

Abstract

The aim of this project is to investigate the acceleration of ultra high energy cosmic ray (UHECR) nuclei within **jets** (relativistic outflows). The process of stochastic acceleration via scattering between shear flows within the jet will be investigated. **Jets** are well-motivated candidate sources of UHECR. I here aim to determine in more detail whether the inclusion of realistic physical scenarios allow sufficient acceleration rates to be obtained such that the nuclei do not disintegrate before accelerated to UHE.