

review of the contemporary knowledge on its nature including the peculiar combination of orbital and rotational motions (resonances) and their implementations; a description of the physical and morphological surface features; an explanation of the likely origin of the relief patterns; and properties of the interior as a 'thin-shelled iron sphere' incorporating the geological history of the planet.

The book combines a good scientific approach with a popular level. Among the many high-quality illustrations are several previously unpublished pictures of the surface of Mercury. I believe that this book will undoubtedly be useful to scholars and students and to all those who exhibit interest in planetary studies and space research.

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R. Viotti, A. Vittone, and M. Friedjung (eds.), *Physics of Formation of Fe II Lines Outside LTE*, Proceedings of the 94th colloquium of the International Astronomical Union, held in Anacapri, Capri Island, Italy, 4–8 July 1986, D. Reidel Publishing Company, Dordrecht, Holland, xiii + 349 pp., 1988, price: (hard cover) Dfl. 158.00/US \$74.00/U.K. £48.95.

This volume presents the proceedings from an unusual IAU Colloquium which did not focus on a specific type of object or observational technique, but on a diagnostic used by highly different researchers in widely different fields of astrophysics, ranging from the laboratory via the Sun and enigmatic Eta Carinae to the distant quasars.

Although the attendance was rather small for so wide a range of subject matter, the volume nevertheless contains a good overview of the various problems met by researchers employing Fe II lines as spectral diagnostics. These problems differ much between objects (certainly one cannot speak of 'the' Fe II problem), and therefore the contributions of most general interest are those by Johansson and by Kurucz, who provide the atomica data required as input by all.

Thus, the volume should certainly be present in astrophysics and many physics libraries, and for many astrophysicists it will provide a good review or two on areas within their interest. The volume is of usual Reidel standard and price (albeit perhaps the last IAU volume published under that name); this reviewer regrets that it took unusually long to appear, and that the discussions have not been included.

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