

## Scientific Instrument Commission Bibliography 22

Twenty-second bibliography of books, pamphlets, catalogues and articles on or connected with historical scientific instruments - Spring 2004

This bibliography contains work published in 2003 and 2004, which came to the compiler's notice until March 2004. It also contains earlier publications which came to his notice after completing the twenty-first bibliography in Autumn 2003. Publications, or notices of publication (please with ISBN) for forthcoming bibliographies may be sent to the compiler:

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Members of the scientific instrument community are invited to send recent titles, especially of publications that may easily escape the compiler's notice, such as descriptive catalogues, exhibition catalogues and papers published in less widely known journals. To avoid duplication, please note that the compiler peruses some forty journals for relevant titles. These range from journals that focus entirely on historic instrumentation, such as the *Bulletin of the Scientific Instrument Society*, *Rittenhouse*, *Journal of the Antique Telescope Society* and *Equilibrium*, to more general journals on the history of science, technology and culture. A list of these journals is found in previous bibliographies.

ACKERMANN, Silke, 'Light on Byzantium - A Universal Sundial in the British Museum', in Chris Entwistle (ed.), *Through A Glass Brightly - Studies in Byzantine and Medieval Art and Archaeology Presented to David Buckton* (Oxford: Oxbow Books, 2003), 16-21 and colour plates 1.1-1.4.

ACKERMANN, Silke and WESS, Jane, 'Between Antiquarianism and Experiment: Hans Sloane, George III and Collecting Science', in Kim Sloan (ed.), *Enlightenment. Discovering the World in the Eighteenth Century* (London: British Museum Press, 2003), 150-157.

ANDERSON, Katharine, 'Looking at the sky: the visual context of Victorian meteorology', *British Journal for the History of Science*, 36 (2003), 301-332 [Includes discussion of "weather-wise instruments": spectroscope and camera].

BEECHER, Dale, 'The Pioneering Instruments of Orson Pratt', *Rittenhouse* vol. 17, #2 (2003), 107-117 [Abstract: When the Mormon pioneers were making preparations for their trek to Utah in 1846-47, very little was known about the area of the overland trail and much less about the Great Basin. Other than John C. Fremont's early observations, there had been no scientific data collected about the region. These methodical emigrants knew they would have to gather good information on their trek for the colonists coming after them. Orson Pratt was the only man among them who was really prepared to do it].

BERETTA, Marco, *Imaging a Career in Science. The Iconography of Antoine Laurent Lavoisier* (Bologna Studies in Scientific Heritage, 1; Uppsala Studies in History of Science vol. 29). Science History Publications / USA, 2001. 126 pages, ISBN 0-88135-294-2. [With interesting glimpses of chemical instrumentation].

BETTS, Jonathan, 'John Hyacinth de Magellan (1722-1790). Part 1: Horological and Scientific Agent', *Antiquarian Horology* vol. 27, nr. 5 (September 2003), 509-517 [Fourteenth Dingwall-Beloe Lecture, delivered at the British Museum on 4 December 2002. The Portuguese scientific communicator and entrepreneur lived in London from 1763 onward as agent for London-made instruments].

BOBIS, L and LEQUEUX, J., *François Arago & l'Observatoire de Paris* (Paris: Observatoire de Paris, 2003). 72 pages. ISBN 2-901057-47-0 [Exhibition catalogue shows among others instruments from the Observatory collection].

BRACEGIRDLE, Brian, 'Microscopy at the Science Museum: 1- Introduction', *Quekett Journal of Microscopy* 39 (2003), 543-557. [On the collection of microscopes of the Science Museum and the author's cataloguing project].

BRACEGIRDLE, Brian, 'Rife and his microscopes', *Quekett Journal of Microscopy* 39 (2003), 459-473. [Discusses five microscopes designed by the American Royal Raymond Rife (1888-1971)].

BROELMANN, Jobst, *Intuition und Wissenschaft in der Kreiseltechnik 1750 bis 1930* (München: Deutsches Museum Abhandlungen und Berichte, Neue Folge, Band 17). 2002, 435 pages. ISBN 3-924183-87-2 [Study on the gyroscope and its use in among others nautical compasses and aviation. English summary 388-392].

BRYDEN, David, 'More Early Printed Ephemera of London Instrument Makers: Instructions and Advertising Broadsheets. Part 1: Instructions for the Universal Equinoctial Dial, c. 1650 - c. 1700', *Bulletin of the Scientific Instrument Society* 79 (Dec 2003), 18-22 [Makers discussed: Walter Hayes, Hilkieh Bedford, John Prujean (Oxford), Anthony Thompson, Thomas Walpoole, Henry Wynne, John Worgan].

CHARETTE, François, *Mathematical Instrumentation in Fourteenth-Century Egypt and Syria: The Illustrated Treatise of Najm al-Dîn al-Misrî* (Leiden/Boston: Brill, 2003 [= Islamic Philosophy, Theology and Science, nr. 51]), xxii+ 422+ 136 pages, ISBN 90-04-13015-2.

CLERCQ, Peter de and CHEIFETZ, Simon, 'SIS Visit to Brussels and Ghent 18th and 19th October 2003', *Bulletin of the Scientific Instrument Society* 79 (Dec 2003), 15-17 [Musée du Cinquantenaire, Brussels; Royal Observatory, Uccle; Museum for the History of Sciences, Ghent; private collection Vanden Berghen, Halle].

[CRAWFORTH-HITCHINS, D.F.], 'Beginner's Guide' Parts 7 and 8 deal with pendulum scales and spring balances, *Equilibrium* 2003, 2767-2774 and 2825-2832.

DAVIES, Surekha, 'The Navigational Iconography of Diogo Ribeiro's 1529 Vatican Planisphere', *Imago Mundi* 55 (2003), 103-112. [Contains the earliest known representations of navigational instruments on maps (mariner's astrolabe, astrolabe, horary quadrant). By depicting these, Ribeiro was demonstrating his support for celestial navigation over more traditional forms of navigation].

DEBAUVAIS, Francis et BEFORT, Paul-André, *Cueillir les Etoiles. Autour des Astrolabes de Strasbourg* (Strasbourg: Editions Ligne à suivre, 2002). 247 pages. ISBN 2-84512-019-2. [This volume, published by the "Amis des instruments des sciences et des astrolabes", contains a description and full analysis of the three astrolabes of Strasbourg: A.D. 1208 by Abu Bakr of Magrebh; A.D. 1481, anonymous German; A.D. 1579 by Johann Krabbe].

DEWITS, Bodo von, + NEKES, Werner, eds., *Ich sehe was, was du nicht siehst! Sehmaschinen und Bilderwelten. Die Sammlung Werner Nekes* (Göttingen: Steidl Verlag, 2002). 455 pages, ISBN 3-88243-856-8. [Catalogue of exhibition on optical devices and amusements at the Museum Ludwig, Cologne, 27 Sept 2002 - 6 Jan 2003] Contents: Larry J. SCHAFF, 'Camera Obscura und Camera Lucida. Bild und Vorstellung vor Erfindung der Photographie'/ Thomas HENSEL, 'Mobile Augen. Pfade zu einer Geschichte des sich bewegenden Betrachters'/ Bodo von DEWITZ, 'Eine mobile Bilderwelt. Der Guckkasten als Bildmedium der Aufklärung im 18. Jahrhundert'/ Deac ROSSELL, 'Die Laterna Magica'/ Thomas FECHNER-SMARSLY, 'Suggestive Projektionen. Laterna Magica, Diorama und ihre Effekte in der Literatur des 19. Jahrhunderts'/ Klaus BARTHELMESS, 'Kosmologie und Sammlung. Optische Instrumente und Sehspielzeuge in den Kunst- und Wunderkammern des 16. bis 18. Jahrhunderts'/ Gerhard KOLBERG, 'Die Animation der Kunstfigur. Von Automaten, Androiden und Cyborgs'/ Barbara KRAFFT, 'Bilder verstecken - Bilder entdecken. Eine Sehreise entlang den Klippen des Augenscheins'/ Astrid WEIDAUER, 'So weit das Auge reicht. Das Panorama als Massenmedium des 19. Jahrhunderts' / Birgit VERWIEBE, 'Lichtspiele und Bewegungsbilder. Zur Geschichte des Dioramas'/ Detlef HOFFMANN, 'Spiel, Zauberei und fröhliche Wissenschaft. Optische Vergnügen des 19. Jahrhunderts', Jens THIELE, 'Der Augenblick des Verweilens und die Flüchtigkeit des Blickes. Bildstillstand und Bildwechsel in vorkinematographischen Zeiten'/ Laurent MANNONI, 'Geburt und Kommerzialisierung der Chronophotographie' / Martin LOIPERDINGER, 'Sammler, Historiographie und gesellschaftlicher Bedarf. Perspektiven für die Geschichte der visuellen Medien'.

DUNN, Richard, 'Scientific Instruments at the Victoria and Albert Museum, London: a provisional inventory', *Bulletin of the Scientific Instrument Society* 79 (Dec 2003), 6-14 [Some 175 European and some 80 non-European instruments].

DUPRÉ, Sven, 'Galileo's Telescope and Celestial Light', *Journal for the History of Astronomy* XXXIV (2003), 369-399.

EAGLETON, C., 'A Previously Unnoticed Fragment of Chaucer's Treatise on the Astrolabe', *Journal of the Early Book Society* 6 (2003), 161-173.

EAGLETON, C., J. DOWNES, K. HARLOE, B. JARDINE, N. JARDINE, A. MOSLEY: *Instruments of Translation* (Cambridge, Whipple Museum, 2003) ISBN: 0-906271-21-5 [About translating Latin texts on instruments, and studying instruments and texts together].

FERRARESI, Alessandra, 'Il Gabinetto pavese di fisica sperimentale nella secondo metà del secolo XVIII: didattica, divulgazione, ricerca nella politica asburgica della scienza', *Annali di storia della università italiane* 7 (2003), 91-110 [Paper on the 18 th -century Pavian physics cabinet in a volume mainly devoted to that university].

FINKELSTEIN, Gabriel, 'M. du Bois-Reymond goes to Paris', *British Journal for the History of Science* , 36 (2003), 261-300 [Examines the science of electrophysiology developed by Emil du Bois-Reymond in Berlin in the 1840s, and claims (p. 264): "The key to understanding du Bois-Reymond's innovation lies in his instruments", chief among which was the galvanometer].

FÜRST, Dietmar, 'Die Geschichte des Heliometers der Sternwarte Königsberg. I. Teil: Anschaffung und Aufstellung des Instruments', *Beiträge zur Astronomiegeschichte* 6 (2003), 90-136 [Discusses the circumstances of the ordering, by Friedrich Wilhelm Bessel, and the installation of the Fraunhofer heliometer at Königsberg Observatory in the 1820s].

GAAB, Hans, 'Johann Philipp von Wurzelbau (1651-1725)', *Beiträge zur Astronomiegeschichte* 5 (2002), 47-114 [This merchant and prominent astronomer in Nuremberg had a private observatory. Of his instruments, a large quadrant dated 1697 survives at the Germanisches Nationalmuseum].

GAAB, Hans, 'Georg Friedrich Kordenbusch und die Astronomie in Nürnberg in der zweiten Hälfte des 18. Jahrhunderts', *Beiträge zur Astronomiegeschichte* 6 (2003), 40-89 [Kordenbusch (1731-1802) was the best-known Nuremberg mathematician and astronomer of his time. Includes discussion of his instruments].

GOLVERS, Noël, *Ferdinand Verbiest, S.J. (1623-1688) and the Chinese Heaven. The Composition of the Astronomical Corpus, its Diffusion and Reception in the European Republic of Letters* (Leuven: University Press / Ferdinand Verbiest Foundation, K.U. Leuven, 2003). 676 pages. ISBN 90 5867 293 X. [Describes more than 220 copies of various publications by Verbiest. The book includes eighteen plates of astronomical apparatus: drawings at the Getty Institute and the Archivio di Stato in Rome, and Chinese xylographic prints].

GREENSLADE, Thomas B. Jr., 'Apparatus for Natural Philosophy: the Radio Micrometer of C.V. Boys', *Rittenhouse* vol. 17, #2 (2003), 64-70. [Abstract: The earliest work on infrared spectra used the bulb of a thermometer as a detector. More precise measurements employed either the heating of a fine metallic element, thus changing its resistance, or the heating of a thermocouple. In 1887 the talented British experimentalist C.V. Boys, combined the thermocouple with the galvanometer movement to produce the Radio-Micrometer, a particularly sensitive detector of infrared radiation. The instrument also used the quartz fiber suspension developed by Boys].

HACKMANN, Willem, 'Natural Philosophy and the Craft Techniques of Experimentation', *Bulletin of the Scientific Instrument Society* 78 (2003), 35-37.

HASHAGEN, Ulf, BLUMTRITT, Oskar, TRISCHLER, Helmuth, eds., *Circa 1903. Artefakte in der Gründungszeit des Deutschen Museums* (München: Deutsches Museum Abhandlungen und Berichte, Neue Folge, Band 19). 2003, 562 pages. ISBN 3-924183-45-7. [Object-centered essays on science, technology and society in the founding year of the Deutsches Museum in Munich, 1903, deal with among others the protuberance spectroscope and the calculating machine].

HENNING, Jochen, *Der Spektralapparat Kirchoffs und Bunsens* (Deutsches Museum: Naturwissenschafts- und Technikgeschichte - Originale und Rekonstruktionen, Band 1). 45 pages, illustrated. ISBN 3-928186-66-3.

HOCHADEL, Oliver, *Öffentliche Wissenschaft. Elektrizität in der deutschen Aufklärung* (Göttingen: Walstein Verlag, 2003). 364 pages. ISBN 3-89244-629-6. [New study on electricity in the German Enlightenment discusses among others electrical machines; G. F. Brander and the "Augsburg Group"; traveling demonstrators; local instrument-makers].

HOLLAND, Julian, 'Metrology in Retrospect', *Rittenhouse* vol. 17, #2 (2003), 99-106 [Abstract: Visitors to the National Museum of American History in Washington may have noted a large engineering testing machine on display. When the author came across this machine by the Riehlé Company of Philadelphia he was inspired to write the story of a similar Riehlé testing machine ordered by the University of Adelaide in South Australia in 1901. This article outlines the history of the firm and gives an account of the background to the Adelaide order. This is an interesting example of American technology spreading into a traditionally British market. Although such devices are usually referred to as machines they are really precision measuring instruments].

HOPP, Peter M., ' "Ratcliffe" - Mathematical Instruments Making in the Area', *Journal of the Oughtred Society* 11, nr. 2 (Fall 2002), 50-54 [Discusses many well-known makers in this part of East-Central London, 16th-19th centuries].

HUMBOLDT: Issue 39/40 (December 2003) of *La Revue (du Musée des arts et métiers)* is a 144-page catalogue of an exhibition 'La boussole et l'orchidée', Dec. 2003 to June 2004, on an expedition by von Humboldt and Bonpland to Latin America in 1799-1804. Instrumental information by Matthieu Jacques, Thierry Lalande, Sylvie Provost and Anthony Turner.

JOHNSTON, Stephen, MÖRZER BRUYNS, Willem F.J., DEIMAN, Jan C, and HOOIJMAIJERS, Hans, 'The Anton Mensing Scientific Instrument Project. Final Report', *Bulletin of the Scientific Instrument Society* 79 (Dec 2003), 28-32 [Provisional verdict on the 800 Mensing related-instruments in Chicago and elsewhere, on whose authenticity doubt was cast in the 1950s by Derek Price: "any blanket condemnation ... is clearly inappropriate". Includes list, with prices and buyers, of instruments sold in the 1911 Amsterdam auction that included material from the Strozzi collection].

JONKERS, A.R.T., *Earth's Magnetism in the Age of Sail* (Baltimore/London: Johns Hopkins U.P., 2003). 300 pages. ISBN 0-8018-7132-8. [Edited version of his PhD dissertation *North by northwest: seafaring, science, and the earth's magnetic field (1600-1800)* ].

KIDWELL, Peggy Aldrich, 'An Erasable Surface as Instrument and Product: The Blackboard Enters the American Classroom', *Rittenhouse* vol. 17, #2 (2003), 85-98 [Abstract: At the beginning of the 19th century, the blackboard was an educational novelty in the United States, favored by a few mathematics professors and locally constructed. By the century's end, chalkboards were commercial products found in almost every classroom. This change which affects science and science education to this day was the result of efforts by teachers, educational reformers, and school supply houses].

KING, David M., '14 th-Century England or 9 th-Century Baghdad? New Insights on the Elusive Instrument Called *Navicula de Venetiis*' , *Centaurus* 45 (2003), 204-226.

LAUE, Georg, ed., *SCIENTIFICA* . With texts in German and English by Hans-Georg von Chamier-Glisczinski, Peter Plaßmeyer, Georg Laue and Christiane Zeiller (Munich, 2004). Hardback, 192 pages, ISBN 3-00-013188-4. EUR 45.- plus shipping charges. [Vol. V in series of illustrated catalogues produced by art dealer Kunstammer Georg Laue in Munich. For details: [www.kunstammer.com](http://www.kunstammer.com)].

LUALDI, Alberto, 'Venetian Makers of Optical Instruments of the 18th-19th Centuries. Part 3 Leonardo Semitecolo and Imitators', *Bulletin of the Scientific Instrument Society* 78 (2003), 32-34.

MADDISON, Ron, 'Some Typical Design Features of Late Eighteenth Century Gregorian Reflectors', *Journal of the Antique Telescope Society* 25 (2003), 17-22 [Inspired by acquisition of a Dudley Adams 4-inch Gregorian].

MESCHIARI, A., 'Giovani Battista Amici e il Reale Officio Topografico di Napoli: corrispondenza con il colonnelli Visconti, De Sauguet, Melorio', *Physis* XXXIX (2002) Nuova Serie, Fasc. 1, 161-247 [Publishes correspondence between the optical instrument maker Amici and three directors of the Royal Topographical Office in Naples, 1818-1831. Among others reveals the provenance of four Amici instruments in the Museo of the Istituto Geografico Militare].

MILLS, Allan A., 'Early Voltaic Batteries: an Evaluation in Modern Units and Application to the Work of Davy and Faraday', *Annals of Science* 60 (2003), 373-398.

MILLS, Allan A., HENNESSY, John and WATSON, Stephen, 'Can A Worm Go Backwards? Observations on the Efficiency of Gears', *Bulletin of the Scientific Instrument Society* 79 (Dec 2003), 33-36.

MINIATI, Mara (with the collaboration of M.T. Bottarel, L. Foi, R. Massini), *Misurare Cielo e Terra. Strumenti scientifici tra Medioevo e Rinascimento* (Gruppo Editoriale Delfo, Brescia, 2003). No ISBN, 103 pages. [Catalogue of a temporary exhibition held in Brescia in Nov 2003.

Some fifty top class pre-1700 mathematical instruments from the Koelliker collection and the Museo della Città di Brescia are described and illustrated. Available from the publishers: [editoriale.delfo@libero.it](mailto:editoriale.delfo@libero.it)].

MINICI ZOTTI, Carlo Alberto (ed.), *Magiche visioni prima del Cinema. La Collezione Minici Zotti* (Padua: Il Poligrafo casa editrice, 2001). 314 pages, ISBN 88-7115-299-9. [Catalogue with 1671 entries detailing the Minici Zotti collection at the Museo di Magiche Visioni in Padua, with most texts also in English translation. Collection contains magic lanterns and slides, mechanical musical instruments, peep shows and views, zoetropes and praxinoscopes, stereoscopes, panoramas].

MORRISON-LOW, A.D., 'Instruments in Scotland and Scottish Instruments', *Bulletin of the Scientific Instrument Society* 78 (Sept 2003), 4-11 ["Thumbnail whistlestop tour around Scotland's significant historical instrumentation", introductory talk given to SIS members visiting Scotland].

OLIVER, B.J., 'Rare Oertling Bullion Balance', *Equilibrium* 2003, nr. 2, 2788-2791.

ORCHISTON, W., 'The role of the large refracting telescope in Australian amateur astronomy: an historical perspective', *Australian Journal of Astronomy* 7 (1997), 89-114.

ORCHISTON, W., *Nautical Astronomy in New Zealand. The Voyages of James Cook* (Wellington, Carter Observatory, 1998). 131 pages.

ORCHISTON, W., 'Amateur telescope-making in Australia: an historical perspective', *Amateur Telescope Making Journal* 15 (2000), 10-26.

ORCHISTON, W., 'Australian innovation in telescope design: origin of the horseshoe mounting', *AAO Newsletter* 97 (2001), 12-13.

ORCHISTON, W., 'The English Equatorial Mounting and the history of the Fletcher Telescope', *Journal of Astronomical History and Heritage* 4 (2001), 29-42.

ORCHISTON, W., 'The Thames observatories of John Grigg', *Southern Stars* 40 (3) (2001), 14-22.

ORCHISTON, W., 'The Dover Heights 'hole-in-the-ground' radio telescope', *AAO Newsletter* 99 (2002), 26-27.

ORCHISTON, W., 'Joseph Ward: pioneer New Zealand telescope-maker', *Southern Stars* 41(2) (2002), 13-21.

ORCHISTON, W., 'Amateur telescope making in Australia. An historical perspective', in Cook, W.J. (ed.). *The Best of Amateur Telescope Making Journal. Volume 2* (Willmann-Bell, Richmond, 2003), 208-239.

ORCHISTON, W., 'The rise and fall of the Chris Cross: a pioneering Australian radio telescope', in Orchiston, W., Stephenson, R., Débarbat, S., and Nha, I-S. (eds.). *Astronomical Archives and Instruments in the Asia-Pacific Region* (Seoul, Yonsei University Press, 2004), 157-162.

OTNES, Bob, 'The 31st (1903) and 32nd (1906) Editions of the K & E Catalogue', 'Keuffel & Esser Slide Rules 1909', 'Keuffel & Esses Slide Rules 1913', *Journal of the Oughtred Society* 11, nr. 2 (Fall 2002), 24-32, 12, nr. 1 (Spring 2003), 25-32 and 12, nr. 2 (Fall 2003), 10-16.

OTNES, Bob, 'American Planimeters', *Journal of the Oughtred Society* 11, nr. 2 (Fall 2002), 59-64.

PANTALONY, David A., 'Fine Tuning in Rudolph Koenig's Workshop. The Making of the 1876 Grand Tonometer', *Bulletin of the Scientific Instrument Society* 79 (December 2003), 23-26 [Assembly of over 600 tuning forks at the Smithsonian Institution, Washington].

PEPIN, Barlow M., *The Emergence of the Telescope: Janssen, Lippershey and the Unknown Man* (Duncanville, Texas: T. Tauri Productions, 2002). 41 pages. No ISBN. No price given. [Not seen, from section 'Books received' in *BJHS* Dec. 2003, p. 490].

PERUZZI, Giulio and TALAS, Sofia, *Bagliori nel vuoto - Dall'uovo elettrico ai raggi X: un percorso fra elettricità e pneumatica da Seicento a oggi* (Treviso: Canova, 2004). ISBN 88-8409-085-7, 188 pages, 18 Euros. [Catalogue of exhibition on electricity and pneumatics in the Museo di Storia della Fisica of the University of Padua. For details: <http://bagliorinelvuoto.pfs.unipd.it/>. To order from publishers: [info@canovaedizioni.it](mailto:info@canovaedizioni.it)].

POULLE, Emmanuel, *Giovanni Dondi dall'Orologio, Tractatus astrarii, édition critique et traduction de la version A*. Travaux d'Humanisme et Renaissance CCCLXXI (Genève: Librairie Droz, 2003). 465 pp. ISBN 2-600-00810-1. [Edition of the *Tractatus Astrarii* of Giovanni Dondi, which explains the construction and the mechanism of an astronomical clock built by Dondi in the years 1365-1380].

RAZAULLAH ANSARI, S.M. (ed.), *Science and Technology in the Islamic World: Proceedings of the XXth International Congress of History of Science* (Liège, 20-26 July, 1997, Volume XXI (Brepols Publishers, Turnhout, 2002 [= *De diversis artibus*, vol. 64]), 271 pp. - ISBN 2-503-51415-4. Includes papers by Roshdi Rashed and Petra G. Schmidl on parabolic mirrors (pp. 101-108) and the magnetic compass (pp. 195-208) in Islamic sources.

ROBERTSON, John, *A Treatise of such mathematical instruments, as are usually put into a portable case ... To which is prefixed, a short account of the authors who have treated on the proportional compasses and sector. Third edition, with many additions* (London, 1775). Reprint, with modern notes, by David Manthey, Arlington, VA, Flower-de-Luce Books and The Invisible College Press, 2002. 226 pages plus plates. ISBN 1-931468-11-7. Price \$ 14.95.

RUDD, M. Eugene, WILLACH, Rolf, STAUBERMANN, Klaus and JAECKES, Duane H., 'A Curious Example of a Fraunhofer-Dollond Connection', *Bulletin of the Scientific Instrument*



*Society* 79 (December 2003), 2-5 [Attempts to explain astonishing similarity between prisms of Peter Dollond and Joseph Fraunhofer].

RUDD, M. Eugene and RUDD, Eric P., 'A new Method of Measuring Chromatic Aberration in Lenses', *Journal of the Antique Telescope Society* 25 (2003), 2-8.

SCHÜRMAN, Astrid, WEISS, Burghard, eds., *Chemie - Kultur Geschichte. Festschrift für Hans Werner Schütt anlässlich seines 65. Geburtstages* (Berlin/Diepholz: Verlag für Geschichte der Naturwissenschaften und Technik, 2002). 434 pages. ISBN 3-928186-63-9. Relevant contributions: Joachim FISCHER, 'Instrument zur Mechanischen Integration II. Ein (weiteres) Zwischenbericht' (143-155); Ilse JAHN, 'Welchen Anteil hatten Biologen an der Entwicklung des Mikroskopbaues in Berlin?' (195-202); Kurt MAUEL, 'Die Entwicklung des Kreiselkompasses und des Kreiselstabilisators' (257-267); Carsten REINHARDT, 'Instrument der Einheit? Nuclear Magnetic Resonance und chemische Forschung um 1950' (327-337).

SHANKLAND, P., and ORCHISTON, W., 'Nineteenth century astronomy at the U.S. Naval Academy', *Journal of Astronomical History and Heritage* 5 (2002), 165-179.

SHELL-GELLASCH, Amy, 'The Olivier String Models at West Point', *Rittenhouse* vol. 17, #2 (2003), 71-84 [Abstract: During the early 1800s, instruction at the United States Military Academy at West Point was revised on the French model. In particular descriptive geometry became a cornerstone of the Department of Mathematical Sciences. As teaching aides, a set of 24 string models, constructed under the supervision of Theodore Olivier (1793-1853), were obtained by the Academy. The models illustrate such mathematical objects as the intersection of two half cones, the intersection of a plane, hyperbolic paraboloid and a hyperboloid of one sheet, and the intersection of two half cylinders. I will give a history of these models, as well as a description of their design, use, and the mathematics they exhibit].

SCHULZE, Fritz, 'Wilhelm and Heinrich Seibert, Wetzlar: the rise and fall of a promising microscope maker', *Quekett Journal of Microscopy* 39 (2003), 563-576.

SCOTLAND: 'SIS Annual Study Conference to Scotland, 29th April-3rd May 2003', *Bulletin of the Scientific Instrument Society* 78 (2003), 12-21 [Report of visits to instrument collections in Edinburgh, St. Andrews, Glasgow and Aberdeen].

SHEPPARD, Mark, 'The Beck microscope family', *Quekett Journal of Microscopy* 39 (2003), 577-594 [Written by great-grandson, drawing on family papers and portraits].

SHI Yunli, 'A Note on the Islamic Influence on the Astronomical Instrumentation of the Chosôn Dynasty', *Historia Scientiarum* 13:1 (nr. 79) (July 2003), 33-41.

SILVESTRI, Andrea, editor, *Energia luce movimento. Le collezioni storiche del Dipartimento di elettrotecnica Politecnico di Milano* (Milano, 2002). 226 pp. ISBN 88-7398-001-5. [Beautifully illustrated book about the collections of the electrotechnical department of Polytechnical School at Milan. Most of it is devoted to measurement and technical instruments, late 19th - early 20th century].

THURET: Vol 14 of the *Revue de la Bibliothèque nationale de France* is devoted to 'Histoires des Sciences' (Paris: Diffusion Seuil, October 2003). ISBN 2-7177-2251-3. 95 pages. Most relevant for instrument historians is Jean-Yvez SARAZIN, 'Belles et obsolètes: deux "machines" astronomiques' (pp. 46-47, with colour photos in front of journal), about the "machine pour les planètes" and the "machine pour les éclipses", constructed by Isaac Thuret in 1680/81.

TOBIN, William, *The Life and Science of Léon Foucault: The Man who Proved that the Earth Rotates* (Cambridge University Press, 2003) xiv + 338 pages. ISBN 0-521-80855-3 [Contains photographs of original or replica instruments, contemporary engravings of his instruments, and an appendix which summarizes the locations of known Foucault instruments and daguerreotypes; modern Foucault pendulums are excluded. Lists more instruments than the original French edition].

TURNER, Anthony, 'Ulrich Schenk, a forgotten Swiss instrument maker', *Bulletin of the Scientific Instrument Society* 78 (2003), 22-23 [Schenk (1786-1845) worked in Berne and sold repeating theodolites to John Herschel -- now at the National Maritime Museum, Greenwich -- and Marc-August Pictet, who published a brief priced catalogue of Schenk's workshop].

TURNER, Gerard L'E., *Renaissance Astrolabes and their Makers* (Aldershot: Ashgate Publishing Ltd., 2003). Variorum Collected Series CS 766. xii + 294 pages. ISBN 0-86078-903-9. \$122.95/£65.00. [Reprint of 12 articles published in 1993 to 2001, some co-authored. <https://www.ashgate.com> Contents: Preface; Later medieval and renaissance instruments; The craftsmanship of the 'Carolingian' astrolabe, IC 3042; A critique of the use of the first point of Aries in dating astrolabes; The astrolabe presented by Regiomontanus to Cardinal Bessarion in 1462; An astrolabe belonging to Galileo?; The Florentine workshop of Giovan Battista Giusti, 1556,1575; An astrolabe attributed to Gerard Mercator, c.1570; The three astrolabes of Gerard Mercator; A Tudor astrolabe by Thomas Gemini and its relationship to an astrological disc by Gerard Mercator of 1551; An astrolabe for Alessandro Farnese, Duke of Parma, by Erasmus Habermel; An unusual Elizabethan silver globe by Charles Whitwell; Zinner's ghosts and a curious date:1576; Index].

VÉRON, Philippe, 'L'équatorial de la tour de l'est de l'Observatoire de Paris', *Revue d'Histoire des Sciences* 56/1 (2003), 191-220. [15-inch refractor commissioned by Arago in 1839 came into use only decades later].

WIESENFELDT, Gerhard, 'Politische Ikonographie von Wissenschaft: Die Abbildung von Teyler's "ungemein grosser Elektrisiermaschine", 1785/87', *N.T.M. (=Internationale Zeitschrift für Geschichte und Ethik der Naturwissenschaften, Technik und Medizin)* 10 (2002), 222-233 [Deals with the illustration of the large Cuthbertson electric generator in Teyler's Museum, as published in 1787 by Martinus van Marum. Argues that the illustration reflects the political implications of the experimental programme in Teyler's Museum].

WILLIAM, Michael R., and TOMASH, Erwin, 'The Sector: Its History, Scales and Uses', *Annals of the History of Computing* Jan.-March 2003, 34-47.

WÜNSCH, Johann, 'Die Messgenauigkeit von Tycho Brahes grossem Sextanten', *Beiträge zur Astronomiegeschichte* 6 (2003), 29-33 [On the accuracy of Brahes large sextant].

ZUIDERVAART, Huib J., ' "Zo'n mooie machine, waarvan de kwaliteit door alle astronomen wordt erkend". Een biografie van een vrijwel niet gebruikte telescoop', *Gewina* 26 (2003), 148-165. [Large reflector, dated c. 1742, designed and owned by Amsterdam amateur astronomer Jacobus van der Wall. Donated to Leiden University in 1782, now Museum Boerhaave inv.nr. V09651].