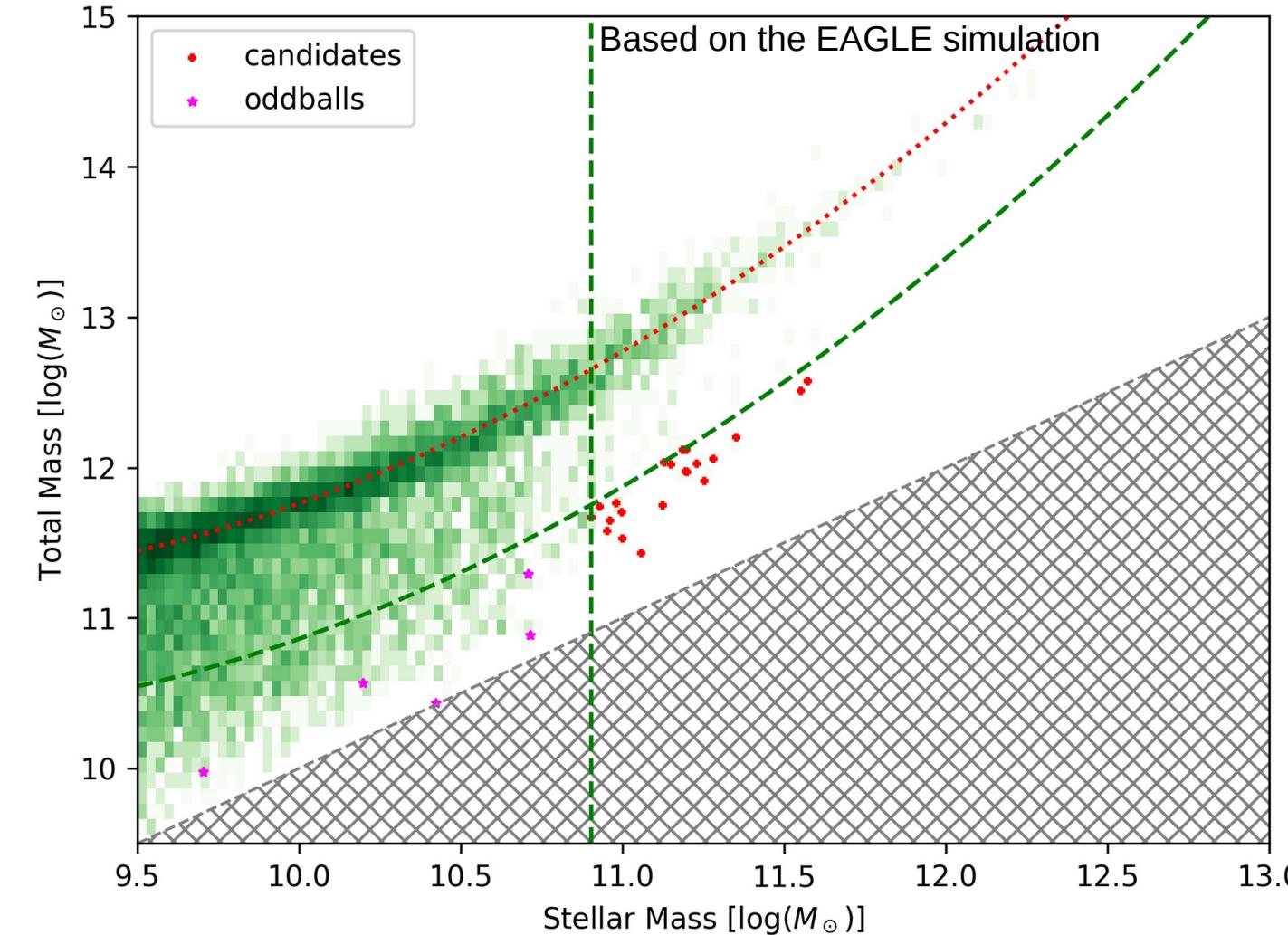


Dark matter deprived galaxies in hydrodynamical simulations

by **Christoph Saulder**



- Stellar to total mass ratio
- What are oddballs?
- Observational motivation
- Properties of dark matter deprived galaxies
- Possible channel for red nugget relics lookalikes
- Importance of phase-space halo finders

Agertz+21

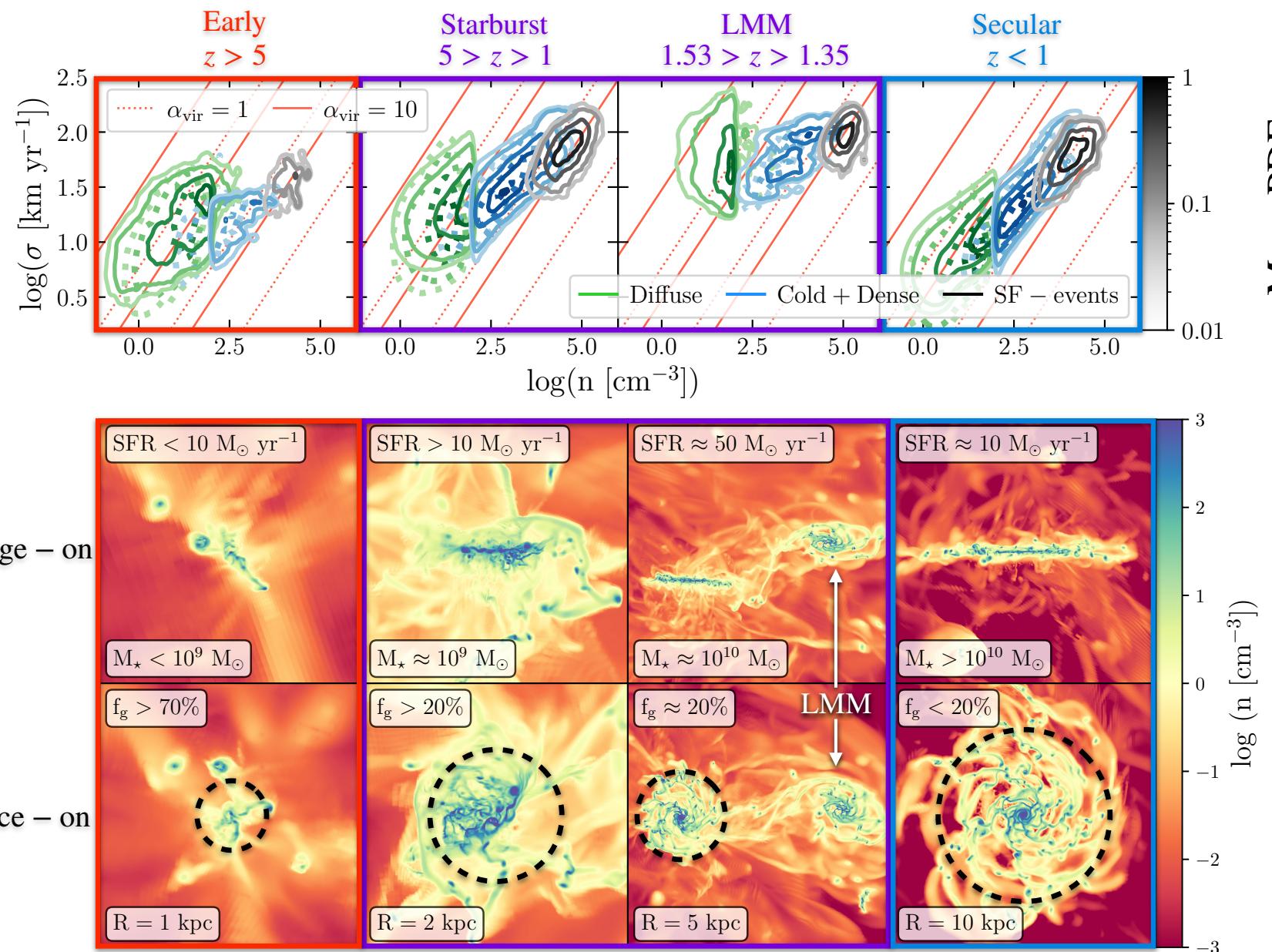
Segovia Otero+22

Renaud+22

Segovia Otero to be sub.

ISM over cosmic time: is ϵ_{ff} universal?

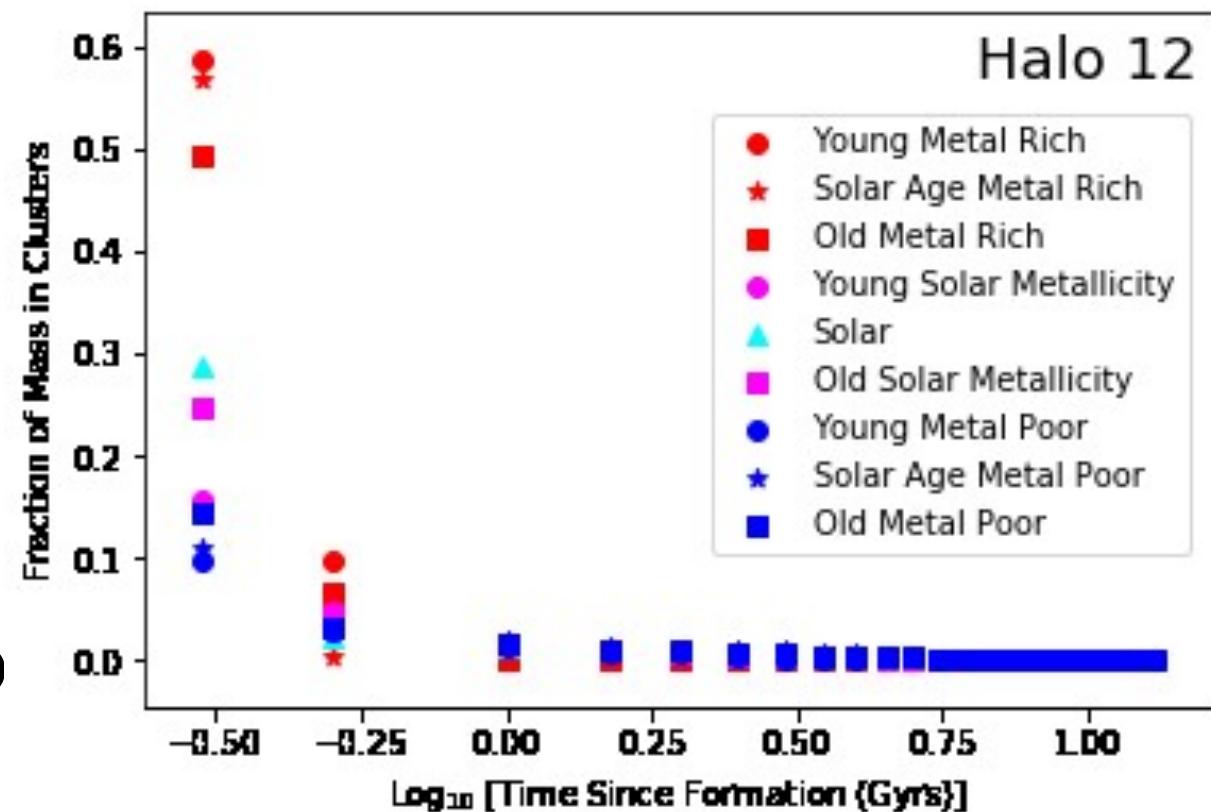
THE
VINTERGATAN
SIMULATION



Building Galaxies
from Scratch
Vienna 2024

alvaro.segovia@astro.lu.se

- Work on simulating formation & evolution of Sun type stars in Milky Way type galaxies using EMP simulations
- Measured a range of different variables and how these varied for different types of stars
- The Sun doesn't have a particularly unique evolutionary history compared to other stars
- In the final 4 (ish) months of my PhD (and need an external examiner)



The effect of numerically sampling the mass resolution and power spectrum cut off on feedback in galaxy clusters.

Imogen Towler, 4th year PhD, University of Manchester

- 14 zoom simulations varying mass resolution and k_{\max} independently

$$k_{\text{Nyq}} = \frac{2\pi}{L} \left(\frac{N^{1/3}}{2} \right)$$

$$k_{\max} = k_{\text{Nyq}} = \pi \left(\frac{\Omega \rho_{c,0}}{m_{\text{DM}}} \right)^{1/3}$$

- Varying k_{\max} affects timescales on which subhaloes form.
- Testing the overall effect on cluster gas profiles
- k_{\max} is not the cause of the entropy profile problem

