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# HI GAS IN A STRIKING JELLYFISH GALAXY

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- Ram pressure stripping (RPS): an effect of cosmic environment on galaxy evolution

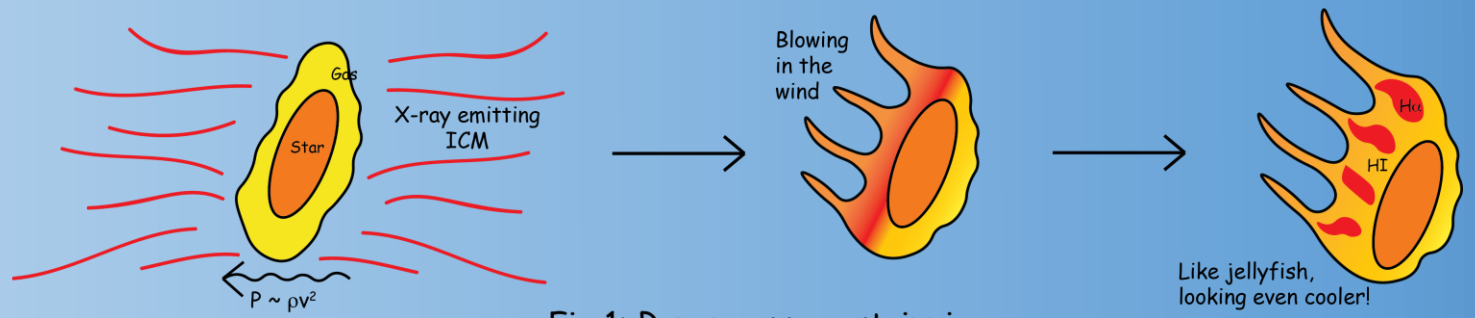



Fig 1: Ram pressure stripping

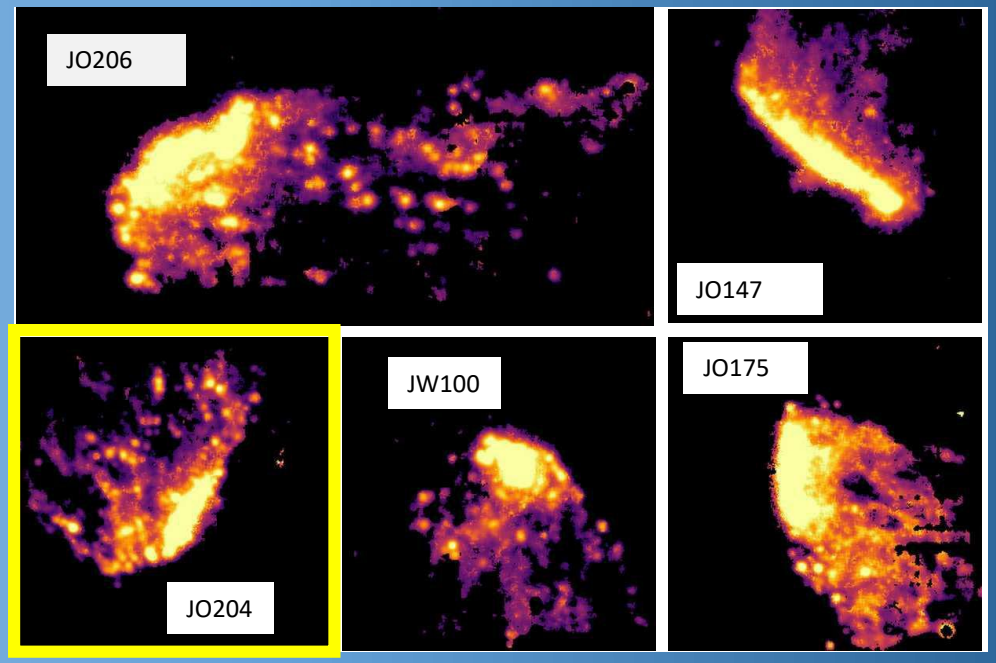
- GASP (GAs Stripping Phenomena in galaxies):

  - 100 galaxies observed with MUSE

  - Range of morphologies and environments

  - HI observed in 5 Jellyfishes with VLA-C

MUSE Hα images:
Poggianti+ 2017

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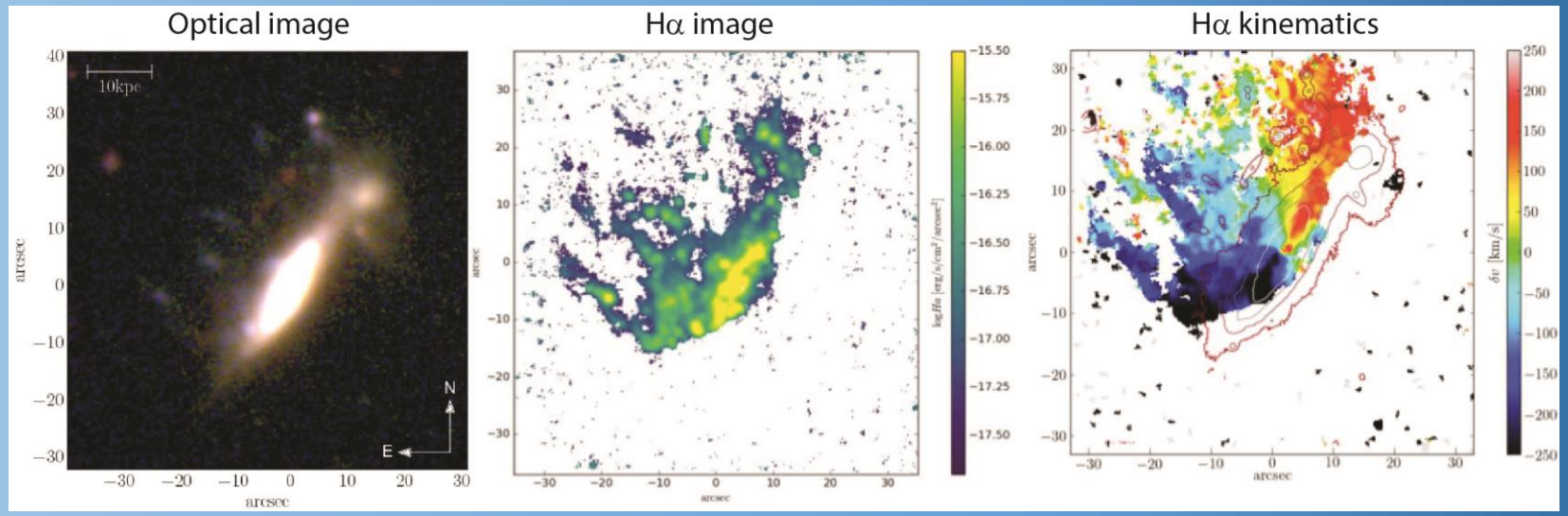
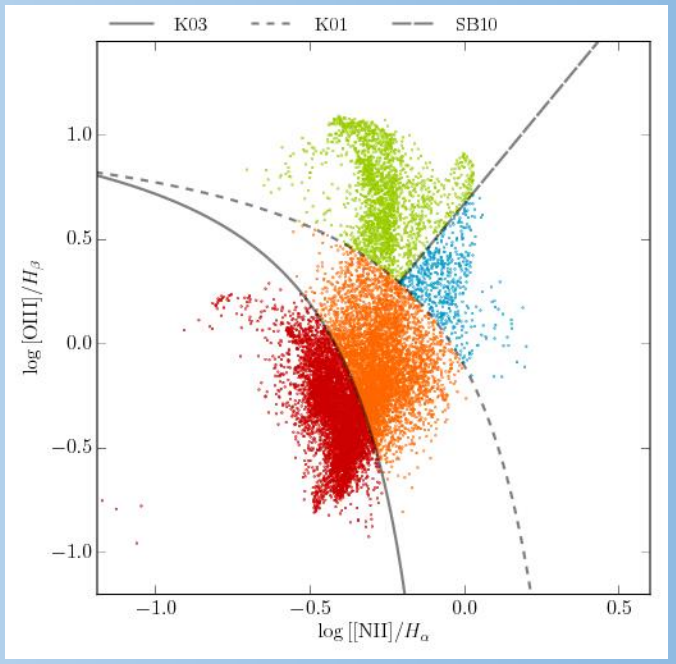
# MUSE

- Field of view 1’ X 1’
- Spectral range 4800-9300Å
- Spectral resolution 108 km/s




log[OIII]/$H_\beta$ ⟶

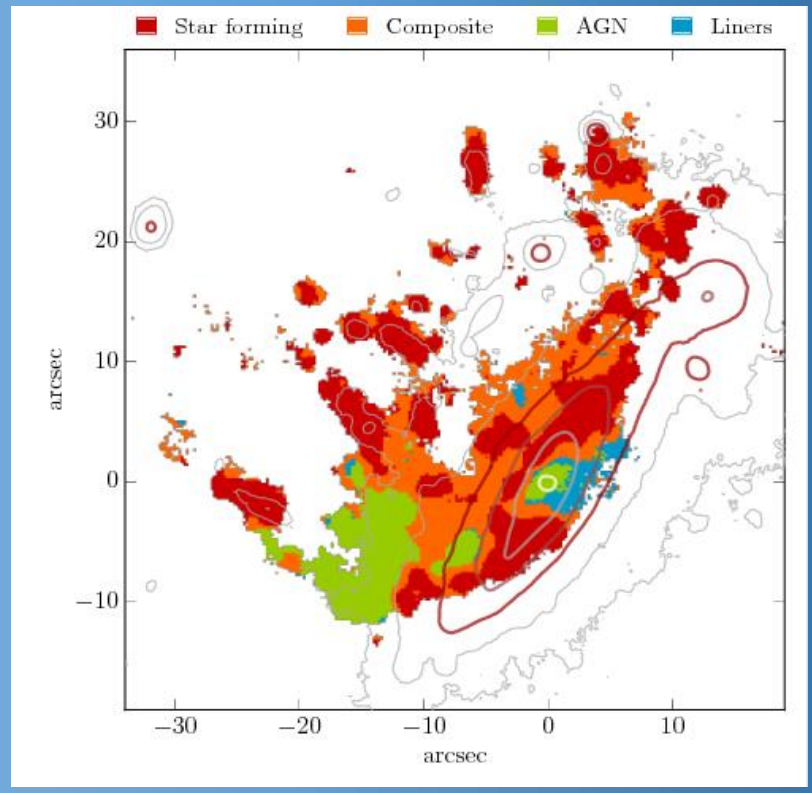
log[NII]/$H_\alpha$ ⟶

AGN

LINER

Composite

Star Formation




BPT diagram

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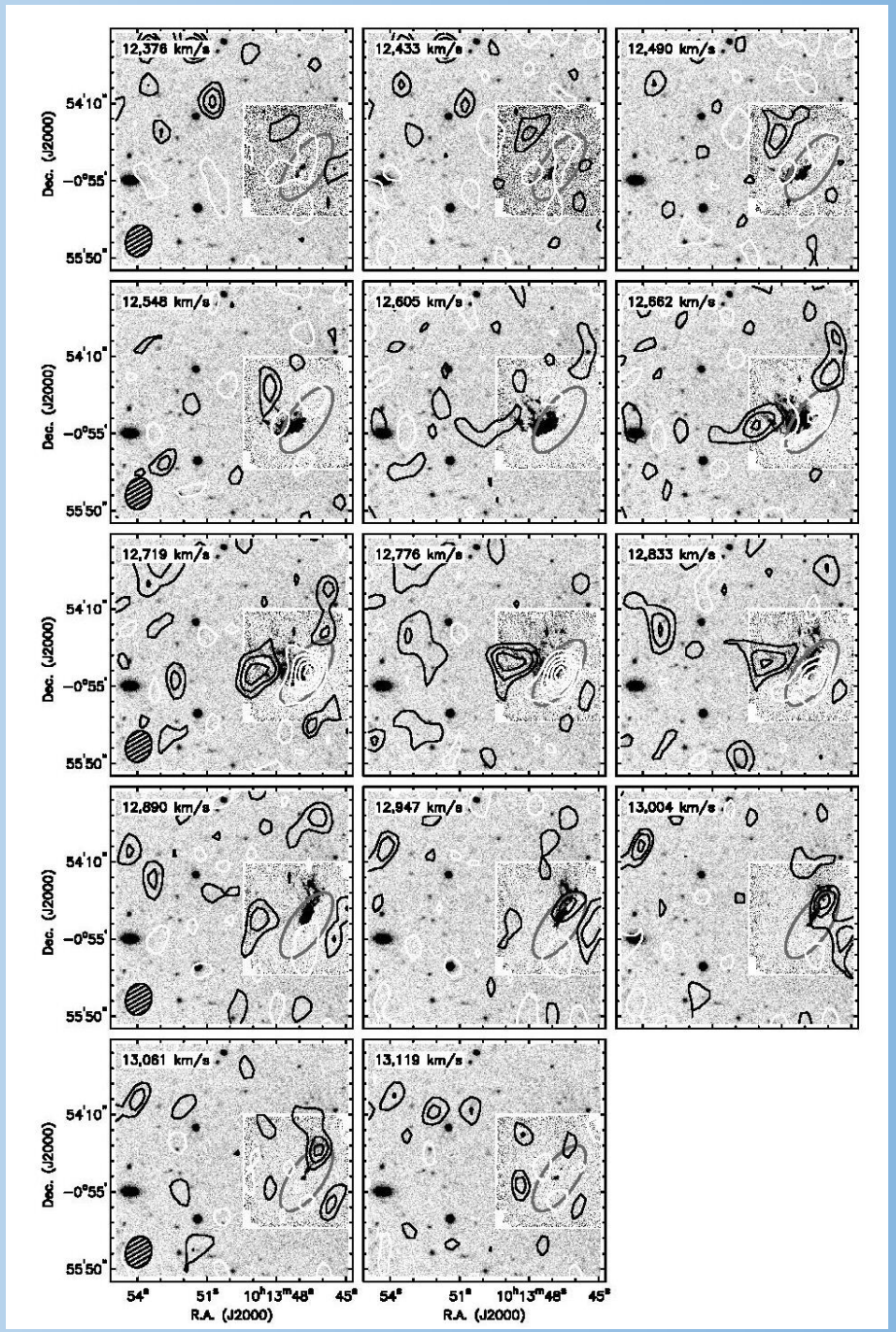
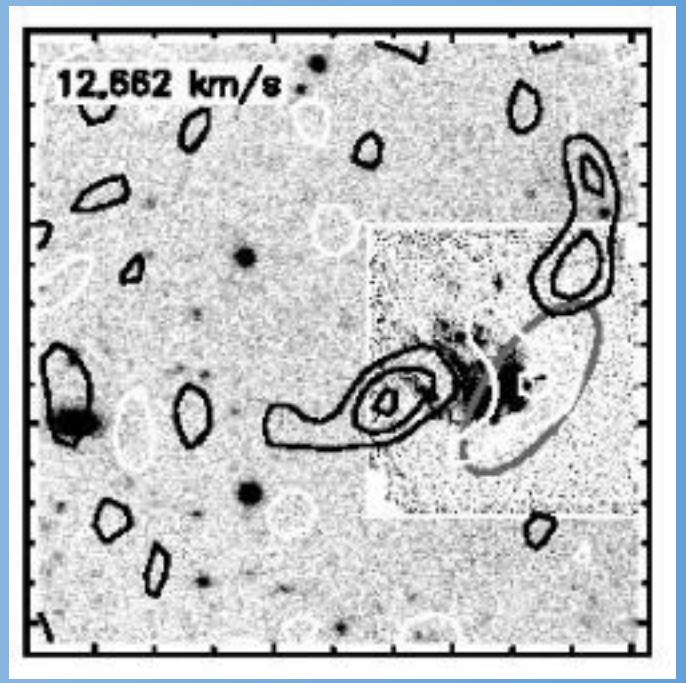
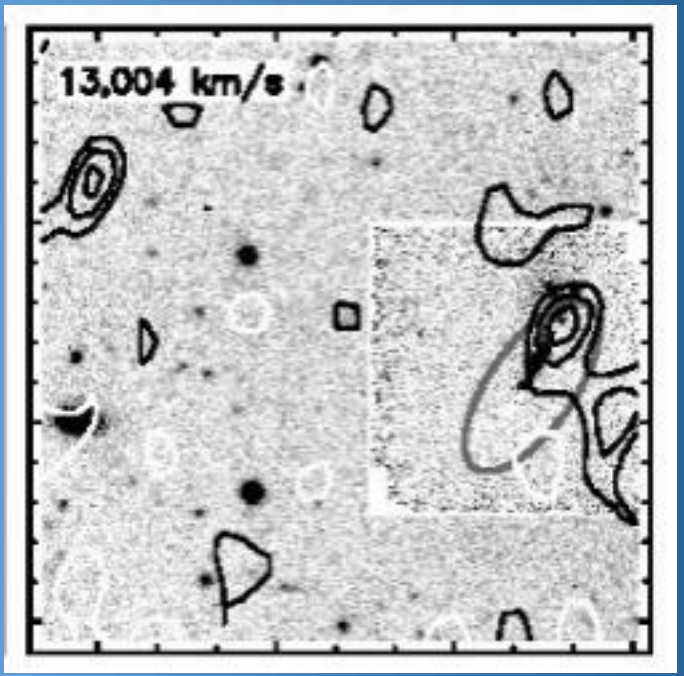



- HI tail more extended than Hα in east
- 12376-12605 km/s: no HI associated with Hα
- 12662 -12833 km/s: HI offset from Hα
- 12947-13061 km/s: HI and Hα co-existing

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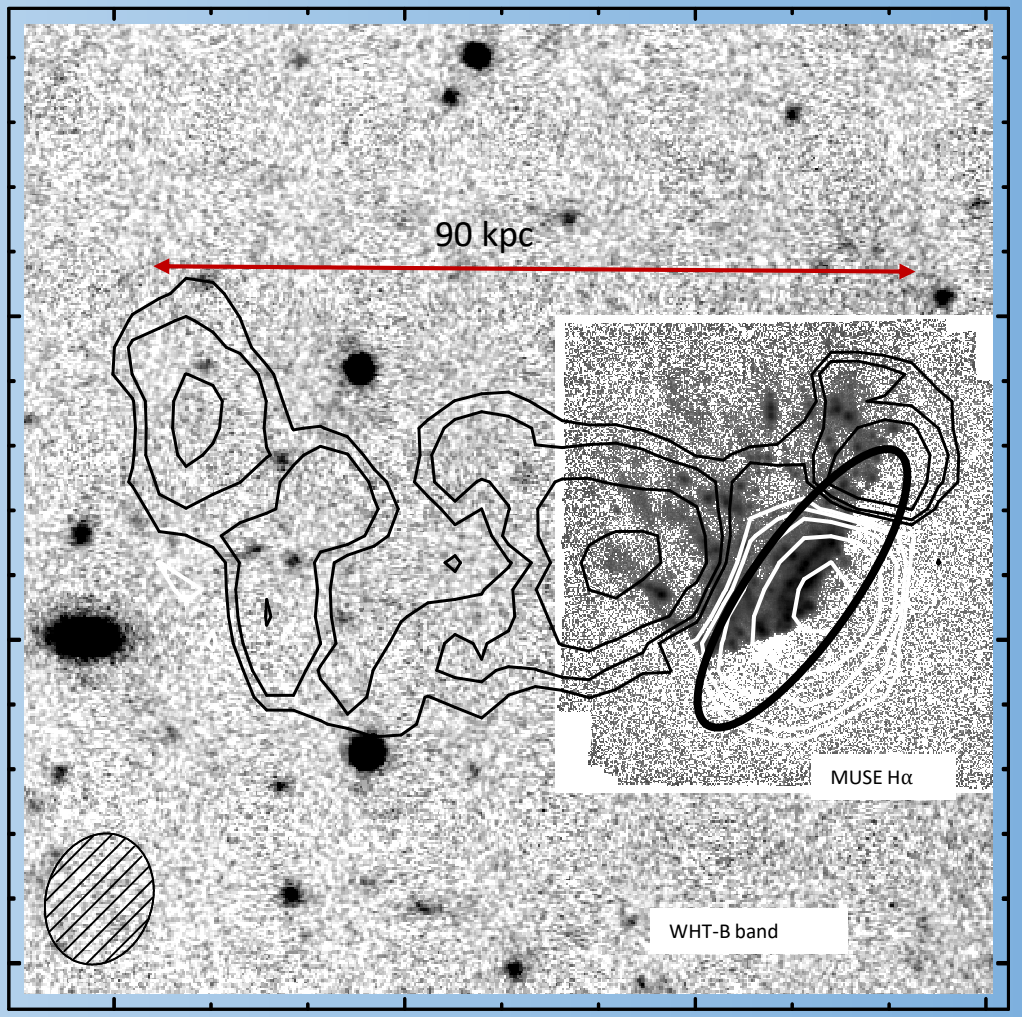


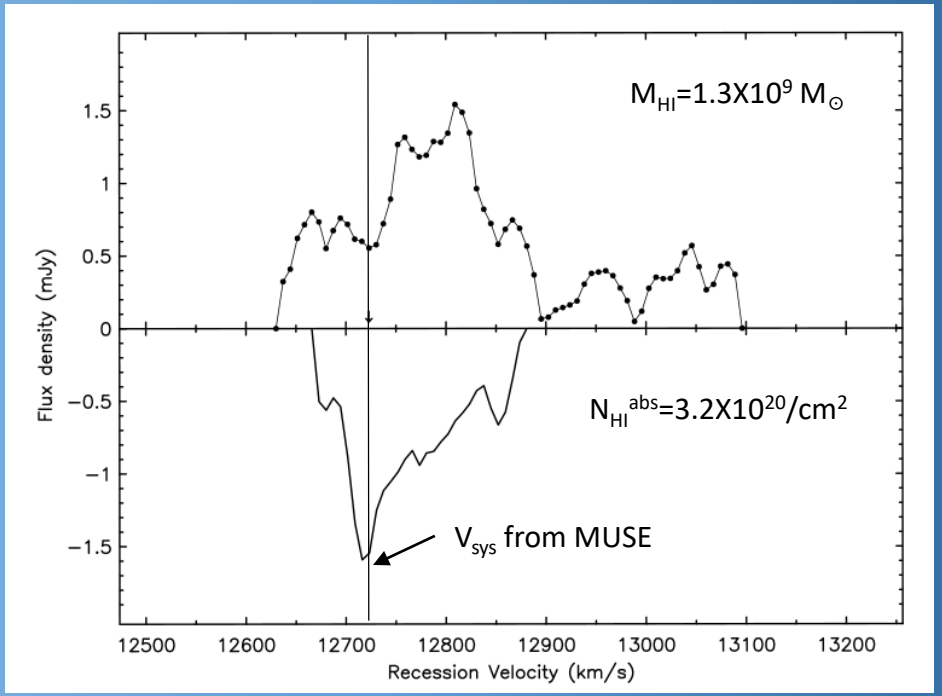


- Continuum flux density 11 mJy
- $N_{HI}$=0.25,0.5,1,2 X 10$^{20}$ atoms/cm$^2$

- Non-uniform stripping
- Redshifted HI absorption
- RPS fueled AGN?

Work in progress..

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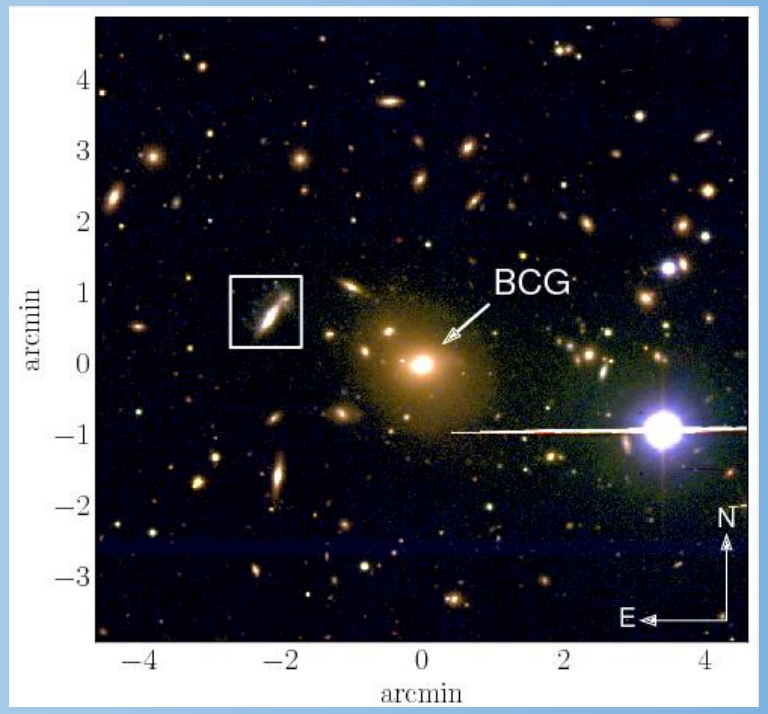
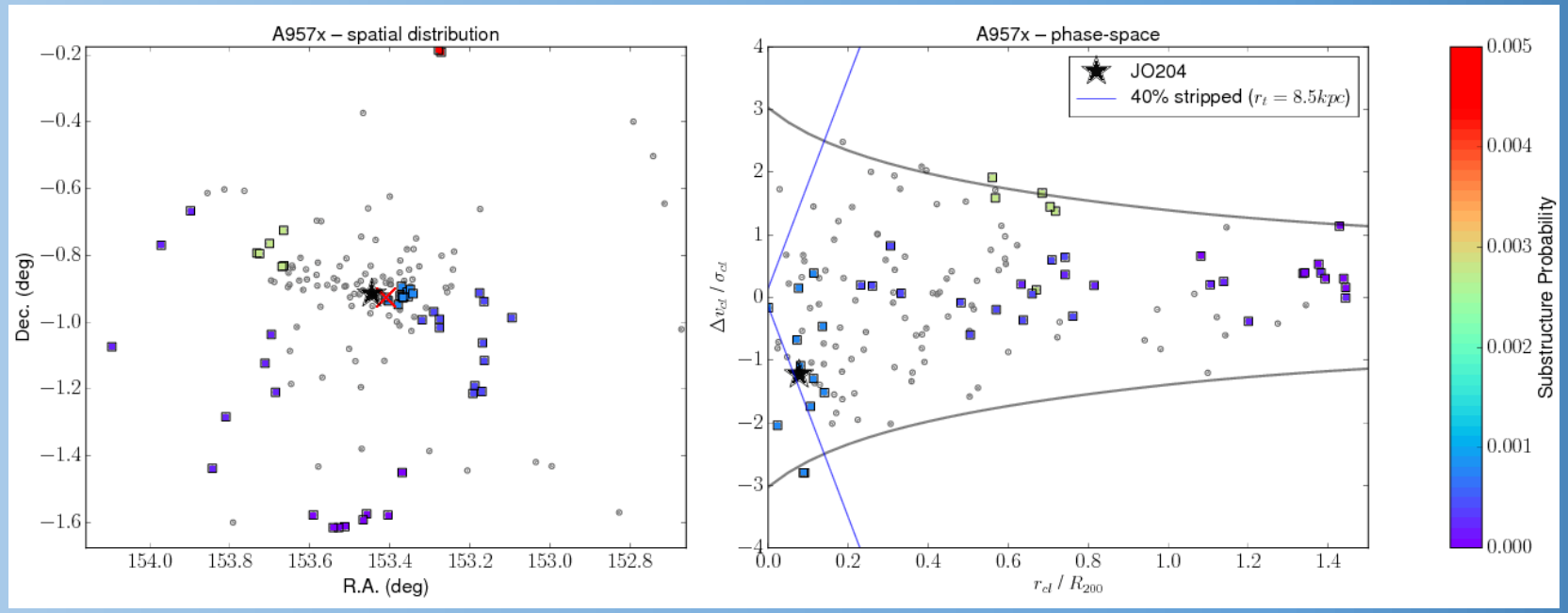



- Massive ($M_\star$= 4 X $10^{10}$ $M_\odot$) in a low mass cluster A957 ($M_{cl}$=4 X $10^{14}$ $M_\odot$)
- Located at 132 kpc from the cluster centre
- 40% of the total gas in JO204 is stripped by ram pressure due to the ICM




Gullieuszik+(2017)