



FZU

Institute of Physics
of the Czech
Academy of Sciences

Invitation

to the seminar of Division of Elementary Particle Physics of the
Institute of Physics of the Czech Academy of Sciences



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FZU – Institute of Physics

The Expanding Universe: Age, Tensions, and the Search for New Physics

Abstract: The expansion rate of the Universe, quantified by the Hubble constant H_0 , is one of the most fundamental parameters in cosmology. Yet, despite an era of increasingly precise observations, different methods for measuring H_0 continue to yield results that are difficult to reconcile within the standard cosmological model. Moreover, recent observations from the Dark Energy Spectroscopic Instrument (DESI) have provided intriguing hints that the accelerated expansion of the Universe may not be fully described by a cosmological constant, raising renewed questions about the validity of the Λ CDM paradigm and the physics driving cosmic acceleration. In this talk, I will review how the Hubble constant and the age of the Universe are measured, highlighting both the observational techniques and the assumptions that underlie their interpretation. I will discuss the current status of the Hubble tension, its connection to the broader framework of the Λ CDM model, and the extent to which current observational anomalies may point to unresolved systematic effects or to new physics beyond the standard model of cosmology.

When: Thursday, June 25, 2026 at 2PM

Where: Dvořák hall, FZU, Pod Vodárenskou věží 1, Prague

For more information, please see <https://indico.fzu.cz/event/342/>