
The intention of the series Geophysics and Astrophysics Monographs is to provide up-to-date accounts of well-defined areas of research, including sufficient basic material to ensure that a volume remains useful for a long period of time. Dr. Priest has succeeded in producing a monograph, Solar Magnetohydrodynamics, which ably satisfies these aims. Although several books have given good accounts of solar observations and the spectroscopic techniques through which modelling is carried out, there has been an absence of a suitable text for the important next step—the investigation of the physical processes which determine the atmospheric structure and energy balance. Solar physics has reached a stage where it is not possible to progress without a sound understanding of how plasmas and magnetic fields interact. Plasma physics, as such, is rarely included in undergraduate courses, and although good specialist graduate texts exist, there has been a need for a book that sets out those aspects which are particularly relevant in solar and stellar coronae.

This monograph has developed from a postgraduate course given by Dr. Priest over a number of years. As a result the core of the book, composed of the chapters on the basic physics of magnetohydrodynamics, magnetohydrostatics and waves, will serve as a fundamental reference for a substantial time ahead. Later chapters are more concerned with applications, for example to coronal heating, sunspots, prominences and the stability of magnetically controlled structures such as active-region loops. These chapters naturally reflect our current state of knowledge and further research will no doubt eventually reveal which of the many processes discussed are the most relevant. There are also useful chapters on more specialized topics, such as dynamo theory, solar flares and the solar wind, which serve as good introductions to areas which could be the subjects of monographs in their own rights. Dr. Priest has made a noble effort to set the scene with an introductory description of solar phenomena, but here his touch is less sure than when dealing with his own research areas. Nevertheless, the chapter adds to the overall value of the book. There are several places, for example the discussion of the energy balance in the transition region, where one could take issue with the view presented, but that is to be expected when work is still in progress.

This volume should be considered as an essential reference for all those working in solar physics and in the rapidly expanding field of stellar coronae. In spite of the expense your library should be persuaded to acquire it.—CAROLE JORDAN.


To those acquainted with the regular appearances of Mr. Moore on television and radio, the present offering will come as no surprise. It is a full-blooded swipe at those prophets of doom who have sought the imminent end of the world at the hands of some celestial catastrophe.

Reading rather like the transcripts of a series of after-dinner talks by our most celebrated professional amateur astronomer, the eleven chapters