Characterizing WHIM in Simulations

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Abstract

Warm-Hot Intergalactic Medium (WHIM) is challenging to observe directly at any wavelength because of its high temperature and diffuse nature, but current and future tomographic surveys of IGM (e.g. Clamato) promise to do just that. WHIM is expected to account for much of the 'missing' baryonic matter and can affect Lyman-Alpha forest observables, making it important to accurately characterize it using simulations. I will present results from IGM simulations done with the Eulerian-AMR code Nyx that quantify how the mass fraction of WHIM in the universe evolves over time, as well as the size of the WHIM around halos as a function of halo mass. These results can be used to quantify the effect of the WHIM on observables, which in turn will help locate it in observational datasets.

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