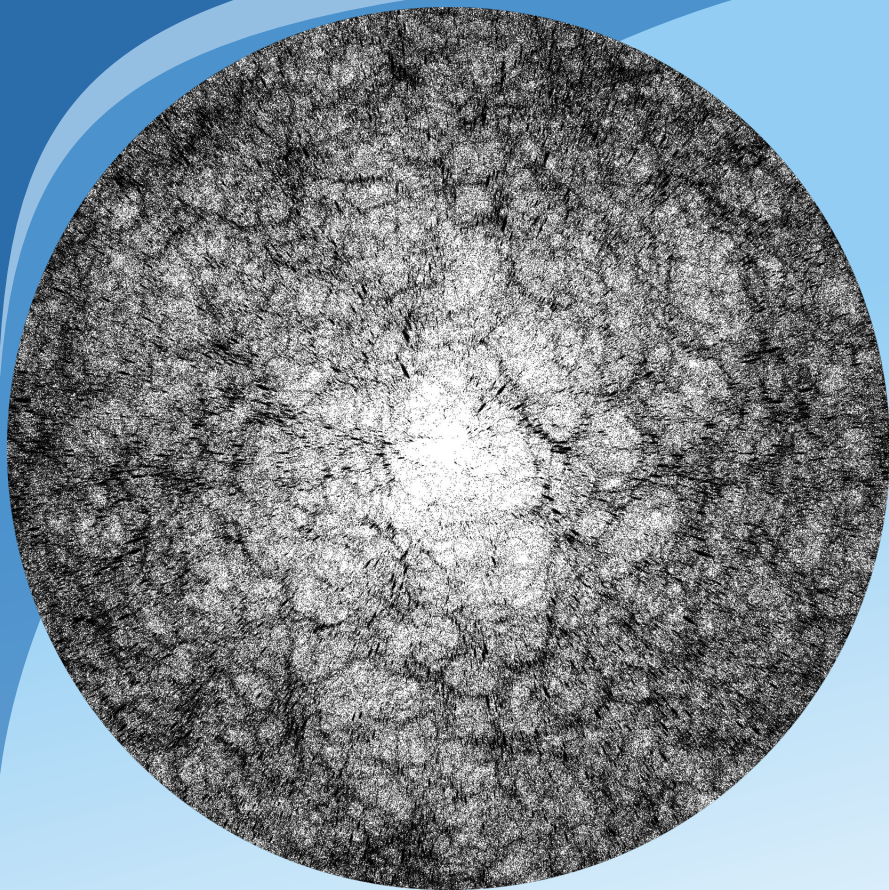


Fast mock galaxy catalogues with PINOCCHIO



The cosmological parameters estimated from observable quantities are significantly affected by systematics connected to **sample variance** and to the **bias** with which galaxies trace mass.

Why don't we run 10000 Nbody simulations to compute the covariance matrix? AHAHAHAHAHAHA!!!

Let's use approximate methods based on the Lagrangian Perturbation Theory!!! **PINOCCHIO** accurately recovers the large-scale density field of matter.

The code does not allow to directly compare with observations, since it only provides catalogs of DM halos.

Two possible approaches are being developed: the **HOD approach** and the **dynamical reconstruction of the orbits**.