Maxwell’s equations for the irregular heliolongitudinal solar wind velocity

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We study the structure of the heliospheric magnetic field based on the numerical solutions of Maxwell’s equations with the changeable solar wind velocity. System of Maxwell’s equations was solved numerically taking into account irregular heliolongitudinal dependence of the radial component of the solar wind velocity approximately corresponding to the experimental data. The proposed model of the interplanetary magnetic field is justified by the solution of the equation \( \text{div}B = 0 \) with the irregular solar wind velocity. We compare the results of numerical solutions of the Maxwell’s equations with the Parker’s standard model of the interplanetary magnetic field.