



EMC-WG teleconf 01/03/2021

RPW status



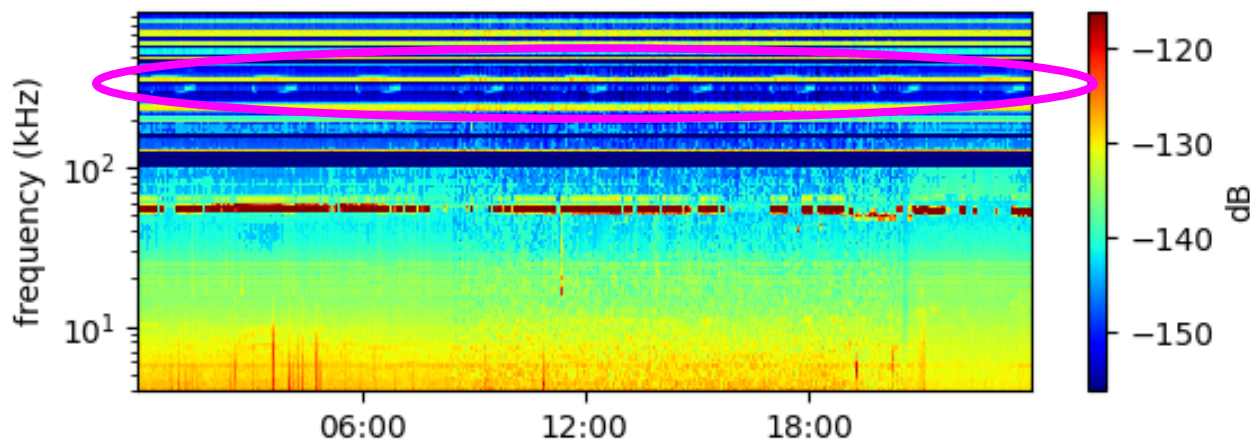
Laboratoire d'Études Spatiales et d'Instrumentation en Astrophysique



■ Battery charging perturbations removed ! Thanks to everyone who worked for the mitigation!

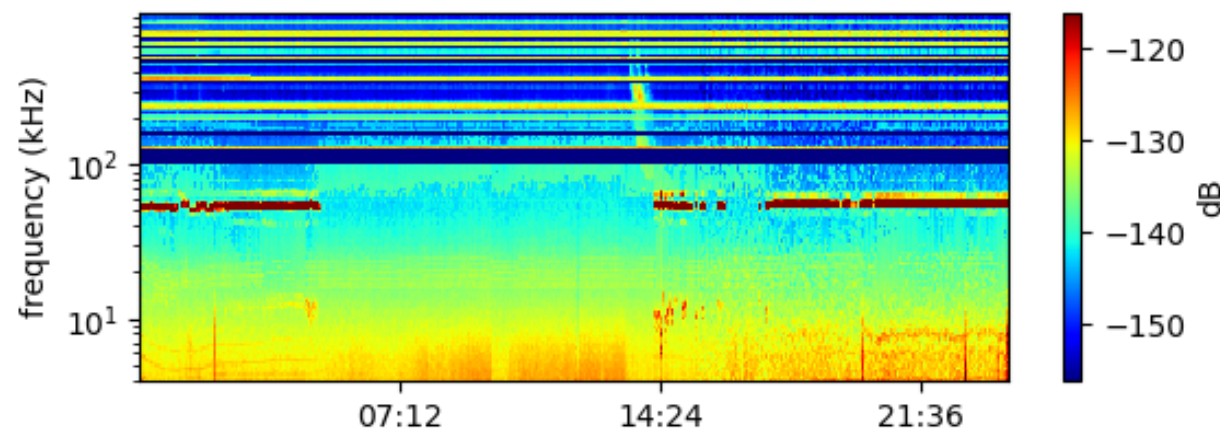
TNR DATA 14-Feb-2021 (00:00:01)-14-Feb-2021 (23:59:25)

V1-V2



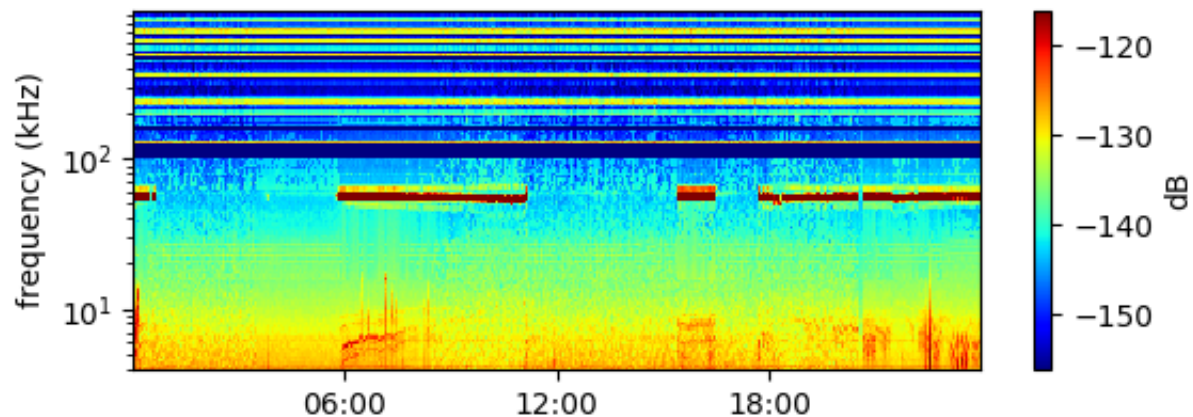
TNR DATA 15-Feb-2021 (00:00:06)-16-Feb-2021 (00:00:44)

V1-V2



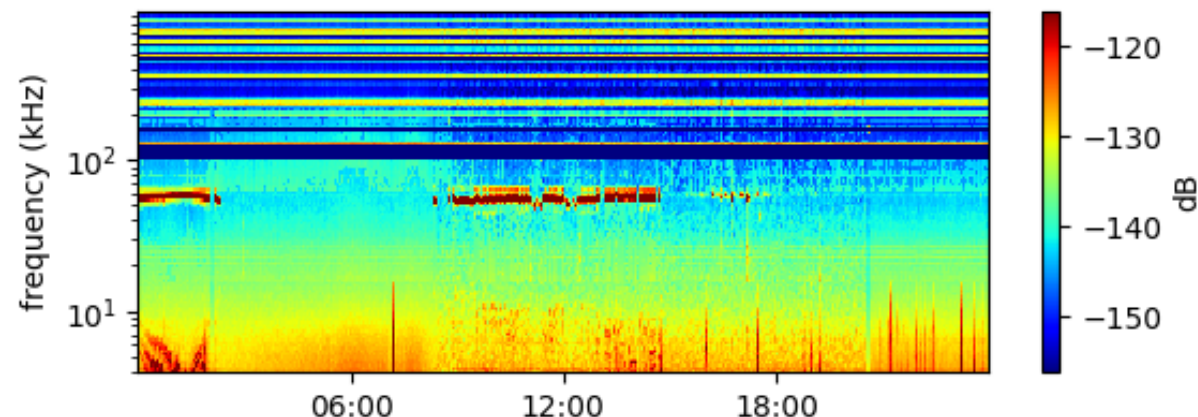
TNR DATA 16-Feb-2021 (00:00:48)-16-Feb-2021 (23:59:28)

V1-V2



TNR DATA 17-Feb-2021 (00:00:10)-17-Feb-2021 (23:59:22)

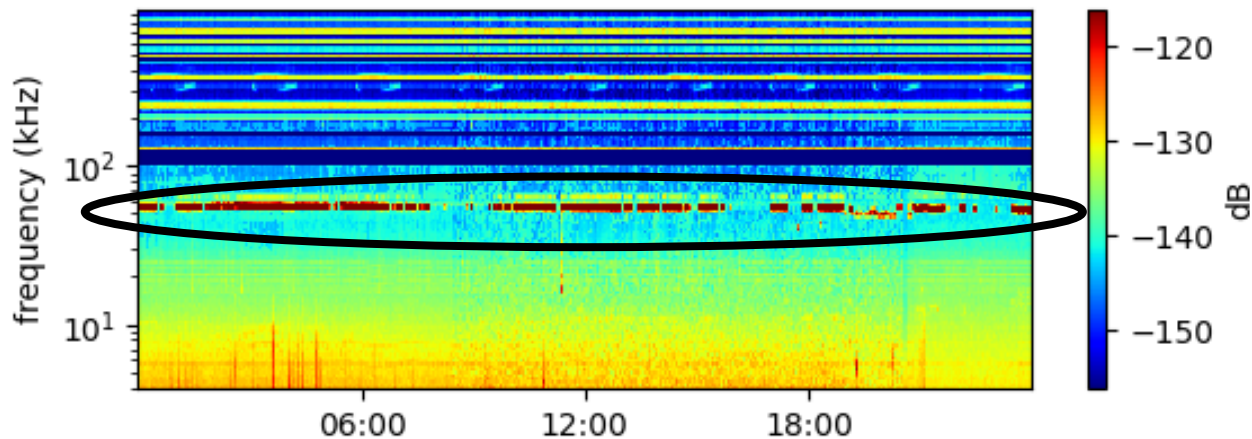
V1-V2



■ Unfortunately the *new* weird 50 kHz is still there

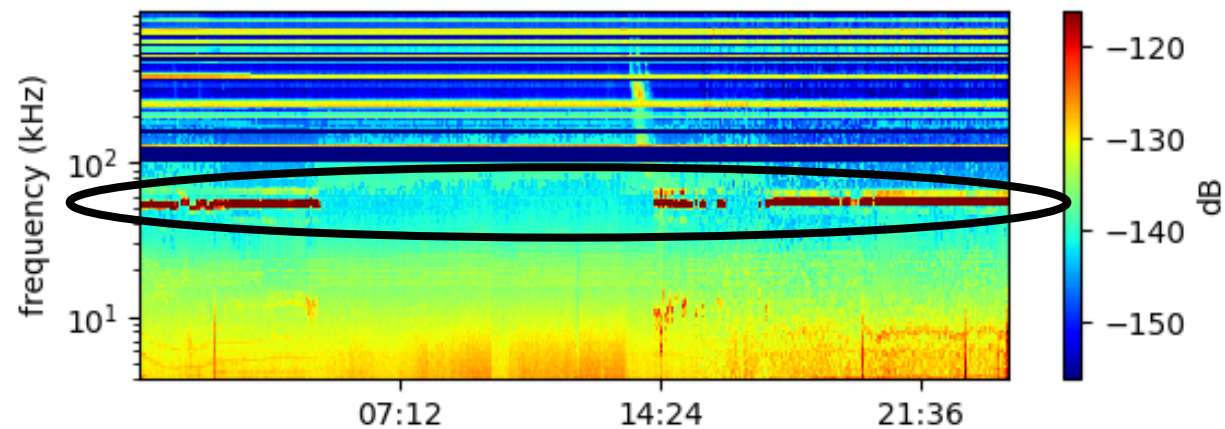
TNR DATA 14-Feb-2021 (00:00:01)-14-Feb-2021 (23:59:25)

V1-V2



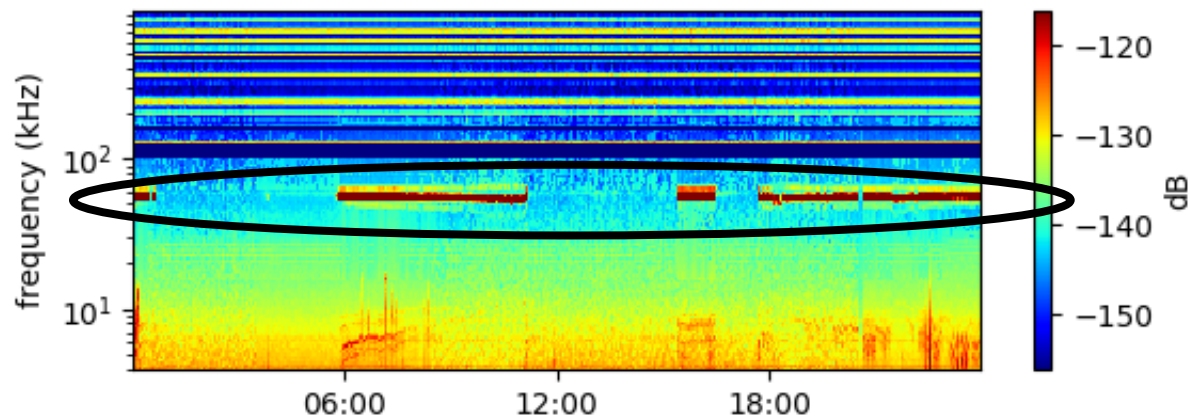
TNR DATA 15-Feb-2021 (00:00:06)-16-Feb-2021 (00:00:44)

V1-V2



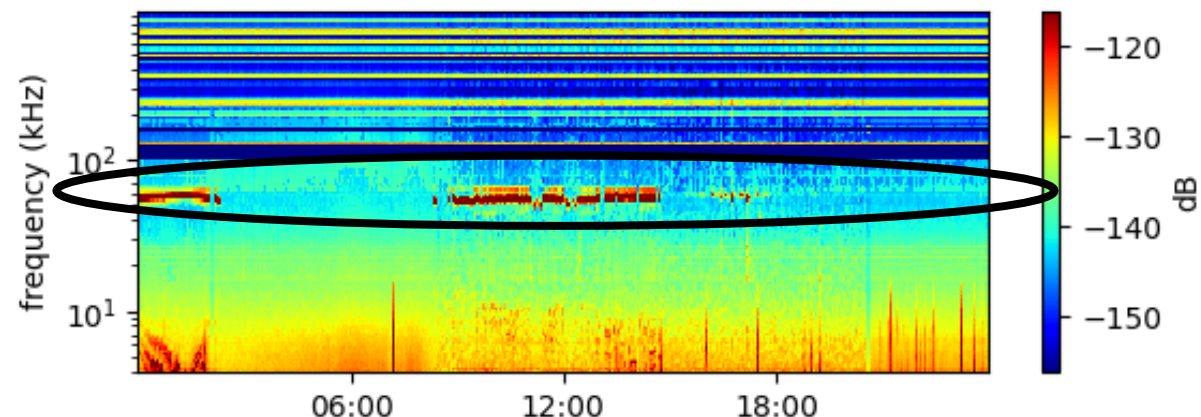
TNR DATA 16-Feb-2021 (00:00:48)-16-Feb-2021 (23:59:28)

V1-V2



TNR DATA 17-Feb-2021 (00:00:10)-17-Feb-2021 (23:59:22)

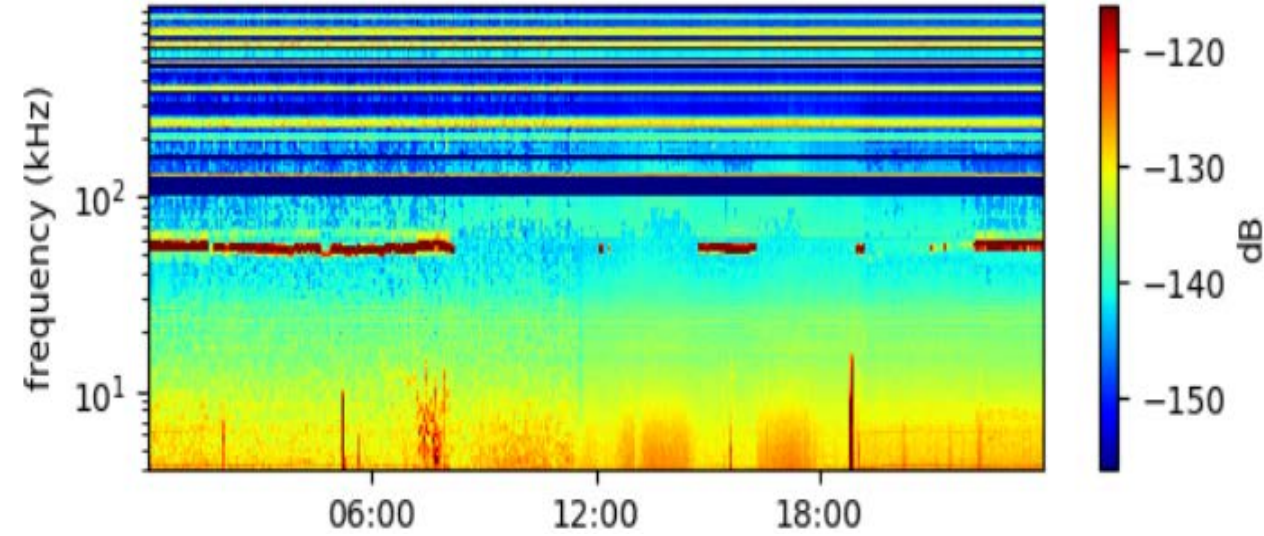
V1-V2



Latest TNR Summary Plots

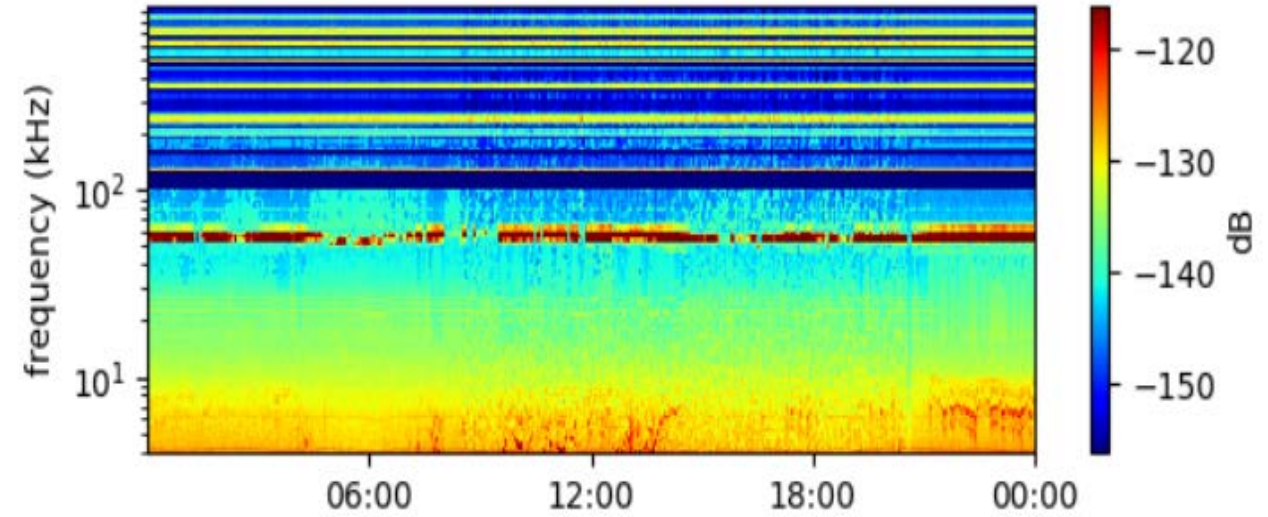
TNR DATA 20-Feb-2021 (00:00:48)-20-Feb-2021 (23:59:58)

V1-V2



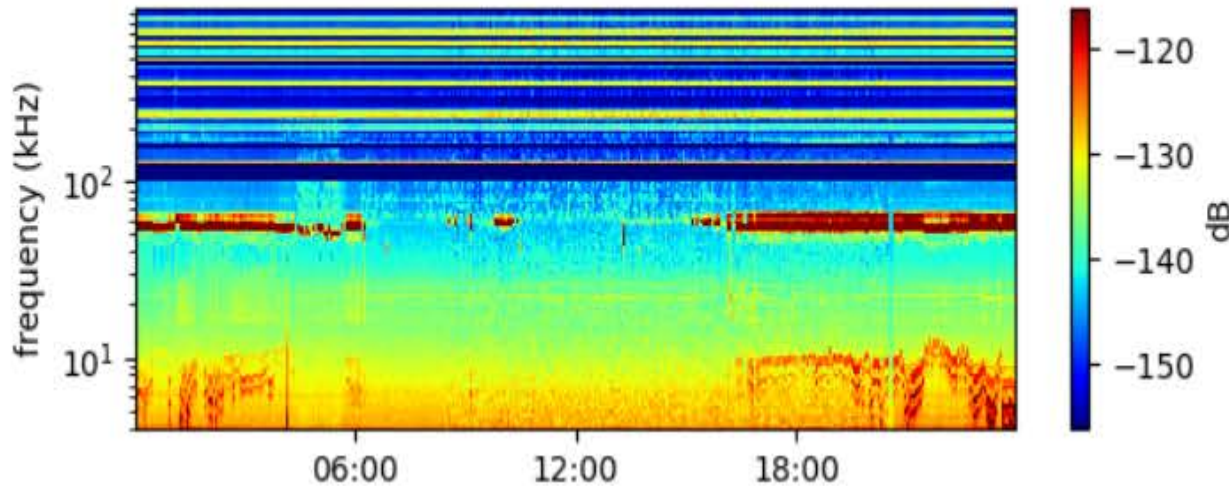
TNR DATA 21-Feb-2021 (00:00:40)-22-Feb-2021 (00:00:11)

V1-V2



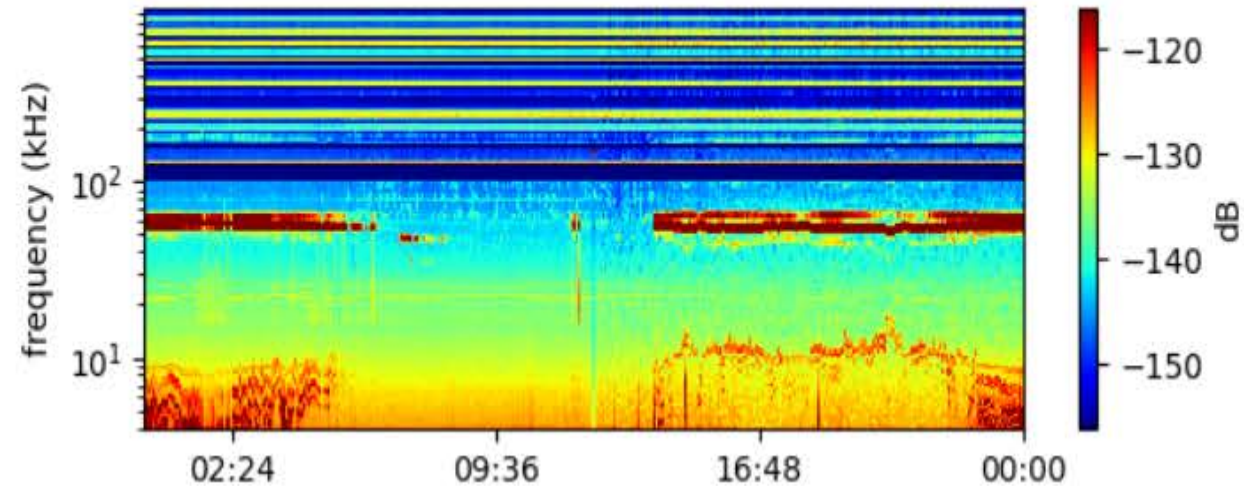
TNR DATA 22-Feb-2021 (00:00:54)-22-Feb-2021 (23:59:24)

V1-V2



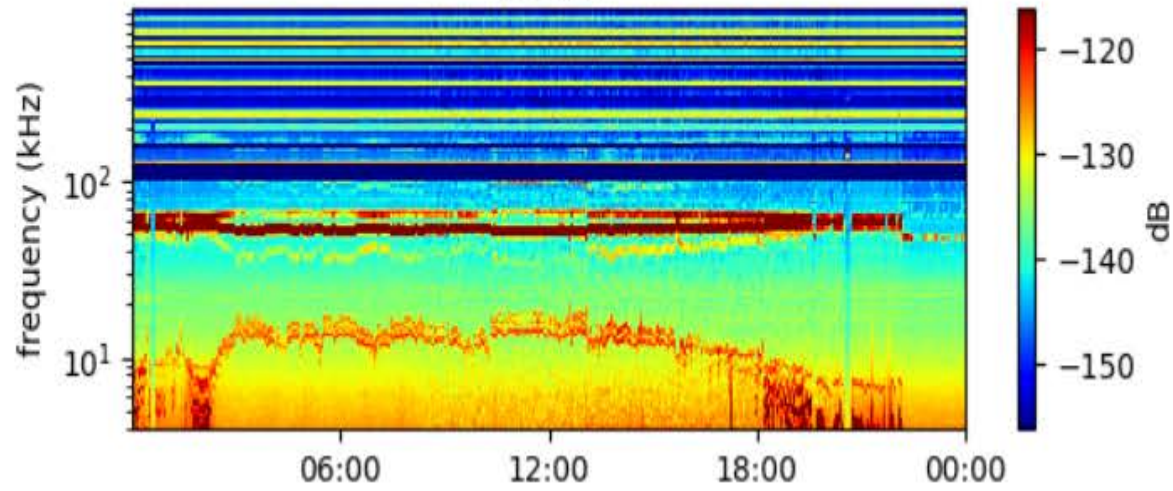
TNR DATA 23-Feb-2021 (00:00:06)-24-Feb-2021 (00:00:47)

V1-V2



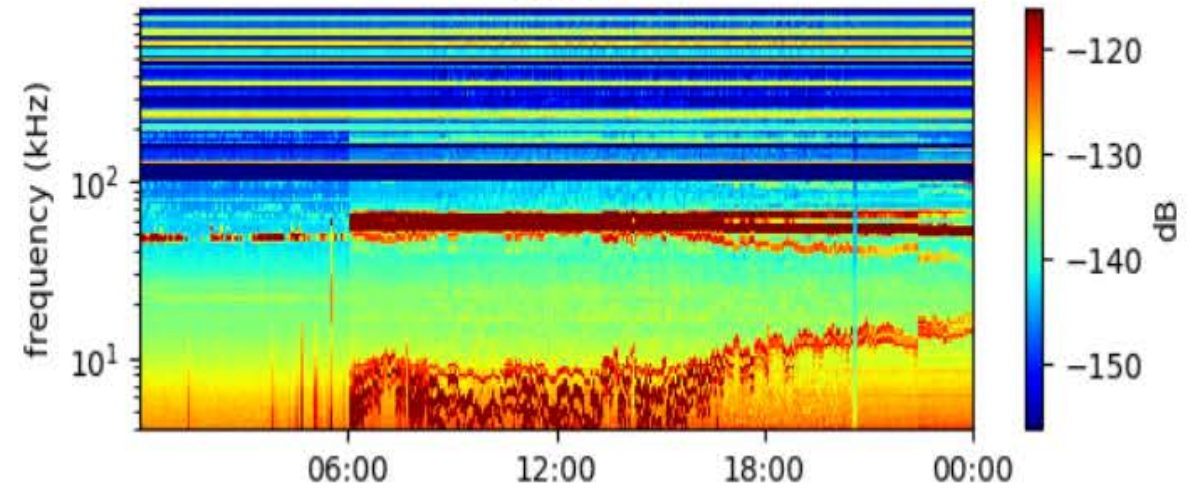
TNR DATA 24-Feb-2021 (00:00:53)-25-Feb-2021 (00:00:10)

V1-V2

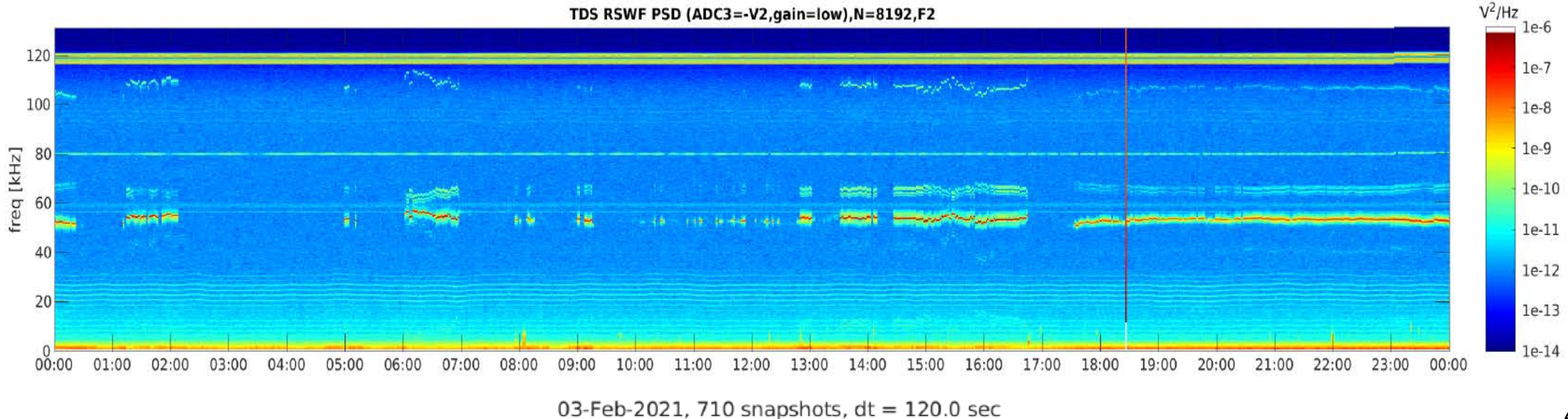


TNR DATA 25-Feb-2021 (00:00:52)-26-Feb-2021 (00:00:04)

V1-V2

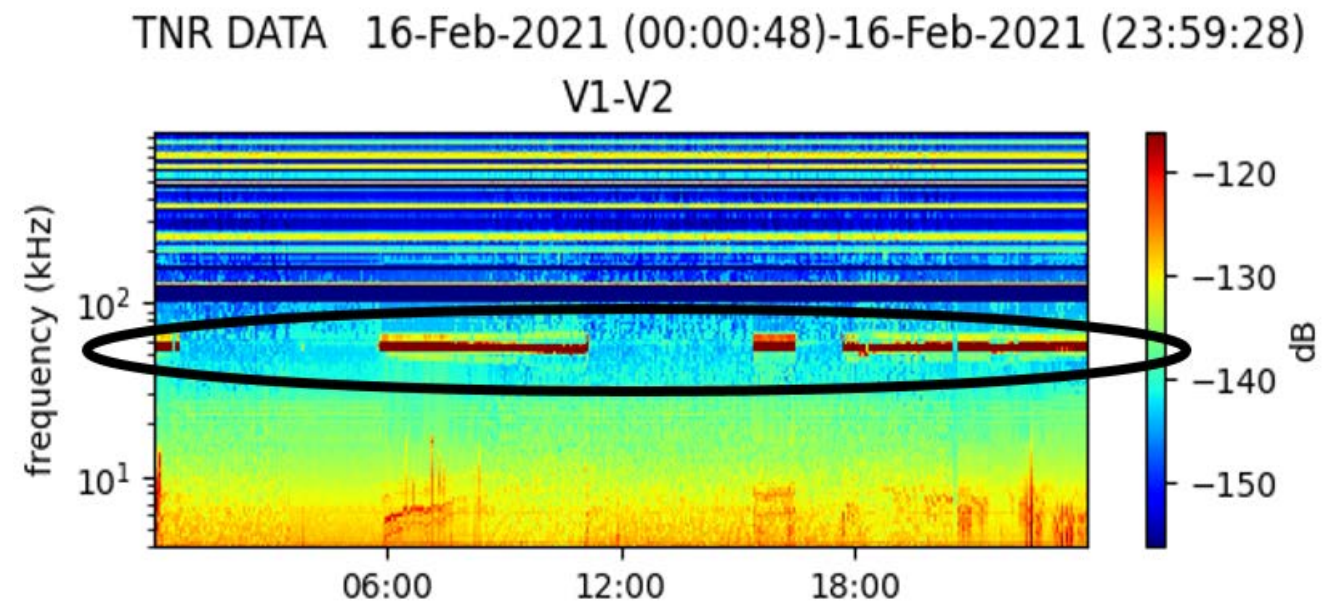
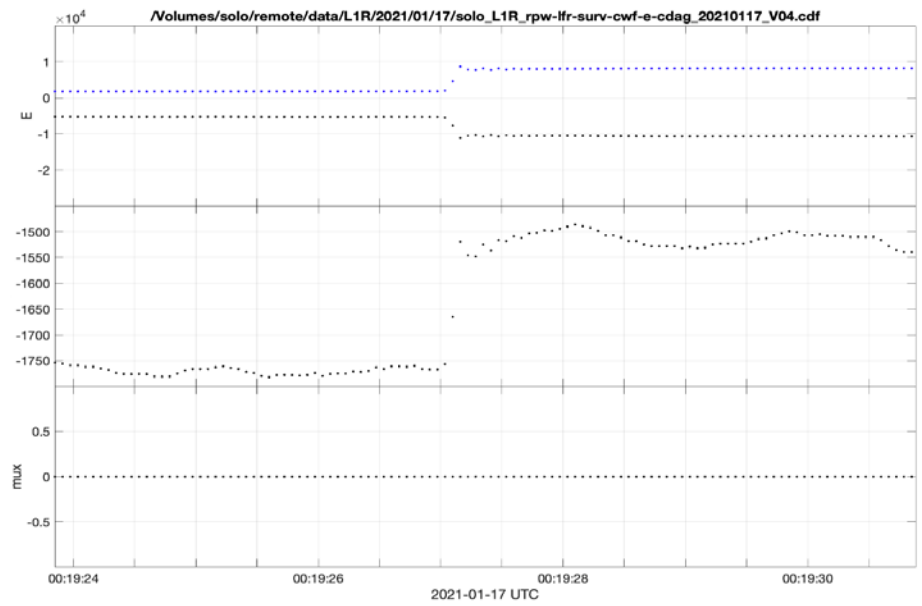


- This *new* serious interference appeared on RPW starting from January 24th, after RPW was switched back on after the CSW update.
- The interference manifests as a strong spectral peak at a frequency moving slowly between 50 kHz and 60 kHz.
- It appears to be particularly strong on antenna V2.
- The spurious signal is not measured all the time (it seems present about 50% of the time) and both the amplitude and frequency vary with time.
- Unfortunately, this signal interferes with the peak tracking capability of RPW and the wave detection algorithm of TDS.



Some questions:

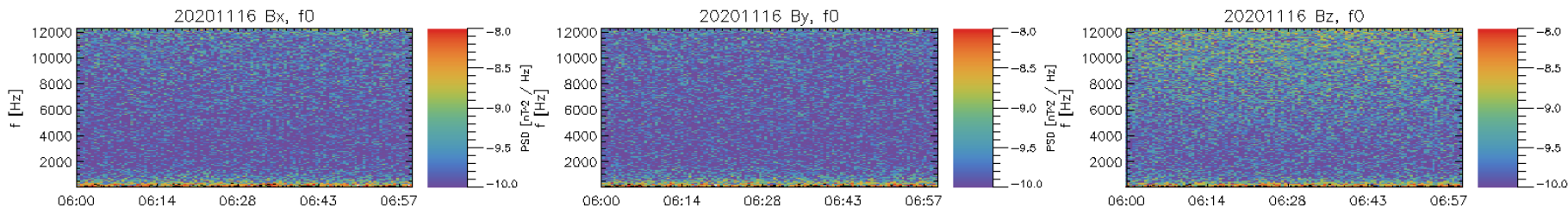
- Can this interference be related to the Central Software update ?
 - *What has been really implemented to insure better S/C pointing ?*
 - *Are the RW involved ?*
- Can it be related to some specific Solar Arrays activities
- Can it be related to the new heating procedure for the SWA DPU ?
- Possibly linked to a BIAS S/C potential offset observed on Jan 17th
 - *Is there a correlation between the interference and spacecraft potential (or ambient plasma density). ?*
- Possibly of the same origin as a similar interference observed around 45 kHz on a few occasions in 2020, but after January 24th, the signal is much stronger and much more persistent. Why ?



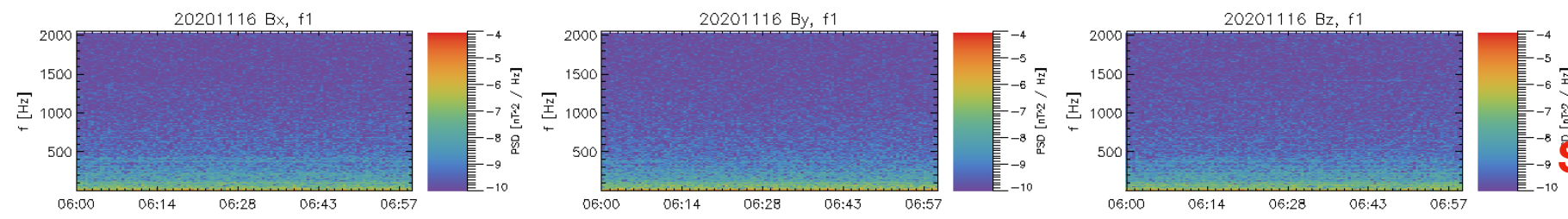
SCM feedback from EMC2 campaign

Significant impact:

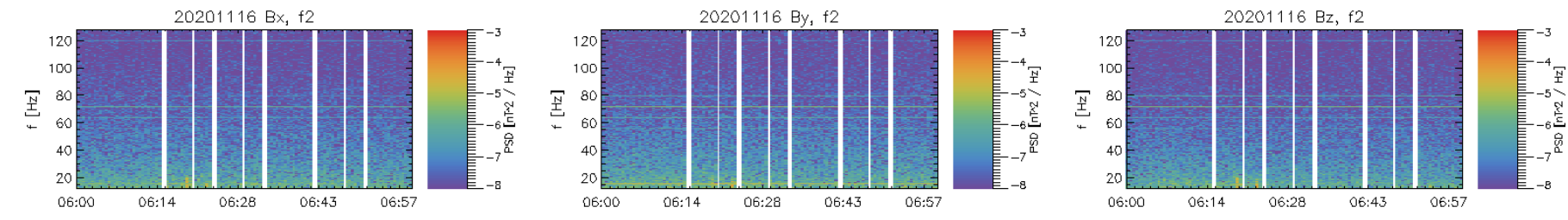
- Solo HI, 6 kHz and smaller 100 Hz**
- Wheel off load**
- other strong signal unidentified on Nov 17th, TBC**



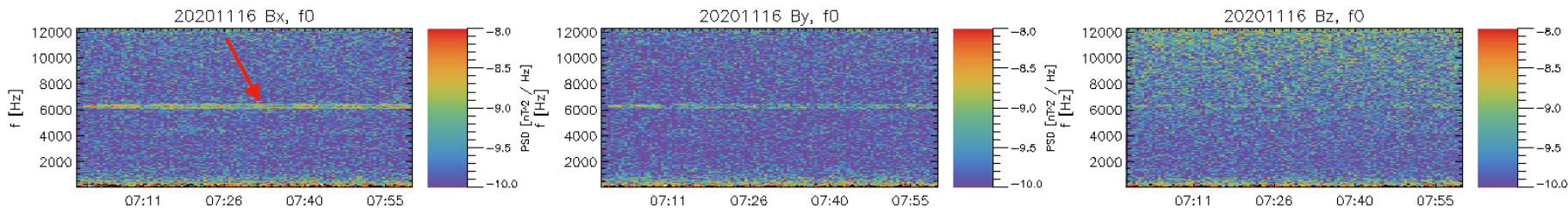
07:00 -
07:30



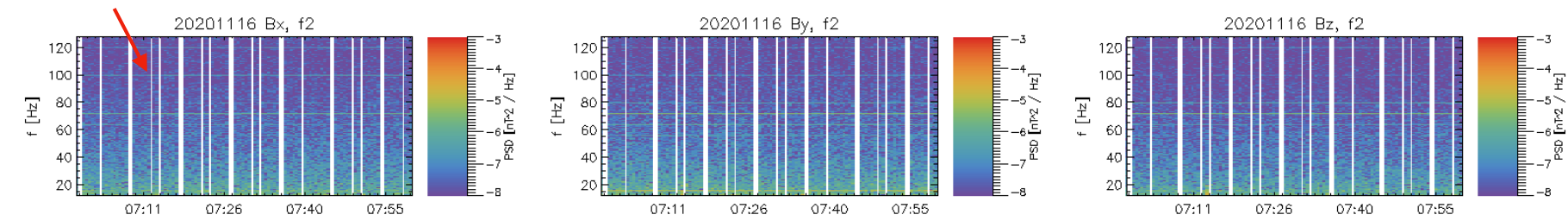
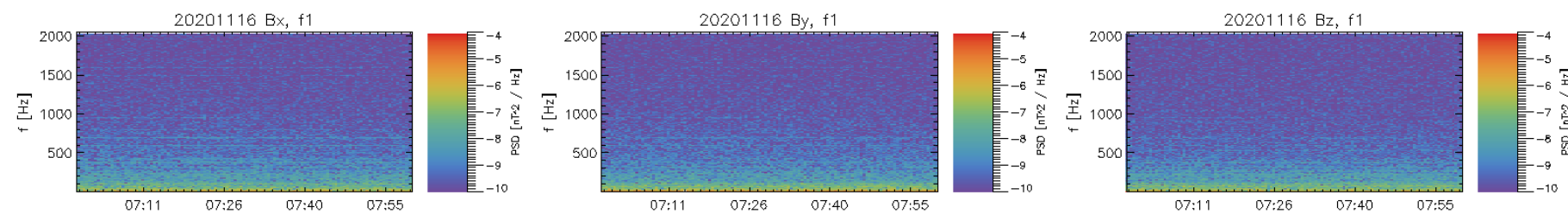
SoloHI OFF
to OPS



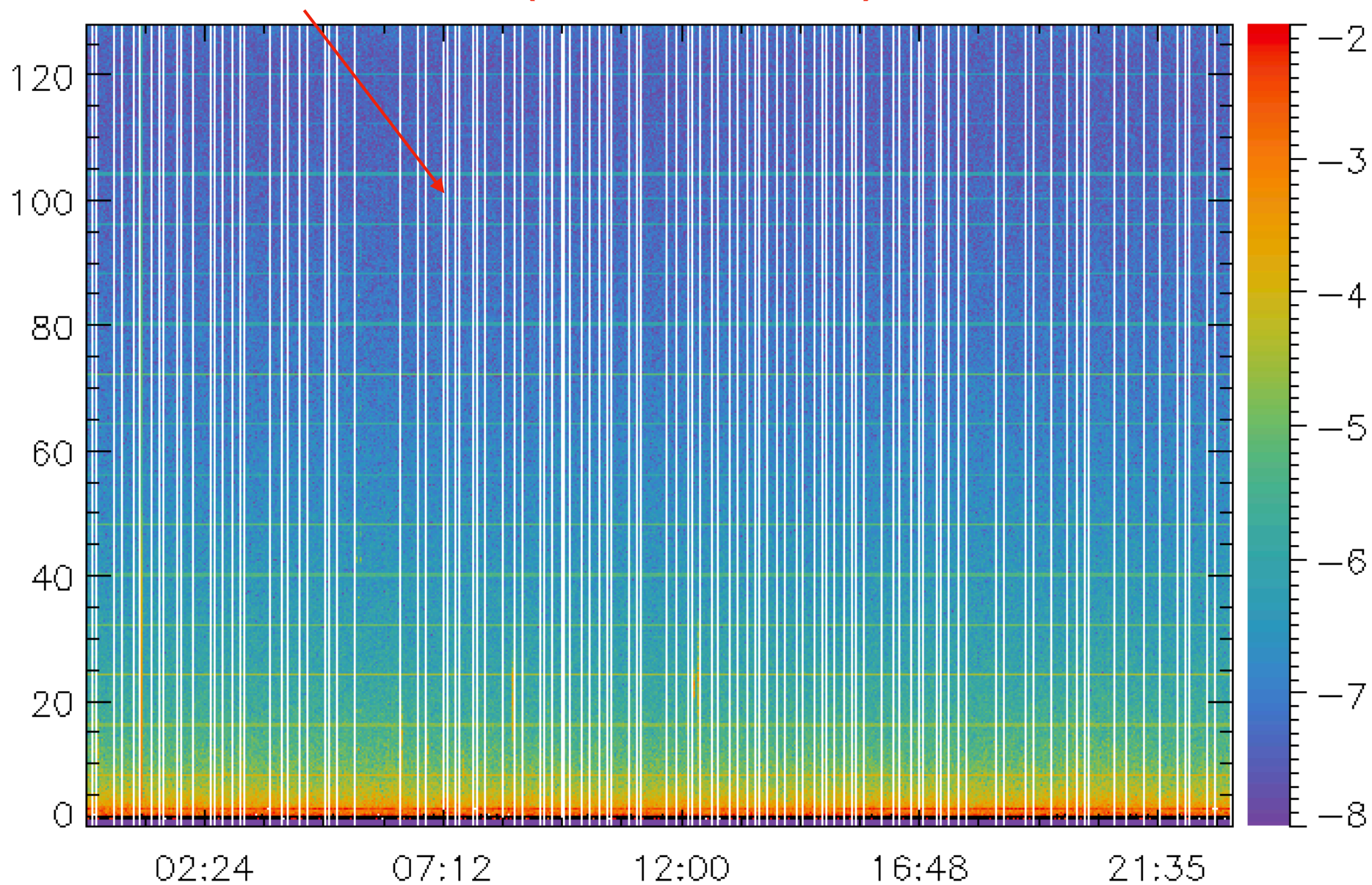
07:35 - 08:00



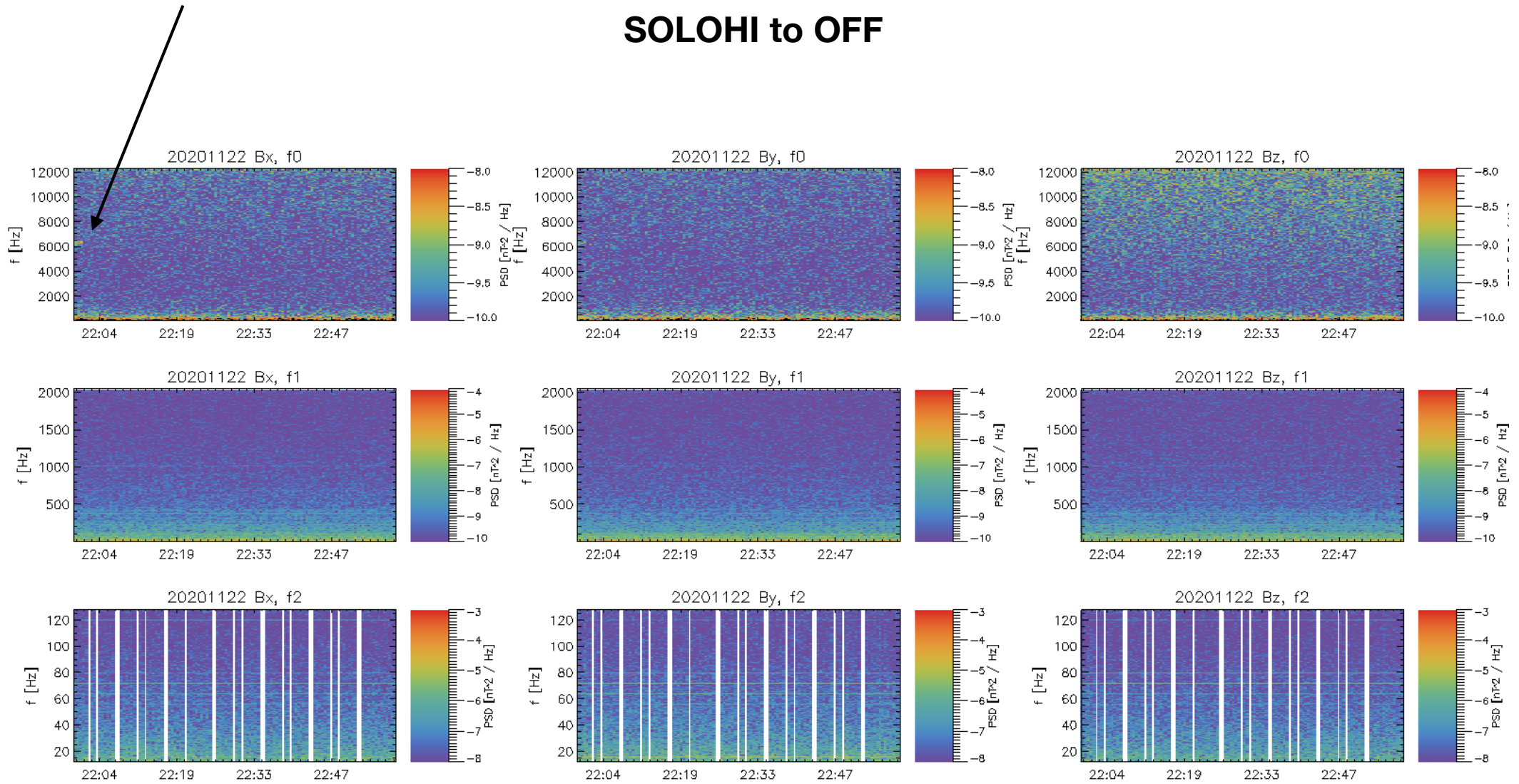
PHI OFF to
OPS:
OK



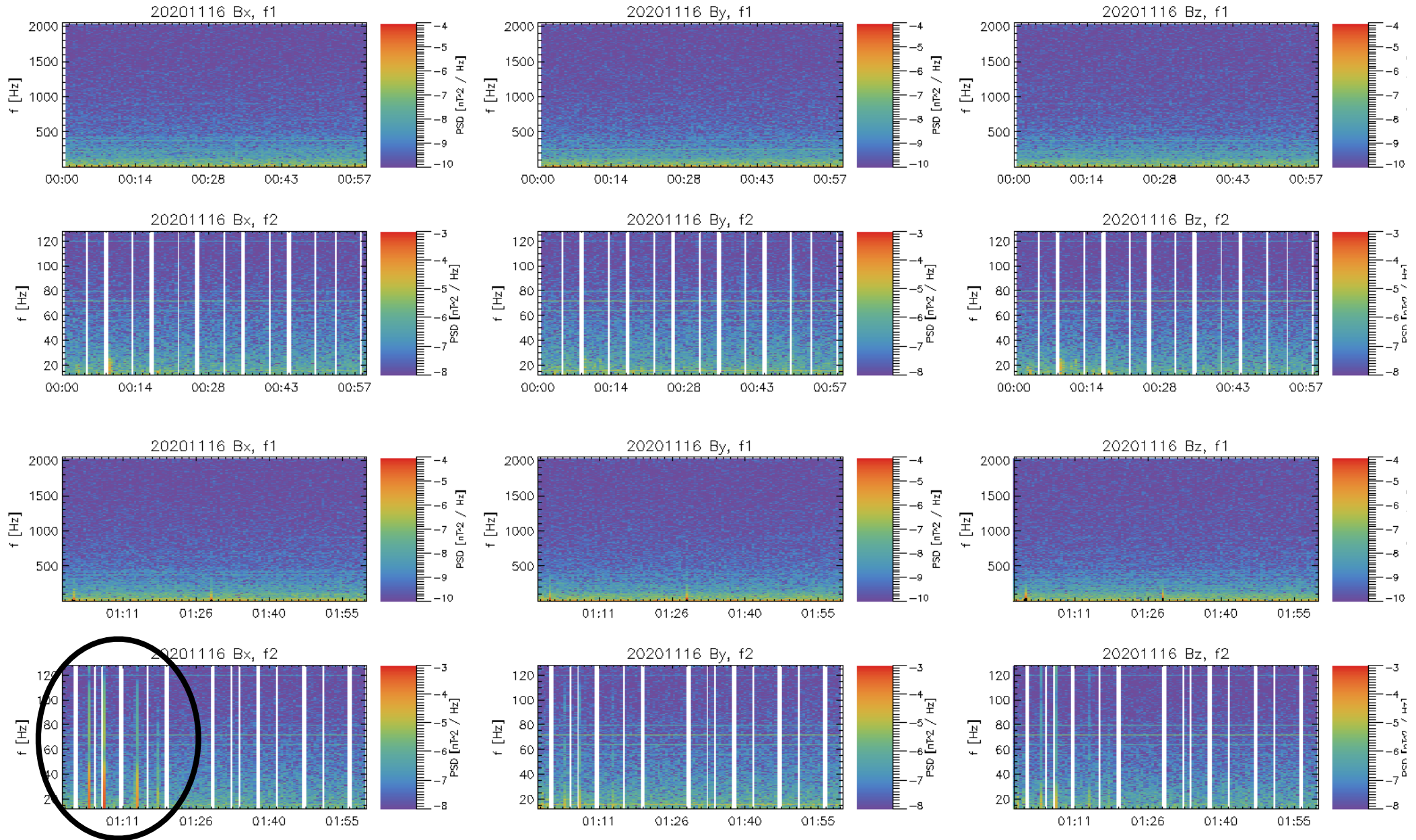
100Hz around 7:00 (SoloHI OFF to OPS)



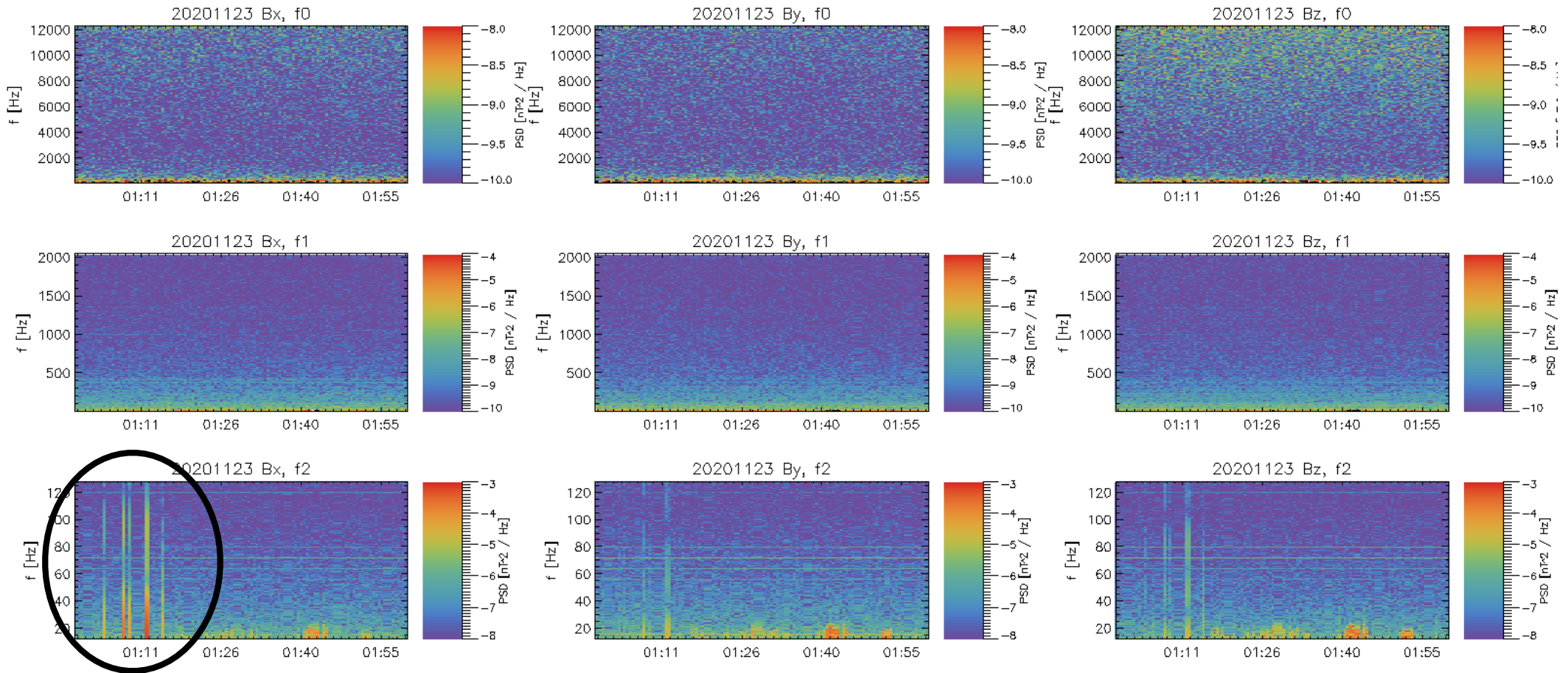
22:01:12 OBSHK->OFF SOLOHI to OFF



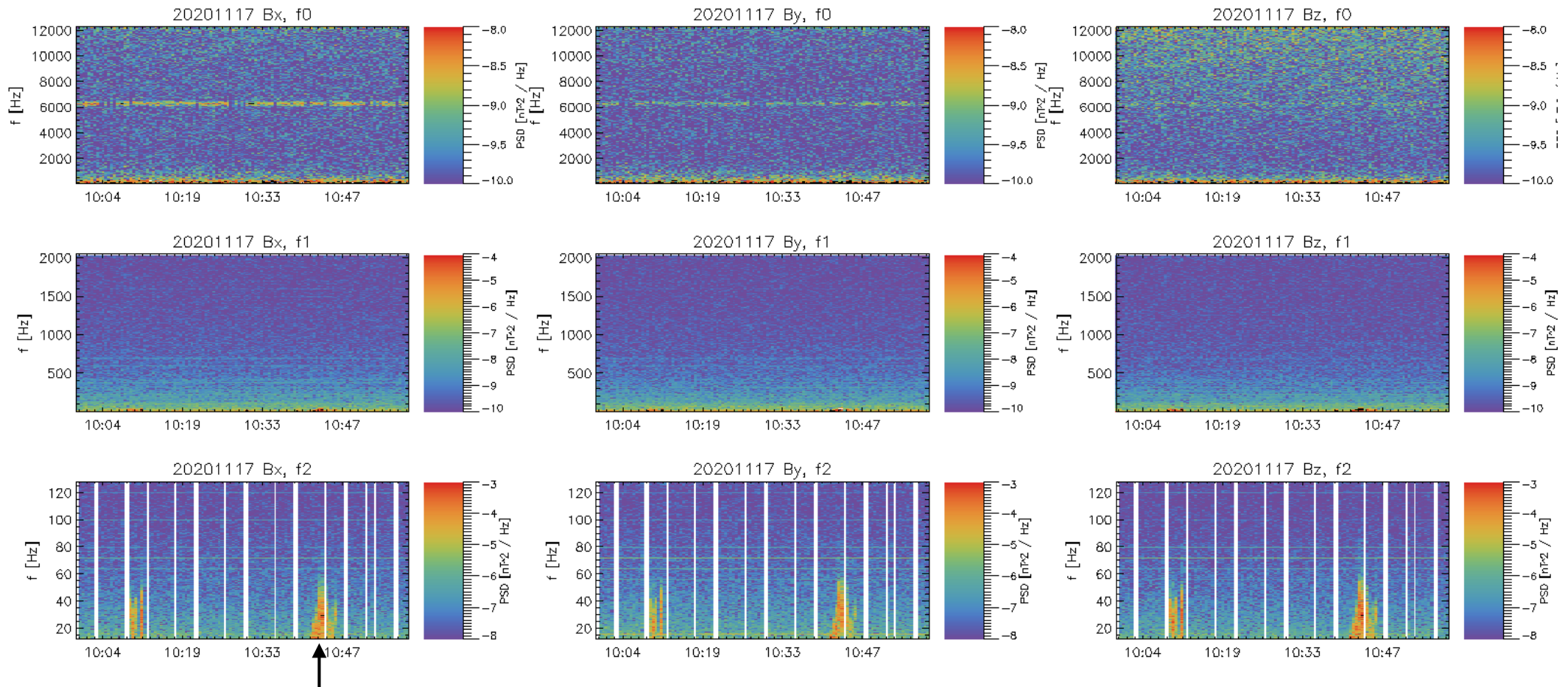
00:05 - 03:05
n/a
WOL, first 45mins noisy



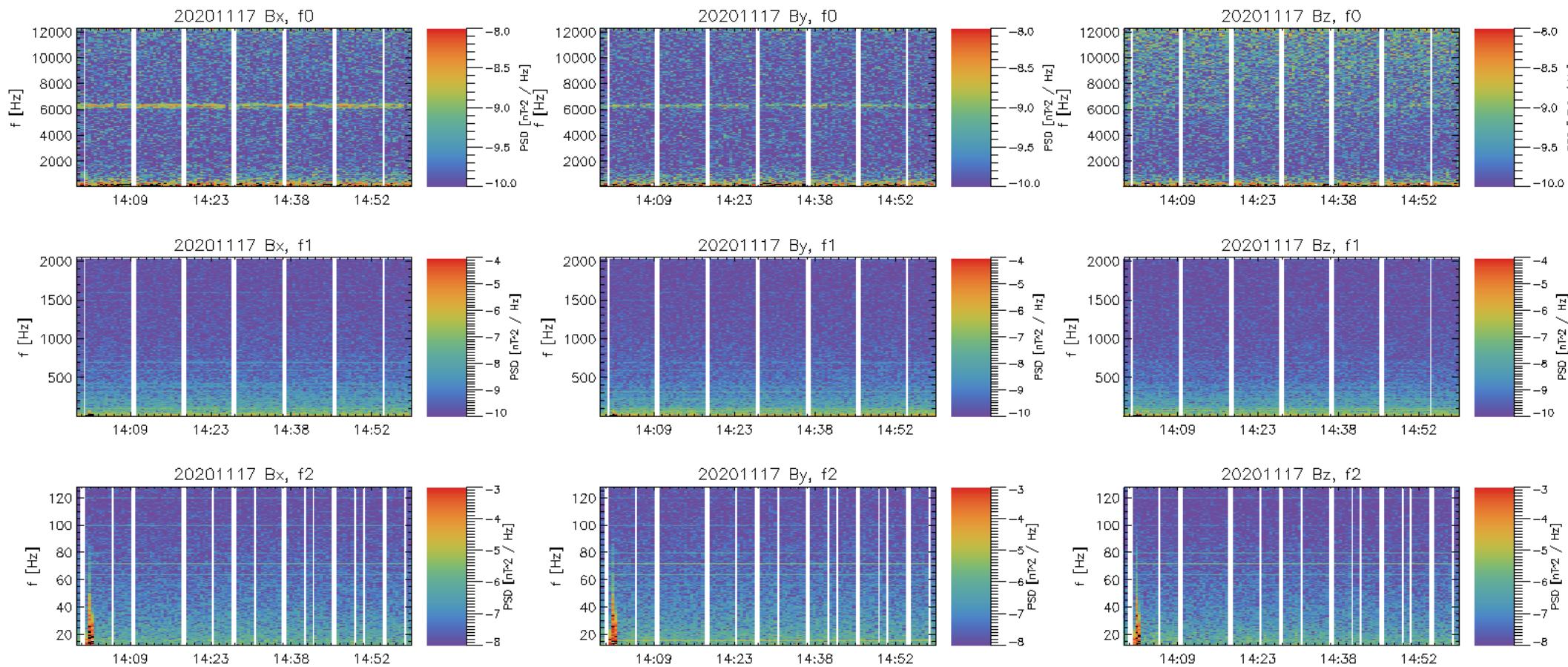
WOL ?



Unclear



Start of pass ?, TBC

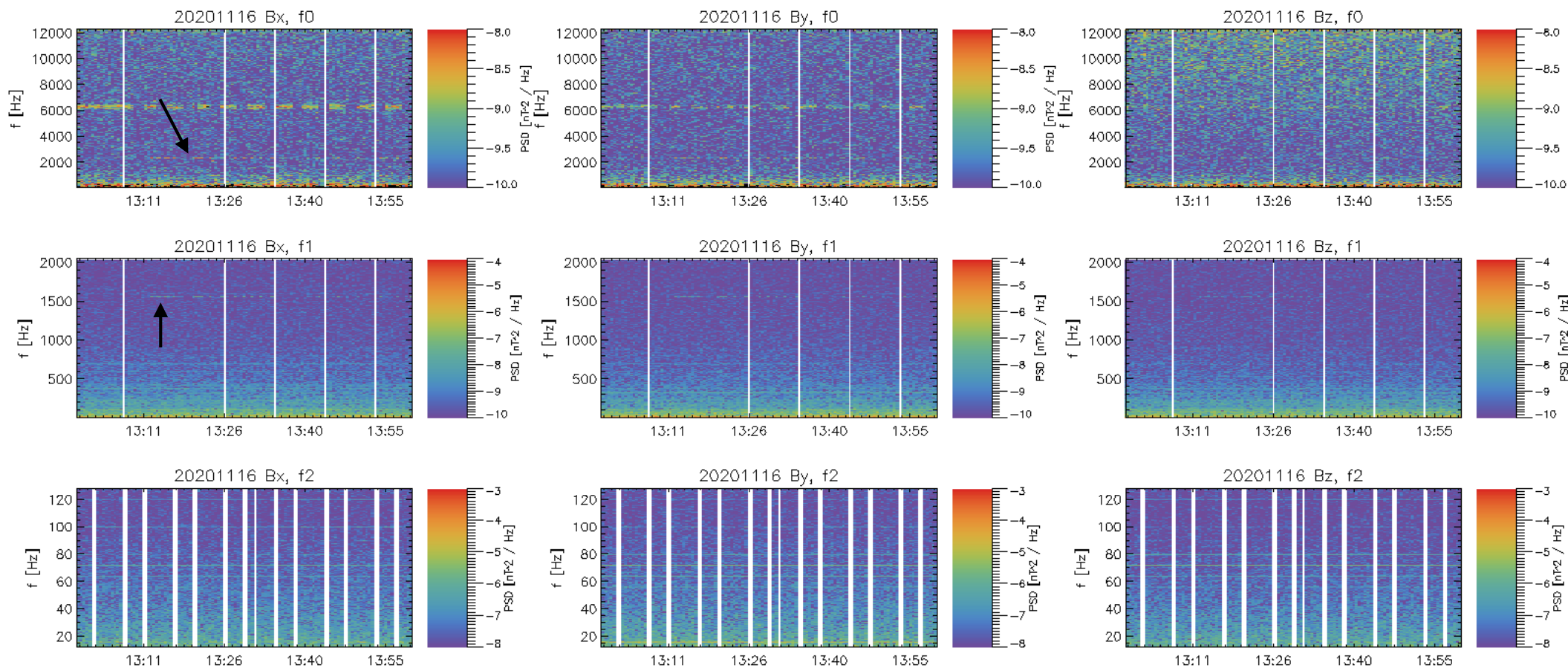
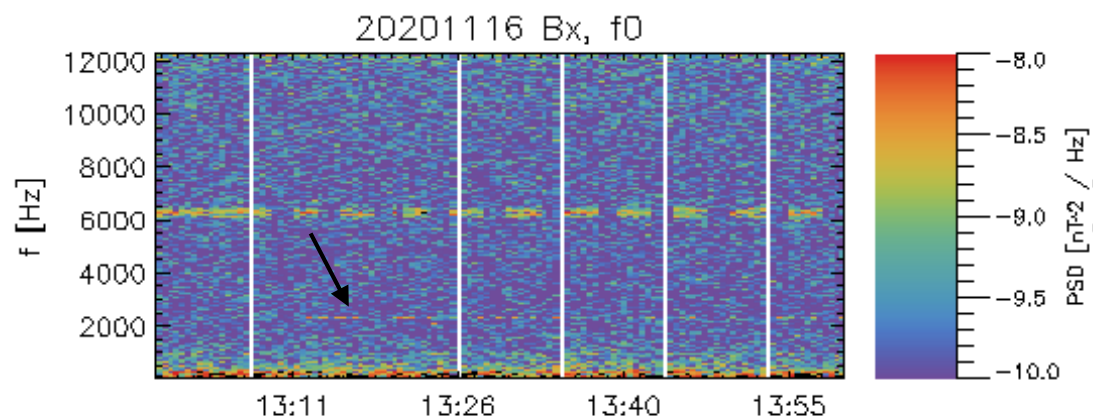


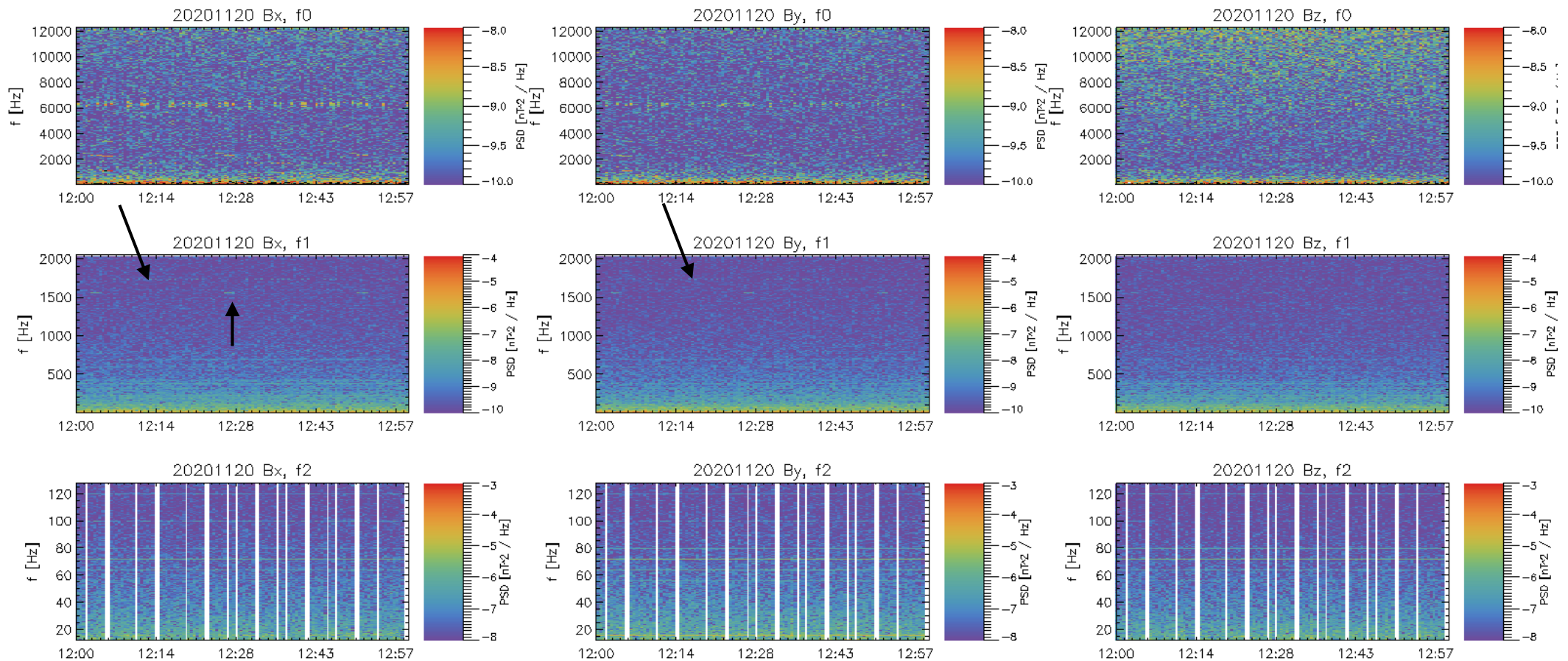
?

not present before 12, disappear after 21:30

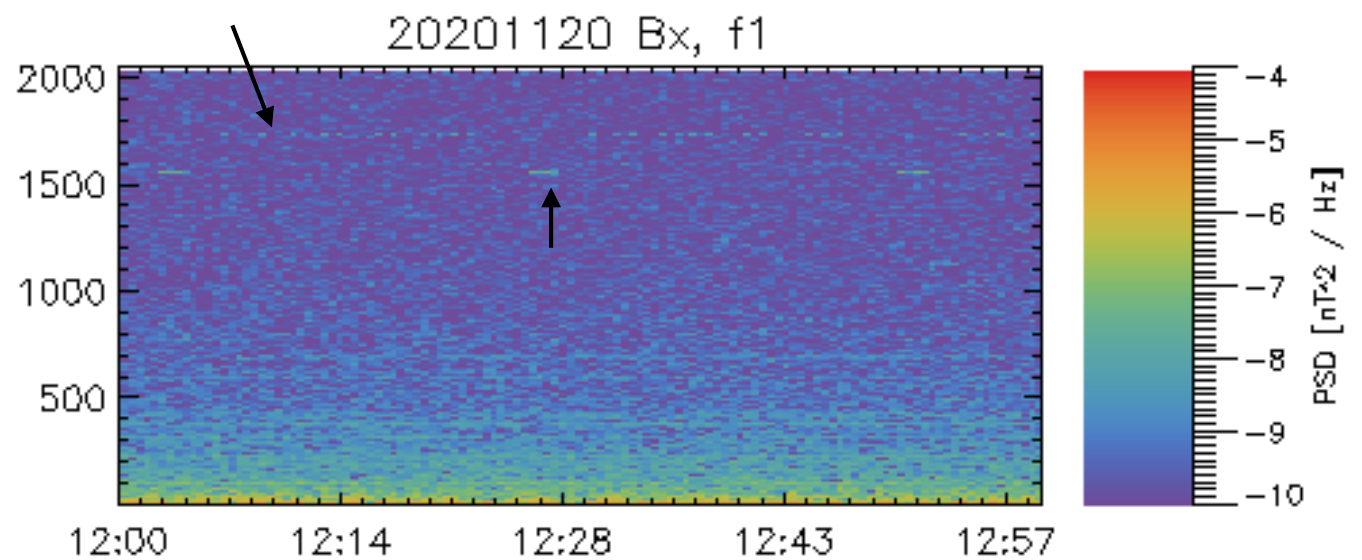
12:00

STIX sending data to ssmm ?





**end on the 21 at noon
small**



21:45

MAG (but RPW in highest cadence as well) to burst 21:45

Look strange, not seen before, short in time

