

BLACK HOLES IN DENSE STAR CLUSTERS
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POSTER TITLE: A Radio Continuum Search for Black Holes in the Milky Way Globular Cluster M10

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Globular clusters are expected to have a large population of stellar mass black holes at the early stages of their lifetime. These Stellar-mass black holes were long predicted to have been kicked out of globular clusters through gravitational interactions during the clusters' evolution, with some clusters retaining only one or two stellar-mass black holes and most clusters not retaining any. Using deep radio continuum observation from the Jansky Very Large Array, our group has identified and published non-central radio sources in two Milky Way globular clusters (two in M22; one M62) that are best explained as stellar-mass black holes accreting from binary companions. We have now begun a systematic radio continuum survey of Milky Way globular clusters to establish statistics on the frequency of stellar-mass black holes and determine which cluster parameters influence the presence of black holes. Here we present the preliminary findings of our radio search for black holes in one of these sample clusters, M10.