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Search for ultra-high energy photons and neutrinos using Telescope Array surface detector

We search for ultra-high energy photons by analyzing geometrical properties of shower fronts of events registered by the Telescope Array surface detector. By making use of an event-by-event statistical method, we derive upper limits on the absolute flux of primary photons with energies above 10^19, 10^19.5 and above 10^20 eV based on the three years data from Telescope Array surface detector (May 2008 - May 2011). We report the results of down-going neutrino search based on the analysis of very inclined events.

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