

SURVEY OF THE PIERRE AUGER OBSERVATORY

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The question of the origin and nature of cosmic ray particles with energies exceeding the predicted GZK spectral cutoff is one of the present great challenges of astroparticle physics. The Pierre Auger Observatory (PAO), currently under construction in Province of Mendoza, Argentina, is a broadly-based international effort to explore the upper end of the cosmic ray energy spectrum. The PAO is the first experiment designed to work in a hybrid detection mode. The combination of two complementary detection techniques – water Cerenkov tank arrays overlooked by atmospheric fluorescence detectors – to observe extensive air showers guarantees high-quality and statistically significant data. An updated overview of the science prospects for the PAO is presented. The concept of the experiment as well as the current status is described.