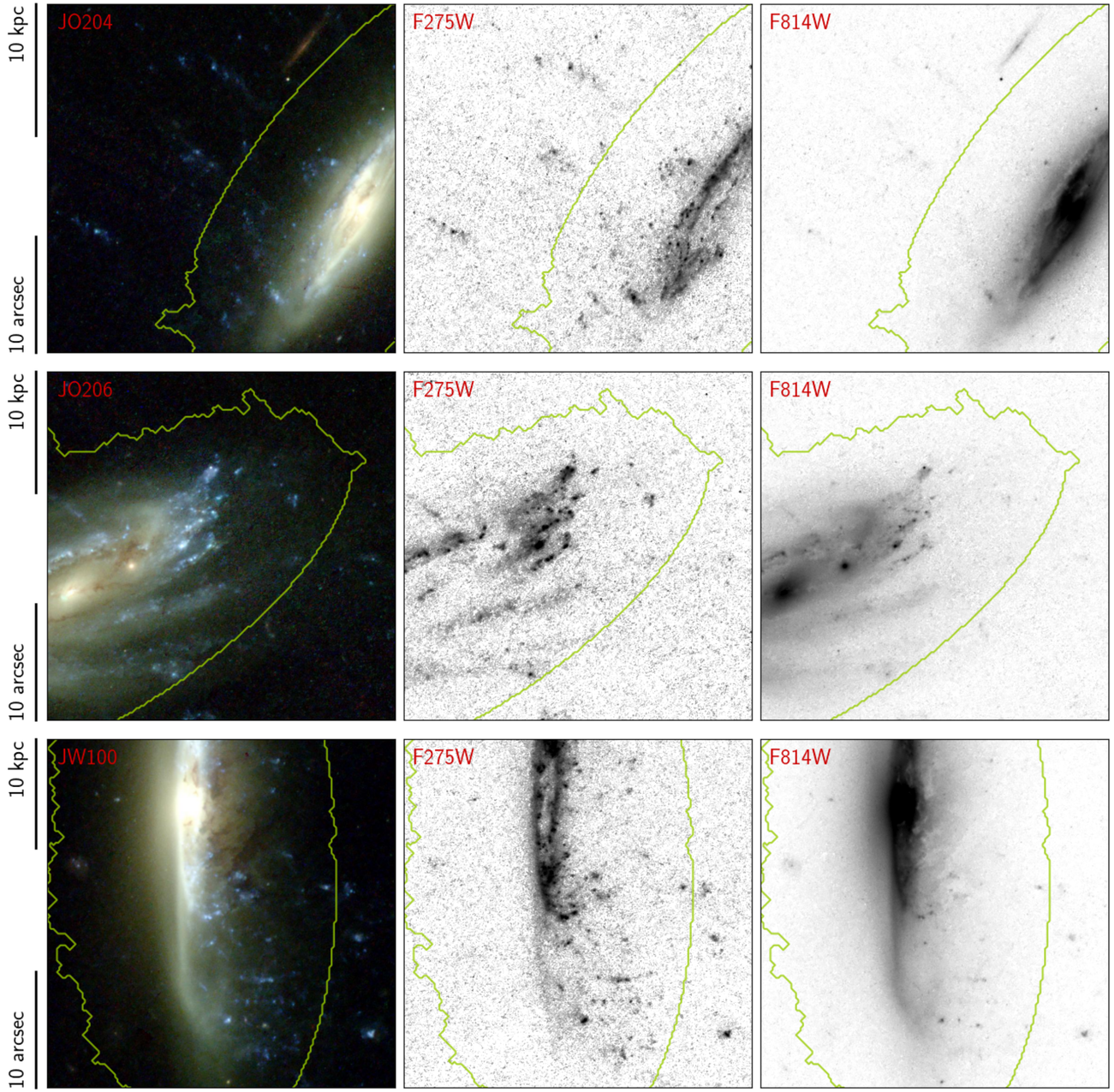
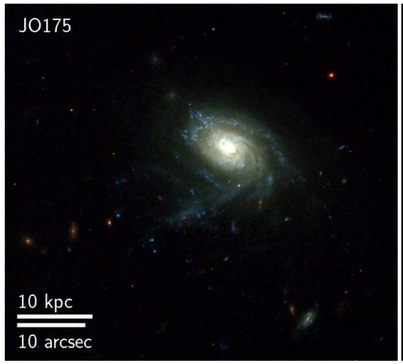
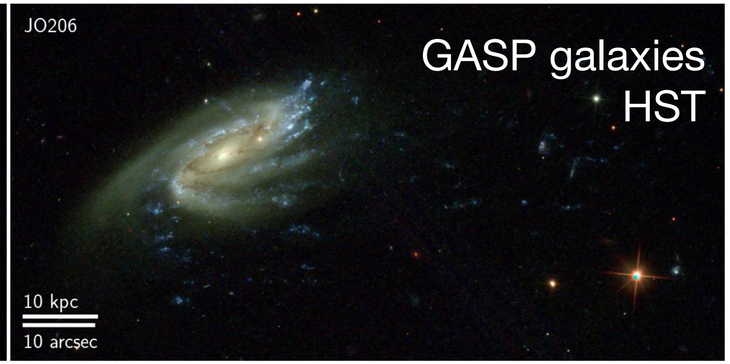
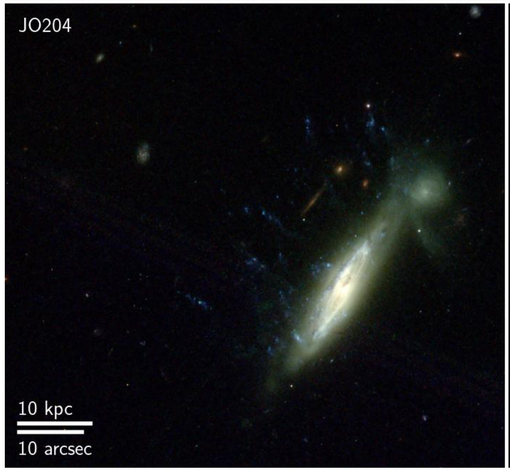
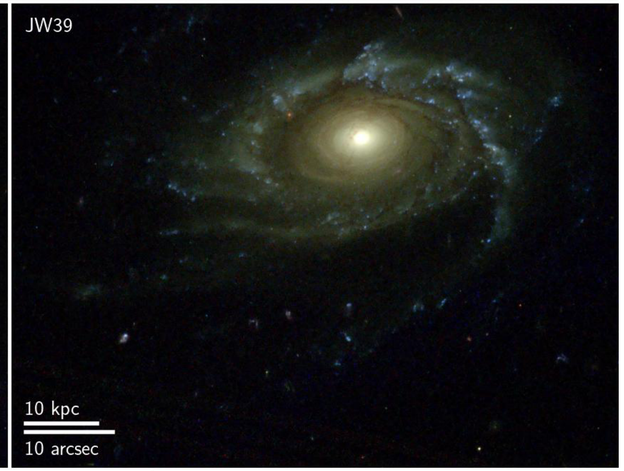
- Observed star formation in RPS tails

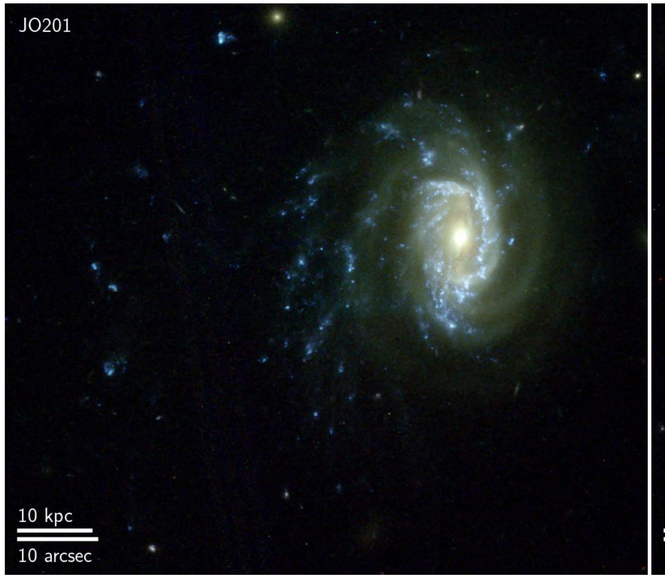


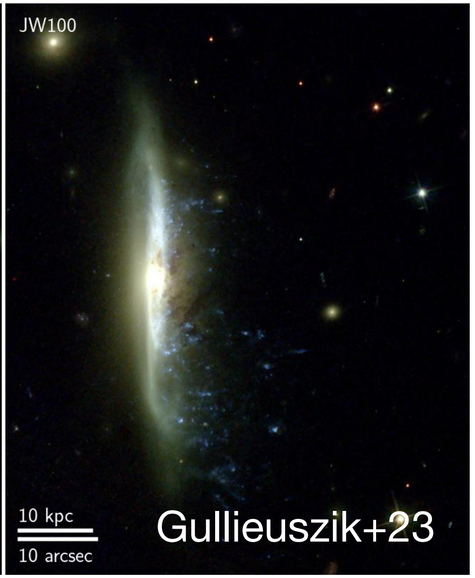






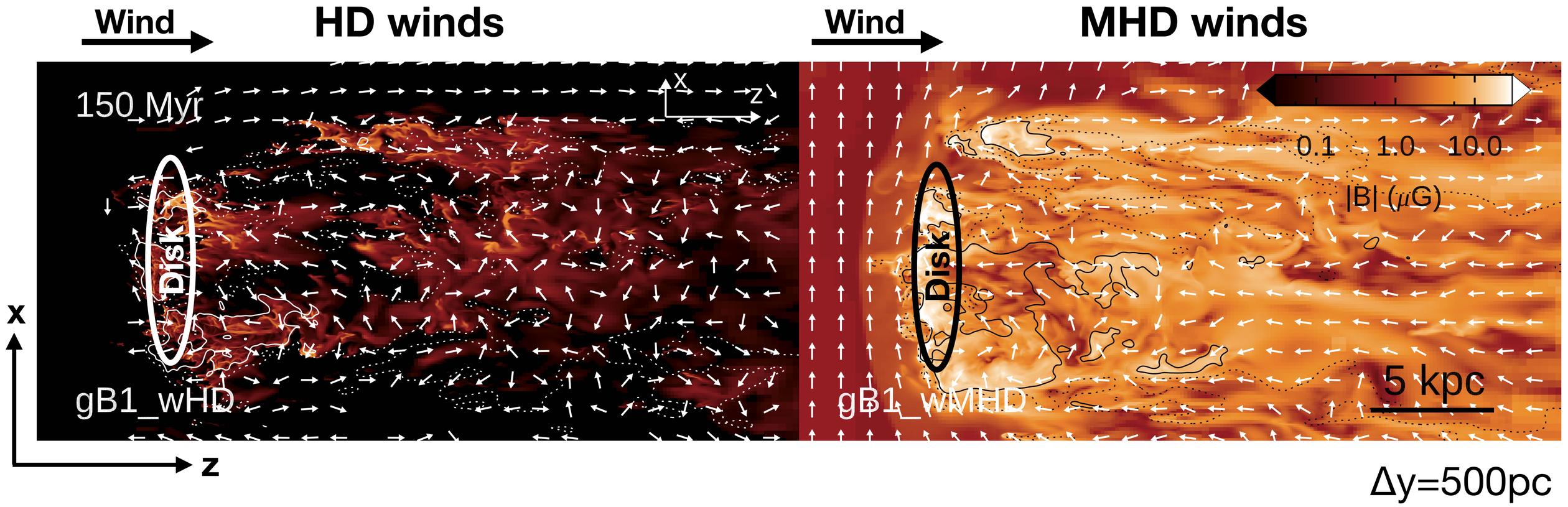






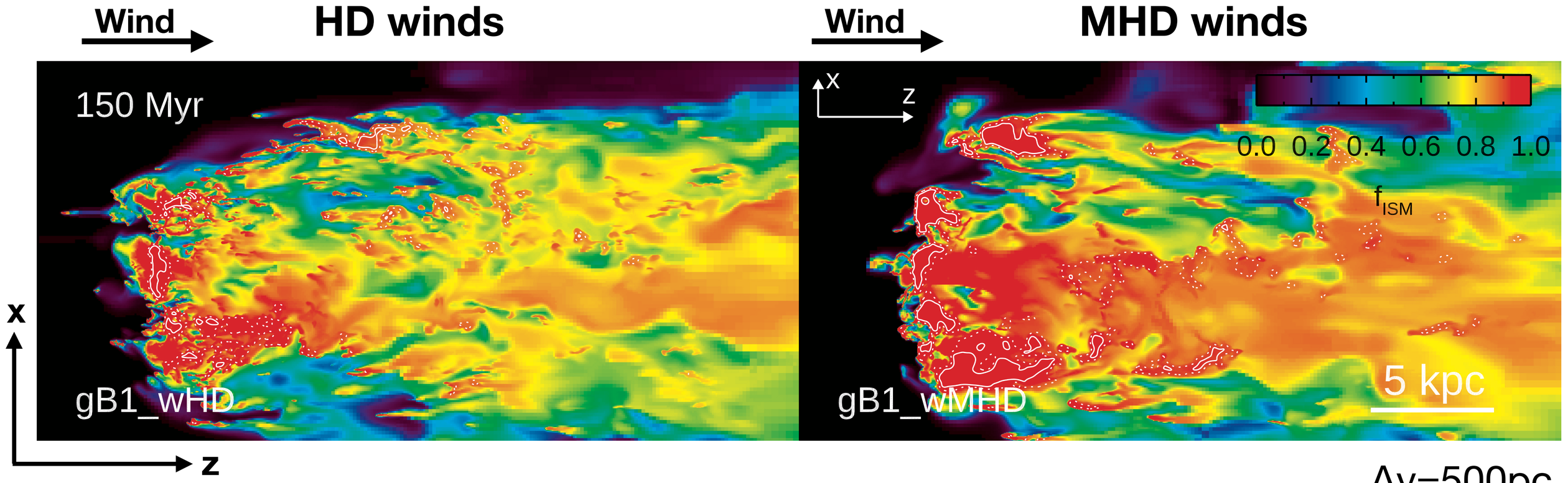
- B-fields are amplified and aligned with the direction of the winds in jellyfish tails

➡ Condition that strongly suppresses mixing between the stripped ISM and ICM



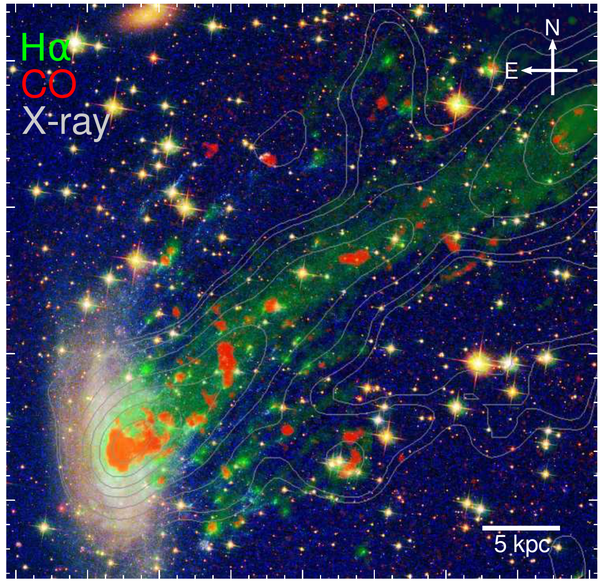
Δy=500pc

- Stripped ISM does not mix well with the ICM in the MHD wind runs
  - f_{ISM}: the mass fraction of the ISM in tail clouds
    - Estimated using metallicity $f_{\rm ISM} = \dfrac{Z_{\rm gas} - Z_{\rm ICM}}{Z_{\rm ISM} - Z_{\rm ICM}}$ $(Z_{\rm ICM} = 0.3 Z_\odot,\ Z_{\rm ISM} = 0.75 Z_\odot)$



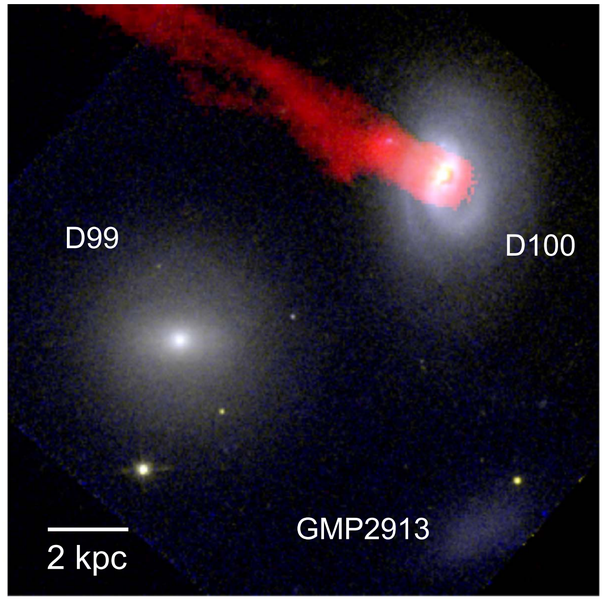
Δy=500pc

- Caveats
  - Missing physics - Thermal conduction
  - Idealized setup - Tail features can be different in live haloes



ESO137-001 in the Norma cluster
Jachym+19

- Interesting scientific issues to be addressed
  - Some molecular-rich tails are weakly or not detected in HI (e.g. ESO137-001 and D100)
    - All cooled? preferentially ionized?



D100 in the Coma cluster
Jachym+17

- Summary & Conclusion

  - Ram pressure stripping has complicated impacts on galaxies

    ➡Mild ram pressure can rather enhance disk SF by compressing dense clouds

  - Prominent tail features of jellyfish galaxies form when strong ram pressure is exerted on a gas-rich disk

    ➡Mixing between the stripped ISM and the ICM plays a key role in the tail formation processes

  - Presence of magnetic fields in the ICM can significantly change the tail features

    ➡Magnetic fields suppress mixing, leading to the formation of less warm/dense clouds in the RPS tails