

BLACK HOLES IN DENSE STAR CLUSTERS
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TITLE: Black Holes in Ultracompact Dwarf Galaxies

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We have recently detected a 20 million solar mass black hole in an ultracompact dwarf galaxy (UCD) with a stellar mass of just 120 million solar masses. This object is the smallest, least massive galaxy known to host a supermassive (>1 million solar mass) black hole. This result provides strong evidence that this UCD is a stripped galaxy nucleus. Furthermore, the low mass-to-light ratio of the stars in this massive UCD suggests that black holes may account for the unusually high dynamical M/L estimates found in most massive UCDs (Mieske+ 2013). This implies a large population of previously unrecognized massive black holes. I will also present ongoing work on testing for the presence of massive black holes in two other UCDs.