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Studying Hierarchical Triple Galactic Binaries in LISA TRAVIS

ROBSON, NEIL CORNISH, Montana State Univ, SILVIA TOONEN, University of Amsterdam, NICOLA TAMANINI, Albert Einstein Institute, VALERIYA KOROL, Leiden University — The Laser Interferometer Space Antenna (LISA) is expected to be sensitive to tens of millions of binaries in our galaxy, most of which will constitute a noise source. It is expected that tens of thousands of these binaries will be resolvable by LISA and a substantial fraction of those will be part of hierarchical triple systems. I will discuss modeling these systems for LISA, and determine how well we can estimate the parameters of the outer orbit. Furthermore, I will discuss the potential existence and properties of a “confusion” regime of parameters space where the triple system could be mis-identified as an isolated binary leading to biased parameter estimation.

Travis Robson
Montana State Univ

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