



Contribution ID: 47

Type: **not specified**

Cosmology from the CMB frequency spectrum

Thursday, March 11, 2021 3:00 PM (1 hour)

The frequency spectrum of the CMB was last measured in the nineties by the FIRAS instrument onboard COBE. It was found to be consistent with a perfect blackbody spectrum, up to $<1e-4$ relative deviations. Today, there is growing interest in re-exploring in more depth this aspect of the CMB, which is complementary to the well-studied CMB anisotropies. In this talk I will briefly review the physics of CMB spectral distortions, and what signals are guaranteed in the standard cosmological model. Beyond this, I will show how CMB spectral distortions can probe dark matter interactions with standard particles, and could thus help shed light on its nature. Lastly, I will discuss the interplay between the CMB monopole temperature T_0 and cosmological parameters (in particular the Hubble constant H_0) inferred from CMB anisotropies.

Presenter: Prof. ALI-HAIMOUD, Yacine (NYU)