

Recent publications relating to the history of astronomy

Books and Pamphlets

Abstracts of contributed talks and posters presented at the scientific fall meeting of the Astronomische Gesellschaft at Innsbruck, September 22–27, 1997. Hamburg, 1997. 267 p. (Astronomische Gesellschaft. Abstract series, 13)

Partial contents: Contributed talks. Bialas, V. The astronomical story as history of civilisation: some principal remarks. Szostak, R. The significance of the history of astronomy for teaching of physics. Eichhorn, G., M. J. Kurtz, and D. Coletti. Plans for future on-line access to the historical astronomical literature through the Astrophysics Data System. Haupt, H. F., and P. Holl. A database of Austrian astronomers (eine Datei österreichischer Astronomen). Daxecker, F. Christoph Scheiner's main work "Rosa Ursina." Deiss, B. M., and V. Nebel. On Galileo Galilei's production of the reappearance of saturn's accompanying stars in 1612. Brosche, P. To the memory of Anton von Zach—soldier, geodesist and cosmogonist. Lichtenberg, H. Zur Interpretation der Gauss'schen Osterformel und ihrer Ausnahmeregel. Kokott, W. The story of the Leonids. Zur Geschichte eines sensationellen Meteorstroms. Dick, W. R. Tracing the fate of astronomers' papers. Firneis, M. G. Johann Palisa (1848–1925): in commemoration of the 150th anniversary of his birth. Wolfschmidt, G. From astronomy to astrophysics. Hamel, J. Die Neubearbeitung der "Bibliographia Kepleriana"—Erfahrungen und Ergebnisse.

Abstracts of contributed talks and posters presented at the scientific fall meeting of the Astronomische Gesellschaft at Tübingen, September 16–21, 1996. Hamburg, 1996. 253 p. (Astronomische Gesellschaft. Abstract series, 12)

Partial contents: Contributed talks. Lichtenberg, H., and P. H. Richter. Verbesserte Zeitrechnung. Kokott, W. Regiomontans Ephemeriden für die Jahre 1475–1506. Wolfschmidt, G. Tycho Brahe (1546–1601)—the best observing astronomer in 16th century. Rienitz, J. Robert Hooke and the atmospheric refraction. Strumpf, M., and O. Schwarz. Belastung bis an die physische Grenze—B. A. von Lindenaus (1780–1854) Wiedereinrichtung der Seeberg Sternwarte (1808). Schwarz, O., and M. Strumpf. P. A. Hansen (1795–1874) und die scientific community—Wissenschaftsförderung durch den Gothaer Astronomen. Theis, C., S. Dieters, C. Einsel, and F. Hohmann. An expelled Jewish astronomer: Hans Rosenberg. Dick, W. R., and A. Zenkert. Paul Guthnick in Briefen an Bürgel, Selbstzeugnissen und Erinnerungen.—Poster. Wunsch, J. About the measuring accuracy of Hevelius.

The American Astronomical Society's first century. Editor, David H. DeVorkin. Washington, D.C., Published for the American Astronomical Society through the American Institute of Physics, 1999. 350 p. illus., facsim., ports.

L'Astronomia in Italia. A cura di Fabrizio Bònoli. Firenze, Società astronomica italiana; Napoli, Arte tipografica, 1998. 156 p. illus. (part col.), group ports. (part col.)

"Le pubblicazioni della Società Astronomica Italiana": p. 147–151.

Bedini, Silvio A. Patrons, artisans, and instruments of science, 1600–1750. Aldershot, Hants, Brookfield, Vt., Ashgate Variorum, 1999. xiv, [324], 3, 11 p. illus., facsim., plan, ports. (Variorum collected studies series, CS635)

Partial contents: Collections and artisans. 3. Christina of Sweden and the sciences (1993). 6. Agent for the Archduke: another chapter in the story of Johann Philipp Treffier, clockmaker of Augsburg (1961). 7. In pursuit of provenance: the George Graham proto-orrieries (1994).—Instruments and techniques. 9. 'A Treatise on Optics' by Giovanni Christoforo Bolantio (1995). 11. The compartmented cylindrical clepsydra (1962). 12. The 17th century table clepsydra (1968). 13. Seventeenth century magnetic timepieces (1969).

Cartwright, David E. Tides, a scientific history. Cambridge, New York, Cambridge University Press, 1999. 292 p. illus., facsim., maps, ports.

Chapman, Allan. The Victorian amateur astronomer: independent astronomical research in Britain, 1820–1920. Chichester, New York, J. Wiley in association with Praxis Pub., 1998. xix, 428 p. illus., facsim., ports. (Wiley-Praxis series in astronomy and astrophysics)

Contents: pt. 1. The grand amateurs. 1. Amateur astronomy in the Romantic Age. 2. Gentlemen and players: amateurs and professionals in 1840. 3. An inheritance, a wife, a benefice, or a brewery: financing fundamental research. 4. Sir John Herschel: a model for the independent scientist. 5. An astronomical house-party: the Bedford-Aylesbury axis. 6. The brotherhood of the big reflecting telescope. 7. The new sciences of light: spectroscopy, photography, and the grand

amateurs. 8. The astronomers' gentlemen: the grand amateurs' professional assistants.—pt. 2. Poor, obscure and self-taught: astronomy and the working class. Prologue. 9. A penny a peep: the astronomical lecturers of the people. 10. Astronomy and the modest master-craftsman. 11. The day-labourer astronomer.—pt. 3. The rise of the leisured enthusiast. Prologue. 12. A goodly pursuit for a Godly mind: Thomas Webb and his influence. 13. That clubbable passion: the amateur astronomical society. 14. Now ladies as well as gentlemen. 15. Conclusion and postscript: the amateur astronomer into the twentieth century.

Depuydt, Leo. Civil calendar and lunar calendar in ancient Egypt. Leuven, Uitg. Peeters en Departement Oosterse Studies, 1997. xiv, 272 p. illus. (*Orientalia Lovaniensia analecta*, 77)

Duhem, Pierre M. M. L'aube du savoir. *Épitomé du Système du monde*. Textes établis et présentés par Anastasios Brenner. Paris, Hermann, 1997. lx, 612 p. illus. (*Collection Histoire de la pensée*)

"Histoire des doctrines cosmologiques de Platon à Copernic."

Contents: 1. ptie. La cosmologie hellénique.—2. ptie. L'astronomie latine au Moyen Âge.—3. ptie. La crue de l'Aristotélianisme.—4. ptie. Le reflux de l'Aristotélianisme. Les condamnations de 1277.—5. ptie. La physique parisienne au XIV^e siècle.

Dynamics of comets and asteroids and their role in earth history. Proceedings of a workshop held at the Dync Astropark 'Ten-Kyu-Kan', August 14–18, 1997. Edited by Shin Yabushita and Jacques Henrard. Dordrecht, Boston, Kluwer Academic Publishers, 1998. 291 p. illus., maps, ports.

Partial contents: Glikson, A. Eugene Shoemaker and the impact paradigm in earth and planetary science.—Glikson, A. Eugene M. Shoemaker—bibliography of impact papers.—Yi, T.-J. Meteor fallings and other natural phenomena between 1500–1750, as recorded in the annals of the Chosn Dynasty (Korea).—Hasegawa, I. Historical variations in the meteor flux as found in the history of the Koryo Dynasty.

Glikson's contributions also appear in *Celestial Mechanics & Dynamical Astronomy*, v. 69, no. 1/2, 1997/98.

Eratosthenes. Le ciel; mythes et histoire des constellations. *Les Catastérismes d'Ératosthène*. Texte traduit, présenté et commenté par Pascal Charvet et Arnaud Zucker; postface et commentaire astronomique par Jean-Pierre Brunet et Robert Nadal. Illus. de Robert Schenk. Édition dirigée par Marie-Claude Char. Paris, NiL éditions, 1998. 238 p. illus. (part col.) (*Le Cabinet de curiosités*)

Evans, David S. The Eddington enigma: a personal memoir. Princeton, NJ, Xlibris Corp., 1998. 199 p. illus., facsim., port.

The Expanding worlds of general relativity. Hubert Goenner, Jürgen Renn, Jim Ritter, Tilman Sauer, editors. Boston, Birkhäuser, 1999. xv, 512 p. illus., facsim. (*Einstein studies*, v. 7)

Partial contents: Andrade Martins, R. de. The search for gravitational absorption in the early twentieth century.—Norton, J. D. The cosmological woes of Newtonian gravitation theory.—Bergia, S., and L. Mazzoni. Genesis and evolution of Weyl's reflections on De Sitter's universe.—Gale, G., and J. R. Urani. Milne, Bondi and the 'second way' to cosmology.—Kragh, H. Steady-state cosmology and general relativity: reconciliation or conflict?—Sanchez Ron, J. M. Larmor versus general relativity.

Ferguson, Kitty. Measuring the universe; the historic quest to quantify space. London, Headline, 1999. xiv, 306 p., [8] p. of plates. illus., facsim., ports.

Foderà Serio, Giorgia, and Ileana Chinnici. L'Osservatorio astronomico di Palermo: la storia e gli strumenti. Palermo, Flaccovio editore, 1997. 175 p. illus. (part col.), ports. (part col.)

Contents: Serio, S. Prefazione.—Storia dell'Osservatorio.—La collezione di strumenti dell'Osservatorio.—1. Astronomia. 2. Cronometria. 3. Meteorologia. 4. Sismologia. 5. Spettroscopia. 6. Fisica. 7. Topografia. 8. Geomagnetismo. 9. Globi.

Le Forme della comunicazione scientifica. A cura di Massimo Galuzzi, Gianni Micheli, e Maria Teresa Monti. Milano, FrancoAngeli, 1998. 438 p. illus., facsim. (*Filosofia e scienza nel Cinquecento e nel Seicento*. Ser. 1, Studi, 49)

Partial contents: Repellini, F. F. L'organizzazione del trattato astronomico nell'antichità.—Pace, A. de. Forma del dialogo e sapere in alcune interpretazioni del Rinascimento italiano. Nuove prospettive sul *Dialogo* galileiano.—Mormino, G. Christiaan Huygens e il problema della comunicazione scientifica.

Galilei, Galileo. Dialogo sopra i due massimi sistemi del mondo, Tolemaico e Copernicano. Edizione critica e commento a cura di Ottavio Besomi e Mario Helbing. Padova, Editrice Antenore, 1998. 2 v. illus., facsim. (*Medioevo e umanesimo*, 102–103)

Contents: 1. Testo.—2. Commento.

Gallo, Carlo. L'astronomia egizia, dalle scoperte archeologiche alla misurazione del tempo. Presentazione di Walter Ferreri. Padova, F. Muzzio editore, 1998. xviii, 196 p. illus. (*Muzzio scienza*)

- Gatti, Hilary. Giordano Bruno and Renaissance science. Ithaca, Cornell University Press, 1999. 257 p. illus., facsim.
- Gillet, André. Une histoire des marées. Paris, Belin, 1998. 95 p. illus., facsim., ports. (Regards sur la science)
 Contents: Introduction.—ch. 1. De la mythologie à l'astronomie scientifique.—ch. 2. Les premières théories.—ch. 3. Les tatonnements des physiciens du XVII^e siècle.—ch. 4. Marées et gravitation.—Glossaire.—Notes.
- History of Oriental astronomy. Chairpersons and editors: S. M. R. Ansari & S. J. Dick. In International Astronomical Union. Highlights of astronomy. v. 11B. As presented at the XXIIIrd general assembly of the IAU, 1997. Edited by J. Andersen. Dordrecht, Boston, Kluwer Academic Publishers, 1998. p. 693–746. illus. (Joint discussion, 17)
 Contents: Maeyama, Y. On the earliest stage of Chinese astronomy: 3 hypotheses.—Dalen, B. van, and M. Yano. Islamic astronomy in China: two new sources for the *Huihui li* ("Islamic calendar").—Kusuba, T. An Arabic commentary on Al-Tūsū's [sic] *al-Tadhkira* and its Sanskrit translation.—Jiang, X.-Y. Indian astronomy in ancient China.—Nha, I.-S. Three star maps produced in Korea during the 18th century.—Nha, I.-S. A new museum of astronomy in Korea.—Stephenson, F. R. Eclipse records in early Korean history: the *Koryo-sa*.—Miyajima, K. Projection methods in Chinese, Korean and Japanese star maps.—Chen, K. Y. On the obliquity of the ecliptic.—Ōhashi, Y. The legends of Vasita—a note on the Vedāṅga astronomy.—Plofker, K. Spherical trigonometry in the astronomy of the medieval Kerala school.—Pang, K. D., K. K. C. Yau, and H. H. Chou. Astronomical dating and statistical analysis of ancient Chinese eclipse data.—Pingree, D. The *Drkpapsasāraṇī*: a Sanskrit version of de La Hire's *Tabulae Astronomicae*.—Ansari, S. M. R. Modern astronomy in Indo-Persian sources.—DeVorkin, D. H. Takamine and Saha: contacts with Western astrophysics.—Isobe, S. Astronomy education in the East.—Hashimoto, K. The earliest evidence of the introduction of Kepler's laws to China as is observed in the *Lifa wenda*.—Sobouti, Y. Contemporary astronomy in Iran—a status report.—Orchiston, W. Power and politics in nineteenth century Australian astronomy.—Débarbat, S. V. Astronomical observations in Asia from Delisle's manuscript preserved in the Paris Observatory Library.
- Hockey, Thomas A. Galileo's planet: observing Jupiter before photography. Bristol, Philadelphia, Institute of Physics Pub., 1999. xvii, 217 p. illus. (part col.), facsim., ports.
 An appendix provides a chronological list of dates (Gregorian) of oppositions of Jupiter, 1601–1900.
- Holland, Charles H. The idea of time. Chichester, New York, J. Wiley, 1999. 150 p. illus.
- Hollander, Raymond d'. L'astrolabe: histoire, théorie et pratique. Paris, Institut océanographique, 1999. 382 p. illus.
 A version of the rete of Abu-Bakr's astrolabe printed on a plastic disk is supplied in a pocket inside the back cover of the volume.
- Ifland, Peter. Taking the stars: celestial navigation from argonauts to astronauts. Newport News, Va., Mariners' Museum; Malabar, Fla., Krieger Pub. Co., 1998. xv, 222 p. illus. (part col.), facsim.
- Ishihara, Aeka. Makarie und das Weltall: Astronomie in Goethes "Wanderjahren." Köln, Böhlau, 1998. 261 p. (Kölner germanistische Studien, Bd. 42)
 Partial contents: Einleitung. Die Gestalt der Makarie in der Forschung.—T. A. Poesie und Naturwissenschaft: "Der Roman über das Weltall."—T. B. I. Goethe und die optischen Instrumente. II. Goethe als Oberaufseher der Sternwarte zu Jena. III. Goethe und die Astronomie.—T. C. Makarie. III. Die Astronomie und die Frauen. IV. Makarie und das Fernrohr: Erschrecken und Erstaunen. V. Die Vertikal- und Spiraltendenz: Makarie und die Naturwissenschaftler. VI. Symbolik: die Gestalt der Makarie.—Ergebnisse und Perspektiven.—Anhang.
- Kane, Matt. Heavens unearthed in nursery rhymes and fairy tales. Illustrated by Joe Servello. Altoona, PA, Golden Egg Books, 1999. 308 p. illus.
 "Our beliefs about the moon can be traced back to ancient times. Many span the globe, and many can be traced even to the last Ice Age. By examining our most popular fairy tales and nursery rhymes, we can see that they are based on ancient myths about the sun and the moon and about solar and lunar eclipses."
- Kepler, Johannes. Gesammelte Werke. Bd. 20.2. Manuscripta astronomica (II). Commentaria in theoriam Martis. Bearb. von Volker Bialas, Johanna Kuric, Inge Noeggerath. München, C. H. Beck'sche Verlagsbuchhandlung, 1998. 650 p. illus., facsim.
- Koch, Heinrich P. Der Sintflut-Impakt: die Flutkatastrophe vor 10.000 Jahren als Folge eines Kometeneinschlags. Frankfurt am Main, New York, P. Lang, 1998. 233 p. illus., maps.

- Krishnamurthy, V. *The clock of the night sky*. New Delhi, UBS Publishers' Distributors, 1998. 107 p. illus. (part fold.) (K. K. Birla Academy monographs on the cultural, scientific and technological heritage of India, no. 2)
 Contents: Foreword.—Preface.—Acknowledgements.—1. Introductory.—2. The 17 Nakshatras of the Hindu calendar.—3. The 27 Sanskrit formulae.—4. The Tamil tradition.—5. The Tanjore manuscript.—6. A critical analysis.—Appendix 1 [proof of a mathematical fact on p. 4]—Appendix 2 [ready reckoner for the visibility of the 27 Nakshatras]—Appendix 3 [ready reckoner Rasi Chakra for locating the 7th sign]—Appendix 4 [MIF for the remaining months]—Appendix 5. Concordance between names of stars in Sanskrit, Tamil and English.
- Kūshyār ibn Labbān. *Kūshyār Ibn Labbān's Introduction to astrology*. Edited and translated by Michio Yano. Tokyo, Institute for the Study of Languages and Cultures of Asia and Africa, 1997. xxviii, 319 p. illus. (*Studia culturae islamicae*, 62)
 Arabic and English on facing pages.
 "Appendix 1: Chinese text of the *Ming-yi Tien-wen shu*": p. 263–295.
 "Appendix 2: Index of Arabic words with Chinese and English translations": p. 297–314.
 "Appendix 3: English-Arabic Glossary": p. 315–319.
- Lachière-Rey, Marc, and Jean P. Luminet. *Figures du ciel; de l'harmonie des sphères à la conquête spatiale*. Paris, Seuil/Bibliothèque nationale de France, 1998. 207 p. illus. (part col.), facsim. (part col.)
 Published in connection with an exhibition at the Bibliothèque nationale de France, Oct. 8, 1998–Jan. 10, 1999.
 Contents: Angremy, J. P. Préface.—L'harmonie du monde.—L'uranométrie.—L'heptaméron.—Les habitants du ciel.
- Library and Information Services in Astronomy III (LISA III). Proceedings of a conference held in Puerto de la Cruz, Tenerife, Spain, 21–24 April 1998. Edited by Uta Grothkopf, Heinz Andernach, Sarah Stevens-Rayburn, and Monique Gomez. San Francisco, Astronomical Society of the Pacific, 1998. xxxi, 323 p. illus., facsim., ports. (*Astronomical Society of the Pacific conference series*, v. 153)
 Partial contents: pt. 6. Who needs all this old stuff? Hoskin, M. A. The value of archives in writing the history of astronomy. Beckman, J. E., and T. J. Mahoney. The Maunder Minimum and climate change: have historical records aided current research? Mahoney, T. J. Historical astrolexicography and old publications.—pt. 8. Posters. Dorokhova, T. H. The development of astronomy in Odessa and its reflection in publications of the Astronomical Observatory, Odessa State University. Foderà Serio, G., and D. Randazzo. The origin of the Palermo Astronomical Observatory Library: Giuseppe Piazzi's (1746–1826) books. Kurtz, M. J., and G. Eichhorn. The historical literature of astronomy, via ADS [the NASA Astrophysics Data System Abstract Service]—pt. 9. Posters presented in absentia. Peperoni, L., and M. Zuccoli. The Bologna historical archives on the Web.
- McKenna-Lawlor, Susan M. P. *Whatever shines should be observed <quicquid nited notandum>* Blackrock, Co. Dublin, Samton, 1998. 136 p. illus., facsim., ports. (*Samton historical studies*, no. 3)
 Contents: 1. Mary, Countess of Rosse (1813–1885) photographer and philanthropist.—2. The Hon. Mrs. Mary Ward (1827–1869) astronomer, microscopist, artist and entrepreneur.—3. Agnes Mary Clerke (1842–1907) historian and active promoter of astrophysics.—4. Ellen Mary Clerke (1840–1906) poet and writer on literary and scientific subjects.—5. Margaret Lindsay Huggins (1848–1915) pioneering astrophysicist.
- Magoni, Gianluigi. *Le cose non dette sui Decani di Schifanoia; una lettura astronomica*. Ferrara, Corbo editore, 1997. 110 p. illus. (*Accademia delle scienze, Ferrara. Atti, ser. 2, v. 73. Supplemento*)
 Summary in English: p. 97–99.
 "An astronomical reading of the *Decani* at Schifanoia."
- The Many faces of the sun. A summary of the results from NASA's Solar Maximum Mission. Keith T. Strong, Julia L. R. Saba, Bernhard M. Haisch, Joan T. Schmelz, editors. New York, Springer, 1999. xxii, 610 p. illus.
- Museo astronomico e copernicano. *Archivio*. La corrispondenza degli astronomi. The correspondence of the astronomers. A. De Simone e G. Monaco. Roma, Osservatorio astronomico di Roma, Archivio del Museo astronomico e copernicano, 1996–97. 2 v. ports.
 A catalog with indexes.
 Contents: v. 1. I. Porro, A. Secchi, L. Respighi, A. Dorna.—v. 2. G. B. Donati, P. Tacchini, A. Wolynski, A. di Legge, E. Millosevich.
- Paltrinieri, Giovanni. *Meridiane e orologi solari d'Italia*. Bentivoglio, L'Artiere edizionitalia, 1997. 263 p. illus. (part col.), facsim., maps, col. ports.

- Contents: Hack, M. Presentazione.—Prefazione.—La gnomonica e la misurazione del tempo.—Motti solari.—I calendari.—Come si muove il Sole.—La suddivisione del giorno.—Coli strumenti gnomonici.—Siamo tutti gnomonisti.—Bibliografia gnomonica.—Nota biografica.
- Paul, Jacques. *L'homme qui courait après son étoile*. Paris, Éditions Odile Jacob, 1998. 272 p. (Sciences (Éditions Odile Jacob))
- Contents: ch. 1. Les rayons de la violence.—ch. 2. Voyage au centre d'une étoile.—ch. 3. Cœurs effondrés.—ch. 4. Un, deux, trois, pulsar!—ch. 5. L'affaire Geminga.—ch. 6. Du rêve à la réalité.—ch. 7. Radiographie de la Voie lactée.—ch. 8. L'inaccessible étoile.
- Pérez Higuera, Teresa. *Calendarios medievales*. La representación del tiempo en otros tiempos. Madrid, Ediciones Encuentro, 1997. 267 p. col. illus., col. facsim. (Pueblos y culturas)
- Poole, Robert. *Time's alteration: calendar reform in early modern England*. London, UCL Press, 1998. xix, 243 p. illus.
- Contents: 1. "Give us our eleven days!" The English calendar riots of 1752.—2. Signs and seasons: time and society in early modern England.—3. The problem of the calendar.—4. England and the Gregorian calendar.—5. John Dee and the Elizabethan calendar.—6. Time's distractions: the seventeenth-century calendar.—7. England and the protestant calendar.—8. The construction of calendar reform, 1700–1752.—9. The impact of calendar reform.—10. Old calendars and new.—11. Calendars and cultures.—Appendix: Fairs and the 1752 calendar reform.
- Richards, E. G. *Mapping time: the calendar and its history*. Oxford, New York, Oxford University Press, 1998. xxi, 438 p. illus., facsim., map, ports.
- Contents: pt. 1. The calendar in theory.—pt. 2. The calendars of the world.—pt. 3. Calendar conversions.—pt. 4. Easter.—Appendices.
- Ruggles, Clive L. N. *Astronomy in prehistoric Britain and Ireland*. New Haven, Yale University Press, 1999. 285 p. illus., maps, plans.
- Schmeidler, Felix. *Kommentar zu "De Revolutionibus"*. Berlin, Akademie-Verlag, 1998. 209 p. (Copernicus, Nicolaus. Gesamtausgabe, Bd. 3, T. 1)
- Schuster, Peter, and Christian Strasser. *Simon Stampfer, 1790–1864: von der Zauberscheibe zum Film*. Hrsg. von Roland Floimair. Salzburg, Landespressebüro, 1997. 223 p. illus., facsim., maps, ports. (Schriftenreihe des Landespressebüros. Serie "Sonderpublikationen," Nr. 142)
- Stampfer worked in astronomy as well as in geodesy.
- Snodgrass, Mary E. *Signs of the zodiac: a reference guide to historical, mythological, and cultural associations*. Illustrated by Raymond Miller Barrett, Jr. Westport, Conn., Greenwood Press, 1997. xiv, 243 p. illus.
- Szczeciniarz, Jean J. *Copernic et le mouvement de la Terre*. Paris, Flammarion, 1998. 438 p. illus. (Nouvelle bibliothèque scientifique)
- Contents: Introduction.—1. ptie. Ouverture thématique.—2. ptie. La rhétorique de Copernic: le mouvement de la Terre doit être possible.—3. ptie. La pluralité des mouvements de la Terre: l'exposition du système héliocentrique.—4. ptie. Le copernicanisme.—Conclusions.—Glossaire.
- Weimayr, Matthias. *Paradigmenwechsel und konfessionelle Krise in der frühen Neuzeit: der Kampf um die Autonomie der Wissenschaft*. Frankfurt am Main, New York, P. Lang, 1995. 282 p. (Europäische Hochschulschriften. Reihe 20, Philosophie. Bd. 461)
- Partial contents: 4. Die kopernikanische Revolution: optische Täuschungen und das Auge des Geistes.—5. Die manieristische Grammatik der Himmelszeichen: der apollinische Dirigent und die Harmonie der Sphären.—6. Die optische Grammatik des Buches der Natur: der teleskopische Blick im Reich der unsichtbaren Zeichen.
- Whitaker, Ewen A. *Mapping and naming the moon; a history of lunar cartography and nomenclature*. Cambridge, New York, Cambridge University Press, 1999. xix, 242 p. facsim., maps.
- Whitesell, Patricia S. *A creation of his own: Tappan's Detroit Observatory*. Ann Arbor, Bentley Historical Library, University of Michigan, 1998. xix, 236 p., [4] p. of plates. illus. (part col.), facsim., map, plans, ports.
- Znakomyĭ neznakomyĭ Zel'dovich; v vospominaniakh družey, kolleg, uchenikov. Otv. redaktory, S. S. Gershteĭn, R. A. Sĭunĭaev. ch. 6. *Astrofizika i kosmologĭa*. Moskva, "Nauka," 1993. (Seriĭa "Uchenye Rossii. Ocherki, vospominaniĭa, materialy") p. 237–312.
- Contents: Doroshkevich, A. G. Kakim ĭa ego pomnĭu ...—Novikov, I. D. Nachalo raboty v astrofizike.—Bisnovatyĭ-Kogan, G. S. Pĭatnadsat' let i dal'she.—Sĭunĭaev, R. A. Kogda my byli molodymi.—Chernin, A. D. Priblizhenie k istine ili anzats Zel'dovicha.—Ruzmaĭkin, A. A. Magnetizm Zel'dovicha.—Grishchuk, L. P. On zhil naukoĭ.—Polnarev, A. G. Uchitel'.—Sazhin, M. V. Kak rozhdalas' odna kniga po kosmologii.—Cherepashchuk, A. M. On sozdal shkolu relĭativistskoĭ astrofiziki.—Khlopov, M. ĪU. S fiziko na "ĪA."—Bonnet, R. M. "Zdravstvu, grub'."

(Vospominaniâ o vstreche s vydaûshchimsîa uchenym.)—Melott, A. L. Î. A. B. Zel'dovich i krupnomasshtabnâa struktura vseleño.—Moffatt, H. K. Chelovek bezgranichnoï energii.—Thorne, K. S. Iskrivlennoe prostranstvo i toroplioe vremâ. (Glava 13 "Isparenie chernykh dyr.")

Articles, Including Essays in Books and Papers in Proceedings

Abattouy, Mohamed. Astronomy. *In his* The history of Arabic sciences, a selected bibliography. Berlin, Max-Planck-Institut für Wissenschaftsgeschichte, 1996. (Max-Planck-Institut für Wissenschaftsgeschichte. Preprint, 53) p. 19–27.

The bibliography also includes sections on mathematics and optics (p. 11–19) and transmission and miscellanea (p. 38–43).

Ackerman, Marcel, and André L. Jaumotte. Marcel Nicolet. *In* Académie royale de Belgique. Annuaire. 164; 1998. Notices biographiques. Bruxelles. p. 31–49. port.

Ackermann, Silke, and John Cherry. Richard II, John Holland and three medieval quadrants. *Annals of science*, v. 56, Jan. 1999: 3–23. illus.

Ackermann, Silke. The scientific instruments. *In* Humphrey Cole: mint, measurement and maps in Elizabethan England. Edited by Silke Ackermann. London, British Museum, 1998. (British Museum. Occasional paper, no. 126) p. 29–95. illus. (part col.), facsimis.

Contents: Astrolabes. Universal instrument. Horizontal sundials. Quadrant sundials. Ring dial. Nocturnal. Astronomical compendia. Folding rules. Folding gunners' rules. Altazimuth theodolites. Plane table alidade. Appendix 1. Saints' days and Christian feasts on Humphrey Cole's instruments. Appendix 2. Latitude list on Humphrey Cole instruments. Glossary.

Adelman, Saul J. Photographic memories. *Astronomy & geophysics*, v. 39, Dec. 1998: 35–36. illus. (part col.) (Viewpoints)

Reminiscences on twenty years of photographic stellar spectra.

Alkuwaifi, Ahmad, and Mònica Rius. Descripción del ms. 80 de al Zāwiya al-amzawīya. *Al-Qanara*, v. 19, fasc. 2, 1998: 445–463. illus.

Abstract in English.

Describes a 16th/17th-century manuscript "of miscellaneous contents, even though most of them are of astronomical nature."

Alt, Peter A. Kopernikanische Lektionen. Zur Topik des Himmels in der Literatur der Aufklärung. *Germanisch-Romanische Monatsschrift, n.F.*, Bd. 48, Heft 2, 1998: 141–164.

Abstract in English.

"Based upon selective literary texts of the age of the Enlightenment various forms of ways dealing with the knowledge of the Copernican astronomy are presented."

Altschuler, Daniel R. The National Astronomy and Ionosphere Center's (NAIC) Arecibo Observatory in Puerto Rico. *In* Particle physics and cosmology: first tropical workshop. High energy physics: second Latin American symposium. San Juan, Puerto Rico, April 1998. Editor, José F. Nieves. Woodbury, N.Y., American Institute of Physics, 1998. (AIP conference proceedings, 444) p. 563–570. illus.

Arai, Shinji. Astronomical studies by Zhao Youqin. *Taiwanese journal for philosophy & history of science*, v. 5, Apr. 1996: 59–102. illus.

"Zhao Youqin was a Daoist priest of the Jindan-dao School who flourished in the first half of the 14th century. He was also the master of the noted Daoist priest Chen Zhixu. But he wrote an astronomy book titled *Gexiang Xinshu*, a unique book in the history of Chinese astronomy. Based on this book, this paper examines: (1) Zhao's cosmological theory, (2) astronomical instruments devised by him, (3) his views of eclipses, and (4) the meaning of the title of his book. In addition, the paper introduces simulations contrived by Zhao to explain astronomical phenomena using pieces of paper and bits of wood. His simulations are evidence which shows that an approach to a better understanding of nature through experiment already existed in China in the 14th century."

Arecchi, Alberto. Sol omnibus lucet. Appunti sugli orientamenti solari nell'architettura medievale. *In* Società pavese di storia patria. Bollettino. nuova ser., v. 50; 1998. Como, Litografia New press. p. 19–29. illus., map.

The illustrations appear on 4 unnumbered pages following p. [30]

"In questo articolo è sviluppata la conoscenza di alcuni fattori, importanti per gli studi sull'architettura sacra medievale, che non sono spesso tenuti in adeguata considerazione."

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English summary.
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