

# 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

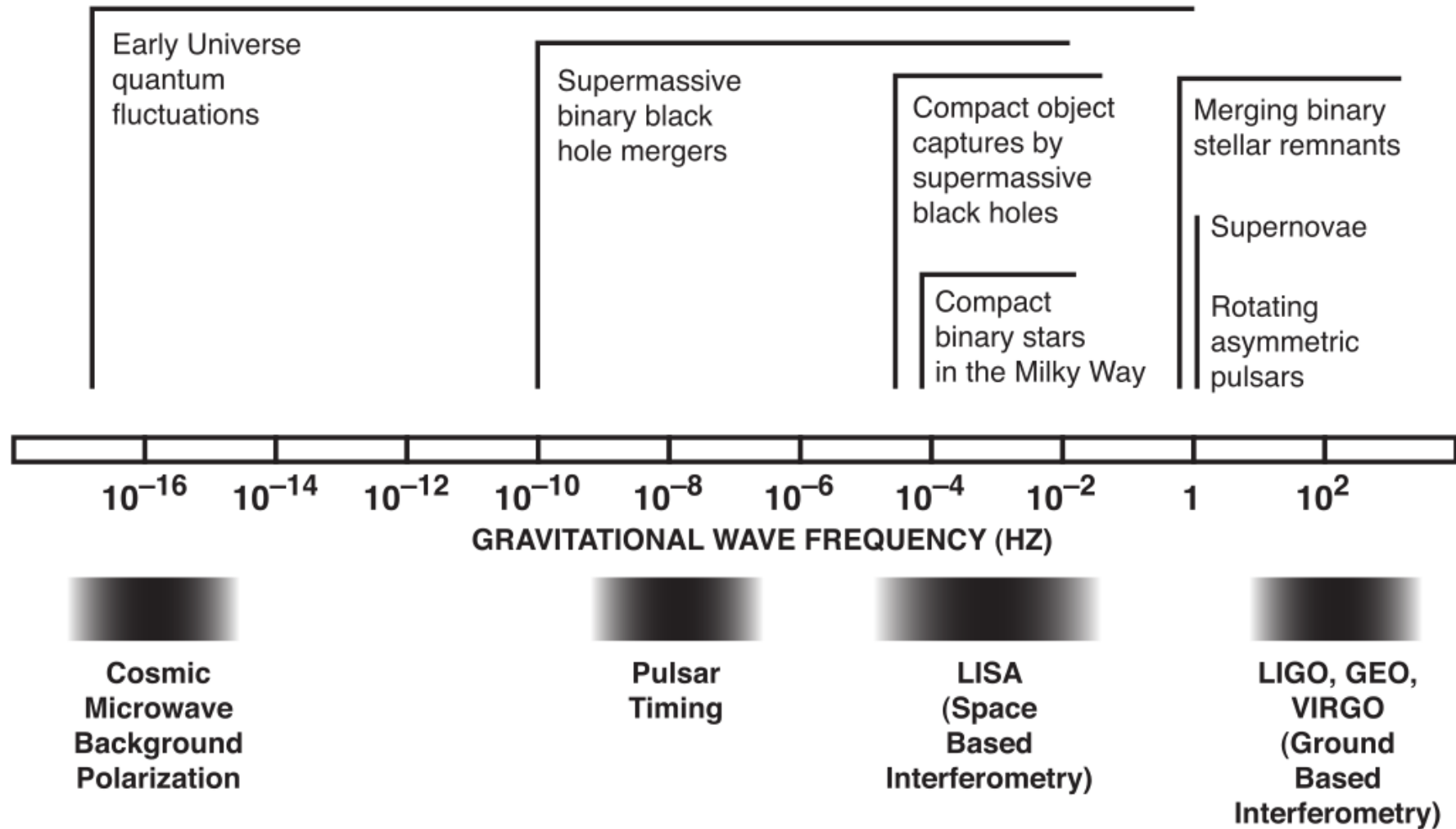
- Exop GW frequencies are low compared to either the round-trip time in a LISA arm (16.7 s) as a frequency, 60 mHz, or compared to  $f_{\text{star}} = c/(2\pi L)$  which is 19.1 mHz.
- Highest Exop GW frequency, see histogram in PrettyPlotsGWStrainEtc notebook, is XXXX
- This puts us in the “LIGO Limit”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

# Links

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

# Backup

# Gravitational Wave Spectrum



# Strain from Exoplanets

Exoplanets RMS summed and LISA/eLISA Strain, 10 years strain

