



Venerdi 21 Novembre 2014, ore 14:00, Aula Wataghin

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Constraints on neutrino mass and dark matter coldness from cosmological data

I will present the tightest constraints that have been recently obtained from cosmological data on total neutrino masses and dark matter coldness (e.g. sterile neutrinos or thermal relics). These constraints are both derived from a combination of cosmic microwave background data with a relatively new probe of the large scale structure at high redshift and small scales: the intergalactic medium. In deriving these limits I will make use of hydrodynamical simulations of the large scale structure. Moreover, I will show how these data could provide useful quantitative measurements of the geometry of the Universe at $z \sim 2$.