Sixteenth bibliography of books, pamphlets, catalogues, articles and CD-ROMs on or connected with historical scientific instruments

This bibliography covers the year 1999, but also contains some earlier publications which only came to the compiler's notice after publication of the Fifteenth Bibliography in May 1999. The compiler is grateful to those who sent him titles for inclusion in this bibliography. Publications, or notices of publication (please with ISBN) for the forthcoming bibliography, covering the year 2000, may be sent to the SIC Secretary.


ACKERMANN, Silke, 'Sun, Moon and Stars - Telling the Time with Astronomical Instruments from the British Museum', *Antiquarian Horology* 25 (1999), 31-46. With many colour photographs, this is the printed version of a talk given to the Antiquarian Horological Society in July 1999.

ACKERMANN, Silke and Paul Buck, *TIME* (London: British Museum Press, 1999). 32 pages, ISBN 0 7141 05953, £ 8,99. This educational booklet comes with several cardboard instruments (a sundial and a nocturnal, both for the northern and southern hemispheres, and a perpetual calendar) to press out and make yourself. They are all based on instruments in the BM collections.

ALBERTI, Luigi de, ROVIDA Edoardo, *Patrimonio Storico del Dipartimento di Meccanica / Historical Heritage of Mechanics Department* (Milano: Politecnico di Milano, 1999), 95 pages, no ISBN. Well-illustrated bilingual (Italian-English) catalogue of the collection of tools, machine tools, testing apparatus, measurement instruments, didactic models and mechanical elements of the collection (late 19th century-c.1950) of the Polytechnical school of Milan.


BALPE, Claudette, 'Constitution d’un enseignement expérimental: la physique et chimie dans les écoles centrales', *Revue d'Histoire des Sciences* 52 (1999), 241-283. Contains a brief discussion of how during the Revolutionary period French schools were stocked with cabinets of instruments, - some confiscated, some newly acquired.


BONOLI, Fabrizio and Maria ZUCCOLI, 'On two sixteenth-century instruments by Giovanni Antonio Magini (1555-1617)', *Nuncius. Annali di Storia della Scienza* XIV (1999), fasc. 1, 201-212. Discusses two quadrants (radius 345 mm), made in 1592 and 1595 by this Bologna astronomer. They could only be studied from pictures, as their present whereabouts is unknown. Cf. Meliconi in *Sphaera* 9 (Spring 1999).

BRACEGIRDLE, Brian, 'George Jackson's microscopic portraits', *The Quekett Journal of Microscopy* 38, 2 (Spring 1998), 85-89. George Jackson made microscopic portraits of worthies of the Microscopical Society of London in the 1850s. Eighteen are reproduced here, with brief biographical notes; they include the instrument makers Andrew Ross (1798-1850) and Cornelius Varley (1781-1873).

Additional material by Bracegirdle appeared in *The Quekett Journal of Microscopy* 38, 3 (Autumn 1998), 219-244 ('Victorian Slide Mounters') and *ibidem* 38, 5 (Winter 1999), 311-315 and 369-371 ('Microscopical mounts and mounters Addenda 1 and 2').


**BURCZYK-MARONA, Danuta, 'Problema datowania dawnych instrumentów naukowych. Uwagi na marginesie artikula A. Bunsch o astrolabium arabskim w szbiorach Muzeum UJ',**


CHEMISTRY: [Anon.], 'Archaeological finds: vessels from the first university chemical laboratory', Sphaera 10 (Autumn 1999), 4-5. During current building works on the Museum of the History of Science, Oxford, a hoard of some thirty earthenware chemical vessels has been discovered, - the most significant archeological find of chemical apparatus yet made in England.


DAVIDSON, Brian, 'Rulings and writings', *The Quekett Journal of Microscopy* 38, 3 (Autumn 1998), 199-205. Concentrates on the development of measuring techniques utilizing diamond rulings, such as Nobert's plates.


DINGLEY, M., 'An unusual microscope by the name Otropic', The Quekett Journal of Microscopy 38, 1 (Spring 1997), 21-27. Manufactured between 1947 and c. 1953 by Hermann Wetzer of Pfronten, Bavaria. The objectives are mounted in a row on an arc-shaped metal bar instead of a rotating disc.


DUNN, Richard and WALLIS, Helen, British Globes up to 1850: A Provisional Inventory (London, 1999). No ISBN. Lists 671 globes, arranged by maker and by date. Circulated free to SIS Members with the Bulletin of the Scientific Instrument Society 60 (1999). Simple off-set list, intended to be expanded into a proper ‘Catalogue of British Globes’. The project was funded from a bequest by Helen Wallis, who died in 1995.


FRIESS, Peter, 'Rediscovering Josef Weidenheimer (1758-1795) and clockmaking in the German-speaking countries', Antiquarian Horology 24, 6 (Summer 1999), 523-538. Only seven of Weidenheimer's clocks are known to have survived. Originally presented as the Ninth Dingwall Beloe lecture.


GREENHOUSE, Lisa, 'Hassler's instruments at NIST', Rittenhouse 12 (1999), 120-124. Swiss-born F.R. Hassler was involved in mapping the US Atlantic coast. Most of his instruments were bought in Europe in the years 1812-1815 and are now at the National Institute of Standards and Technology, Maryland.

GREENSLADE, Thomas B., Jr., 'Apparatus manufacturers in Chicago, ca. 1900', Rittenhouse 13 (1999), 16-19.


GREENSLADE, Thomas B., Jr., 'Examination Questions Based On Historical Apparatus', The Physics Teacher 37 (1999), 172-173.


HOLLAND, Julian, 'T.F. Wiesener', in Chris Pratten, ed., *Summer Hill* (Ashfield & District Historical Society, 1999), 83-89. Theodore Frederick Wiesener (1845-1897) moved from Germany to Sydney in 1871, where he set up as an instrument maker. His firm was continued after his death.

HOLLAND, Julian, 'Metrology in retrospect. Facts not Opinions', *The Australian Metrologist* No 17 June 1999, 9-12. Prompted by tested specimens surviving in Sydney, the author discusses the Testing and Experimenting Works set up in the 1860s by David Kirkaldy at 99 Southwark Street, London SE1, which can now be visited as a museum.


HOLLAND, Julian, 'Historic Scientific Instruments and the Teaching of Science: A guide to resources', in Michael R. Matthews (ed.), *History, Philosophy & New South Wales Science Teaching - Second Annual Conference* (Sydney, 1999), 121-129. Intended to provided a guide to the variety of sources, including book titles and websites, for teachers who wish to examine the role of instruments in their syllabus.


JANIN, Joseph, 'Le Musée Ampère et de l'Électricité', *La Revue du Musée des Arts et Métiers* 26 (March 1999), 47-54. The house in Poleymieux-au-Mont-d'Or near Lyon, where the physicist André-Marie Ampère (1775-1836) lived, was opened as a museum in 1931. With thirteen colour photos of exhibits, some on loan from the Musée des Arts et Métiers, Paris.

JARRELL, R.A., 'J.S. Plaskett and the modern large reflecting telescope', *Journal for the History of Astronomy* vol. 30 (1999), 359-390. Discusses "how the world's first conventional large reflector, the 72-inch telescope of the Dominion Astrophysical Observatory in Victoria, British Columbia, was designed, and how it became the model for an entire generation of telescopes from its completion in 1918 to the 1960s."

JOHNSON, Kevin, 'Sensible telescopes? The life and work of Andrew Ainslie Common', *Journal of the Antique Telescope Society* 17 (Summer 1999), 22-24. A.A. Common (1841-1903), British pioneer of astrophotography, built some of the largest reflecting telescopes of the time.


LANTINK-FERGUSON, Annie Th., 'Drie tandwielssystemen voor een maankalender', Gewina 22 (1999), 195-220. A 15th-century Flemish manuscript in Salamanca contains sketches and descriptions for the construction of three geared systems for the generation of lunar motion. The descriptions are in the vernacular, which indicates they were drawn up by craftsmen. These mechanisms were possibly meant as an extra dial in monumental astronomical clock-works.


MEINEL, Chr. (ed.), Das Maß aller Dinge. Das Meter, die Revolution und die Wissenschaft (Regensburg, 1999). 26 pp. Brochure in German, available upon request from christoph.meinel@psk.uni-regensburg.de. It accompanied a small exhibition at the Kepler Museum in Regensburg to commemorate the definitive legal fixation of the length of the meter in December 1799. Chief exhibit (not illustrated) was a Borda-type Cercle Répétiteur, built and signed by Nicolas Fortin in Paris, and bought for Regensburg’s observatory in 1808.

MESKENS, A, and others, 'Winegauging at Damme: the evidence of a late medieval manuscript', *Histoire et Mesure* 14 (1999), 51-77. Possibly the earliest manuscript on constructing a wine gauge, in this case a quadratic rod, with a special geometrical technique.


OLDROYD, David, 'Non-written sources in the study of the history of geology: pros and cons, in the light of the views of Collingwood and Foucault', *Annals of Science* 56 (1999), 395-415. Includes brief discussion of instruments, and mentions that Dr. Sally Newcomb, Maryland, is currently working on a history of instruments used in geological research, and on the history of experimentation in the earth sciences.


PETZOLD, Hartmut, 'Wer macht die Zeit? Der Sonnenuhrengarten im Deutschen Museum', *Kultur & Technik* 1999, vol. 3, 38-43. On a 'sundial garden' on a roof terrace of the Deutsches Museum in Munich, which was opened in June 1998. Most dials were made for the purpose by sundial specialist Yves Opizzo and sculptor Christian Tobin.

PETZOLD, Hartmut, 'Wer macht die Zeit? Der Sonnenuhrengarten im Deutschen Museum', *Kultur & Technik* 1999, vol. 3, 38-43. On a 'sundial garden' on a roof terrace of the Deutsches Museum in Munich, which was opened in June 1998. Most dials were made for the purpose by sundial specialist Yves Opizzo and sculptor Christian Tobin.

PLOMP, Reinier, 'A longitude timekeeper by Isaac Thuret and the balance spring invented by Christiaan Huygens', *Annals of Science* 56 (199), 379-394. A recently discovered clock, signed 'Thuret A Paris', dated 1675-1680, reveals that this clockmaker was much more closely involved in the development of a clock for finding longitude than has generally been assumed.


RASMUSSEN, Nicolas, *Picture control: the electron microscope and the transformation of biology in America, 1950-1960* (Stanford, California, 1997). xvi + 338 pages. Argues that the intellectual and historical significance of scientific instruments can only be adequately appreciated by a combined philosophical, historical and sociological approach.
RASMUSSEN, Nicolas, 'What moves when technologies migrate? "Software" and hardware in the transfer of biological electron microscopy to postwar Australia', *Technology & Culture* 40, 1 (January 1999), 47-73. In 1944 the "Universal" electron microscope (EMU) model from the Radio Corporation of America -- then arguably the world's most sophisticated commercially manufactured scientific instrument -- was brought to Melbourne. This paper retraces the replication and adaptation of biological microscopy in isolated conditions in the later 1940s.

RUDD, M. Eugene, 'De Witt Bristol Brace: professor, instrument maker, innovator', *Rittenhouse* 13 (1999), 3-11. Based at the University of Nebraska, he devised several highly innovative instruments between 1887 and 1905.

SARMA, Sreeramula Rajeswara, 'Yantraraja: the astrolabe in Sanskrit', *Indian Journal of History of Science* 34 (2) 1999, 146-158. Overview of manuals on the construction and use of the astrolabe composed in Sanskrit, and of astrolabes in which legends were engraved in Sanskrit language and in Devenagari script. A list of errata can be requested from the author at his new address: 23 Safina Apartments, Medical College Road, Aligarh 202 002, India, fax 0571-500 162.


STAUBERMAN, Klaus, *Controlling vision - the photometry of Karl Friedrich Zoellner*. PhD dissertation of 1998 on the reconstruction of a Zoellner astro-photometer from 1861, undertaken in order to understand the observers' scientific practice and the success of the instrument. Internet publication at [http://dibinst.mit.edu/fellows/webdiss.pdf](http://dibinst.mit.edu/fellows/webdiss.pdf)


SULLY: [anon.], 'Horloge pour mesurer le temps en mer inventée par M. Sully', *Antiquarian Horology* 25, 1 (September 1999), 12-17. Detailed discussion, inserted as 'Advertisement Feature', of Henry Sully's pendulum-à-levier, auctioned in Geneva on 23 October 1999. Claimed to be 'one of the 12 most important timekeepers related to the discovery of longitude at sea'.


TANNER, Amoret, 'Market Place. Ephemera', *Bulletin of the Scientific Instrument Society* 60 (March 1999), 28-32. Instrument-related ephemera such as trade cards and manuals, and where these may be found.


VANPAEMEL, Geert, 'De eerste microscoop aan de Leuvense universiteit', *Scientiarum Historia* 25 (1999), 1, 13-25. Around 1700, Louvain professor of mathematics Martinus van Velden had an aquatic microscope (not preserved) from Antoni van Leeuwenhoek or from the Musschenbroek workshop.


WHITESELL, Patricia S., *A Creation of His Own: Tappan's Detroit Observatory* (University of Michigan Press, 1999). Contains chapters on telescope makers Henry Fitz, Jr. of New York and Pistor & Martins of Berlin. The University of Michigan Detroit Observatory retains its two original telescopes by these makers, in the original mounts. The 1997-98 restoration of the Observatory is also chronicled, with photographs and descriptions of the work, including the restoration of the telescopes.


WILLS, Karl-Hein, 'The case of the stolen lens?', *Bulletin of the Scientific Instrument Society* 60 (March 1999), 24-27. Animadversions on a lens-like glass, probably intended as a mere ornament, part of a Viking find but probably made much earlier, viz. around 550 BC.


WÜNSCH, J, 'The accuracy of Hevelius's astrometric measurements', *Journal for the History of Astronomy* vol. 30 (1999), 391-406. Analysis of measurements made by Hevelius, his assistants and his wife Elisabeth, with the great brass sextant and the great brass octant, illustrated in his *Machina Coelestis*.

ZANDVLIET, Kees, 'Adriaen de Lelie's portret van de VOC-examinator Hendrik de Hartog, 1790', *Bulletin van het Rijksmuseum* 47 (1999), nr.1, 44-52 (with English summary on page 78). On a portrait (oil on panel), acquired by the Rijksmuseum in Amsterdam, of Hendrik den Hartog (1751-1838), who for over 40 years was reader in mathematics, astronomy and navigation at the Atheneum Illustre in Amsterdam. He is portrayed with a telescope and a sextant.
