VANDERBILT UNIVERSITY

LISA Noise Curves - Consider Cornish and Robson arXiv 1803.01944v1 and Maggiore Chapter7

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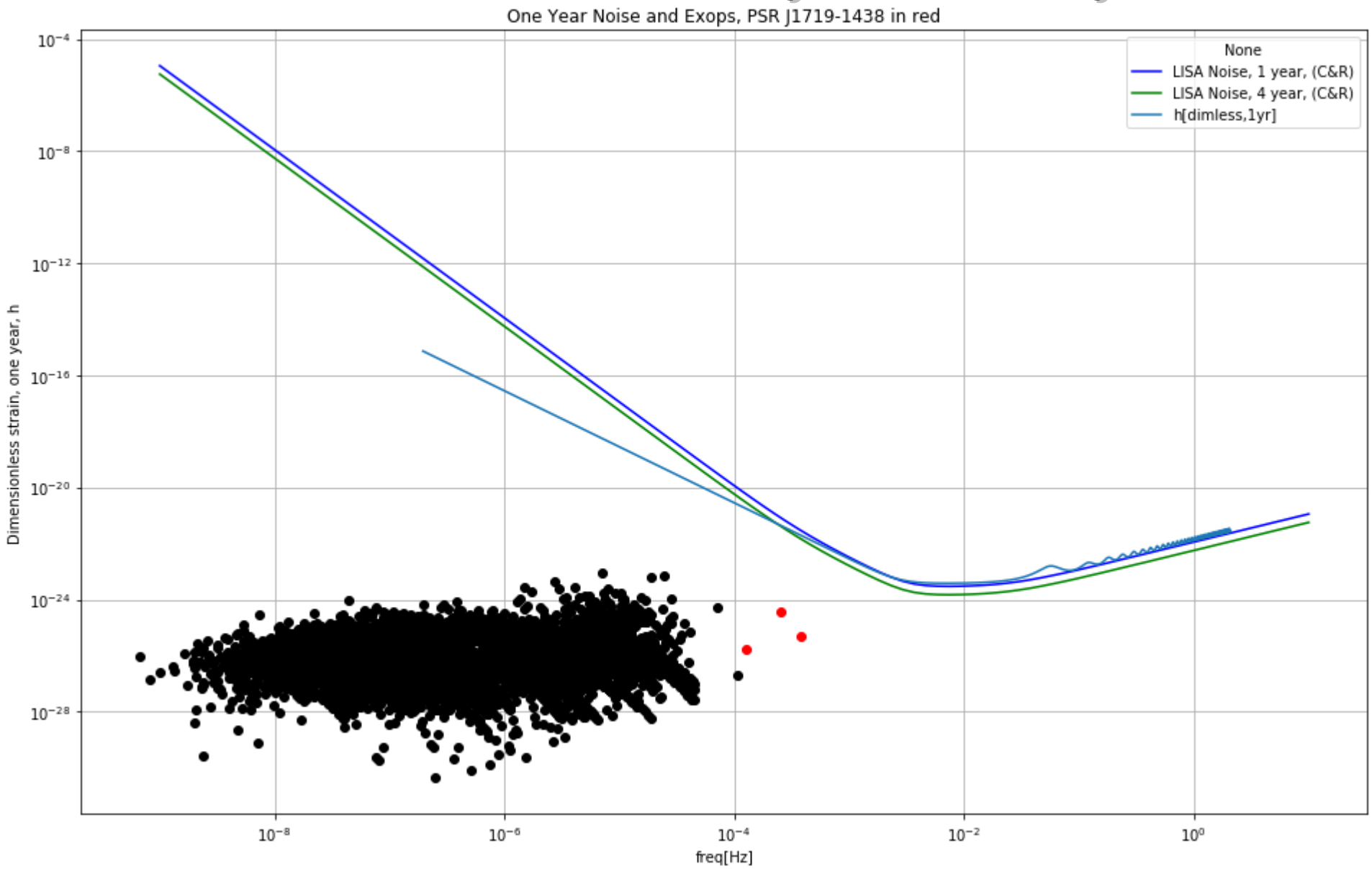
Refs:
Maggiore, *Gravitational Waves,* Chapter 7
Cornish and Robson, *The construction and use of LISA sensitivity curves*, arXiv 1803.01944v1

Some Points about our Exops

- Exop GW frequencies are low compared to either the round-trip time in a LISA arm (16.7 s) as a frequency, 60 mHz, or compared to f_star = c/(2pi L) which is 19.1 mHz.
  - Highest Exop GW frequency, see histogram in PrettyPlotsGWStrainEtc notebook, is XXXX
  - This puts us in the “LIGO Limit” where the LISA “signal response function of the instrument” (sky and polarization averaged) is the same at LIGO, \cal R = 1/5 per channel.
- Oh yeah, C&R say that there are two independent Michelson interferometer channels below f_star and three above f_star.
  - So you can multiply signal, usual \cal R, by 2 or 3.
  - That is Sky and Polarization averaged.
- Plot on following from GWStrainPlotsSNR notebook, currently last cell.

All Exop Modes and Cornish-Robson and Larson noise curves, 1 year and 4 year

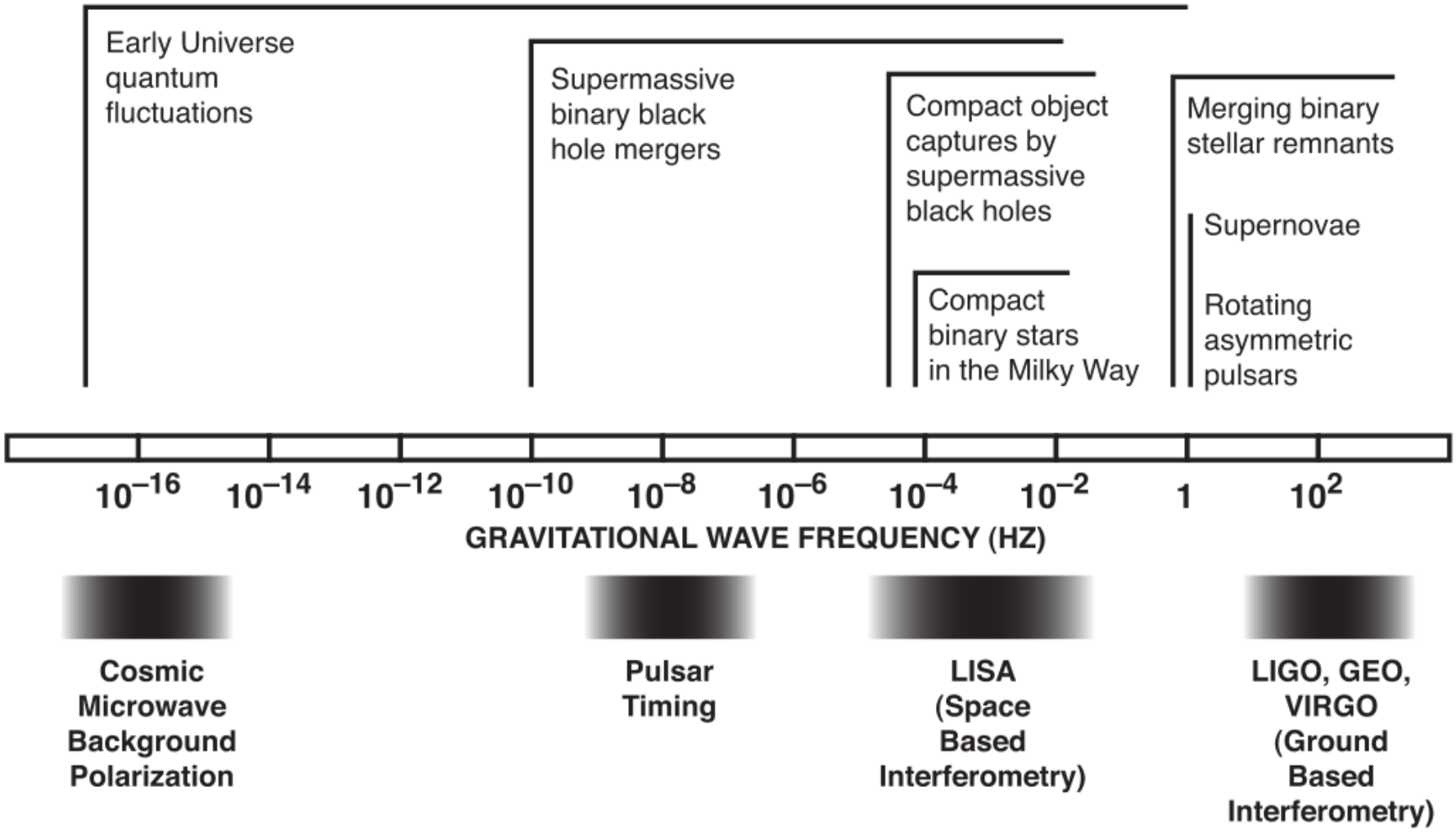


Links

- Cornish and Robson, https://arxiv.org/abs/1803.01944
- aa

Backup

Gravitational Wave Spectrum



Strain from Exoplanets