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# Supermassive black hole dynamics under the grid

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## Abstract

Supermassive BHs reside in the center of most massive galaxies in our local Universe and are thought to play a key role in the big picture of galaxy evolution. Over the last decade, BHs have been widely implemented in many astrophysical codes, including RAMSES. Their evolution is mostly captured by subgrid models since the resolution required to capture the physics around BHs is far above what we can achieve now. I will introduce you to an important effect for BH dynamics: dynamical friction, and I will present a new subgrid model for RAMSES, which take into account this phenomenon, thus correct BH dynamics. I will finally show some implications of this corrected dynamics.

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