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What shapes the conspiracy between luminous and dark matter mass distribution in elliptical galaxies?

The mass distributions of elliptical galaxies show a conspiracy between dark matter and stars which is not understood but must be telling us something fundamental about their formation process. The goal of this project is to (i) quantify the conspiracy for a sample of elliptical galaxies through simple dynamical models of extended kinematic data, and understand the dependence on galaxy mass, (ii) explore the conditions under which violent relaxation in merger simulations can set up such a conspiracy, and (iii) construct a simple diffusion model in phase-space based on simulation data, which can then be used to physically constrain the formation histories of elliptical galaxies.