Contribution ID: 57

Type: Poster

The project of the hybrid detector for the multicomponent studies of extensive air showers

Tuesday, 24 June 2025 11:30 (30 minutes)

At the present time, the studies of ultra-high energy cosmic rays can be carried out only at the ground-based facilities recording extensive air showers (EAS). The existing facilities for the cosmic ray research measure various components of extensive air showers using different detecting systems. Simultaneous detection of several EAS components using hybrid detectors will provide additional information on the energy spectrum and mass composition of cosmic rays, as well as the opportunities to test cosmic ray interaction models and, subsequently, to interpret the features of the experimental spectra of the measured EAS components. The report considers various design options for the planned hybrid detector and presents the preliminary results of its detecting part simulation.

Primary author: VOLKOV, Evgenii (National Research Nuclear University MEPhI)

Co-authors: DMITRIEVA, Anna (National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)); GROMUSHKIN, Dmitry (National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)); NIKOLAENKO, Roman; Mr KHOHLOV, Semen (National Research Nuclear University MEPhI); SHULZHENKO, Ivan (National Research Nuclear University MEPhI)

Presenter: VOLKOV, Evgenii (National Research Nuclear University MEPhI)

Session Classification: Coffee Break + Poster Session

Track Classification: Cosmic rays (nuclei, gammas, neutrinos) of very high energies (> 100 TeV)