

## RECENT PUBLICATIONS RELATING TO THE HISTORY OF ASTRONOMY

### *Books, Pamphlets, and Special Issues of Journals*

Allen, Michael J. B. *Nuptial arithmetic. Marsilio Ficino's commentary on the fatal number in Book VIII of Plato's Republic.* Berkeley, University of California Press, 1994. 291 p. facsim.

Contents: Preface.—pt. 1. Study. 1. Ficino's commentary on the eighth book of the *Republic*. 2. Figured numbers and the fatal number. 3. Eugenics, the *habitus*, and the spirit. 4. Jupiter, the stars, and the golden age. Epilogue.—pt. 2. Texts. Headnote and sigla. Text 1. *Argumentum*. Text 2. Ficino's rendering of *Republic* VIII.546A1–D3: *Chalepon men ... paides esontai*. Text 3. *De numero fatali*.—Appendix 1. Ficino's Greek exemplar.—Appendix 2. Ficino and the earlier humanist versions of *Republic* 546A ff.—Appendix 3. “In number, weight, and measure.”—Appendix 4. Conversion tables.

The texts are given in Latin with English translation on facing pages.

Alles über Kometen. München, Verlag Sterne und Weltraum Dr. Vehrenberg, 1997. 187–311 p. illus. (part col.), facsimis. (part col.), ports. (part col.) (Sterne und Weltraum, 36. Jahrg., Nr. 3)

Partial contents: Lüthen, H. Komet West, vor 21 Jahren.—Kippenhahn, R. Es begann mit Tycho und Halley.—Fischer, D. Der Kometen-Mann: Fred Whipple wurde 90.—Seggewiss, W. Gestirne der Könige: Kometen-Kunst aus zwei Jahrtausenden.—Seggewiss, W., and U. Borgeest. Furcht und Faszination: Kometen in der Gebrauchskunst.—Fischer, D. Das also war des Kometen Kern: die Giotto-Mission zu Halley 1986.—Schmidt, J. Tunguska 1908: ein Warnschuss aus dem All.—Wacker, S. Das Abenteuer von Kohoutek mit Kohoutek.—Hughes, D. W. Heller als alle Sterne: die wirklich “grossen” Kometen der Vergangenheit.—Hughes, D. W. Tafel der Kometen.—Guthier, O., and M. Meyer. Die Meister der Kometen-Jagd.

Astell, Ann W. *Chaucer and the universe of learning.* Ithaca, Cornell University Press, 1996. xvi, 254 p.

Argues that “Chaucer uses an astrological sequence, which becomes evident in the rapidly descending order of the first three tales, to structure the pilgrimage to Canterbury as a philosophical soul-journey, which subsumes under the successive *influentia* of the seven planets a topical survey of the arts and sciences, arranged according to the same outline used by Gower in Book VII of *Confessio Amantis*.

“These two planetary and philosophical outlines establish remarkable and hitherto unnoticed correspondences between Chaucer's *Tales* and the works of Gower and Dante.”

Astronomical diaries and related texts from Babylonia, by the late Abraham J. Sachs. Completed and edited by Hermann Hunger. v. 3. Diaries from 164 B.C. to 61 B.C. Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1996. 2 v. illus. (Österreichische Akademie der Wissenschaften. Philosophisch-historische Klasse. Denkschriften, 247. Bd.)

Contents: pt. 1. Texts.—pt. 2. Plates.

Aveni, Anthony F. *Stairways to the stars: skywatching in three great ancient cultures.* New York, J. Wiley, 1997. 230 p. illus., maps, plans.

Contents: Preface.—ch. 1. Introduction: a different sort of cosmos.—ch. 2. The naked sky.—ch. 3. Standing stones and stars, megalithic astronomy and the people of ancient Great Britain.—ch. 4. Power from the sky: ancient Maya astronomy and the cult of Venus.—ch. 5. City and cosmos: astronomy and the Inca empire.—ch. 6. The West vs. the rest?—Appendix A. Things to think about.—Appendix B. Archaeoastronomical fieldwork.—Appendix C. Archaeoastronomical resources.

Baigent, Michael. *From the omens of Babylon: astrology and ancient Mesopotamia*. London, New York, Arkana, Penguin Books, 1994. 225 p. map.

"A more complete understanding of how astrology developed over the centuries is useful not only to historians but also to those concerned with the wider task of understanding the growth of ancient Mesopotamian intellectual ability and expression."

Barrow-Green, June. *Poincaré and the three body problem*. Providence, R.I., American Mathematical Society, 1997. xv, 272 p. illus., facsimis., ports. (History of mathematics, v. 11)

Baum, Richard, and William Sheehan. *In search of planet Vulcan: the ghost in Newton's clockwork universe*. New York, Plenum Trade, 1997. xvi, 310 p. illus., ports.

Booth, Nicholas. *Exploring the solar system*. Cambridge, New York, Cambridge University Press, 1996. 176 p. illus. (part col.)

First published in Great Britain by G. Philip in 1995.

"... attempts to record the remarkable legacy of three decades of planetary exploration ..."

Byrhtferth. *Byrhtferth's Enchiridion*. Edited by Peter S. Baker and Michael Lapidge. Oxford, New York, Published for the Early English Text Society by the Oxford University Press, 1995. cxxxiii, 480 p., [1] leaf of plates. illus. (1 fold.), facsim. (Early English Text Society. S.S. 15)

"Appendix A. Extracts From Byrhtferth's *Computus*": p. 373–427.

"Appendix B. Fragment of an Old English *Computus*": p. 429–430.

Anglo-Saxon and/or Latin with English translation on facing pages.

"Byrhtferth's intention in composing his *Enchiridion* was to make ecclesiastical computus and arithmology—subjects which are at best difficult and at worst impenetrable—comprehensible to a diverse audience. In presenting this edition to the public our chief hope is that we have in some measure assisted him in achieving his aim."

Calvin and science. Edited by Richard C. Gamble. New York, Garland Pub., 1992. 196 p. (Articles on Calvin and Calvinism, v. 12)

Reprints of previously published essays.

Partial contents: Gerrish, B. A. The Reformation and the rise of modern science: Luther, Calvin, and Copernicus (1982).—Rosen, E. Calvin's attitude toward Copernicus (1960).—Ratner, J. Some comments on Rosen's "Calvin's attitude toward Copernicus." Rosen, E. A reply to Dr. Ratner (1961).—Hooykaas, R. Calvin and Copernicus (1974).—Kaiser, C. B. Calvin, Copernicus, and Castellio (1986).—Marcel, P. C. Calvin and Copernicus (1981).—Probes, C. M. Calvin on astrology (1974–75).—White, R. Calvin and Copernicus: the problem reconsidered (1980).—Kaiser, C. B. Calvin's understanding of Aristotelian natural philosophy: its extent and possible origins (1988).—Deason, G. B. The Protestant Reformation and the rise of modern science (1985).—Reid, W. S. Natural science in sixteenth-century Calvinistic thought (1963).

The Cambridge illustrated history of astronomy. Edited by Michael Hoskin. Cambridge, New York, Cambridge University Press, 1997. 392 p. illus. (part col.), facsimis. (part col.), ports. (part col.)

Contents: Hoskin, M. A. Preface.—1. Ruggles, C. L. N., and M. A. Hoskin. Astronomy before history.—2. Hoskin, M. A. Astronomy in antiquity. Cullen, C. Astronomy in China.—3. Hoskin, M. A., and O. Gingerich. Islamic astronomy. Hoskin, M. A. The astrolabe.—4. Hoskin, M. A., and O. Gingerich. Medieval Latin astronomy.—5. Hoskin, M. A. From geometry to physics: astronomy transformed. Bennett, J. A. The refracting telescope in the seventeenth century.—6. Hoskin, M. A. Newton and Newtonianism.—7. Hoskin, M. A. The astronomy of the universe of stars.—8. Dewhurst, D. W., and M. A. Hoskin. The message of starlight: the rise of astrophysics.—9. Hoskin, M. A., and O. Gingerich. Astronomy's widening horizons.

Domenicucci, Patrizio. *Astra Caesarum: astronomia, astrologia e catasterismo da Cesare a Domiziano*. Pisa, Edizioni ETS, 1996. 191 p. illus. (Testi e studi di cultura classica, 16)

Revised and enlarged edition of his *Astra Caesarum: note sul catasterismo a Roma* (Chieti,

Vecchio Faggio, 1989. 139 p. Collana di studi degli istituti di lettere, Università G. D'Annunzio di Chieti, Facoltà di lettere e filosofia).

Contents: Premessa.—Introduzione.—cap. 1. Cesare e le stelle.—cap. 2. Il cielo di Augusto.—cap. 3. Il cielo degli imperatori da Augusto a Domiziano.

Edmondson, Frank K. AURA and its US national observatories. Cambridge, New York, Cambridge University Press, 1997. xviii, 367 p. illus., ports.

Encyclopedia of the history of Arabic science. v. 1. Astronomy—theoretical and applied. Edited by Roshdi Rashed in collaboration with Régis Morelon. London, New York, Routledge, 1996. 330 p. illus., facsimis., maps, plan.

Contents: Rashed, R. Preface.—1. Morelon, R. General survey of Arabic astronomy.—2. Morelon, R. Eastern Arabic astronomy between the eighth and the eleventh centuries.—3. Saliba, G. Arabic planetary theories after the eleventh century AD.—4. King, D. A. Astronomy and Islamic society: qibla, gnomonics and timekeeping.—5. Kennedy, E. S. Mathematical geography.—6. Grosset-Grange, H. (in collaboration with H. Rouquette). Arabic nautical science.—7. Vernet, J., and J. Samsó. The development of Arabic science in Andalusia.—8. Goldstein, B. R. The heritage of Arabic science in Hebrew.—9. Hugonnard-Roche, H. The influence of Arabic astronomy in the medieval West.

Ettisch, Ernst. The Hebrew vowels and consonants as symbols of ancient astronomic concepts. Translated from the German by Harry Zohn. Brookline Village, MA, Branden Pub. Co., 1987. 156 p. illus. Translation of an unpublished work.

Europäische Technik im Mittelalter, 800 bis 1200: Tradition und Innovation. Ein Handbuch, hrsg. von Uta Lindgren. Vermessung des Himmels und der Erde. Berlin, Gebr. Mann, 1996. p. 381–411. illus., facsimis. (part col.)

Partial contents: Flachenecker, H. Mechanische Uhren.—Kunitzsch, P. Das Astrolab.—Lindgren, U. Mittelalterliche Seekarten: Methoden und Instrumente zu ihrer Herstellung und Benutzung.

A color illustration relating to Flachenecker's essay appears on p. 457.

Faltenbacher, Karl F. Das Colloquium Heptaplomeres und das neue Weltbild Galilei; zur Datierung, Autorschaft und Thematik des Siebenengesprächs. Stuttgart, F. Steiner, 1993. 43 p. (Akademie der Wissenschaften und der Literatur, Mainz. Geistes- und sozialwissenschaftliche Klasse. Abhandlungen, Jahrg. 1993, Nr. 2)

Federico II e le scienze. A cura di Pierre Toubert e Agostino Paravicini Bagliani. Palermo, Selerio editore, 1994. 500 p., [34] p. of plates. illus., plans.

Partial contents: Pouille, E. L'astronomia.—Caroti, S. L'astrologia.—Samsó, J. Le due astronomie dell'Occidente musulmano (1215–1250).

The essays by Pouille and Samsó were translated into Italian by Silvia Giudice.

Flórez Miguel, Cirilo, Pablo García Castillo, and Roberto Albares Albares. La ciencia del cielo: astrología y filosofía natural en la Universidad de Salamanca (1450–1530). Traductor: José Sanz Ramos. Salamanca, Caja de Ahorros y Monte de Piedad de Salamanca, 1989. 394 p. illus., facsimis. (Colección Salamanca en el descubrimiento de América, 6)

Contents: A. Astrología. 1. Astronomía y astrología en Castilla. 2. Los protagonistas. Perfil biográfico: Lope de Barrientos; Abraham Zacut; Diego de Torres. 3. Textos.—B. Filosofía natural: espacio y tiempo. 1. El lugar y el tiempo en la filosofía natural del Renacimiento Salmantino. 2. El protagonista. Perfil biográfico de Rodrigo de Vasurto. 3. El texto: Edición bilingüe del "De natura loci et temporis" de Rodrigo de Vasurto.—C. Conclusion.

Includes texts in Latin with Spanish translations.

Gack-Scheiding, Christine. *Johannes de Muris Epistola super reformatione antiqui kalendarii*. Ein Beitrag zur Kalenderreform im 14. Jahrhundert. Hannover, Hahnsche Buchhandlung, 1995. xxvi, 164 p. illus. (Monumenta Germaniae historica. Studien und Texte, Bd. 11)

Gärtner, Heinz. Er durchbrach die Schranken des Himmels; das Leben des Friedrich Wilhelm Herschel. Leipzig, Edition Leipzig, 1996. 255, [1] p. illus., ports.

Includes a chronological list of Herschel's astronomical contributions to the Royal Society's *Philosophical Transactions* (p. 250–254) and a list of his musical compositions (p. 254–[256]).

Halbronn, Jacques. Astrologie et prophétie: merveilles sans image. L'appareil iconographique dans la littérature divinatoire française au seizième siècle. [Exposition] Paris, Bibliothèque nationale, Département des livres imprimés, Réserve des livres rares et précieux, 1994. 51 p. facsims. (À la Réserve, 3)

Heller, Michał. Lemaître, big bang, and the quantum universe. With his original manuscript. Tucson, Pachart Pub. House, 1996. 108 p. (Pachart history of astronomy series, v. 10)

Entitled "The Expanding Universe," the essay reproduced here in facsimile on p. 47–98 "consists of 50 typed pages with many corrections" in the author's hand.

Hollander, Raymond d'. L'astrolabe. Les astrolabes du Musée Paul Dupuy. Toulouse, Musée Paul Dupuy; Paris, Association française de topographie, 1993. 151 p. illus.

Rete printed on a transparent plastic disk in pocket.

Contents: Andres, J. L'astrolabe.—Penent, J. Les astrolabes du Musée Paul Dupuy.—Guinot, B. Préface.—Introduction.—ch. 1. Historique de l'astrolabe.—ch. 2. Description, principe de fonctionnement et de construction d'un astrolabe planisphérique ordinaire.—ch. 3. L'astrolabe d'Abu-Bakr du Musée Paul Dupuy de Toulouse.—ch. 4. L'astrolabe universel à table des horizons et araignée d'Adrien Descrolières.—ch. 5. L'astrolabe catholique du Musée Paul Dupuy de Toulouse.—ch. 6. L'horloge astrolabique de table d'Isaac Habrecht (1578) du Musée Paul Dupuy de Toulouse.—ch. 7. Conclusion sur la présente notice, son utilité, réalisation d'un astrolabe moderne.

Hoyt, Douglas V., and Kenneth H. Schatten. The role of the sun in climate change. New York, Oxford University Press, 1997. 279 p. illus., facsims., maps, port.

Katalog der deutschsprachigen illustrierten Handschriften des Mittelalters. Begonnen von Hella Frühmorgen-Voss†. Fortgeführt von Norbert H. Ott zusammen mit Ulrike Bodemann und Gisela Fischer-Heetfeld. Bd. 1, Lieferung 5. 11. Astrologie/Astronomie. München, In Kommission bei der C. H. Beck'schen Verlagsbuchhandlung, 1991. 339–474 p., [29] p. of plates. (Veröffentlichungen der Kommission für Deutsche Literatur des Mittelalters der Bayerischen Akademie der Wissenschaften)

Kraus, John D. Big Ear two: listening for other-worlds. Powell, Ohio, Cygnus-Quasar Books, 1995. 370 p. illus., ports.

Krausse, Joachim, Dietmar Ropohl, and Walter Scheiffele. Vom Grossen Refraktor zum Einstein-Turm. From the Great Refractor to the Einstein Tower. An exhibition on the occasion of the 70th anniversary of the Einstein Tower in Potsdam. Eine Ausstellung zum 70. Jahrestag des Einstein-Turms in Potsdam. Hrsg. vom Astrophysikalischen Institut Potsdam, dem Ministerium für Wissenschaft, Forschung und Kultur des Landes Brandenburg und dem Museumspädagogischen Dienst Berlin. Giessen, Anabas Verlag G. Kämpff, 1996. 91 p. illus., plans, ports.

German and English.

Kuhn, Heinrich C. Venetischer Aristotelismus im Ende der aristotelischen Welt; Aspekte der Welt und des Denkens des Cesare Cremonini (1550–1631). Frankfurt am Main, New York, P. Lang, 1996. 864 p. illus. (Europäische Hochschulschriften. Reihe XX, Philosophie, Bd. 490)

See particularly "Gegen die 'Einflüsse' der Astrologen" (p. 360–387) and "Cremoninis rationale Kosmologie" (p. 388–472).

Lankford, John. *American astronomy: community, careers, and power, 1859–1940*. With the assistance of Ricky L. Slavings. Chicago, University of Chicago Press, 1997. xxvi, 447 p. illus.

Lombardi, Tiziana. *Thomas Kuhn e la ricerca storiografica relativa alla rivoluzione copernicana*. Roma, Gruppo editoriale internazionale, 1995. 159 p. (Nuovi saggi, 103)

Contents: cap. 1. La storiografia copernicana.—cap. 2. La teoria kuhniana delle rivoluzioni scientifiche.—cap. 3. La rivoluzione copernicana nell'interpretazione di Thomas Kuhn.—cap. 4. Confronto con un modello interpretativo: Koyré.—cap. 5. Confronto con un modello interpretativo successivo: Lakatos.—Conclusione.

Mannikka, Eleanor. *Angkor Wat: time, space, and kingship*. Honolulu, University of Hawai'i Press, 1996. xv, 341 p., [8] p. of plates. illus. (part col.), maps, plans.

Astronomy and cosmology are imbedded in the plans and designs of the structures of Angkor Wat, built during the 12th century.

The author writes, "When I began this work, no one in the scholarly world had suggested a temple could be constructed based on measurements that conveyed any particular meaning—at least not in Asia. No one had explored the role of astronomy in the narrative reliefs of an Asian temple. No one had discovered solar and lunar alignments within a temple compound. There may have been interest, but scholars were engaged in other pursuits. Astronomers had researched Native American remains, but those cultures were very different from the Brahmanical, Buddhist, and ancestral focus of the Khmers. In other words, there was no precedent to hint at what lay ahead in this cultural context. Worse yet, in 1972 my knowledge of astronomy was limited to the shape of the Big Dipper."

Markel, Stephen. *Origins of the Indian planetary deities*. Lewiston, N.Y., Edwin Mellen Press, 1995. xv, 234 p., [52] p. of plates. illus. (Studies in Asian thought and religion, v. 16)

Micallef, Paul I. *Maltese sundials*. Malta, 1994. 125 p. illus.

Mozzani, Éloïse. *Le livre des superstitions: mythes, croyances et légendes*. Paris, R. Laffont, 1995. xxiii, 1822 p. illus., facsims. (Bouquins)

Includes articles under the following headings: Astrologie (p. 138–144); Aurore boréale (p. 149–150); Calendrier (p. 285–290); Comète (p. 478–488); Éclipse (p. 624–629); Étoile, including subsections on the star of Bethlehem, the pole star, and meteors (p. 675–685); Jour (dates) (p. 924–931); Lune (p. 1018–1040); Ours (grande, petite) (p. 1317–1319); Planète (p. 1416–1419); Pléiades (p. 1422–1423); Soleil (p. 1659–1662); and the names of the months.

North, John D. *Stonehenge: neolithic man and the cosmos*. London, HarperCollinsPublishers, 1996. xliv, 609 p., [24] p. of plates. illus., facsims., maps, plans.

Contents: 1. Introduction.—2. The long barrows.—3. Cursus and enclosure.—4. Stars in chalk.—5. Sun and moon.—6. Avenue and row.—7. Treehenge and Aubrey circle.—8. The great treehenges.—9. Stonehenge astronomy—a historical prologue.—10. Stonehenge—an inventory.—11. The first three stonehenges.—12. Lozenge and calendar.—13. Ritual and belief.—Appendix 1. Radiocarbon dating.—Appendix 2. The astronomical framework.—Appendix 3. Tables of directions.—Appendix 4. Heliacal rising and setting.—Appendix 5. The rising and setting of Venus.—Appendix 6. Alignment in later religions.

*The Oldest Latin astrolabe*. Edited by W. M. Stevens, G. Beaujouan, A. J. Turner. Pisa, Domus galilaeana di Pisa, 1996. 183–450 p., [24] leaves of plates. illus., facsims., maps. (Physis, nuova ser., v. 32, fasc. 2/3, 1995)

"The articles have been adapted from papers read at the XIX International Congress of History of Science which was held in Zaragoza, August 22–29 1993, during a symposium coordinated by W. M. Stevens, G. Beaujouan, A. J. Turner."

Includes bibliographic references.

Contents: Stevens, W. M. Preface.—Introduction. Turner, A. J. Destombian discovery and

doubt, the problem of the “oldest Latin astrolabe.” Graeve, J. de. La provenance de l’astrolabe ‘carolingien’ de Marcel Destombes.—Historical context. Eastwood, B. S. Latin planetary studies in the IX<sup>th</sup> and X<sup>th</sup> centuries. Pouille, E. La littérature astrolabique latine jusqu’au XIII<sup>e</sup> siècle. Samsó, J. *Roma et Francia* (=IFRANJA) in M. Destombes’ Carolingian astrolabe. Stevens, W. M. Paleographical studies of letter forms on the mater and tympana of astrolabe AI. 86–31. Mundó, A. M. Analyse paléographique de l’astrolabe ‘carolingien.’—European astrolabes. Tihon, A. Traité byzantins sur l’astrolabe. King, D. A. The earliest known European astrolabe in the light of other early astrolabes. Hollander, R. d’. Étude comparative entre l’astrolabe dit ‘carolingien’ et l’astrolabe d’Abù-Bakr ibn Yusuf de Toulouse.—Materials and inscriptions. Turner, G. L’E. The craftsmanship of the ‘Carolingian’ astrolabe, IC 3042. Gratuze, B., and J. N. Barrandon. Nouvelles analyses de l’astrolabe latin AI. 86–31.—Conclusions. Beaujouan, G. L’authenticité de l’astrolabe dit ‘carolingien.’

Papers not in English include summaries in English.

Osterbrock, Donald E. *Yerkes Observatory, 1892–1950: the birth, near death, and resurrection of a scientific research institution.* Chicago, University of Chicago Press, 1997. 384 p. illus., ports.

Pioneering a new astronomy: papers in memory of John G. Bolton. Editors: Dorothy E. Goddard, Raymond F. Haynes. East Melbourne, Vic., CSIRO, 1994. 495–680 p. illus., map, ports. (Australian journal of physics, v. 47, no. 5)

“Papers presented at the John G. Bolton Memorial Symposium, Parkes Observatory, 9–10 December 1993.”

Contents: Goddard, D., and R. F. Haynes. Introduction.—Wild, J. P. Eulogy to John G. Bolton.—Reminiscences. Wild, J. P. Some reminiscences of John Bolton. Price, M. John Bolton—on doing and being. Manchester, R. N. How I got a job in astronomy. Dinn, M. J. Parkes and NASA. Gascoigne, S. C. B. John Bolton and the Anglo-Australian Telescope.—Historical contributions. Stanley, G. J. Recollections of John G. Bolton at Dover Heights and Caltech. Slee, O. B. Some memories of the Dover Heights Field Station, 1946–1954. Westfold, K. C. John Bolton—some early memories. Orchiston, W. John Bolton, discrete sources, and the New Zealand field-trip of 1948. Milne, D. K. John Bolton and the rainmakers. Greenstein, J. L. The early years of radio astronomy at Caltech. Roberts, J. A. Some memories of John Bolton from Caltech and early years at Parkes. Ekers, R. D. John Bolton’s variable-baseline interferometer and the structure of radio galaxies. Whiteoak, J. B. John Bolton as a pioneer of OH spectroscopy. Wright, A. E. From the Parkes Catalogue to COMRAD. Savage, A. Wild, Woolley and Savage—or how John Bolton and I went hunting for quasars and QSOs.—Research contributions. Kellermann, K. I. Compact radio sources, quasars and active galactic nuclei. Harris, D. E. Cygnus A—John Bolton’s first cosmic source. Tingay, S. J., for the SHEVE team. Centaurus A, the core of the problem. Wall, J. V. Populations of extragalactic radio sources. Hunstead, R. W. Accurate optical positions for radio source identifications. Bicknell, G. V. Extragalactic radio sources and the role of relativistic jets.

Pompeo Faracovi, Ornella. *Scritto negli astri: l’astrologia nella cultura dell’Occidente.* Venezia, Marsilio, 1996. 297 p., [16] p. of plates. illus. (part col.)

Contents: Premessa.—1. L’enigma astrologico.—2. Astrologia e astromantica.—3. Soldati dei fato.—4. Astrologia neoegizia e tradizione ermetica.—5. La rivoluzione tolemaica.—6. Cause o segni?—7. Necessità e inclinazione.—8. L’anima e le stelle.—9. Congetture e profezie.—Conclusione.

Shapin, Steven. *The scientific revolution.* Chicago, University of Chicago Press, 1996. xiv, 218 p. facsimis.  
“There was no such thing as the Scientific Revolution, and this is a book about it.”

Śnieżyńska-Stolot, Ewa. *Tajemnice dekoracji Psalterza Floriańskiego.* Z dziejów średniowiecznej koncepcji uniwersum. Warszawa, Wydawn. Nauk. PWN, 1992. 155 p., [175] p. of plates. illus., facsimis. (part col.)

Includes bibliographic references and an illustrated glossary of astronomical terms.

Errata slip inserted.

“The Mystery of the Decoration of the Florian Psalter: a Contribution to the History of the Mediaeval Concept of the Universe”: p. 152–155.

"The Florian Psalter is an exceptional work in Poland not only because of the trilingual version of the Psalms therein ... but also owing to the ideas encompassed by the marginal decoration of this manuscript, exemplifying the Christian interpretation of the zodiac."

Storm over a mountain island: conservation biology and the Mt. Graham affair. Edited by Conrad A. Istock, Robert S. Hoffmann. Tucson, University of Arizona Press, 1995. 291 p. illus., maps.

Proceedings of a workshop held in Tucson in October 1989, with additional papers.

Contents: Preface.—Introduction.—pt. 1. The setting and the flow of events: environmental decision-making in the Pinaleños.—pt. 2. Modern astronomy: the purpose and promise of the Mt. Graham International Observatory.—pt. 3. The forests of the Pinaleños: structure and history.—pt. 4. The biogeography of the Pinaleños: past and present.—pt. 5. Vulnerability to extinction of small isolated populations: biology and the red squirrel.—Epilogue.—Contributors.

Sutton, Geoffrey V. Science for a polite society; gender, culture, and the demonstration of enlightenment. Boulder, Colo., Westview Press, 1995. 391 p. facsimis.

This "cultural history of the birth of the new science in seventeenth- and eighteenth-century France" stresses the development of physics, astronomy, and chemistry.

Thom, Archibald S. Walking in all of the squares. A biography of Alexander Thom, engineer, archaeoastronomer, discoverer of a prehistoric calendar, the geometry of stone rings and megalithic measurement. Glendaruel, Argyll Pub., 1995. 380 p. illus., ports.

A Tribute to Subrahmanyan Chandrasekhar. Bangalore, Indian Academy of Sciences, 1996. 302 p. illus., ports. (part col.) (Journal of astrophysics and astronomy, v. 17, no. 3/4)

"Publications by S. Chandrasekhar": p. 269–298.

Contents: Srinivasan, G. Subrahmanyan Chandrasekhar (19.10.1910–21.8.1995).—Srinivasan, G. Stars: their structure and evolution.—Salpeter, E. E. Neutron stars before 1967 and my debt to Chandra.—Binney, J. J. The stellar-dynamical oeuvre.—Rybicki, G. B. Radiative transfer.—Rau, A. R. P. The negative ion of hydrogen.—Parker, E. N. S. Chandrasekhar and magnetohydrodynamics.—Lebovitz, N. R. The virial method and the classical ellipsoids.—Schutz, B. F. Making the transition from Newton to Einstein: Chandrasekhar's work on the post-Newtonian approximation and radiation reaction.—Friedman, J. L. Stability theory of relativistic stars.—Penrose, R. Chandrasekhar, black holes, and singularities.—Osterbrock, D. E. Chandra and his students at Yerkes Observatory.

450 [Vierhundertfünfzig] Jahre Copernicus "De revolutionibus." Astronomische und mathematische Bücher aus Schweinfurter Bibliotheken. Ausstellung des Stadtarchivs Schweinfurt in Zusammenarbeit mit der Bibliothek Otto Schäfer. 21. November 1993–19. Juni 1994. Katalogredaktion: Uwe Müller, Menso Folkerts, Ute Grad, Rudolf Kreutner. Schweinfurt, 1993. 437 p. illus., facsimis., ports. (Veröffentlichungen des Stadtarchivs Schweinfurt, Nr. 9)

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Death of Margaret Mayall. In *Astronomical Society of Southern Africa. Monthly notes*, v. 55, Apr. 1996: 38.

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"The impact on globe making of the change from a Ptolemaic to a Copernican world-view is examined. As well as showing a map of the Earth and the Heavens, the main use of globes originally was to demonstrate the natural phenomena as these are observed from a geocentric perspective. In the second half of the eighteenth century some belated attempts were made to construct so-called Copernican globes for this purpose. This late response did not stop the production and use of the common Ptolemaic globe. It is argued that the technological developments of the nineteenth century made the role of the globe as a demonstration model superfluous and thus contributed more to the downfall of the common Ptolemaic globe than did any revolution in science."

Dewhurst, David W. Gerald Merton (1893–1983). In *Royal Astronomical Society. Quarterly journal*, v. 37, Dec. 1996: 847–849.

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Includes transcription, transliteration, and German translation of texts from a cuneiform tablet in private hands. Photographs of the tablet are reproduced on three plates.

Dijksterhuis, Fokko J. Huygens's *Dioptrica*. *De Zeventiende eeuw*, jaarg. 12, nr. 1, 1996: 117–126.

Dollfus, Audouin. Christiaan Huygens et la lunette sans tuyau 'Astroscope.' *De Zeventiende eeuw*, jaarg. 12, nr. 1, 1996: 127–140.

Donbaz, Veysel, and Johannes Koch. Ein Astrolab der dritten Generation: NV. 10. In *Journal of cuneiform studies*, v. 47; 1995. Atlanta, Ga., Scholars Press for the American Schools of Oriental Research, 1996. p. 63–84.

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Dubé, Claire. Le thème de l'Ours céleste chez les Micmacs. *Recherches amérindiennes au Québec*, v. 26, printemps 1996: 55–64. illus.

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Abstract in English: p. 88.

Dumont, Simone. Une monnaie ancienne souvenir d'une occultation de Jupiter? Observations et travaux, no 46, 2. trimestre 1996: 34–36. illus.

Investigates Antoniadi's statement that an old coin of Byzantium showing a star and a crescent moon records an occultation of Jupiter that took place while Philip of Macedon was besieging the city (340–339 B.C.). No support for this idea could be found.

Extracts from the diaries of the University of Toronto Southern Observatory. In Royal Astronomical Society of Canada. Journal, v. 90, June, Oct./Dec. 1996: 115–127, 270–286.

Contents: 3. Matthews, J. M. Our Lady of Tilden and other tales.—4. Fernie, J. D., B. F. Madore, M. Faúndez-Abans, M. de Groot, R. A. Crowe, R. F. Garrison, and J. M. Matthews. Pot-pourri.

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Fälthammar, Carl G. Plasma physics from laboratory to cosmos: the life and achievements of Hannes Alfvén.

In IEEE International Conference on Plasma Science, Boston, Mass., 1996. IEEE conference record—abstracts, 1996 IEEE International Conference on Plasma Science, Boston Park Plaza Hotel and Towers, Boston, Massachusetts, June 3–5, 1996. Piscataway, NJ, IEEE Service Center, 1996. p. 91.

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Faris, Peter. A meterological [sic] model for the concentric circle sun symbol of the American Southwest. Southwestern lore, journal of Colorado archaeology, v. 59, summer 1993: 23–27. illus.

The images may represent the haloed sun, important as a precursor of precipitation.

Federici Vescovini, Graziella. Su un trattatello anonimo di fisiognomica astrologica. In Uomo e natura nella letteratura e nell'arte italiana del Tre-Quattrocento. Atti del Convegno interdisciplinare, Firenze, 1987. A cura di Wolfram Prinz. Firenze, EDIFIR, 1992. (Quaderni dell'Accademia delle arti del disegno, n. 3, 1991) p. 43–61. facsims.

Fermor, John. Timing the sun in Egypt and Mesopotamia. *Vistas in astronomy*, v. 41, pt. 1, 1997: 157–167. illus.

Fernie, J. Donald. Transits, travels and tribulations. 1. *American scientist*, v. 85, Mar./Apr. 1997: 120–122. col. illus. (Marginalia)

On transits of Venus and their possible use in determining the earth's distance from the sun.

Finke, Friedrich. Der Grundgedanke der Lösung war ... Zur Erfundung der Stern-Projektion in Planetarien. *Sterne und Weltraum*, 36. Jahrg., Nr. 4, 1997: 350–355. facsims., port.

"In den vergangenen Jahrzehnten haben mehrere Autoren unter dem Thema 'Neues vom Zeiss Planetarium' über die Weiterentwicklung des überall bewunderten Projektionsgerätes geschrieben. Auch hier soll Neues über das Zeiss-Planetarium berichtet werden: Neues über den Ursprung und die Priorität der Erfundung."

Finley, Gerald. Heaven and earth: J. M. W. Turner's artistic response to astronomy and geology. In Muse and reason: the relation of arts and sciences, 1650–1850. A Royal Society symposium. B. Castel, J. A. Leith and A. W. Riley, editors. Kingston, Ont., Published by Queen's Quarterly for the Royal Society of Canada, 1994. p. 109–127. illus.

Forbes, Eric G., and Jacques Gapaillard. La correspondance astronomique entre l'abbé Nicolas-Louis de Lacaille et Tobias Mayer. *Revue d'histoire des sciences*, t. 49, oct./déc. 1996: 483–541. illus.

Summary in English.

The provisional edition prepared by Eric Forbes before his untimely death in 1984 was revised, and the introductory matter and notes put into French, by Fr. Gapaillard.

"Between 1757 and 1761 the astronomers Tobias Mayer (1723–1762) in Göttingen and Nicolas-Louis de Lacaille (1713–1762) in Paris exchanged thirteen letters of which twelve survive at least in

part. Four major topics are addressed: astronomical refraction, the return of Halley's comet in 1759, the determination of terrestrial longitudes by means of Lunar distances and Venus' passage across the Solar disc on the 6th of July 1761."

Fort, Jean. Opticiens et astronomes: les frères [Paul et Prosper] Henry. *Observations et travaux*, no 46, 2. trimestre 1996: 1–13. illus., ports.

Friedman, John B. Harry the Haywarde and Talbat his dog: an illustrated girdlebook from Worcestershire. In Kresge Art Museum. *Art into life. Collected papers from the Kresge Art Museum medieval symposia*. Edited by Carol Garrett Fisher and Kathleen L. Scott. East Lansing, Michigan State University Press, 1995. p. 115–153. facsimis.

Produced in England in 1389, the manuscript "contains a great many colored drawings and circular astrological, prognostic, and mnemonic diagrams and a relatively small amount of text in Latin, Middle English verse, and Anglo-Norman prose ...

"Strongly informational in purpose and incorporating an unusual number system, the manuscript suggests that its owner was a busy and practical person whose reading ability was limited but who wanted ready access to lore about weather, harvest predictions, solar and lunar motions, the feasts of the liturgical year, and divine and human history. Its technique of pictorializing scientific, meteorological, hagiographic, and biblical texts and narrative events is a very interesting one and casts some light on the faint, or perhaps wavering, line between literacy and its absence in late medieval England."

Gale, George, and Niall Shanks. Methodology and the birth of modern cosmological inquiry. *Studies in history and philosophy of modern physics*, v. 27B, Sept. 1996: 279–296.

"The central concern of this paper is with the ways in which issues, questions and debates in the domain of the *philosophy of science* can influence the birth, and subsequent development of a science. The case study to be discussed is that of modern cosmology. We will argue that the study of events in the early history of modern cosmology affords ample evidence of the many ways in which philosophy of science and science are inextricably intertwined."

Gandt, François de. La réception de Newton: philosophes et géomètres. *Revue du Nord*, t. 77, oct./déc. 1995: 845–857. port.

The portrait is of the marquise Du Châtelet.

Garstang, Roy H. Subrahmanyan Chandrasekhar (1910–1995). In *Astronomical Society of the Pacific. Publications*, v. 109, Feb. 1997: 73–77. ports.

Gascoigne, S. C. B. Mount Stromlo Observatory. *Sky & space*, v. 7, June 1994: 18–21; v. 8, Feb. 1995: 24–28. illus. (part col.), ports.

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Gatto, Romano. Il cannocchiale Amici dell'Osservatorio astronomico di Capodimonte e la corrispondenza Amici-Zuccari. *Nuncius*, anno 11, fasc. 2, 1996: 631–653. (Per un archivio della corrispondenza degli scienziati italiani)

Includes text of 13 letters.

English summary.

Gautschy, Alfred. The development of the theory of stellar pulsations. *Vistas in astronomy*, v. 41, pt. 1, 1997: 95–115. illus., ports.

Gemmo, Alessandra G., and Cesare Barbieri. Astrometry of Pluto from 1969 to 1989. *Icarus*, v. 108, Apr. 1994: 174–179. illus.

Gent, Rob H. van. Het raadsel van de ster van Bethlehem. Oude en nieuwe sterrenkundige verklaringen. *Zenit*, 23. jaarg., dec. 1996: 510–514. illus.

See the letters from H. W. Arts and H. Roodhorst, with replies from two of *Zenit*'s editors, in 24. jaarg., feb. 1997, p. 77.

Gerdes, Dieter. Absturz auf Jupiter im Oktober 1785. *Sterne und Weltraum*, 36. Jahrg., Nr. 1, 1997: 28–33. illus., port.

Provides details of Schroeter's observations and drawings of the dark spots on Jupiter late in 1785 and early the following year. The spots, resembling those produced by the Shoemaker-Levy 9 impacts in July 1994, may have resulted from a similar collision with the comet of 1783.

Giannetto, Enrico. Henri Poincaré and the rise of special relativity. *Hadronic journal supplement*, v. 10, Dec. 1995: 365–433.

Gigli, Rossella. L'“errore fruttuoso”. L'argomento galileiano delle maree nella critica recente. *Rivista di storia della filosofia*, nuova ser., anno 51, n. 3, 1996: 641–658.

Gillispie, Charles C. L'Exposition du système du monde. *La Recherche*, no 292, nov. 1996: 74–79. illus., ports. (part col.) (Histoire des sciences)

“Deux cents ans après sa publication, retour sur le célèbre ouvrage de Laplace.”  
Includes a box, “Exposition du système du monde (première édition)” (p. 78).

Gingerich, Owen. The scale of the universe: a curtain raiser in four acts and four morals. In *Astronomical Society of the Pacific*. Publications, v. 108, Dec. 1996: 1068–1072.

“This concise and highly selective introduction to the distance-scale debate, from antiquity to Hubble's paper of 1924 on the distance to M31, provides some key quotations and references. The first section describes the early Greek determinations of the distances of the Sun and Moon. The second part discusses the distances to the stars, from Copernicus to Huygens. Section 3 skips to the early twentieth-century ideas on the scale of the Milky Way, especially the work of Shapley. The final section describes how Hubble's discovery of distances to galaxies was first announced.”

Goddard, Alison. Carl Sagan 1934–1996. *Physics world*, v. 10, Feb. 1997: 52.

Golowin, Sergius. Die Sternenkräfte. In his Paracelsus: Mediziner, Heiler, Philosoph. München, Goldmann, 1993. p. 32–61.

Golvers, Noel. The *Astronomia Europaea* treatises of F. Verbiest, S.J.: a remarkable source for 17th-century Jesuit science, and for the history of Western science in China. In *Orientalia Lovaniensia Periodica*. 27; 1996. Leuven, Departement Oosterse studies. p. 127–149.

Gould, Stephen J. Bright star among billions. *Science*, v. 275, Jan. 31, 1997: 599.

About Carl Sagan.

See the issue of Feb. 28, p. 1245, for three letters commenting on Gould's remarks.

Griesser, Markus. Eine Supernova, so hell wie der Halbmond. *Orion*, 55. Jahrg., Feb. 1997: 4–7. illus.  
On observations made by a monk at St. Gall in the spring of 1006.

Gumbert, J. P. Über Falbücher, vornehmlich Almanache. In *Rationalisierung der Buchherstellung im Mittelalter und in der frühen Neuzeit. Ergebnisse eines buchgeschichtlichen Seminars*, Wolfenbüttel, 12.–14. November 1990. Hrsg. von Peter Rück und Martin Boghardt. Marburg an der Lahn, Institut für Historische Hilfswissenschaften, 1994. p. 111–121. illus.

An important feature of almanacs of this period was the provision of new moon dates, reckoned as precisely as possible, chiefly for medical use.

One of the illustrations shows a leaf of Leiden UB Vule 100 C with predictions of solar eclipses for the period 1425–62.

Gurshtein, Aleksandr A. The origin of the constellations. *American scientist*, v. 85, May/June 1997: 264–273. illus. (part col.), col. facsimis.

Hackmann, Willem D. The magus and the armillary. *Bulletin of the Scientific Instrument Society*, no. 52, Mar. 1997: 3–4. facsimis. (Cover story)

On early illustrations showing Hermes with an armillary sphere.

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Halpert, Herbert. The man in the moon in traditional narratives from the South. *Southern folklore*, v. 50, no. 2, 1993: 155–170.

Halsberghe, Nicole. J. B. Riccioli's *Almagestum Novum* (1653) as quoted and interpreted in F. Verbiest's *Xin zhi tai yi xiang zhi* (1674). In *Orientalia Lovaniensia Periodica*. 27; 1996. Leuven, Departement Oosterse studies. p. 121–126.

Hatch, Robert A. Between friends: Huygens & Boulliau. *De Zeventiende eeuw*, jaarg. 12, nr. 1, 1996: 106–116.

Heller, Henry. Copernican ideas in sixteenth century France. *Renaissance and Reformation*, v. 20, winter 1996: 5–26.

Hetherington, Norriss S. Ptolemy: on trial for fraud. *Astronomy & geophysics*, v. 38, Apr./May 1997: 24–27. col. illus., col. facsim.

“... reviews the search for fraud in the *Almagest* and highlights other possible explanations for the anomalies that it contains.”

Heuvel, E. P. J. van den. Twee markante Nederlandse sterrenkundigen. *Zenit*, 24. jaarg., jan. 1997: 12–17. illus., ports.

About Willem Luyten and Peter van de Kamp.

Hockey, Thomas A. The search for historical impact sites on Jupiter. *Planetary and space science*, v. 44, June 1996: 559–564. illus.

“Examining the sizeable historical record for Shoemaker-Levy-like spots faces several impediments. Here, I present some case examples, and the limitations of each. I then generalize the difficulties associated with a search program for historical impact candidates.”

Hönig, Werner. Cheopspyramide: der Sonnenweg an 12 Stunden des Tages. *Discussions in Egyptology*, no. 36, [Sept.?] 1996: 45–47. plan.

Hohlweg, Armin. Astronomie und Geschichtsbetrachtung bei Nikephoros Gregoras. In *Geschichte und Kultur der Palaiologenzeit. Referate des Internationalen Symposiums zu Ehren von Herbert Hunger* (Wien, 30. November bis 3. Dezember 1994). Hrsg. von Werner Seibt. Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1996. (Österreichische Akademie der Wissenschaften. Philosophisch-historische Klasse. Denkschriften, 241. Bd.) (Kommission für Byzantinistik. Veröffentlichungen, Bd. 8) p. 51–63.

Hollis, Andrew. Kenneth Essex Edgeworth [1880–1972]—a biographical note. In *British Astronomical Association, London. Journal*, v. 106, Dec. 1996: 354.

Holmberg, Gustav. Mechanizing the astronomer's vision: on the role of photography in Swedish astronomy, c. 1880–1914. *Annals of science*, v. 53, Nov. 1996: 609–616.

Holst, Per A. Svein Rosseland and the Oslo analyser. *IEEE annals of the history of computing*, v. 18, Oct./Dec. 1995: 16–26. illus., ports.

Horn, Peter. Das Tunguska-Ereignis. Sterne und Weltraum, 35. Jahrg., Nr. 12, 1996: 914–918. illus. (part col.), ports. (part col.), col. map.

“Vom 15. bis 17. Juni 1996 trafen sich im Kloster San Giovanni in Monte in Bologna Spezialisten aus aller Welt zu einer Diskussionsrunde, in der die Deutung des Tunguska-Ereignisses, bei dem ein kosmisches Projektil mit der Erde kollidierte, im Lichte der neuesten Forschung über Meteoriten- und Kometen-Einschlagskrater auf der Erde und den anderen Planeten und ihren Monden diskutiert wurde. Die Bedeutung dieses Treffens wurde unterstrichen durch die Teilnahme der prominenten Meteoritenforscher Nicolay Vasilyev (Ukraine) und des Ehepaars Shoemaker (USA), der Mitentdecker des Kometen Shoemaker-Levy 9, welcher 1994 mit Jupiter kollidierte.”

Hübner, Wolfgang. Hören und Sehen in der Klassifikation der mathematischen Wissenschaften bei Platon und Augustin. In Vermittlung und Tradierung von Wissen in der griechischen Kultur. Hrsg. von Wolfgang Kullmann und Jochen Althoff. Tübingen, G. Narr, 1993. (ScriptOralia, 61. Reihe A, Altertumswissenschaftliche Reihe, Bd. 12) p. 353–374.

Hughes, David W. The Quarterly Journal, 1960–96. In Royal Astronomical Society. Quarterly journal, v. 37, Dec. 1996: 485–492.

Hunger, Hermann. Ein astrologisches Zahlenschema. In Festschrift für Hans Hirsch zum 65. Geburtstag gewidmet von seinen Freunden, Kollegen und Schülern. Wien, Im Selbstverlag des Instituts für Orientalistik, 1996. (Wiener Zeitschrift für die Kunde des Morgenlandes, 86. Bd.) p. 191–196. illus. Provides transcription of Tablet BM 47851; photographs are reproduced on a plate.

Hunt, John L. J. W. L. Glaisher, FRS, ScD (1848–1928). In Royal Astronomical Society. Quarterly journal, v. 37, Dec. 1996: 743–757. illus., ports.

In passing ... In Royal Astronomical Society of Canada. Journal, v. 90, June, Oct./Dec. 1996: 171, 351–352.  
Notes on the death of Miriam Burland at age 93, Richard Tanner at age 83, and V. A. Ambartsumian (1908–1996).

Jachim, František. Astronom Antonín Bečvář. DVT, Dějiny věd a techniky, roč. 29, čís. 1, 1996: 45–55.  
A list of Bečvář's writings is given on p. 53–55.

Jain, L. C., and Kumari Prabha Jain. Certain special features of the ancient Jaina calendar. Indian journal of history of science, v. 30, Apr./Dec. 1995: 103–131.

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Jodra, Serge. À la recherche des constellations perdues. Ciel et espace, no 319, déc. 1996: 44–51. col. illus.  
Includes four boxes: “Dix de perdues, une de retrouvée!” (p. 47), “Graffitis sur une peau de dauphin” (p. 48), “Le bêtisier des étoiles” (p. 50), and “Chasse aux étoiles fantômes” p. 51).

Jodra, Serge. L'affaire Geminga. Ciel et espace, no 322, mars 1997: 60–61. col. illus. (Idées fausses)

Jodra, Serge. Le vraie-fausse prédition des lunes de Mars. Ciel et espace, no 319, déc. 1996: 58–59. col. illus. (Idées fausses)

Jones, Alexander. Studies in the astronomy of the Roman period. 1. The standard lunar scheme. Centaurus, v. 39, no. 1, 1997: 1–36.

Jonkers, A. R. T. Finding longitude at sea: early attempts in Dutch navigation. De Zeventiende eeuw, jaarg. 12, nr. 1, 1996: 186–197. illus.

Jordan, Detlev. Die Exzentrizität der Sonnenbahn in isländischen Quellen. In Arbeitstagung der Skandinavisten des Deutschen Sprachgebietes, 11th, Sigtuna, Sweden, 1993. Arbeiten zur Skandinavistik. 11. Arbeitstagung der deutschsprachigen Skandinavistik, 8.–14. August 1993 in Sigtuna. Hans Schottmann (Hrsg.). Münster, Kleinheinrich, 1994. p. 293–298.

Kak, Subhash C. Knowledge of planets in the third millennium BC. In Royal Astronomical Society. Quarterly journal, v. 37, Dec. 1996: 709–715.

Kalinowski, Marc. Astrologie calendaire et calcul de position dans la Chine ancienne; les mutations de l'hémérologie sexagésimale entre le IV<sup>e</sup> et le II<sup>e</sup> siècle avant notre ère. In Disposer pour dire, placer pour penser, situer pour agir: pratiques de la position en Chine. Préparé par Karine Chemla et Michael Lackner. Paris, Presses universitaires de Vincennes, 1996. (Extrême-Orient, Extrême-Occident, 18) p. 71–113. illus.

English summary: p. 191–192.

Kalinowski, Marc. The use of the twenty-eight xiu as a day-count in early China. In Chinese science. no. 13; 1996. Los Angeles, Center for Chinese Studies, University of California, Los Angeles. p. 55–81.

Katgert-Merkelijn, Jeannette K. Oort en de Krabnevel. Zenit, 24. jaarg., apr. 1997: 154–157. illus., ports.

Kennedy, J. E., and S. D. Hanson. Excerpts from Simon Newcomb's diary of 1860. In Royal Astronomical Society of Canada. Journal, v. 90, Oct./Dec. 1996: 292–303. illus., maps, port.

“The 1860 diary of Simon Newcomb provides historians of science with an exciting and detailed account of an expedition to a remote region of Canada to view a total solar eclipse.”

King, David A. Astronomical instruments between East and West. In Kommunikation zwischen Orient und Okzident: Alltag und Sachkultur. Internationaler Kongress, Krems an der Donau, 6. bis 9. Oktober 1992. Wien, Verlag der Österreichischen Akademie der Wissenschaften, 1994. (Österreichische Akademie der Wissenschaften. Philosophisch-historische Klasse. Sitzungsberichte, 619. Bd.) (Institut für Realienkunde des Mittelalters und der frühen Neuzeit. Veröffentlichungen, Nr. 16) p. 143–198. illus.

“List of Instruments Mentioned in the Text and Featured in the Illustrations”: p. 180–183.

“Appendix A. Astronomical Instruments Made in Vienna in the Fifteenth Century”: p. 183–188.

“Appendix B. Medieval Astronomical Instruments in or Lost From Austrian Collections”: p. 189–192.

Kirsanov, Vladimir S. Pervyi russkiy perevod “Kosmoteorosa” Giūgensa. Voprosy istorii estestvoznaniia i tekhniki, no. 2, 1996: 27–37. illus.

Koch, Johannes. AO 6478, MUL.APIN und das 364 Tage Jahr. N.A.B.U., Nouvelles assyriologiques brèves et utilitaires, déc. 1996: 97–99.

Krafft, Fritz. Die ‘Copernicanische Revolution.’ In Das 16. Jahrhundert: europäische Renaissance. Hrsg. von Hildegard Kuester. Regensburg, Verlag F. Pustet, 1995. (Eichstätter Kolloquium, Bd. 2) p. 181–214. illus.

Kronk, Gary. A large comet seen in 135 BC? International comet quarterly, v. 19, Jan. 1997: 3–7.

Kunitzsch, Paul. Gerhard von Cremona und seine Übersetzung des “Almagest.” In Mediävistenverband. Symposium, 4th, Cologne, 1991. Die Begegnung des Westens mit dem Osten. Kongressakten des 4. Symposiums des Mediävistenverbandes in Köln 1991 aus Anlass des 1000. Todesjahres der Kaiserin Theophanu. Hrsg. von Odilo Engels und Peter Schreiner. Sigmaringen, J. Thorbecke, 1993. p. 333–340.

Kutina, Gary L. Perfect timing: the National Watch Company Observatory. *Historic Illinois*, v. 17, Feb. 1995: 3–7. illus.

Another photograph of the observatory is reproduced on the outside front cover of the issue.

La Cotardière, Philippe de. La gloire confisquée d'Henrietta Leavitt. *Ciel et espace*, no 321, fév. 1997: 68–71. ports.

Includes two boxes, "Céphéides et RR Lyrae" (p. 70), and "Les stars du harem de Pickering" (p. 71).

La Cotardière, Philippe de. Planète X, l'éternelle inconnue. *Ciel et espace*, no 318, nov. 1996: 56–57. col. illus. (Idées fausses)

Lada, Charles J. Twenty-five years of CO astronomy: revealing the cold universe. In International Astronomical Union. *Symposium, 170th, Tucson, Ariz., 1995*. CO: twenty-five years of millimeter-wave spectroscopy. Proceedings of the 170th Symposium of the International Astronomical Union, held in Tucson, Arizona, May 29–June 5, 1995. Edited by William B. Latter, Simon J. E. Radford, Philip R. Jewell, Jeffrey G. Mangum, and John Bally. Dordrecht, Boston, Kluwer Academic Publishers, 1997. p. 387–396.

Lamprey, John P. An examination of two groups of Georg Hartmann sixteenth-century astrolabes and the tables used in their manufacture. *Annals of science*, v. 54, Mar. 1997: 111–142. illus., facsimis.

Leitz, Christian. Die altägyptischen Tagewählkalender. *Forschung in Köln, Berichte aus der Universität*, Nr. 1, 1996: 42–49. illus. (part col.)

Lejbowicz, Max. Langues vernaculaires et langage scientifique: l'enjeu médiéval. In *Pratiques de la culture écrite en France au XV<sup>e</sup> siècle. Actes du Colloque international du CNRS, Paris, 16–18 mai 1992*, organisé en l'honneur de Gilbert Ouy par l'unité de recherche "Culture écrite du Moyen Age tardif." Édités par Monique Ornato et Nicole Pons. Louvain-la-Neuve, Fédération internationale des instituts d'études médiévales, 1995. (*Textes et études du Moyen Age*, 2) p. 279–297.

Includes discussion of astronomical works.

Lerner, Michel P. La physique céleste de Telesio: problèmes d'interprétation. In *Atti del Convegno internazionale di studi su Bernardino Telesio, Cosenza, 12–13 maggio 1989*. Cosenza, Accademia cosentina, 1990. p. 83–114.

Lloyd, G. E. R. Heavenly aberrations: Aristotle the amateur astronomer. In *his Aristotelian explorations*. Cambridge, New York, Cambridge University Press, 1996. p. 160–183.

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Relevant material elsewhere in the book can be found through the index under such terms as Astrology, Astronomical Bureau, Astronomy, Eclipses, Moon, Stars, and Sun.

Lualdi, Alberto. François de Baillou, un ottico della Milano teresiana. *Nuncius*, anno 11, fasc. 2, 1996: 613–630. illus., facsimis.

Includes descriptions of surviving microscopes and telescopes made by de Baillou.  
English summary.

Lynden-Bell, Donald, and G. A. Gurzadian. Victor Amazaspovich Ambartsumian 1908–1996. *Astronomy & geophysics*, v. 38, Apr./May 1997: 37. port.

McBeath, Alastair. Meteoric dragons. *WGN*, v. 25, Feb. 1997: 34–36.

“Some notes are presented on the term ‘dragon’ as applied to bright meteors in the past, including a short discussion of meteoric phenomena that may have helped create and strengthen such a link.”

McCarthy, D., and A. Breen. An evaluation of astronomical observations in the Irish annals. *Vistas in astronomy*, v. 41, pt. 1, 1997: 117–138. map.

Provides a list of the annals examined.

McCarthy, D. P. The biblical chronology of James Ussher. *Irish astronomical journal*, v. 24, Jan. 1997: 73–82. facsimis., port.

“Interest in James Ussher and his chronological work saw a re-awakening as the date of 22nd October 1996 approached and it was realised that we were commencing the 6000th year from Archbishop Ussher’s estimated date of Creation, viz. the beginning of the night of the 22nd October 4004 BC. In the popular press some, playing on the inherent uncertainty of our existence, suggested that Ussher had predicted that the world would end on the evening of 22 October 1996; thus the *Irish Times* headline of this date ‘An early tea would be advisable as the world may end at 6 p.m.’, but this certainly misrepresents Ussher’s work, for he made no such prediction. Who then was James Ussher and why is he so strongly associated with chronological matters in the public mind?”

McGovern, Bill. Old renditions of Jupiter impact: amateur astronomer uncovers 307-year-old Cassini drawing of a Jovian spot. *NEO news*, v. 2, 4th quarter 1996/v. 3, 1st quarter 1997: 1, 4. illus.

Concerns the discovery, at the library of the Paris observatory, of drawings made by G. D. Cassini of a dark spot on Jupiter over a period of 18 days in December 1690. The drawings, which may document the result of an impact, were found by Isshi Tabe, a Japanese amateur astronomer, and are undergoing further study. (See the entry under Tabe, below.)

McKie, J. N. John Tindale (1878–1969) and the genesis of the radio-telescope. *In Royal Astronomical Society. Quarterly journal*, v. 37, Dec. 1996: 663–681. group port.

Includes text of Tindale’s 1969 pamphlet, *Historical Review of the Radio-Telescope, Its Genesis, and Associated Physical Fields* (p. 667–681).

McKim, Richard. Alan Pennell Lenham, 1930–1996. *In British Astronomical Association, London. Journal*, v. 107, Feb. 1997: 50. illus., ports.

Lenham worked for several years as a research assistant for Gerard Kuiper at Yerkes Observatory. He resumed an interest in planetary observation after retirement from the Royal Military College of Science in 1984.

McKim, Richard. E. M. Antoniadi’s astronomical notebooks of the 1890s. *In British Astronomical Association, London. Journal*, v. 106, Dec. 1996: 347.

McNally, Derek, and Clive L. N. Ruggles. The minor standstill of the moon and Stonehenge. *Astronomy & geophysics*, v. 38, Feb./Mar. 1997: 30–31. col. illus.

McNally, Derek. Sir William McCrea at 90: a great Irish astronomer. *Irish astronomical journal*, v. 24, Jan. 1997: 49–54. ports.

McNaughton, David L. Eclipses during Ramadān. *Hamdard Islamicus*, v. 19, spring 1996: 81–86.

Includes two tables: “Recent Double-Eclipse Ramadāns” (solar and lunar eclipses of any type—total, partial, central, or annular—occurring in the same month, from A.D. 1590 to A.D. 1982), and “Ramadāns with Two Central Eclipses” from A.D. 896 to A.D. 2155 (in 2155 the solar eclipse will be annular).

McPartlan, M. A. Astronomical calculations of new crescent visibility, 579–583 AH. *In Royal Astronomical Society. Quarterly journal*, v. 37, Dec. 1996: 837–842.

- Major, John S. Celestial cycles and mathematical harmonics in the *Huainanzi*. In *Sous les nombres, le monde. Matériaux pour l'histoire culturelle du nombre en Chine ancienne*. Préparé par Alexeï Volkov. Paris, Presses universitaires de Vincennes, 1994. (Extrême-Orient, Extrême-Occident, 16) p. 121–134. illus.
- Marshak, Boris I. The historico-cultural significance of the Sogdian calendar. In *Iran, journal of the British Institute of Persian Studies*. v. 30; 1992. London. p. 145–154.
- Martin, Leonard J., and Richard W. Zurek. An analysis of the history of dust activity on Mars. *Journal of geophysical research*, v. 98, Feb. 25, 1993: 3221–3246. illus.  
Includes tables of observations from 1873 through 1990.
- Maury, Jean P. Le Gentil et les caprices de Vénus. *Ciel et espace*, no 318, nov. 1996: 64–67. col. illus., col. map.  
“Ou la rocambolesque histoire d'un astronome, dépêché par l'Académie des sciences à l'autre bout du monde afin d'observer un événement rare, le passage de Vénus devant le Soleil. Mais voilà, parfois, le sort en décide autrement.”
- Meertz, Ralf, and Angela Stercken. Ein Augsburger “Wunderkammerstück.” *Klassik-Uhren*, 19. Jahrg., Dez. 1996/Jan. 1997: 47–53. col. illus.  
The authors describe “eine Augsburger Türmchenuhr mit Astrolabium, die etwa 1610 genau nach den Auflagen der Augsburger Meisterprüfungsordnung [sic] gebaut wurde.”
- Miller, Dana R. Sargis of Rešaina: On What the Celestial Bodies Know. In *Symposium Syriacum, 6th, University of Cambridge, 1992*. VI Symposium Syriacum, 1992. University of Cambridge, Faculty of Divinity, 30 August-2 September 1992. Edited by René Lavenant. Roma, Pontificio istituto orientale, 1994. (*Orientalia Christiana analecta*, 247) p. 221–233.  
The treatise dealt with here “is not by Sargis but by Alexander of Aphrodisias ...  
“If the conjectures made in this paper have any validity, the Syriac translation of Alexander's treatise offers us a glimpse into the intellectual milieu associated with Harran, one that blended Neoplatonism, Aristotelian science, and astrological lore.”
- Minati, Mara, Vincenzo Greco, and Giuseppe Molesini. Examination of a terrestrial telescope with the signature of Galileo. *Optik*, v. 101, Jan. 1996: 140–142. illus.
- Mobberley, Martin P., Patricia M. Barber, and Guy M. Hurst. C. R. d'Esterre and the mysteries of UV and UW Per. In *British Astronomical Association, London. Journal*, v. 107, Apr. 1997: 65–71. illus.  
“A dwarf nova in Perseus shows no evidence for the nebulous surround observed in 1912. A nearby suspected U Gem star has never been seen in outburst in modern times; the recent discovery of the original outburst plate confirms it has been mis-identified. The evidence for these objects and the story of their enigmatic discoverer are discussed in detail.”
- Montanari Caldini, Roberta. Aspetti dell'astrologia in Germanico. In *Germanico: la persona, la personalità, il personaggio nel bimillenario dalla nascita. Atti del Convegno (Macerata-Perugia, 9–11 maggio 1986)*. A cura di Giorgio Bonamente, Maria Paola Segoloni. Roma, G. Bretschneider, 1987. (Macerata. Università. Facoltà di lettere e filosofia. Pubblicazioni, 39. Atti di convegni, 4) p. 153–171.
- Moore, Patrick. The quest for Neptune. In *British Astronomical Association, London. Journal*, v. 107, Feb. 1997: 23–25. illus., facsim., ports.
- Morando, Bruno, and Denis Savoie. Étude de la théorie du Soleil des *Tables pruténiques*. *Revue d'histoire des sciences*, t. 49, oct./déc. 1996: 543–567. illus., facsim.  
Summary in English.

Münzel, Gisela. Der Uhrendienst der Leipziger Universitätssternwarte. In Beiträge zur Geschichte von Technik und technischer Bildung. Folge 9. Leipzig, Hochschule für Technik, Wirtschaft und Kultur, 1994. p. 56–83. illus., facsims., ports.

Nordtvedt, Kenneth. La Lune au secours d'Einstein. La Recherche, no 295, fév. 1997: 70–76. col. illus., ports. (part col.)

“Entre la relativité générale et les théories rivales, la distance Terre-Lune arbitre.”  
Includes a box, “Les Équations de Newton” (p. 71).

Obrist, Barbara. Le diagramme isidorien des saisons, son contenu physique et les représentations figuratives. Mélanges de l'École française de Rome: Moyen Age, t. 108, fasc. 1, 1996: 95–164. facsims.

Contents: Le “De rerum natura” et ses figures.—Le diagramme des saisons et les images avec personnifications.—La cosmologie astronomique et physique et les diagrammes.—Le diagramme isidorien de l'année et des saisons et son contenu physique.—Les représentations figuratives des saisons. 1. Les saisons du recueil computiste de Saint Mesmin de Micy. 2. Les saisons du “De natura rerum” de Laon. 3. Les saisons des manuscrits de Cava et de Madrid.—Conclusion.

Oleak, Hans. Die Zeitschrift “Die Sterne”: ein Rückblick. Sterne und Weltraum, 36. Jahrg., Nr. 1, 1997: 16–17. illus., ports.

*Die Sterne* merged with *Sterne und Weltraum* as of 1997.

Oliver, Carol. Dr Bobbie Vaile, June 25, 1959–November 13, 1996. Sky & space, v. 10, Feb. 1997: 8–9. col. port.

Oosterhout, G. W. van. The heliacal rising of Sirius. Discussions in Egyptology, no. 24, [Sept.?] 1992: 71–111. illus.

Orchiston, Wayne. The historic 23cm refracting telescope at the Carter Observatory. In Carter Observatory, Wellington, N.Z. Astronomical handbook for 1997. [Wellington, N.Z.? 1996?] p. 59–69. illus., ports.

Orchiston, Wayne, Ken Beames [1899–1989]: Australian telescope-maker extraordinaire. In British Astronomical Association, London. Journal, v. 107, Apr. 1997: 83–87. illus., map, ports.

Oreskes, Naomi. Objectivity or heroism? On the invisibility of women in science. In Science in the field. Edited by Henrika Kuklick and Robert E. Kohler. Chicago, University of Chicago Press, 1996. (Osiris, 2d ser., v. 11) p. 87–113. illus., map, ports.

“The thesis of this paper is that many women have done objective scientific work, but have had their work obscured or devalued by the ideology of scientific heroism—an ideology that has been particularly manifest in the history of the field sciences. An example is Eleanor Lamson (1875–1932).” Lamson was an astronomer on the staff of the U.S. Naval Observatory.

Pamiati Vladimira Grigor'evicha Demina. Kosmicheskie issledovaniâ, t. 34, nožâbr'/dek. 1996: 563.

Panaino, Antonio. Considerazioni sul lessico astronomico-astrologico medio-persiano. In Convegno internazionale di linguisti, 8th, Milan, 1992. Lingue e culture in contatto nel mondo antico e altomedievale. Atti dell'VIII Convegno internazionale di linguisti, tenuto a Milano nei giorni 10–12 settembre 1992. Testi raccolti a cura di R. B. Finazzi e P. Tornaghi. Brescia, Paideia editrice, 1993. p. 417–433.

Pang, Alex Soojung-Kim. Gender, culture, and astrophysical fieldwork: Elizabeth Campbell and the Lick Observatory-Crocker eclipse expeditions. In Science in the field. Edited by Henrika Kuklick and Robert E. Kohler. Chicago, University of Chicago Press, 1996. (Osiris, 2d ser., v. 11) p. 17–43. illus., ports.

Pappas, John. R. J. Boscovich et l'Académie des sciences de Paris. *Revue d'histoire des sciences*, t. 49, oct./déc. 1996: 401–414.

Summary in English.

"Boscovich's early relations with the Paris Academy of Sciences were quite cordial. In 1748 he was named correspondent of D'Ortous de Mairan by the Academy. In 1752 he is awarded an accessit for his study of Saturn and Jupiter. During a voyage to Paris in 1759 he frequents the Academy and is invited to the home of many academicians. He forms close links especially with La Condamine, Clairaut and Lalande who, as enemies of D'Alembert, prejudice him against the latter. The Ragusan even writes a lengthy attack against him in defense of Clairaut in his *Voyage astronomique* (1770)."

Peebles, P. J. E., and David T. Wilkinson. Obituary. Robert Henry Dicke (1916–97). Physicist whose work led to the discovery of the cosmic microwave background. *Nature*, v. 386, Apr. 3, 1997: 448. port.

Persi, Peris. I globi di Mercatore di Urbania. Due rari cimeli geografici e di storia della scienza. In Gerardo Mercatore: sulle tracce di geografi e viaggiatori nelle Marche. A cura di Giorgio Mangani e Feliciano Paoli; introduzione di Marcel Watelet. Urbania, Edizioni Biblioteca e Civico museo di Urbania; Ancona, Il Lavoro editoriale, 1996. (Le Collezioni di Casteldurante dai Della Rovere agli Ubaldini, 4) p. 34–58. illus. (part col.), port.

One of the two is a celestial globe.

Peters, Paul. Restauratie van twee Mercatorglobes uit het bezit van de K.O.K.W. te Sint-Niklaas. Caert-thresoor, 14. jaarg., nr. 2, 1995: 37–43. illus.

One of the pair is a celestial globe.

English summary.

Pfitzner, Elvira. Georg Samuel Dörffel, geb. 11. Oktober 1643 in Plauen/Vogtland—gest. 6. August 1688 in Weida. *Studia Leibnitiana*, Bd. 28, Heft 1, 1996: 119–122. (Korrespondenten von G. W. Leibniz, 13)

Pitt, Joseph C. Discovery, telescopes, and progress. In New directions in the philosophy of technology. Edited by Joseph C. Pitt. Dordrecht, Boston, Kluwer Academic Publishers, 1995. (Philosophy and technology, v. 11) p. 1–16.

"In this paper, I turn explicitly to the role of the technological infrastructure of science in the growth of knowledge in general ... The thesis is direct: *the development of new information in a mature science is, by and large, a function of its technological infrastructure.*"

Poole, Robert. "Give us our eleven days!": calendar reform in eighteenth-century England. *Past & present*, no. 149, Nov. 1995: 95–139. illus.

Powells, Sylvia. The Samaritans and astrology. In *Abr-Nahrain*; an annual published by the Department of Classics and Archaeology, University of Melbourne. v. 33; 1995. Louvain, Peeters Press, 1996. p. 74–95. illus., facsimils.

Contents: 1. Preliminary remarks.—2. Samaritan astrological texts and astrological material found in Samaritan manuscripts.

Prestinenza, Luigi. Le macchie nere di Schroeter. *L'Astronomia*, anno 19, genn. 1997: 12–13. col. illus.

"L'astronomo tedesco potrebbe essere stato testimone della caduta su Giove di una Shoemaker-Levy di due secole fa."

Ramaseshan, S. Chandrasekhar—some reminiscences. In *Bharatiya Jyotir Vijyan Parishad*. Bulletin of the Astronomical Society of India, v. 24, Sept. 1996: 537–550.

A photograph taken in 1961 of Lalitha and Subrahmanyam Chandrasekhar with M. K. Vainu Bappu at Kodaikanal is reproduced in color on the front cover of the issue.

Rana, N. C., and Rajesh K. Kochhar. On the meaning of the Müla Nakṣatra. *Indian journal of history of science*, v. 30, Jan./Mar. 1995: 31–34. illus.

The name is interpreted as signifying that part of the sky where the ecliptic crosses the densest region of the Milky Way.

Rang, Hans. Tycho i Landskrona: ett möte över Sundet. *Astronomisk tidsskrift*, årg. 29, Dec. 1996: 13–15.

Reisinger, Reiner. "Octaua significat mortem ..." Erasmus Ebners Horoskop für Albrecht V. Scheurl im Codex J.H.Msc.jur 3 (I.29) der Staatsbibliothek Bamberg. Ein Beitrag zur frühneuzeitlichen Fachliteratur. In *Artibus. Kulturwissenschaft und deutsche Philologie des Mittelalters und der frühen Neuzeit. Festschrift für Dieter Wuttke zum 65. Geburtstag*. Hrsg. von Stephan Füssel, Gert Hübner und Joachim Knape. Wiesbaden, Harrassowitz, 1994. p. 197–227. illus., facsims.

Contents: 1. Überlieferung und Geschichte des Horoskops.—2. Editorischer Bericht.—3. Edition.—4. Astrologischer Kommentar.

Reitan, Eric A. Nature, place, and space: Albert the Great and the origins of modern science. *American Catholic philosophical quarterly*, v. 70, winter 1996: 83–101.

Richet, Pascal. La radioactivité, le Soleil, la Terre et la mort de Kelvin. *La Recherche*, no 291, oct. 1996: 78–83. illus. (part col.), ports. (Histoire des sciences)

Includes two boxes, "Les chaînes d'éléments radioactifs" (p. 81) and "L'astuce de Boltwood" (p. 82).

Rigutti, Mario, and Aldo Imer. Il museo astronomico storico dell'Osservatorio di Capodimonte. *Museoscienza*, nuova ser., n. 2, giugno 1992: 24–27. col. illus.

Robinet, Isabelle. Le rôle et le sens des nombres dans la cosmologie et l'alchimie taoïstes. In *Sous les nombres, le monde. Matériaux pour l'histoire culturelle du nombre en Chine ancienne*. Préparé par Alexei Volkov. Paris, Presses universitaires de Vincennes, 1994. (Extrême-Orient, Extrême-Occident, 16) p. 93–120.

Rodríguez-Sala, María Luisa. Francisco Domínguez, geógrafo-cosmógrafo y partícipe en la primera observación astronómica científica novohispana: el eclipse de luna de 1584. *Ciencia* (Mexico City), v. 46, dic. de 1995: 463–475. illus., port.

Abstract in English.

Roero, Clara S. Giovanni Battista Benedetti and the scientific environment of Turin in the 16th century. *Centaurus*, v. 39, no. 1, 1997: 37–66. illus.

Roth, Günter D. An historical exploration of modern astronomy. In *Compendium of practical astronomy*. Günter Dietmar Roth (ed.). v. 1. Instrumentation and reduction techniques. Translated and rev. by Harry J. Augensen and Wulff D. Heintz. Berlin, New York, Springer-Verlag, 1994. p. 425–435.

Ruphy, Stéphanie. L'art de classer les étoiles. *Ciel et espace*, no 323, avril 1997: 66–70. col. illus.

"Hipparque à Hipparchos, les astronomes n'ont jamais cessé de trier, comparer, ranger l'innombrable population des étoiles. Un exercice délicat qui aura beaucoup varié au cours des siècles, au rythme des avancées de l'astronomie. C'est que pour classer, il faut connaître un peu ..."

Ruphy, Stéphanie. Karl Schwarzschild, le sourdoué de Göttingen. *Ciel et espace*, no 322, mars 1997: 62–66. illus., ports.

"Portrait de celui que beaucoup considèrent comme le plus grand astronome allemand depuis Kepler ..."

Includes a box, "Le cercle magique" (p. 66).

Sacchetti, Laura. Una significativa presenza nell'alto Medioevo: l'"Arato Latino." *Cultura e scuola*, anno 34, luglio/dic. 1995: 63–73.

Saliba, George. Antioch and all the East: Indian science and the early Syrian fathers. In *The First one hundred years; a centennial anthology celebrating Antiochian Orthodoxy in North America*. With a foreword by the Most Reverend Metropolitan Philip. Editors: George S. Corey, Peter E. Gillquist, Anne Glynn Mackoul, Jean Sam, Paul Schneirla. Englewood, N.J., Antakya Press, 1995. p. 189–217.

“The focus of this paper is on the scientific doctrines, now identified as Indian, which can be documented in the works of the church fathers who lived in the region of the Antiochian See.”

Much of the essay deals with the work of “the famous Aramean philosopher, Bār Daṣān (d. 222),” some of whose writings, “as cited by other authors, seem to have earned him the reputation of an astronomer, which at that time would not have been distinguished from an astrologer. But from his own attack against the astrologers, he was probably one of the first people to draw a distinction between astronomy and astrology.”

Sanders, Roel. De oriëntatie van Drentse kerken. *Zenit*, 23. jaarg., dec. 1996: 523–527. illus., map.

Sarkar, Ramatosh. Oriental studies and ethnoastronomies: some problems and prospects. In *Asiatic Society, Calcutta. Journal*, v. 36, no. 3, 1994: 165–169.

Sauval, A. Jacques. Quetelet and the discovery of the first meteor showers. *WGN*, v. 25, Feb. 1997: 21–33. illus., facsimis., port.

Savoie, Denis. La diffusion du copernicanisme au XVI<sup>e</sup> siècle: les Tables Pruténiques. *L’Astronomie*, v. 111, fév. 1997: 45–50. illus.

Schillinger, Klaus. Ein Spiegelteleskop von Johann Gottlob Rudolph. *Weltkunst*, 61. Jahrg., 1. Jan. 1991: 40–42. illus.

Dating from about 1748, the telescope, the tube of which is covered in decorated porcelain, is in the collections of the Mathematisch-physikalischer Salon in Dresden.

Schliesser, Eric, and George E. Smith. Huygens’s 1688 report to the directors of the Dutch East India Company on the measurement of longitude at sea and its implications for the non-uniformity of gravity. *De Zeventiende eeuw*, jaarg. 12, nr. 1, 1996: 198–214. maps.

Schoofs, Susanne. 25 Jahre Radioteleskop Effelsberg. *Sterne und Weltraum*, 36. Jahrg., Nr. 4, 1997: 334. col. illus.

Scotti, James V. Wieslaw Z. Wisniewski (1931–1994). In *Royal Astronomical Society. Quarterly journal*, v. 37, Dec. 1996: 845.

Scriba, Christoph J. Bartel Leendert van der Waerden (2. Februar 1903–12. Januar 1996). *Berichte zur Wissenschaftsgeschichte*, Bd. 19, Dez. 1996: 245–251. port.

Sebastián, Amparo. Proceso de identificación de autor de un importante astrolabio flamenco en el Museo de Ciencia y Tecnología. *Llull*, v. 18 (no. 35), 1995: 569–617. illus.  
Abstract in English.

Shapin, Steven. Manners, mundanity, and moral uncertainty in cometary astronomy. In *his A social history of truth; civility and science in seventeenth-century England*. Chicago, University of Chicago Press, 1994. (Science and its conceptual foundations) p. 266–291. illus.

On a dispute between Auzout and Hevelius concerning comets that appeared in 1664 and 1665, one of the “episodes of contested testimony” used by the author “as windows into the early modern system of cultural practices by which credibility was accomplished.”

Shea, William R. The revelations of the telescope. *Nuncius*, anno 11, fasc. 2, 1996: 507–526. illus. (Lettura galileiana)

Sheehan, William. Giovanni Schiaparelli, visions of a colour blind astronomer. In *British Astronomical Association, London. Journal*, v. 107, Feb. 1997: 11–15. facsimis., port.

Simcock, A. V. The lady and the astrolabe. *Bulletin of the Scientific Instrument Society*, no. 51, Dec. 1996:

2-3. facsim. (Cover story)

On early illustrations showing women using scientific instruments.

Another illustration appears on the outside front cover of the issue.

Sixteenth-century sphere hits heavenly price. *Nature*, v. 386, Apr. 17, 1997: 639. col. illus.

On the sale in London (for £771,500) of a brass armillary sphere made for Sultan Murad III.

Smith, Robert C. Obituary. Roger J. Tayler, OBE, FRS. *Observatory*, v. 117, Apr. 1997: 120.

Śnieżyńska-Stolot, Ewa. Zagadnienie kształtowania wyobraźni średniowiecznego artysty na podstawie drôlerie.

In *Folia historiae artium*. t. 29. Kraków, Wydawn. i druk. "Scesja," 1993. p. 9-26. illus., facsims.

Summary in English.

Argues that the so-called drolleries—illustrations in the margins of mediaeval illuminated manuscripts—are astrological representations. "Their introduction on a large scale into 12th century English and French illuminated manuscripts, for the most part liturgical in character, was the result of the model of the universe, common in the consciousness of a mediaeval man, and served to code some definite Christian ideas. In the present paper an attempt is made to demonstrate how this model shaped the imagination of a mediaeval miniaturist."

Srinivas, M. D. Indian approach to science: the case of jyotihsastra. *PPST bulletin*, no. 19/20, June 1990: 69-77.

Presents the Indian approach to astronomy by means of quotations from works dating from the 5th through the 16th century. Sanskrit texts are provided on p. 75-77; an errata sheet relating to these is laid in.

Stavinschi, Magdalena. Bref historique des relations astronomiques franco-roumaines. *L'Astronomie*, v. 110, déc. 1996: 348-352. illus., ports.

Stavinschi, Magdalena. Le temps entre physique et astronomie. In *Le Temps dans les sciences. Que fait le temps à l'affaire?* Textes réunis par Basarab Nicolescu, Norbert Dodille et Christian Duhamel. Paris, Éditions L'Harmattan, 1995. p. 71-84.

Stephenson, F. Richard, and Said S. Said. Records of lunar eclipses in medieval Arabic chronicles. In London. University. *School of Oriental and African Studies. Bulletin*, v. 60, pt. 1, 1997: 1-34.  
An appendix (p. 33-34) lists, in chronological order, the Arabic chronicles consulted.

Stern, S. Alan. Obituary. Clyde Tombaugh (1906-97). Astronomer who discovered the solar system's ninth planet. *Nature*, v. 385, Feb. 27, 1997: 778. port.

Sutera, Salvatore. Freschi di restauro: due globi di Vincenzo Coronelli. *Museoscienza, nuova ser.*, n. 1, ott. 1991: 14-17. col. illus.

The globes, one of them celestial, belong to the Museo della scienza e della tecnica in Milan and underwent restoration in 1990.

Sutter, Berthold. Johannes Kepler zwischen lutherischer Orthodoxie und katholischer Gegenreformation. In *Katholische Reform und Gegenreformation in Innerösterreich, 1564-1628. Katoliška prenova in protireformaciji v notranjeavstrijskih deželah, 1564-1628. Riforma cattolica e controriforma nell'Austria Interna, 1564-1628. Hrsg./izdajatelji/curatori: France M. Dolinar, Maximilian Liebmann, Helmut Rumpler, Luigi Tavano. Redakteur/urednik/redattore: Werner Drobisch. Klagenfurt, Hermagoras/Mohorjeva, 1994.* p. 459-487.

Tabe, Isshi, Jun-ichi Watanabe, and Michiwo Jimbo. Discovery of a possible impact spot on Jupiter recorded in 1690. In *Nihon Temmon Gakkai. Publications of the Astronomical Society of Japan*, v. 49, no. 1, 1997: L1-L5. illus., facsim.

Taton, René. Les relations entre R. J. Boscovich et Alexis-Claude Clairaut (1759–1764). *Revue d'histoire des sciences*, t. 49, oct./déc. 1996: 415–458.

Summary in English.

Includes the text of 10 letters from Clairaut to Boscovich (p. 444–458).

“Whereas Clairaut and Boscovich represent, in the light of their major works and their subsequent influence, two antagonistic trends in the critical analysis and development of Newton's work, especially in celestial mechanics and parts of physics, they were able to establish a confident relationship, which lasted until 1764.”

Taylor, R. J. Subrahmanyan Chandrasekhar, 19 October 1910–21 August 1995. In Royal Society of London. Biographical memoirs of Fellows. v. 42; 1996. London. p. 79–94. port.

Taylor, Fred. Chet Raymo (b. 1936). In American nature writers. John Elder, editor. v. 2. New York, C. Scribner's Sons, 1996. p. 767–780. port.

*The Soul of the Night* is one of two works discussed at length.

Timm, Ulrich. Astrologie im Test. Sterne und Weltraum, 36. Jahrg., Nr. 1, 1997: 6–7.

Letter providing additional information and corrections to the article by Sebastian von Hoerner, “Astrologie, nach eigener Erfahrung,” published in 35. Jahrg., Nr. 3, 1996, and cited in *H.A.D. News* no. 38.

Traunecker, Claude. Mesurer le temps terrestre. In Hommes, sciences et techniques au temps des pharaons.

Paris, Excelsior publications, 1996. (Science et vie. Hors série, no 197) p. 140–144. col. illus.

Discusses the calendar, the length of the hour, and ways of measuring the passage of time.

Trimble, Virginia.  $H_0$ : the incredible shrinking constant, 1925–1975. In Astronomical Society of the Pacific. Publications, v. 108, Dec. 1996: 1073–1082. illus.

“The story of the Hubble constant logically begins just where the Curtis-Shapley debate on the distance scale of the universe ended, with Hubble's discovery of Cepheid variables in several nebulae that we now recognized as galaxies within the Local Group, which settled the issue of the existence of external galaxies. Hubble's own value of  $H_0$  was in the range of 500–550 km s<sup>-1</sup> Mpc<sup>-1</sup>. The 'best buy' value shrank in several steps beginning in 1952, each being predicated on the recognition of some fundamental mistake in the previous distance scale calibrations. But it shrank more for some workers than for others, and by 1975 there was a clear polarization between a 'long' and a 'short' distance scale. On the theoretical side, important events were the recognition that general relativity permits, indeed nearly requires, an expanding universe; the gradual elimination of alternative explanations of redshift-distance relations; and the repelling of a late assault in the form of steady-state cosmology, within whose framework  $H_0$  is a well-defined, never-varying number of only moderate importance.”

Ukhova, O. K. Nuzhno li bylo vosstanavlivat' Pulkovo? Priroda, iiûl' 1996: 127–128.

Valdivia Gutiérrez, Óscar. Matemáticas y astronomía precolombinas. In Historia social de las ciencias en América Latina. Juan José Saldaña (coordinador). México, D.F., Grupo Editorial M. Á. Porrúa, 1996. (Colección Problemas educativos de México) p. 91–118. illus.

Van Helden, Albert. Contrasting careers in astronomy: Huygens and Cassini. De Zeventiende eeuw, jaarg. 12, nr. 1, 1996: 96–105.

Vanýsek, Vladimír. Případ Antonína Bečváře. [The case of Antonín Bečvář] DVT, Dějiny věd a techniky, roč. 29, čís. 1, 1996: 56–60.

Vermij, Rienk H. Het copernicanisme in de Repbuliek: een verkenning. Tijdschrift voor geschiedenis, 106. jaarg., afl. 3, 1993: 349–367. illus.

Viviano, Benedict T. The movement of the star, Matt 2:9 and Num 9:17. *Revue biblique*, 103. année, janv. 1996: 58–64.

“The star that guides the magi in Matt 2:1–12 is a miraculous star midrashically inspired by the messianic star of Num 24:17. The precise movement of the star has hitherto been left unexplained. It is the thesis of this article that the behavior of the star was suggested to the evangelist by the cloud-fire traditions of the Pentateuch, specifically by Num 9:15–23, esp. 9:17, as transformed by Hellenistic Judaism.”

Voltes Bou, Pedro. *Delirios astronómicos. In his Errores y fraudes de la ciencia y la técnica*. Barcelona, Planeta, 1995. (Memoria de la historia. Episodios) p. 125–143. ports.

Contents: *¿Cómo empezó el mundo?*—La “ecuación personal”: usos y abusos.—El filósofo en el pozo.—Aristóteles nos lleva por el mal camino.—De lo complicado a lo sencillo.—Copérnico suave y tímido.

The portraits appear on the 5th and 6th pages of plates following p. 160.

Wade, Peter. Astronomy in nineteenth-century Lancaster. *In British Astronomical Association, London. Journal*, v. 107, Apr. 1997: 75–78. illus., map.

Watt, W. S. Eight notes on Germanicus' Aratea. *Rheinisches Museum für Philologie*, n.F., 137. Bd., Heft 1, 1994: 72–77.

Wayman, Patrick A. A novel equatorial mounting, never realised. *Irish astronomical journal*, v. 24, Jan. 1997: 55–58. illus.

“This note describes an equatorial mounting proposed [for the Great Melbourne Telescope of 1868] by one of the most original of 19th Century astronomers, Charles Piazzi Smyth, in a design that has never been followed up or even fully described in subsequent literature.”

Weichenhan, Michael. Astrologie und natürliche Mantik bei Caspar Peucer. *In 700 Jahre Wittenberg: Stadt, Universität, Reformation. Im Auftrag der Lutherstadt Wittenberg hrsg. von Stefan Oehmig*. Weimar, Verlag H. Böhlau Nachf., 1995. p. 213–224. illus.

Welin, Gunnar. Wargentins “Försök att determinera Solens Parallaxis.” *Astronomisk tidsskrift*, årg. 30, mars 1997: 33–34. illus.

Wenzel, Johann. Das Astrolab an Uhren. *Klassik-Uhren*, 19. Jahrg., Dez. 1996/Jan. 1997: 36–46. illus. (part col.), facsim., col. port.

“Das Astrolab wird schon seit dem Altertum verwendet. Bis über das Mittelalter hinaus wurde es als Messinstrument in der Uhr benutzt, und noch heute nimmt es der Freund der Astronomie. Die Erklärung der vielseitigen und interessanten Funktionsweise und des Gebrauchs ist eingebettet in sechs Jahrhunderte Zeitgeschichte.”

Willis, David M., F. Richard Stephenson, and J. Robin Singh. Auroral observations on AD 1770 September 16: the earliest known conjugate sightings. *In Royal Astronomical Society. Quarterly journal*, v. 37, Dec. 1996: 733–742. illus., maps.

Records of this display were made by Chinese observers as well as by voyagers on board H.M.S. *Endeavour* bound for Australia.

Witzel, Michael. Looking for the Heavenly Casket. *In Ved-Vyākaraṇa-Vyākhyāna. Festschrift, Paul Thieme zum 90. Geburtstag am 18. März 1995, dargebracht von Schülern, Freunden und Kollegen. Hrsg. von Hanns-Peter Schmidt und Albrecht Wezler. Reinbek, Dr. I. Wezler, Verlag für orientalistische Fachpublikationen*, 1996. (Studien zur Indologie und Iranistik, Bd. 20) p. 531–544. illus.

Identifies this feature of the Vedic night sky as the Big Dipper.

Wlasuk, Peter T. ‘So much for fame!’: the story of Lewis Swift. *In Royal Astronomical Society. Quarterly journal*, v. 37, Dec. 1996: 683–707.

Wolf, Virginia S., and Michael E. Roebuck. Anasazi Pueblo I Basketmaker III multi-component solstice observatory in the lower Mancos River Canyon. *Southwestern lore, journal of Colorado archaeology*, v. 59, summer 1993: 34–39. illus., map, plan.

Wolfschmidt, Gudrun. Göttingen—ein Zentrum der Sonnenphysik im 2. Weltkrieg. In *Gauss-Gesellschaft. Mitteilungen*. Nr. 33. Göttingen, 1996. p. 3–10. illus., port.

Zambelli, Paola. Der Himmel über Wittenberg: Luther, Melanchthon und andere Beobachter von Kometen. In *Istituto storico italo-germanico in Trento. Annali*. 20; 1994. Bologna, Società editrice il Mulino, 1995. p. 39–62.

Zuccoli, Marina. La torre degli astri aperta sul mondo. *Museoscienza, nuova ser.*, n. 3, dic. 1992: 32–35. col. illus., col. port.

On the library of the astronomy department at the University of Bologna.

Zund, Joseph D. Clyde William Tombaugh 1906–1997. *Astronomy & geophysics*, v. 38, Apr./May 1997: 38. port.

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