



The Cambridge Encyclopaedia of Stars

by James B. Kaler

Cambridge University Press, 2006. ISBN 0-521-81803-6. Pp ix + 324, £35.00 (hbk).

This is a splendid book if you're interested in the building blocks of galaxies, namely stars, and how they are born, evolve and die.

It is written in a clear style, in which respect it is a typical Kaler book, and the subject order leads one through the book in a structured way. James Kaler has written a number of books on stars, one of which, *Stars and their Spectra*, has been my bible on this subject for many years. Kaler is Prof Emeritus of Astronomy at the University of Illinois and also an international author of some repute. He is keen on bringing astronomy to a greater number of people and has an asteroid named after him for this work.

The book commences with a number of sections on the fundamentals including magnitudes and distances, before moving on to spectra and the gross properties of stars. As the majority of stars are to be found in doubles, multiples and/or clusters or associations these are covered next before a section on the many types of variable star.

The latter sections of the book deal with star formation and evolution. Finally, there are five appendices, suggestions for further reading and an adequate index.

More complex issues are dealt with in separate boxes, as seems popular nowadays, and so can be skipped if you don't wish to delve into a particular topic. The book is extensively



referenced throughout to both later and earlier explanations, which is most helpful and not intrusive. However, on p.196 Kaler mentions g-mode and p-mode but gives no formal definition as to what is meant by these terms other than gravity and pressure. Each subject is treated to its own sub-section as, for example, the section on star clusters and associations is divided into an introduction, forms, open clusters, associations,

and finally globular clusters.

The book is very up to date as the outburst of the recurrent nova RS Ophiuchi in 2006 receives a mention (p.158). Errors are few and far between and the only ones I noted were typographical, such as the photograph of Gemini (p.8) (which is also poorly reproduced) and Ursa Major (p.9) which are inverted. I also felt that the discussions on binary star evolution were a little wanting and could do with more explanation.

That said, this is an excellent grounding in stellar evolution which can be read with little or no prior knowledge of the subject, although you may have to put in a little work to get the most out of it. Altogether *The Cambridge Encyclopaedia of Stars* is an excellent read, and highly recommended.

Roger Pickard

Roger Pickard is Director of the BAA Variable Star Section, with a special interest in stellar evolution.

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