

Scientific Instrument Commission Bibliography 23

Twenty-third bibliography of books, pamphlets, catalogues and articles on or connected with historical scientific instruments – Summer 2004.

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ACKERMANN, Silke, 'The Path of the Moon Engraved - Lunar Mansions on European and Islamic Scientific Instruments', in *Il Sole e la luna - The Sun and the Moon, Micrologus XII* (Firenze: Sismel Edizioni del Galluzzo, 2004), 135-164 and figures 1-14.

ARMSTRONG, Isobel, 'The Microscope: Mediations of the Sub-Visible World', pp. 30-54 in: Roger Luckhurst, Josephine McDonagh (eds.), *Transactions and Encounters: Science and Culture in the Nineteenth Century* (Manchester: Manchester U.P., 2002) viii + 239 pages. ISBN 0719059100

BARCLAY, Robert and BROOKS, Randall, 'In Situ Preservation of Historic Spacecraft', *Journal of the British Interplanetary Society*, 55 (2002), 173-181. [Paper deals with important scientific satellites].

BETTS, Jonathan, 'John Hyacinth de Magellan (1722-1790). Part 2: The Early Clocks', *Antiquarian Horology* vol. 28, nr. 2 (June 2004), 173-183 [To be continued. For part 1 see Bibliography 22]

BRACEGIRDLE, Brian, 'Microscopy at the Science Museum: 2- Simple Microscopes', *Quekett Journal of Microscopy* 39 (2004), 627-641 [Survey of the 555 simple microscopes in the Science Museum collection, of which twelve are illustrated here]

BROOKS, Randall C., JOHN H. ENGLAND, ARTHUR S. DYKE and JAMES SAVELLE, "Krüger's Final Camp in Arctic Canada?", *Arctic* Vol. 57, No. 2 (June 2004), 225-232. [Links small mountain transit made by Max Hildebrand of Freiberg (ca. 1920) with Dr. Hans Kurt Erich Krüger, a German geologist mysteriously disappeared in 1930-1931. Details of the markings and trade mark provided the evidence to link the transit found on Axel Heiberg Island in Canada's high Arctic and Krüger. Note: to receive the article as a PDF file, contact the author: rbrooks@technomuses.ca]

BRYDEN, D.J., 'More Early Printed Ephemera of London Instrument Makers: Instructions and Advertising Broad Sheets. Part 2: Barometer Trade Literature, c. 1680 - c. 1720', *Bulletin of the Scientific Instrument Society* 80 (March 2004), 12-17. [Makers discussed are John Warner, Henry Wynne and John Patrick].

BRYDEN, D.J., 'More Early Printed Ephemera of London Instrument Makers: Instructions and Advertising Broad Sheets. Part 3: Instructions for Using Microscopes: 1706 - c. 1730', *Bulletin of the Scientific Instrument Society* 81 (June 2004), 10-17. [Makers discussed are James Wilson, Edmund Culpeper and Ralph Sterrop].

CAMEROTA, Filippo, *Il compasso di Galileo/Galileo Compass* (Florence: Istituto e Museo di Storia della Scienza, 2004), 61 pages. [Bilingual illustrated booklet about the use and the history of the sector, which comes with a CD with simulation of the use of the sector, its construction, etc., and a replica of the sector for exercising and calculating. The entire set costs 25 EURO.]

CHRISTIANSON, John R., HADRAVOVA, Alena, HADRAVA, Petr, SOLC, Martin, eds., *Tycho Brahe and Prague. Crossroads of European Science* (Frankfurt am Main: Verlag Harri Deutsch, 2002), Acta Historica Astronomiae, Vol. 16. 392 pages, ISBN 3-8171-1687-X. Price 29,80 EURO. [Proceedings of symposium organized by the Research Centre for the History of Sciences and Humanities in Prague in October 2001. The thirty-seven contributions include explicitly instrument-related papers by Felix Lühning, Mara Miniati and Gudrun Wolfschmidt]

CLERCQ, Peter de, 'A chronicle of lesser men'. E.G.R. Taylor and her *Mathematical Practitioners of England*, *Bulletin of the Scientific Instrument Society* 81 (June 2004), 31-33 [Appraisal of instrument-historical work by first woman Professor of Geography in Britain (1879-1966)]

COLLINS, H.M., 'LIGO becomes Big Science', *Historical Studies in the Physical and Biological Sciences* 33 (2003), 261-297 [On the Laser Interferometer Gravitational Wave Observatory].

COWHAM, Mike, *A Dial in Your Poke* (Published for the author, 2004). 224 pages, hard-cover. Over 320 colour photographs. A new book on portable sundials [poke is old-English for pocket], - their makers, history, use and decoration. Price £ 29.50 (SIS Members £ 25), P&P UK £ 4.50, Europe (USA surface mail) £ 5.50, USA airmail £ 10.00. To order: Mike Cowham [B], PO Box 970, Haslingfield, Cambridge CB3 7FL, mikeb@brownsover.fsnet.co.uk

COWHAM, Mike, 'An Interesting Compass by Walter Hayes', *Bulletin of the Scientific Instrument Society* 81 (June 2004), 8-9 [Demonstrates that Hayes re-used a compass plate of Henry Sutton]

CRADDOCK, Paul T., 'The Scientific Detection of Fakes and Forgeries', *Physics in Canada* 59 (2003), 235-242. [Not strictly on instruments but the techniques are applicable and the author has interesting examples, good graphics and an extensive bibliography. At a semi-technical level and quite readable for non-physicists].

CUYNEN, G., 'Diamantbalans van Becker te Brussel', *Meten & Wegen* 124 (December 2003), 2947 - 2951. [Dutch article. Detailed description of a precision balance of Ancien Etablissement Becker S.A. Bruxelles].

DAVIDSON, Brian, 'Portable microscopes', *Quekett Journal of Microscopy* 39 (2004), 611- 625. [Discusses mainly English microscopes c. 1730 - c. 1930. Of the twelve microscopes illustrated, nine are from a private collection]

DAVIS, John, 'The Equation of Time as Shown on Sundials', *Bulletin of the British Sundial Society* vol 15 nr. iv (December 2003), 135-144

DAVIS, John, 'Sundials at Trinity College Cambridge', *Bulletin of the British Sundial Society* vol. 16 nr. i (March 2004), 7-13

DEKKER, Elly, *Catalogue of Orbs, Spheres and Globes. Florence* (Istituto e Museo di Storia della Scienza, Giunti Editore, 2004). ISBN 88-09-03589-5, 188 pages. Price 38 EURO. [Latest in ongoing series of thematic catalogues of the Florence museum].

DORIKENS, M., L. DORIKENS-VANPRAET, K. VAN CAMP, P. DE RYCKE en J. UYTENHOVE, *Verborgen voor het oog. Historische microscopen en X-stralen foto's uit de Collectie Dr. Henri van Heurck (1838-1909)* (Gent: Museum voor de Geschiedenis van de Wetenschappen, 2003). 59 pages. [Simply produced, illustrated catalogue of exhibition of historical microscopes and X-ray photographs and related apparatus from the Van Heurck collection, recently transferred from Antwerp to the Museum of the History of Sciences at Ghent University. The exhibition scheduled for 6 November 2003 - 25 July 2004, will be extended from 15 September to the end of January 2005. Enclosed CD provides colour pictures of the microscopes and their related apparatus. Price for catalogue + CD: 8 EURO, excl. p/p., which will be around 6 EURO for the UK. To order: jos.uyttenhove@UGent.be]

DRESTI, Guido, MOSELLO, Rosario, 'An Astrolabe from the Italian Alps', *Bulletin of the British Sundial Society* vol. 16 nr. ii (June 2004), 65-69 [The first author made an astrolabe in 2002, using the EXTRACAD 5 programme produced by FINSON, Milan].

FEHLHAMMER, Wolf Peter, ed., *Deutsches Museum. Ingenious Inventions and Masterpieces of Science and Technology* (Munich etc., Prestel Verlag, 2003). 300 pages. ISBN 3-7913-2818-2. [This lavish book, published to mark the centenary of this museum, contains among others many colour photographs of instruments].

GREENSLADE, Thomas B. Jr., 'The Foley Acoustic Wave Front Slide', *The Physics Teacher*, Vol 24 (April 2004), 231-235. [About the apparatus and the techniques used around 1912 for producing the slide illustrating sound waves].

KAZUTAKA, Unno, *Tōzai chizubunka kōshōshi kenkyū : Monographs on the history of cartographical exchange between the East and the West* (Osaka: Seibundo, 2003). xi + 747 pages. Includes articles on globes and portolan charts and, on pp. 305-327, 'The world map, an armillary sphere, and a clock by Fukuda Seishitsu (?-1663).

LEVI-DONATI, Gemma Rosa, 'Four hundred and twenty-five years later: Egnazio Danti's anemoscope', *Nuncius* Anno XVIII, 2003, fasc.2, 467-479.

McCRA Y, W. Patrick, *Giant Telescopes: Astronomical Ambition and the Promise of Technology* (Cambridge: Harvard University Press, 2004). 367 pages. ISBN 0674011473

MAL AQUIAS, Isabel, and VAZ GOMEZ, Emília, 'Scientific Instruments as Indispensable Resources in Portuguese Navigation Teaching in the Late 18 th Century', *Bulletin of the Scientific Instrument Society* 80 (March 2004), 25-29.

MARTINÓN-TORRES, Marcos, REHREN, Thilo, & VON OSTEN, Sigrid, 'A 16th-century lab in a 21st-century lab: archaeometric study of the laboratory remains from Oberstockstall, Austria', *Antiquity* Vol. 77, nr. 298 (December 2003) [The collection is on permanent display at the Museum Der Alchemist in Kirchberg am Wagram, Austria. For full details see <http://antiquity.ac.uk/ProjGall/martinon/index.html>]

MILLS, Allan, 'Armed Lodestones', *Bulletin of the Scientific Instrument Society* 81 (June 2004), 26-30

MÖRZER BRUYNS, Willem F.J., 'The Cross-Staff Ten Years Later. An Update with Recently Found Examples', *Bulletin of the Scientific Instrument Society* 80 (March 2004), 18-23. [Update of the author's book *The Cross-Staff. History and Development of a Navigational Instrument* (Zutphen, 1994). Discusses new evidence found on cross-staffs, new evidence about cross-staff makers, gives amendments to the 1994 check-list of 95 then known surviving cross-staffs and lists 34 (!) newly-discovered cross-staffs].

OUDE RAA, E.M. van der, 'Twee balansen van Westphal', *Meten & Wegen* 123 (September 2003), 2920 - 2925. [Dutch article. Short survey of instruments to determine the specific gravity of fluids, followed by a description of two balances of Westphal, made by Becker's Sons, Rotterdam and Brummen].

PEAVITT, Helen, 'George J. Symons and the Brontometer', *Bulletin of the Scientific Instrument Society* 81 (June 2004), 2-6 [Discusses unique "thunderstorm-measurer" in the Science Museum, London, made by the English meteorologist G.J. Symons with Richard Frères of Paris, completed in 1890]

RADDER, Hans (ed.), *Philosophy of Scientific Experimentation* (Pittsburgh: University of Pittsburgh Press, 2003). xii + 311 pages. ISBN 0822957957. [Not seen; contains articles with the word 'instrument' in the title by Rom Harré, Jim Woodward, Michael Heidelberger and Daniel Rothbart].

REID, William, 'Barr & Stroud 'Nitrogen-filled Binoculars': the facts', *Bulletin of the Scientific Instrument Society* 81 (June 2004), 34-36

ROSEN, Mark, 'Don Miniato Pitti and the Second Life of a Scientist's Tools in Cinquecento Florence', *Nuncius* XVIII (2003, fasc.1), 3-25. Abstract:
<http://galileo.imss.firenze.it/public/e2003.html#15>

SAWYER, Frederick W., *Analemmatic sundial sourcebook: including recent work and English translations of early source texts on the analemmatic sundial and the variable-center dials that derive from it* (400+ pages). Compiled and edited by Frederick W. Sawyer. Glastonbury, CT : North American Sundial Society, c. 2004. Festschrift marking the tenth anniversary of the North American Sundial Society. Includes historical development of the sundial with diagrams and measurements.

SCHIFFER, Michael Brian, *Draw the Lightning Down. Benjamin Franklin and Electrical Technology in the Age of Enlightenment* (University of California Press, 2003). ISBN 30 520-23802-8. xiv + 383 pages. £ 22.95 / \$ 34.95, hardback.

SCHMIDGEN, Henning, 'Die Geschwindigkeit von Gefühlen und Gedanken. Die Entwicklung psychophysiologischer Zeitmessungen, 1850-1865', *N.T.M. (=Internationale Zeitschrift für Geschichte und Ethik der Naturwissenschaften, Technik und Medizin)* 12 (2004), 100-115. [The technology of electromagnetism facilitated time-measurements by experimental physiologists and psychologists; includes discussion of Hipp's chronoscope].

SIC: 'Conference Report: XXII Scientific Instrument Symposium. The Mariners' Museum, Newport News, Virginia. 30 th September – 4 th October 2003', *Bulletin of the Scientific Instrument Society* 80 (March 2004), 32-36 [By participants Marv Bolt, Jan Tapdrup, Dana A. Freiburger, David Pantalony and Stephen Johnston].

SPAIGHT, John Tracy, '“For the Good of Astronomy”: The Manufacture, Sale and Distant Use of William Herschel's Telescopes', *Journal of the History of Astronomy* XXXV (2004), 45-69. [Includes lists of 59 dated and 25 undated Herschel reflectors and mirrors made for other observers between 1781 and 1814; the lists specify the purchasers].

SPECTROSCOPY: Spectroscope Histories II, Papers based on a workshop organised in collaboration with the IUHPS Scientific Instrument Commission with the support of the Hans-Jenemann Foundation, and hosted by the Deutsches Museum. Munich, 2001. Edited with an Introduction by C. BIGG and K. STAUBERMANN. *Nuncius*, 2, 2003. Contents: 'Introduction' (737-739); Jochen HENNING, 'Bunsen, Kirchoff, Steinheil and the elaboration of analytical spectroscopy' (741-754); Klaus STAUBERMANN, 'Investigating vision and reversion spectroscopy: early astronomical colour studies in experimental psychology' (755-763); Charlotte BIGG, 'Spectroscopic metrologies' (765-777); Richard STALEY, 'The interferometer and the spectroscopy: Michelson standards and the spectroscopic community' (779-801); Sean F. JOHNSTON, 'An unconvincing transformation? Michelson's interferential spectroscopy' (803-823); Anna M. LOMBARDI, 'The bolometer and the spectro-bolometer as steps towards the black-body spectrum' (825-840); Eva A. MAYRING, 'Sources for the history of spectroscopy at the Deutsches Museum' (841-852)

VOLRATH, Hans-Joachim, 'Das Pantometrum Kircherianum – Athanasius Kirchers Messtisch', pages 119-136 in: *Spurensuche. Wege zu Athanasius Kircher* (Dettelbach: Verlag J.H. Röhl, 2002). 188 pages. ISBN 3-89754-213-7 [Athanasius Kircher's surveying instrument, a kind of plane-table, was described and illustrated in his *Magnes* of 1643, and in Caspar Schott's *Pantometrum Kircherianum* of 1660. Volrath discusses it in this volume on Kircher, which was published in combination with an exhibition catalogue *Magie des Wissens. Athanasius Kircher 1602-1680 Universalgelehrter, Sammler, Visionär* (Dettelbach: Verlag J.H. Röhl, 2002) 216 pages, ISBN 3-89754-211-0. The exhibition was held in Würzburg and Fulda in October 2002 – March 2003. The catalogue also discusses instruments in chapters on Kircher and mathematics (by Volrath) and Kircher and astronomy (by Harald Sieber)].

WILLIS, J.B., 'Three Little Companies – The Birth of a Major Australian Scientific Instrument Industry', *Historical Records of Australian Science* 14 (2003), 403-429

WITTJE, Roland, 'The Use of Centrifuges and Ultracentrifuges in Medical, Chemical and Microbiologic Laboratories. A Short History', *Bulletin of the Scientific Instrument Society* 81 (June 2004), 20-25

WŁODARCZYK, Jarosław, 'Instrumenty Obserwatorium Astronomicznego Uniwersytetu Wrocławskiego: XVIII – XIX Wieku', *Kwartalnik Historii Nauki e Techniki* 47 (3) (2002), 75-92. [Translated title: The instruments at the Astronomical Observatory of Breslau University: 18th and 19th centuries']

WRIGHT, M.T., 'The Scholar, the Mechanic and the Antikythera Mechanism: complementary approaches to the study of an instrument', *Bulletin of the Scientific Instrument Society* 80 (March 2004), 4-11 [The Society's Eleventh Annual Invitation Lecture, delivered in London on 26 November 2003].

ZIK, Yaakov, 'Kepler and the telescope', *Nuncius Anno XVIII*, 2003, fasc.2, 481-514