



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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Probing the Structures of Pyramids using Cosmic Ray Muon Tomography

Abstract: The pyramids of ancient Egypt and of pre-Hispanic Mesoamerica have fascinated people since the cultures that built them vanished into the annals of history. How were they built? What were they used for? Are there unknown internal substructures, perhaps hidden chambers that have yet to be discovered? Using the detector technology we developed for a particle physics experiment at Fermilab, we intend to perform non-invasive searches for hidden structures at the Great Pyramid of Khufu, in Egypt, and at the Temple of Kukulcán at Chichén Itzá. The apparatus will detect cosmic-ray muons produced high in the atmosphere that course through the pyramids to produce a tomographic image of their interiors. I will review the status of both projects, describe in detail the technique we intend to use, present recent simulation results and detector prototype results.

When: Wednesday, August 21, 2024 at 2PM

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

For more information, please see <https://indico.fzu.cz/event/256/>