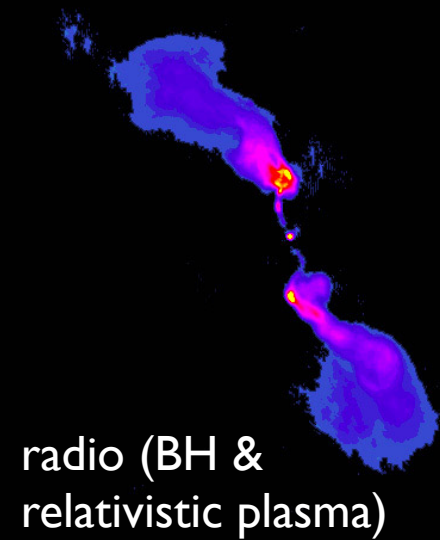
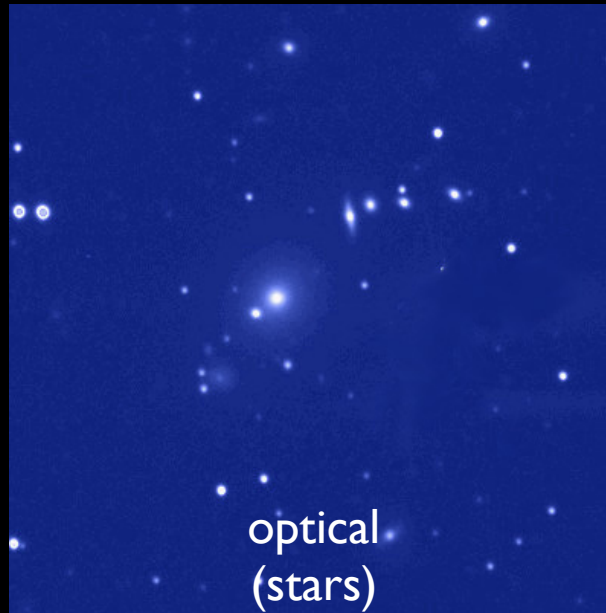
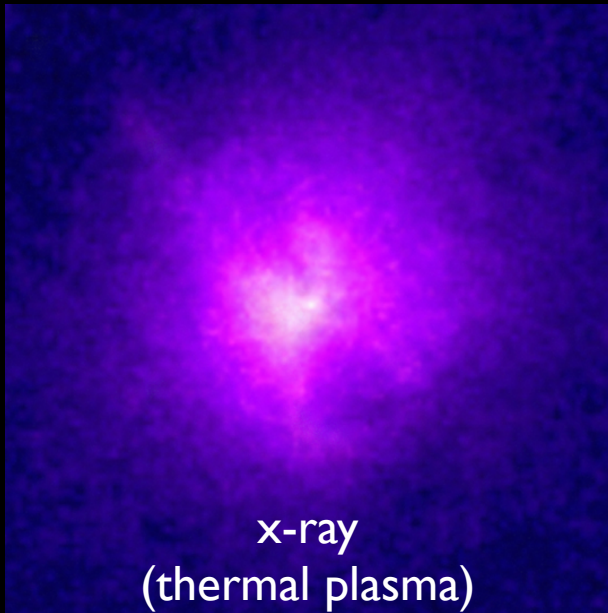


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• Galaxy Groups & Clusters

- Convection and Heat Transport in the ICM
- Plasma Instabilities: MTI, HBI, viscosity, etc.
- Thermal instability: filaments, star formation
- Black hole accretion and feedback (jets/bubbles)
- Student: Mike McCourt (UC Berkeley Astro, 5th year)



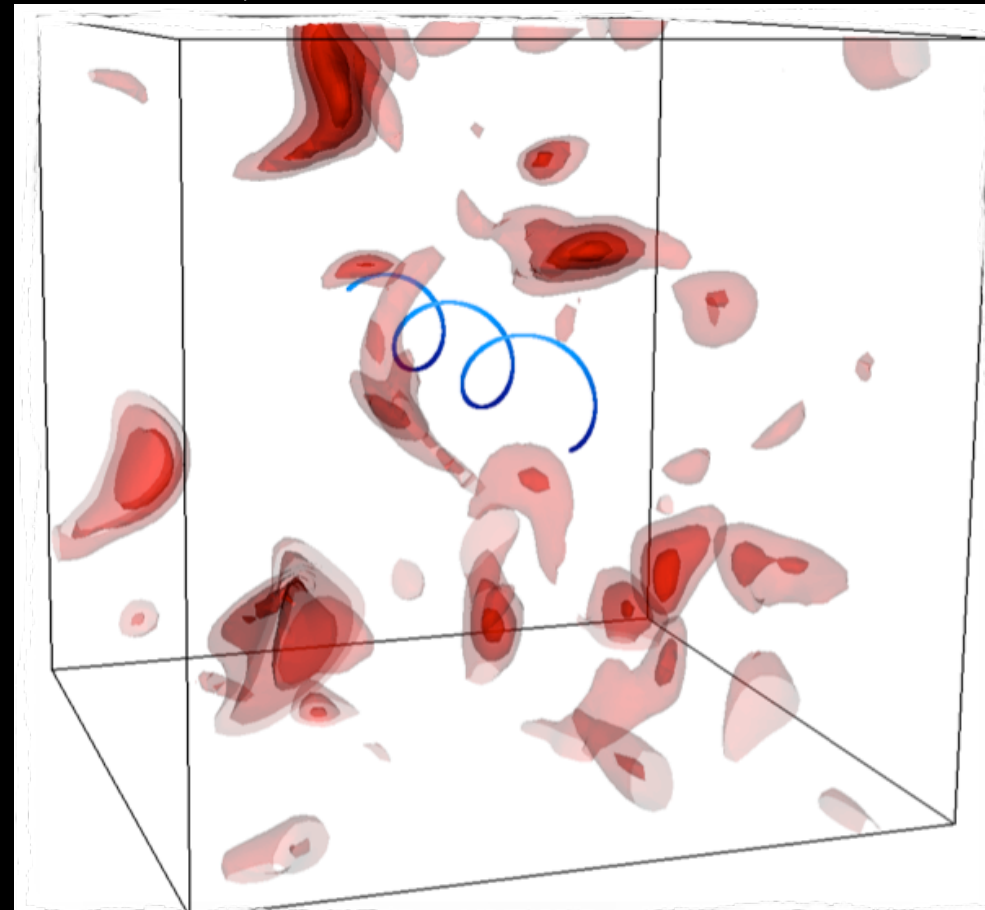
← $\sim 0.1 R_{\text{vir}}$ →

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• Particle Acceleration & Heating

- Solar Wind
- MHD Turbulence (SN remnants)
- Particle Heating in MRI & BH Accretion
- Quasi-linear theory, Fermi Acceleration, Cosmic Rays
- Student: Jacob Lynn (UC Berkeley Physics, Ph.D.)



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- Plasma Physics & Fusion
- High-Performance Supercomputing and GPU's with OpenACC
- Inflation of Hot Jupiters with Kristen Menou

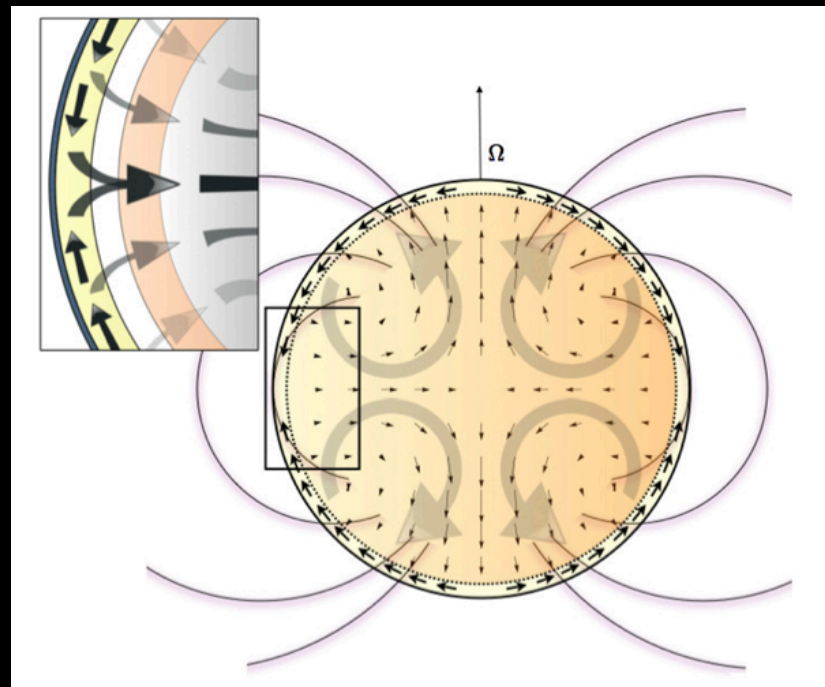


Figure from Batygin & Stevenson 2010