

Modeling and Analysis of Eclipsing Binary Stars

The theory and design principles of PHOEBE

Andrej Prša

The fascinating and observationally spectacular world of binary stars is a vast and beautiful one that is a significant aspect of many astrophysical studies. *Modeling and Analysis of Eclipsing Binary Stars* gives a comprehensive analysis and description of the science behind eclipsing binaries. It also explores the assumptions and the difficulties that can occur when using the modeling principles of the classical codes as well as introducing PHOEBE (the PHysics Of Eclipsing BinariEs) – a modern suite for modeling binary stars. PHOEBE was conceived by Andrej Prša and his collaborators, and has become one of the standard tools in the eclipsing binary field.

This book provides a constructive and intriguing contribution to the expansion of the modeling approaches of binaries and our subsequent understanding of the processes that govern stellar evolution. Aimed at a wide audience, Prša provides new astronomers with the knowledge and background of eclipsing binary stars as well as facilitating researchers a better understanding of the intricate details behind eclipsing binary models.

About the author

Andrej Prša is a Slovenian astrophysicist who obtained his PhD in physics from the University of Ljubljana in 2005. The principal result of his doctoral thesis was PHOEBE.



Stars and stellar physics



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