A SEARCH FOR HORIZONTAL AIR SHOWERS INDUCED BY EXTREMELY HIGH ENERGY COSMIC NEUTRINOS OBSERVED BY AKENO GIANT AIR SHOWER ARRAY

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We have made a systematic search for air shower events induced possibly by Extremely High Energy (EHE) cosmic neutrinos detected by the Akeno Giant Air Shower Array (AGASA). The lateral distribution of secondary shower particle densities and their shower front curvature are found to be closely related to atmospheric depth of the shower maximum which makes it possible to discriminate anomaly penetrating air shower events from the regular hadron induced air showers. We show the detection aperture for air showers induced by EHE neutrinos with energies greater than 10^{18} eV and obtain the experimental upper bound of EHE neutrino fluxes by the AGASA detector.