account, he sets out to uncover the perceptual processes which occurred and explain the conclusions which were drawn by the players in terms of the whole complex of human physiology and intellectual behaviour. Both his discussion of history and his presentation of the technical aspects of telescope performance in a turbulent atmosphere I found to be authoritative. I would recommend the book to all students of science, in whatever discipline, since it illustrates so clearly how coloured by human nature genuine scientific investigation can be. As an account of our accumulating knowledge of the Solar System, it is an important and accessible contribution. — Bob Fosbury.


Subramanyan Chandrasekhar is one of the most distinguished astrophysicists in the relatively short history of the subject and the appearance of his selected papers is obviously of great interest. Because he has summed up his contributions to a succession of research fields in monographs, which have contained or summarized many of his published papers, he has concentrated in the present selection on papers which are not in his books but which contain material of historical interest. Inevitably this means that this series of volumes will not give a completely rounded view of his achievements. The first volume is concerned with his earliest research interests and the papers all appeared when he was aged between 19 and 32.

It is very instructive to look at attempts to obtain a good understanding of the structure and evolution of stars at a time when there were no electronic computers. Thus we have a series of papers on integral properties of stars in which Chandrasekhar discusses what constraints can be placed on such quantities as the central pressure and the internal opacity of a star from knowledge of its surface properties. The major interest in this volume is his study of degenerate matter and white dwarf stars. It is interesting to see that the expression for the Chandrasekhar limiting mass appeared first as 0.91M☉, because the mean molecular weight of stellar material was then thought to be 2.5. In a 1932 paper, in which he showed that a star in which radiation pressure is important could not become degenerate and avoid collapse, he tentatively feels towards the concept of a black hole with the remark “Given an enclosure containing electrons and atomic nuclei, what happens if we go on compressing the material indefinitely?”.

Other groups of papers are his pioneering work on rotationally and tidally distorted polytropes, early work on the structure of stellar atmospheres, including particularly extended spherical atmospheres and planetary nebulae, and some papers on stellar evolution, which were written after his book on stellar structure appeared. The latter includes his important work on stars with isothermal cores including the discussion of the Schönberg-Chandrasekhar limit, which leads to rapid post-main-sequence evolution in massive stars.

In this volume we get some feel for Chandrasekhar’s interactions with Eddington and Milne. He has already written a short book about Eddington. His relations with Milne were obviously very important, as much of his early work was stimulated by Milne, but at the same time he was having important disagreements with Milne even when he was still a research student. I should be very interested to learn more about this. — R. J. Tayler.