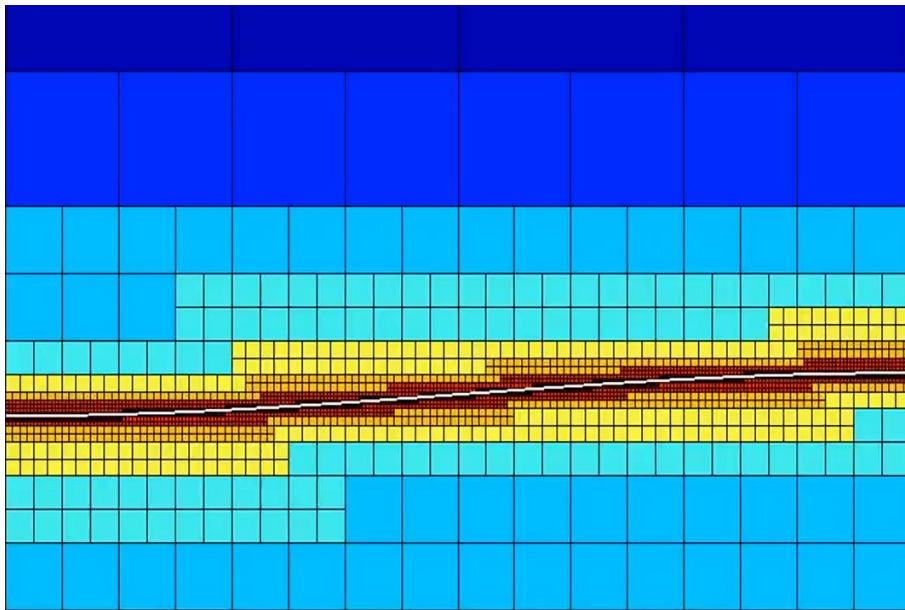


Monte Carlo tracers implemented for the AMR code RAMSES



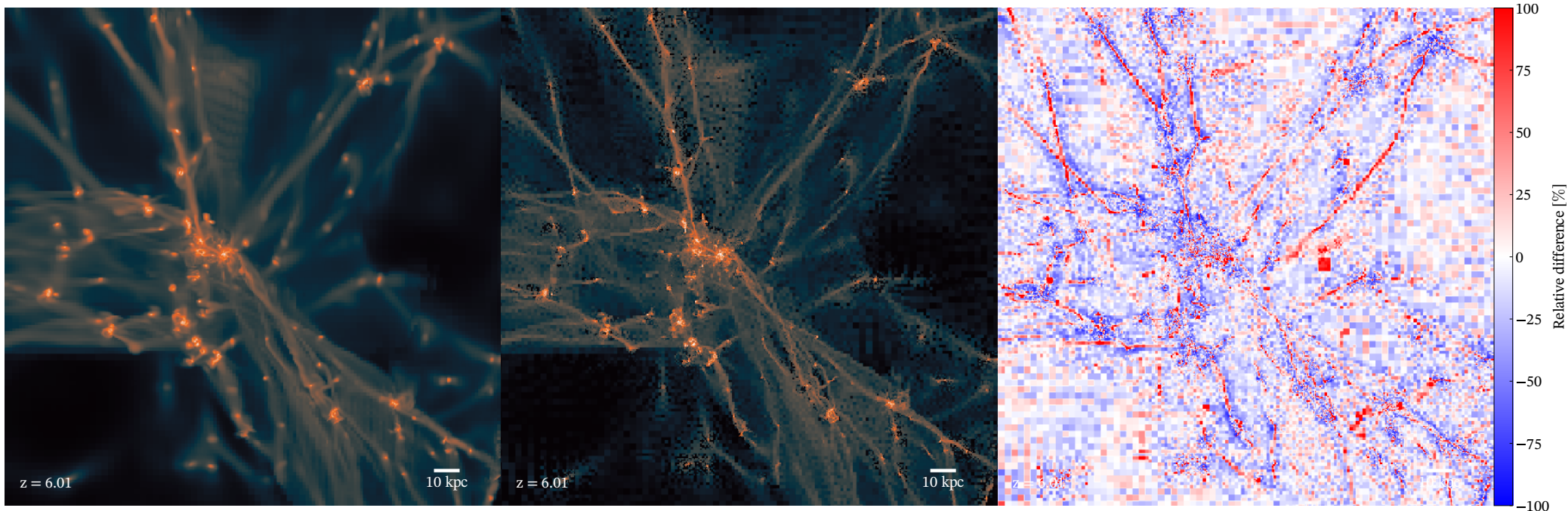
AMR on Rayleigh-Plateau instability

- Where does the gas come from?
- Where does it go?
- What is its thermodynamical evolution?

Need Lagrangian info

Using tracer particles

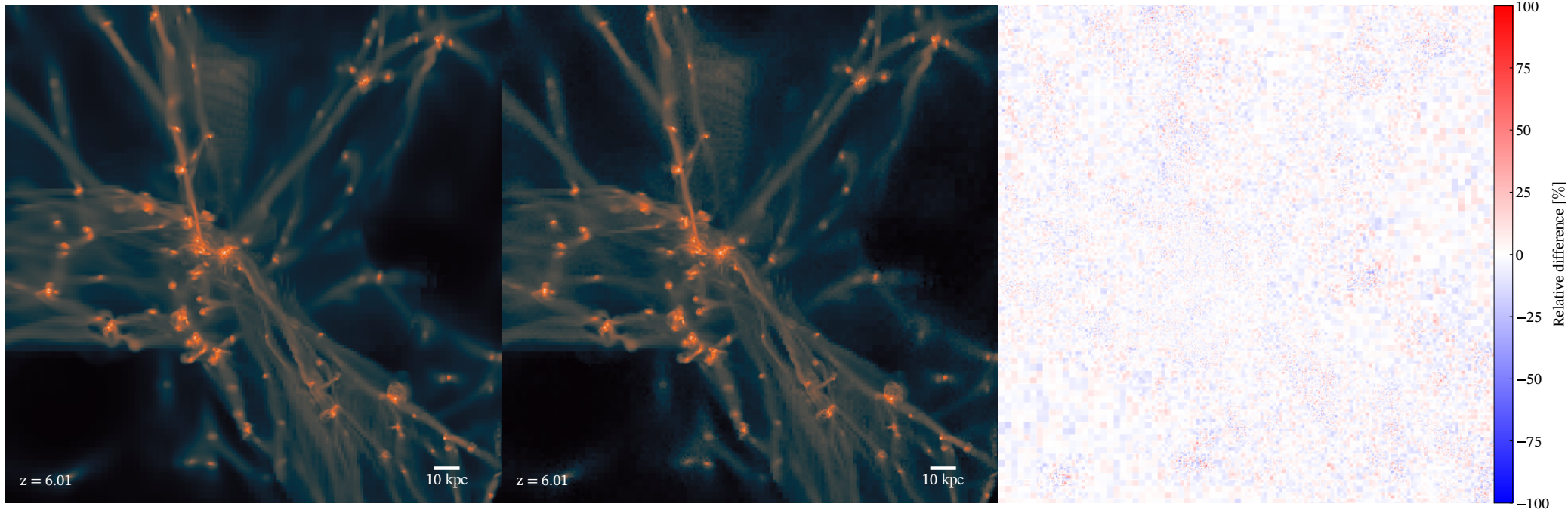
Idea 1: advect tracers with (interpolated gas velocity)



Problems: it only takes into account advection, not diffusion!
what about stars? SMBH? Dust formation?

Using tracer particles

Idea 2: move as many particle as gas flux using stochastic approach



The new scheme reproduces well the gas distribution, can now be used for science cases!