1. Record Nr. UNINA9910298370303321

Titolo	Determination of Atmospheric Parameters of B-, A-, F- and G-Type Stars : Lectures from the School of Spectroscopic Data Analyses / / edited by Ewa Niemczura, Barry Smalley, Wojtek Pych
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-06956-X
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (312 p.)
Collana	GeoPlanet: Earth and Planetary Sciences, , 2190-5193
Disciplina	523.86
Soggetti	Planetology Observations, Astronomical Astronomy—Observations Space sciences Astronomy, Observations and Techniques Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Series Editors; Advisory Board; Preface; Contents; Contributors; 1 Spring School of Spectroscopic Data Analyses: Determination of Atmospheric Parameters of B, A, F and G-type Stars---Introduction; 1 The Need for Accurate Atmospheric Parameters and Abundances from an Astrophysical Point of View; 2 Spectra as a Powerful Tool; 2.1 How to Choose the Ideal Spectrograph?; 3 KASC and the Characterisation of Asteroseismic Kepler Targets; 4 Motivation of the Spectroscopic School; 4.1 Available Spectra of Kepler Main Sequence Pulsators; 4.2 Outlook; References 2 Stellar Atmospheres: Basic Processes and Equations1 Introduction; 2 Basic Definitions; 2.1 Specific Intensity; 2.2 Flux; 2.3 K-integral; 3 Absorption Coefficient and Optical Depth; 4 Emission Coefficient; 5 Source Function and Its Physical Meaning; 5.1 Two Simple Cases; 5.2 Pure Isotropic Scattering; 5.3 Pure Absorption; 6 The Transfer Equation; 6.1 Elementary Solutions; 6.2 No Absorption, No Emission; 6.3 No Absorption, Only Emission; 6.4 No Emission, Only Absorption; 6.5

General Case: Absorption and Emission; 6.6 Special Case: Linear Source Function; 7 The Flux Integral
8 Computing a Model Atmosphere8.1 Basic Equations of Stellar Atmospheres; 8.2 A Pedagogical Example: The Grey Atmosphere; 9 Conclusions; References; 3 How to Build a Model of the Atmosphere and Spectrum; 1 Introduction; 2 Observational and Computational Pipelines; 3 Rotation; 4 Circumstellar and Interstellar Absorption; 5 Telluric Spectra; 6 Comparison to Observed Spectra; 7 Equation of State; 8 Convection and Microturbulent Velocity; References; 4 Model Atmosphere Codes: ATLAS12 and ATLAS9; 1 Introduction; 2 SYNTHE; 3 High Resolution Atlases; 4 Validating Spectrum Calculations; 5 ATLAS12
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6 Metal Line Diagnostics

Sommario/riassunto

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 Wrocaw'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.