

# **The inverse problem for galactic cosmic ray propagation and modulation in the Heliosphere**

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We solved the inverse problem for galactic cosmic ray (CR) propagation in the interplanetary space on the basis of convection-diffusion and drift models of CR modulation in the Heliosphere by using observation data of CR- solar activity hysteresis phenomenon (NM data for more than 4 solar cycles and satellite data for more than one solar cycle). We show that the solving of inverse problem gave possibility to estimate the relative role of CR convection-diffusion and drift modulations in dependence of particle energy, dimension of Heliosphere, effective diffusion coefficient, and as final result – determination of the part of radiation environment in the Heliosphere owed by galactic CR in dependence of particle energy, and its time variation during odd and even solar cycles.