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The Effect of PSD Drift on the GstLAL PSD Estimator CODY MESSICK, University of Texas at Austin — The GstLAL-based inspiral pipeline is one of the LIGO-Virgo-KAGRA matched-filter analyses that searches for gravitational-waves from merging compact binaries. One of the key components of a matched-filtering pipeline is the power spectral density (PSD) estimator. If the PSD changes on timescales smaller than the timescale of the PSD estimate, the signal-to-noise ratio (SNR) can be miscalculated. I will present the GstLAL PSD estimation method and the results of my investigation into the effect of PSD drift on this method.

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