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Institute of Physics
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Invitation

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



Dr. Alexey Yushkov

FZU - Institute of Physics of the
Czech Academy of Sciences

Highlights from the Pierre Auger Observatory

Abstract: The Pierre Auger Observatory is the world's largest detector of ultrahigh-energy cosmic rays (UHECRs). The data, unrivaled in quality and statistics, collected by the observatory over nearly two decades greatly shaped the current state of UHECR physics. We review this impact using the most recent highlights from the Pierre Auger Observatory on the UHECR energy spectrum, mass composition, arrival directions, nuclear interactions, searches for neutral particles and multimessenger physics. However, progress in our understanding of the UHECR properties has led to a complex picture with new challenges for discovering the UHECR origins. On this account, we discuss the nearly completed upgrade of the Pierre Auger Observatory (dubbed AugerPrime) and its potential to address these challenges during the next decade.

When: Thursday, May 30, 2024 at 2PM

Where: Main conference hall, Institute of Physics, Na Slovance 2, Prague 8

For more information, please see <https://indico.fzu.cz/event/249/>