

Physical modelling of patchy reionization

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The epoch of cosmic reionization can be probed using the secondary anisotropies imprinted on the cosmic microwave background (CMB) temperature and polarization field. I will discuss the imprints of patchy reionization on the kSZ power spectrum and CMB B-mode polarization. I will introduce two new scaling relations to connect the kSZ and secondary B-mode power spectrum with the physics of reionization. I will discuss the advantage of a joint study of the kSZ signal and secondary B-mode polarization from CMB-S4 to get a better understanding of the epoch of reionization.

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