


# ***Stellar Atmospheres***

- ❑ The Description of the Radiation Field
- ❑ Stellar Opacity
- ❑ Radiative Transfer
- ❑ The Structure of Spectral Lines

# Radiation Transfer And Stellar Atmospheres

**National Institute of Standards and  
Technology (U.S.)**



## **Radiation Transfer And Stellar Atmospheres:**

**Radiation Transfer and Stellar Atmospheres** Thomas L. Swihart, 1981      Radiative Transfer in Stellar and Planetary Atmospheres Lucio Crivellari, Sergio Simón-Díaz, María Jesús Arévalo, 2020-01-09 Radiative transfer is essential for obtaining information from the spectra of astrophysical objects This volume provides an overview of the physical and mathematical background of radiative transfer and its applications to stellar and planetary atmospheres It covers the phenomenology and physics of early type and late type stars as well as ultra cool dwarf stars and extrasolar planets Importantly it provides a bridge between classical radiative transfer and stellar atmosphere modelling and novel approaches from both theoretical and computational standpoints With new fields of application and a dramatic improvement in both observational and computational facilities it also discusses the future outlook for the field Chapters are written by eminent researchers from across the astronomical disciplines where radiative transfer is employed Using the most recent observations this is a go to resource for graduate students and researchers in astrophysics

**Theory of Stellar Atmospheres** Ivan Hubeny, Dimitri Mihalas, 2014-10-26 The most authoritative synthesis of the quantitative spectroscopic analysis of stellar atmospheres This book provides an in depth and self contained treatment of the latest advances achieved in quantitative spectroscopic analyses of the observable outer layers of stars and similar objects Written by two leading researchers in the field it presents a comprehensive account of both the physical foundations and numerical methods of such analyses The book is ideal for astronomers who want to acquire deeper insight into the physical foundations of the theory of stellar atmospheres or who want to learn about modern computational techniques for treating radiative transfer in non equilibrium situations It can also serve as a rigorous yet accessible introduction to the discipline for graduate students Provides a comprehensive up to date account of the field Covers computational methods as well as the underlying physics Serves as an ideal reference book for researchers and a rigorous yet accessible textbook for graduate students An online illustration package is available to professors at [press.princeton.edu](http://press.princeton.edu)

**Transfer of Radiation in Stellar Atmospheres** Cornelis Jager, A. B. Underhill, 1963

**Radiative Transfer in Stellar Atmospheres** Robert J. Rutten, Sterrekundig Instituut Utrecht, 1995      **Non-LTE Radiative Transfer in the Atmosphere** Manuel López-Puertas, F. W. Taylor, 2001

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**Radiative Transfer in Extended Stellar Atmospheres** Robert DeWitt Chapman, 1964  
To investigate the transfer of radiation in extended stellar atmospheres the transfer equation is solved for an infinite spherically symmetric medium by expanding the intensity in terms of Legendre polynomials The nature of the solutions is discussed in detail A literature survey and a presentation of the basic theory are included Author  
**Nuclear Science Abstracts**, 1976 **Publications** United States. National Bureau of Standards, 1971 NBS Special Publication, 1968

**Publications of the National Institute of Standards and Technology ... Catalog** National Institute of Standards and Technology (U.S.), 1971 **Publications of the National Bureau of Standards** United States. National Bureau of Standards, 1970 *Scientific and Technical Aerospace Reports*, 1967 *NASA Thesaurus*, 1967 **Publications of the National Bureau of Standards, 1970** Betty L. Oberholtzer, 1971 Publications of the National Bureau of Standards ...

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Division,1978

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In a fast-paced world fueled by information and interconnectivity, the spellbinding force of linguistics has acquired newfound prominence. Its capacity to evoke emotions, stimulate contemplation, and stimulate metamorphosis is truly astonishing. Within the pages of "**Radiation Transfer And Stellar Atmospheres**," an enthralling opus penned by a highly acclaimed wordsmith, readers embark on an immersive expedition to unravel the intricate significance of language and its indelible imprint on our lives. Throughout this assessment, we shall delve into the book's central motifs, appraise its distinctive narrative style, and gauge its overarching influence on the minds of its readers.

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