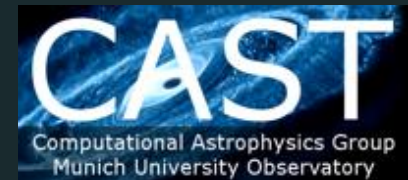


Merge and Strip - Investigating the Evolution of Galaxy Mergers in Cluster Environments

Anna Ivleva

Klaus Dolag, Rhea-Silvia Remus





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optical

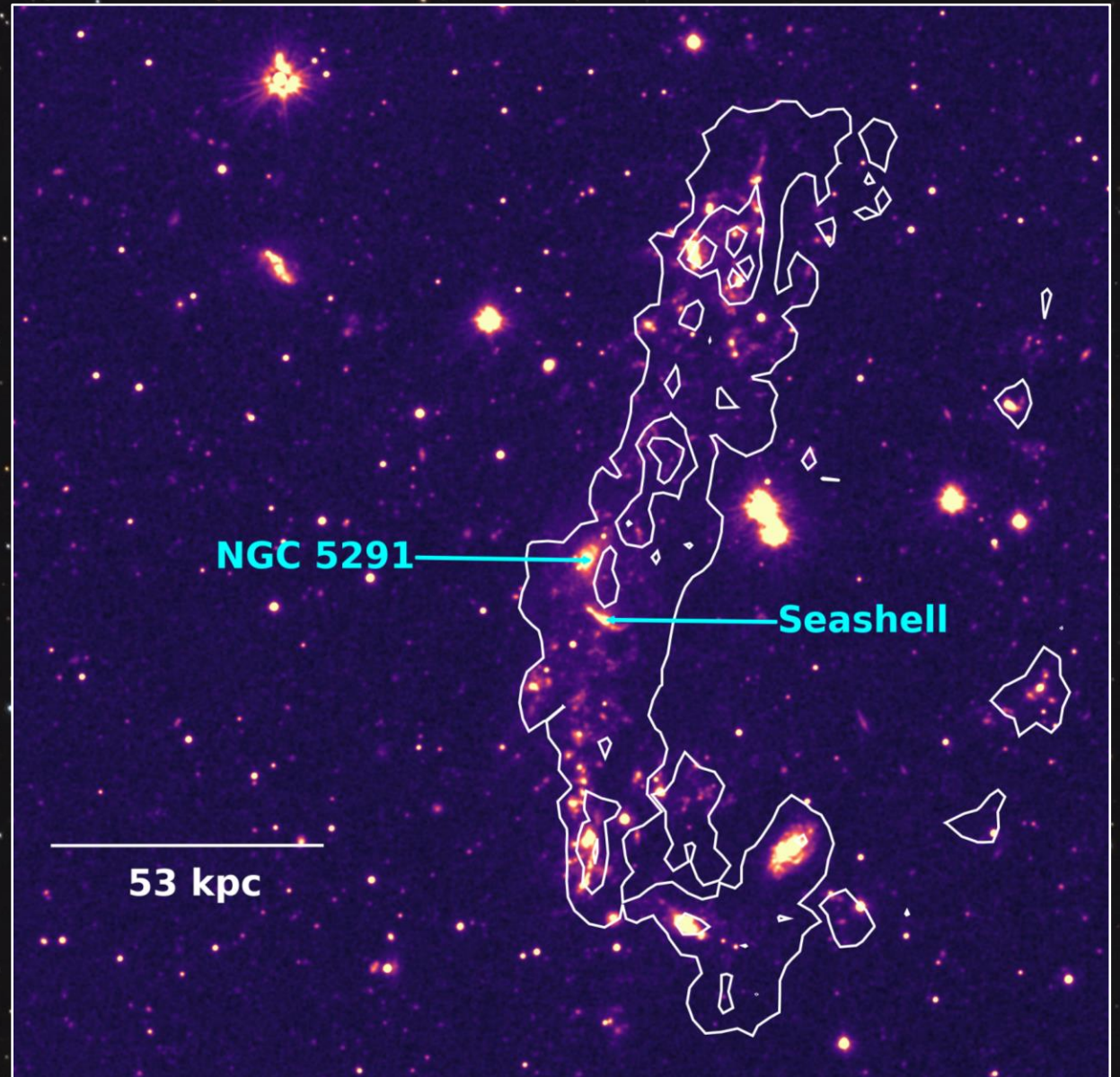
“ENHANCE”





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optical



53 kpc

NGC 5291

Seashell

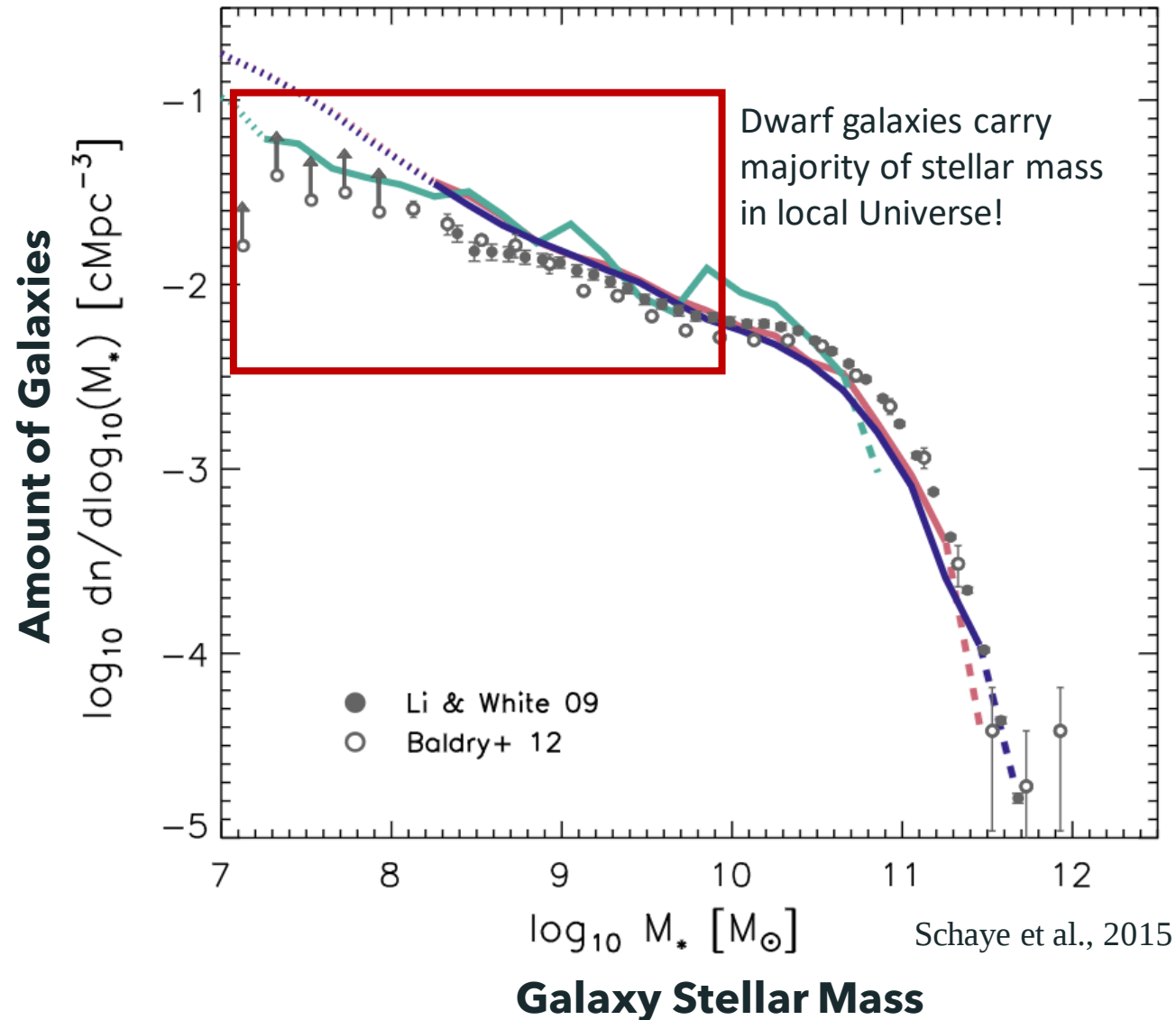
NUV + 21 cm contours

Rakhi et al. 2023

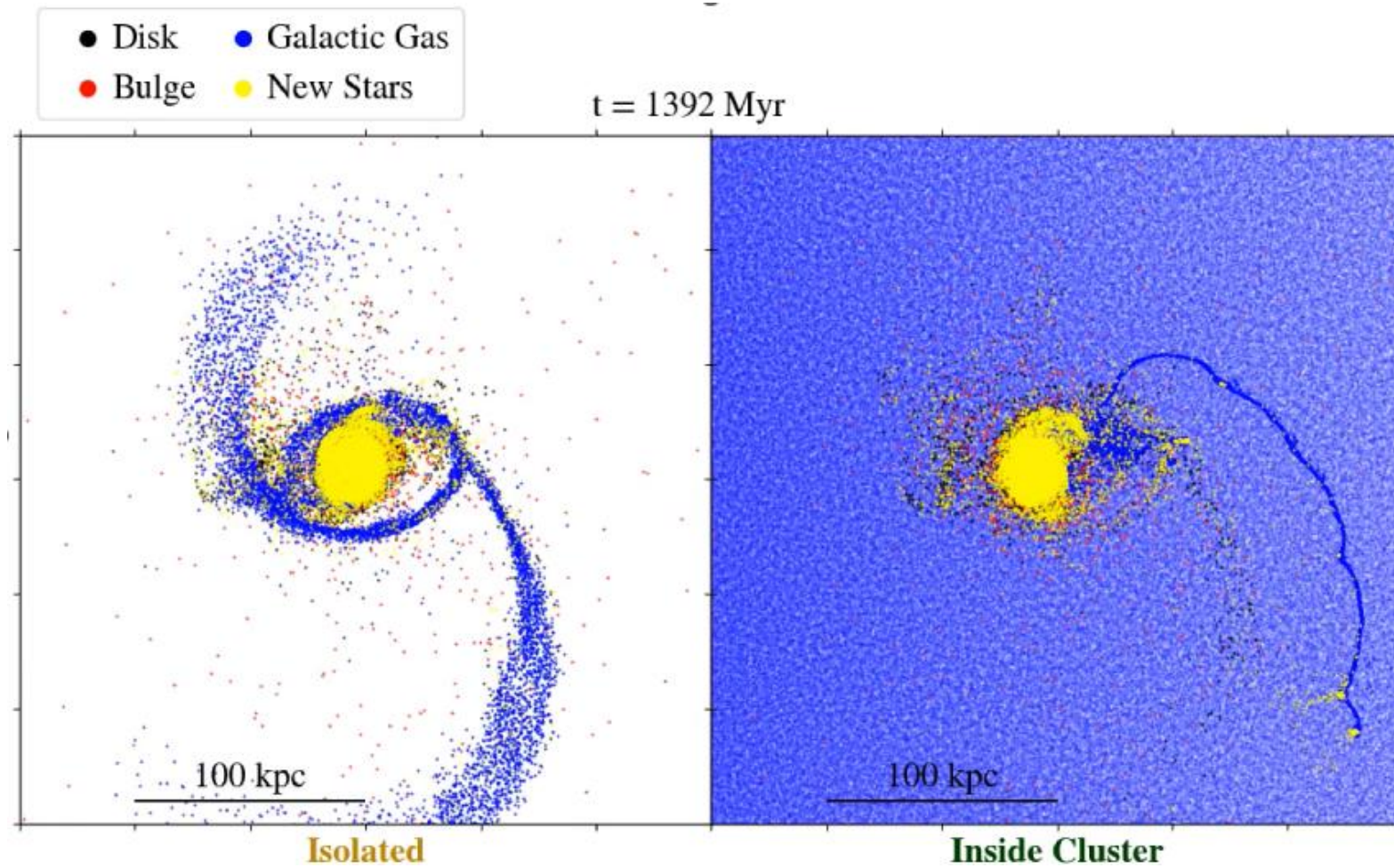
Cluster
Center

projected distance: ~500 kpc

Dwarf Galaxies: Out of Sight, But Not Off Mind



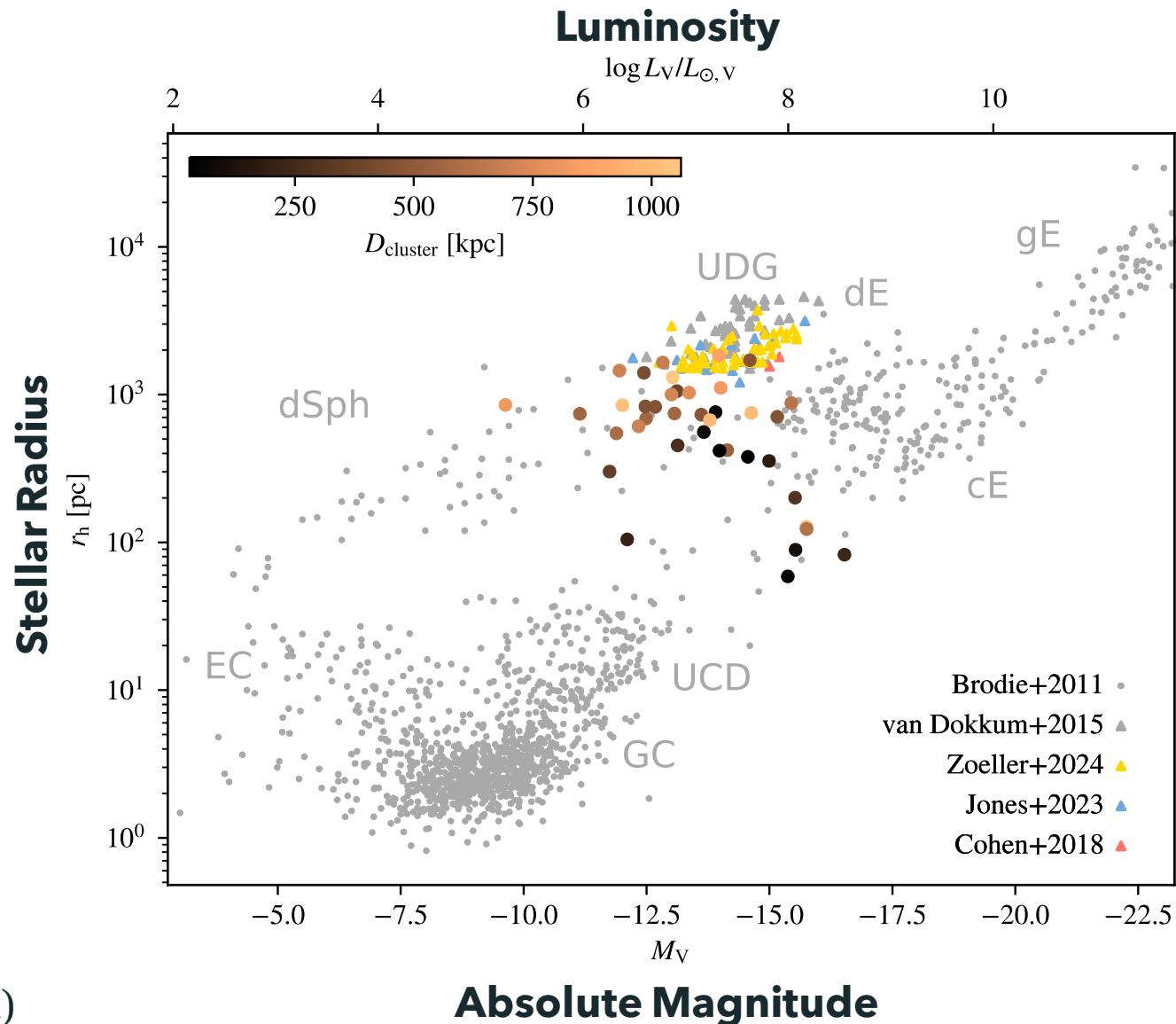
Environment is a game changer!



t=1761 Myr



The zoo of tidal dwarf galaxies



Simulated tidal dwarfs cover wide range of observed dwarf galaxies!

Take-Home Messages

- **Tidal dwarf galaxies** forming in the tails of mergers are **dark-matter deficient**
- **Environment** plays crucial role in tidal dwarf formation and evolution!
- Mergers in galaxy clusters produce huge **variety of dwarf galaxy types**
- **More dwarf galaxies** in clusters **with tidal origin** than **currently assumed** in the literature



Ivleva et al., 2024
arXiv:2402.09060