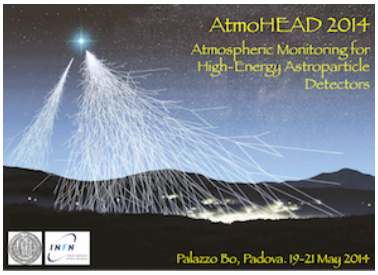

Contribution ID: **27** Type: **Oral**

ARCADE : description of the project and setup of the LIDAR/AMT system

Wednesday, 21 May 2014 10:15 (25 minutes)

The Atmospheric Research for Climate and Astroparticle DEtection (ARCADE) project is a 3 years project funded by MIUR, that aims to study the aerosol attenuation of UV light in atmosphere using multiple instruments and techniques, as those commonly used in the cosmic rays community: elastic Lidar, Raman Lidar, side-scattering measurements using a distant laser source. All measurements will be acquired on the same air mass at the same time, in semi-desertic site near Lamar, Colorado. For each instrument, multiple analysis techniques will be tested: the target is a better comprehension of the systematics and limits of applicability of each method. The system is composed by a Lidar (elastic+Raman), fully designed and built within this project, and by the Atmospheric Monitoring Telescope (AMT), a telescope for the detection of UV light owned by the Colorado School of Mines. The setup of the two instruments is described in detail here. The project is presently entering its third year : the Lidar system has been tested at the University of L'Aquila last February before shipment to the U.S., and the AMT has been recently reinstalled and tested in Lamar. During the next month the ARCADE group will work out the final setup of the Lidar+AMT system in Lamar and begin data acquisition.

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