

SAMS Analysis/Overview of BD-2 Treadmill Exercise

GMT 2025-04-10

Slide # and Description:

1. Previous slide.
2. This description slide.
3. Topology shows 2 Columbus sensor locations we used for analysis.
4. Sensor SE-F08 at COL1A3, 12-Hour Spectrogram Below 6 Hz
5. Sensor SE-F02 at COL Endcone, 12-Hour Spectrogram Below 6 Hz
6. Sensor SE-F08 at COL1A3, 3-Hour Spectrogram Below 10 Hz, Time Zoom-In
7. Sensor SE-F02 at COL Endcone, 3-Hour Spectrogram Below 10 Hz, Time Zoom-In
8. Sensor SE-F08 at COL1A3, 3-Hour Interval RMS Accel. Below 6 Hz
9. Sensor SE-F02 at COL Endcone, 3-Hour Interval RMS Accel. Below 6 Hz

**interval RMS acceleration below 6 Hz suggests “bad/brief” BD2
exercise period was a factor of 3x to 4x higher than “good” period**

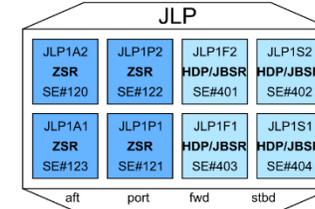
Topology



Version # IC-3847
Generated On 2025-03-05
Increment: 73

SAMS Sensor Locations

as of 2025-04-16



SAMS Sensor Head Locations

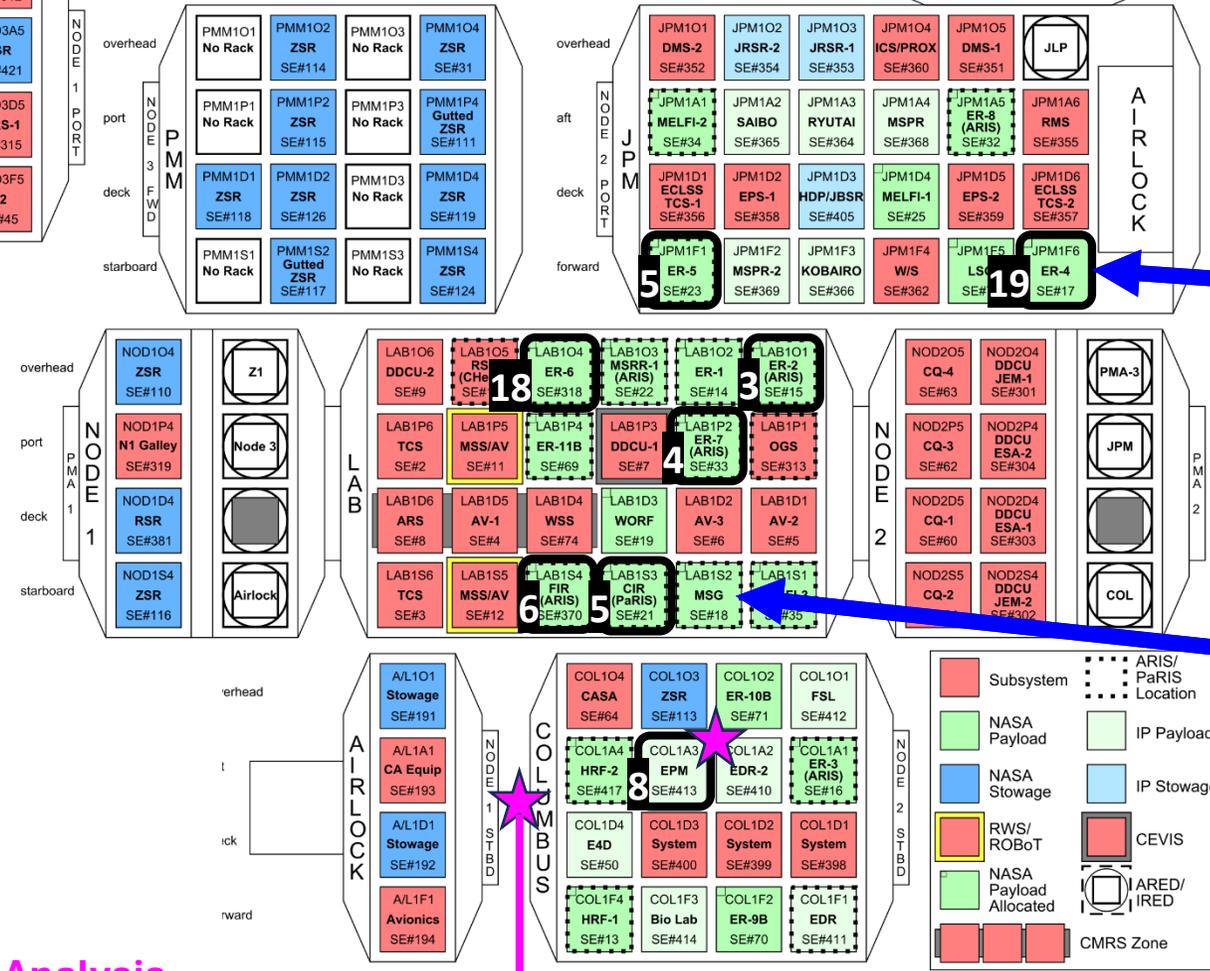
- 2** SE F02, COL1A1, ER3, Seat Track
- 3** SE F03, LAB101, ER2, Lower Z Panel
- 4** SE F04, LAB1P2, ER7, Cold Atom Lab Front
- 5** SE F05, JPM1F1, ER5, Inside RTS/D2
- 8** SE F08, COL1A3, EPM, near PK-4
- 9** TSH-ES09 (and ES03), LAB1S2, MSG
- 5** TSH-ES05, LAB1S3, CIR
- 6** TSH-ES06, LAB1S4, FIR
- 18** TSH-ES18, LAB104, ER-6
- 20** TSH-ES20, LAB1S2, MSG, Seat Track
- 19** TSH-ES19, plan to deploy to JPM1F6

LEGEND:

- Sensor that does not move
- Sensor that has moved or may move
- Sensor that has never moved

hard-wired
hard-wired

★ Two COL sensors used for BD-2 Analysis



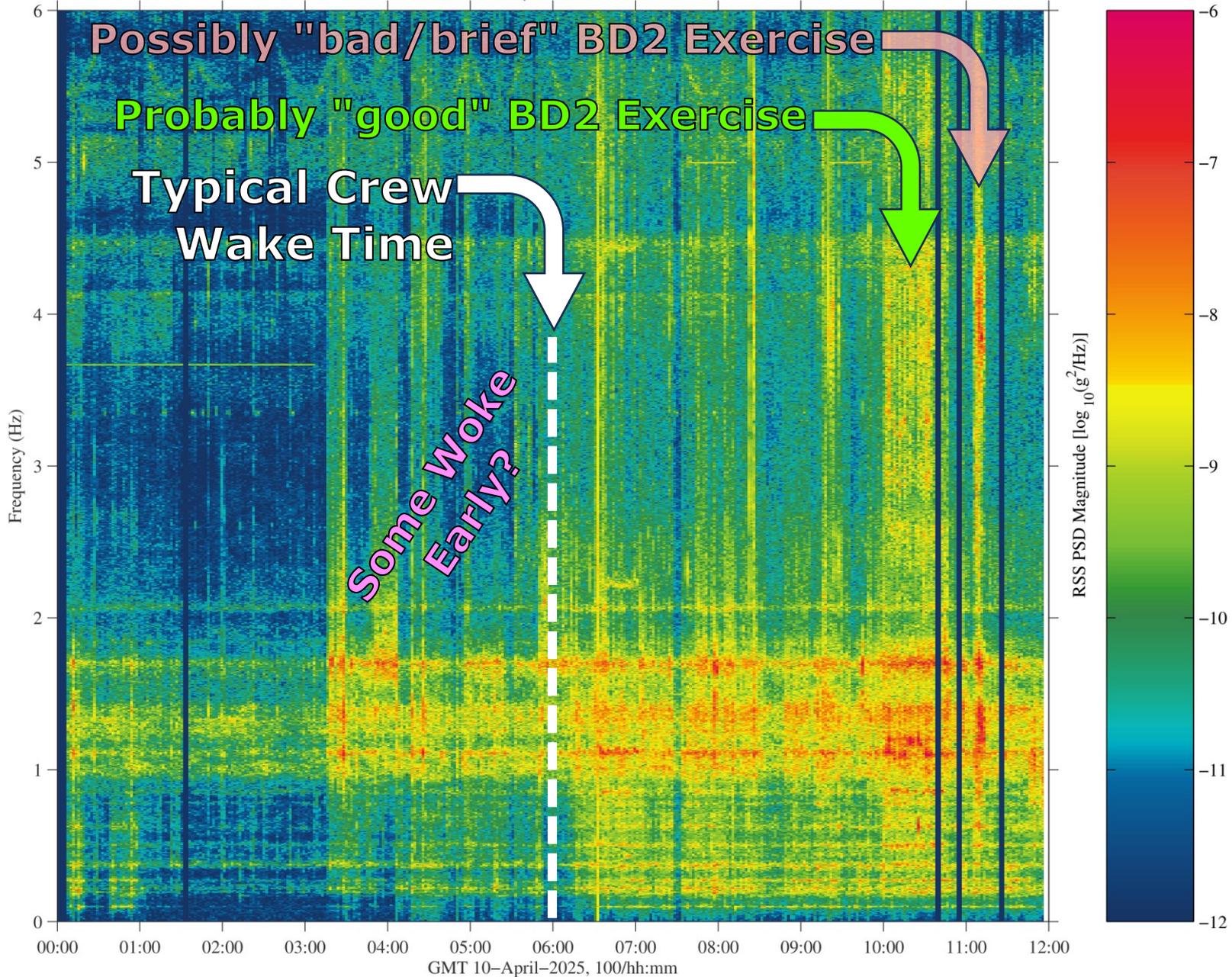
plan is to deploy here

20
MSG
Seat Track

2 COL endcone

SE-F08 at COL1A3

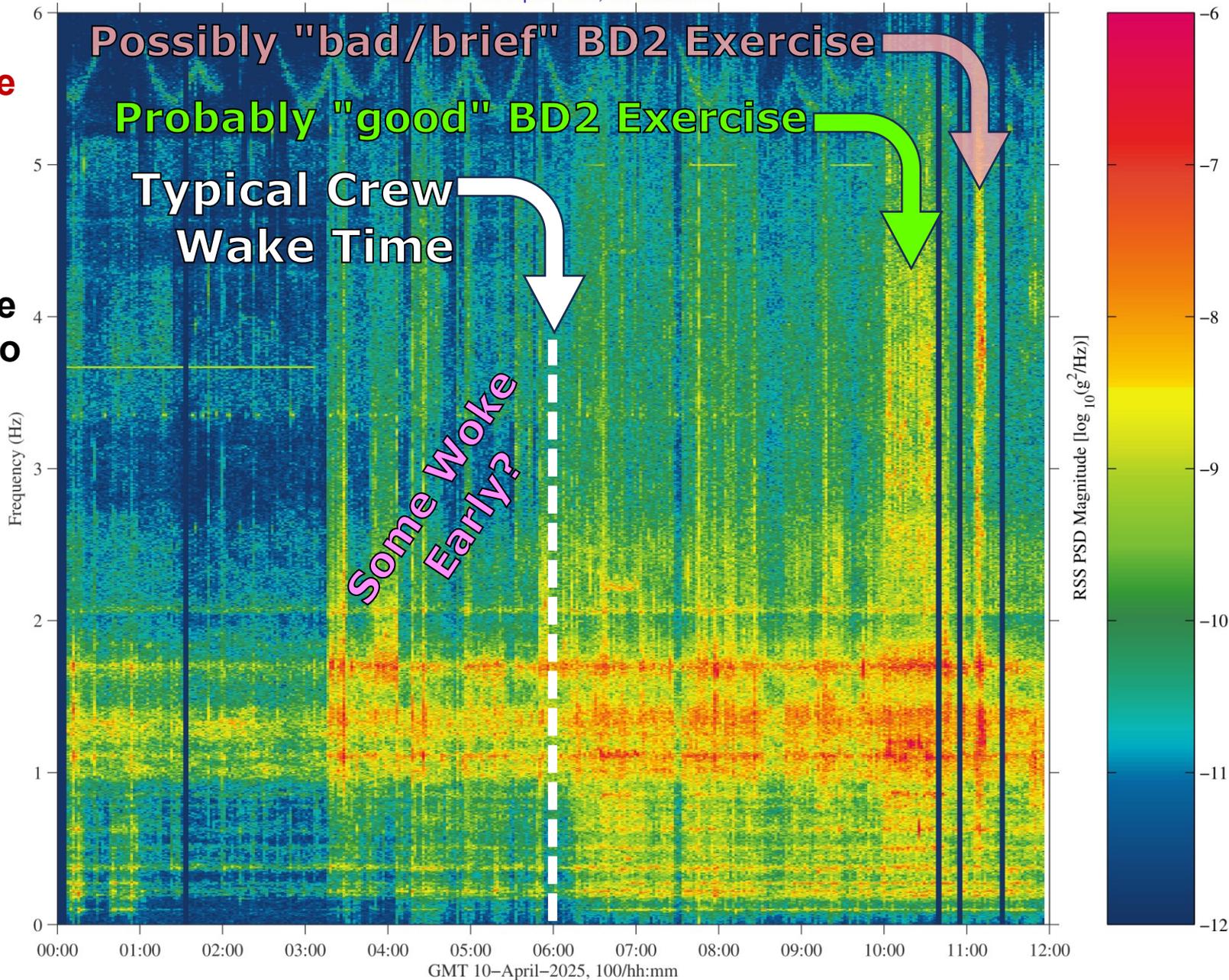
12 Hours Below 6 Hz



SE-F02 at COL Endcone

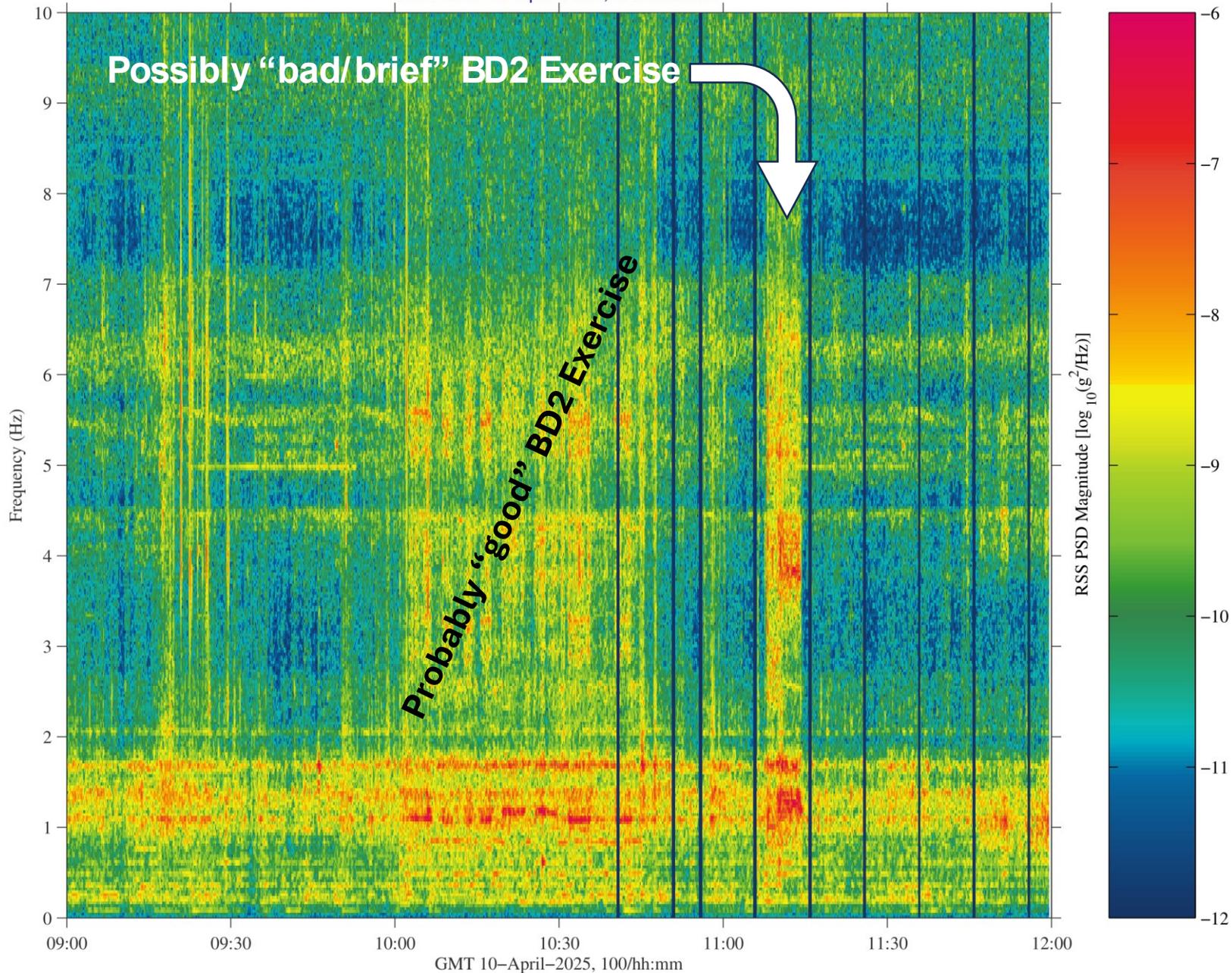
12 Hours
Below 6 Hz

Generally, more
energetic due to
location.



SE-F08 at COL1A3

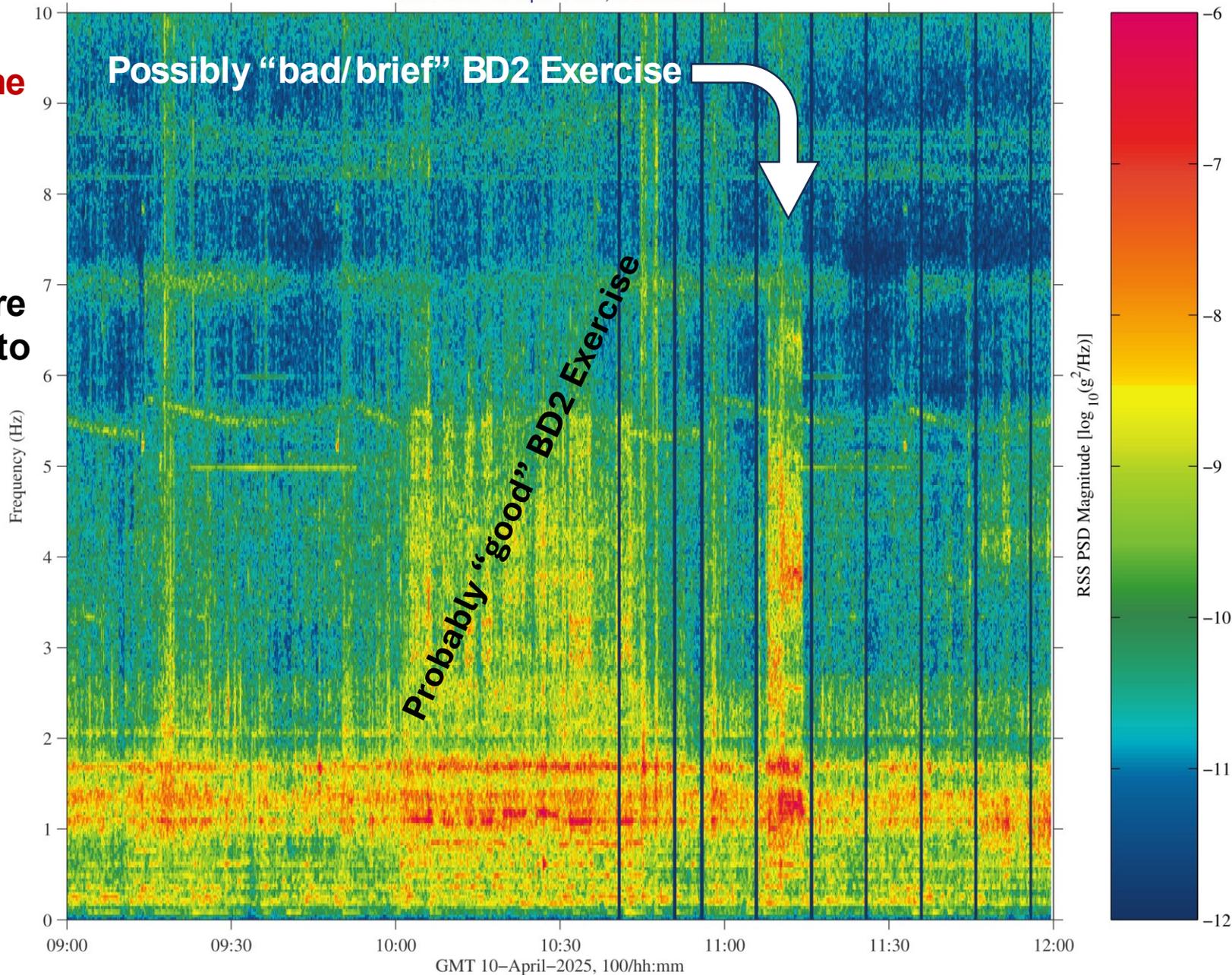
3 Hours Below 10 Hz



SE-F02 at COL Endcone

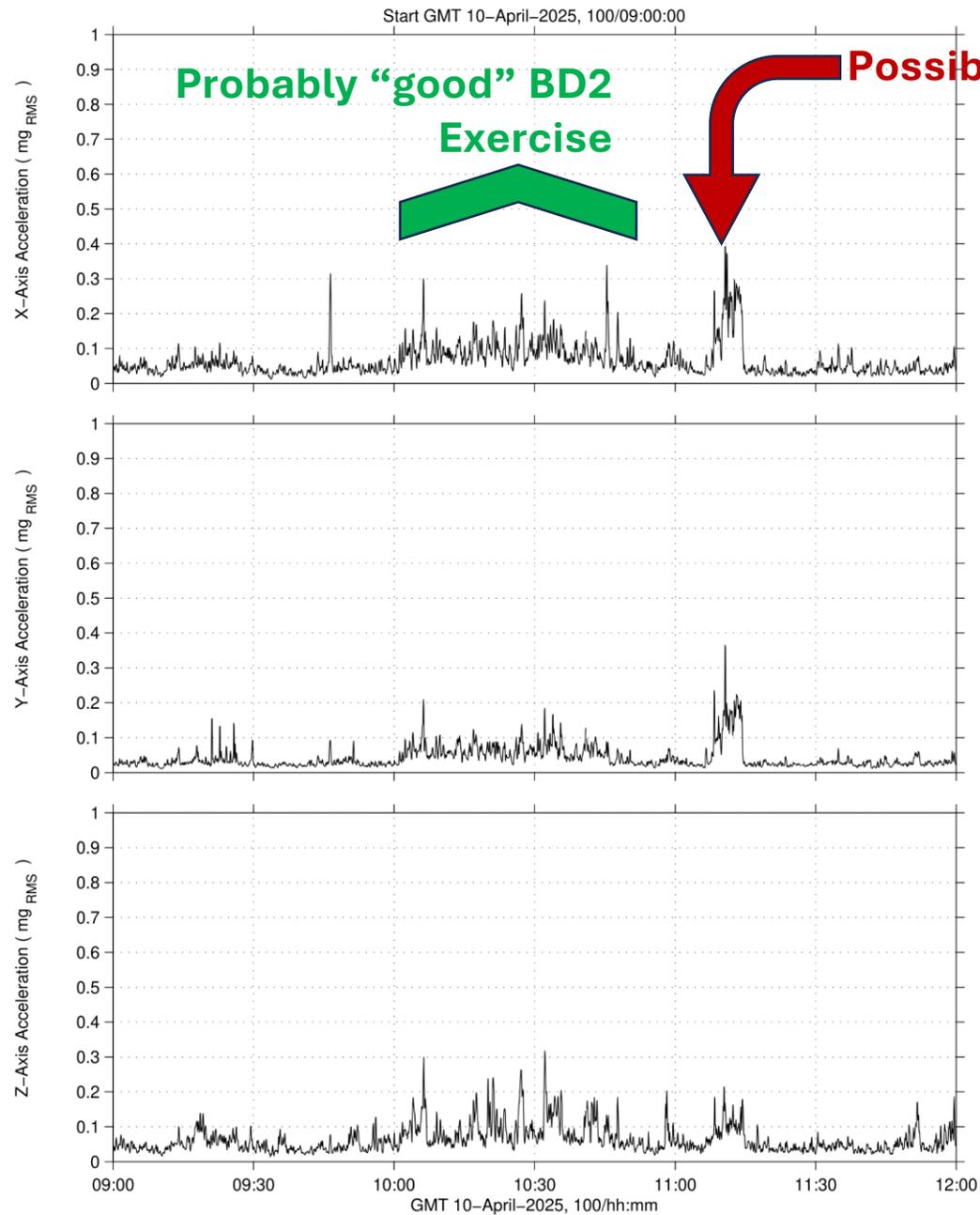
3 Hours
Below 10 Hz

Generally, more
energetic due to
location.



SE-F08 at COL1A3

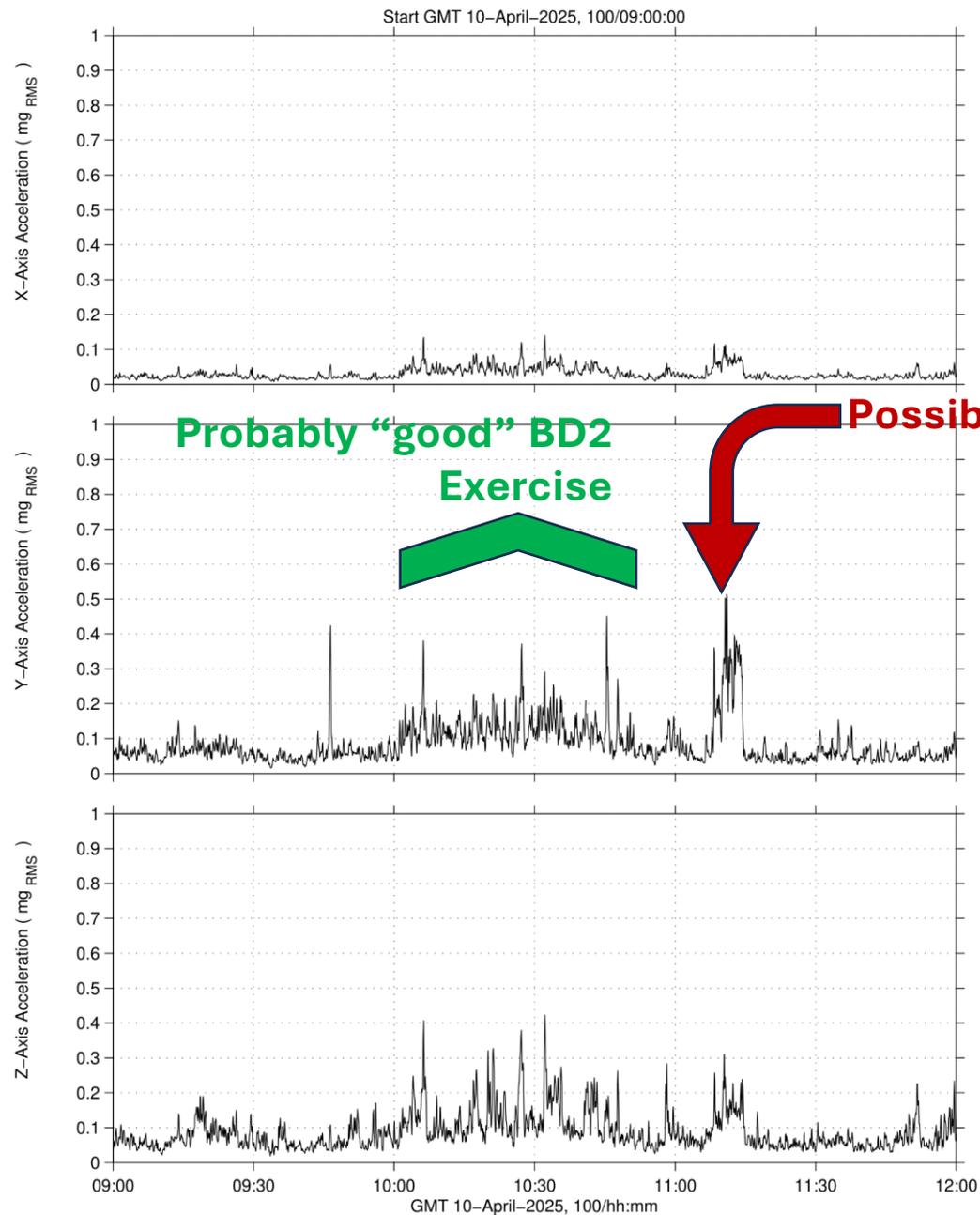
3 Hours Below 6 Hz



SE-F02 at COL Endcone

3 Hours
Below 6 Hz

Generally, more energetic due to location.



Possibly "bad/brief" BD2 Exercise

Probably "good" BD2 Exercise

interval RMS acceleration below 6 Hz suggests "bad/brief" period was a factor of 3x to 4x higher than "good" period