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Detection and parameter estimation for accreting stellar-origin black-hole binaries and their electromagnetic counterpart

Tuesday, January 14, 2020 10:30 AM (15 minutes)

We study the impact of mass accretion in the evolution of LIGO-like black hole binaries. Based on simulated catalogues of binary populations, we estimate that a fraction of the events will have a detectable imprint of Eddington-level accretion, when detected by LISA or by LISA and ground-based detectors (multiband). Accretion can also induce bias in the binary parameters, such as the masses and the coalescence time. For these events, the sky location is well determined and allows for targeted searches for electromagnetic counterparts, e.g. with the ATHENA mission or SKA.

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