

Abstract Submitted  
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**Upgrades to the LIDAR atmospheric monitoring detectors for the Pierre Auger Observatory**<sup>1</sup> MARIA BECKER, University of Nebraska, THE PIERRE AUGER COLLABORATION — The LIDAR (Light Detection and Ranging) systems at the Pierre Auger Cosmic Ray Observatory are being upgraded with near-field detectors to improve atmospheric measurements within the first kilometer in front of each LIDAR station. The upgrades have involved designing, simulating, constructing, and installing new LIDAR telescopes, which use small spherical mirrors and photomultiplier tubes to collect and measure back-scattered laser light. Data collected by the near-field detectors will provide a more complete atmospheric density profile between detected air showers and the fluorescence detectors (FDs), resulting in a more accurate calibration of the energy measurements of primary cosmic rays as determined by the FDs. The near-field LIDAR detector design and preliminary results of data analysis will be presented.

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Maria Becker  
University of Nebraska

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