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Searching for Intermediate Mass Black Holes with Advanced LIGO LALEH SADEGHIAN, Univ of Wisconsin, Milwaukee, LESLIE WADE, Kenyon College — Intermediate Mass Black Holes (IMBHs) are conjectured to occupy the mass space between stellar-mass and super-massive black holes, roughly between 100 and 10^5 solar masses. The coalescence and merger of IMBH binaries with masses of a few hundred solar masses is an intriguing possible source of gravitational waves for Advanced LIGO and Advanced Virgo. A single detection of an IMBH binary merger would provide the first unambiguous proof of IMBH existence. Searches for these sources have started on data collected by the Advanced LIGO since September 2015. In this talk I will present a search method for these sources in the advanced detector era, based on known signal morphology.

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