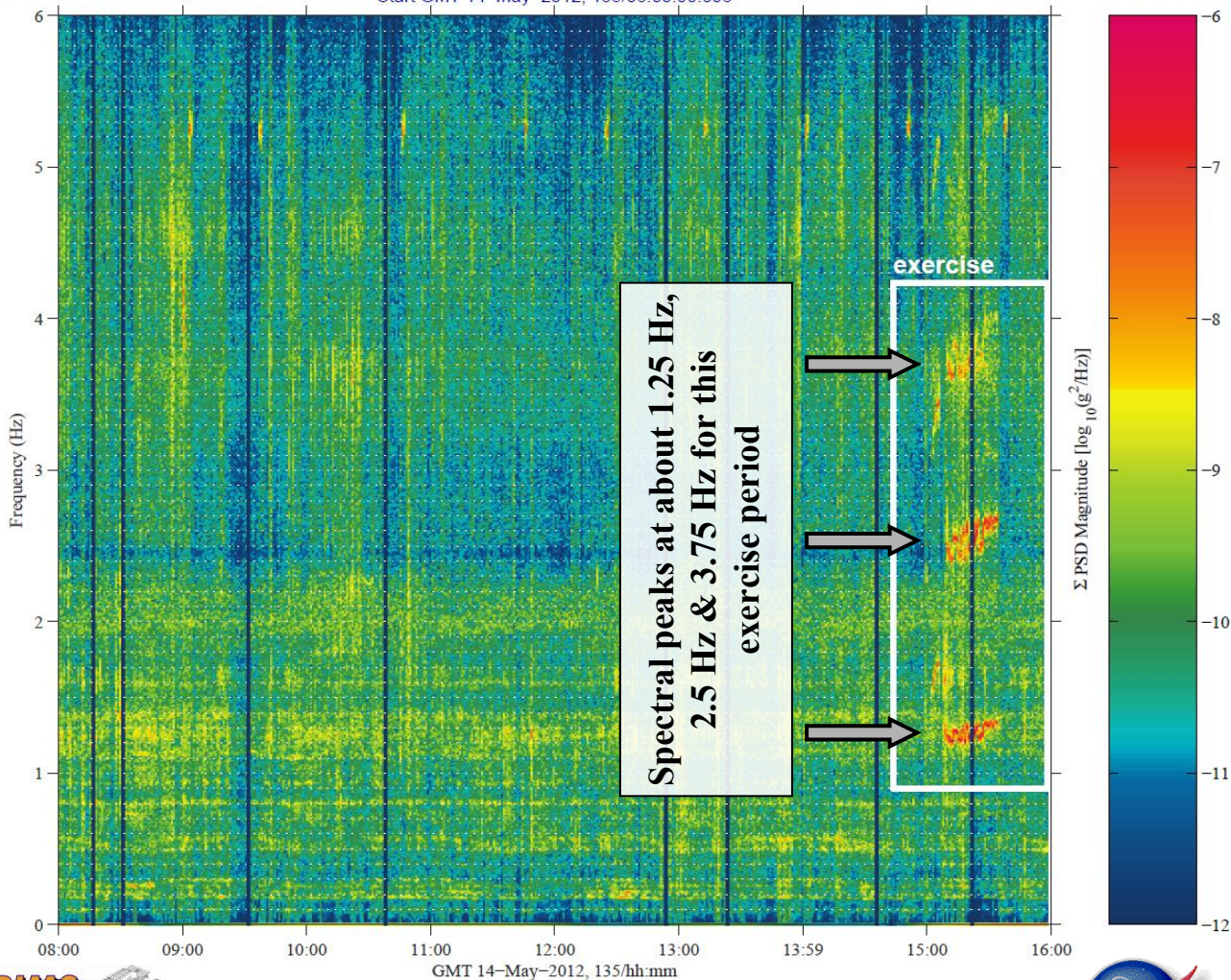


sams2, 121f03006 at LAB1O1, ER2, Lower Z Panel[191.54 -40.54 135.25]
 142.0000 sa/sec (6.00 Hz)
 $\Delta f = 0.009$ Hz, Nfft = 16384
 Temp. Res. = 57.690 sec, No = 8192

Exercise Qualify

sams2, 121f03006

Start GMT 14-May-2012, 135/08:00:00.003



Spectral peaks at about 1.25 Hz,
 2.5 Hz & 3.75 Hz for this
 exercise period



Acceleration Measurements Program



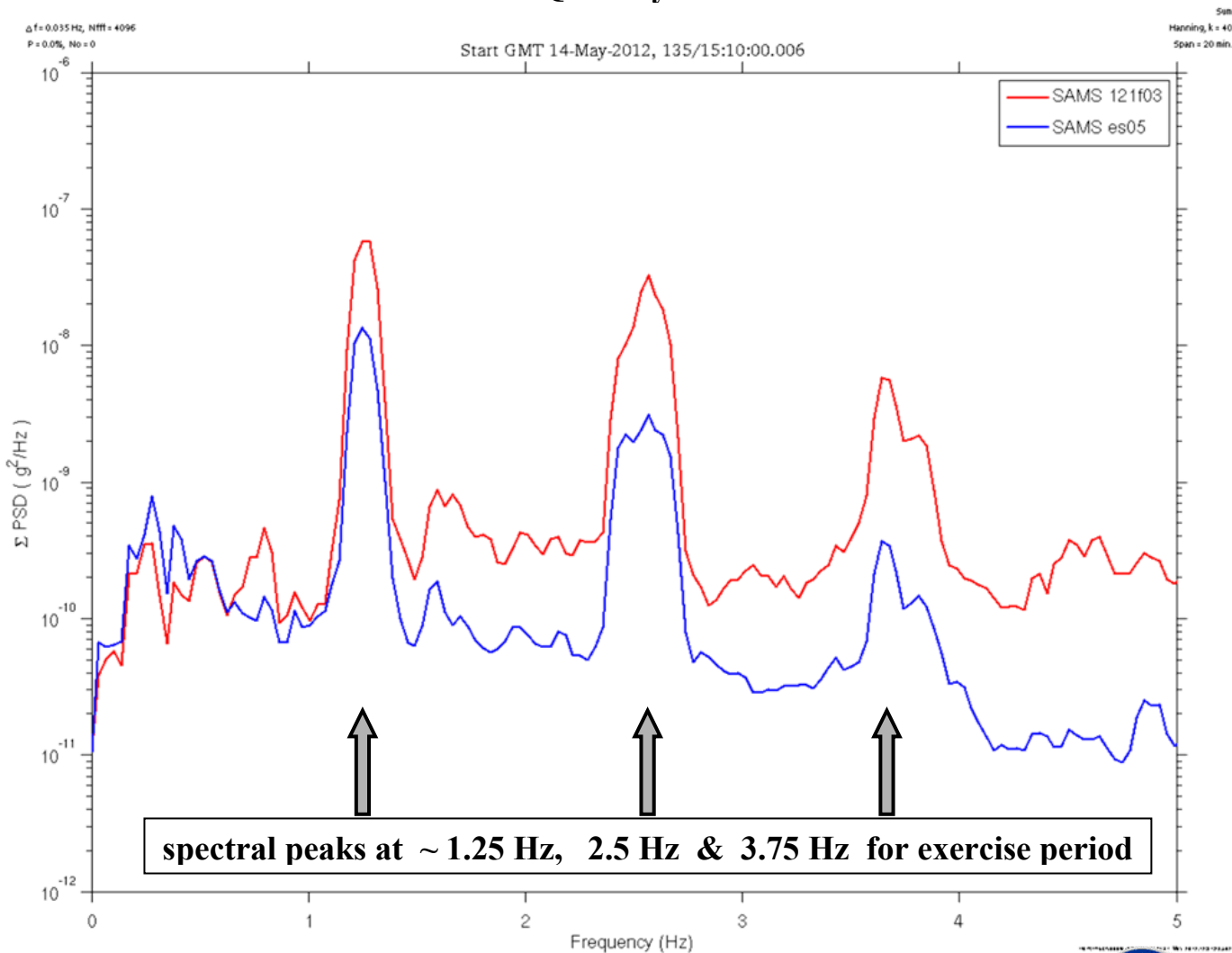
Glenn Research Center

Description	
Sensor	121f03 142 sa/sec (6 Hz)
Location	LAB1O1, ER2, Lower Z Panel
Plot Type	spectrogram

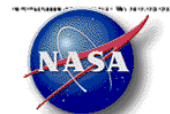
- Notes:**
- The objective of this handbook entry is to compare a crew exercise period as measured by two different SAMS sensors in the US LAB.
 - To qualify this event, we first show on this page a spectrogram computed from SAMS sensor 121f03 located on the lower Z panel of ER2.
 - Note the excitation at about 1.25 Hz, 2.5 Hz, and 3.75 Hz as seen by the red horizontal streaks and marked with rightward gray arrows at those frequencies.
 - The data show that this exercise period started at GMT 14-May-2012, 135/15:03 and lasted just over 30 minutes.

Regime:	Vibratory
Category:	Crew
Source:	Exercise

Exercise Quantify



Acceleration Measurements Program



Glenn Research Center

Description	
Sensor Locations	121f03 at ER2 ES05 at CIR (w/PaRIS)
Plot Type	Power Spectral Density

Notes:

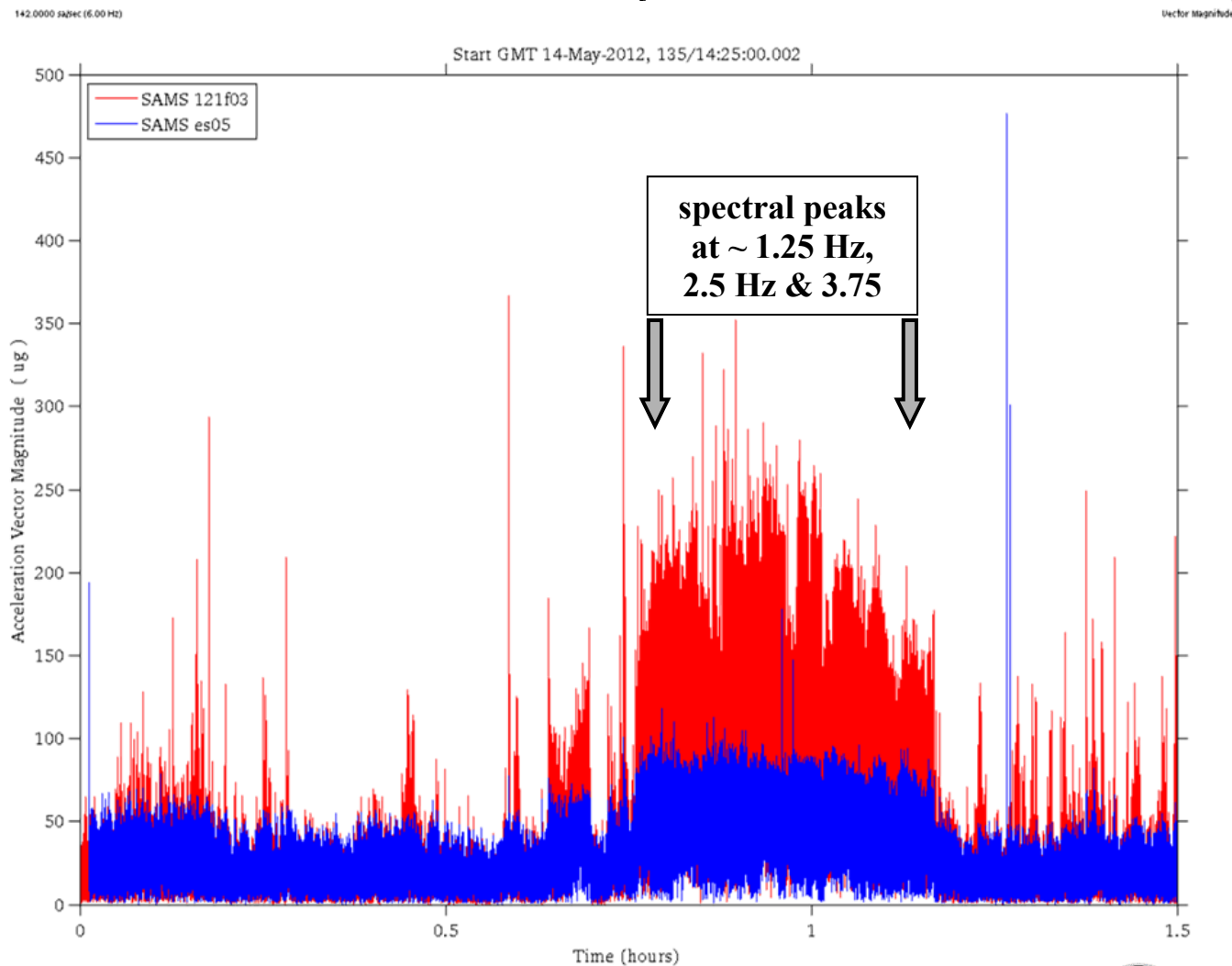
- From this comparison of PSDs, note the spectral roll-off associated with the SAMS es05 data measured at the the Combustion Integrated Rack (CIR) location relative to the SAMS 121f03 data taken at the ER2 location during 20 minutes within this exercise period. This dampening is associated with the PaRIS (Passive Rack Isolation System) of the CIR.
- The following table breaks down the RMS level of acceleration in 1 Hz bands for this 20-minute span:

frequency range (Hz)	ugRMS	
	NON-ISOLATED RACK	ISOLATED RACK
	SAMS 121f03	SAMS es05
[0.01 1)	13	13
[1 2)	85	41
[2 3)	69	26
[3 4)	34	10
[4 5)	15	4

Regime:	Vibratory
Category:	Crew
Source:	Exercise

For updates with more details, see another handbook entry on PaRIS at the following link:
http://pims.grc.nasa.gov/pimsdocs/public/ISS%20Handbook/hb_vib_equipment_paris.pdf

Exercise Quantify



Acceleration Measurements Program



Glenn Research Center

PIMS ISS Acceleration Handbook
 Date last modified 2012-05-31

Description	
Sensor Locations	121f03 at ER2 ES05 at CIR (w/PaRIS)
Plot Type	Vector Magnitude vs. Time

Notes:

- From this comparison of acceleration vector magnitude versus time data, note particularly during the span between the downward-pointing gray arrows that the **SAMS es05 data measured at the Combustion Integrated Rack (CIR) location** is markedly attenuated relative to the **SAMS 121f03 data taken at the ER2 location**. This further emphasizes the dampening afforded by the PaRIS (Passive Rack Isolation System) of the CIR.
- The acceleration vector magnitude for SAMS data low-pass filtered at 6 Hz **averaged 105 ug for the ER2 location**, while the **average was 47 ug for the CIR location**.

Regime:	Vibratory
Category:	Crew
Source:	Exercise