle
Source:	Attitude, XPOP

Microgravity Science Division

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