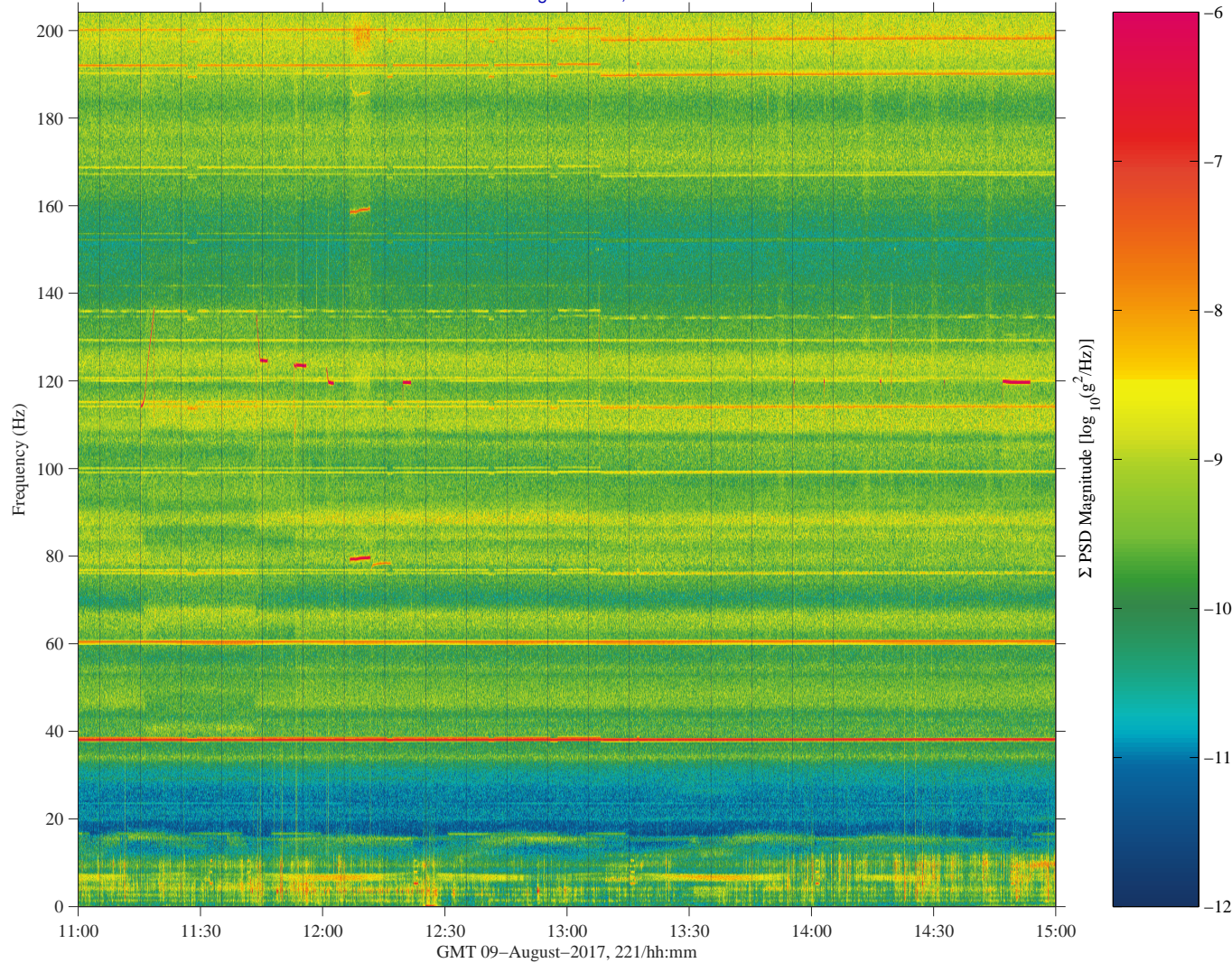


09-Aug-2017 Progress 67P Reboost Qualify

samses, es05 at LAB1S3, CIR, Front Panel:[116.81 40.39 192.76]
 500.0000 sa/sec (204.20 Hz)
 $\Delta f = 0.244$ Hz, Nfft = 2048
 Temp. Res. = 4.096 sec, No = 0

CIR Alignment Guides Installed During Progress 67P Reboost

Start GMT 09–August–2017, 221/11:00:00



Sum
 Hanning, k = 3515
 Span = 239.89 minutes

Description	
Sensor	SAMS es05 500 sa/sec, 204.2 Hz
Location	LAB1S3, CIR, Front Panel
Plot Type	Spectrogram

Notes:

- A color spectrogram showing some context up to just over 200 Hz with a span around the Progress reboost from 12:25 to 12:27.
- Note the red punctuation signatures between about 11:00 and 12:30 are assumed to be that of CIR routine for the combustion chamber leading up to FOMA ops.

Regime:	Vibratory
Category:	Vehicle
Source:	09-Aug-2017 Progress 67P Reboost

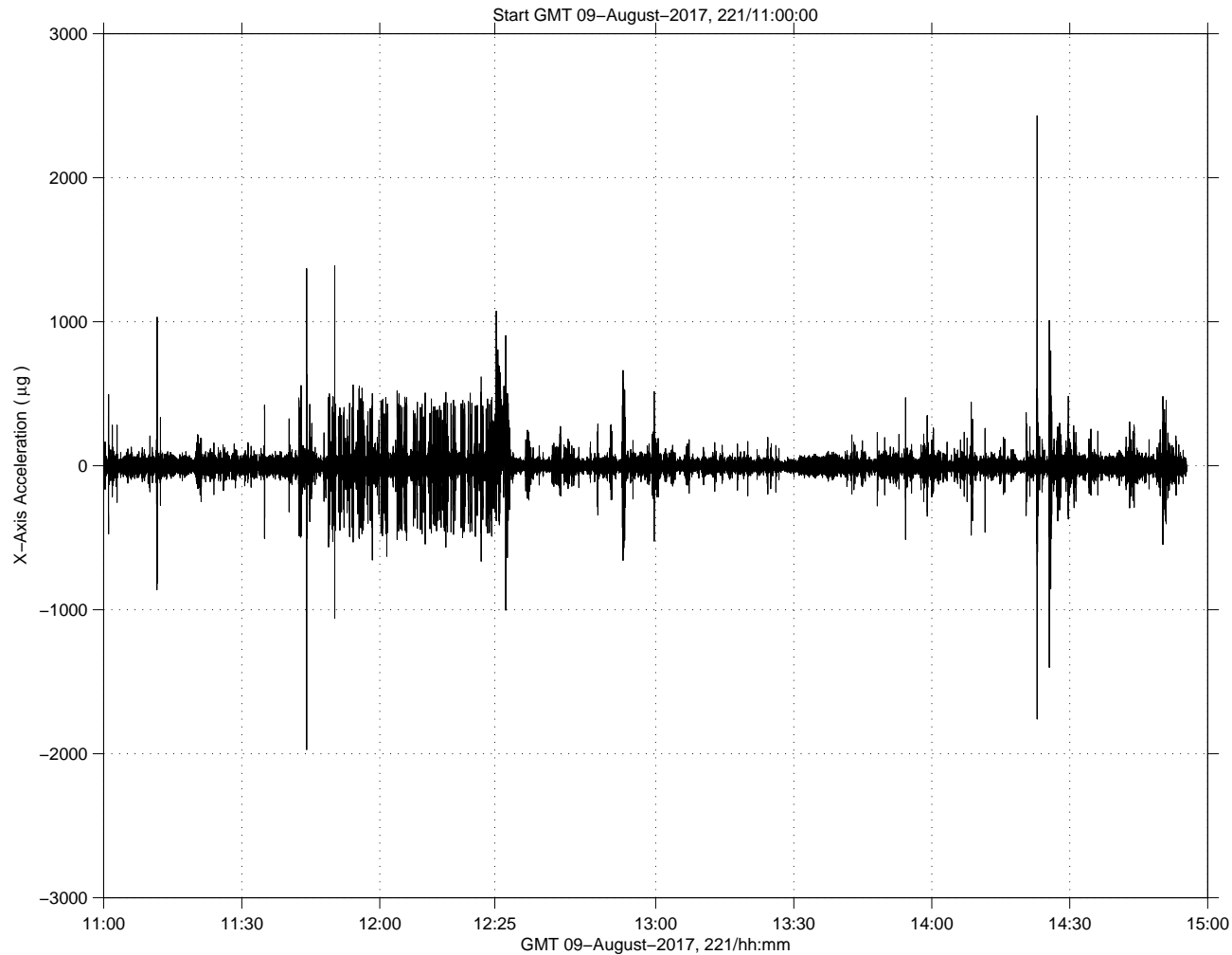


09-Aug-2017 Progress 67P Reboost Quantify

inverted-sames, es05006 at LAB1S3, CIR, Front Panel:[116.81 40.39 192.76]
142.0000 sa/sec (6.00 Hz)

CIR Alignment Guides Installed During Progress 67P Reboost

SSAnalysis[0.0 0.0 0.0]



Description

Sensor	SAMS es05 500 sa/sec, 204.2 Hz
Location	LAB1S3, CIR, Front Panel
Plot Type	X-Axis Accel. vs. Time

Notes:

- Inverted X-axis data for the same period as the spectrogram on the previous page.
- Notice the large spikes starting at about 11:30 come with handover of station attitude control from US to RS.
- It is hard to clearly see the reboost on this plot, so take a look at the next page for more clarity.

Regime:	Vibratory
Category:	Vehicle
Source:	09-Aug-2017 Progress 67P Reboost

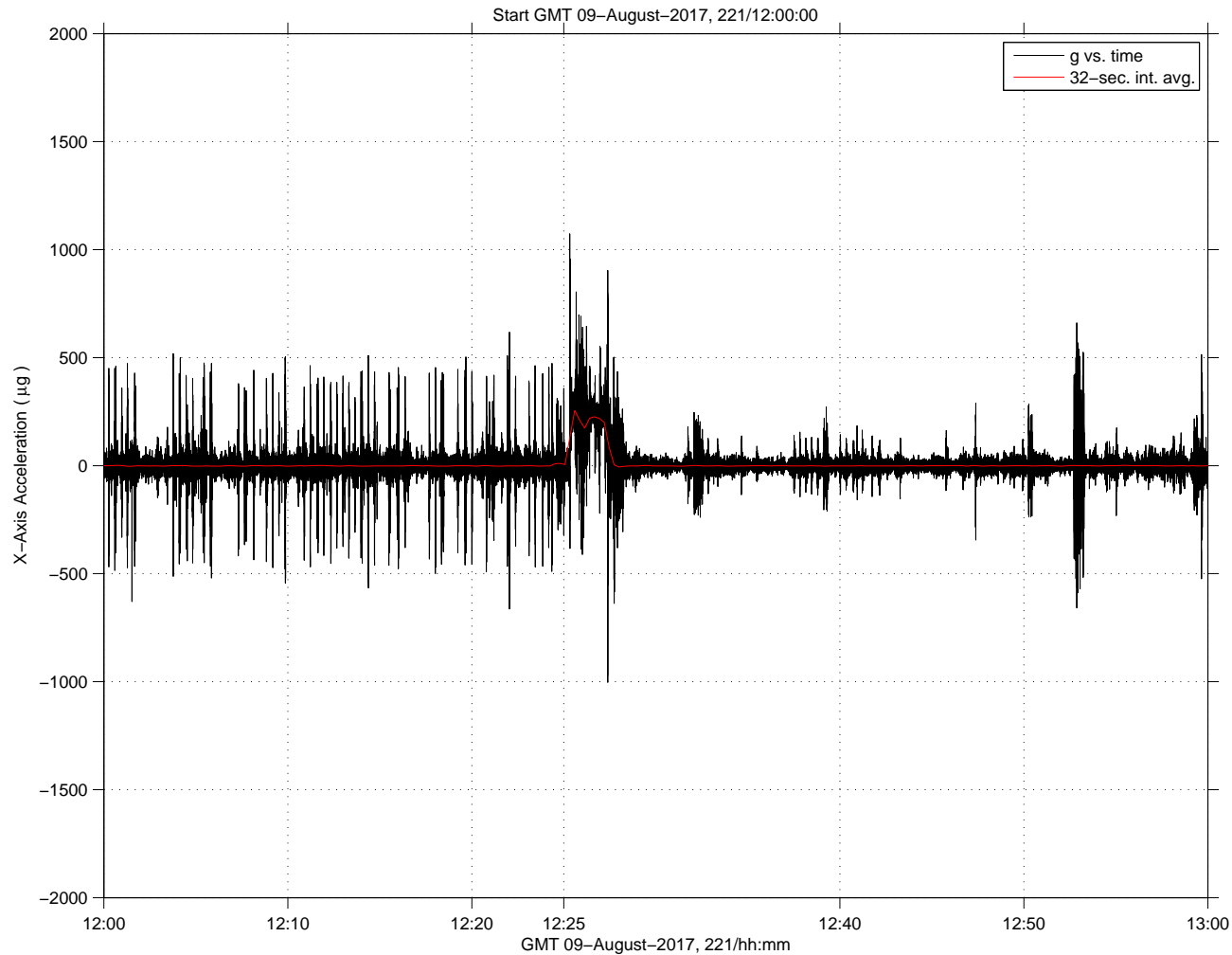


09-Aug-2017 Progress 67P Reboost Quantify

inverted-sames, es05006 at LAB1S3, CIR, Front Panel:[116.81 40.39 192.76]
142.0000 sa/sec (6.00 Hz)

CIR Alignment Guides Installed During Progress 67P Reboost

SSAnalysis[0.0 0.0 0.0]



Description

Sensor	SAMS es05 500 sa/sec, 204.2 Hz
Location	LAB1S3, CIR, Front Panel
Plot Type	32-Second Int. Average

Notes:

- The black trace on this page is identical to that on the previous slide.
- The red overlay trace is a 32-second interval average of these data (with a 16-second overlap).
- The red trace brings more clarity as we see the reboost “step” on the X-axis starting at about 12:25 with a duration of just over 2 minutes.

Regime:	Vibratory
Category:	Vehicle
Source:	09-Aug-2017 Progress 67P Reboost

