Catching massive black hole binaries with LISA

KEVIN SHUMAN, NEIL CORNISH, Montana State University, Bozeman — The Laser Interferometer Space Antenna (LISA) will detect thousands of overlapping signals that are present in the data for months or years. We are developing a time-evolving global analysis of the LISA data, which will simultaneously detect and characterize all galactic binaries, back holes binaries, extreme mass ratio inspirals, and un-modeled sources while also modeling the detector noise. Here we discuss the techniques we are working on to tackle the specific challenges relating to the detection and characterization of multiple massive binary black holes.

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