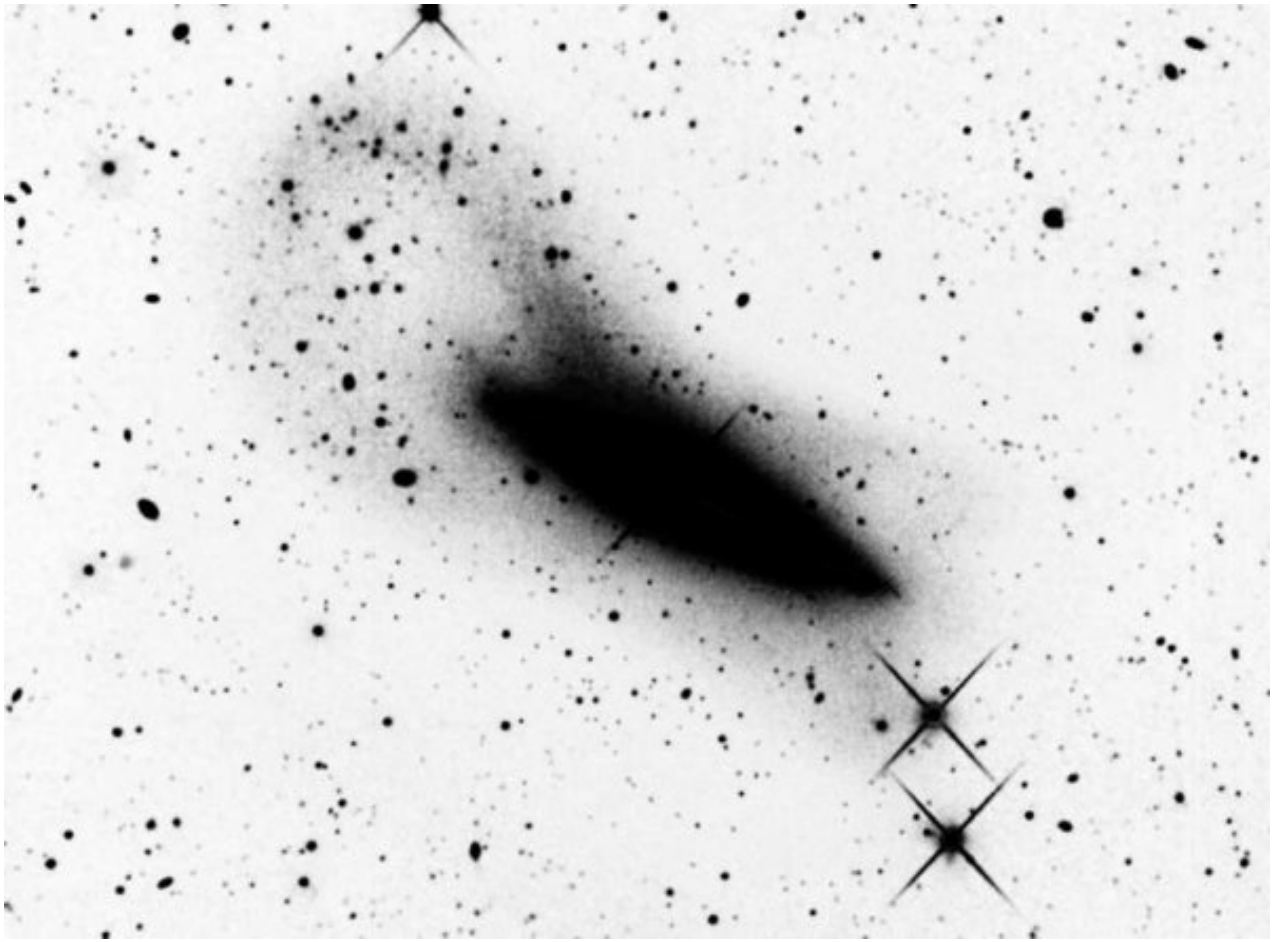
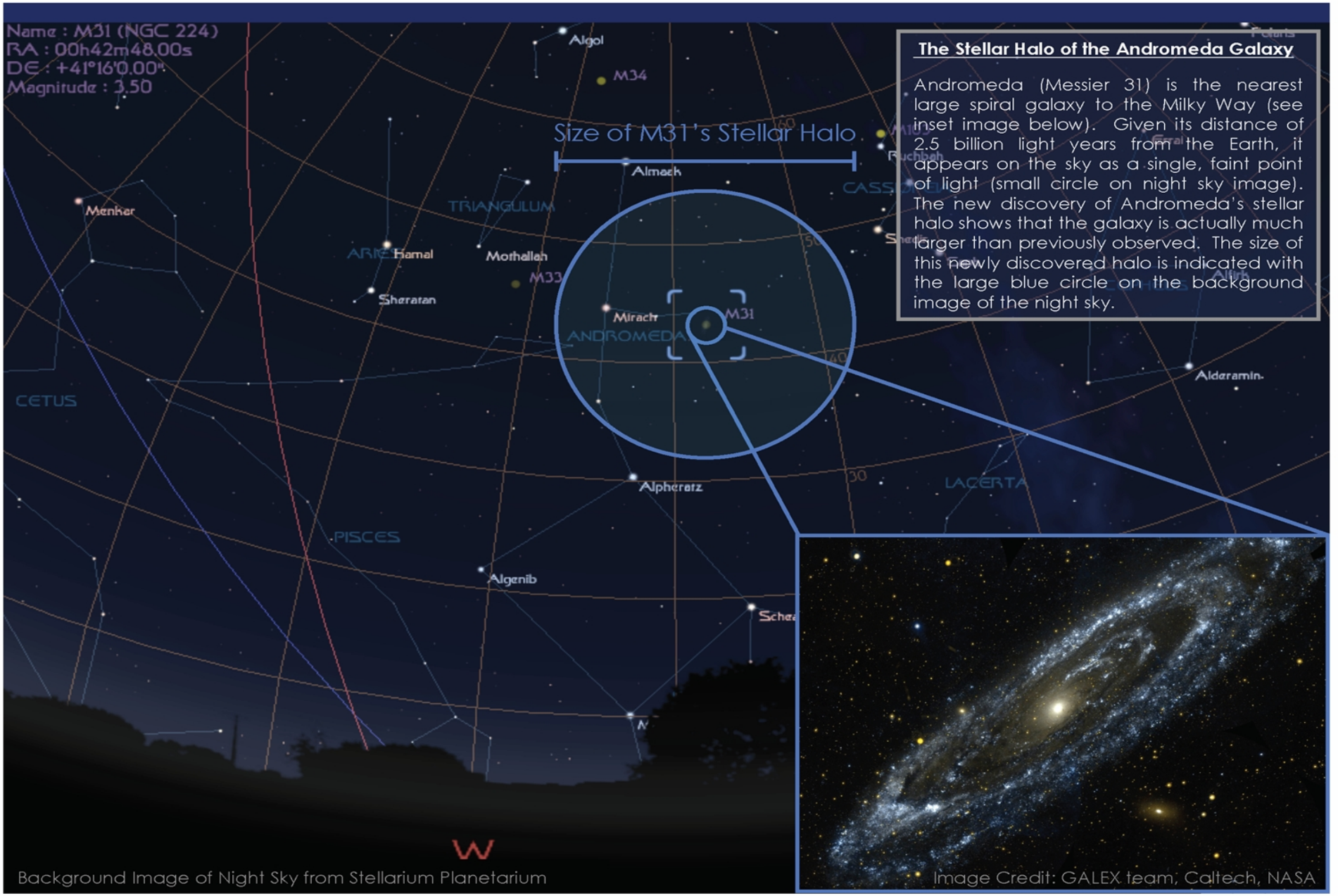
Stellar Haloes

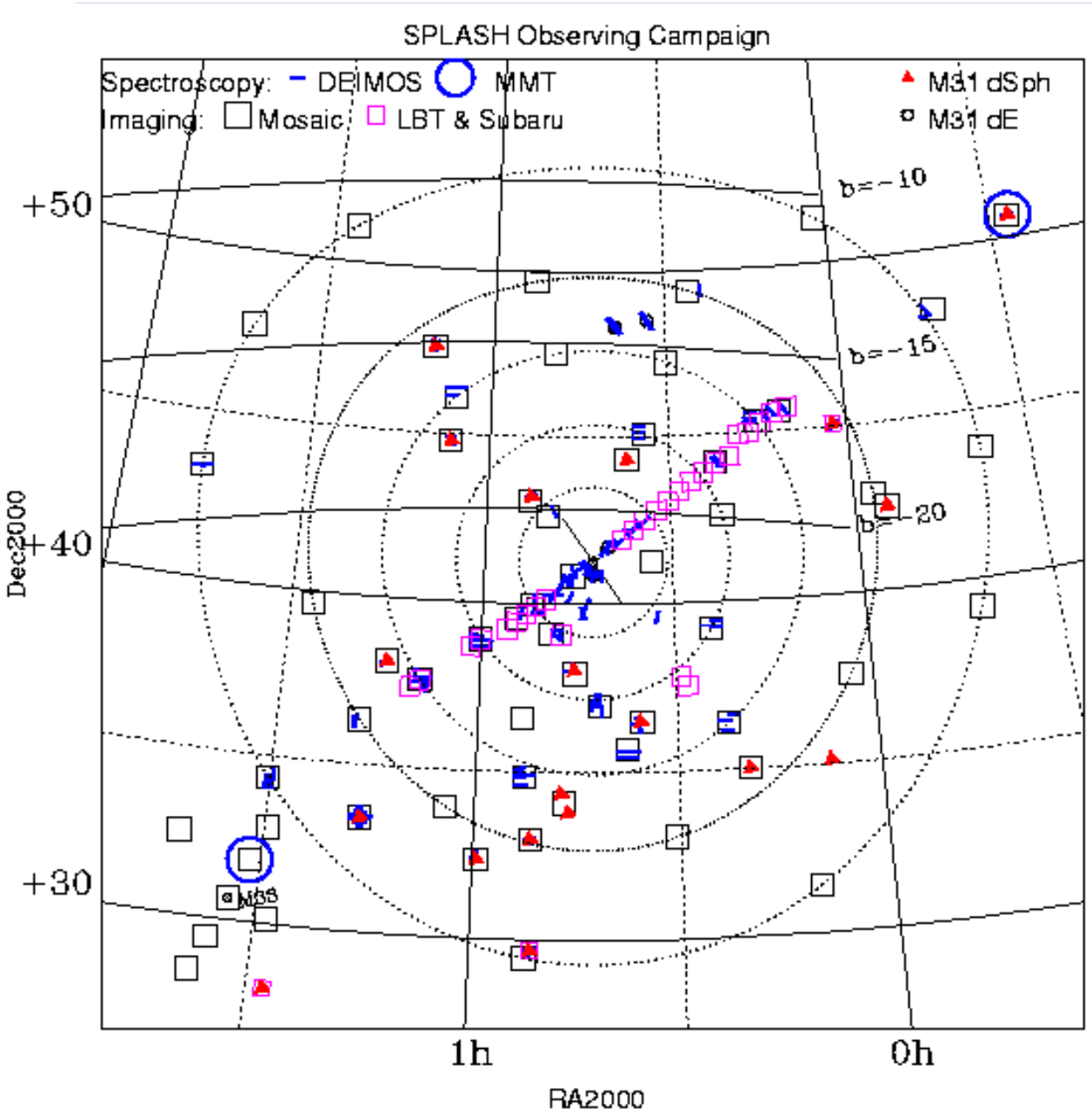


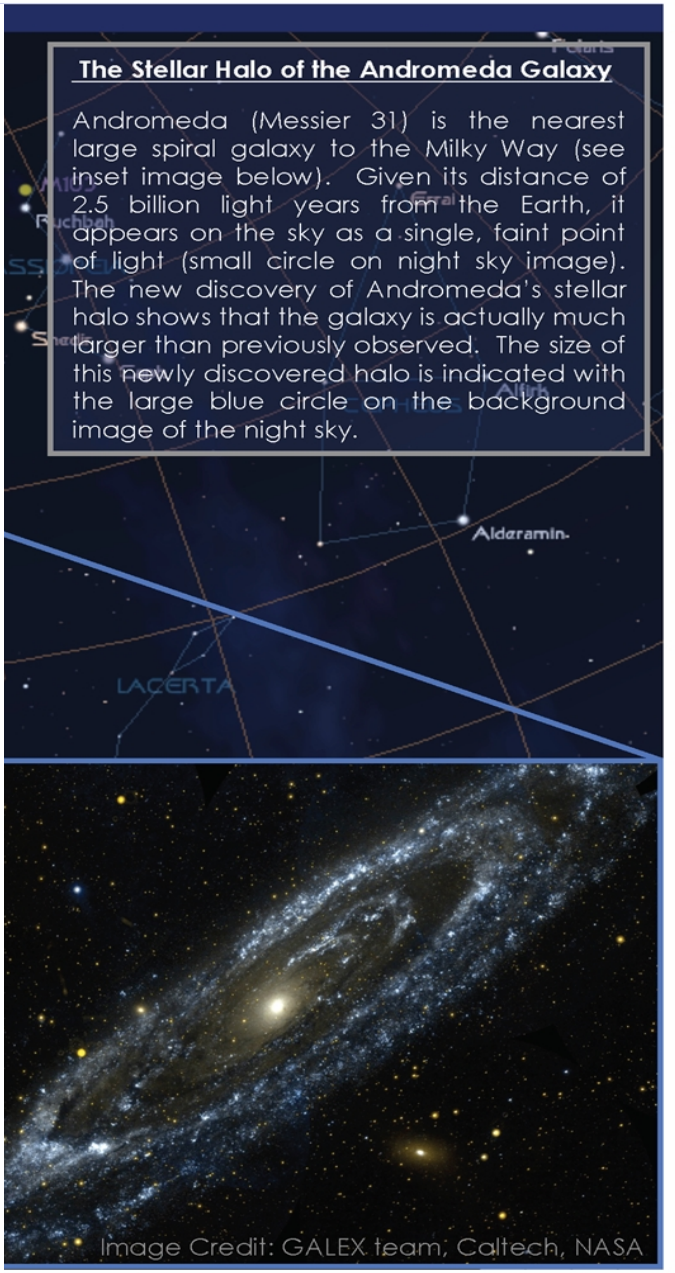
Rachael Beaton (University of Virginia) and the SPLASH team
notably work by Majewsiki, Guhathakurta, Kalirai, Bullock,
Geha, K. Gilbert, Evan Kirby, Tollerud, Wolf
all across the US …

M31 Stellar Halo

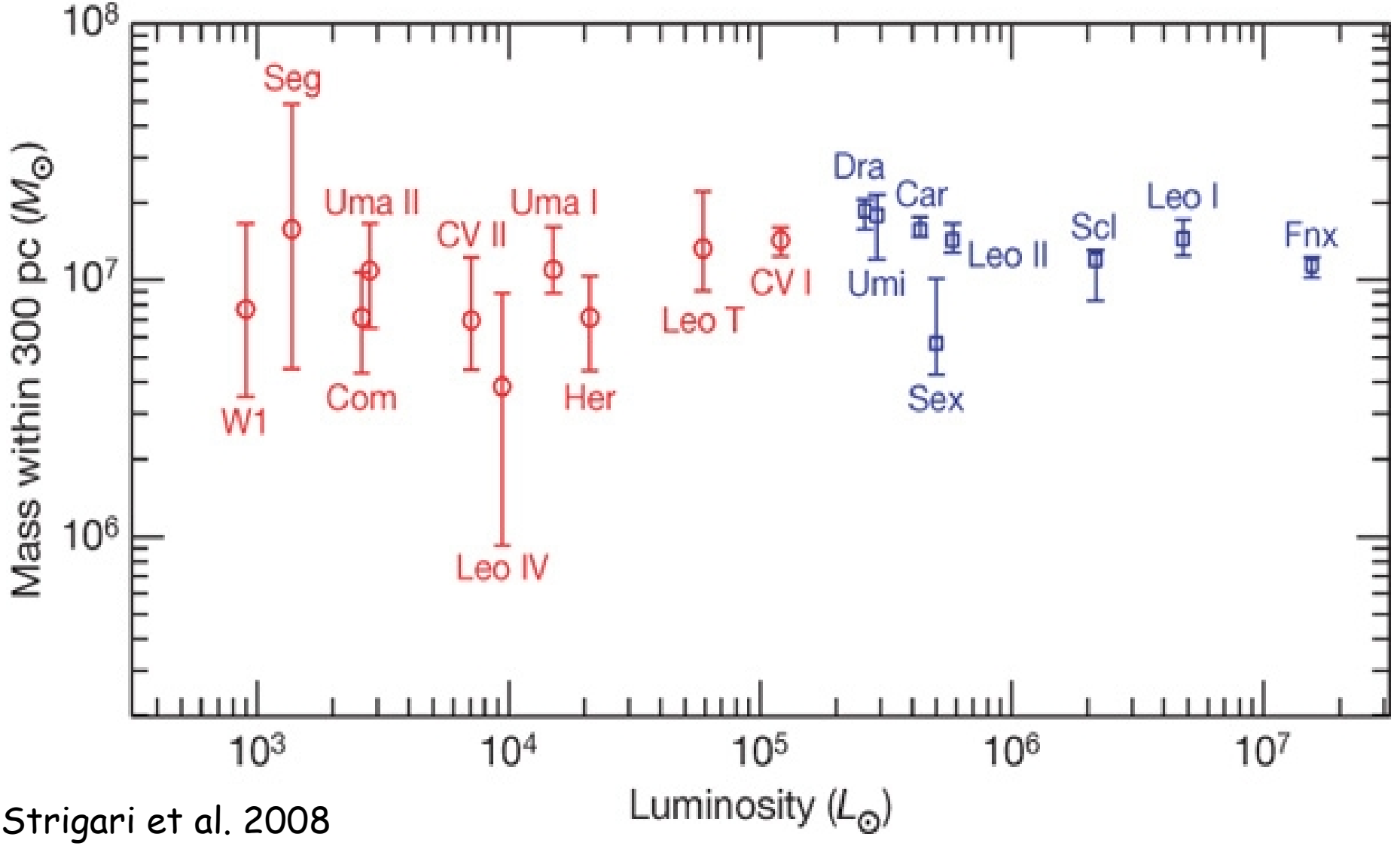


M31 Stellar Halo



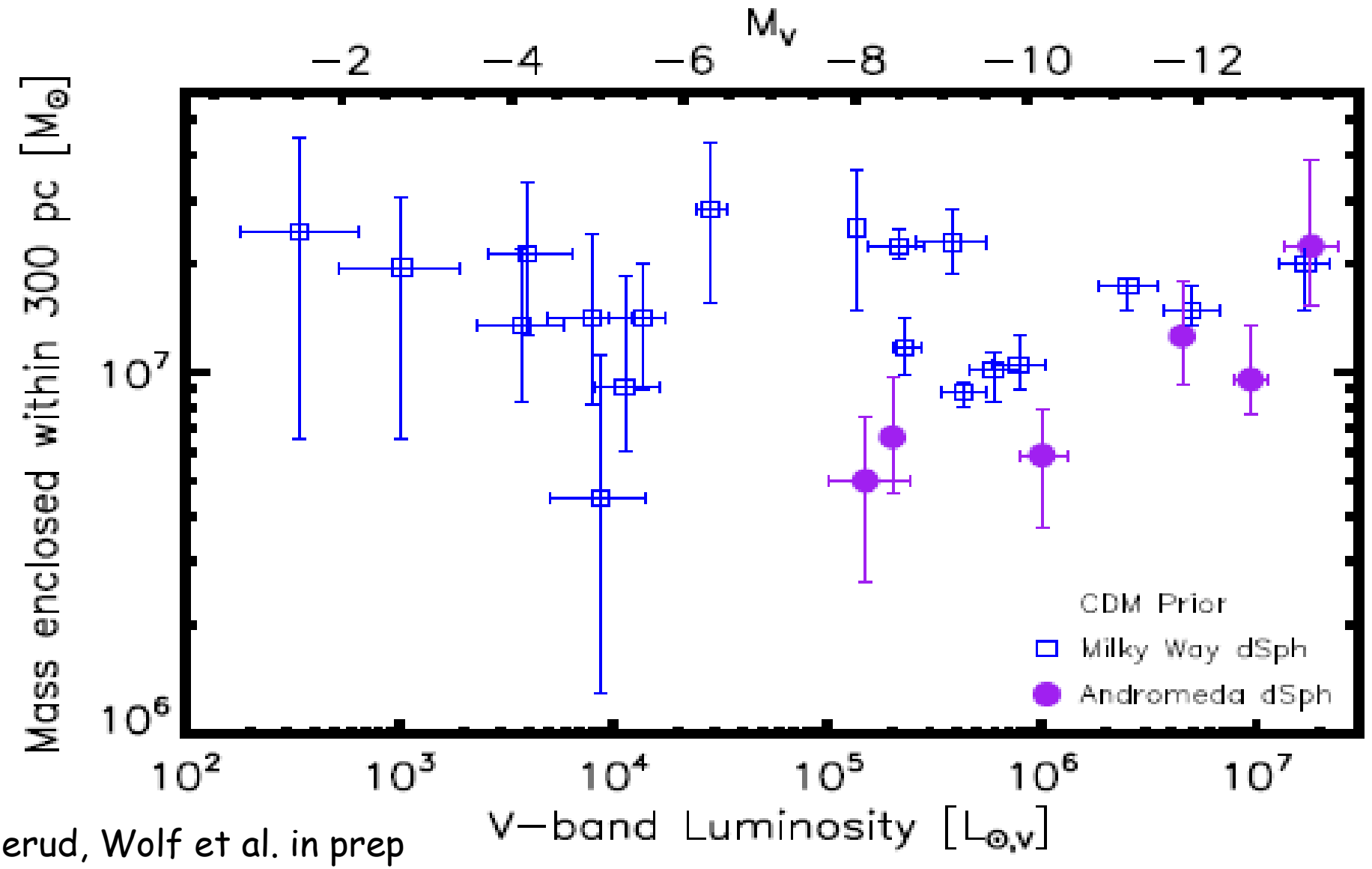


This is interesting for Star Formation Because …



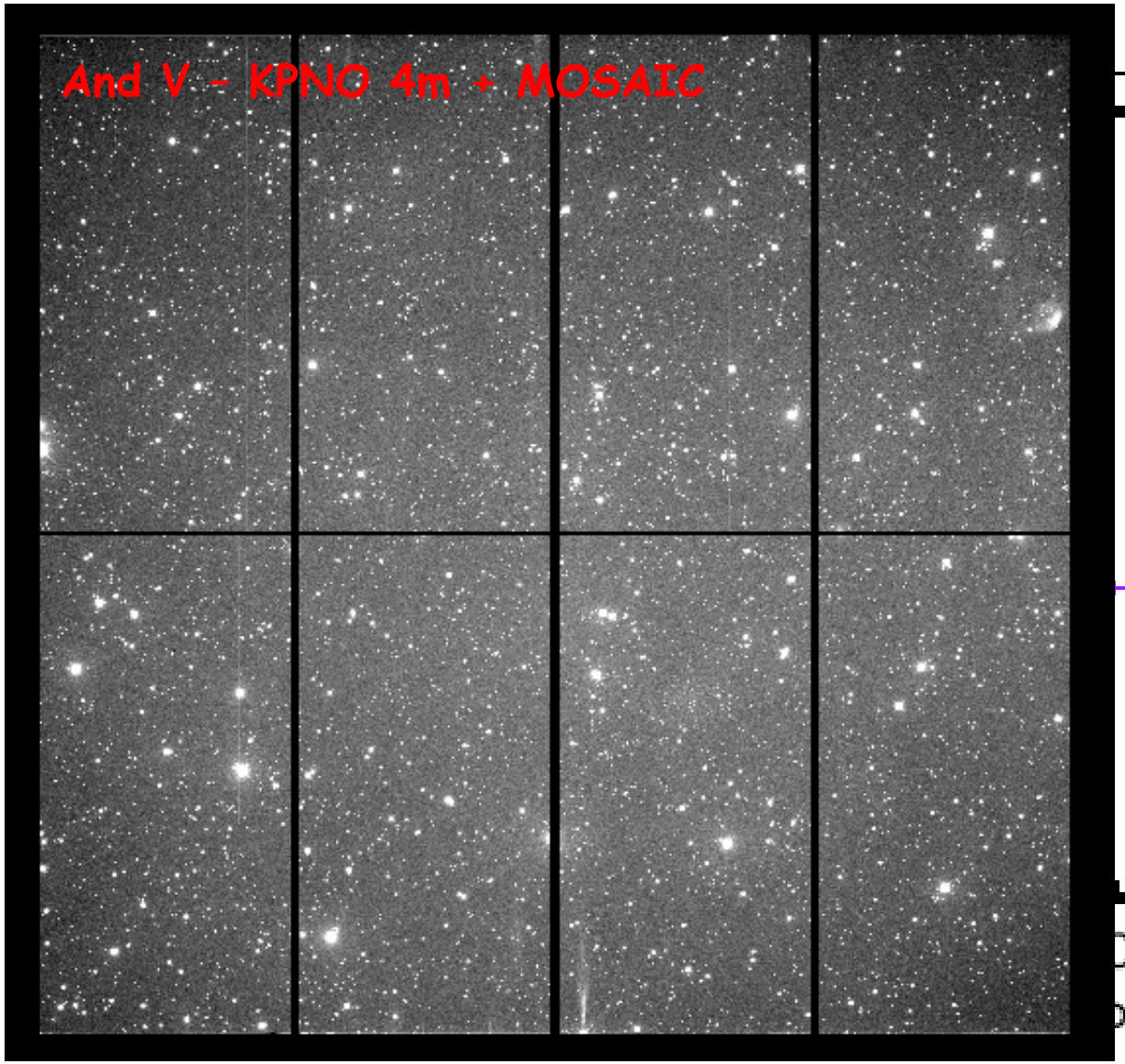
Strigari et al. 2008

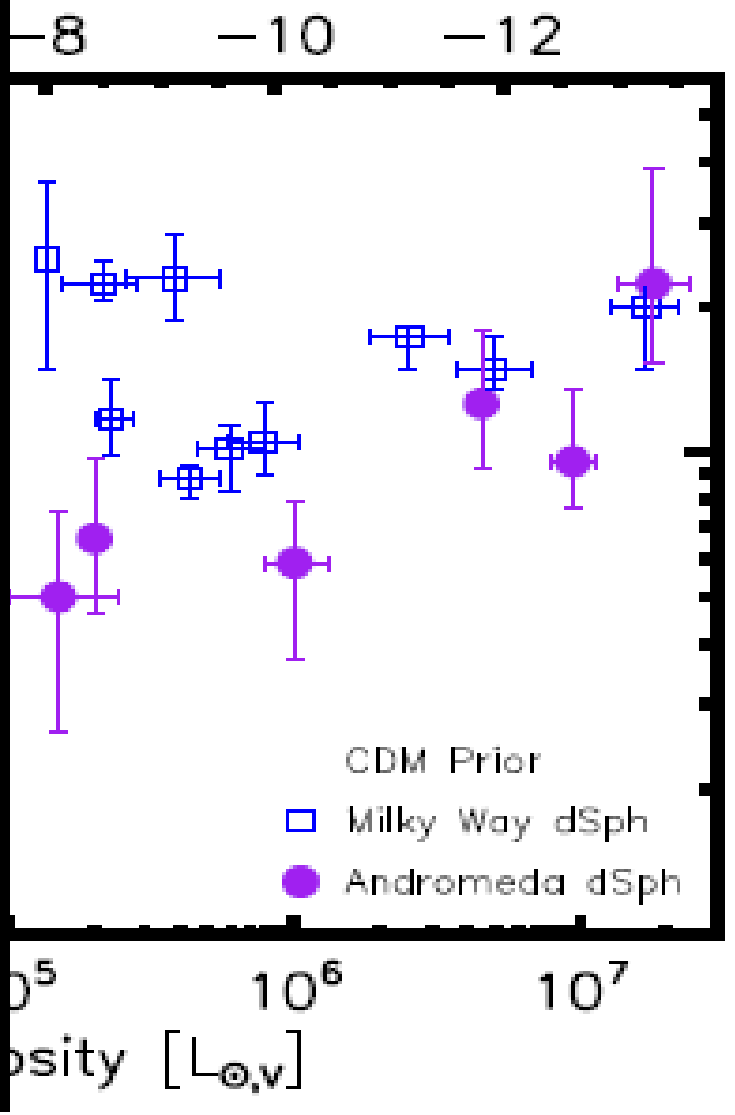
This is interesting for Star Formation Because …



Tollerud, Wolf et al. in prep

This is interesting for Star Formation Because …





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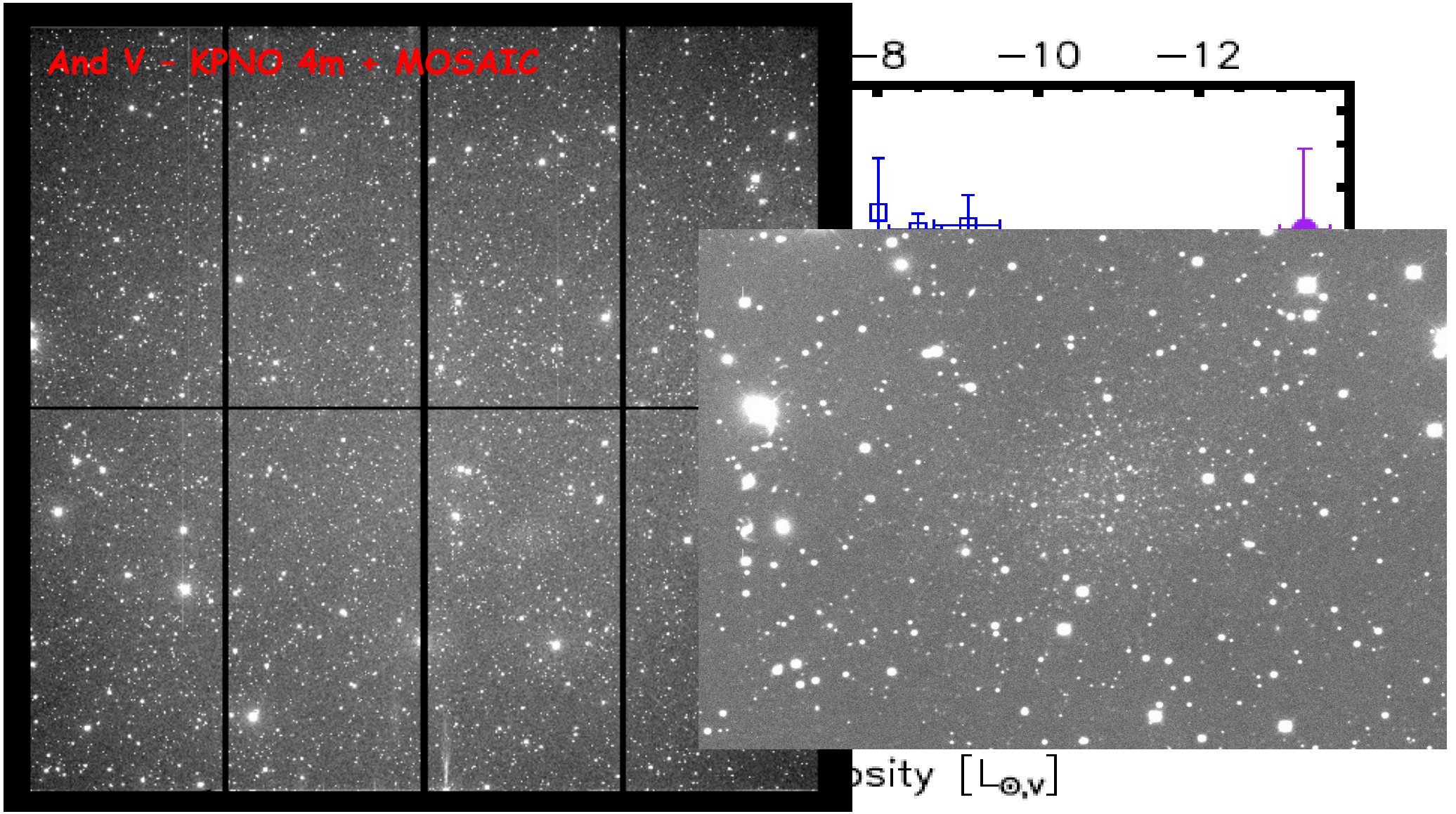
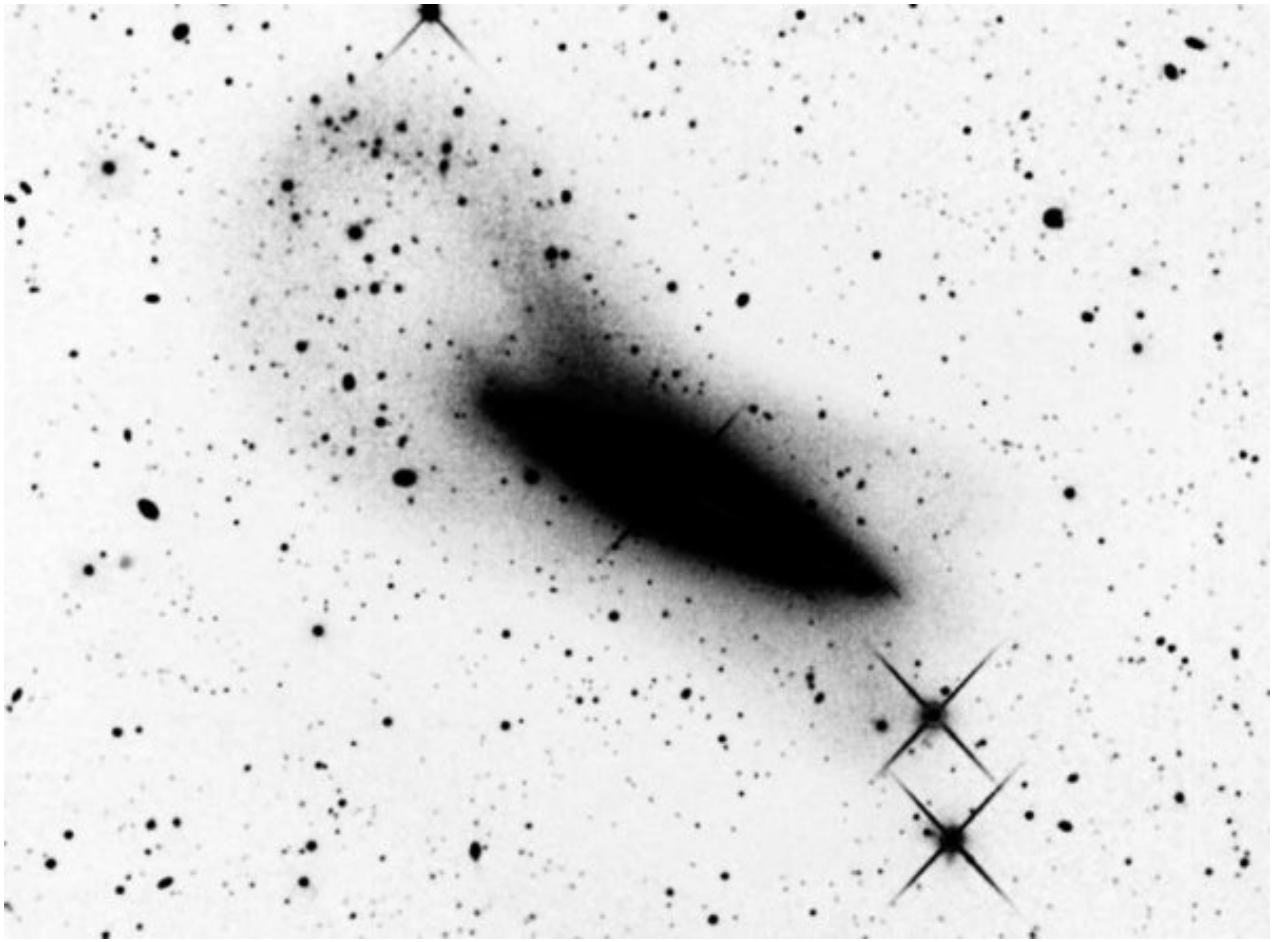


Stellar Haloes

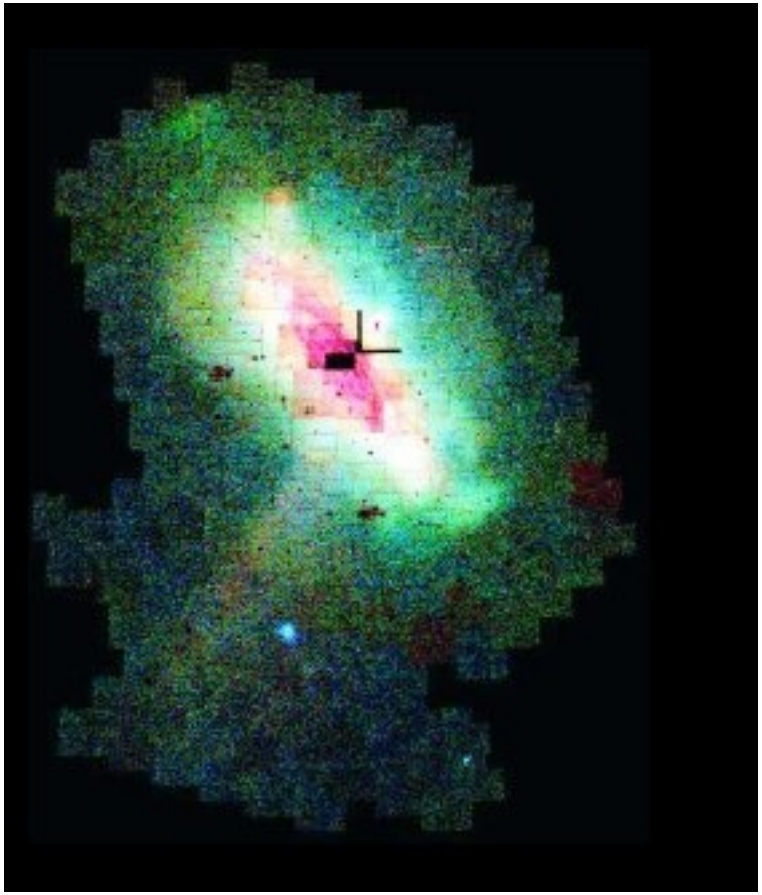


Star formation histories of the stellar halo are the sum of its parts – all of the 100's to 1000's of mergers during its formation.

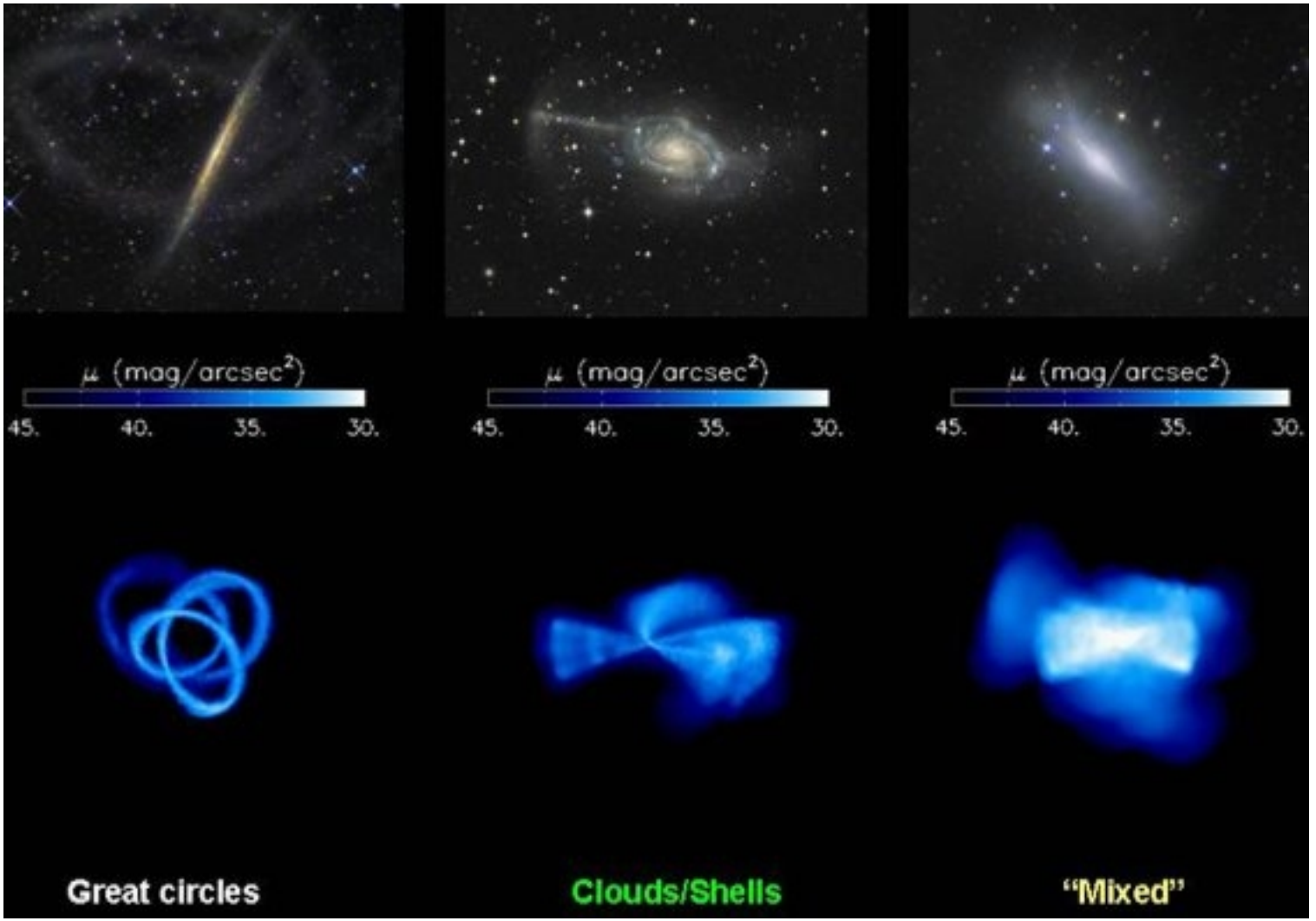
Resolved Stellar Pops are Tough

Must decouple components of the galaxy in both photometric, kinematic and chemical spaces.

In the past 10 years we have learned about M31:
- It has a long and short stellar bar
- It has a small classical bulge
- The "halo" is really a large spheroid
- There is a large metal poor stellar halo
- the GSS
- ~20 previously unknown dSphs (not yet to the level of finding ultra-faints, but we're getting there!)
- And then all the crazy awesome things that show up in Spitzer/Galex/WISE et al. That need to be connected to the resolved stellar pop (ala Knut Olsen poster & see Gordon et al 2006, Athanassoula & Beaton 2006)



Stellar Haloes



Models by K. Johnston; Observations s by J. Gabany;

K. Johnston, A. Font Simulations

The merger history of a galaxy defines the characteristics of the stellar populations in the stellar halo – the perceived star formation history, chemical enrichment patterns and spatial distribution.

These models are influenced by extremely detailed photometric, kinematic and dynamical studies over large areas on Milky Way dSphs.