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## **STATISTICAL ERROR OF FP EQUATION SOLUTION FOR COSMIC RAYS DISTRIBUTION IN THE HELIOSPHERE**

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Cosmic rays propagate the heliosphere from interstellar space till orbit of planets and Sun. The problem of their distribution, described by Fokker-Planck equation is solved by a couple of methods, one of the most used is the stochastic method based on Ito lemma. Presented work is focused on the estimation of statistical error of Fokker –Planck equation solution of the 1D forward stochastic method, for evaluation cosmic rays distribution in the heliosphere. Error dependence on simulation statistics and energy for 1AU is presented. The 1% precision criterium is defined as a function of solar wind velocity and diffusion coefficient value. The systematic error of the FP equation is also discussed.

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