

NEGLECTED DUTCH AMATEURS

Van 'Konstgenoten' en Hemelse Fenomenen: Nederlandse Sterrenkunde in de Achttiende Eeuw. Huib Zuidervaart (Erasmus Publishing, Rotterdam, 1999). Pp. 664. Hfl. 97.50.

In this important publication Huib Zuidervaart, a former physics teacher in Middelburg, reveals a largely unknown and neglected aspect of the history of astronomy in the Netherlands during the eighteenth century.

Most studies on the history of astronomy in the Netherlands have tended to skip this period or treat it only in passing, as it appears less interesting compared with the preceding and following periods. Whereas Dutch scholars and instrument makers had played an important role in the rise of modern astronomy during the seventeenth century, their influence appears nearly negligible during the next century when all interesting developments seemed to be taking place elsewhere. The lack of famous names such as Simon Stevin, Petrus Plancius, Willebrord Snell, Willem Janszoon Blaeu, Adriaan Metius, Philips van Lansbergen, Jacob Golius and Christiaan Huygens only seemed to emphasize further the barrenness of this period. Only in the nineteenth century did astronomy in the Netherlands flourish again due to the energetic activities of Frederik Kaiser and his pupils who struggled hard to bring the study and practice of astronomy in line with the rest of Europe and elsewhere.

Zuidervaart's exhaustive study shows that this sketch needs revision. True, no great astronomical discoveries were made in the Netherlands during this period but the study and practice of astronomy was certainly not neglected. With the exception of a few incidental observations made from the university observatories of Utrecht and Leiden by professional astronomers such as Petrus van Musschenbroek, Johan Lulofs and Johan Frederik Hennert, most astronomical activity was in fact done by 'lovers of astronomy' (*konstgenoten*), or persons whom we would now call amateur astronomers. These were in general wealthy individuals with an interest in science and astronomy who were members of the various learned societies scattered around the country. Zuidervaart's study has brought the life and work of these shadowy individuals, so often neglected in biographical sources, into clearer focus and shows that they have been more influential than has been believed up to now.

Through the medium of newspapers, scientific journals and popular lectures, they were kept abreast of recent discoveries and scientific developments. Nor was there any lack of telescopes and other instruments for observing recently discovered comets or predicted phenomena such as lunar and solar eclipses. Especially in the northern province of Friesland, instrument makers such as Van der Bildt produced hundreds of portable reflecting telescopes during the second half of the eighteenth century. Some of these *konstgenoten* had considerable financial resources and the Amsterdam merchant Jacobus van der Wall could for some years even boast that he possessed the largest telescope in the world (the instrument is currently on display

in the entrance hall of the Leiden Observatory).

The work concludes with a summary in Dutch, English and French, followed by extensive notes, bibliography, a number of appendices (listing eighteenth-century observatories in Europe, Dutch publications on eclipses, Dutch observers of comets, transits of Mercury and Venus, with biographical data of all the persons mentioned), and an index.

Zuidervaat's study is the result of many years hard and difficult labour, during which he studied countless publications and inspected many hitherto neglected archival sources, and it is to be hoped that in due course an English translation will become available.

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THE CREATOR OF ASTROGEOLOGY

Shoemaker by Levy: The Man Who Made an Impact. David H. Levy (Princeton University Press, Princeton, 2000). Pp. xvi + 303. \$27.95.

At the end of this intensely personal biography, I found a lump forming in my throat as if I had known Gene Shoemaker for many years. While I only knew him for the last few years of his life, such was his warmth and unpretentiousness that Gene and his wife Carolyn seem like old friends. While helping the Shoemakers patrol the skies for near-Earth asteroids, David Levy came to know Gene Shoemaker as few could and he has provided us with a fascinating look at the man who, more than any other, created the study of astrogology. Shoemaker's early career centred about the impact origin for the Meteor Crater outside Flagstaff, Arizona, and the likelihood that other craters on the Earth, and many more on the Moon, were not volcanic in origin but rather the result of unimaginable impact energies resulting from comet and asteroid strikes.

While his dream one day to explore the Moon as a geologist astronaut was cut short by his Addison's disease, he did remotely explore the Moon as a member of the Ranger spacecraft lunar impact team. Later, he was the lead scientist for the Surveyor lunar spacecraft and in 1965 he was appointed the principal investigator for the Apollo field geology experiments. However, four years later he announced his departure from this position because he felt strongly that the Apollo program should be driven by scientific exploration rather than by the technical challenges required to win the space race with the Soviet Union. In the early 1970s he and Eleanor Helin began searching the skies for near-Earth asteroids and comets using the 18-inch Palomar Schmidt telescope. By 1982, Shoemaker and Helin had separate search programs in place at Palomar and soon afterwards, Gene was joined by his wife Carolyn and later by Henry Holt and David Levy. The Shoemakers have 42 comet discoveries and far more asteroid discoveries to their credit. Between