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Time-Frequency Analysis for LISA Black Hole Binaries

MATTHEW DIGMAN, NEIL CORNISH, Montana State University, Bozeman —
Future space-based gravitational-wave interferometers such as LISA will offer rich opportunities to study novel gravitational-wave sources that are not observable from ground-based detectors. They will also facilitate detailed multi-wavelength studies of the inspiral phase of stellar origin black hole binaries whose merger is later observable from the ground. Extracting the maximum possible scientific yield from these sources in LISA data presents multiple novel data analysis challenges. This talk will examine the utility of applying wavelet-based time-frequency analysis to the study of stellar origin black hole binaries in LISA data.

Matthew Digman
Montana State University, Bozeman

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