

BLACK HOLES IN DENSE STAR CLUSTERS
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TITLE: IMBHs in Globular Clusters through Individual Star Radial Velocities

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An intermediate-mass black hole (IMBH) hidden in a globular cluster (GC) is predicted to produce a steep central cusp in the velocity dispersion (VD) profile. Observationally detecting such a signature is indeed very challenging. In this framework we are conducting a dedicated multi-instrument campaign at the ESO-VLT, aimed at determining the cluster VD profile from the radial velocities of hundreds individual stars, distributed from the very center, out to the periphery of ~ 30 Galactic GCs. I will focus on the results obtained for NGC 6388, where we find no significant evidence of IMBH, at odds with the conclusions from integrated light spectroscopy suggesting a 10^4 Msol BH. Preliminary results for a few other GCs will also be presented.