

GeoPlanet: Earth and Planetary Sciences

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Determination of Atmospheric Parameters of B-, A-, F- and G-Type Stars

Lectures from the School of Spectroscopic Data Analyses

This book introduces the theory of stellar atmospheres. Almost everything we know about stars is by analysis of the radiation coming from their atmospheres. Several aspects of astrophysics require accurate atmospheric parameters and abundances. Spectroscopy is one of the most powerful tools at an astronomer's disposal, allowing the determination of the fundamental parameters of stars: surface temperature, gravity, chemical composition, magnetic field, rotation and turbulence. These can be supplemented by distance measurements or pulsation parameters providing information about stellar interior and stellar evolution, otherwise unavailable.

The volume is based on lectures presented at the Wrocław's Spectroscopic School aimed at training young researchers in performing quantitative spectral analysis of low-, mid-, and high-resolution spectra of B, A, and F-type stars.

About the series

The GeoPlanet series is a forum for presenting the latest achievements in the Earth and space sciences. It is published by the GeoPlanet consortium (Earth and Planetary Research Centre) formed by five institutes affiliated with the Polish Academy of Sciences: Institute of Geophysics, Space Research Centre, Institute of Geological Sciences, and Institute of Oceanology, and Nicolaus Copernicus Astronomical Centre. Its main objective is a multidisciplinary approach to link scientific activities in various Earth-related fields (geophysics, geology, oceanology) with Solar System research. Our publications encompass topical monographs and selected conference proceedings, authored or edited by leading experts of international repute as well as by promising young scientists. The GeoPlanet series aims to provide the stimulus for new ideas and discoveries by reporting on the state of the art and laying the foundations for the future development of the Geosciences.

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