n*48.3 Hz Bumps LHO ER13, nonlinear coupling from central station tank motion?

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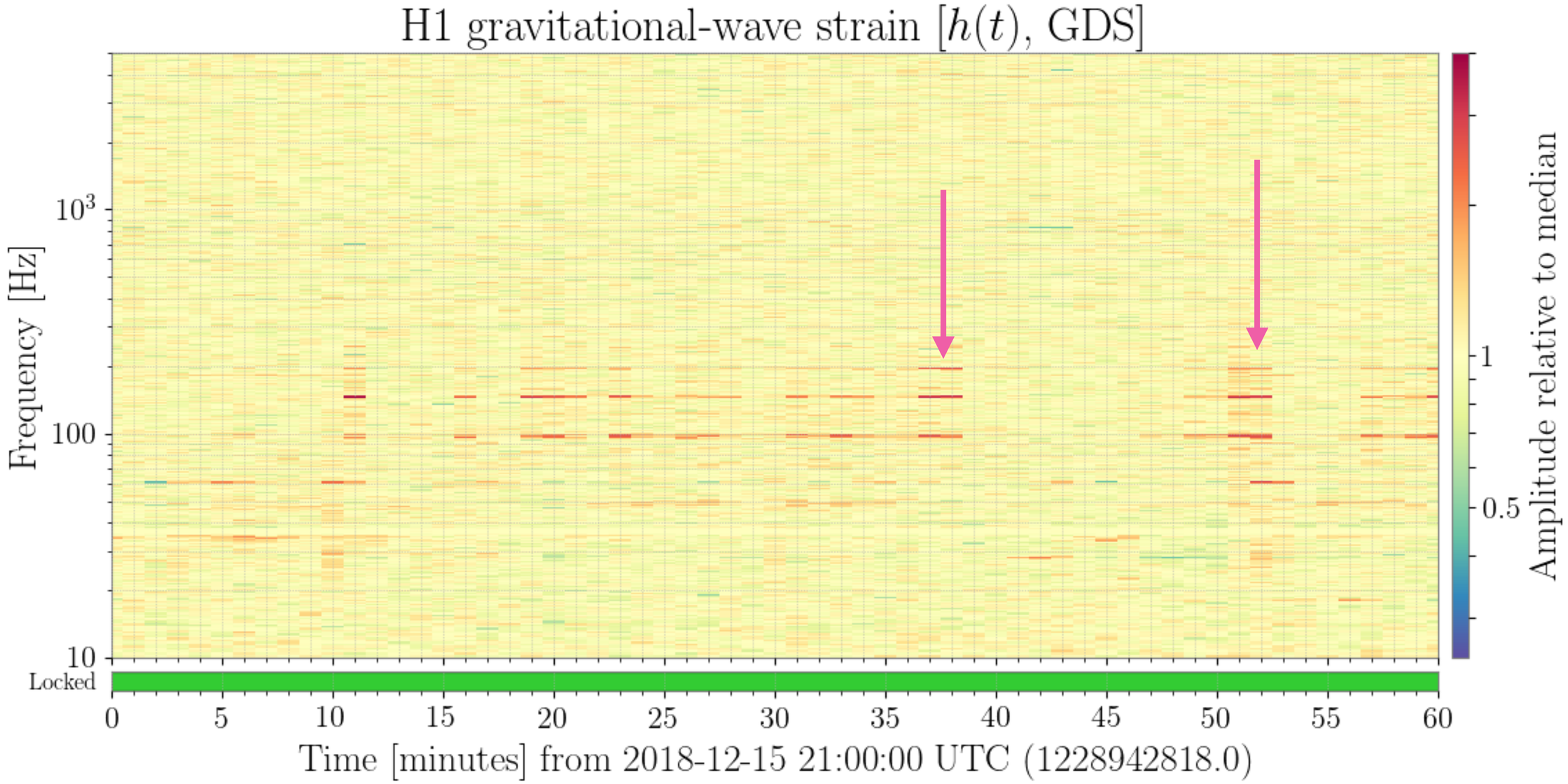
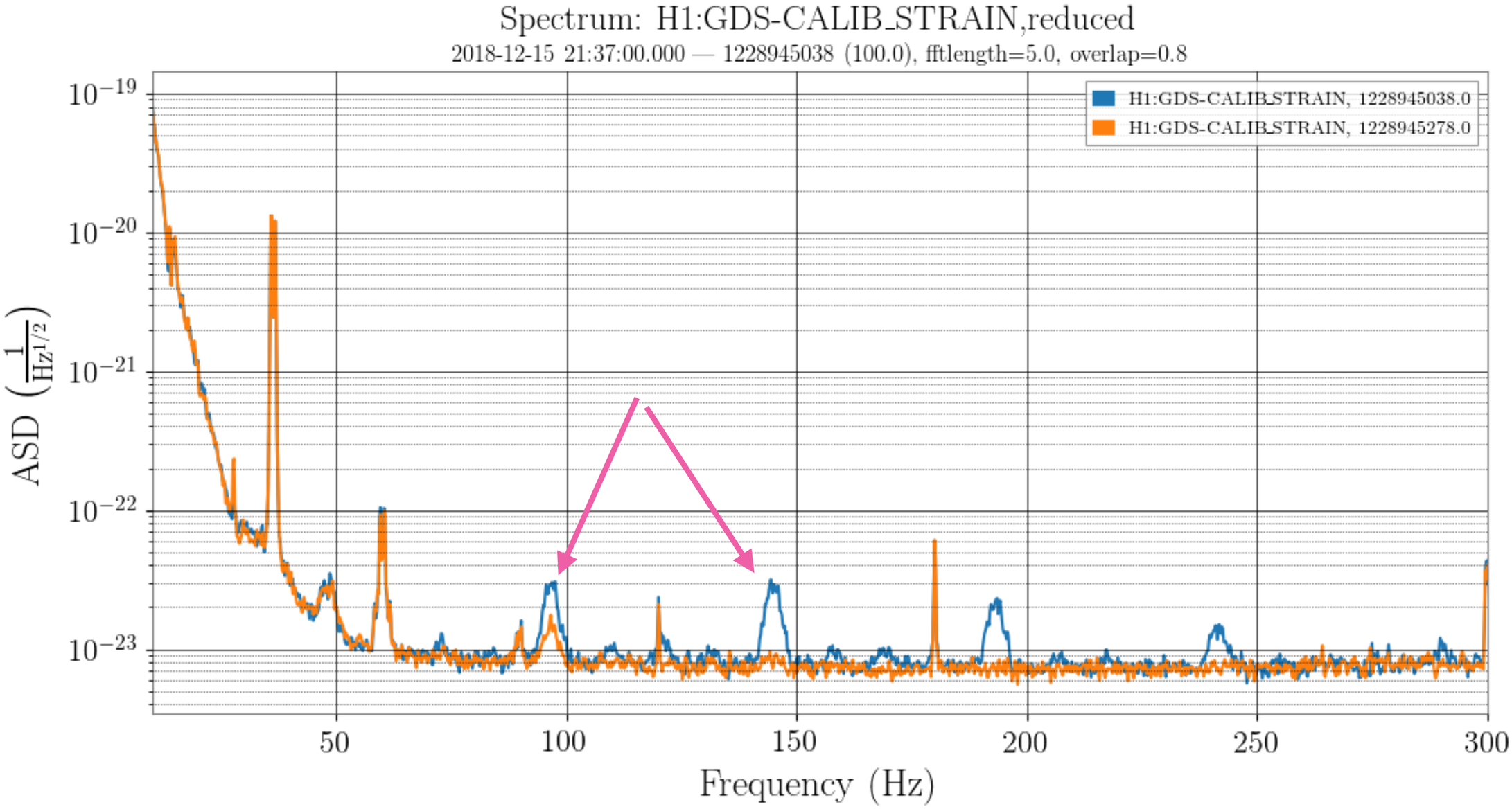
Conclusions

- 48.3Hz and first harmonic peak show up sharply in central station accelerometers, loudest in HAM3 PR2 ACC
- DARM has n*48.3Hz bumps that are broadened (possibly by scattering) and show more harmonics (also show up as glitches)
- The accelerometer is a quantized peak that switches in frequency in +/- ~7Hz steps

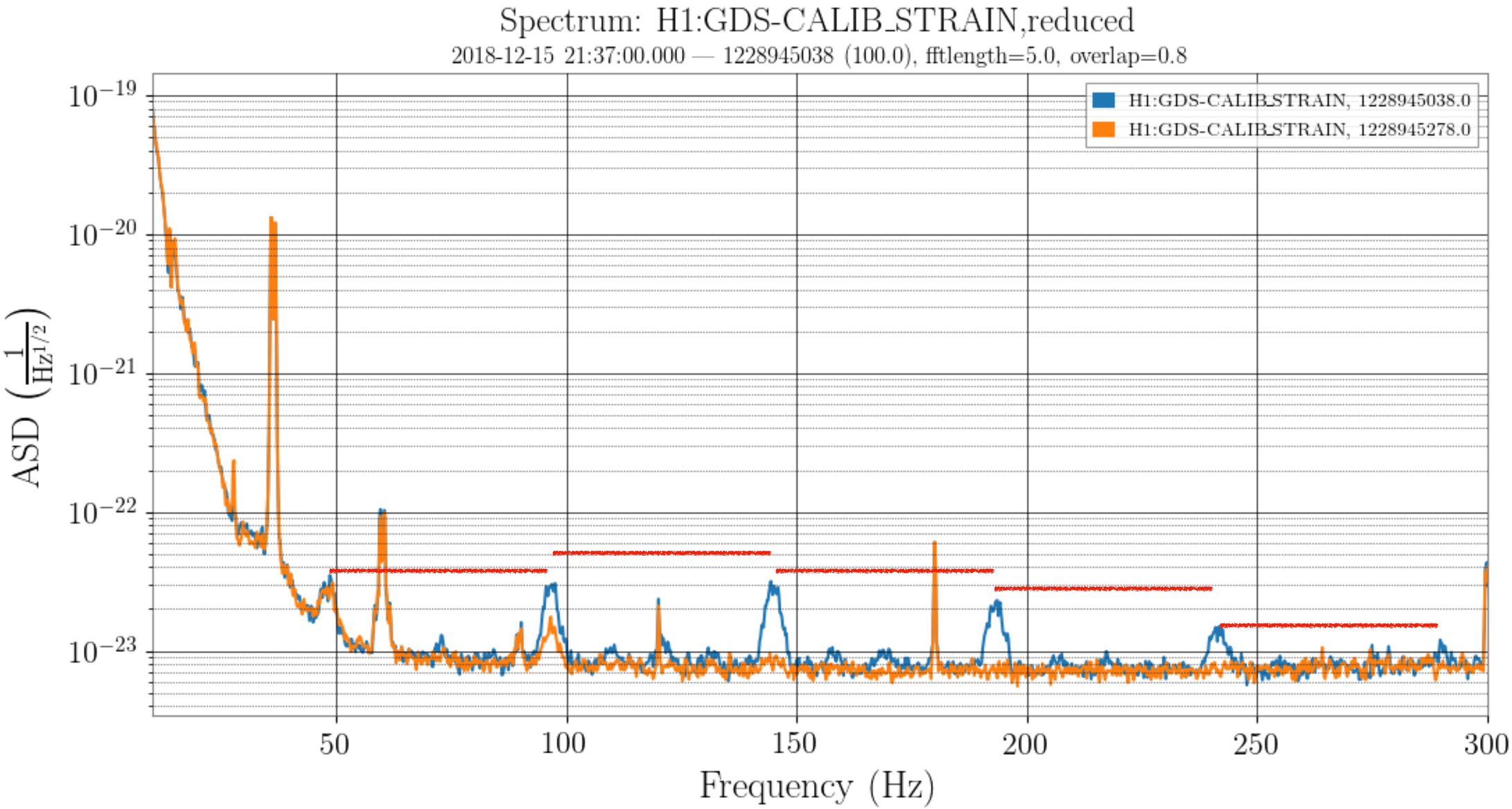
n*48.3Hz bumps on/off during typical hour



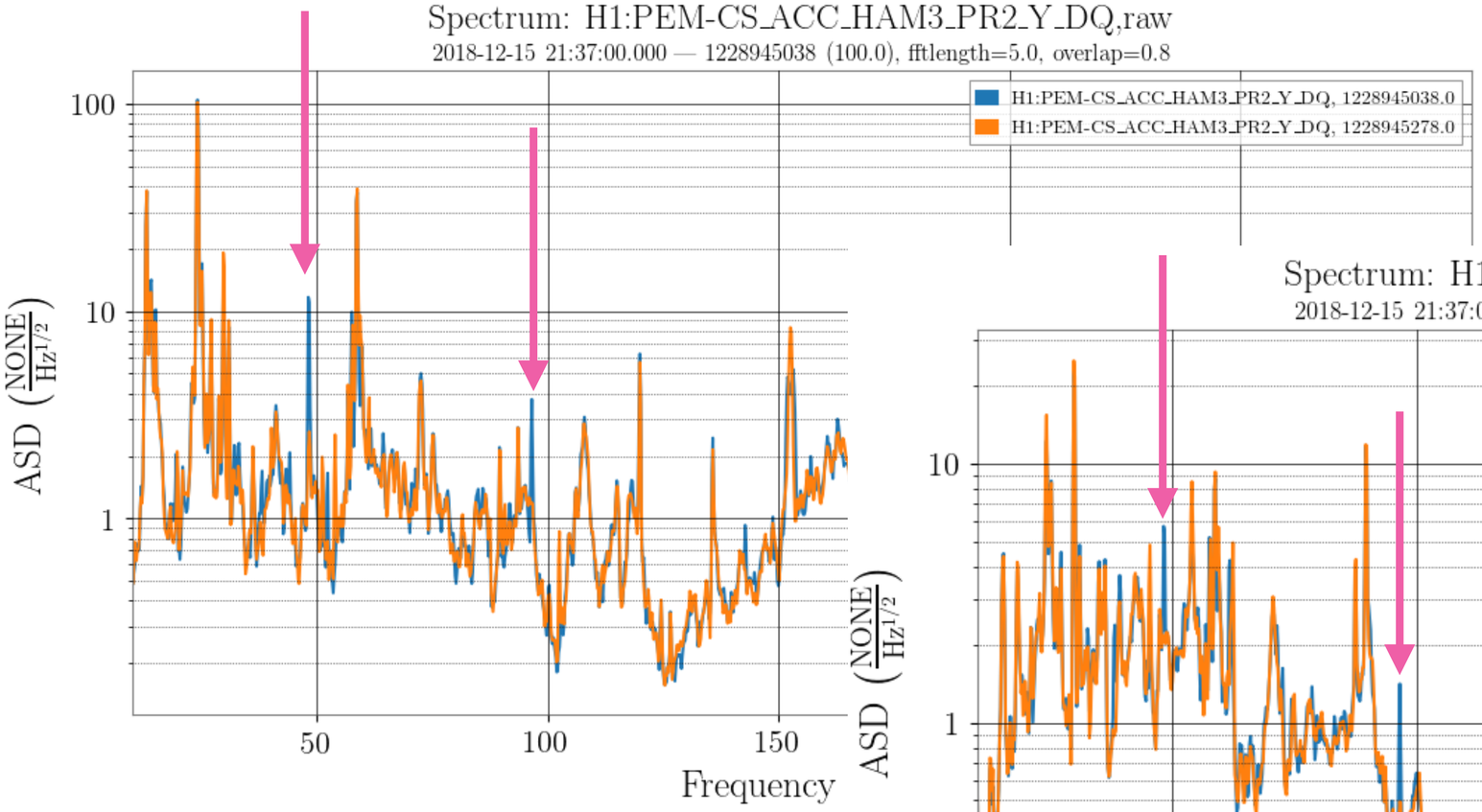
Here's what it looks like good/bad in h(t)

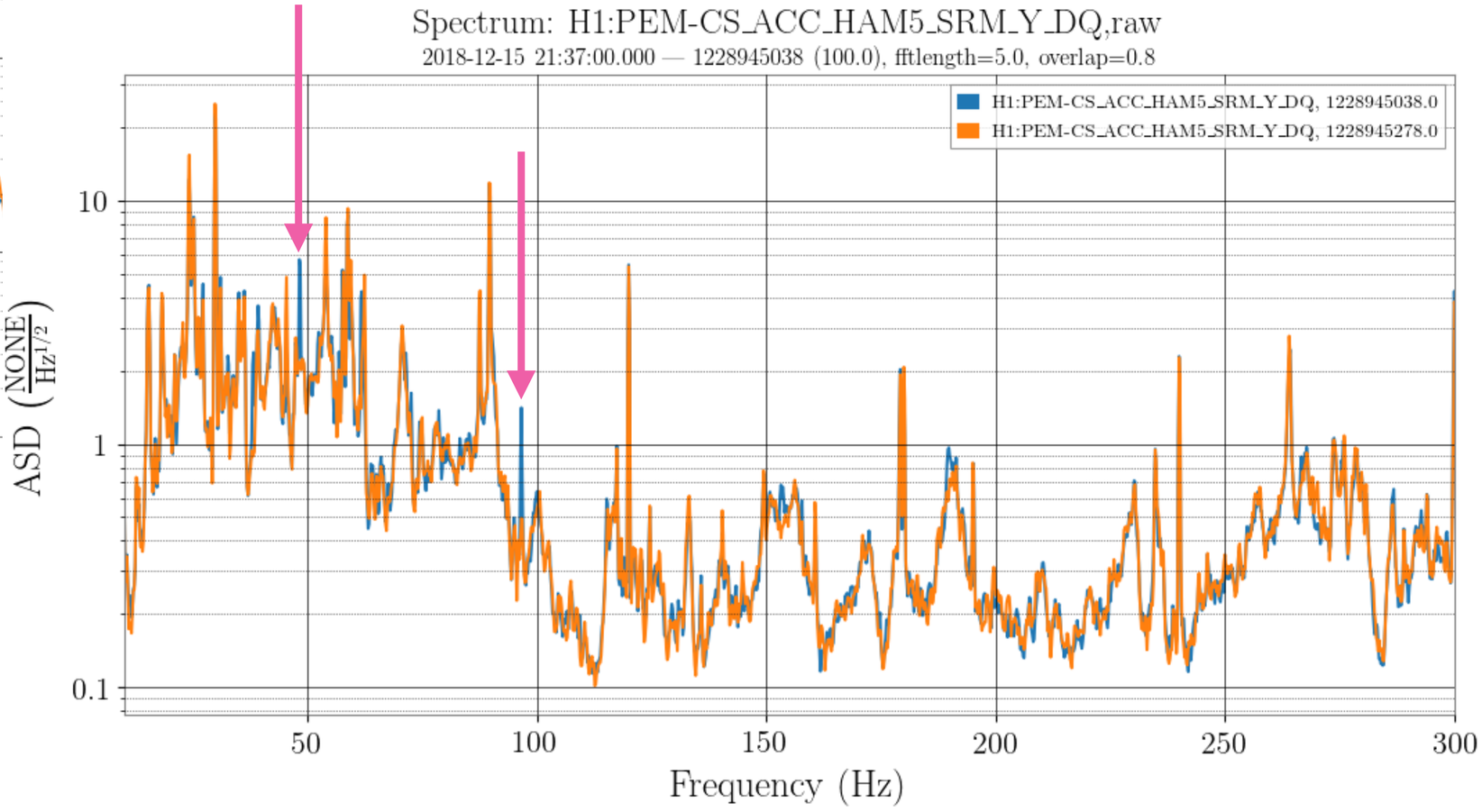


These bumps are harmonics of 48.3Hz

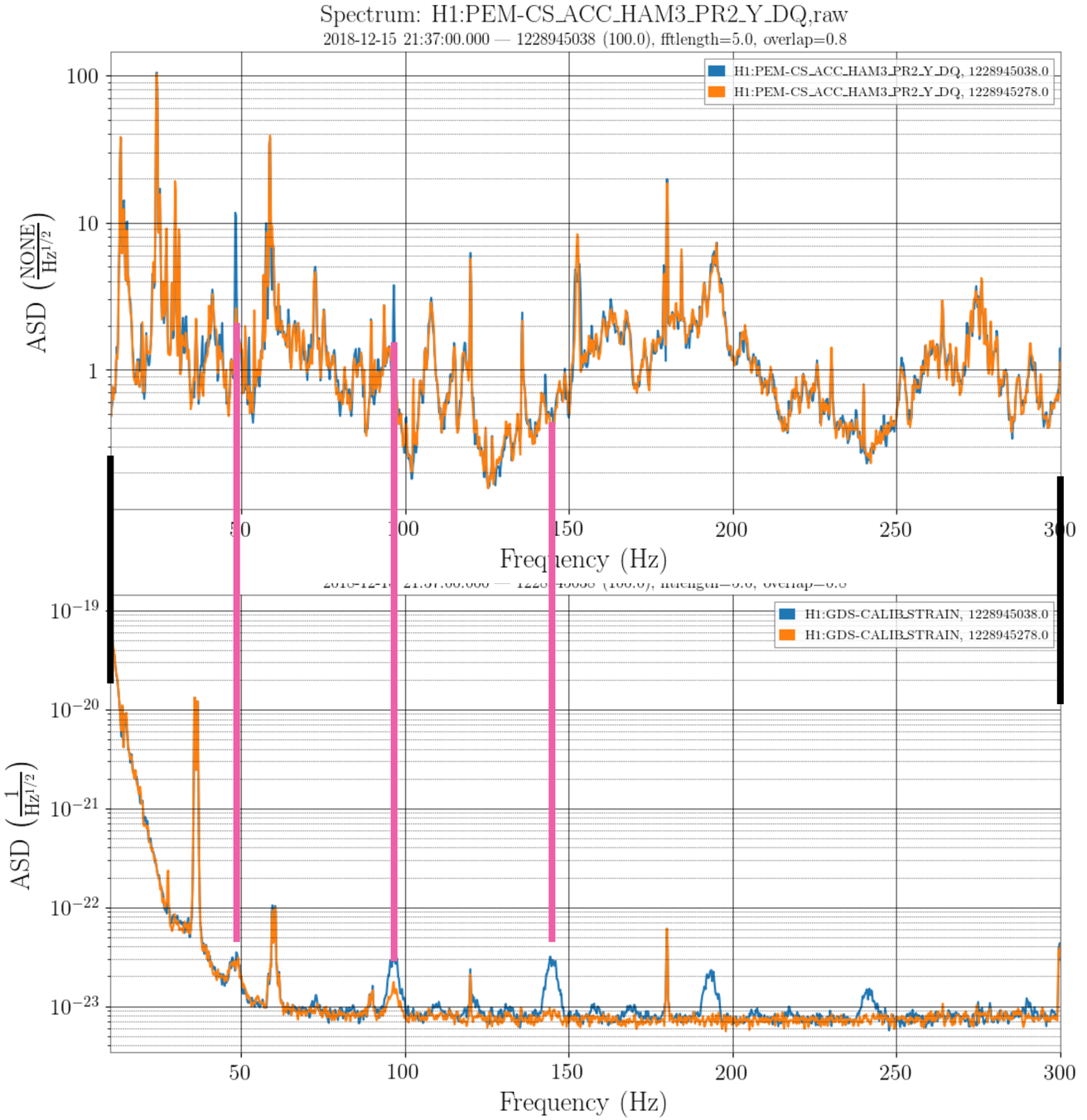


Accelerometers in the **central station** see this, strongest in HAM3, peaks in ACC more sharp, suggests scattering broadening the h(t) bumps

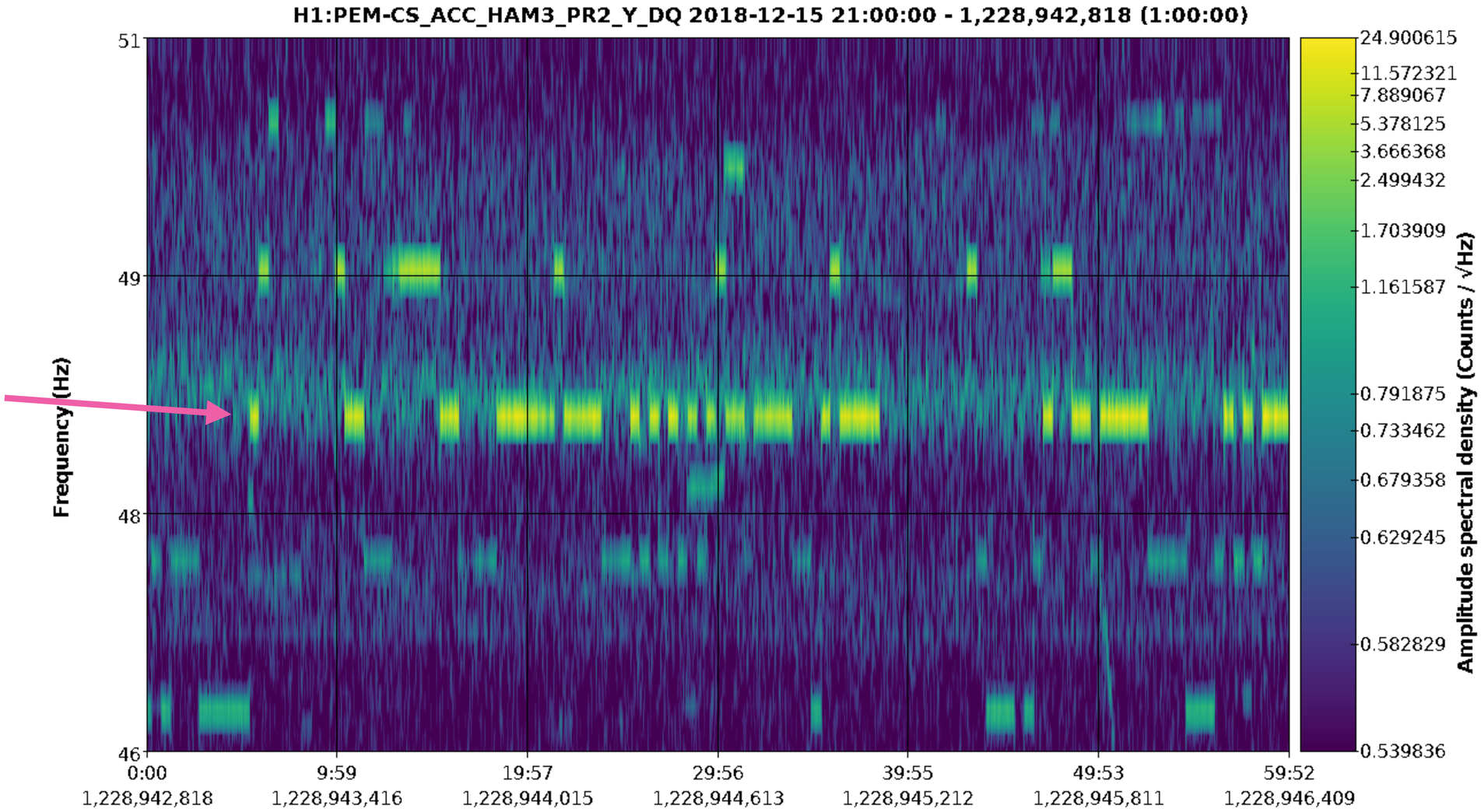




Here’s ACC and h(t)



The cause in the accelerometer looks to be some switching/ quantized frequency [+/- ~7Hz steps] (switching power supply?)



Fundamental frequency in acc is 48.3Hz