presented in this book. I recommend this book as good bedtime reading for anyone who wants to get a feel for the problems of cometary research.

To provide the background necessary for appreciation of the technological developments, Hirsh discusses many of the problems and ideas central to X-ray astronomy. However, this book is not designed to be an introduction to X-ray astronomy. This is a book for those interested in the history, politics, and sociology of science, and, as such, it unravels a fascinating tale.

‘Glimpsing an Invisible Universe’

Reviewed by R. P. Norris.

The subtitle of this slim volume, ‘The emergence of X-ray astronomy’, is a very much more apt description of the book than the main title, which would be more suitable for an overall review of X-ray astronomy. The book does not purport to be a review of X-ray astronomy, but instead addresses the topic of how X-ray astronomy grew from a small specialist discipline to ‘big science’. In doing so, it concentrates almost exclusively on work in the United States, barely mentioning the work done by non-American groups. On the other hand, to those of us who are mystified by the complexities of US science funding, it provides some fascinating insights, and reveals a great deal about the way in which pure research may be funded by the private sector.

Hirsh, a historian of science, may perhaps disillusion those who see the development of scientific technique as an inexorable march guided by the availability of technology and the demands of the scientific community. Instead, Hirsh attributes the rapid growth of X-ray astronomy in the sixties to the heavy US funding of space sciences following the blow to their prestige by the launch of Sputnik. Subsequent funding of X-ray astronomy continued unhindered while the subject remained relatively small by space budget standards. The emerging prominence of X-ray astronomy in the seventies, however, exposed it to public scrutiny at just the time when science was being blamed for many of the ills of the twentieth century. Despite the consequent cuts in X-ray astronomy funding, the subject has since amply demonstrated its resilience by the launch of spacecraft such as the Einstein observatory. I was disappointed that Hirsh says little about the success of the X-ray telescopes of the last decade. Indeed, little is said about any of the ‘third phase’ of X-ray astronomy, in which X-ray astronomers have set foot in the fields of conventional astronomy (which must now include radio-astronomy).

The organisation of the book into different aspects of its subject, rather than chronological order, occasionally produces confusion, and makes it difficult to assess the political environment of a particular technological innovation. However, this is a minor criticism when viewed against the difficulty of compiling so many disparate viewpoints into one book, and Hirsh has undoubtedly been largely successful in this task.

‘Interferometry’

Reviewed by J. Davis.

The first edition of Interferometry by W. H. Steel was published in 1967 and was widely accepted as an important sourcebook on the theory and applications of interferometry. Since the first edition was published the field of interferometry has undergone a rejuvenation brought about primarily by the remarkable increase in laser techniques and applications. In preparing the second edition of his book, Dr. Steel has taken the opportunity to extensively revise and enlarge the text to include the new developments.

The author’s stated aim in Interferometry is to present a theory of interferometry and a description of its techniques that are valid for all applications and in all regions of the spectrum where interferometers are used. The author admitted in the first edition that the treatment is biased towards applications with visible light and reflects his own interests. In the second edition the bias is greater with the sections on microwave and radio interferometry reduced to make way for new material.

At the time when the first edition was written most interferometers used light sources that were far from coherent and the author chose to emphasize this by giving theory only in terms of coherence functions. The traditional treatment in terms of coherent sources and simple waves was not included. In the second edition a new chapter on ‘Wave Interference’ has been added because, as the author puts it, the use of laser sources has given it practical relevance. Two other new chapters have been added, one on ‘Holograms’ and one on ‘Hologram and Speckle Interferometry’. The chapter on ‘Interference Imagery’ has also been extensively revised, particularly the section on Stellar Diameters, and this reflects the developments and increasing interest of astronomers in stellar interferometry.

The subject of interferometry has expanded to the point where it is impossible for all applications to be covered in detail in a single volume. However, ‘Interferometry’ includes an impressive and valuable list of some 530 references and this more than compensates for those application sections where the author has chosen to give only a somewhat cryptic discussion.

‘Interferometry’ can be highly recommended to anyone working or thinking of working in the field of interferometry.