STOCHASTIC-DETCHAR UPDATES: MAY 6

Rich Ormiston

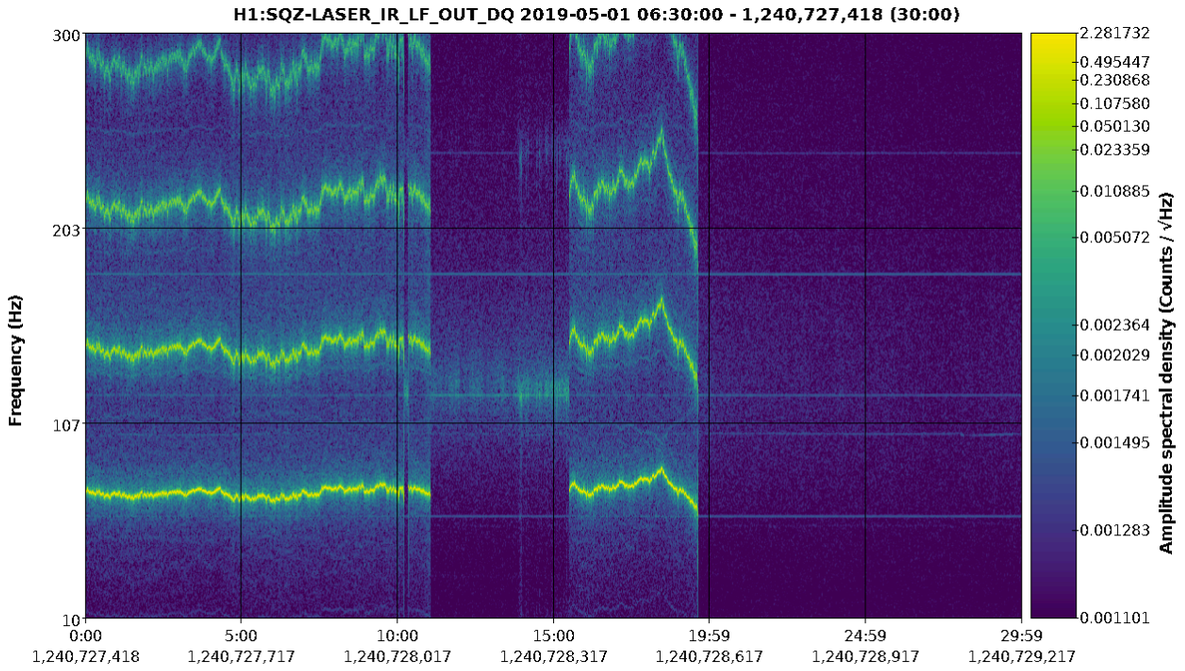
background image aLOG

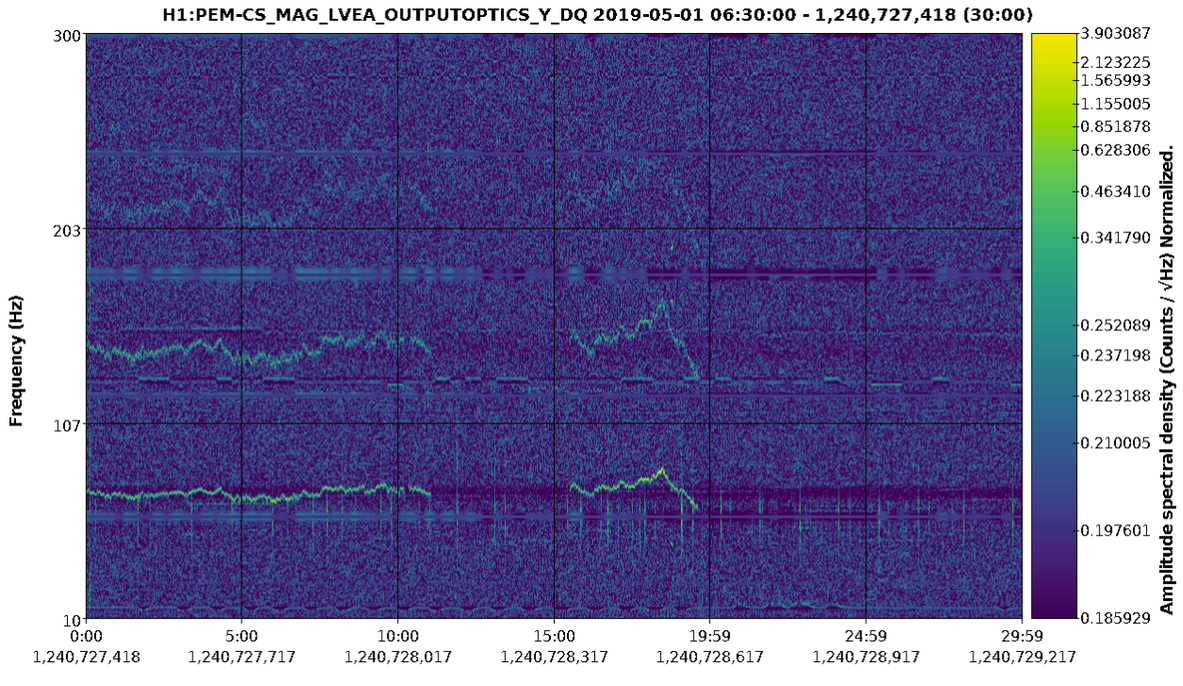
SUMMARY

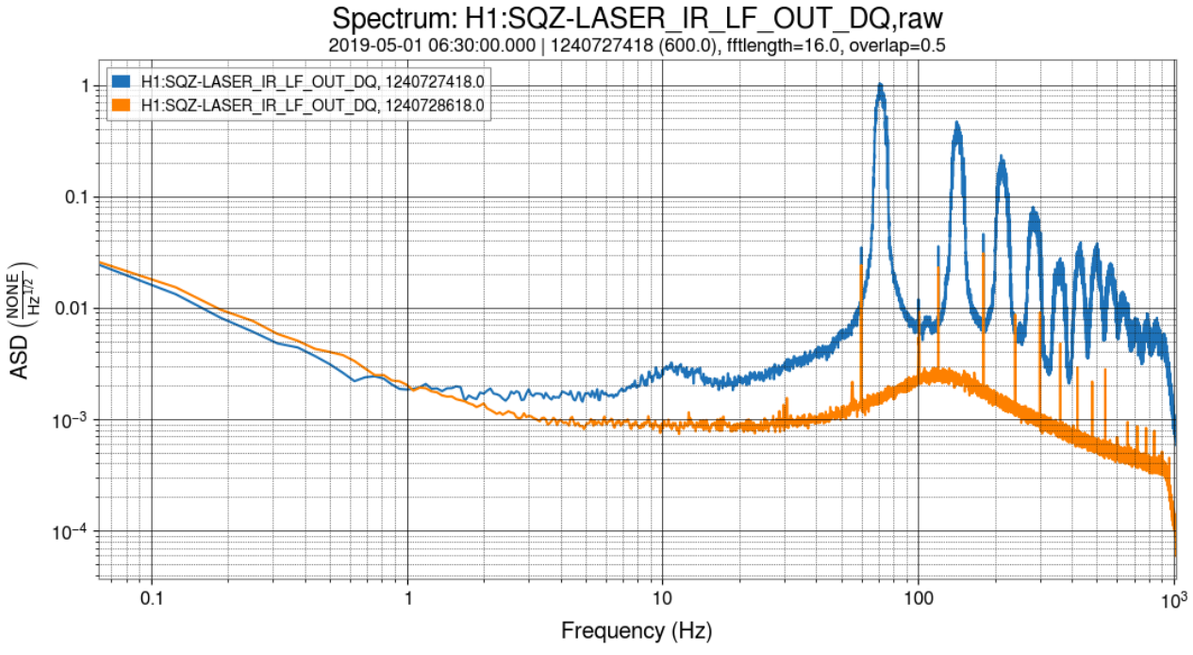
- Stochastic Detchar Repo here (Summaries, wikis and useful links!)
- Detchar Minutes (May 6)
- Nice 'first 4 weeks' summary from Evan Goetz
- LHO
  - More squeezer issues and resolution (48996, 49006, 48892)
  - Whistles (48939)

LHO - SQUEEZER

Seems like the lines were coming from the SQZ Noise Eater. It is now manually switched off after locking (needs to be on to lock the IFO)







LHO - EXTRA

- Whistles have gotten worse (48863) May need to swap VCOs
- Coherent lines found at 40.93, 46.09, 17.8, 27.71 Hz (48951)

GENERAL

- The 10 - 100 Hz band is much improved compared with O2. Maybe there are some things done at L1 that can be applied also at H1 to improve this low frequency data there

- There is good improvement in many bands; even as the broadband noise improved, more noise lines were not revealed.

- Some new lines are present that were not there in O2

- Violin suspension resonances are spaced out more than in O2, but I can't tell if there is work to actively damp them during observing. The shoulders of the resonances are not too terrible, so maybe that implies some amount of damping work is in-place. When these ring up, lots of new lines can appear due to these loud peaks beating against other noise lines and introduce new noise into h(t). Keeping the violin line amplitudes to a minimum can help mitigate this effect.

- Some comb-like structures remain near the violin resonances. We never did get to the bottom of these during O1/O2.

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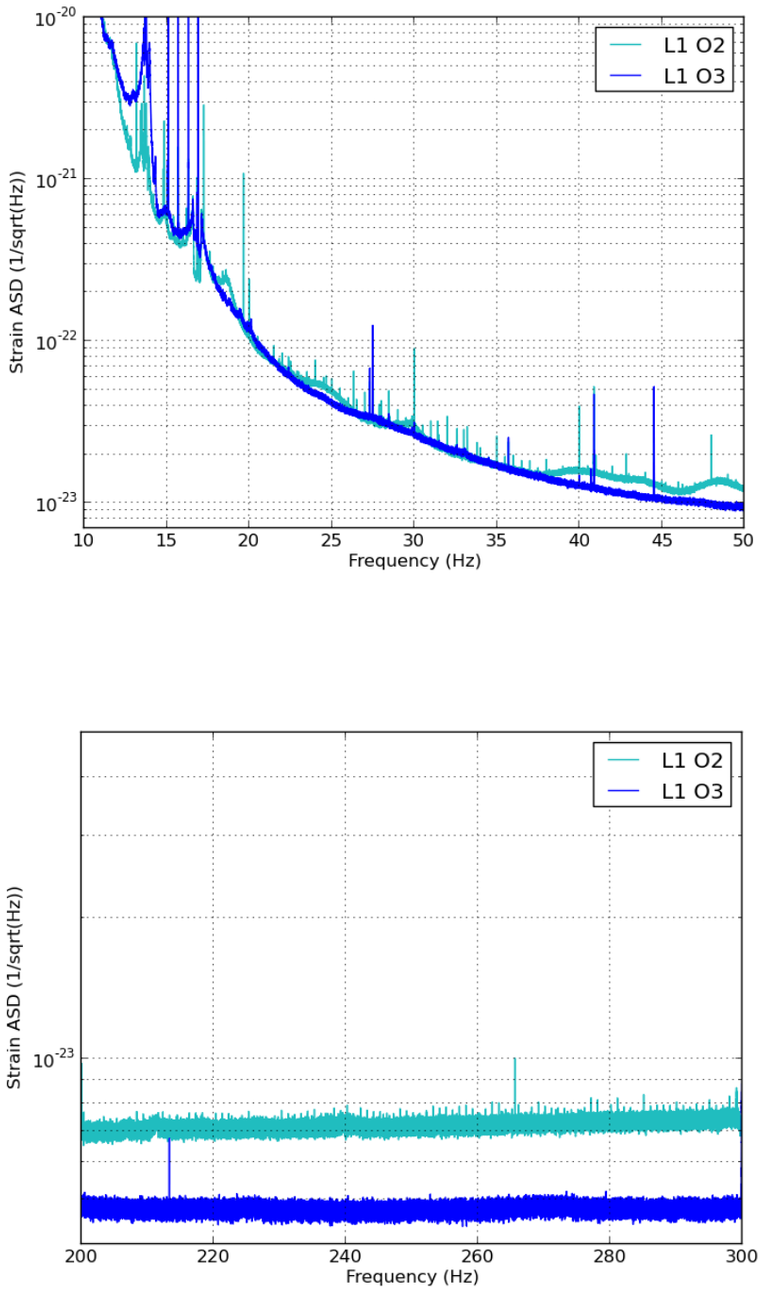
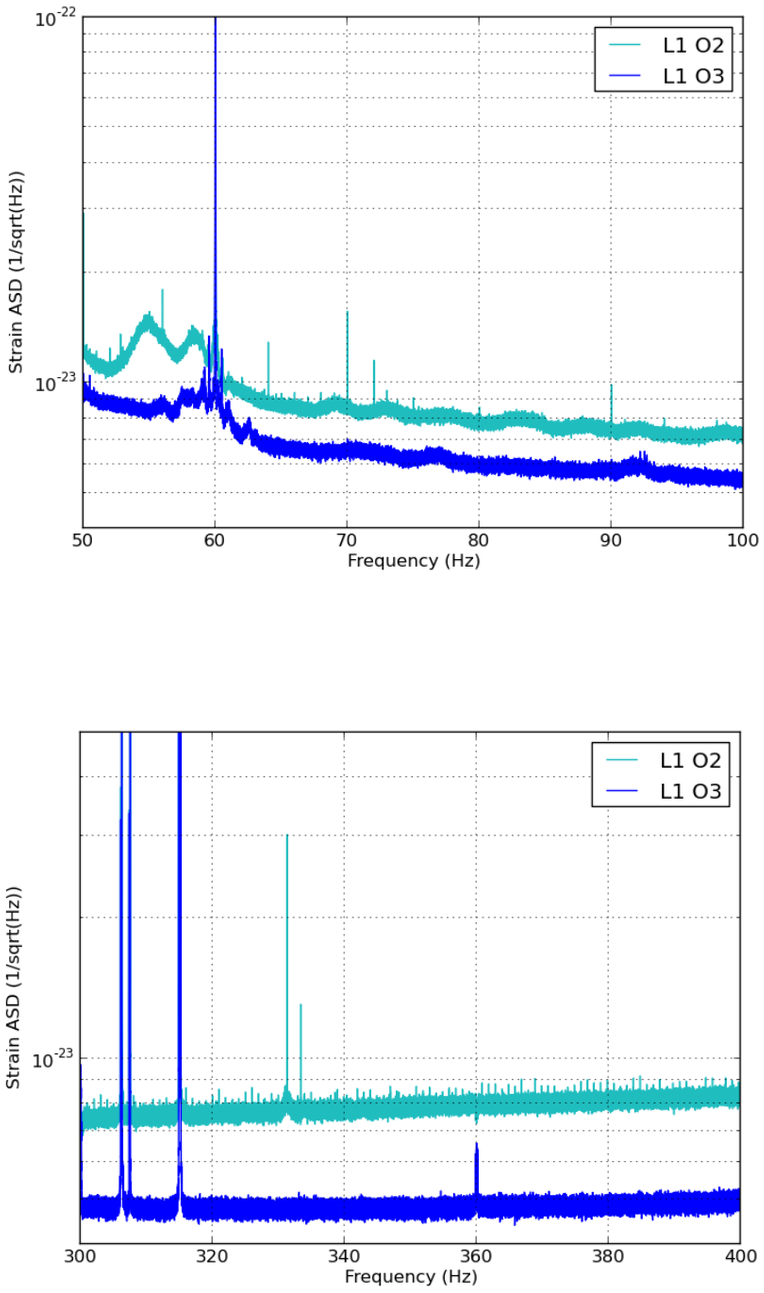
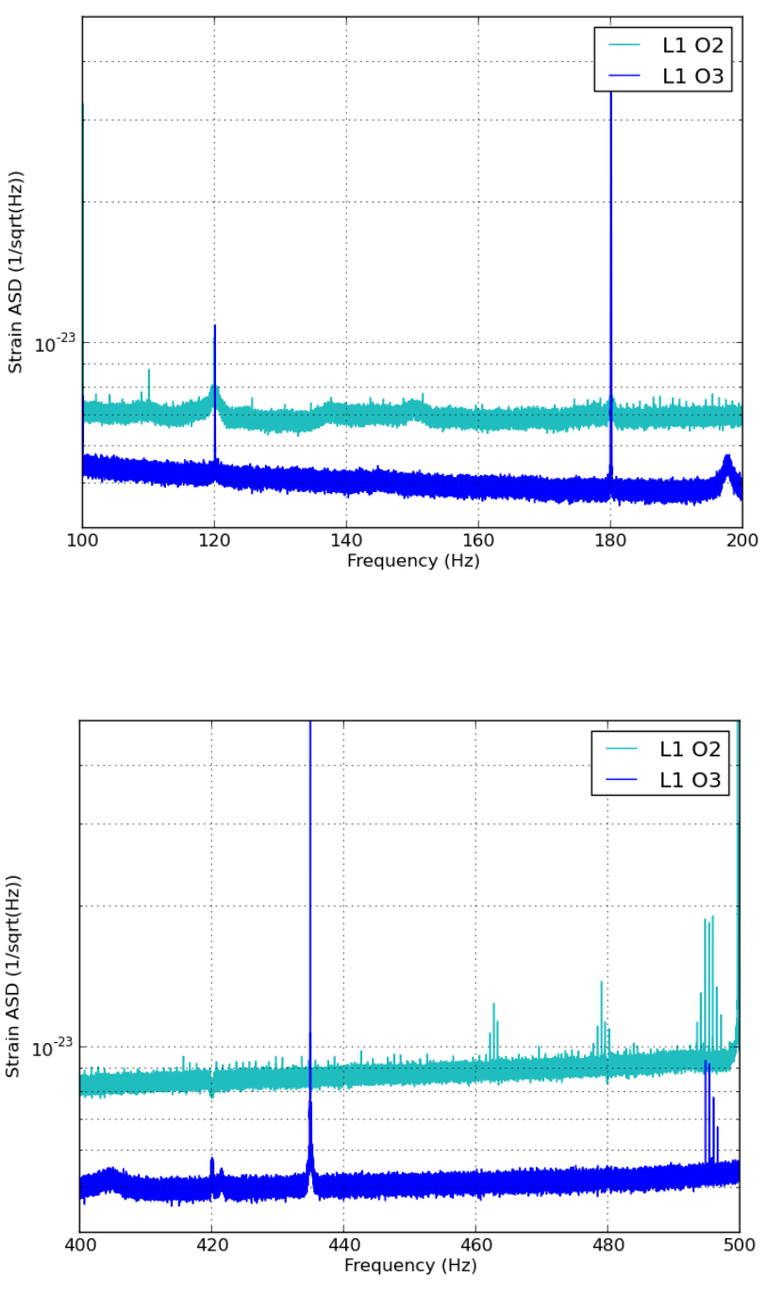
GENERAL







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EXTRA

- Interesting glitch hunting code from Greg Vaughn-Ogin
- Glitch hunting from Josh, TJ & Andy
- Superevent S190503 GraceDB page