

Abstract Submitted
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Search for exotic particles in the High Resolution Fly's Eye data set. ADAM BLAKE, University of Utah, HIRES COLLABORATION — The High Resolution Fly's Eye detector operated from 1997 to 2006 observing cosmic rays with energies greater than $10^{17.5}$ eV. These cosmic rays have energies five orders of magnitude higher than achieved in accelerators. With information calculated using stereo reconstruction, the HiRes data can be examined for evidence of exotic particles. In particular, the speed a shower develops in the atmosphere can indicate non-relativistic particles with high energies (for example, strangelets). Showers that develop faster than the speed of light could indicate super luminal phenomena like tachyons. This process can also be used to check our understanding of our reconstruction programs and our data. I will discuss both the current status of the exotic particle search and the use of these methods to check our data.

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