



STOCHASTIC-DETCHAR UPDATES: APRIL 24

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SUMMARY

- Stochastic Detchar Repo [here](#)
- Detchar Minutes ([April 22](#))
- LHO PCALX at wrong frequency ([48505](#))
- Change in LHO CAL frequencies ([48534](#))
- Quite a few earthquakes ringing up violin modes ([45307](#))

LHO - ERRANT 501.3 Hz INJECTION

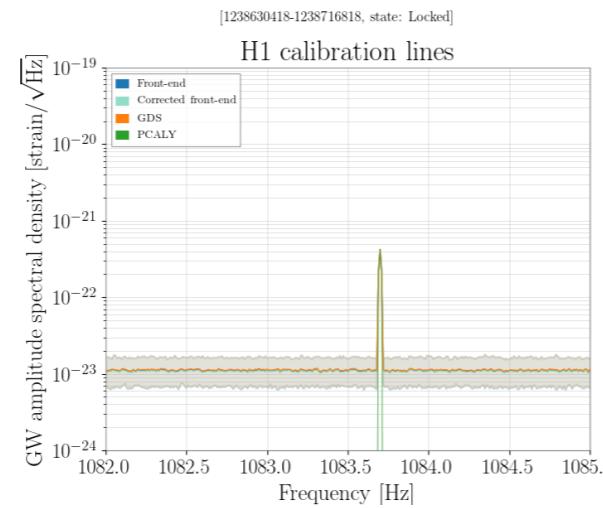
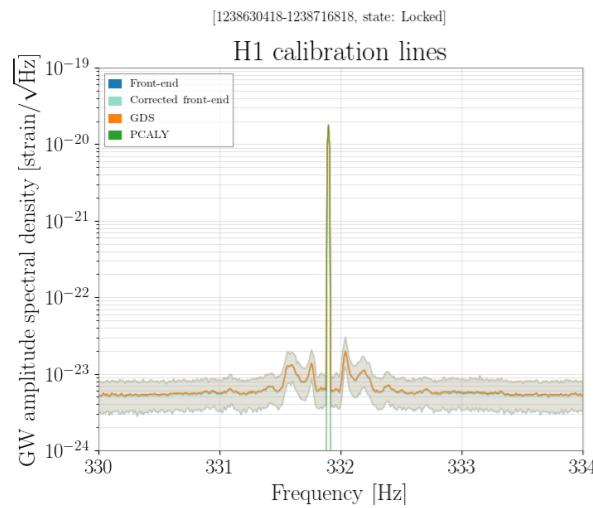
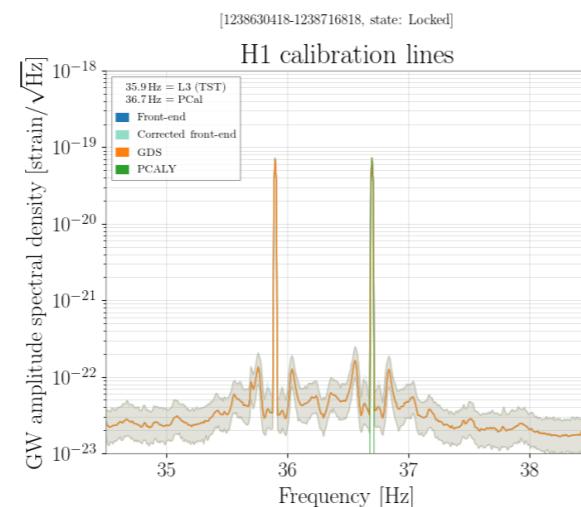
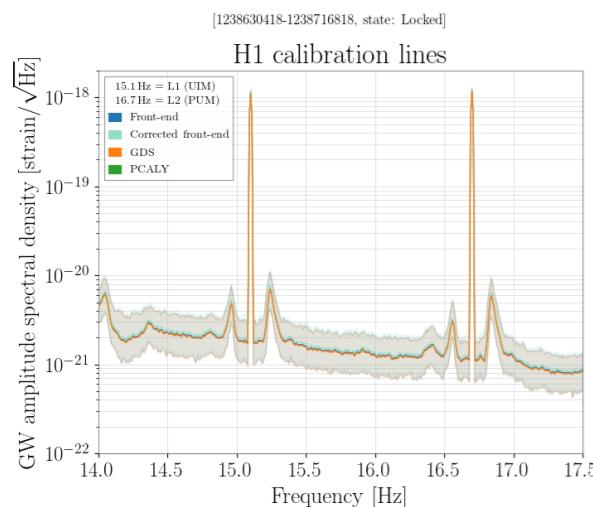
UTC Time of Change	GPS Time of Change	Changed to Freq (Hz)	Duration at Previous Freq (Hours)
2019-04-15 05:36:08 UTC	1239341786	501.3	24.52
2019-04-14 05:04:45 UTC	1239253503	1001.3	12.42
2019-04-13 16:39:41 UTC	1239208799	1501.3	28.47
2019-04-12 12:11:29 UTC	1239106307	2001.3	17.13
2019-04-11 19:03:16 UTC	1239044614	2501.3	

- For ~8 hours on Monday, April 15, PCALX was injecting at 501.3 Hz.
- Should be far enough away from violin modes to not cause further problems
- aLOG 48505

LHO - UPDATED CAL LINES

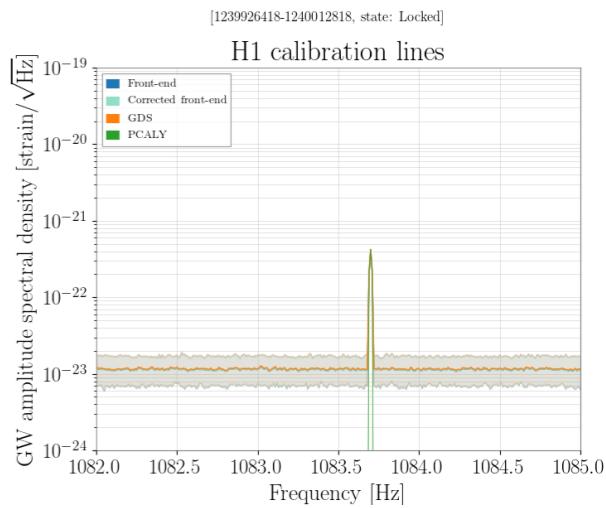
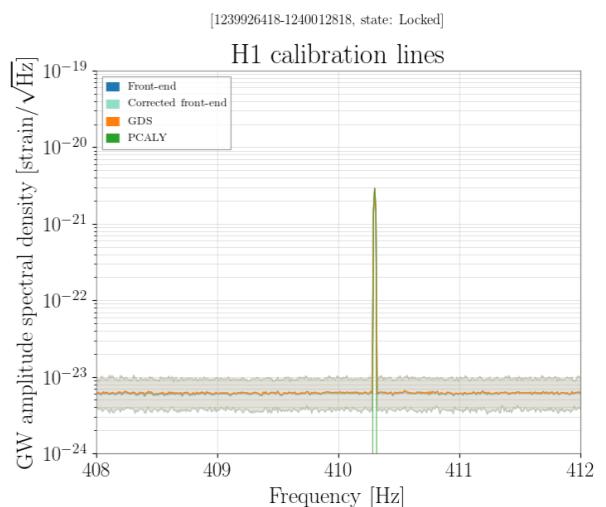
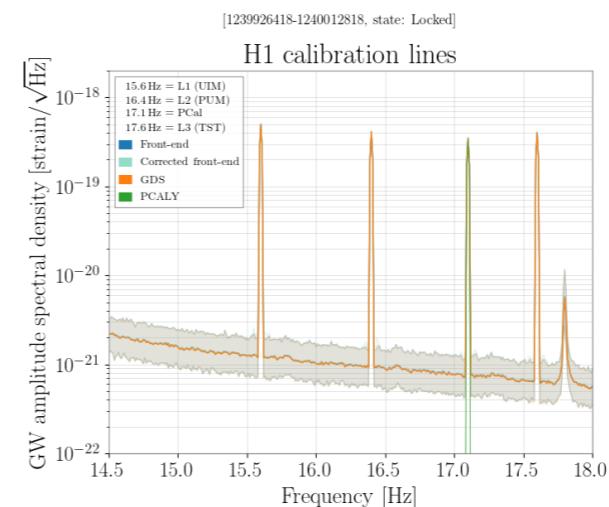
Old lines (**pre** April 16)

[15.1, 16.7, 35.9, 36.7, 331.9]



New lines (**post** April 16)

[15.6, 16.4, 17.1, 17.6, 410.3]

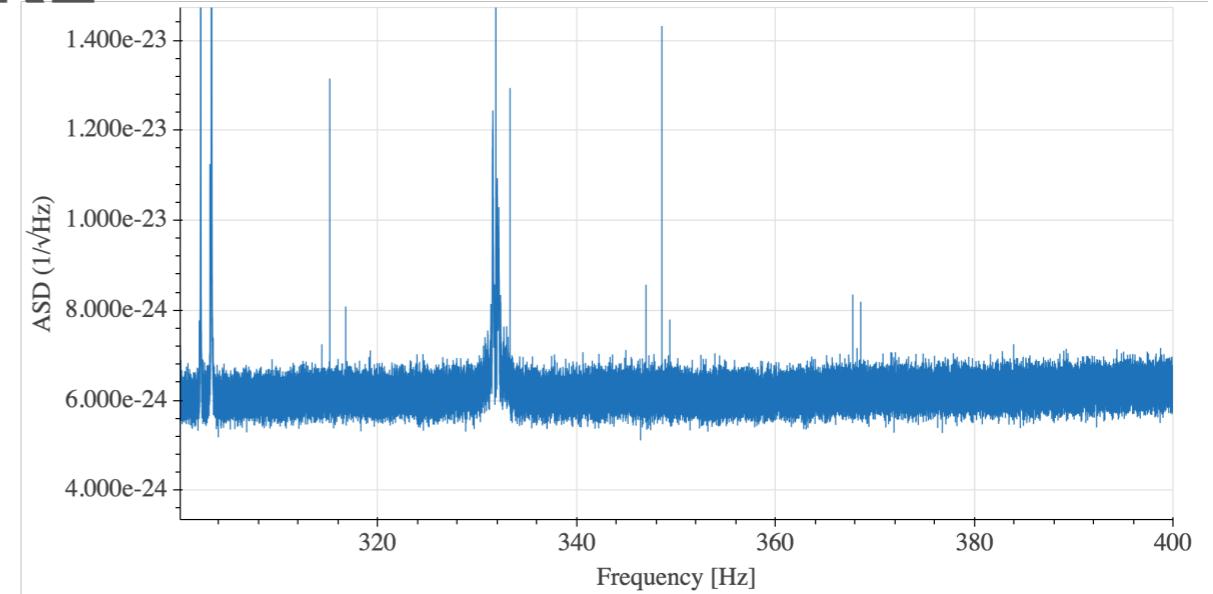
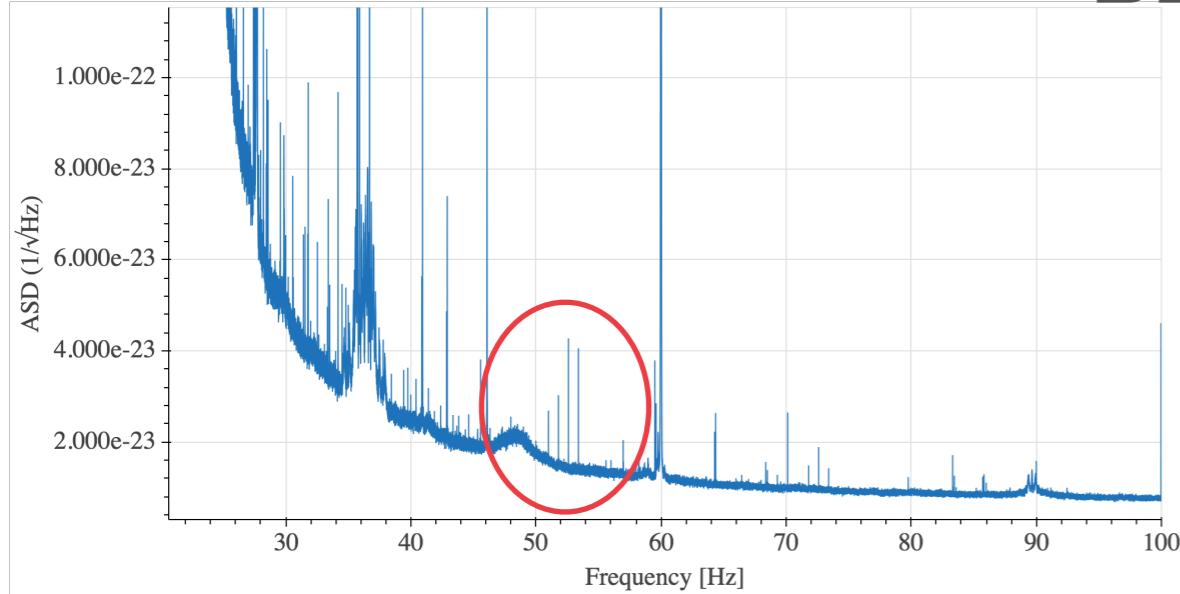


aLOG 48534
aLOG 48512
aLOG 44590

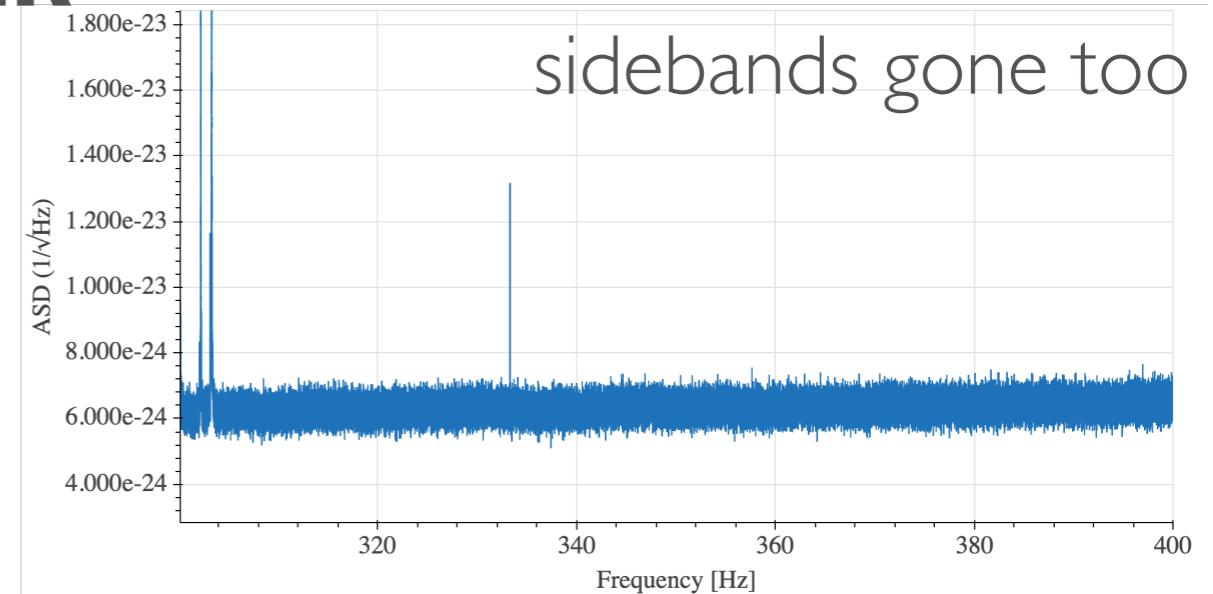
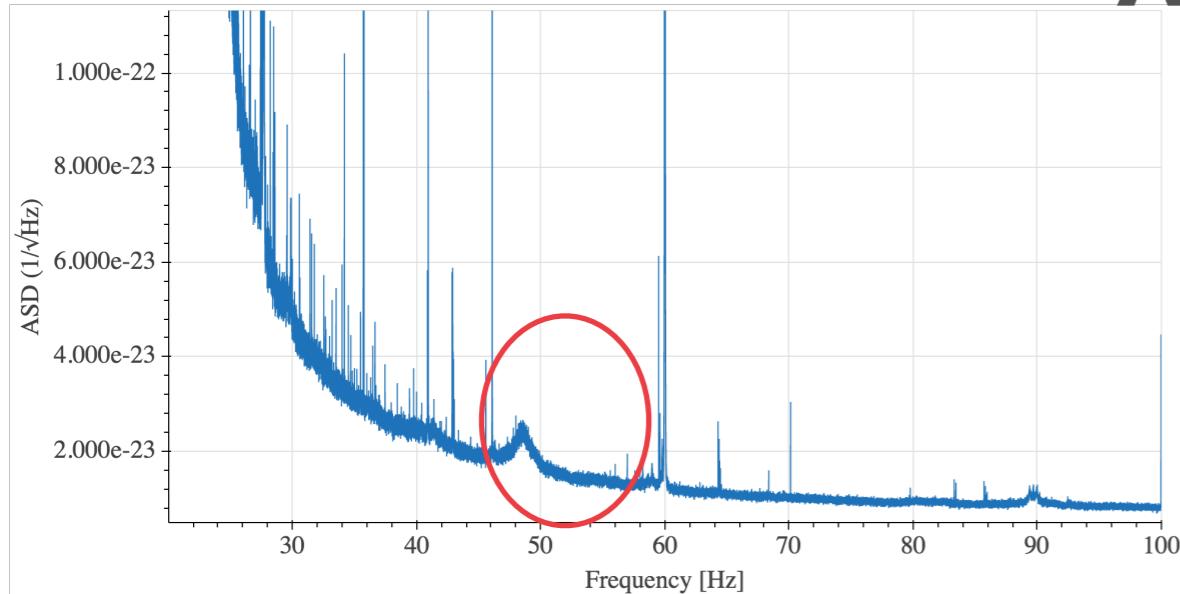
LHO - 0.8 Hz COMB AND LINES

(before and after moving CAL lines)

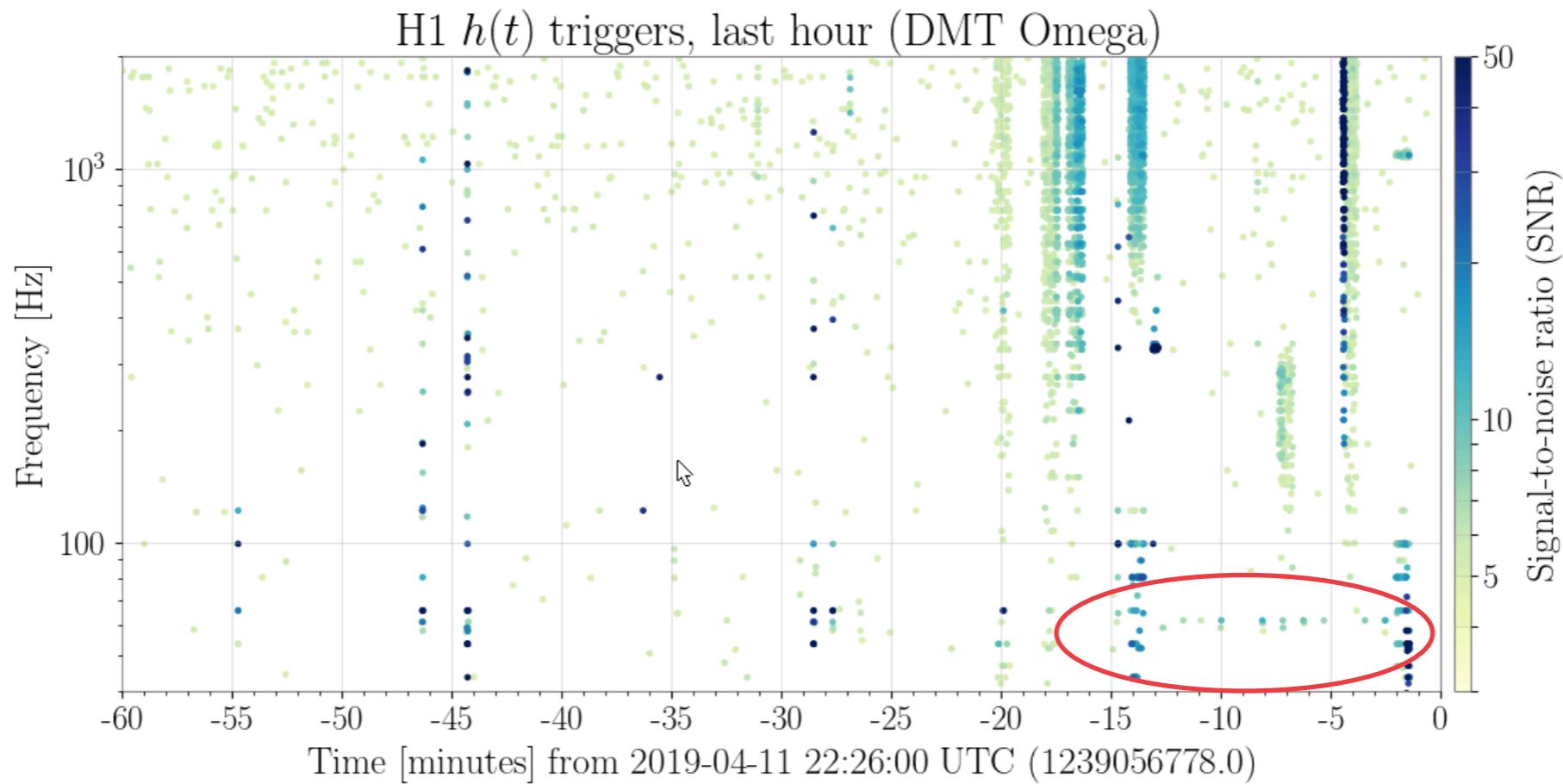
BEFORE



AFTER



LHO - GLITCHES

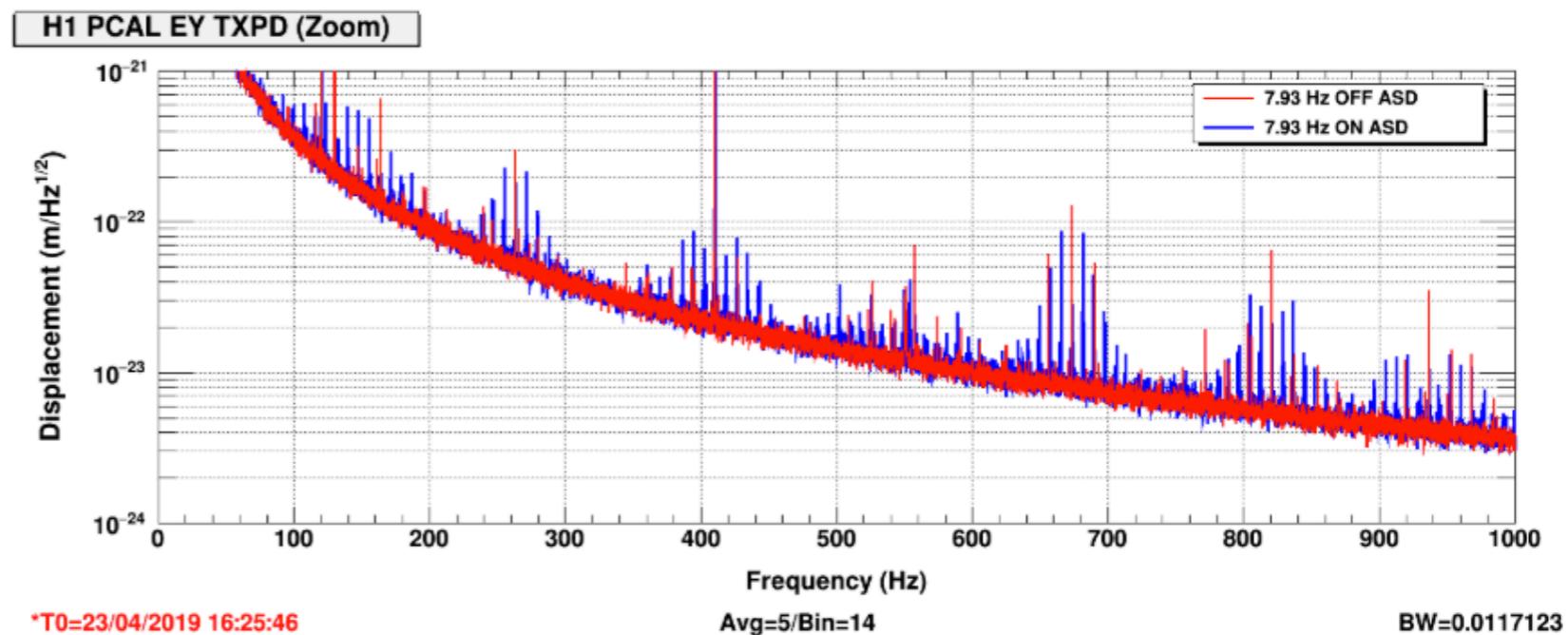
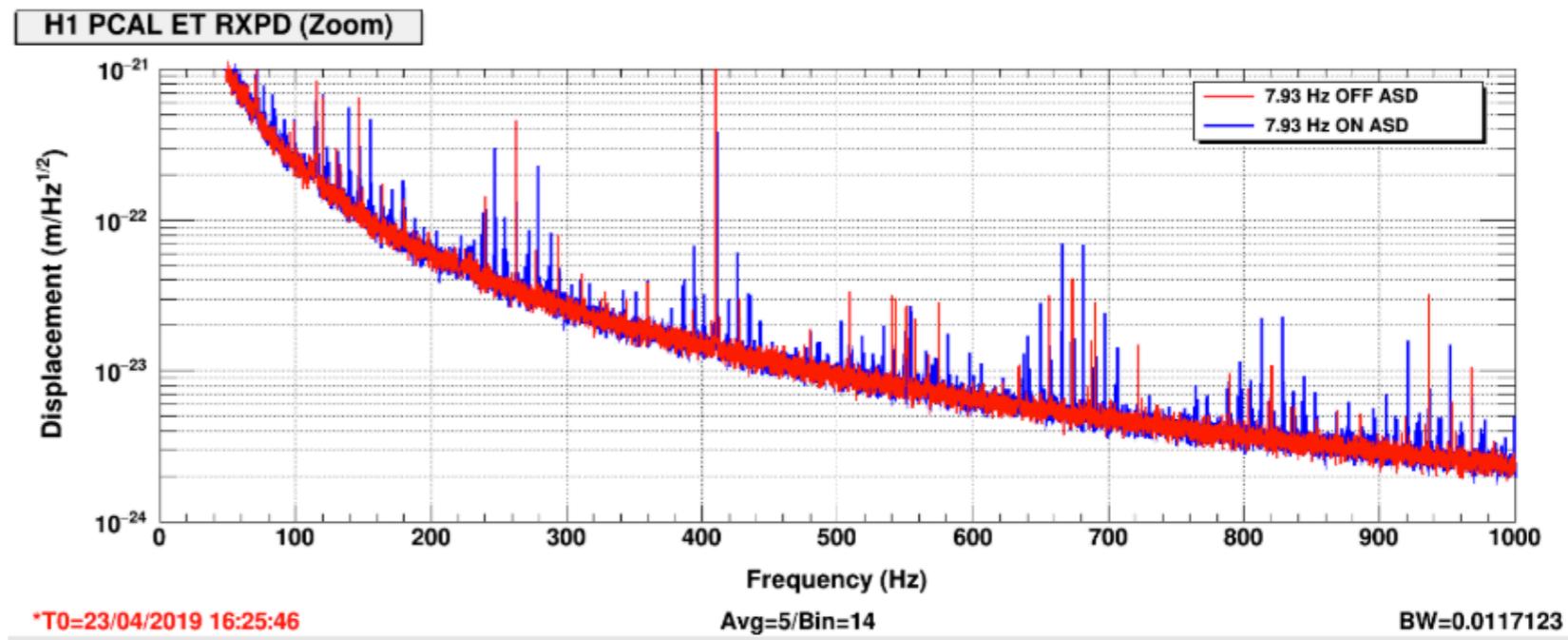


~60 Hz glitches found to be associated with calibration channels. In the plot above, the CAL lines were turned back on at -14 min. [aLOG 486|3](#)

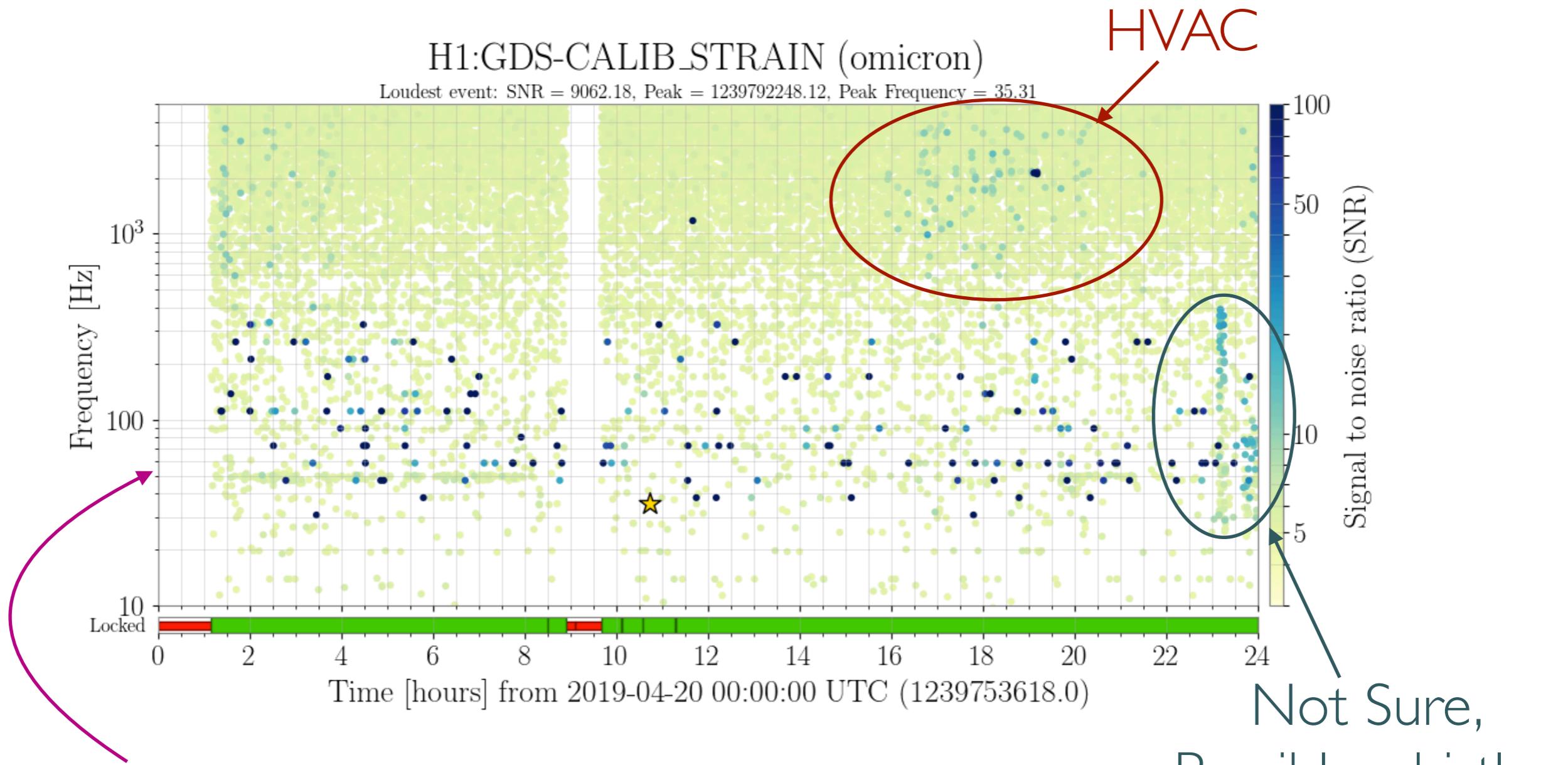
LHO - 7.93 Hz LINE REMOVED

"I have turned off this calibration line, and it will remain so in all future observation segments" -
Jeff Kissel

aLOG 45240



LHO - GLITCHES

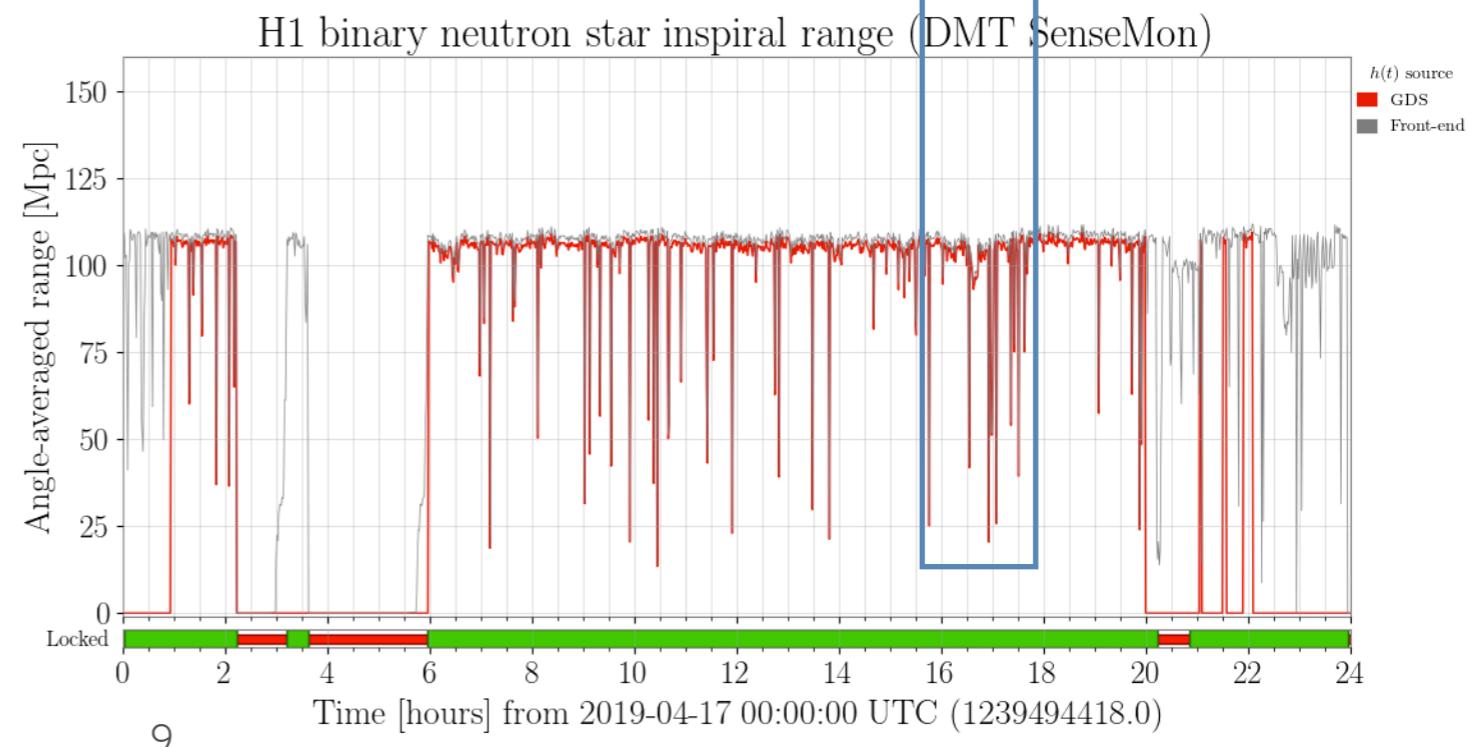
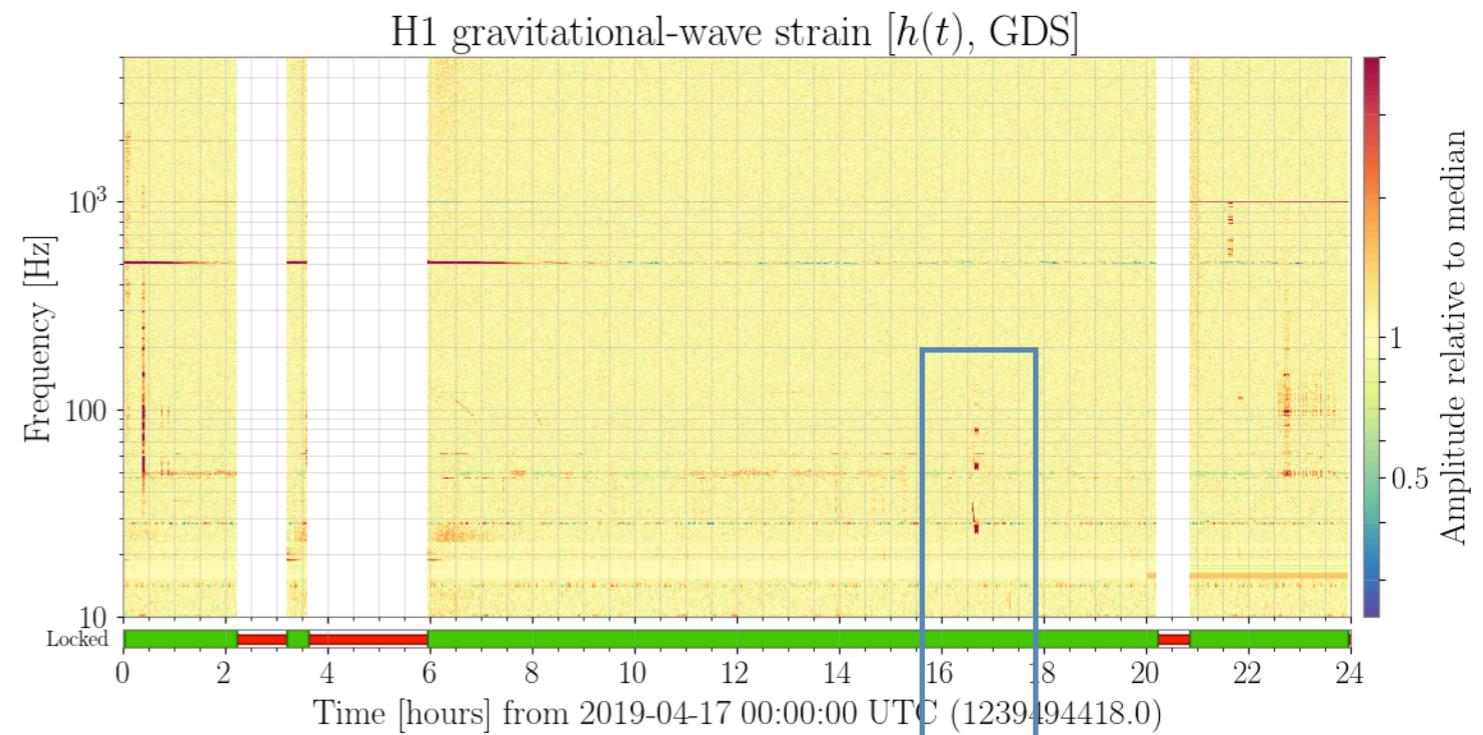


Abundance of 50 Hz glitches.
Come and go most days

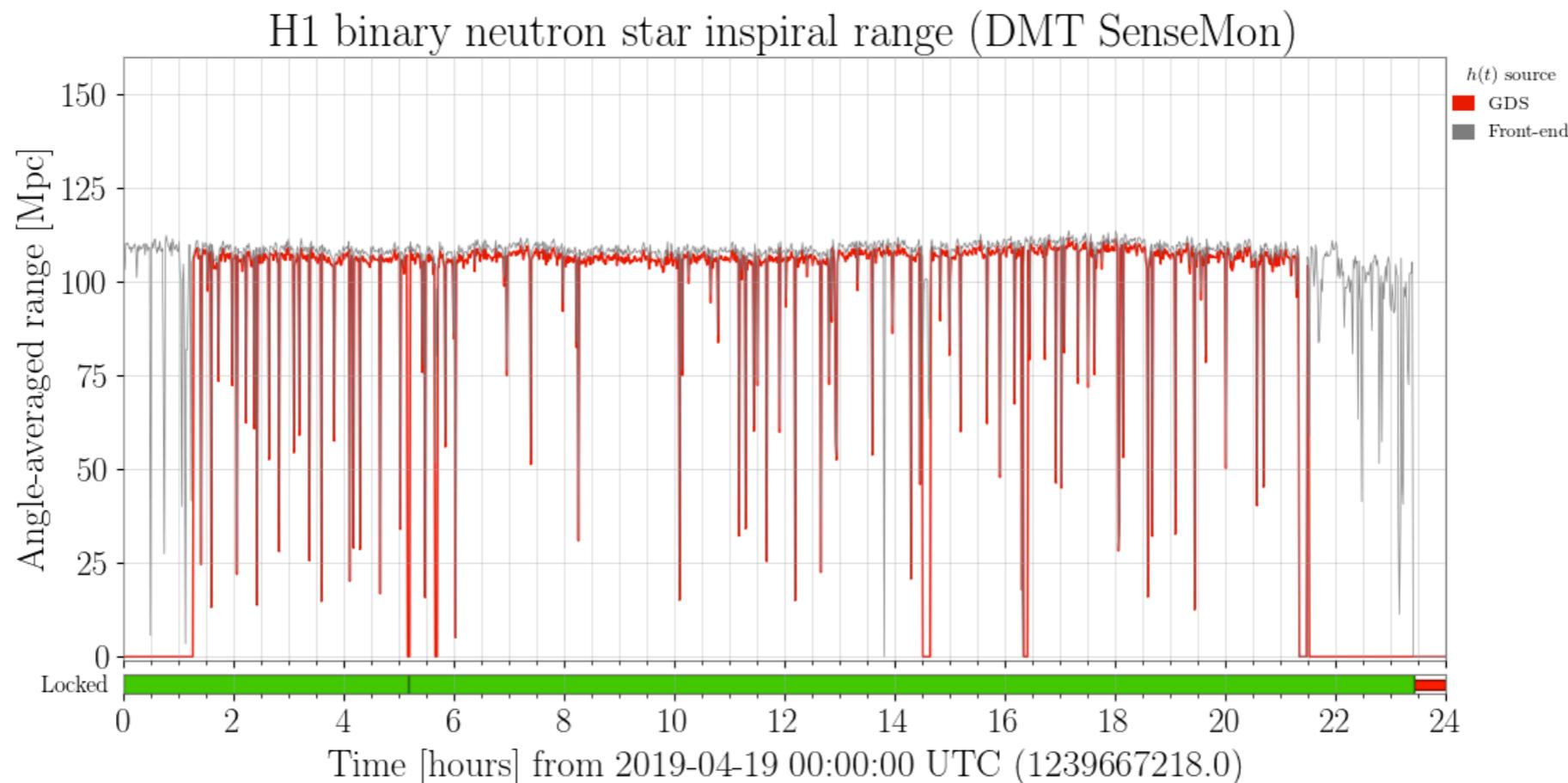
Possibly whistles

LHO - FORKLIFT

Propane refills at 16:30 UTC caused increased glitching and a \sim 5.5 Mpc drop in range



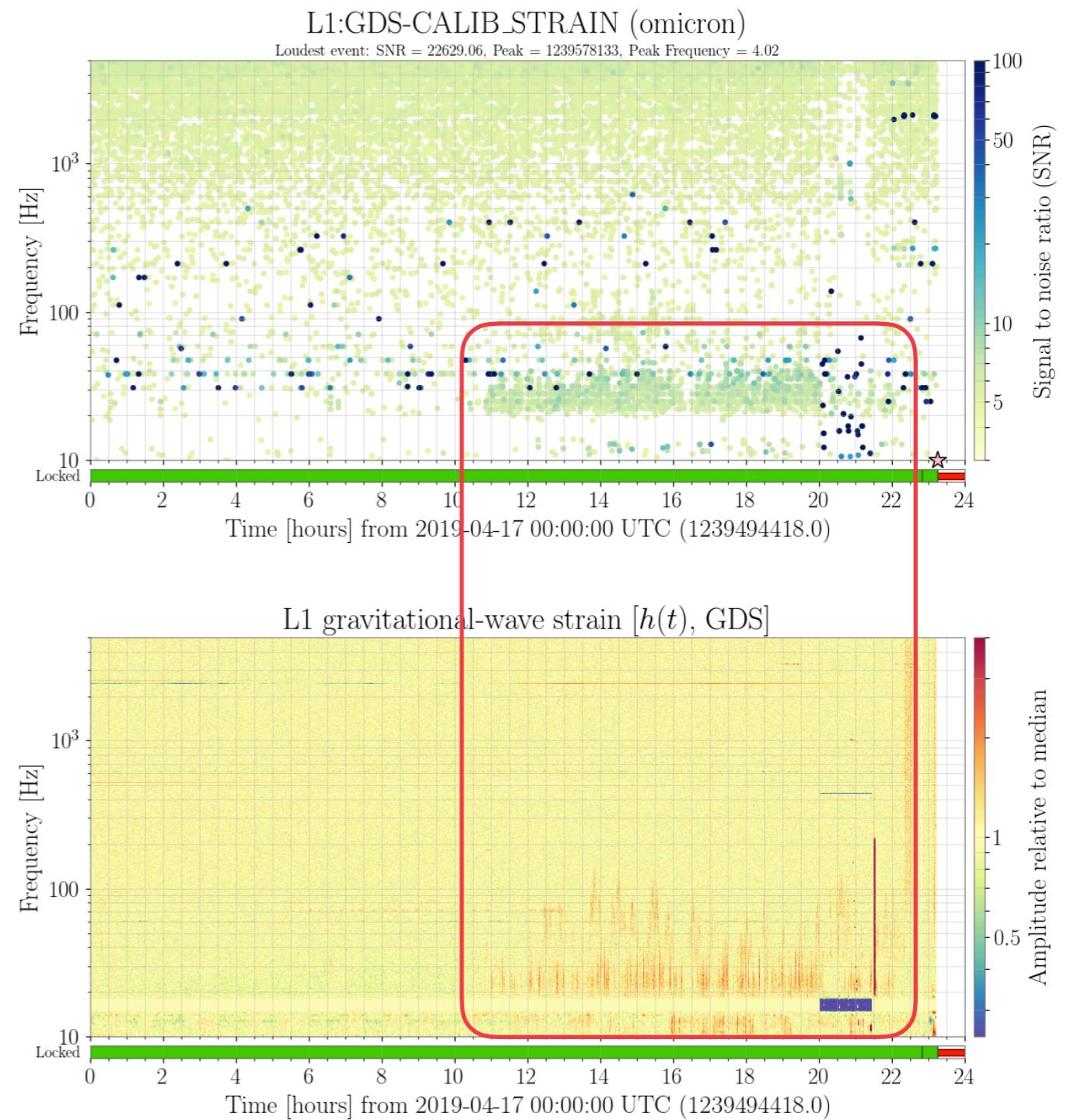
LHO - BNS RANGE



Stability from 6-11 UTC coincides with decreased glitch rate from
[H1:LSC-POP A LF OUT DQ](#), the HVETO winner

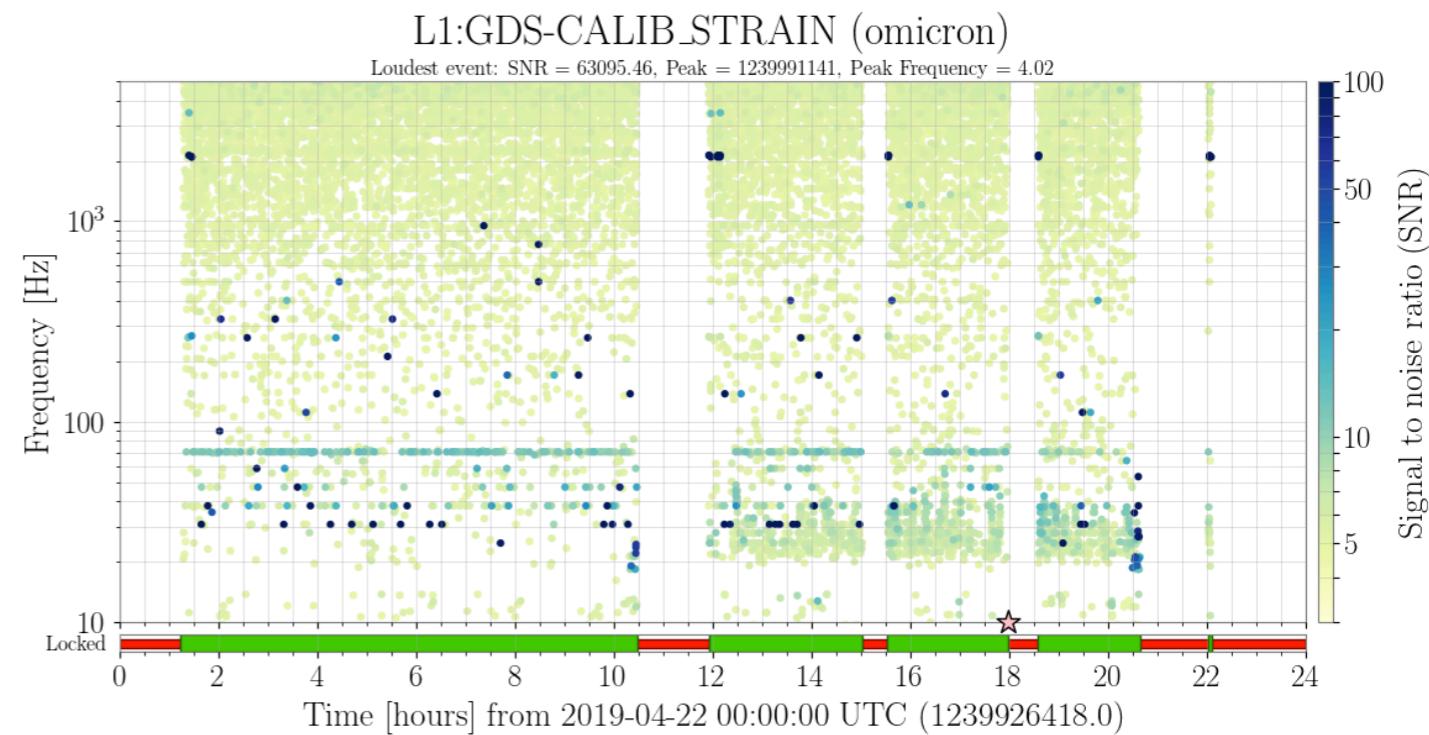
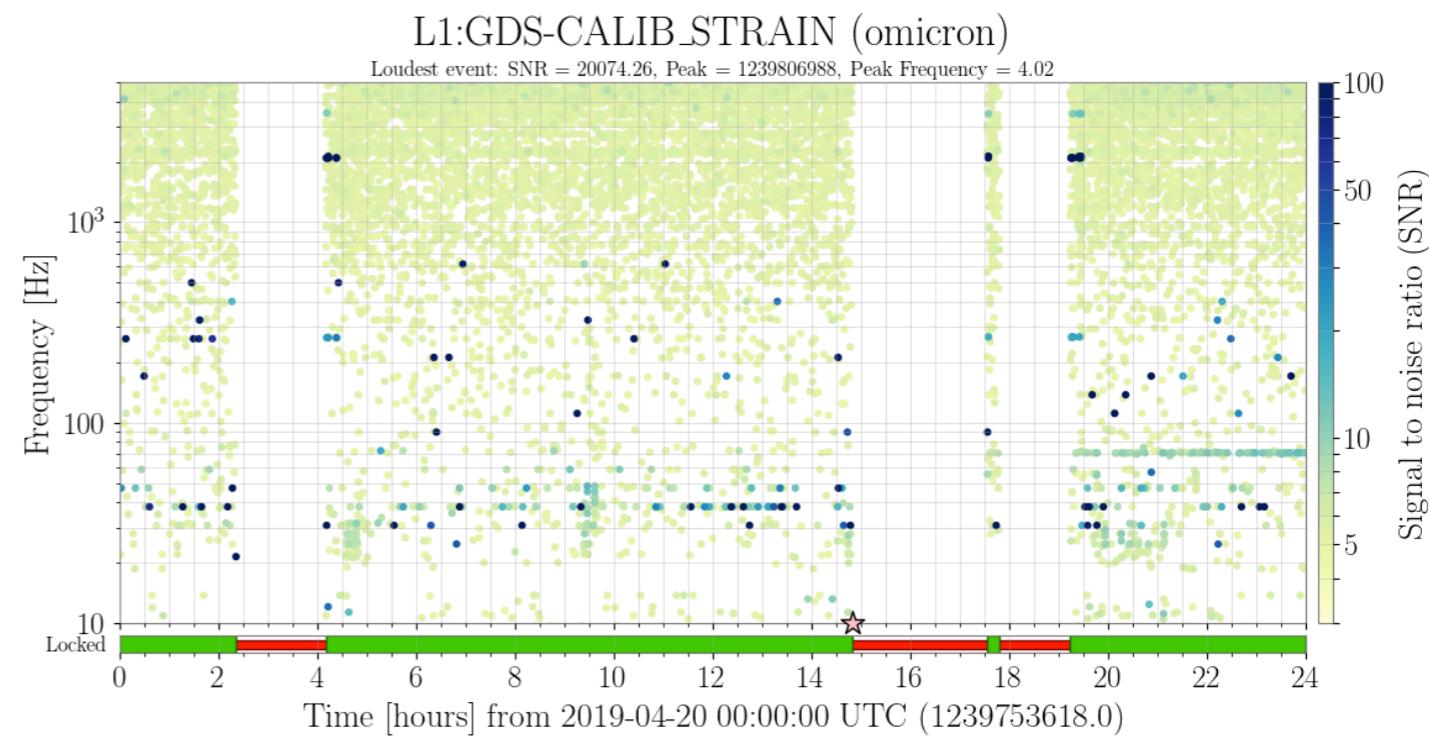
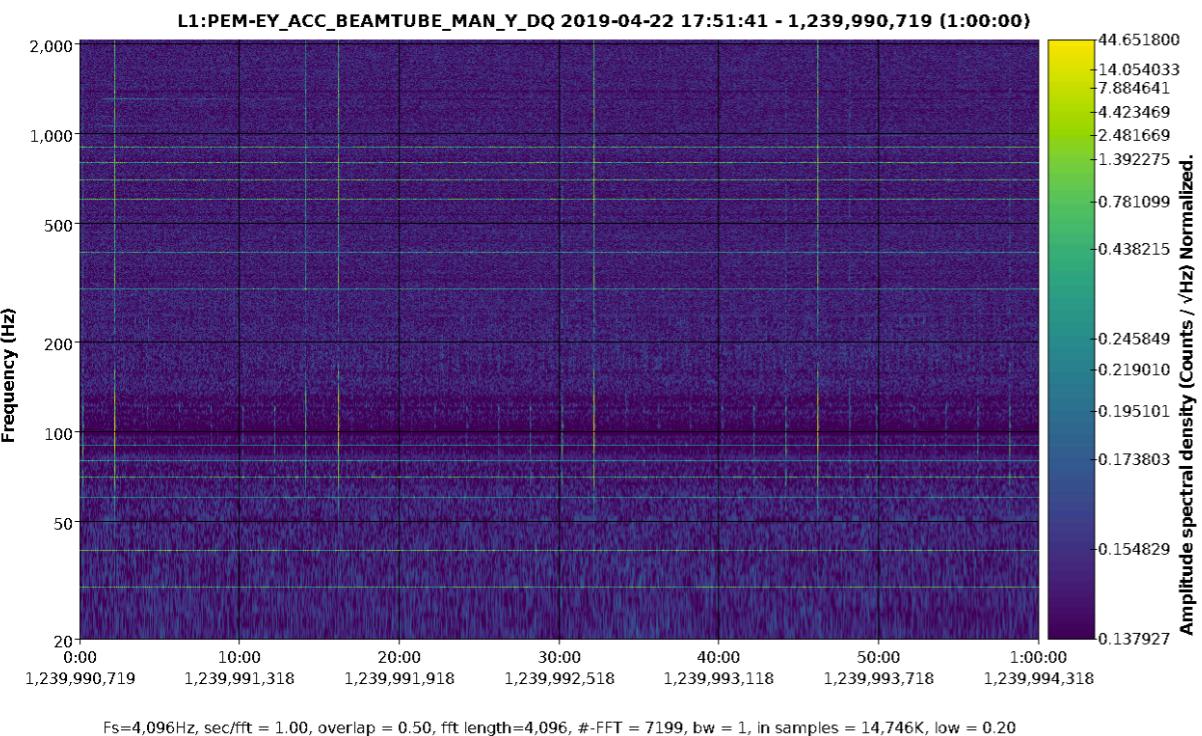
LLO - SCATTERING

On and off, but pretty consistently bad most days

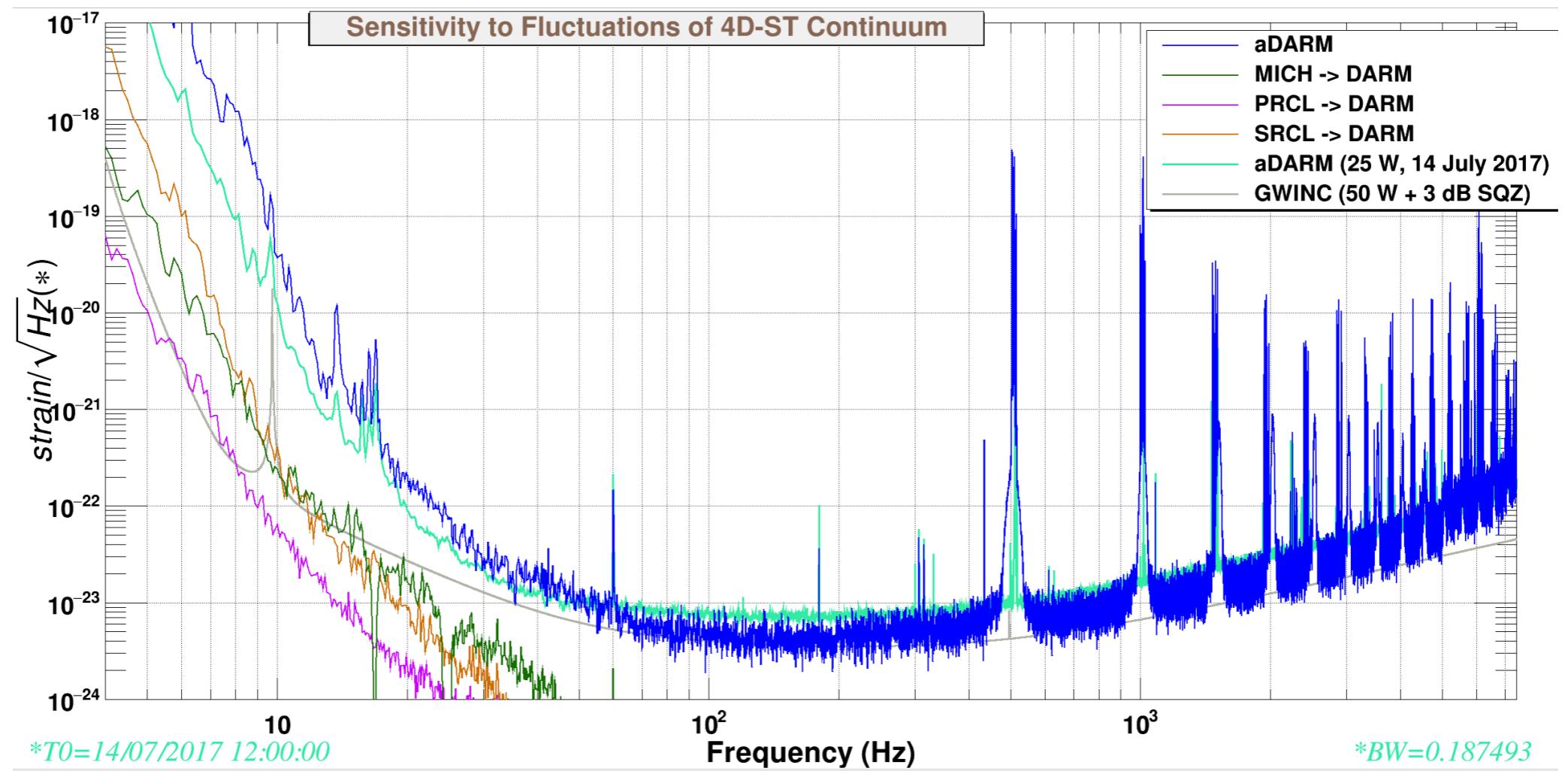


LLO - GLITCHES

Picked up a pretty ugly 70 Hz glitch 4/20. Still very apparent. Glitches are correlated with L1:PEM-EY_ACC_BEAMTUBE_MAN_Y_D Q in HVeto. GravitySpy (incorrectly) thinks it is power lines ([45436](#)).



LLO - VIOLIN MODES



Friday April 19 - Violin modes severely
rung up (45307)

LLO - EXTRA

- High Winds and earthquakes causing lockless
([45272](#), [45269](#), [45289](#), [45108](#), [45305](#), [lockloss summary](#))
- Squeezer issues making it hard to lock ([45340](#))
- High frequency PCALX moved ([45230](#))