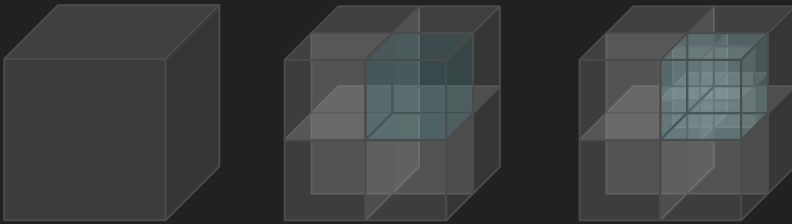


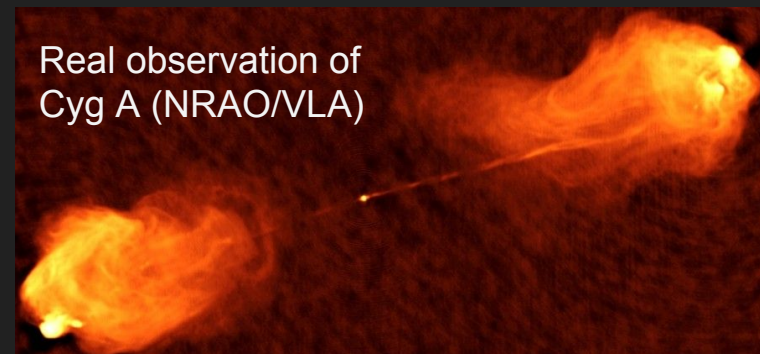
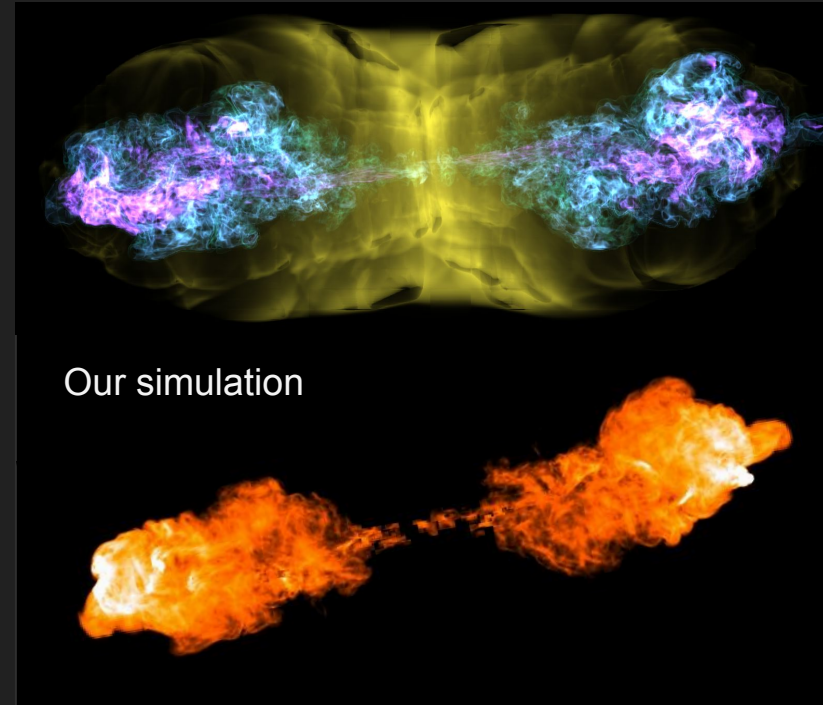
Simulating magnetized jets

We use HPC to solve magnetohydrodynamic equations to achieve high resolution that is necessary for the delicate magnetic field structure in the jets.

We use Adaptive Mesh Refinement (**AMR**) to save computing time



I implement the magnetization and develop particle tracers to synthesize radio images and spectra



Computational challenges and goals

- How to map the information from particles to mesh grids in a meaningful and computationally efficient way?
- How to use the simulations to determine the properties of the jets from the observations
- Better understand the parallel algorithms of the code (debugging...)
- Learn new ideas and cool tools!

