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**A Method for Constraining Galactic Magnetic Field Models Using Data from the Pierre Auger Observatory** MICHAEL SUTHERLAND, The Ohio State University, THE PIERRE AUGER COLLABORATION — Ultra-high energy cosmic rays are deflected by magnetic fields during propagation from their extra-galactic sources. However, these fields are poorly understood. We present a method for constraining the parameter space of galactic magnetic field models by comparing test statistics between backtracked data and isotropic expectations for assumed source and cosmic ray composition hypotheses. Different galactic magnetic field models are scanned using data from the Pierre Auger Observatory under various assumed source and composition hypotheses.

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