

Meteor showers and their parent comets

by Peter Jenniskens

Cambridge University Press, 2006. ISBN 0-521-85349-4. Pp xi + 790, £85.00 (hbk).

I saw my first meteor outburst on an enforced return from the Antarctic to the UK by sea, when on 1982 April 21/22 there was a strong Lyrid display from comet Thatcher over the South Atlantic. This was somewhat prophetic! On a subsequent journey to the Antarctic I was lucky enough to obtain a window seat for the night of the Leonid fireballs. Both of these events were surprises, but thanks to developments in theory and computing power over the last decade it is now possible to make predictions for meteor outbursts with reasonable accuracy, though there are still likely to be surprises, when filaments from unknown comets intersect the Earth.

This well illustrated book recounts the development of the theories of the evolution of meteoroids from comets and their subsequent orbital dynamics, and is interspersed with personal accounts of the author's travels, in a curious mix of pro-am. This makes it rather schizophrenic and it isn't entirely clear whether the book is aimed at the budding professional or the educated amateur. It is however clearly a labour of love, from a professional astronomer who is also a dedicated amateur observer. The prose has occasional moments which demonstrate that English is not Peter's first language, and I fear that CUP did not allow sufficient time for technical proof and copy editing. The book

would clearly have benefited from a read through by someone familiar with the subject matter, although the errors do not significantly detract from the work. As an example Figure 9.5 shows a decline in the absolute magnitude of comet 2P/Encke since its discovery, however the points given for the last 50 years are all the same. Whilst BAA data shows that this is approximately the case, there is variation from apparition to apparition, with perhaps a slight brightening over this period. Also (as often seems to be the case) I take to task the naming convention for comets that has been used, which diverges from that given in the definitive SAO Catalogue of Cometary Orbits.

The tour de force of the book is the extensive set of tables, which includes predictions for expected meteor outbursts, and these will be of great benefit to the amateur observer. Given the British weather, which for many observers has just written off the two major events of 2006 December, they are almost a compulsory aid to planning when and where to take your next astronomical holiday.

Jonathan Shanklin

Jon Shanklin is a keen meteor observer, and hopes to benefit from the predictions in the book to boost his tally of meteor outbursts. As Director of the Comet Section he is also looking forward to one of the unknown long period comets suggested as parent bodies for some meteor showers returning in a really close encounter with the Earth, but preferably not too close....

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