

BLACK HOLES IN DENSE STAR CLUSTERS
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TITLE: Dense Galaxies and Over-Massive Black Holes

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The masses of super-massive black holes correlate to various properties of their host galaxies, including the nuclear star clusters. However, very few galaxies are nearby enough for direct black hole mass measurements. To find all suitable galaxies, we surveyed a thousand galaxies with the Hobby-Eberly Telescope. The first results of this survey was the discovery of a dozen extremely compact, high-dispersion, galaxies, which are candidates to host extraordinary massive black holes. The prototype is NGC1277, which is an extremely compact, lenticular galaxy which hosts a 10 billion solar mass black hole. There are now several systems known with over-massive black holes, including NGC4486B and M60UCD1. They are all extremely dense stellar systems and most reside in the halo of other galaxies. This beckons the question are all these over-massive black holes hosted in stripped galaxies?