instant success and although now out of print commands a significant price on the second-hand market. Thus, the appearance of a second edition is to be welcomed. First of all it must be said this is not a guide that you would take into the field but a reference book for the home. The second edition has been considerably updated with new images for many of the objects and the astrophysical data updated to include distances from *Gaia* DR3 along with other information that has come to light since the publication of the first edition. Although the book has more pages than the first it is also thinner indicating a different type of paper. It is, however, still very heavy.

The book contains much useful information on Messier himself and the telescopes he used, as well as an English translation of his catalogue. The book also contains some information on the forerunners to his catalogue and the work that contemporaries were doing in cataloguing nebulae. There is also a brief section on the astrophysics of the types of objects found in the Messier catalogue. The main part of the book is ordered by the Messier catalogue number and the section on each object contains information on its history, what is known about it, and observations of it. Note that there are no charts to show where they are, hence it not being a field guide. The book could be combined with Stephen O'Meara's Messier book from the CUP *Deep Sky Field Guides* series to get more information, although much of the information in that book is now out of date. The reproduction of the drawings and images in the *Atlas* is first class which adds to the lustre of the book.

I found very few issues with the book and only a couple of nit-picking errors where the discoverer of M 1 was called Charles Bevis rather than John Bevis in one part, although correctly attributed later, and Admiral Smyth was referred to as Admiral Smith. I also found the text in the reference section was so small that one would need a magnifying glass to read it. These, however, in no way detract from an excellent publication that should be on the bookshelves of any deep-sky observer. I would suggest that this is now the definitive guide to the Messier objects. — Owen Brazell.

From The Library

Three Views of the Cosmos

The Great Ideas Today: Ptolemy, Copernicus, and Kepler, by Owen Gingerich, in *Encyclopedia Britannica*, 1993. Pp. 137–180.

Cosmology, by E. Finlay-Freudlich, in *International Encyclopedia of Unified Science* (University of Chicago Press), 1951. Vol. 1, No 8, 1951. Pp. 1–59.

The Recent Renaissance of Observational Cosmology, by D.W. Sciama, in *Atti della Reunion di Studio su Problemi di astrofisica* (Torino), 1969. Pp. 21-47.

These three came to me as part of the RAS Library deaccession project, with some of their pages still uncut. A nail file completed that task, revealing three very different opinions on what has been known about the Universe at various times and who is likely, or should be likely, to care about it all anyway

Each of the three has something you may never have thought of and could

potentially enjoy. Gingerich uses the methods and data given in Ptolemy's *Almagest* to calculate the longitude of Mars on a particular date some 361 years after the death of Alexander the Great. And yes, he gets Ptolemy's answer, given in *Almagest* X, 8, but then has to ask the question "Did Ptolemy cheat?" The catch is that the observations Ptolemy used to select values of the five necessary quantities in the method (things like the ratio of the epicycle to the deferent) disagree with what the actual positions were on the advertised dates by as much as 1·4 degrees. Gingerich ends that section by telling us that astronomers have been aware of such problems with Ptolemy's data for a couple of centuries, and that, what is more, it is not the task of the historian of science to cast moral judgements on pioneers of the past.

For Finlay-Freundlich (who added the birth surname of his mother after moving out of Germany), the most important question is whether the Universe is closed and finite. He was of the opinion that "the relativistic treatment of the cosmological problem promises to give in the future a definite answer to the one question which appears to be the highest prize of all efforts, namely the question: Is the universe closed and finite?" He was worried that with H_0 somewhere around 500 km/sec/Mpc, "closed" would be rather small. And he carries lambda as a lower-case Greek letter with him for the rest of the chapter to expand the range of possibilities. Can we say that another 53 years of observations have justified his optimism? Maybe.

But as has been the case with others of my RAS Library acquisitions, perhaps the most interesting item in this brief volume is a yellowing invoice made out by B. H. Blackwell, Ltd., University Booksellers of Oxford to G. J. Whitrow, Esq. of Clapham, London SW4. That is to say that Whitrow's interests extended beyond philosophy of time to the observed Universe at least to the extent of 9 shillings, 9 pence (including 3 pence postage). This in turn gives your reviewer an opportunity to thank reader Steven Phillipps, who has found Rev. Richard Lacey Webb, a mystery guest in an earlier 'From the Library' review. He was the son of a bank clerk from Brecon, Wales, born in Bristol on 1909 May 29. He died as recently as 2004 November 30 in Norwich, having been rector of Wacton in Norfolk and later Rural Dean of Rockford and Norfolk. He was sufficiently interested in the cosmos to supplement one of his purchases with information from a newspaper article.

This brings us to Dennis Sciama, who by 1969 had given up confidence in Steady State cosmology in favour of the very isotropic microwave background radiation (implying a singularity in the past). He even presents Cavendish data on counts of radio sources ($\log N - \log S$), showing a slope steeper than $n = -1{\cdot}5$ at the bright end, implying evolution of the source populations. He accepts that He/H would be only about 0·01 by number, not 0·1, if stars were the only source, writes of the αβγ proposal, and cites Wagoner, Fowler, and Hoyle for their 1967 calculation of the production of H, He, D, He-3, and Li in a hot Big Bang. The observation Sciama was looking forward to was the motion of our Earth relative to that microwave background, as a "linkup with Mach's Principle, which asserts that local inertial frames are unaccelerated relative to the Universe as a whole. We are on the verge of great clarification." Well, Mach's Principle, fondness for a finite closed Universe, and repeating Ptolemy's calculations do seem to have gone more or less out of fashion. But we still live in both wonderful space and 'Interesting Times', with the possibility of continuing to learn from our predecessors. — Virginia Trimble.