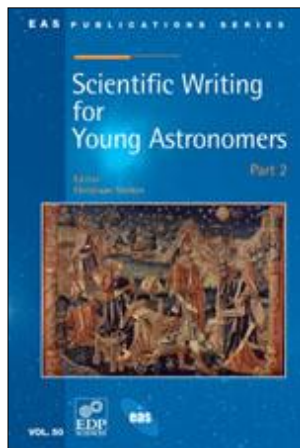


BOOK REVIEWS

Editorial Comment: Following is a review of the last book that the late Hilmar Duerbeck was reviewing for this journal when he died. Hilmar's partly-finished review was published in the March 2012 issue (Volume 15, pp. 72-73), as a salute to his years of dedication to this journal. In his review, Hilmar pointed out that Chris Sterken's book "... may at first glance be of little interest to historians of astronomy. But this is not the case: it is at least a quarry for historians of modern astronomy, offering an insight into the strata of a major journal *Astronomy and Astrophysics*." Given Chris Sterken's long record of publishing papers on the history of astronomy, it also makes good sense to include a review of his book in this journal. We now wish to thank Michael Geffert for kindly preparing the following review of the second volume of Chris Sterken's very useful book, and to apologise for its delayed publication (caused by the loss of the relevant email during my international travels in 2012).

***Scientific Writing for Young Astronomers, Part 2*, edited by Christiaan Sterken (Les Ulis, EDP Sciences, EAS Publication Series Volume 50, 2011), 298 pp., ISBN 978-2-7598-0639-3, 35 x 155 mm. US\$32.05.**

The first issue of *Scientific Writing for Young Astronomers* is related to a more common background of a researcher starting with writing scientific papers. In the second volume Christiaan Sterken, as editor and sole author, focuses directly on the creation of a scientific paper: the writing process, communication



using graphics and ethical issues. The chapters are written by an astronomer with long experience as a scientist, writer and referee. It is the first aim of this book to give helpful information to young scientists at the beginning of their careers, information which normally is collected over the lifetime of a scientist. But the book is more than a simple collection of good advice. From the beginning, and throughout the book, the author goes to a lot of trouble to not only write a technical description on the writing of research papers. The question of the responsibility that a scientist has is also important. Consequently, the last chapter of this book relates to "... truthful communication of scientific results ..." and is titled "Ethical Aspects".

Often scientists writing up the first paper describing their results are confronted by a large number of unfamiliar procedures, like authorship, the refereeing process, copyright, etc. The chapter on "The Writing Process" outlines the basic principles of the complete procedure, and one may read this chapter as a guide for beginners. It deals with many aspects, ranging from basic points like the different categories of scientific papers to the very special question "when to thank a referee", which might also be an important question for a first paper. Useful collections on "what to avoid at all price" and "FAQs about the editorial process" complete this chapter.

Visual communication by, for example, graphs and photographs is perhaps the most important part of a scientific publication. It is extensively treated in the second chapter on "Communication by Graphics". With the development of computer technology a large variety of possibilities for visualizing scientific results became available. Today it is the responsibility of every author to provide suitable graphics for his/her scientific papers. After discussing some general aspects of visual communication this chapter presents the different types of graphs and elements of a graphical image (such as axes, plot symbols and size ratios). A large number of examples is used to demonstrate the different aspects of graphics. At the end of this chapter the scientific treatment (outliers, perception of linearity, curve fitting) is considered. The reader will find a lot of useful practical information in this chapter.

More than a hundred pages of the second volume of *Scientific Writing for Young Astronomers* are devoted to the "Ethical Aspects" of writing a scientific paper. At first some general considerations on truth, error, quality and value of scientific work are given for the reader. Then bibliometric indices are explained, which help to define the quality of scientific work. The last part of this chapter, however, points out that the process of scientific writing may also be affected by different kinds of human errors. The discussion ranges from different types of misconduct to the bias of bibliometric indices, and is exhaustive. Throughout the chapter examples from history, like van Maanen's false estimation of the motions in spiral galaxies or the authorship of the paper on the Millikan experiment, which led to a Nobel Prize, nicely illustrate the general considerations.

The second volume of *Scientific Writing for Young Astronomers* contains not only useful material for all astronomers who start writing scientific papers, but also gives a lot of interesting additional information. The very comprehensive presentation of all aspects of publication of scientific results, the historical citations and also the

occasional philosophical considerations make this book interesting—and not only for young astronomers.

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***Meeting Venus. A Collection of Papers Presented at the Venus Transit Conference in Tromsø 2012*, edited by Christiaan Sterken and Per Pippin Aspaas (Brussels, Vrije Universiteit Brussel and the Faculty of Humanities, Social Sciences and Education, University of Tromsø, 2013). Pp. xii + 255, ISBN 978-82-8244-094-3 (paperback).**

The 2012 transit of Venus spawned a number of new books focusing on the historical transits, and this one, under the capable editorship of Chris Sterken and Per Pippin Aspaas, reports on the results of a conference held in Tromsø, Norway, and originally published in the electronic *Journal of Astronomical Data*. In their Preface, the editors explain the reasons for this conference:

First and foremost, the last transit of Venus of this century lent itself to be observed on the disc of the Midnight Sun in this part of Europe during the night of 5 to 6 June 2012. Second, several Venus transit expeditions in this region were central in the global enterprise of measuring the scale of the solar system in the eighteenth century. (Page vii).

It is the second of these reasons that sets this book apart from others already published, as it focuses mainly on Scandinavian observations of the 1761 and 1769 transits.

This lavishly-illustrated 267-page book contains four Parts dealing with the transits, along with a biographical account of our recently-departed dear friend and colleague, Professor Hilmar W. Duerbeck, and detailed general, name and author Indexes.

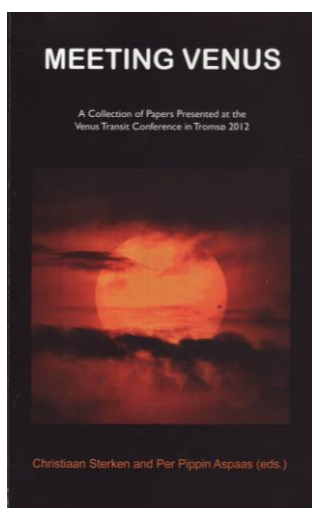
Part 1 contains just one chapter, of only 16 pages, but this is jam-packed with information, tables and figures about Scandinavian observations of the 1761 and 1769 transits (and a little on the following 1874 and 1882 transits), and sets

the scene, as it were, for the chapters that follow. I found this introductory chapter and the supporting page and a half of references invaluable.

Part 2, “Venus Transit Histories from Northern Europe, 1761–1769” contains seven chapters about research policy and astronomy in Sweden, how Catherine II used these two transits to bring the Russian Academy of Science international recognition, Denmark-Norway’s very limited involvement in these transits, observations of the two transits by the Swedish amateur astronomer Anders Hellant, Bayly and Dixon’s British expedition to northern Norway in 1769, Anders Johan Lexell’s investigation of the solar parallax, and some cultural and political repercussions of Maximillian Hell’s expedition to Denmark-Norway in 1769. While the expeditions associated with Hell, and Bayly and Dixon, are well known to transit of Venus specialists I found much new information in the other chapters, and the Lexell paper was fascinating. Another aspect that could not escape my attention was the extensive literature on these two transits published in languages other than English and therefore not widely available to the international transit of Venus scholars. *Meeting Venus* ... is an excellent way of bringing some of this literature to a wider audience.

While the 1761 and 1769 transits are not always the focus of papers on the near 200-page long Part 3 (“Other Transit Histories 17th to 20th Century”), there is much of interest here for historians of astronomy. The first paper deals with Keplerian orbits and the 1631 and 1639 transits of Mercury and Venus respectively, while Suzanne Debarbat’s brief paper which follows examines various attempts using transits and other methods to solve what Airy (1857) “... considered the noblest problem in astronomy”, and culminates in listing the results of the 2012 IAU Resolution B2: that the ‘astronomical unit’ is exactly 149,597,870,700 meters. The next paper—which I found engrossing—follows a quite different path and looks at “Venusians: the planet Venus in the 18th-century extraterrestrial life debate”, and in the process manages to make some concessions to transits by discussing various observations purporting to document the atmosphere of Venus. The following papers on Jesuit Austrian-Hungarian observatories and J.-N. Delisle and J.-J. Lalande both relate to the 1761 and 1769 transits, while Chris Sterken’s paper on J.-C. Houzeau relates to the two 1882 Belgian transit of Venus expeditions to Texas and Chile. The final paper in Part 3 deals with some French attempted observations of the 1882 transit and how subsequent observations of transits of Mercury led to successful observations of the 2004 transit of Venus.

In a marked departure from other academic



volumes on historic transits of Venus, Part 4 in *Meeting Venus* contains three papers that report on attempted observations of the 2012 transit by various member of the audience who attended the conference. The first two papers are short (and deal with observations made from Tromsø and during an aeroplane flight), but the final copiously-illustrated 30-page multi-authored paper captures the excitement of travelling by ship to view the transit from northern Norway, only to have their hopes dashed by cloudy skies. As the authors lament:

The description of the Vardø weather conditions ... vividly illustrates the extreme impact of the weather on the outcome of a scientific enterprise of the magnitude of a Venus transit expedition today ... and even more so in the past. (Pages 227-228).

As indicated earlier, Part 5, titled simply “Leaves of History” and penned by Chris Sterken, rounds out this book by recording a few of his memories

... of a very lovely person who should have been with us in Tromsø and Vardø, but who passed away suddenly and unexpectedly on January 5, 2012. This short paper is meant to evoke the memory to the very special person and

scientist that Hilmar Duerbeck was. (Page 235).

This paper brought back a flood of memories for me too, as Hilmar was also my friend, IAU colleague on the Transits of Venus Working Group Committee, academic companion (we co-supervised Ph.D. students) and an Associate Editor of this *Journal*. He is sadly missed.

Meeting Venus may end on a sad note for those of us who knew Hilmar Duerbeck, but this should not deflect us from the joy of a book that contains a wealth of new material about transits of Venus—particularly those of 1761 and 1769. I feel that this book deserves to be in the library of all those with a fascination for historic transits of Venus, but as only a very limited number of hard copies were printed it is not readily available in book form. However, those wanting to download specific papers can do so by accessing the electronic journal in which the papers first appeared. This is: *The Journal of Astronomical Data*, Volume 19, Part 1, 2013.

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