captures of comets by Jupiter by an example which is physically impossible. Another shortcoming is the lack of uniformity of the nomenclature. The same object can be found under a different designation in each of the four tables where it appears: as Comet Encke 1967 XIII in Table 3.2, P/Encke in Table 4.4, Encke in Table 4.5, and 1957c (Encke) in Table 6.1; moreover, it is listed separately as 1786 A.D., 1795 A.D., etc., in the Comet Index on p. 240. Part III supplements Part II by selected results obtained on the brightest comets of the past decade, and by a good overview of the problems of future spacecraft missions to comets.

Part IV deals in an attractive way with comet danger and comet lore.

While Parts I and IV represent an exciting reading even for laymen, Parts II and III require a certain background in mathematics and physics. These will find their main use among specialists from other research areas, rather than as an introduction for the beginners and amateurs. The suitability of the book as a dependable source of information is amplified by a wealth of formulae, diagrams and photographs, and by a 10-page list of suggested readings, arranged by topics.

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The heavy volume consists of 91 contributions: 24 invited papers and 67 contributed papers. The diversity is much larger than the title suggests: nearly half of the papers and nearly 40 percent of the pages are devoted to 'Observed Activity in Related Objects' which include Sun (solar flares), T Tau stars, RS CVn and contact binaries. Indeed the volume covers a very broad range of activity in late-type stars. The emphasis is on observations and their immediate interpretation; 20 percent of the pages cover theoretical aspects.

The quality of the review papers ranges from good to excellent. Of the 67 contributed papers about 10 papers (about 25 pages) convey no information – they are too short or otherwise incomprehensible; some lack essential figures or references. The quality of the remaining papers scatters between acceptable and excellent.

The editors have recovered most of the discussions from the magnetic tape, which adds many pertinent comments to the big mound of information. There are overlaps between the papers. The book seems too unwieldy for most of the undergraduate students working their way into astrophysics. However, for research workers and for senior students starting research it is a storehouse of data, ideas and references. A subject index helps to find the shelves.

This book on this rapidly growing branch of astrophysics is most welcome; it is a nice complement to J. O. Stenflo (ed.): 'Solar and Stellar Magnetic Fields: Origins and Coronal Effects' (IAU Symposium No. 102).

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C. ZWAAN


The book is a very successful presentation of the latest discoveries in astronomy; it is advisable to amateur astronomers or to everyone who looks for extensive information on modern astronomy at a popular level. The reader gets a brief historical review on technical developments in optical, infrared, radio, ultraviolet, X-ray and gamma-ray astronomy completed with basic descriptions of the techniques used for present day observations. But the main emphasis is put on beautiful pictures presenting some of the most interesting observational results. Since the first X-ray survey of the sky by the UHURU satellite plenty of space experiments like OAO, HEAO, IRAS and others have revealed fascinating data in all spectral regions. Transformed by new imaging techniques these data show details in the far universe never seen before. The text is easily readable and the pictures (sometimes resembling artistic paintings) will attract everybody who opens the book.

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