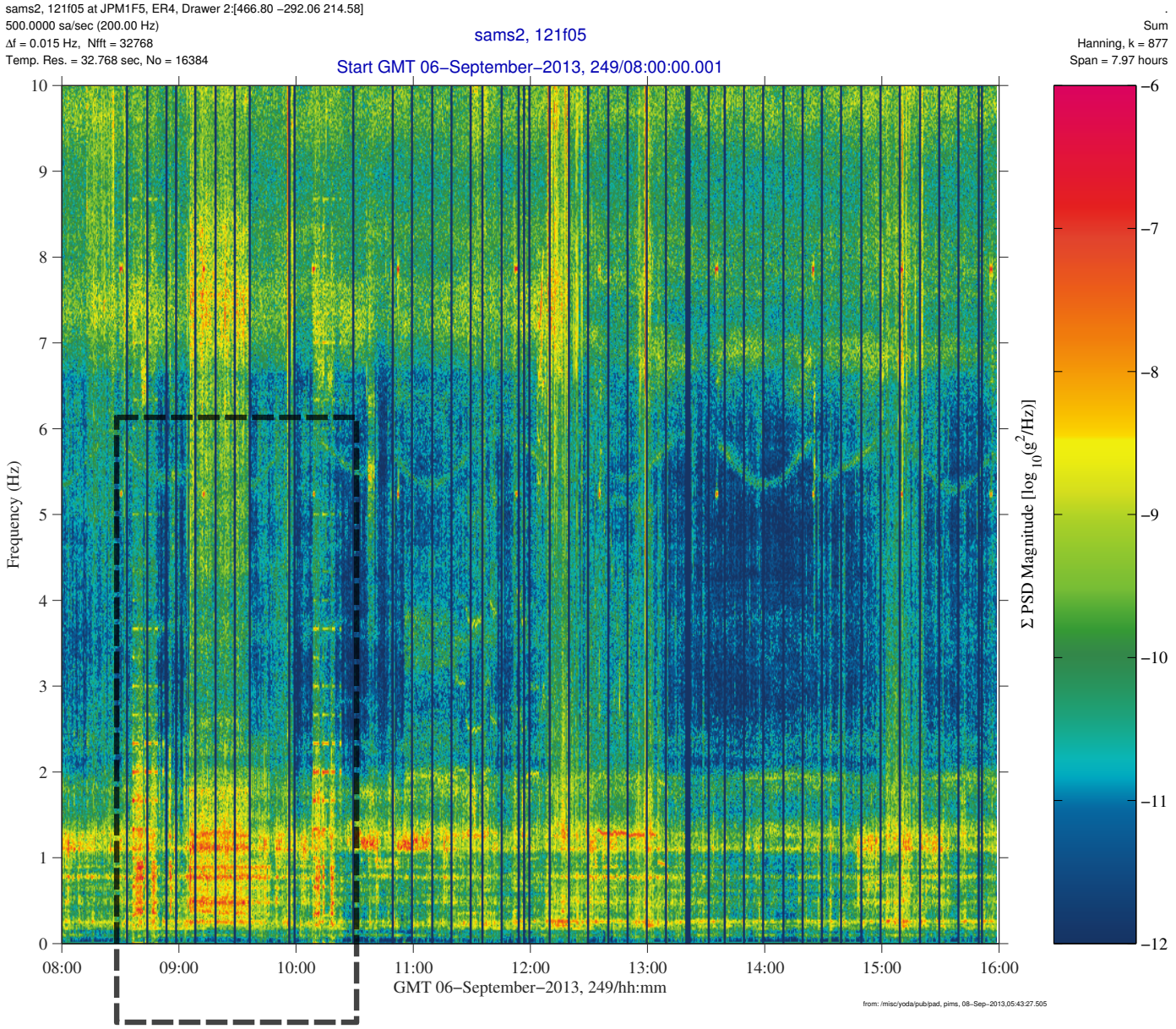
Soyuz 34S Thruster Test
Qualify



Description	
Sensor	121f05 500 sa/sec (100 Hz)
Location	JPM1F5, ER4, Drawer 2
Plot Type	spectrogram (Σ); f < 10 Hz

Notes:

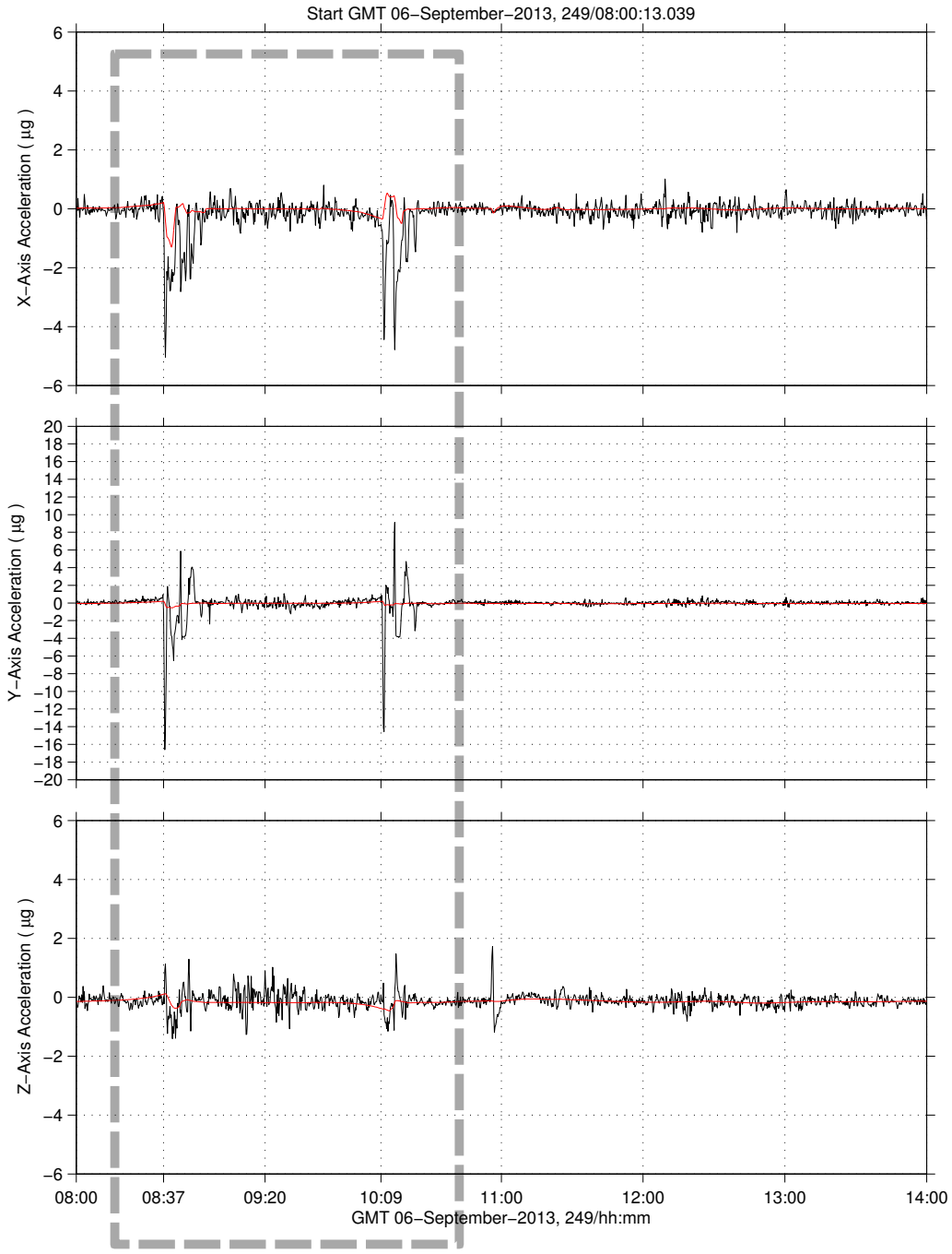
- A thruster test was schedule for the Soyuz 34S, while mated to the MRM-2 on GMT 06-Sept-2013 between 08:05 and 10:27. See last page for schedule details.
- This spectrogram shows the transient impact of the maneuvers and thruster test as a set of orange-to-red horizontal streaks in the GMT time range from about 08:30 to about 10:30.

Regime:	Vibratory
Category:	Vehicle
Source:	Soyuz 34S Thruster Test

mams, ossbtmf at LAB1O2, ER1, Lockers 3,4:[135.28 –10.68 132.12]
0.0625 sa/sec (0.01 Hz)

Quasi–steady Roadmap
RED LINE IS RADGSE
DELTAS (ossbtmf – radgse): X = –0.1285, Y = –0.4245, Z = 0.0216 (µg)

SSAnalysis[0.0 0.0 0.0]



Soyuz 34S Thruster Test Quantify

Description	
Sensor	MAMS, OSSBTMF 0.0625 sa/sec (0.01 Hz)
Location	LAB1O2, ER1, Lockers 3,4
Plot Type	Acceleration versus time

Notes:

- The sequence shown on the last page in conjunction with the MAMS measurements shown here indicate that the primary quasi-steady disturbance during the Soyuz 34S thruster test are attributable to the maneuvers to LVLH attitude starting at about 08:37 and 10:09.
- NOTE: in the subplots shown here, the X-, and Z-axis have common limits on the vertical axis, while the Y-axis limits are set to capture peak accelerations during this sequence of events.
- Note the peak acceleration of over 14 ug occurred on the Y-axis at about the start time of the 2 maneuvers to LVLH attitude.

Regime:	Vibratory
Category:	Vehicle
Source:	Soyuz 34S Thruster Test

Soyuz 34S Thruster Test
Ancillary Information

Maneuver Start-Stop GMT	Beta Angle	Attitude Name	Ref. Frame	YPR	F/T Cfg.	Event	Remarks
						34S Thruster test (M13_249_A_05.UAF)	**9/6/2013**
249/08:05	-45	+XVV	LVLH	354	MMT	Handover US to RS	
—		+ZLV		357.7	THR		
		TEA		0.6			
249/08:10	-45	+XVV	LVLH	354	THR	Thruster Test (Soyuz on MRM-2)	
249/08:36		+ZLV		357.7	FDO		
				0.6			
249/08:36	-45	+XVV	LVLH	354	THR	Mnvr to LVLH Attitude	
249/08:50		+ZLV		357.7	THR		
		TEA		0.6			
249/09:47	-45	+XVV	LVLH	354	THR	Thruster Test (Soyuz on MRM-2)	
249/10:09		+ZLV		357.7	FDO		
				0.6			
249/10:09	-45	+XVV	LVLH	354	THR	Mnvr to LVLH Attitude	
249/10:18		+ZLV		357.7	THR		
		TEA		0.6			
249/10:27	-45	+XVV	LVLH	354	THR	Handover RS to US Momentum Management	VV#3az N2neze, PSARJ Auto, SSARJ Auto
—		+ZLV		357.7	MMT		
		TEA		0.6