

BLACK HOLES IN DENSE STAR CLUSTERS
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TITLE: Illuminating Massive Black Holes with White Dwarfs

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White dwarfs can be tidally disrupted only by massive black holes with masses less than about 10^5 solar masses. White dwarf tidal interactions feed material to the black hole well above its Eddington limit, with the potential to launch a relativistic jet. This talk will discuss the observability of high-energy, beamed emission as well as unbeamed thermal emission arising from these tidal interactions. Beamed emission from white dwarf disruptions significantly outshines that of its more numerous main sequence star disruption counterparts. As a result, when considering black holes of less than 10^5 solar masses, white dwarf disruption transients are the most likely to be observed in the high energy band. A fraction of these transients are likely accompanied by atypical thermonuclear supernovae visible away from the beaming axis at optical wavelengths. We discuss the ways that current and next-generation surveys can use this host of white dwarf disruption transients to constrain the population of massive black holes with masses less than 10^5 solar masses.