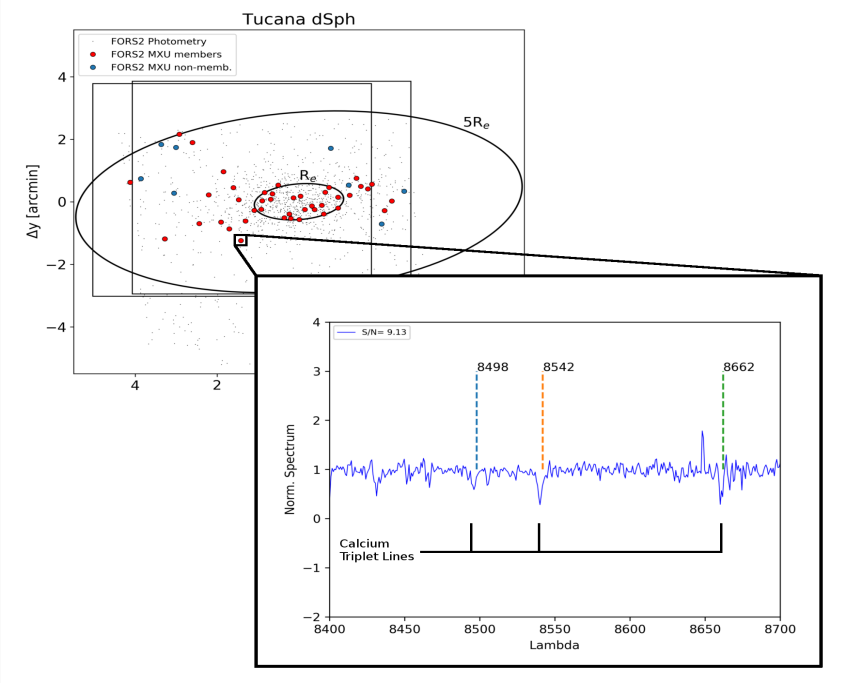
Stellar chemo-kinematics of Local Group isolated dwarf galaxies

Salvatore Taibi - Instituto de Astrofisica de Canarias; Universidad de La Laguna



Measurements:

$\delta(V_{hel}) \sim \pm 5 - 10$ km/s

$\delta([\mathrm{Fe/H}]) \sim \pm 0.1 - 0.2$ dex

$\mathrm{S/N}_{tot} \sim 15 - 35$ pxl^{-1}

Dwarf galaxies:

Cetus and **Tucana** dSphs

Aquarius and **Phoenix** dTrs

Datasets:

Sizable VLT/FORS2 MXU spectroscopy of individual RGB stars around the CaT region over a large spatial area

Advantage:

to be **isolated** $\rightarrow$ minimal environmental interactions

A window onto the intrinsic evolutionary processes of dwarf galaxies

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Results

Kinematic analysis

Cetus and Tucana dSphs: Mainly dispersion-supported

No evidences of internal rotation

σ_v different from literature but in line with similar luminous dwarfs

Taibi et al. (2018); Taibi et al. (in prep.)

Phoenix and Aquarius dTrs: Peculiar internal motions

Phx: Prolate stellar rotation

$\rightarrow$ accretion of a smaller system ?

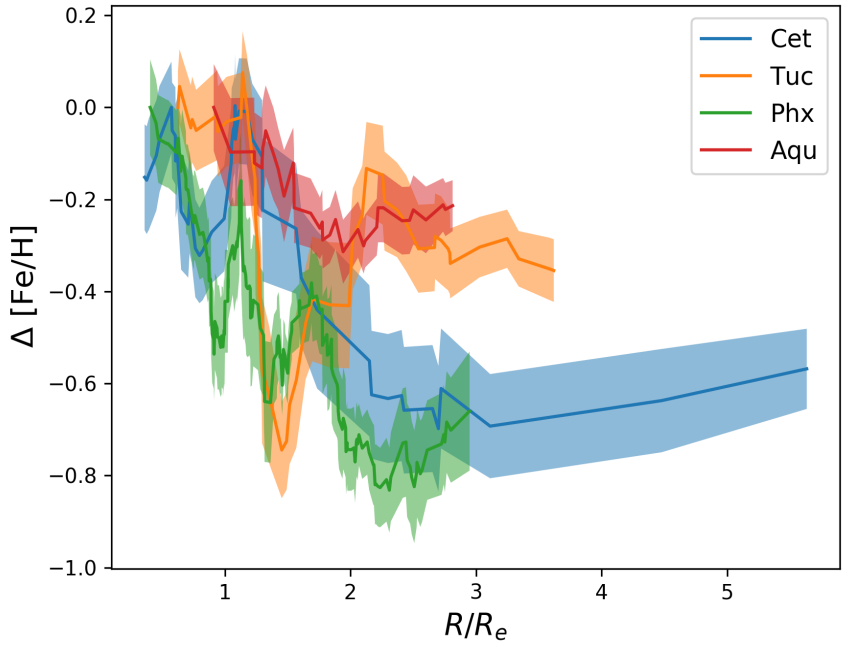
Kacharov et al. (2017)

Aqu: Counter-rotating wrt HI

$\rightarrow$ recently accreted gas ?

Hermosa-Muñoz et al. (sub.)

Chemical analysis



Presence of radial metallicity gradient in our isolated dwarfs

Akin to MW satellites $\Rightarrow$ internal effects rather than the environment played an important role in shaping their chemical properties