Detecting Cosmic Rays at the Highest Energies with the Pierre Auger Observatory

DAVID PACKARD — Ultra-High Energy Cosmic Rays (UHECR) are the most energetic particles in the Universe. They are constantly bombarding the earth, creating “air-showers” in the atmosphere yielding billions of secondary particles that can reach the ground. Where these particles come from, what their composition is, and how they achieve such large energies is still an ongoing investigation. For this investigation it is important to distinguish the real UHECR events from laser shots that are used for detector calibration. In this poster I explain my research project focus on the correct selection of laser shots minimizing the rejection of real (and very valuable!) UHECR events.