

Three-Dimensional Radiative Transfer with Polarization

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It is clear that the solar atmosphere is finely structured in all three spatial dimensions. To interpret observations from such an atmosphere, and to keep track of the radiative losses and gains in it, detailed radiative transfer is required that accounts for this complex structure. I will discuss the conditions under which multi-dimensional transfer effects become important and how to solve the transfer equations, including polarization, in complex geometries. I will illustrate these techniques with several examples.

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