

Cosmic Recombination in the Presence of Primordial Magnetic Fields (remote)

Wednesday 15 May 2024 10:30 (1 hour)

Primordial magnetic fields (PMFs) may explain observations of magnetic fields on extragalactic scales. They are most cleanly constrained by observations of details of the cosmic microwave background radiation (CMB). Their effects on cosmic recombination may even be at the heart of the resolution of the Hubble tension. Employing detailed MHD- and Monte-Carlo- simulations we present an analysis of the effects of PMFs on cosmic recombination taking into account of all so far known relevant physical processes. The simulations are compared to current CMB data showing that the existence of PMFs at recombination is consistent with the CMB data, while relieving the Hubble tension.

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