

Preface

During the past years, asteroseismology has greatly benefited from space missions such as *Kepler*, *CoRoT* and *MOST*. Data of unprecedented quality have challenged both observers and theorists, allowing us to improve our knowledge of stars significantly. However, during this process it became very clear that ground-based follow-up spectroscopy is crucial for an in-depth seismic study, as it provides information on different stellar parameters. Keeping this in mind, the ‘Spring School of Spectroscopic Data Analyses’ was organised by the Astronomical Institute of the University of Wrocław, Poland, from April 8 to 12, 2013.

The aim of this school was to provide researchers with an introduction to methods used to obtain the atmospheric parameters of B-, A-, F- and G-type stars. The lecture topics included the determination of atmospheric models and synthetic spectra, application of LTE and NLTE analysis and the analysis of high- and low-resolution data. The practical exercises undertaken during the workshop not only allowed the participants to learn how to compute atmospheric models and synthetic spectra, but also how to determine the atmospheric parameters (effective temperature, surface gravity, microturbulence, etc.), abundances of chemical elements and stellar rotation.

The school was an initiative of *Kepler* Asteroseismic Science Consortium (KASC) working group on main-sequence pulsators and was primarily intended for Ph.D. students and postdocs. The lectures presented here were given by experienced scientists who actively work on stellar atmospheres. We are confident that these lectures will provide an important tool for all students interested in stellar spectroscopy.

The school was sponsored by the Nicolaus Copernicus Astronomical Centre of the Polish Academy of Sciences, Polish Academy of Arts and Sciences, Astronomical Institute of the University of Wrocław and Copernicus Foundation for Polish Astronomy.

Ewa Niemczura
Barry Smalley
Wojtek Pych

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

Lectures from the School of Spectroscopic Data
Analyses

Niemczura, E.; Smalley, B.; Pych, W. (Eds.)

2014, XVI, 310 p. 128 illus., 59 illus. in color., Hardcover

ISBN: 978-3-319-06955-5