Contribution ID : **97**

Type : **not specified**

Building the high-redshift Hubble Diagram with quasars

martedì 30 maggio 2023 11:50 (25)

In recent years, quasars have shown to be standardizable candles, allowing us to extend the Hub- ble Diagram from the Supernovae Ia range (z ˜ 0-1.5) up to very high redshift (z ˜ 6), and therefore explore the expansion history of the Universe at previously uninvestigated epochs. This implemen- tation has shown the presence of a strong tension (>4σ) with a standard flat ΛCDM model, and indications in favor of Interacting Dark Sector alternative models. In this talk, I will first discuss the reliability of quasars as standard candles, focusing on possible sources of biases and systemat- ics and how we can address them to build a valid quasar sample for cosmology. I will then focus on the observed dispersion of the luminosities relation, describing its possible causes and if and how we can lower it to get more precise distance measurements. Finally, I will discuss the high-redshift tension with the standard flat ΛCDM model.

Presenter(s) : MATILDE SIGNORINI