

Lensing of 21 cm intensity mapping

Monday 5 February 2018 16:45 (20 minutes)

I'll talk about our work on weak lensing of 21cm intensity mapping. 21cm intensity mapping, like the CMB, undergoes second order lensing; However unlike the CMB, here, we do not neglect the cross-spectrum between 21cm density fluctuations and the lensing potential, since they come from similar redshifts and the cross spectrum is not negligible. We show that lensing is a small effect on the intensity mapping, smaller than the CMB; However, we can observe intensity mapping for a large number of redshifts, as well as use cross-spectra, neither of which is possible with the CMB. Then using Fisher matrix forecast, we study the possibility of detecting the lensing signal.

Presenter: JALILVAND, Mona (University of Geneva)