
Small scale structure of the IGM: A Dark Matter Tale

Vid Irsic^{*1}

¹University of Washington, Department of Astronomy – United States

Abstract

The intergalactic medium (IGM) plays a unique role in constraining the (small scale) matter power spectrum, since the low-density, high redshift IGM filaments are particularly sensitive to the small scale properties of dark matter. The main observable manifestation of the IGM, the Lyman-alpha forest, has provided important constraints on the linear matter power spectrum, especially when combined with cosmic microwave background data. This includes, most notably, the tightest constraints on warm dark matter (WDM) and fuzzy dark matter (FDM) models, that I will present in this talk.

*Speaker