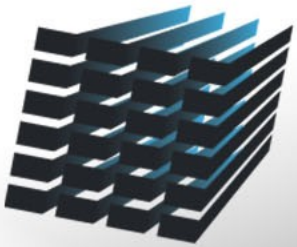
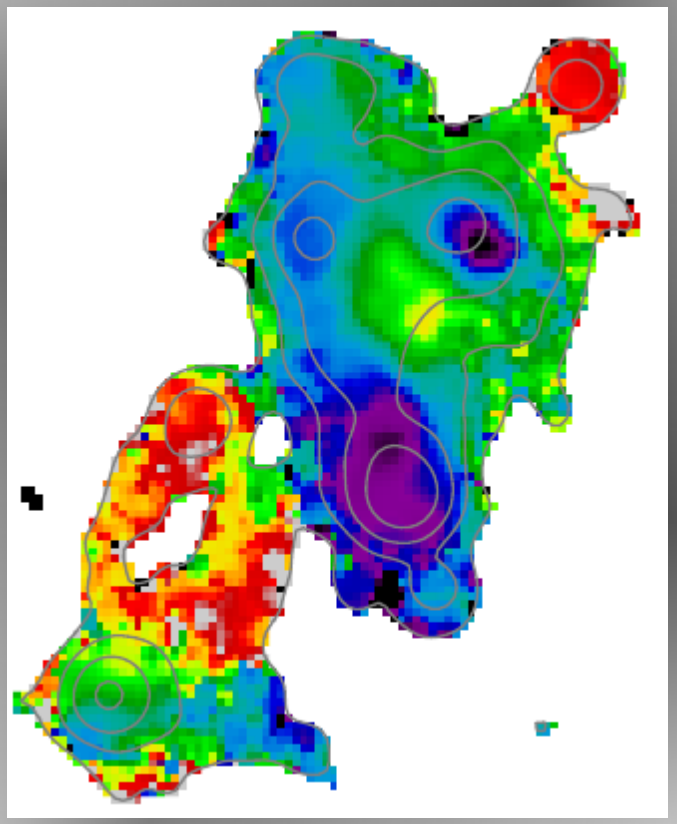


muse

multi unit spectroscopic explorer

B. Epinat (IRAP/LAM)
& the MUSE collaboration



Extended ionised gas structure in a z~0.7 galaxy group

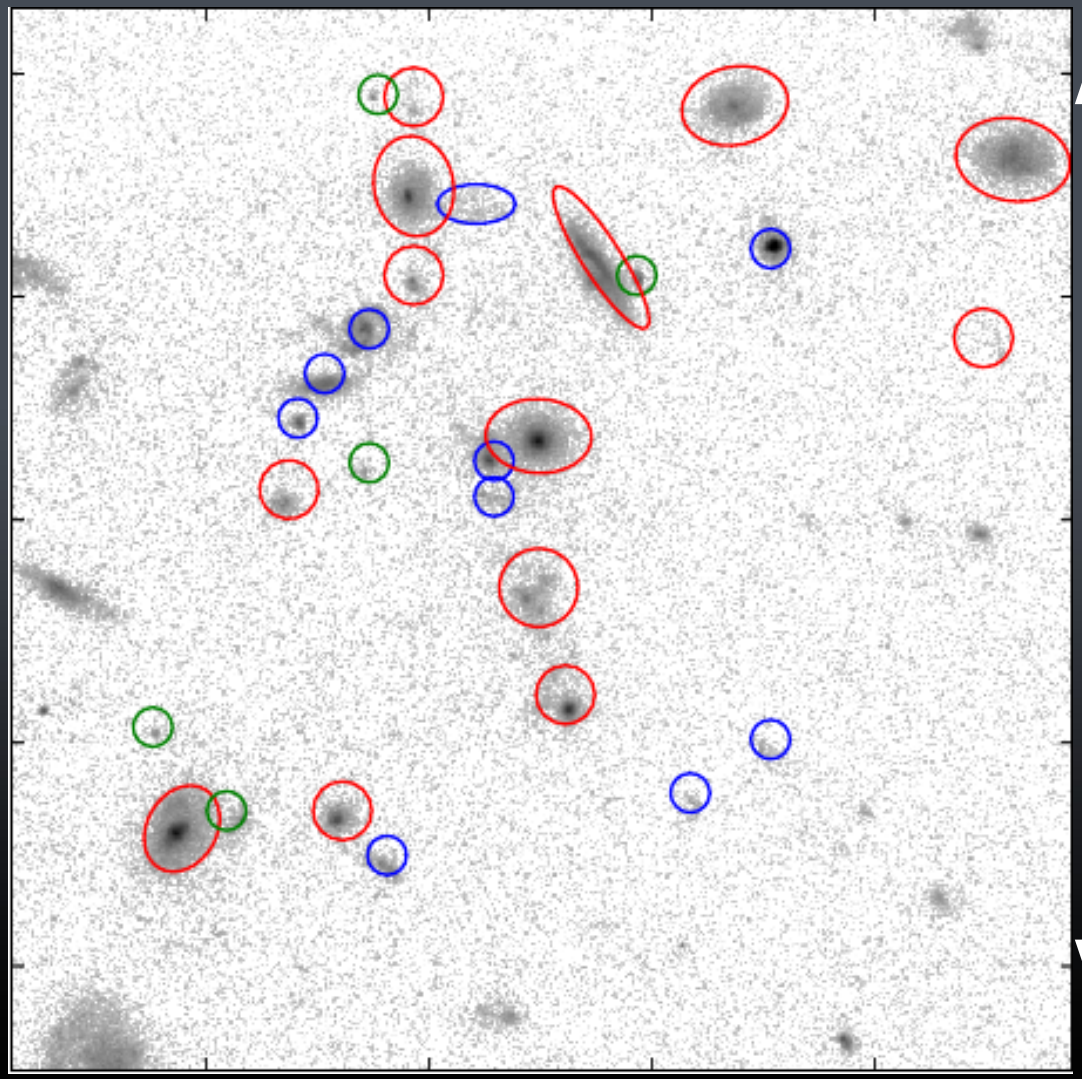
Extended ionised region

Group @ z~0.7

<u>MUSE data:</u>
Observations: 9.75h
Seeing : 0.5” to 0.9”

HST/ACS image F814W

Red: group members
Blue: secure foreground and background galaxies
Green: no secure redshift



Extended ionised region

Group @ z~0.7

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HST/ACS image F814W
+ MUSE [OII] contours

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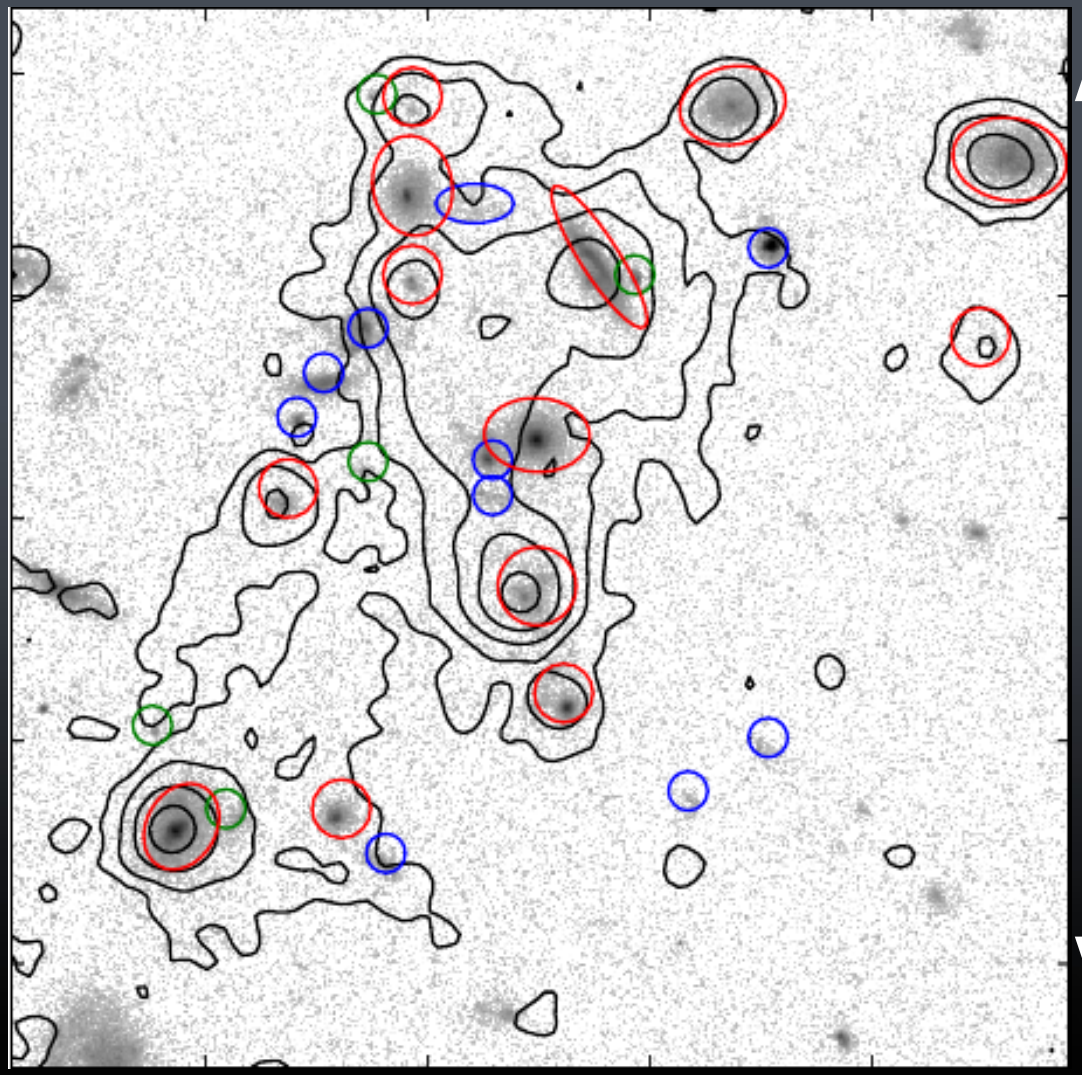

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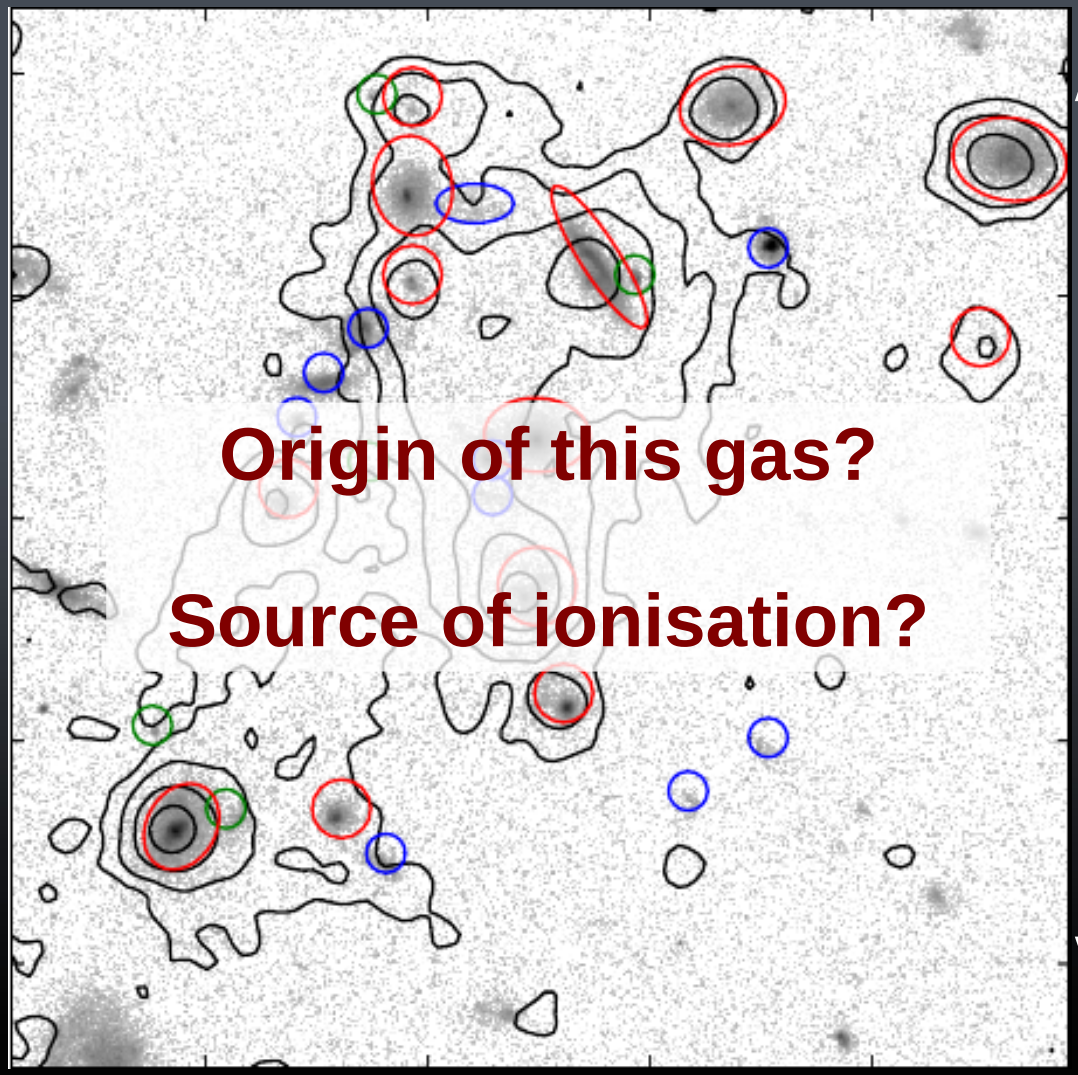
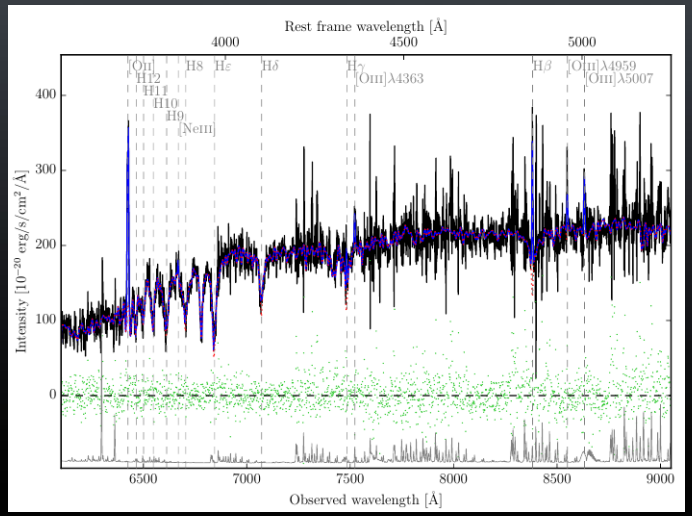


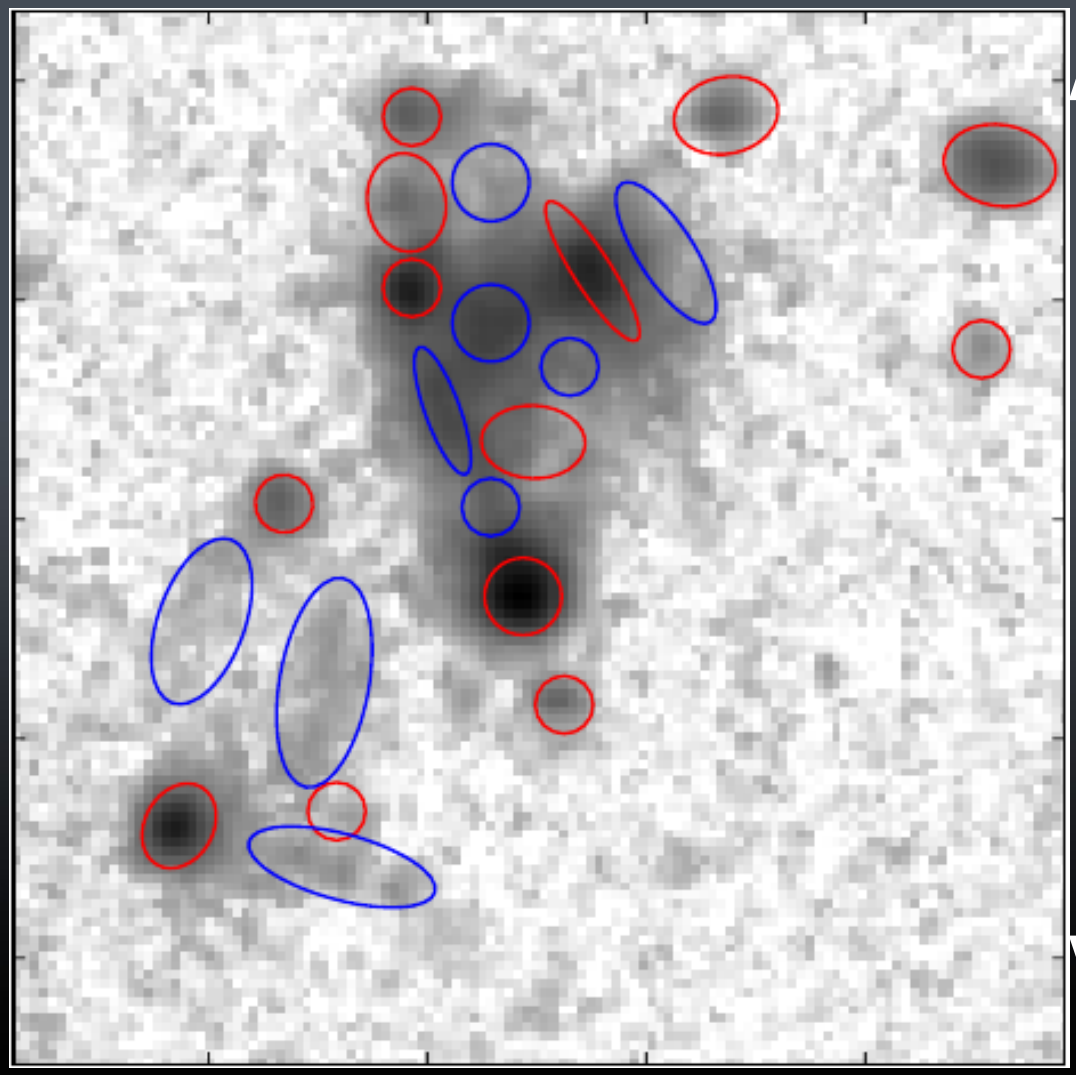
Spectra extraction

MUSE [OII] flux map

Red: group members
Blue: extended regions

Spectra extraction over each region





Line diagnostics

$$R23 = \frac{[O\,III]\lambda5007 + [O\,III]\lambda4959 + [O\,II]\lambda3729 + [O\,II]\lambda3726}{H\beta}$$

Metallicity proxy

$$O32 = \frac{[O\,III]\lambda5007 + [O\,III]\lambda4959}{[O\,II]\lambda3729 + [O\,II]\lambda3726}$$

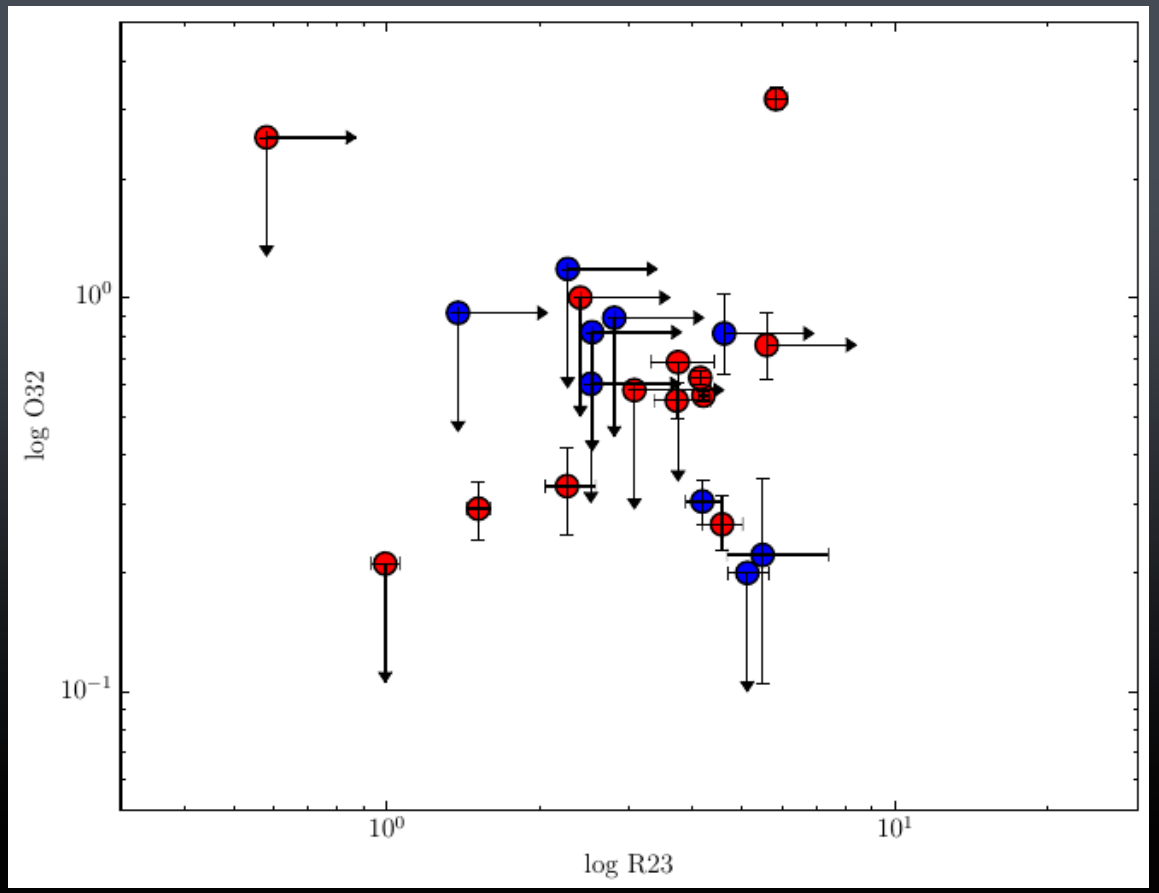
Ionization degree

Red: group members

Blue: extended regions

Extended regions: typical metallicity of galaxies

Ionization parameter seems lower for extended regions

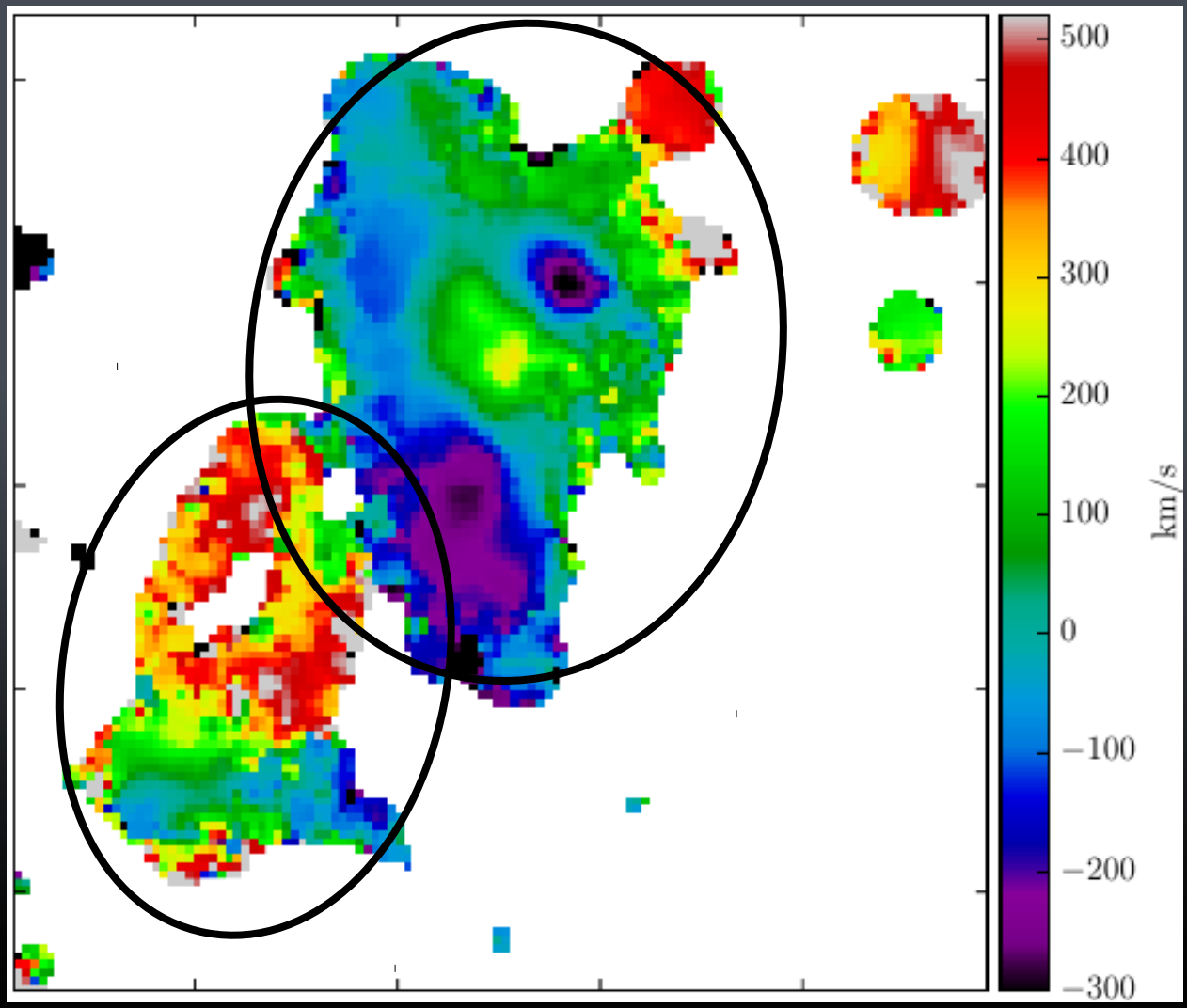


[OII] kinematics

[OII] velocity field

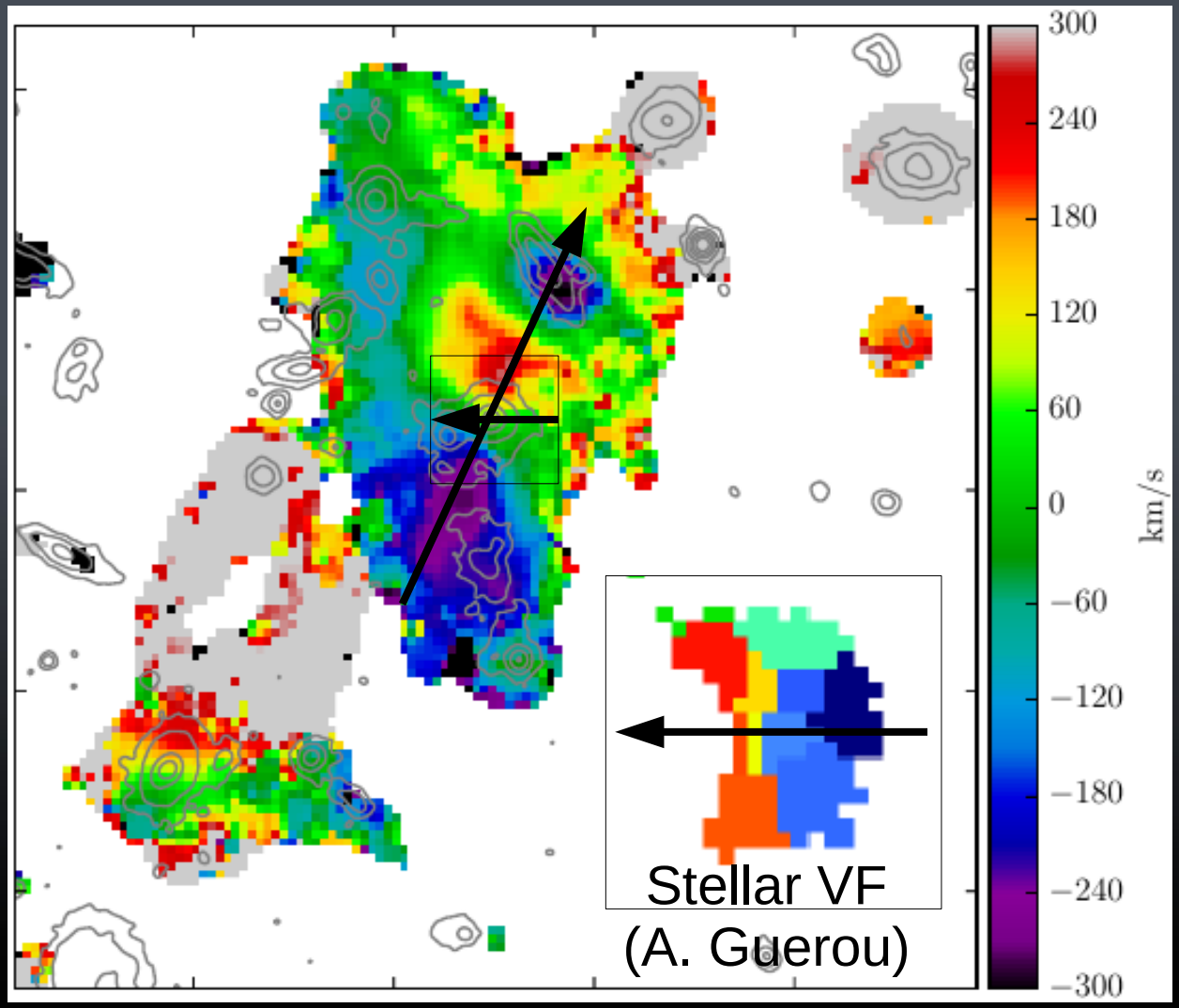
Radial velocity amplitude: **800 km/s**!

Two kinematically decoupled regions?



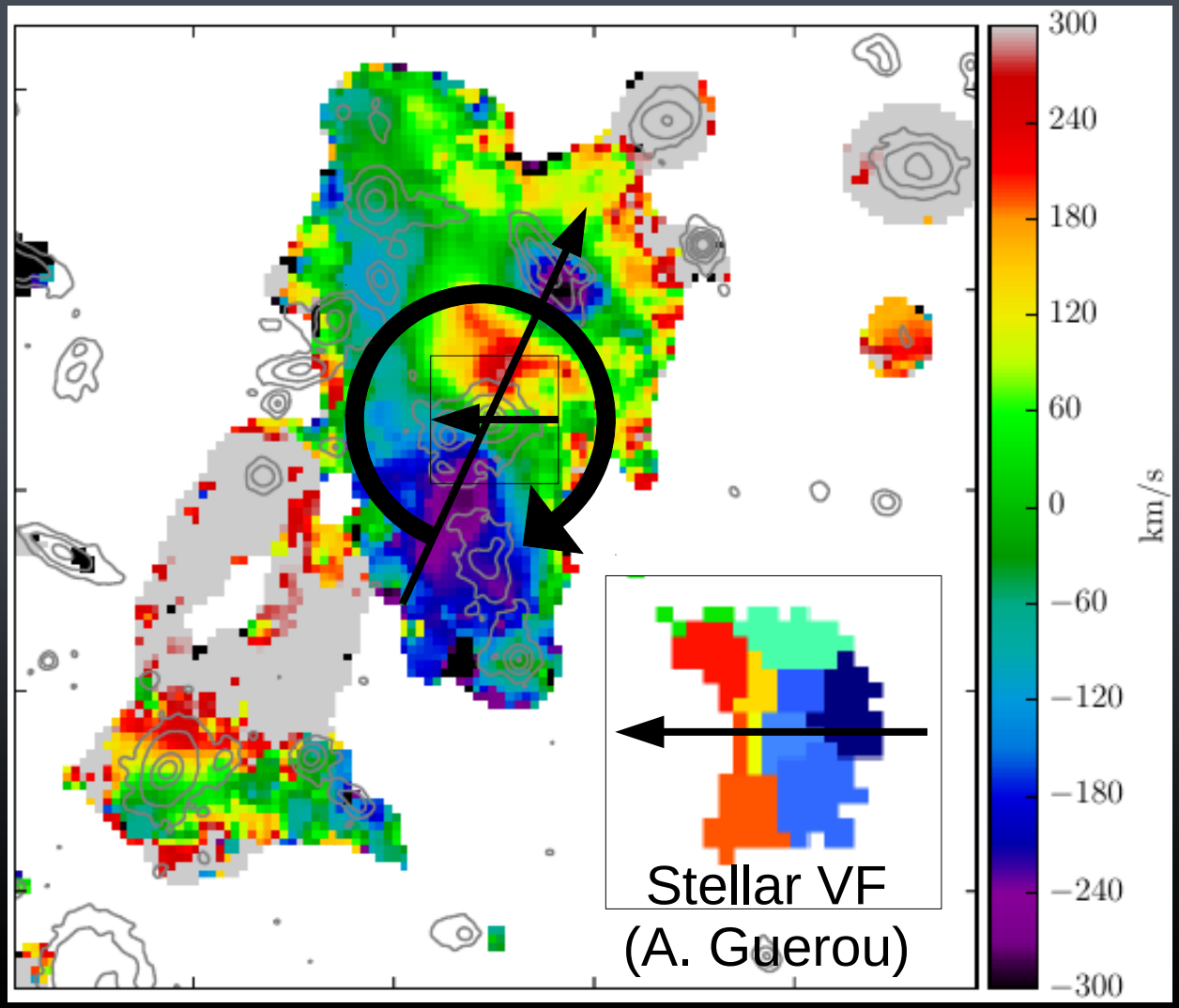
[OII] kinematics

- Gas and stellar spins are different



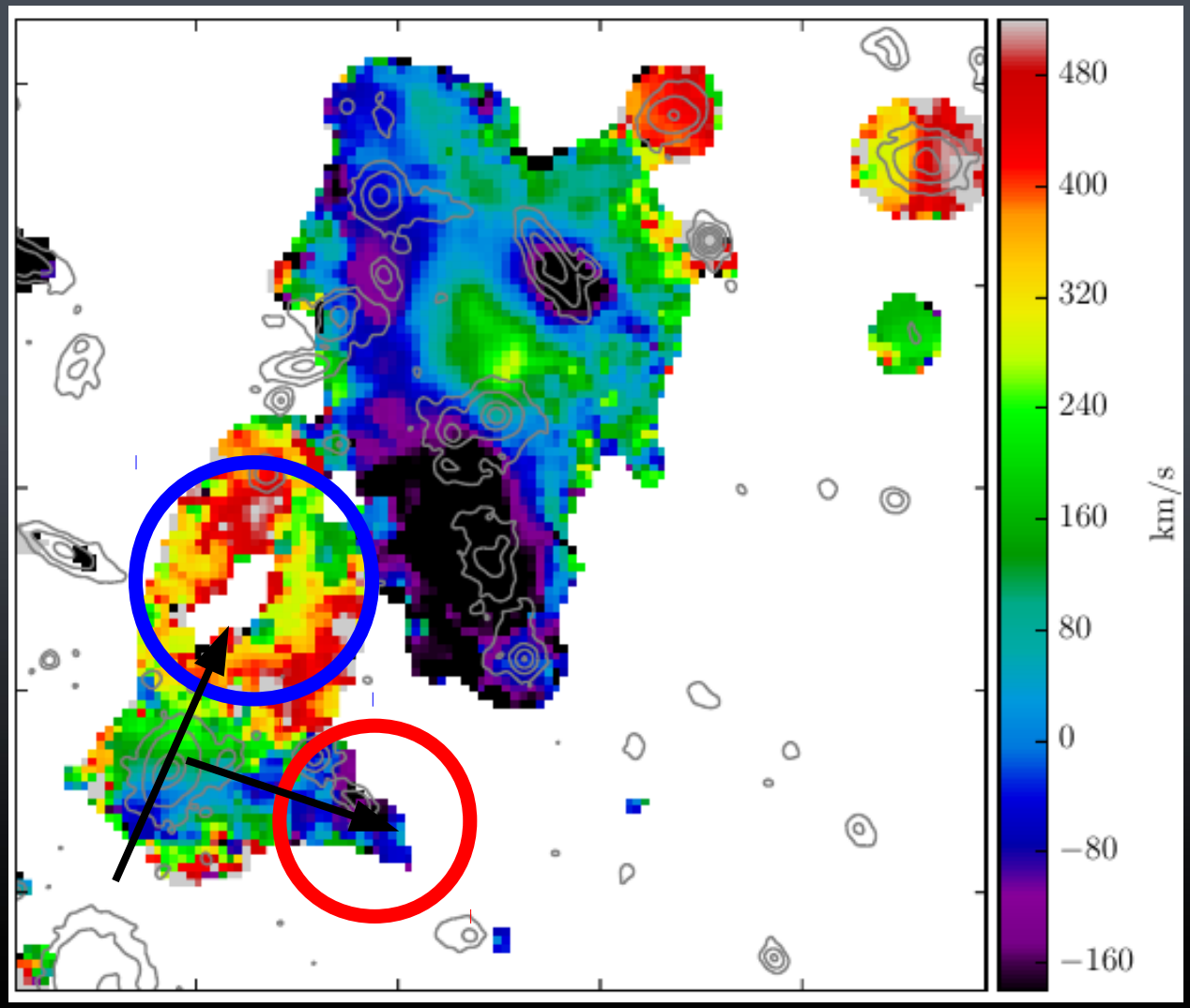
[OII] kinematics

- Gas and stellar spins are different
- Rotation around the most massive galaxy?
- Jets from the massive galaxy?
- Small galaxies follow ionised gas motion: tidal galaxies?



[OII] kinematics

- AGN related regions?
- Link/tails between AGN and satellite?
- Jet?



Ancillary data

- Galactic origin of the gas
  - AGN
  - Tidal interactions
- Source of ionisation
  - Star formation in tidal tails
  - AGN power ?
  - Shocks ?