

RMOSA

Rocky Mountain Section of the Optical Society of America

Joint RMOSA/IEEE-LEOS Seminar & Meeting

Thursday, March 19, 2009

Refreshments: 7:00 p.m. Seminar: 7:30 p.m.

Room 340, Koelbel Building, Leeds Business School, CU, Boulder

Recent Results and Status of The Pierre Auger Cosmic Ray Observatory



Dr. Pablo Miguel Baleo

Abstract: The Pierre Auger Collaboration goal is to measure the upper end of the cosmic ray spectrum ($E > 10^{19}$ eV) using two observatories, one located in Argentina (operational) and the other one in Colorado (in planning).

At those high energies the flux is extremely low (1 CR/km²/year) therefore each observatory will cover an area larger than 3.000 km², both in the Argentinean pampas and in the high plains of southeast Colorado.

There is not a conclusive model that can explain how the particles could be accelerated at those energies but recent experimental data has begun to shine light on the cosmic ray sources location. At the highest energies the arrival directions correlates with the spatial distribution of active galactic nuclei.

This talk will cover the measurement techniques, detector technology, the observatory status, and summarize the recent released results obtained with the southern detector as well as cover future research plans and status of the northern observatory.

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