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Extreme Mass-Ratio Inspirals as dark standard sirens

In this talk we discuss the potential of Extreme Mass-Ratio Inspirals (EMRIs) observed by LISA as dark standard sirens by cross-matching their sky localisation region with mock galaxy catalogs, i.e., statistically inferring the galaxy host redshift. We report constraints on the cosmological parameters assuming either a ΛCDM model or a redshift-evolving dark energy equation of state, showing that EMRIs will be excellent probes of the Hubble parameter H_0 and, potentially, also of the first-order dark energy equation-of-state parameter w_0.

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