
Atomic diffusion and radiative accelerations in stellar atmospheres

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Abstract

Atomic diffusion modifies elements distribution in the atmospheres of the main-sequence chemically peculiar A and B type stars. The main ingredient in evaluating diffusion effects in atmospheres is the radiative acceleration, which accounts for the momentum transfer from the photon flux to atoms. In most cases these stars have strong magnetic fields, which make radiation transfer calculations very heavy to achieve. I will present recent works in this subject, and will present the numerical tools (from calculation of polarized radiation transfer to time-dependent elements stratification) that are developed to describe the surface of these stars.

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