Abstract Submitted for the APR20 Meeting of The American Physical Society

Recent Anisotropy Results from the Pierre Auger Observatory JOHN FARMER, University of Chicago, THE PIERRE AUGER COLLABORATION COLLABORATION — The Pierre Auger Observatory, located in Mendoza, Argentina, is the world's largest Ultra-High Energy Cosmic Ray (UHECR) observatory and has accumulated an unprecedented exposure to UHECRs (over 100,000 km² sr yr) throughout more than fifteen years of operation. In this contribution, we report on the results from recent searches for anisotropies in the arrival directions of UHECRs. We present the observation of a large-scale dipole in arrival directions and the evolution of its phase and amplitude over more than three decades of energy. We also discuss the results from several anisotropy studies at small and intermediate scales, including correlations with candidate sources and model-independent local overdensity searches.

John Farmer University of Chicago

Date submitted: 10 Jan 2020 Electronic form version 1.4