

PROPAGATION OF PARTICLES FROM EHE COSMIC RAY SOURCES WITHIN THE GALA

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Recent analyses of the anisotropy of cosmic ray arrival directions around 10^{18} eV show significant excesses from the direction close to the Galactic Center and Cygnus region (Hayashida et al. 1999, Bellido et. al. 2000). Our aim is to check whether such anisotropy can be caused by single sources. We investigate propagation of protons and heavy nuclei in the Galactic regular and turbulent magnetic fields assuming that these particles are injected by discrete sources located at different distances from the Earth. Particles moving through the magnetic fields arrive to the Earth at different times. Therefore we consider injection of particles by steady sources (e.g. black hole in the Galactic Center) and evolving sources (e.g. a young pulsar). We show how fluxes and directions of particles arriving to the Earth depend on the type of the source and its location in the Galaxy.