



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



Dražen Glavan

Institute of Physics
of the Czech Academy of Sciences

Exploring Particle Physics and Quantum Gravity via Primordial Inflation

Abstract: Primordial inflation is a period of extraordinarily rapid accelerated expansion at the very beginning of our Universe. The energy scale associated with this expansion far exceeds anything achievable in Earth-based particle accelerators, making it a unique arena for exploring particle physics and even quantum gravity. The observational challenge lies in uncovering traces of this epoch in the observable Universe today. In this seminar I will focus on the theoretical side, and provide an overview of early Universe cosmology, focusing on the phenomenon of gravitational particle production in inflation and its consequences. Furthermore, I will discuss why quantum loop corrections are important in inflation, and what is their relevance for both particle physics and quantum gravity.

When: Thursday, January 16, 2025 at 2PM

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

For more information, please see <https://indico.fzu.cz/event/273/>

Roman Lysák

Jiří Hejbal