

STAR FORMING REGIONS IN THE TAILS OF JELLYFISH GALAXIES



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OUR SAMPLE

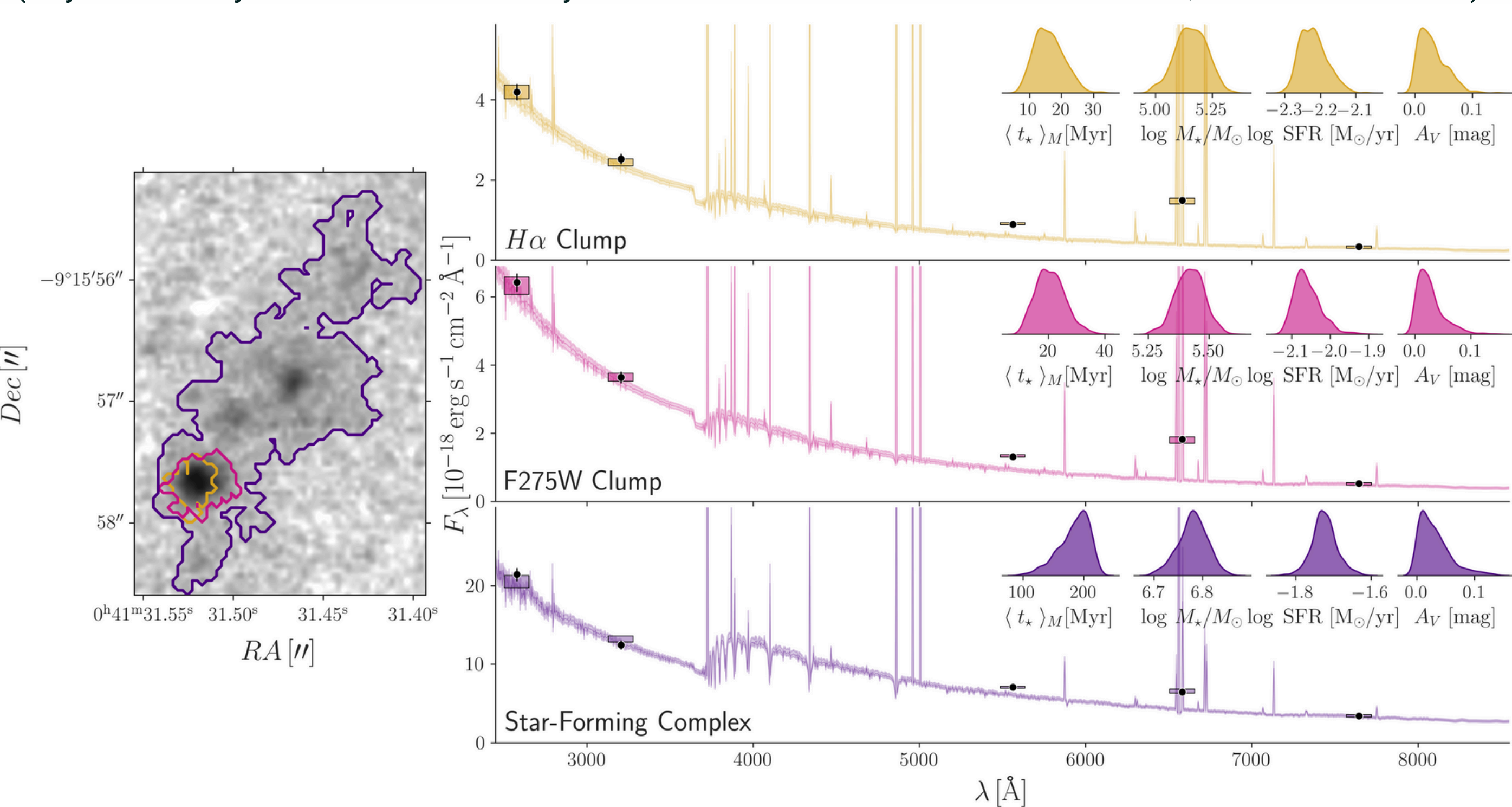
We observe **6 jellyfish galaxies** from the GASP (Gas Stripping Phenomena in Galaxies, Poggianti et al. 2017) sample using the Hubble Space Telescope (HST). We obtain images in 5 filters, from the near ultraviolet to the I-band: F275W, F360W, F606W, F680N (narrow-band H α) and F814W. See below our image of the galaxy **JO204**. (Credit: ESA/Hubble & NASA, M. Gullieuszik and the GASP team).

We study star-forming **clumps detected in H α and F275W** images. These clumps are embedded in larger structures (**star-forming complexes**) **detected in F606W**.

- 347 H α clumps
- 851 F275W clumps
- 296 Star-forming complexes

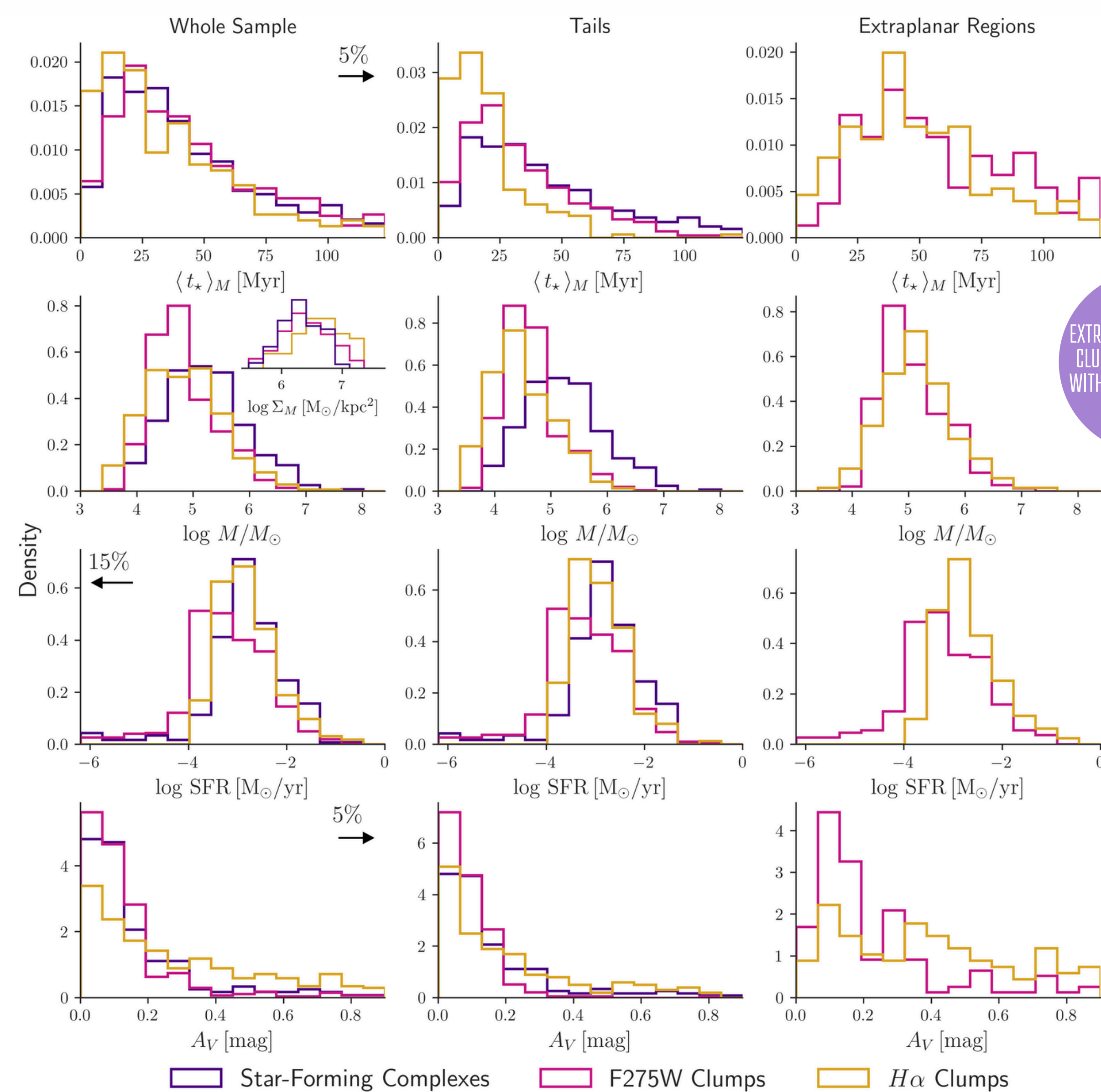
WHAT WE DO

We model the photometry of star-forming regions in the tails of jellyfish galaxies using **BAGPIPES** (Bayesian Analysis of Galaxies for Physical Inference and Parameter ESTimation, Carnall et al. 2018).



WHAT WE MEASURE

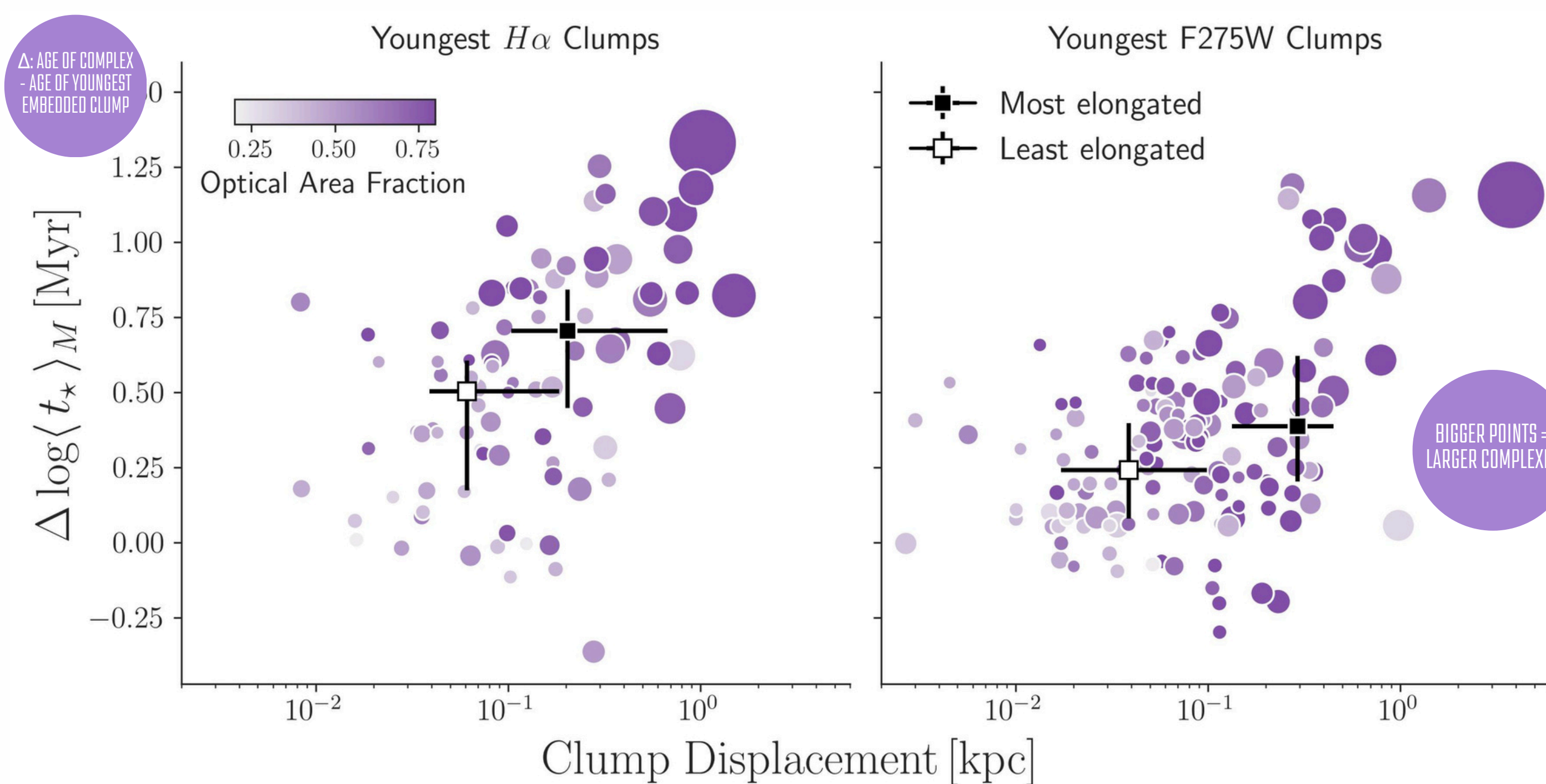
By modeling star-formation histories and dust attenuation, we obtain parameters such as **mass-weighted ages, stellar masses, star-formation rates** (in a 10 Myr timescale) and **dust extinction**.



EXTRAPLANAR: STRIPPED CLUMPS THAT OVERLAP WITH THE GALACTIC DISK

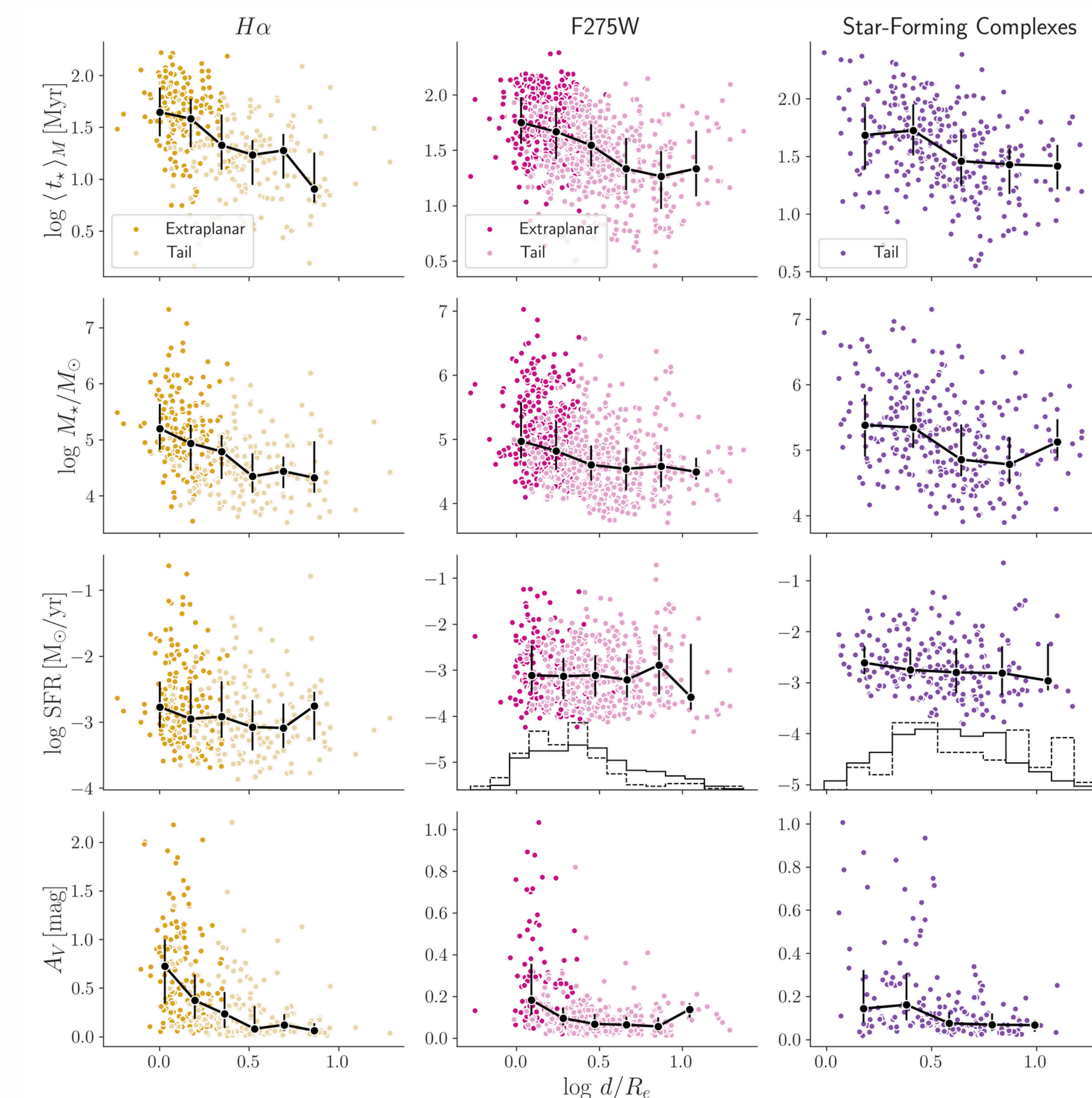
FIREBALLS

The **younger the clumps** (compared to their host complex), the **more displaced** they are from the center of the complex, reflecting the **fireball-like morphology** of these objects.



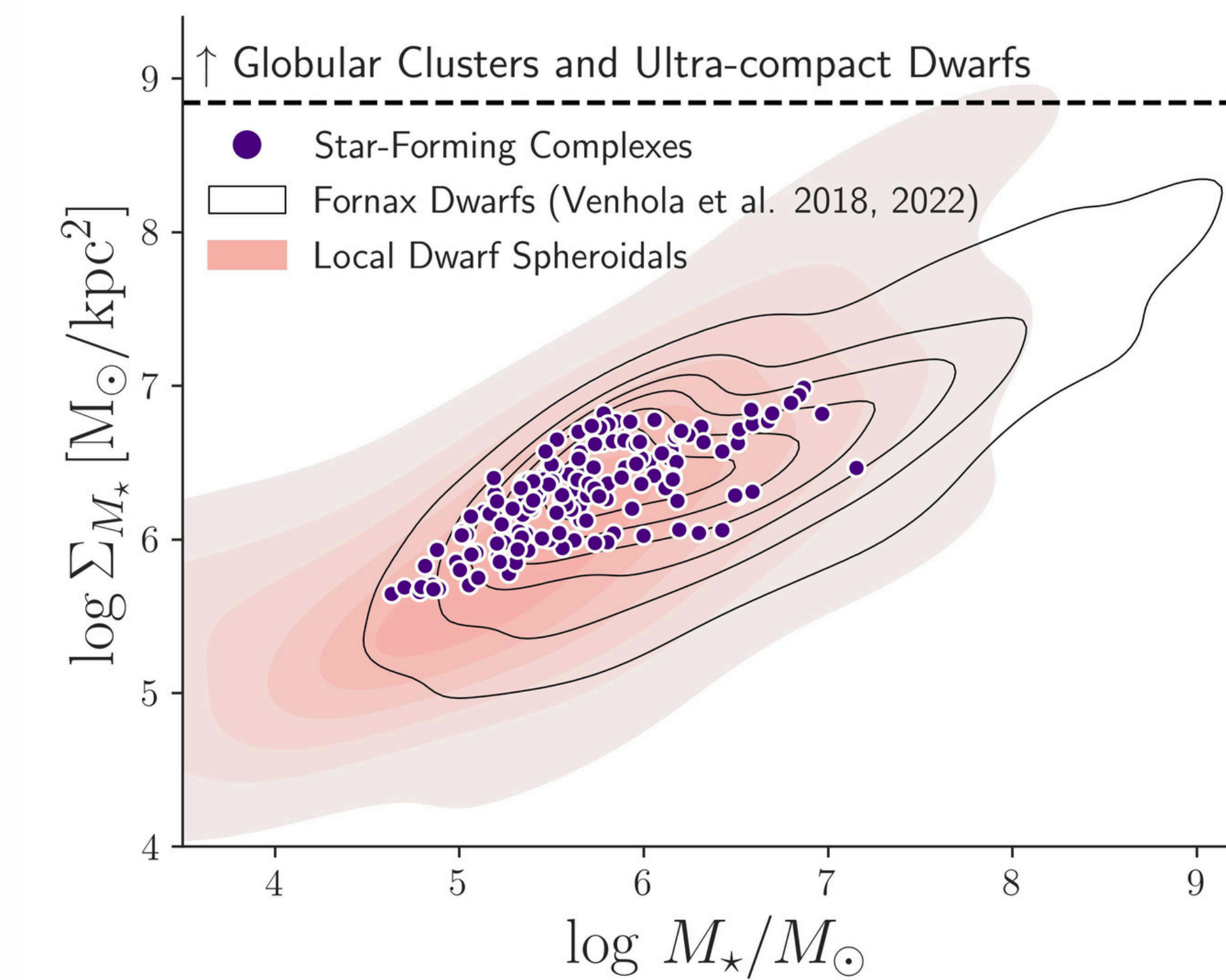
TRENDS WITH GALACTOCENTRIC DISTANCE

As we move **away from galaxy disks**, we tend to find clumps and complexes that are increasingly **younger, less massive and less dust obscured**.



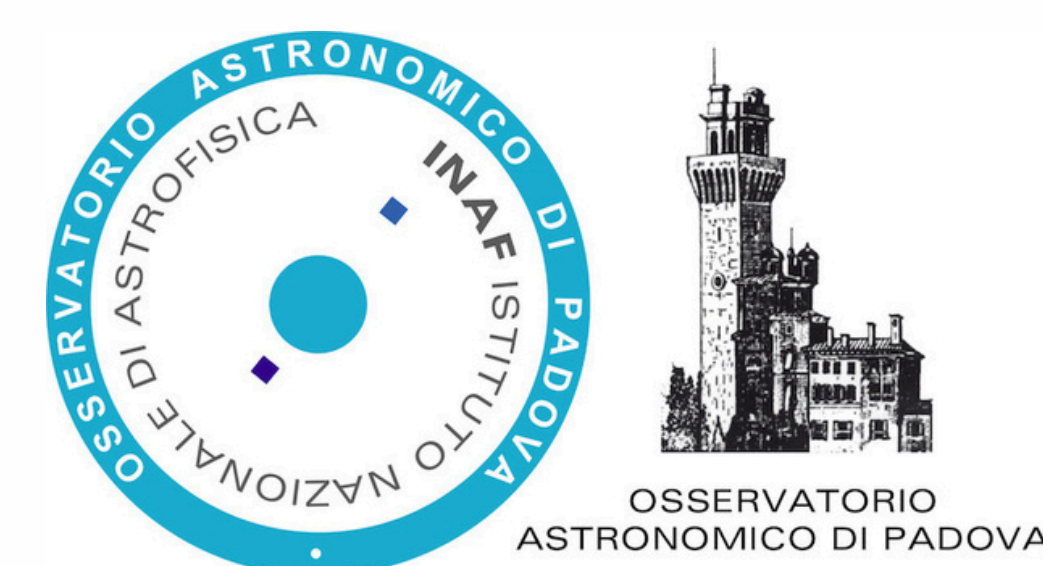
A PATH TO DWARF GALAXIES?

The stellar masses of star-forming complexes are similar to the that of globular clusters and dwarf galaxies. And their stellar mass surface densities are also comparable to the ones of dwarf galaxies.



... AND THERE IS MORE!

Check Gullieuszik et al. (2023) and Giunchi et al. (2023) for other results and stay tuned for more publications.



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