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Coherently searching for perturbed black-hole ringdown signals with a network of gravitational-wave detectors DIPONGKAR TALUKDER, SUKANTA BOSE, Washington State University — We present results in Gaussian data from a template-based multi-detector coherent search for perturbed-black-hole ringdown signals. Like the previous “coincidence” ringdown searches in LIGO data, our method incorporates knowledge of the ringdown waveform in constructing the search templates. Additionally, it checks for consistency of signal amplitude and phase with the signals’ times-of-arrival at the detectors. The latter feature is common to both of our method and the “coherent WaveBurst” algorithm, and can help bridge the gap in performance between the coincidence search and the coherent WaveBurst search for ringdown signals.

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