

THE VARIATIONS OF GALACTIC COSMIC RAYS

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ABSTRACT

The variation of galactic cosmic rays (CR) appears from uneven distribution of the sources of cosmic rays in Galaxy, diffusion of particles from Galaxy, flashes supernova, generation of particles of closely disposed neutron stars and also from the possible explosions in the center of Galaxy.

According to experimental data of neutron supermonitor of Samarkand State University, the analysis of daily variation of cosmic rays was made.

The analysis of daily variations showed that daily variation of cosmic rays has 3 harmonics: 24-hour, 12-hour and 8-hour. The investigators connect 12-hour harmonic of daily variations of CR with the gradient of density of CR in perpendicular direction of plane of ecliptic, i.e. with anisotropy of galactic cosmic rays.

The measuring of daily effect give sharp changes, i.e. the season changes of daily effect of CR appear during year, where summer changes of motion of intensity of galactic cosmic rays are very different from winter ones.

It is determined by many investigators [1] that during a year not only amplitude, but also the phase of daily variations changes. The maximum of 24-hour harmonic comes to the afternoon. Thus, the experimental data show that the conforming to the laws season change of daily motion of intensity of neutron components of cosmic rays exist in Samarkand.

It may be connected with uneven distribution of the sources of CR and diffusion of particles from Galaxy which can bring to the certain predominant stream of particles in some direction i.e. to some anisotropy can be found by method of measuring the starry daily variation of cosmic rays.

Thus, the experimental data show that the conforming to the laws season change of daily motion of intensity of neutron components of cosmic rays exist in Samarkand.

REFERENCES

1. L.I.Dorman. Experimental and theoretical principles of astrophysics of cosmic rays. Publ. house Science. . 1975.