

Extreme mass ratio inspirals in evolving nuclear star clusters

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Recently we have build a Monte-Carlo method that can obtain self-consistent solutions of an evolving nuclear star cluster that contains a central massive black hole. Our method evolves the orbits of stellar objects by solving two-dimensional (energy and angular momentum) Fokker-Planck equations given multiple mass components. In this study we apply our method to investigate the evolution of the rates of extreme mass ratio inspirals over cosmic time.

Paper info

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