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# The role of drifts in the galactic cosmic ray transport

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We have earlier presented a 2D-axisymmetric model of the transport of galactic cosmic rays in the heliosphere. The model uses stochastic simulation techniques and allows us to study different aspects of cosmic ray modulation process separately. In addition to the basic modulation effects that the cosmic rays experience in the heliosphere (convection, adiabatic cooling by the solar wind, scattering on magnetic inhomogenities), our model includes also particle drift along the wavy heliospheric neutral sheet. Depending on the phase of the solar cycle, the neutral sheet extends to higher or lower latitudes. The reversal of the Sun's global magnetic field changes the drift direction.

Here we present first results from a refined modelling of the neutral sheet drift. The drift effect is shown to play an important role in the modulation process and should be included in the detailed calculations of cosmic ray transport. We visualize the drift effect by presenting the particles' streaming in the heliosphere for both positive and negative polarity periods.