INFLUENCE OF THE HELIOSPHERIC INTERFACE ON THE DISTRIBUTION OF INTERSTELLAR HYGROGEN ATOMS INSIDE THE HELIOSPHERE

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We have studied influence of the heliospheric interface on the distribution of interstellar H atoms inside the heliosphere. To do this we compare results of two kinetic models for motion's description of the interstellar H atoms in the heliosphere. The first model is the classical hot model that assumes Maxwellian distribution of H atoms far from the Sun. The second is the advanced model developed by us. This model takes into account e□ects of latitudinal variation of the solar wind and photoionization and solar cycle variations as well as the effects of heliospheric interface. Outer boundary in our model is a sphere of large radius that is close to the heliospheric termination shock distance in the upwind direction. The velocity distribution at this boundary involves disturbances of the heliospheric interface as they obtained in the frame of self-consistent model of the the solar wind interaction with the local interstellar medium. Comparison has shown that there is a significant influence of the heliospheric interface on distribution of H-atoms close to the Sun. We explore possibilities to apply the developed models for analyses of backscattered solar Lyman-alpha radiation.
This work is supported by ISSI in Bern, RFBR grants 07-02-01101-a, 06-02-72557, and "Dynastia" Foundation

heliospheric interface, hot model

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