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Large scale Cosmic Rays Anisotropy as Observed With IceCube

RASHA ABBASI, University of Wisconsin — IceCube is a neutrino observatory under construction at the geographic South Pole. When completed it will comprise 80 strings deployed in the deep ice between 1,450 and 2,450 meters depth, each string containing 60 optical sensors. From April 2007 to March 2008 data were collected with 22 deployed strings. An analysis was performed on this data to measure large-scale cosmic-rays anisotropy with $\sim$4.3 billion events with a median cosmic ray energy of $\sim$ 14 TeV. A two-dimensional skymap is presented with an evidence of $\sim$ 0.1% large-scale anisotropy. This result bears implications to our understanding of cosmic rays, galactic magnetic field and possible origin for this anisotropy.

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