



Contribution ID : 527

Type : **Poster**

Synchrotron radiation of cosmic ray electrons in the anomalous diffusion model

Wednesday, 4 July 2007 14:45 (0:00)

Abstract content

A new study of the cosmic ray electron and synchrotron spectra is presented. Anomalous diffusion model, proposed in our recent papers, is used to describe the particles propagation in fractal-like interstellar medium. The parameters defining the anomalous diffusion have been determined from the analysis of nuclear component. We carry out calculation of the synchrotron spectrum in the frequency range $\sim 2^7$ MHz – 2^7 GHz (corresponding to energies of electrons $\sim 0.2 - 6^7$ GeV). The computed electron and synchrotron spectra are in a good agreement with the experimental data.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 2 (OG part 1), pages 179-182

Primary author(s) : Dr. TYUMENTSEV, Alexander (Altai State University, Barnaul, Russia)

Co-author(s) : Prof. LAGUTIN, Anatoly (Altai State University, Barnaul, Russia); Mr. VOLKOV, Nikolay (Altai State University, Barnaul, Russia); Mr. KUZMIN, Alexander (Altai State University, Barnaul, Russia); Dr. BUGAYOV, V (Department of Physics, Washington University, St. Louis, USA)

Presenter(s) : Dr. BUGAYOV, V (Department of Physics, Washington University, St. Louis, USA)

Session Classification : Posters 1 + Coffee

Track Classification : OG.1.3