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Weighing neutrinos with cosmic neutral hydrogen

Thursday 7 June 2018 15:00 (20 minutes)

The 21cm radiation from cosmic neutral hydrogen can be used to survey large cosmological volumes of the Universe through intensity mapping. I will discuss the impact of neutrino masses on the abundance and clustering of neutral hydrogen, that we have investigated through hydrodynamic simulations with massive neutrinos. I will show that it can be understood by accounting for the effects neutrinos induce on the properties of matter and halos. I will show forecasts on how well upcoming instruments, like the Square Kilometer Array, can detect the minimum mass of the neutrino masses.

Presenter: VILLAESCUSA NAVARRO, Francisco

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