

# The 'Valencian-GALAXY-zoo'

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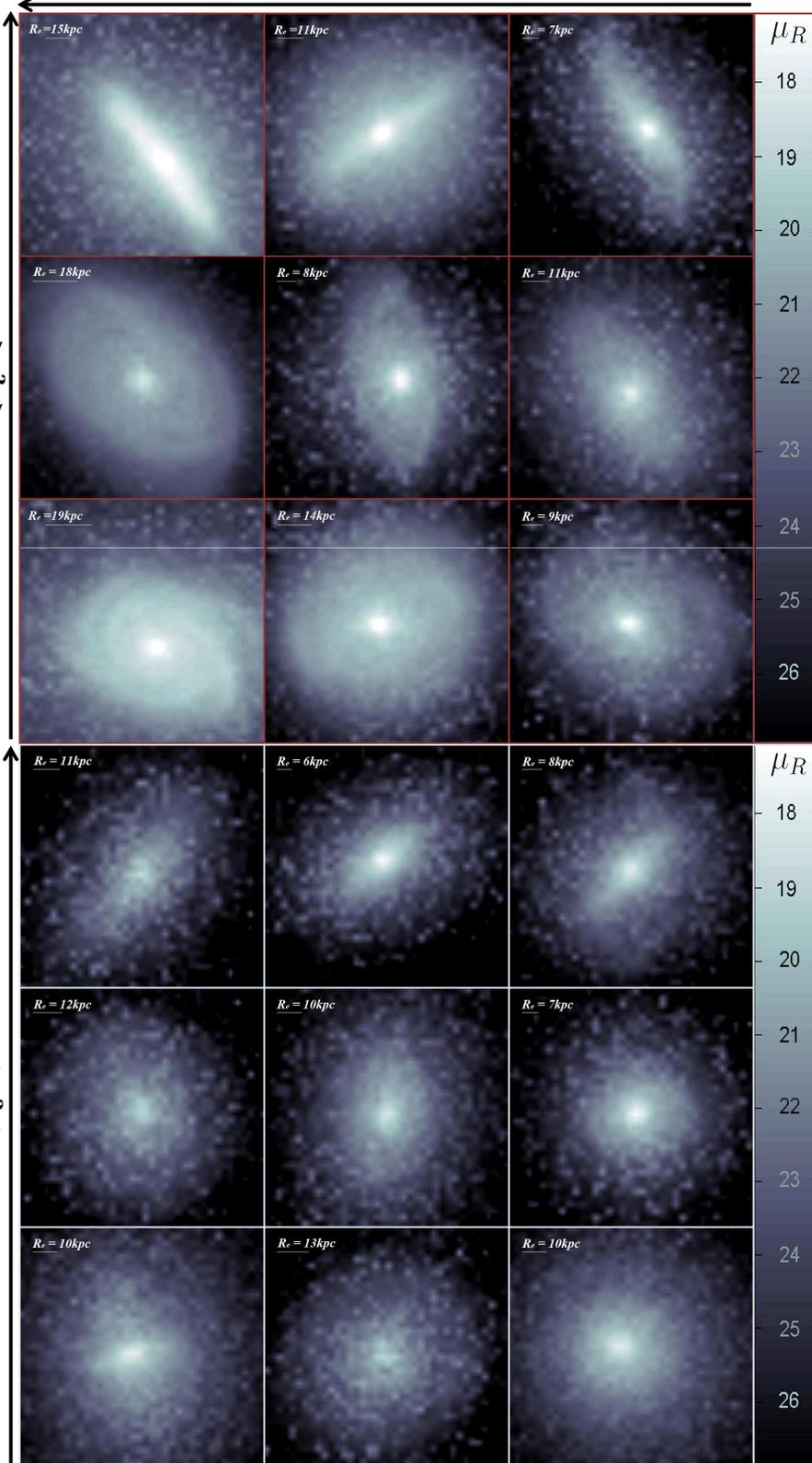
## Abstract



-We present a sample of the most massive galaxies ( $M^* > 10^{11} M_{\odot}$ ) found at  $z=0$  in a fully cosmological simulation performed with MASCLET (Mesh Adaptive Scheme for Cosmological structure evolution).  
-The upper (lower) panel shows the merger (quiet) galaxies depending on ellipticity ( $\epsilon$ ) and velocity vs velocity-dispersion ( $v/\sigma$ )  
-We use the ssp MILES models to make our galaxies bright and to study some observables of our fully cosmological synthetic galaxies.



$> v/\sigma >$

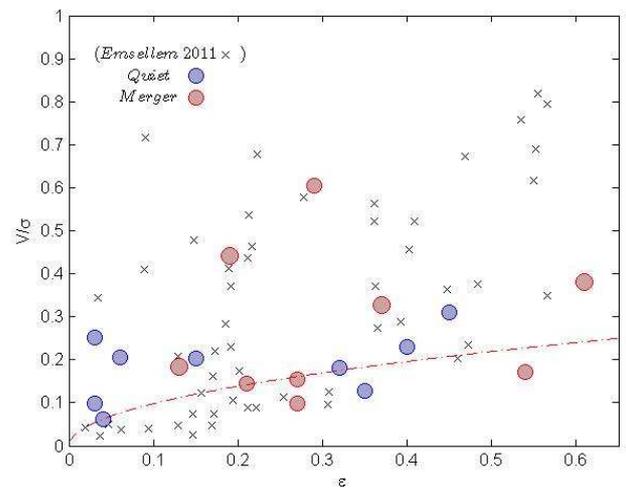


## Simulation

\* The simulation described in this poster was performed with the cosmological code **MASCLET** (Quilis 2004). The initial conditions were set up at  $z = 50$ , using a CDM transfer function, for a **cube of comoving side length 44Mpc**. The computational domain was discretised with  $128^3$  cubical cells, using a maximum of seven levels of refinement, which gives a peak **spatial physical resolution of 2.69kpc** at  $z = 0$ . The star formation is introduced in the MASCLET code following the ideas of Yepes et al. (1997) and Springel & Hernquist (2003).

## Images

- \* Each image is a 100x100 physical kpc square.
- \* To convert physical quantities in observables (put light in the SSP) we adopt the **MIUSCAT** stellar population synthesis models (Vazdekis et al. 2012; Ricciardelli et al. 2012)
- \* The **ellipticity ( $\epsilon$ )** is measured with the two-dimensional fitting code **GALFIT** (Peng et al. 2002)
- \* The **velocity vs velocity-dispersion ( $v/\sigma$ )** value is computed using each **1D galaxy velocity and sigma profile**.



## Figure

\* Our sample galaxy distribution (red and blue circles) in the anisotropy diagram comparing with the distribution of real galaxies (x) from Emsellem et al. 2011 with similar mass range.

## References:

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