

Abstract Submitted  
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**Cosmic Rays and Mountain Waves** JOHN MATTHEWS, CHARLES JUI, University of Utah — The High Resolution Fly’s Eye (HiRes), AUGER South, and the Telescope Array (TA) cosmic ray experiments are all located on high plateaus leeward (down-wind) of a major mountain range. The obstructed air motion generates down-slope winds and gravity waves (analogous to deep ocean waves) called “mountain waves” or “lee-waves”. The location of AUGER South in the southern Andes is a particularly active region for mountain waves. The waves generate an additional uncertainty which must either be measured or accounted for in the reconstruction of cosmic ray air showers. While the effect is significantly smaller in Utah – Home to HiRes and TA, the new Telescope Array experiment will be measuring this effect and taking it into account.

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