

PROPERTIES OF EHE GAMMA-RAY INITIATED AIR SHOWERS AND THEIR SEARCH BY AGASA

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The measurements of the primary composition play a key role to solve the origin of the highest energy cosmic rays above 10^{19} eV. One of the most important parameters is a content of gamma-rays to discriminate the models. We have carried out a large number of simulations with various combinations of compositions, energies and interaction models. The simulation results imply that events with small or no muon detection in AGASA experiment are good candidates for gamma-ray primaries. The relation of muon density at 1000m as a function of primary energy is examined for individual observed events by comparing simulation results. In this paper, the result of the search for EHE gamma-ray candidate events and their estimated flux will be reported.