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Analyses of heliospheric magnetic field data as input for ab initio modulation models

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Abstract content
   (Max 300 words)
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Various approaches can be followed to calculate the intensity of galactic cosmic rays throughout the heliosphere. In the ab initio approach, turbulence quantities calculated from magnetic field data, obtained by various spacecraft, are used as input for a turbulence transport model. In turn, output from the latter model is used as input for the diffusion tensor of the cosmic-ray transport equation. I will discuss the structure of the turbulence that we believe characterizes the turbulent solar wind. I will then show how spacecraft data support a composite slab and two-dimensional structure, highlighting the difficulties and uncertainties that arise when we have no other option than to use data obtained by a single spacecraft.

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