

Abstract Submitted  
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**Rates and characteristics of intermediate-mass-ratio inspirals detectable by Advanced LIGO** ILYA MANDEL, Theoretical Astrophysics, California Institute of Technology, DUNCAN BROWN, Theoretical Astrophysics and LIGO Laboratory, California Institute of Technology, JONATHAN GAIR, Institute of Astronomy, Cambridge, M. COLEMAN MILLER, Department of Astronomy, University of Maryland and Goddard Space Flight Center — We discuss the event rates and characteristics of intermediate-mass-ratio inspirals (IMRIs) of compact objects into intermediate-mass black holes (IMBHs) in globular clusters that may be in the detection range of Advanced LIGO. We comment on the astrophysical background of these events, suggest estimates of rates per globular cluster, discuss the distance sensitivity of LIGO and show that Advanced LIGO may see up to tens of IMRIs per year, though one per year may be a more plausible value. We analyze several possible capture mechanisms, and conclude that most IMRIs will have circularized by the time they are in the Advanced LIGO band.

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