Comets II

by Michael C. Festou, Uwe Keller & Harold A. Weaver (Eds.)

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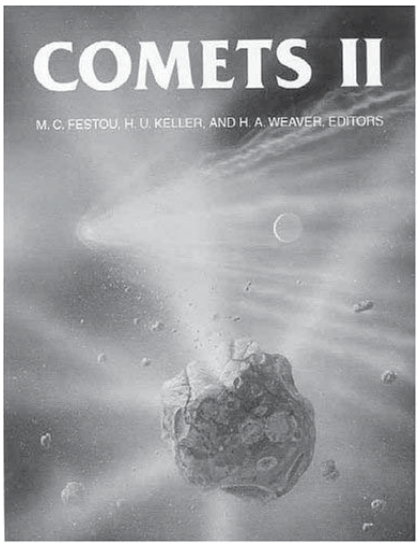

This weighty volume is a compendium of nearly forty papers with approaching 100 authors, summarising the latest research (up to 2004) on all aspects of comets. The field is a rapidly changing one, and some aspects are already dated. The papers are generally written at a technical level, however there are usually opening and closing summaries at a more general level. There are two overview chapters, followed by sections on the formation of comets in the solar nebula, on comet orbits and the Oort cloud, on the nucleus, on the coma, on dust and plasma, and a concluding section on interrelations between comets and other objects. There is an extensive glossary and a short section of colour plates, though not all those selected warrant colour. There are extensive references, but inevitably internet related ones quickly become out of date. An interesting example with lists of comets has moved to **http://www.physics.ucf.edu/~yfernandez/cometlist.html**.

There are many nuggets of interest to the amateur astronomer, and I will aim to include some of them in the pages of the Comet Section newsletter and the annual cometary reviews. One piece of advice for example is that astrometrists should measure the position of the brightest pixel, rather than the centre of light. Another is to watch for coma arclets in images, as they are likely to be indicators that a splitting event has taken place. The visual light curves of periodic comets which show asymmetry with respect to perihelion may help to elucidate their non-gravitational orbital parameters.

One gripe that I do have with the book is the inconsistency in comet names. The IAU has adopted a simple and rational scheme, however many of these authors are reluctant to use it. Indeed in one of the opening reviews the authors seem to take perverse delight in using as many different styles as possible.

The volume is not one to read from cover to cover, but more to dip into when carrying out research on comets. The index is adequate to find some specific references, but it is probably wiser to dip into the appropriate chapters. In short whilst this book is packed full of information, it is one that is probably best consulted in the library.

Jonathan Shanklin

The Director of the Comet Section took this volume with him on his latest visit to Antarctica, and made use of it whilst working on the Section report on the comets of 1999 and 2000.