

**BLACK HOLES IN DENSE STAR CLUSTERS**  
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TITLE: The Mass of the IMBH in NGC4395

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A census of low-mass massive black holes can provide constraints on massive black hole formation in the early Universe. NGC4395, a low-mass bulge-less spiral galaxy at a distance of only 4.5 Mpc, is one of the nearest Seyfert 1 galaxies. The nucleus is thought to be powered by an intermediate-mass black hole, however, mass estimates of the black hole from reverberation mapping differ by almost an order of magnitude. Here, I present the first direct dynamical mass estimate of the mass of the IMBH, using gas kinematics from adaptive optics assisted Gemini/NIFS integral field data and HST/WFC3 imaging data. Our analysis suggests a black hole mass of  $5.3 \times 10^5$  solar mass, significantly higher than the most recent reverberation mapping estimate, although with some uncertainty due to modeling assumptions.