# How much of their stellar mass have cluster galaxies lost to the ICL ?


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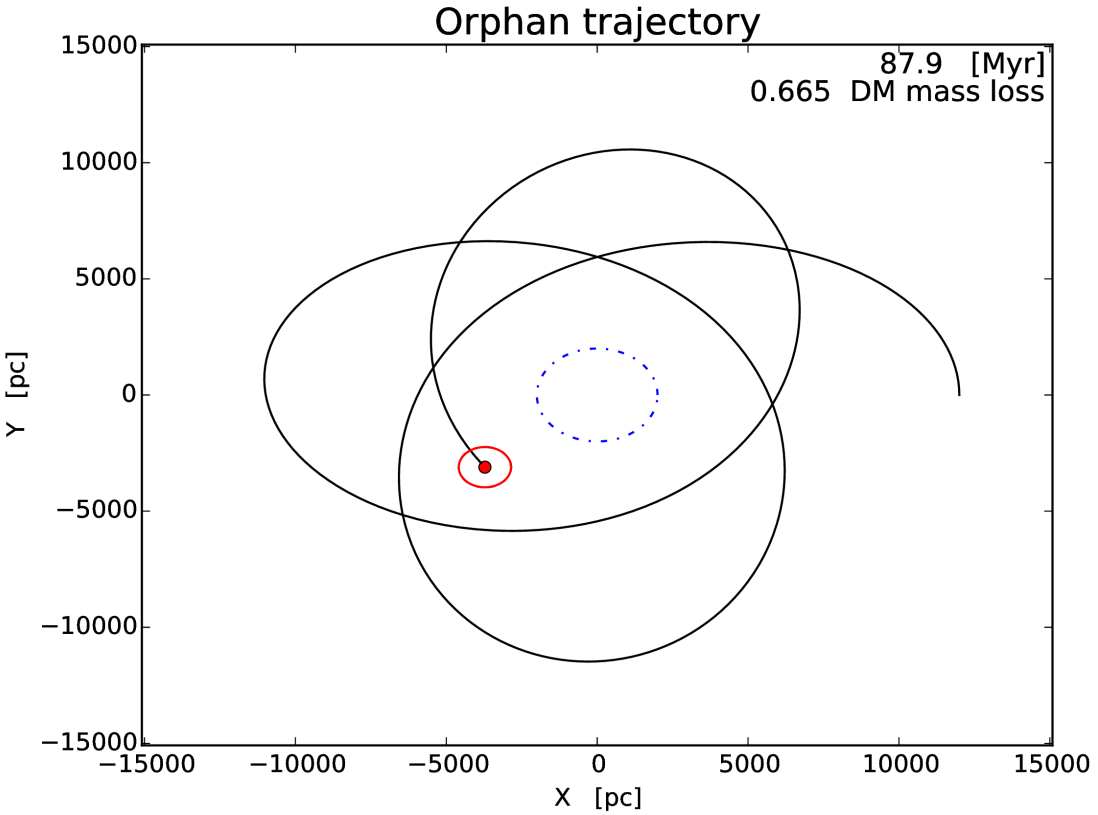
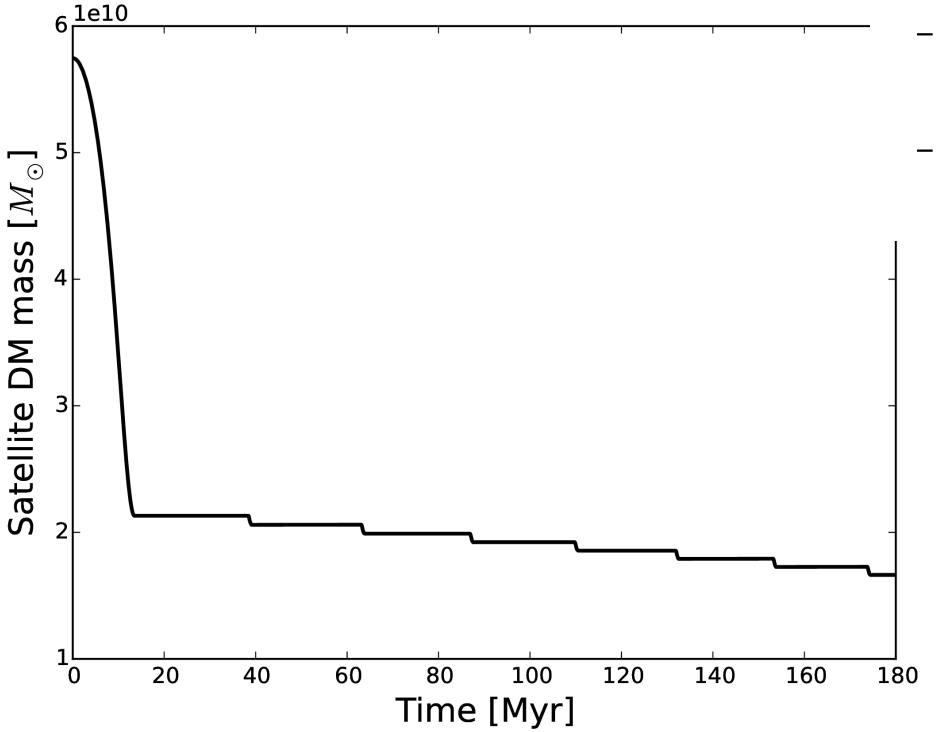
# Preliminary step : orphan treatment

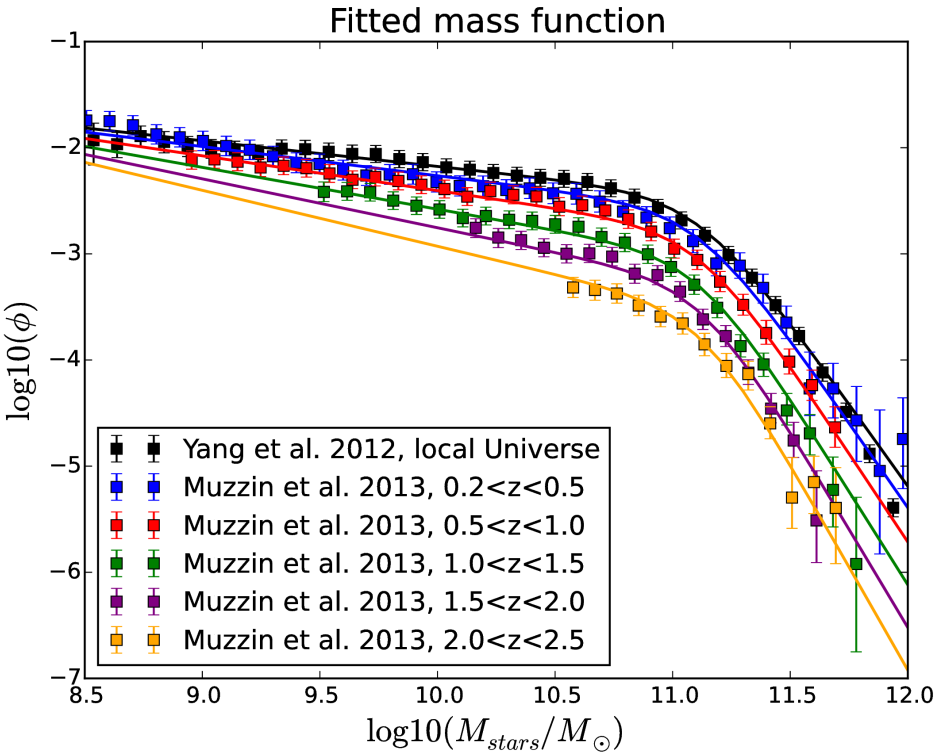
When a subhalo falls below the resolution limit of a DM simulation its galaxy becomes an orphan. Orphan trajectories are computed using Chandrasekhar's dynamical friction formula. They survive up to the pericentric passage that fit with Jiang's prescription. (Jiang et al. 2008)

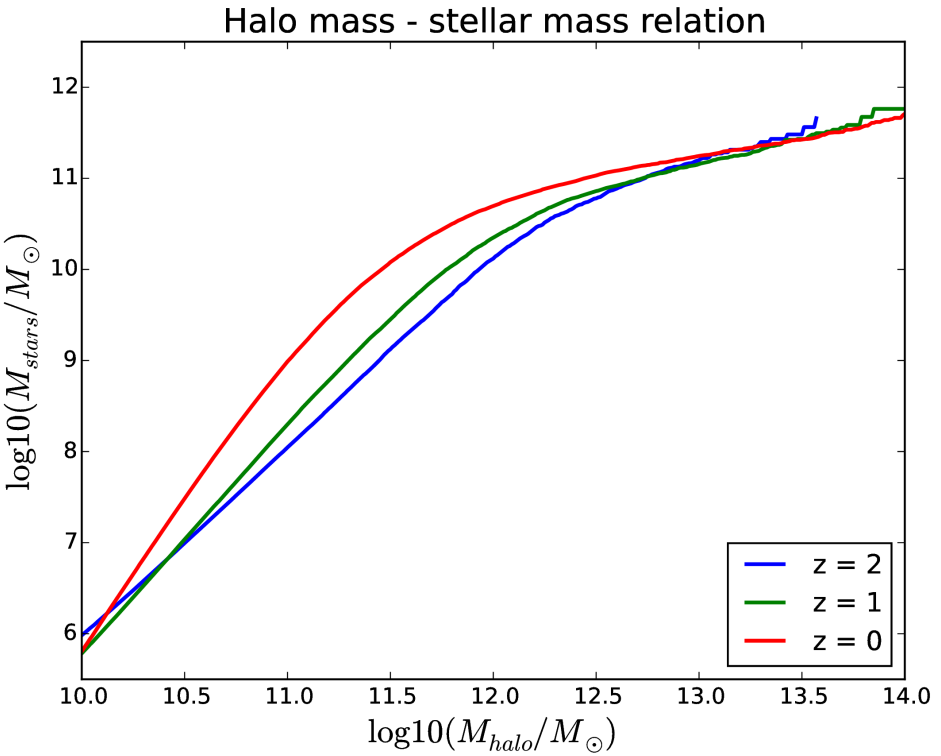



We strip satellite's NFW dark matter profile inside an instantaneous tidal radius. Our goal is to estimate the fraction of stellar mass that is stripped.

# Method : abundance matching



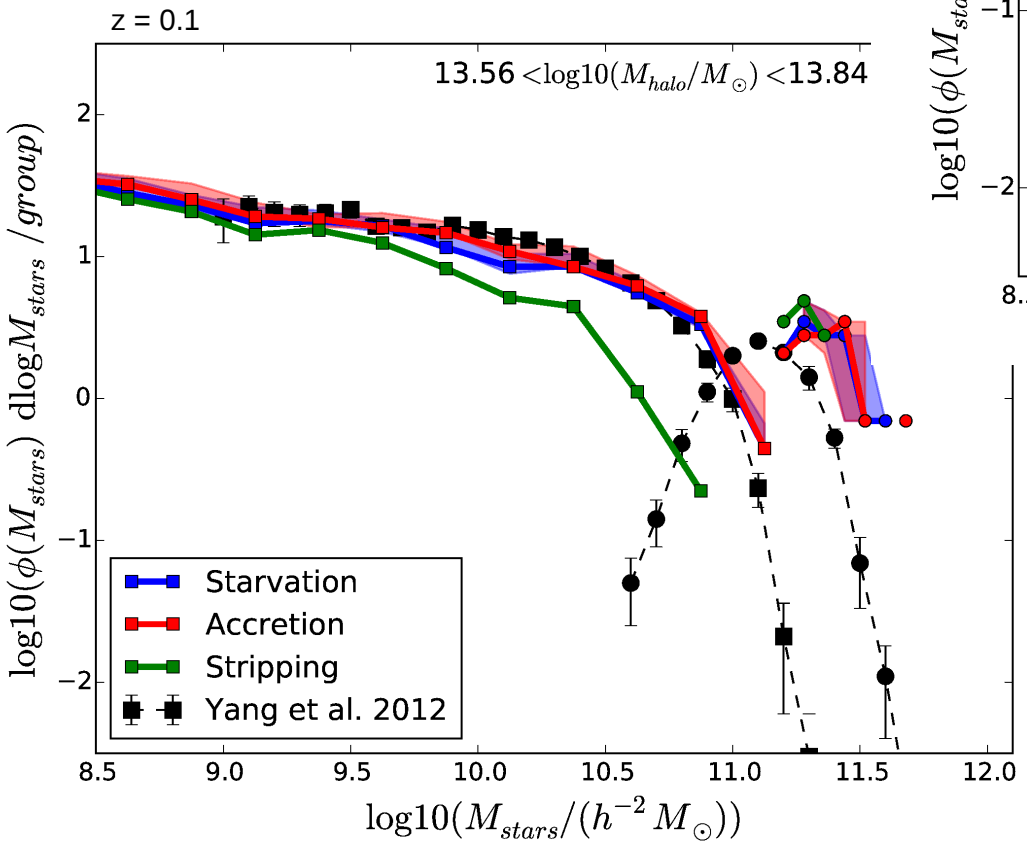

We match observed stellar mass function and halo mass function from a DM simulation to obtain $M_{star}$ as a function of z and $M_{halo}$.

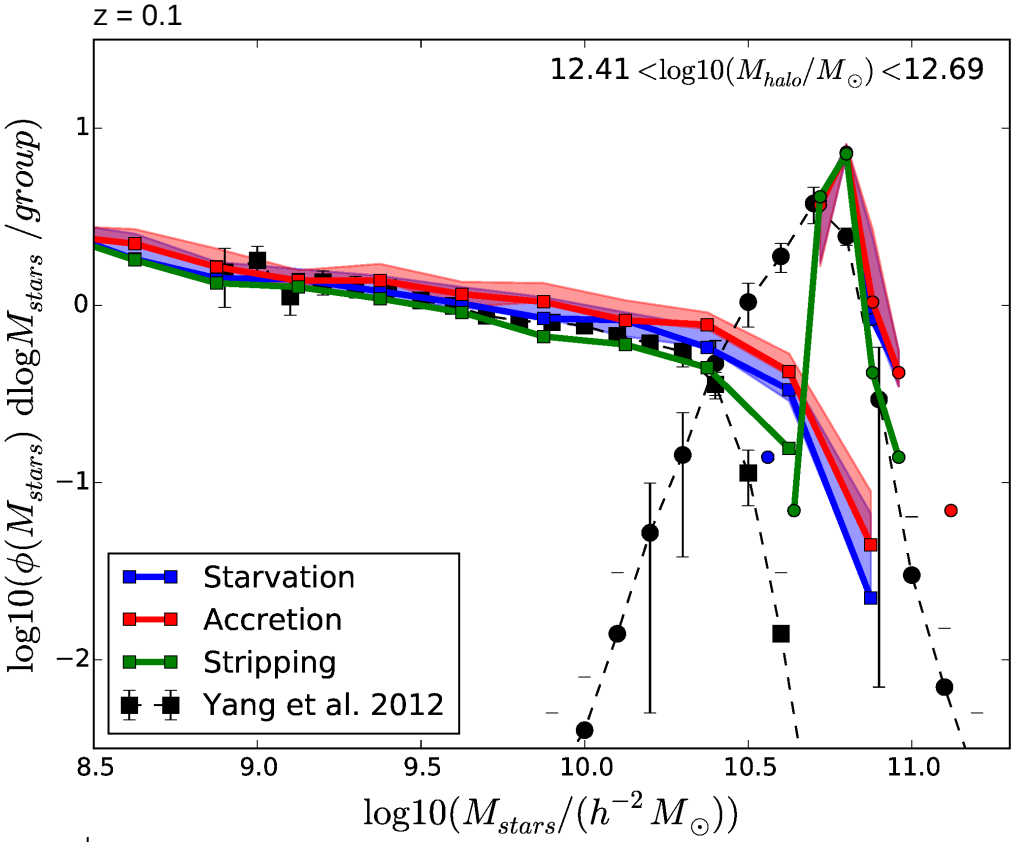
Stellar mass is assigned to galaxies following three differents scenarios :

- Starvation : no accretion on satellite and no stripping
- Accretion : galaxies keep accreting regardless of whether they lie in groups or not
- Stripping : satellite starvation + tidal stripping model

# Results : group stellar mass function

**Stripping is required only in low mass groups.**
Our physically motivated stripping prescription removes on average 79% of the stars from the satellites.




At higher masses observations are reproduce without stripping, satellites remain intact. The ICL is populate only during mergers.