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The Andes Large area PArticle detector for Cosmic ray physics and Astronomy (ALPACA) is a new air shower array experiment under construction in the Bolivian Andes at the altitude of 4740m. The aim of the experiment is to explore the southern gamma-ray sky beyond 100 TeV to reveal the yet unknown PeV cosmic-ray accelerators. The surface array consisting of 401 plastic scintillating counters covers $82,800\text{m}^2$ and the underground muon detector array of 3600m^2 area enables the identification of electromagnetic showers from hadronic shower background. A prototype surface array named ALPAQUITA has been running since 2023 and the construction of the underground muon detector will start in 2025. In this presentation, the status of the ALPACA project is reviewed in addition to the initial performance of ALPAQUITA for the hadronic cosmic-ray observations.

Collaboration(s)

The ALPACA Collaboration

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