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Future prospects of the 21cm cosmology

Wednesday, 25 March 2020 09:20 (40 minutes)

After reviewing basic aspects of 21cm brightness temperature observation from the epoch of reionization, we will discuss the 21cm forest, that is, systems of narrow absorption lines due to intervening, cold neutral hydrogen in the spectra of high-redshift background radio sources in the cosmic reionization epoch. We will show that the 21cm forest observations are very sensitive to the mass of warm dark matter and ultra light dark matter, and it may be possible to probe the the mass range that may otherwise be difficult to access. We will also discuss a new idea of constraining cosmology beyond the cosmic variance limit using 21cm observations.

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Session Classification: Invited talks