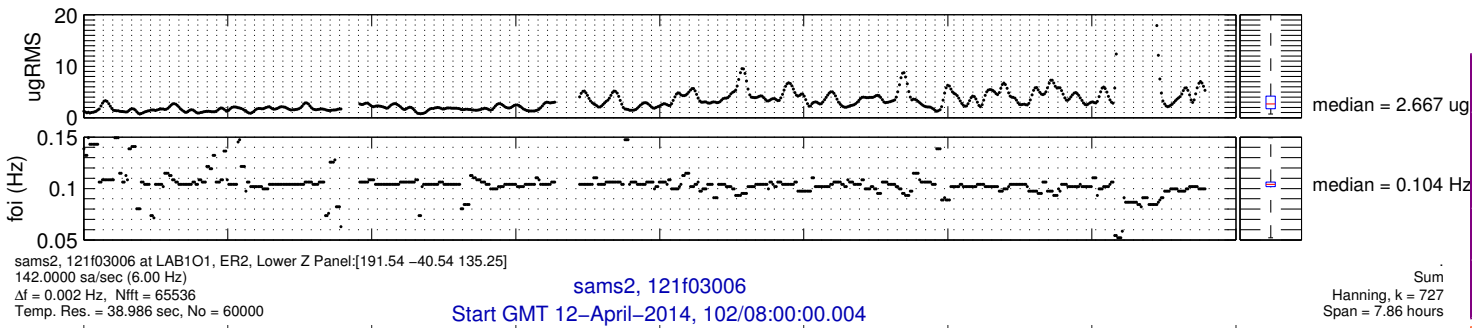
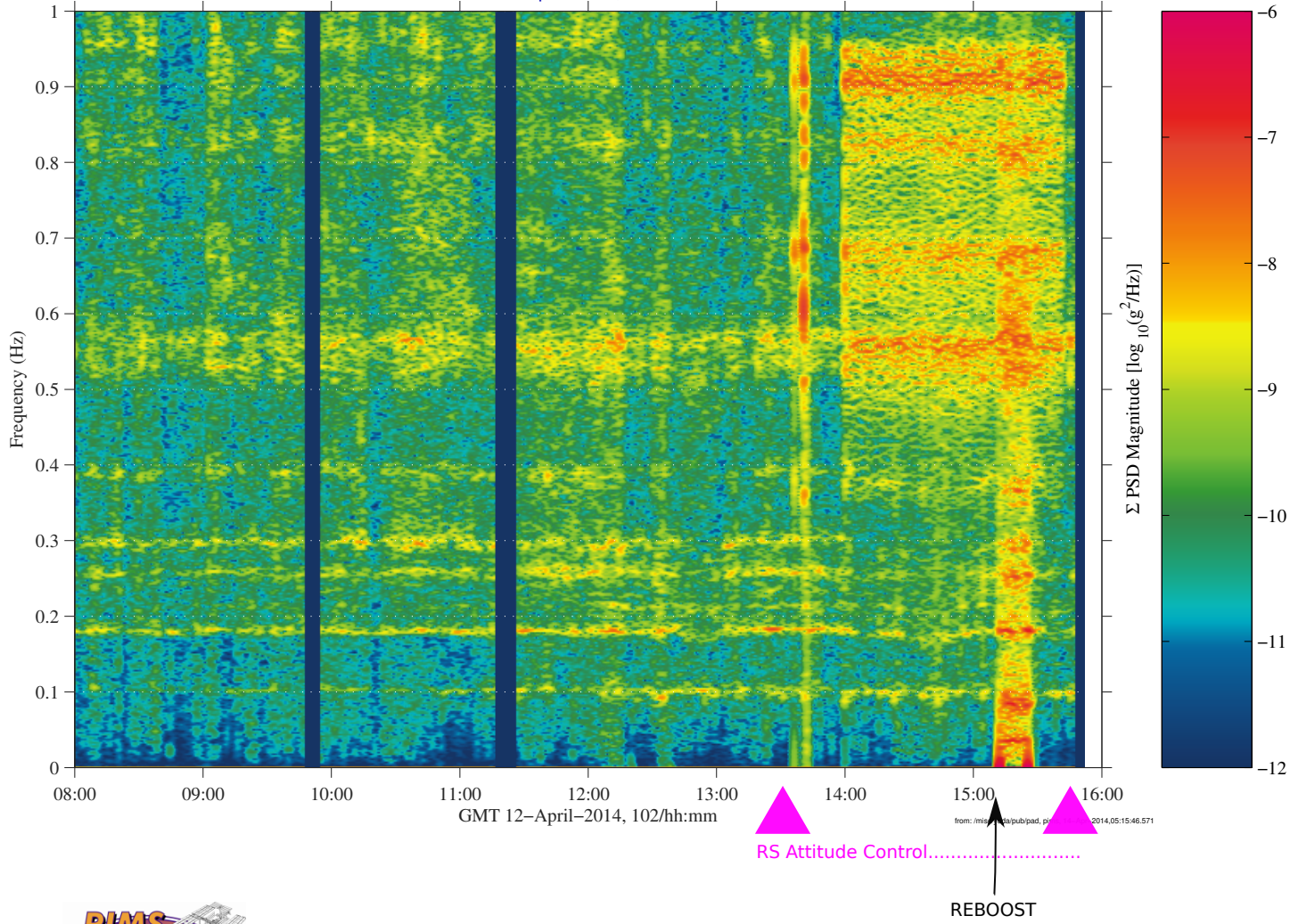


Progress 53P Reboost Quality

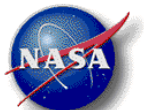


Description	
Sensor	SAMS 121f03006 142.00 sa/sec, 6.00 Hz
Location	LAB1O1, ER2, Lower Z Panel
Plot Type	Spectrogram; $f < 1$ Hz



- Notes:**
- The Progress 53P vehicle was used to reboost the altitude of the ISS on GMT 12-April-2014 from about 15:16 to 15:29.
 - This spectrogram shows the impact of the reboost event as a yellow/orange/red vertical broadband disturbance during reboost, which starts where marked by the vertical, black arrow.. Note the elevated structural mode excitation at multiple distinct frequencies primarily below about 1 Hz – these are the horizontal, red streaks at those distinct frequencies.
 - The other, ancillary impact on the microgravity environment comes from heightened structural excitation due to Russian Segment (RS) attitude control, shown between the magenta triangles.

Regime:	Quasi-Steady
Category:	Vehicle
Source:	Progress 53P Reboost



Progress 53P Reboost Quantify

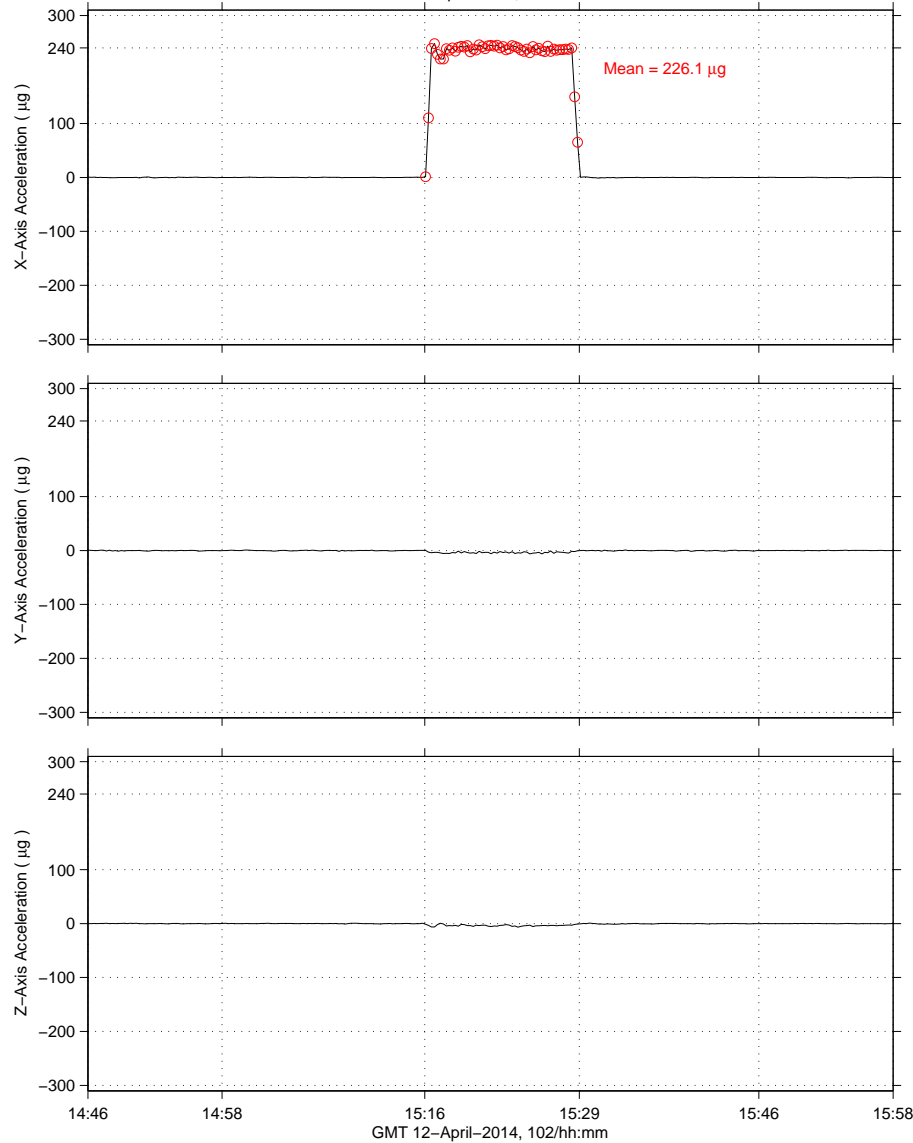
mams_ossbtmf at LAB1O2, ER1, Lockers 3,4 [135.28 -10.68 132.12]
0.0625 sa/sec (0.01 Hz)

mams_acce_ossbtmf, LAB1O2, ER1, Lockers 3,4, 0.0 Hz (0.1 s/sec)

SSAnalysis[0.0 0.0 0.0]

$$\Delta V = ((226.1 \times 10^{-6} \text{g}) \times 13.87 \times 60) = 1.85 \text{ m/s}$$

Start GMT 12-April-2014, 102/14:46:03.621



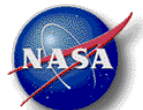
Description

Sensor	MAMS ossbtmf 0.0625 sa/sec, 0.01 Hz
Location	LAB1O2, ER1, Lockers 3,4
Plot Type	Acceleration vs. Time

Notes:

- The per-axis acceleration versus time plots shown to the left spans about 1 hour and 12 minutes approximately centered on the reboost event, which lasts about 13 minutes.
- This figure shows the primary, quasi-steady impact of reboost, which is that the X-axis exhibits a large offset (about 226 ug) during reboost. This acceleration imparts a net X-axis velocity change of 1.85 m/s. The Y-axis and Z-axis show very little impact on the scale compared to the X-axis.

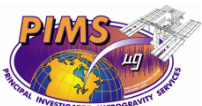
Regime:	Quasi-Steady
Category:	Vehicle
Source:	Progress 53P Reboost



Progress 53P Reboost Ancillary Notes



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