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Search for high-mass-ratio sub-solar mass primordial black hole mergers and implications for dark matter abundance ALEXANDER NITZ, YI-FAN WANG, Max Planck Institute for Gravitational Physics — We present the first search for gravitational waves from the coalescence of stellar mass and sub-solar mass black holes with masses between 20 - 100 $M\odot$ and 0.01 - 1 $M\odot$, respectively. The observation of a single sub-solar mass black hole would establish the existence of primordial black holes and a possible component of dark matter. We'll present results from our search of the public LIGO data and discuss how these observations can inform the potential dark matter contribution from primordial black holes.

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