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Update on the Measurement of the Full-sky Anisotropy of Cosmic Rays with IceCube and HAWC

We present updated results on the joint analysis of the arrival direction distribution of Galactic cosmic rays by the High-Altitude Water Cherenkov (HAWC) Observatory (located at 19° N) and the IceCube Neutrino Observatory (located at 90° S). We describe the methods used to combine the IceCube and HAWC data, including an improved reconstruction method that can recover the amplitude of large-scale angular features that are attenuated by a limited field of view at mid latitudes. We also address the individual detector systematics and study the region of overlapping FoV between the two observatories. The combined analysis eliminates biases introduced by partial sky coverage that result in strong correlations between different multipole modes C_ℓ . The updated results include a combined sky map and an all-sky angular power spectrum in the overlapping energy range of the two experiments at around 10 TeV for angular scales down to $\sim 15^\circ$ using data collected by the HAWC Observatory and data from the IceCube Observatory.

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