samples. In other cases, the sample actually came to the instrument, as with the dust-impact mass spectrometers carried by *Vega*, *Giotto*, and *Helios*, where the instruments collided with cometary dust particles.

For most of these techniques the theoretical background is given, together with specific applications and detailed descriptions of actual spacecraft instruments. The book is well produced, and of uniformly high quality; a slight reservation is that, no doubt for reasons of economy, all the colour pictures are grouped together in the middle, with only black-and-white replicas placed in context. However, the illustrations are very good, and the book can be highly recommended as a timely and valuable reference work that brings together in one place a large amount of useful information. — JOHN GEAKE.


This publication contains the proceedings for the meeting in Palermo, in 1991, celebrating the bicentennial of the observatory there, and commemorating the passing of one of the great figures in that field, G. S. Vaiana.

The first 20 pages are taken up with the text of the memorial lecture (given by Riccardo Giacconi), listing some of Vaiana’s major contributions to the field since the early, ground-breaking days, and descriptions of the history of solar and (later) active-star research, including Palermo Observatory’s place in this work. This latter text includes some stunning woodcuts of the observations of solar prominences and sunspots by Tacchini in 1871 and 1872. This section provides an unusual and welcome overture to the more modern work which follows.

The next section, devoted to the understanding of the solar corona, concentrates on the new technology of, for example, multilayer optics for X-ray and EUV observations, and the new missions *NIXT* and *Yohkoh*. The *SXT* imaging from the latter is of comparable quality and detail to Tacchini’s optical observations 120 year earlier!

The following pair of sessions continue the historical bent of the book by presenting the understanding of stellar coronae both prior to and after observations from *ROSAT*, making an interesting comparison in itself. The section titled ‘Other Observations’ includes just about every aspect of the investigation of stellar coronae one could ever wish to read about, and the final section concerns the theoretical understanding of coronal physics.

This book is unusual in that it simultaneously manages to cover a very broad swathe of subjects in a pleasing amount of detail; any individual reader should find a lot to interest them, rather than one or two items, and the triple-index system (by author, subject, and star name) is nicely comprehensive. The discussions are, unfortunately, left to the end of each broad section rather than appearing more appropriately after each paper. This involves a certain amount of to-ing and fro-ing between a presentation and the relevant discussion, but, in the interests of saving trees, this is not a serious complaint.

A more serious problem is the prohibitively high cost of this publication, especially considering that there are no colour plates at all, and that it was probably assembled from camera-ready layouts. I would not hesitate to recommend it to anyone currently in the field, or to postgraduates starting in the field, except that it would set them back several weeks’ rent. — DAVE WOONACOTT.