BOOK REVIEWS

L. Crivellari, I. Hubený, and D. G. Hummer (eds.), *Stellar Atmospheres beyond Classical Models*, NATO ASI Series, Series C: Mathematical and Physical Sciences – Vol. 341, Kluwer Academic Publishers, Dordrecht, The Netherlands, 461 pp., hardbound Dfl 230.00, ISBN 0–7923–1343.

This book contains the Proceedings of a NATO Advanced Research Workshop held in Trieste, Italy, September 3–7, 1990. The first comment that comes to my mind is that it lives up to the expectations of its title. To somebody like this reviewer, whose interests have gradually shifted away from stellar and solar atmospheric modelling, the reviews and many of the remaining articles contained in this volume serve as an excellent update on the 'new wave' of developments in stellar theory. The book is divided into three sections. Section I deals with new computational methods currently employed in stellar atmosphere calculations, ending with a comparative summary by Hummer and Hubený of those codes that are currently available. Section II can be adequately summarized by the title of Mihalas' review, as 'the quest for physical realism in stellar atmospheric modelling', where I particularly liked reading articles on multidimensional radiative transfer. Finally, Section III deals with spectroscopic diagnostics as related to testing model atmospheres, ranging from hot stars to cool sunspots.

Overall, I can say that I have really enjoyed reading this book, as a very good educational experience. For this reason, I think that these proceedings will be very valuable to anybody interested in stellar atmospheres theory and observations.

The University of Alabama in Huntsville

M. E. MACHADO

J. T. Schmelz and J. C. Brown (eds.), *The Sun: A Laboratory for Astrophysics*, NATO ASI Series, Series C: Mathematical and Physical Sciences – Vol. 373, Kluwer Academic Publishers, Dordrecht, The Netherlands, XIII + 617 pp., 1992, hard cover Dfl. 395,–/US $234,–/UK £139.00, ISBN 0–7923–1811–0.

This book contains the proceedings of the NATO Advanced Study Institute on *The Sun: A Laboratory for Astrophysics*, held at Crieff, Scotland, June 16–29, 1991.

The main goal of this Advanced Study Institute was to sum up the present knowledge on the structure and dynamics of the Sun and to prepare, as well as inspire, the young solar researchers for the scientific tasks they will meet in the late 90s, when the sophisticated new space-born instrumentation like Yohkoh, Ulysses, SOHO, GRANAT, Coronas, as well as new ground-based optical facilities such as LEST and Gong will give a new set of high-quality data.

The lectures read at the ASI are organized in this book in four parts.