

Abstract for an Invited Paper
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Gravitational Radiation from Intermediate-Mass Black Holes

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Stellar-mass black holes (up to approximately 20 solar masses) and supermassive black holes (millions to billions of solar masses) have been well-established for many years. More recently, X-ray observations have strongly suggested the existence of intermediate-mass black holes (IMBHs) in the hundreds to thousands of solar masses. Candidate IMBHs are often associated with dense young stellar clusters, and may represent the present-day counterparts to the earliest stellar black holes at redshifts up to roughly 20. Gravitational waves from mergers of IMBHs with themselves or with supermassive black holes would be visible to these high redshifts, and could carry unique information about star formation and the hierarchical assembly of structure as well as producing high-signal extreme mass ratio inspiral events that test strong-gravity predictions of general relativity. We will discuss the astrophysical context of gravitational radiation from IMBHs and the prospects for detection with future ground-based and space-based instruments.