

Recent publications relating to the history of astronomy

Books and Pamphlets

- Baten, Henri. *Speculum divinorum et quorundam naturalium*. Parts 20–23. On the heavens, The divine movers, and The first intellect. Edited by Carlos Steel, Guy Guldentops. Leuven, Leuven University Press, 1996. lv, 562 p. (Ancient and medieval philosophy, ser. 1, 23)
 Preface and introduction in English; text in Latin.
- Bede, *the Venerable, Saint*. The reckoning of time. Translated, with introd., notes and commentary, by Faith Wallis. Liverpool, Liverpool University Press, 1999. ci, 479 p. (Translated texts for historians, v. 29)
 Translation of *De ratione temporibus*.
- Bedini, Silvio A. The Jefferson Stone: demarcation of the first meridian of the United States. Frederick, Md., Professional Surveyors Pub. Co., 1999. xv, 184 p. illus., facsim., maps, ports.
- Bedini, Silvio A. The life of Benjamin Banneker, the first African-American man of science. 2d ed., rev. and expanded. Baltimore, Maryland Historical Society, 1999. xxiv, 428 p. illus., facsim., maps, ports.
- Between demonstration and imagination; essays in the history of science and philosophy presented to John D. North. Edited by Lodi Nauta and Arjo Vanderjagt. Leiden, Boston, Brill, 1999. xviii, 424 p. illus., facsim., port. (Brill's studies in intellectual history, v. 96)
 Contents: Due North. Contributors. List of illustrations. Section 1. Astrolabes, horoscopes, and the division of time. King, D. A. Bringing astronomical instruments back to earth—the geographical data on medieval astrolabes (to ca. 1100). Lorch, R. P. The treatise on the astrolabe by Rudolf of Bruges. Samsó, J. Horoscopes and history: Ibn 'Azz_z and his retrospective horoscopes related to the battle of El Salado (1340). Maddison, F. R., and A. J. Turner. The names and faces of the hours.—Section 2. Medieval astronomy, cosmology, and natural philosophy. Burnett, C. S. F. 'Abd al-Mashh of Winchester. Eastwood, B. S. Calcidius's commentary on Plato's *Timaeus* in Latin astronomy of the ninth to eleventh centuries. Gingerich, O. Sacrobosco illustrated. Goldstein, B. R. Astronomy in the medieval Spanish Jewish community. Grant, E. God, science, and natural philosophy in the late Middle Ages. Hutchison, K. A strange fact about Aristotelian dynamics. Snedegar, K. V. The works and days of Simon Bredon, a fourteenth-century astronomer and physician.—Section 3. Early modern philosophy and scholarship. Nauta, L. A humanist reading of Boethius's *Consolatio Philosophiae*: the commentary by Murellius and Agricola (1514). Pätzold, D. Ist Tschirnhaus' *Medicina mentis* ein Ableger von Spinozas Methodologie? Ruler, H. van. 'Something, I know not what'. The concept of substance in early modern thought. Federici Vescovini, G. *Les Vite di matematici Arabi* de Bernardino Baldi (Urbino 1553–1617).—Bibliography of John D. North.
- Bialas, Volker. Vom Himmelsmythos zum Weltgesetz; eine Kulturgeschichte der Astronomie. Wien, ibera verlag, 1998. 463 p. illus., maps, ports.
- Björn Jónsson. Star myths of the Vikings; a new concept of Norse mythology. Swan River, Manitoba, Hignell Print. [1994?] 218 p.
- Bonito, Vitaniello. L'occhio del tempo: l'orologio barocco tra letteratura, scienza ed emblematica. Bologna, CLUEB, 1995. 281 p. (Heuresis, 1. Quaderni di schede umanistiche, 4)
 Contents: Introduzione: tra l'emblema e la macchina.—Il museo del curioso.—L'orologio come emblema.—Un nuovo *topos* letterario.—Misura del tempo, misura della poesia.—L'orologio e gli elementi del cosmo.—Il teatro del Tempo.—Temporalità e metafisica oratoria.
- Brand, John C. D. Lines of light: the sources of dispersive spectroscopy, 1800–1930. Amsterdam, Gordon and Breach, 1995. xiv, 266 p. illus.
- Burl, Aubrey. Great stone circles: fables, fictions, facts. New Haven, Yale University Press, 1999. 199 p. illus. (part col.), facsim., maps, plans.
 Treatment of the circles considers "their legends, their construction, age, design, distribution, art, astronomy and purpose."
- Callataÿ, Godefroid de. Annus Platonicus: a study of world cycles in Greek, Latin and Arabic sources. Louvain-la-Neuve, Université Catholique de Louvain, Institut orientaliste, 1996. xv, 287 p. (Publications de l'Institut orientaliste de Louvain, 47)
 Contents: Prologue: Instruments of time.—ch. 1. The foundation stones from classical antiquity.—ch. 2. Periodic returns and astral determinism.—ch. 3. The first opponents of the doctrine.—ch. 4. The commentators.—ch. 5. The world-year in Islam.—ch. 6. Astrology and computus in the Western Middle Ages.—ch. 7. The condemnation by the Christians.—ch. 8. The last sigh of the *Annus Platonicus*.—Appendix 1. Original texts.—Appendix 2. Great cycles (in solar years).

- Carboni, Stefano. *Following the stars: images of the zodiac in Islamic art*. New York, Metropolitan Museum of Art, 1997. 48 p. illus.
- Issued in conjunction with an exhibition held Feb. 4–Aug. 31, 1997. Includes an introductory essay entitled "Islamic Art and Astrology."
- A color illustration of the center of a bowl (Iran, late 12th–early 13th century) appears on the outside front cover of the book.
- Cassé, Michel. *Théories du ciel: espace perdu, temps retrouvé*. Paris, Payot, 1999. 193 p. (Manuels Payot)
- Cattabiani, Alfredo. *Planetario i simboli, miti e misteri di astri, pianeti e costellazioni*. Milano, Mondadori, 1998. 442 p. illus., facsim.
- Christianson, John R. *On Tycho's island; Tycho Brahe and his assistants, 1570–1601*. Cambridge, New York, Cambridge University Press, 2000. 451 p. illus., facsim., maps, ports.
- Contents: pt. 1. On Tycho's island.—pt. 2. Tycho Brahe's coworkers. Biographical directory.
- Cosmos: from Romanticism to the avant-garde. Edited by Jean Clair. Montreal, Montreal Museum of Fine Arts; Munich, New York, Prestel, 1999. 396 p. illus. (part col.), facsim. (part col.)
- "From the beginnings of Romanticism to the culmination of the avant-garde, how did exploration and scientific discoveries shape modern sensibilities?"
- Partial contents: 1. Nature and the cosmos. Deligeorges, S. The scales of the universe.—4. Beyond the earth: the moon. Phillips, C. "Magnificent desolation": the moon photographed.—5 Imaginary cosmologies. Larson, B. The new astronomy and the expanding cosmos: the view from France at the end of the nineteenth century. Lista, G. The cosmos as finitude. From Boccioni's chromogony to Fontana's spatial art. Naubert-Riser, C. Cosmicimaginings, from symbolism to abstract art.—6. To infinity and back. Ottinger, D. Contemporary cosmologies.
- Dadić, Žarko. *Hrvati i egzaktne znanosti u osvitu novovjekovlja*. Zagreb, naprijed, 1994. 342 p., [8] p. of plates. illus., facsim. (part col.), col. map, ports. (part col.) (Kultura i civilizacija)
- Partial contents: 5. Astronomski rad Nikole Nalješkovića.—8. Nikola Sagroević i problemi plime i oseke mora.—12. Kalendari i gregorijanska reforma kalendara.—16. Stav Andrije Dudića prema astrologiji i prirodnim filozofijama.—21. Astronomski i matematički rad Ivana Uremana.—23. Stavovi Jurja Dubrovčanina o peripatetičkoj prirodnoj filozofiji i astrologiji.—24. Astrološka shvaćanja u hrvatskim krajevima tijekom 17. stoljeća.—25. Prirodnoznanstveni stavovi u rukopisnim djelima i u knjižnom fondu knjižnica u Hrvatskoj u 17. stoljeću.—31. Islamski matematički i astronomski tekstovi u 17. stoljeću na hrvatskom etničkom prostoru.—32. Matematički i astronomski arapski školski tekstovi u 17. stoljeću na hrvatskom etničkom prostoru pod turskom vladavinom.—36. Fizikalni, matematički i astronomski rad Stjepana Gradića.
- Davidson, Keay. *Carl Sagan, a life*. New York, J. Wiley, 1999. xx, 540 p., [16] p. of plates. illus., ports.
- Daxecker, Franz. *Das Hauptwerk des Astronomen P. Christoph Scheiner SJ: "Rosa Ursina sive Sol"—eine Zusammenfassung*. Innsbruck, Universitätsverlag Wagner, 1996. 82 p. facsim. (Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck. Supplementum, 13)
- Summary in English.
- Döring, Detlef. *Der Briefwechsel zwischen Gottfried Kirch und Adam A. Kochanski, 1680–1694. Ein Beitrag zur Astronomiegeschichte in Leipzig und zu den deutsch-polnischen Wissenschaftsbeziehungen*. Berlin, Akademie-Verlag, 1997. 94 p. facsim. (Sächsische Akademie der Wissenschaften, Leipzig. Philologisch-Historische Klasse. Abhandlungen, Bd. 74, Heft 5)
- Contents: Vorwort.—Gottfried Kirch in Leipzig. Seine Beziehung zu Adam A. Kochanski. — Briefwechsel zwischen Gottfried Kirch und Adam A. Kochanski.—Briefe Gottlieb Kirchs an seinen Vater Gottfried Kirch.—Anhang I. Verzeichnis des Kirch-Nachlasses in der Universitätsbibliothek Leipzig (Ms 01322).—Anhang II. Verzeichnis der Briefe von und an Gottfried Kirch im Ms L Ia 699 der Universitätsbibliothek Basel.
- Drévilion, Hervé. *Lire et écrire l'avenir: l'astrologie dans la France du Grand Siècle (1610–1715)*. Seyssel, Champ Vallon, 1996. 282 p. facsim. (Epoques)
- Contents: 1. ptie. Entre croyance et suspicion (1610–1649).—2. ptie. Horoscopes mondains et livres populaires (1648–1665).—3. ptie. L'art d'abuser les "esprits faibles" (1666–1715).
- El Eclipse de Luna: misión científica de Felipe II en Nueva España. M^a Luisa Rodríguez Sala (ed.). Huelva, Universidad de Huelva, 1998. 173 [i.e. 169] p. facsim. (Bibliotheca Montaniana, 1)
- Contents: Montaner Roselló, J. Prólogo.—Uña, O. Presentación.—Rodríguez Sala, M. L. Unas palabras iniciales de agradecimiento.—1. pt. Estudio en torno a la importancia socio-histórica y astronómica de la observación del eclipse y de los participantes en ella. 1. Rodríguez Sala, M. L. La observación del eclipse de luna del 17 de noviembre de 1584. Sus antecedentes. 2. Galindo Trejo, J. La observación de eclipses en el pasado prehistórico de México. 3. Moreno Corral, M. A. El

- estudio de los eclipses como problema científico del siglo XVI. 4. Rodríguez Sala, M. L. La misión científica de Jaime Juan en la Nueva España y las Islas Filipinas. 5. Rodríguez Sala, M. L. Francisco Domínguez y Ocampo, geógrafo y cosmógrafo. 6. Rodríguez Sala, M. L. Cristóbal Gudiel, armero y polvorista real.—2. pt. Facsímil sobre observación del eclipse de luna del 17 de noviembre de 1584.—3. pt. Rodríguez Díaz, E., and M. L. Rodríguez Sala. Transcripción paleográfica.—4. pt. Gómez Aguado, P. S., and F. Navarro Antolí. Traducción del texto.
- Gemistus Plethon, George. Manuel d'astronomie. Par Anne Tihon et Raymond Mercier. Louvain-la-Neuve, Academia Bruylant, 1998. 323 p., [2] leaves of plates. illus., facsim. (Corpus des astronomes byzantins, 9)
Greek and French on facing pages.
- Goodrich, Anne S. Peking paper gods; a look at home worship. Nettetal, Steyler Verlag, 1991. 501 p. illus. (Monumenta Serica monograph series, 23)
Partial contents: ch.9. Sky powers.—ch. 15. Time.—Appendix H. The stars.
- Grafton, Anthony. Cardano's cosmos: the worlds and works of a Renaissance astrologer. Cambridge, Mass., Harvard University Press, 1999. 284 p. facsim., port.
- Grillenzoni, Paolo. Kant e la scienza. v. 1. 1747–1755. Milano, Vita e pensiero, 1998. xiv, 549 p. (Scienze filosofiche, 62)
Partial contents: II. Il cosmo. *L'Allgemeine Naturgeschichte* (1755). 1. L'intreccio problematico. 2. La "teoria del cielo." 3. La "storia" dell'universo. 4. Altri mondi.—III. La Terra. Gli 'articoli' del 1754. 1. La rotazione terrestre. 2. L'invecchiamento della Terra.
- Guicciardini, Niccolò. Reading the *Principia*: the debate on Newton's mathematical methods for natural philosophy from 1687 to 1736. Cambridge, New York, Cambridge University Press, 1999. 285 p. illus., facsim.
- Hack, Margherita. Sette variazioni sul cielo. Milano, R. Cortina editore, 1999. 248 p. illus. (Scienza e idee, 53)
Contents: Premessa.—1. Astrologia e astronomia.—2. Il peccato di Aristarco.—3. L'esplorazione del Sistema solare.—4. La vita nel cosmo.—5. La controversa origine dell'Universo.—6. Apocalissi vecchie e nuove.—7. La liberalità della natura.
- Heilbron, John L. The sun in the church: cathedrals as solar observatories. Cambridge, Mass., Harvard University Press, 1999. 366 p., [8] p. of plates. illus. (part col.), facsim., plans.
- Histoire des sciences en Belgique de l'antiquité à 1815. Direction scientifique: Robert Halleux, Carmélia Opsomer, Jan Vandersmissen. Bruxelles, Crédit Communal, 1998. 463 p. illus. (part col.), facsim. (part col.), maps (part col.), ports. (part col.)
Treatment of astronomy is included in several of the 25 chronologically arranged chapters, but see particularly "La cosmologie, de Gemma Frisius à Wendelen" (p. 145–167), by Fernand Hallyn; "L'occultation du débat cosmologique après la condamnation de Galilée" (p. 169–178), by Robert Halleux; and the first part of "L'œuvre des jésuites en Chine et l'exportation de la 'science belge'" (p. 273–288), by Noël Golvers.
See also "L'historiographie des sciences en Belgique" (p. 419–431), by Geert Vanpaemel.
- Horowitz, Wayne. Mesopotamian cosmic geography. Winona Lake, Ind., Eisenbrauns, 1998. xiv, 410 p. illus. (Mesopotamian civilizations, v. 8)
Contents: pt. 1. Sources for Mesopotamian cosmic geography.—pt. 2. The regions of the universe.
- Howse, Derek. Greenwich time and the longitude. London, P. Wilson, National Maritime Museum in association with A.T.Kearney, 1998. 199 p. illus. (part col.), facsim. (part col.), maps (part col.), ports. (part col.)
Reprints the text of a work first published in 1980.
- Hugo, of Santalla. The *Liber Aristotilis* of Hugo of Santalla. Edited by Charles Burnett and David Pingree. London, Warburg Institute, School of Advanced Study, University of London, 1997. 299 p. facsim. (Warburg Institute surveys and texts, 26)
- Huizenga, Erwin. Een nuttelike practijke van cirurgien. Geneeskunde en astrologie in het Middelnederlandse handschrift Wenen, Österreichische Nationalbibliothek, 2818. Hilversum, Verloren, 1997. 537 p. illus., facsim. (Middeleeuwse studies en bronnen, 54)
Summary in English: p. 509–516.
- Hunger, Hermann, and David Pingree. Astral sciences in Mesopotamia. Leiden, Boston, Brill, 1999. xviii, 303 p. (Handbuch der Orientalistik. 1. Abt., Der Nahe und Mittlere Osten, 44. Bd.)
- Huyghe, Edith, and François B. Huyghe. Images du monde; les mille et une façons de représenter l'univers avant Galilée. Paris, JC Lattès, 1999. 299, [16] p. of plates. illus. (part col.), facsim. (part col.)

- Contents: Introduction.—ch. 1. Du Big Bang à la caverne.—ch. 2. S'installer sur Terre.—ch. 3. Mythes archaïques, mythes cosmologiques.—ch. 4. Les ruptures.—ch. 5. Éléments et infinis.—ch. 6. Mouvements des astres et mouvements des âmes.—ch. 7. La doctrine des sphères.—ch. 8. D'Aristote à Ptolémée.—ch. 9. Unité divine, unité cosmique.—ch. 10. L'Islam.—ch. 11. Cosmologie et scholastique.—ch. 12. La perte du centre.—Annexes. Cinquante mots pour décrire les images du monde. Cent systèmes cosmologiques. Bibliographie.
- Ikonomakos, Konstantinos. *Concordantia Aratea*. Hildesheim, New York, Olms-Weidmann, 1997. 296 p. (Alpha-Omega. Reihe A, Lexica, Indizes, Konkordanzen zur klassischen Philologie, 189)
 "... provides a fundamental tool in the grammatical and stylistic research on the *Phaenomena* ..."
- Ilyas, Mohammad. *Islamic astronomy and science development: glorious past, challenging future*. Petaling Jaya, Selangor Darul Ehsan, Malaysia, Pelanduk Publications, 1996. 147 p. illus.
 Contents: 1. Science in Islamic civilization.—2. Religious impetus for Islamic astronomy.—3. State patronage and science development.—4. Impact of Islamic astronomy and allied sciences.—5. Modern crisis in Islamic astronomy and related S&T.—6. Globalization of the Islamic time system.—7. Revival of Islamic observatory institution.
- Jacobsen, Theodor S. *Planetary systems from the ancient Greeks to Kepler*. Seattle, Dept. of Astronomy, University of Washington in association with the University of Washington Press, 1999. xvi, 256 p. illus., port.
 Contents: Introduction.—ch. 1. Astronomical knowledge of the ancient Greeks.—ch. 2. Eudoxus (408–355 B.C.).—ch. 3. Hipparchus (fl.146–126 B.C.).—ch. 4. Ptolemy (fl. 125–150).—ch. 5. Copernicus (1473–1543).—ch. 6. Tycho Brahe (1546–1601).—ch. 7. Kepler (1571–1630).
- Jardine, Lisa. *Ingenious pursuits: building the scientific revolution*. New York, N. A. Talese, Doubleday, 1999. xx, 444 p., [24] p. of plates. illus. (part col.), facsim. (part col.), maps (part col.), ports. (part col.)
 Biographical sketches of the leading players are provided in a section entitled "Cast of Characters" (p. 366–392).
 Much attention is given to developments in astronomy.
- Johnson, Laurin R. *Shining in the ancient sea: the astronomical ancestry of Homer's Odyssey*. Portland, Or., Multnomah House Press, 1999. 156 p. illus. (1 fold.)
 "An ancient Indo-European system of astronomy found in the Hindu Vedas underlies the structure of the Odyssey."
- Jones, Alexander. *Astronomical papyri from Oxyrhynchus (P. Oxy. 4113–4300a)*. Edited with translations and commentaries. Philadelphia, American Philosophical Society, 1999. 2 v. in 1 (368, 471 p., [12] leaves of plates). illus., facsim. (American Philosophical Society, Philadelphia. *Memoirs*, v. 233)
- Kennedy, Edward S., Paul Kunitzsch, and Richard P. Lorch. *The melon-shaped astrolabe in Arabic astronomy*. Texts edited with translation and commentary. Stuttgart, F. Steiner, 1999. 235 p. illus., facsim. (Boethius, Bd. 43)
 Includes Arabic texts with English translations on facing pages.
- Kidger, Mark R. *The star of Bethlehem; an astronomer's view*. Princeton, N.J., Princeton University Press, 1999. 306 p. illus.
- Klamt, Johann C. *Sternwarte und Museum im Zeitalter der Aufklärung: der Mathematische Turm zu Kremsmünster (1749–1758)*. Mainz, P. von Zabern, 1999. 494 p. illus., facsim., plans, ports.
- Kratkaiâ istoriia kalendariâ. IÛrchenko È. I., sostavlenie. [Moskva?] Mosgorpechat', 1998. 80 p. illus.
 Contents: Vekovaiâ oshibka Petra I i nashi kalendarny problemy.—Istoriia nashego kalendariâ.—IÛlianskii kalendar'.—V poiskakh tochki otschëta.—Nashe letoschislenie---ëra "ot rozhdestva Khristova."—Vvedenie grigorianskogo kalendariâ.—NovoiÛlianskii kalendar'.—Kalendar' v Rossii.—Novyi god nad Evropoi.—Prilozheniâ.
- Kronk, Gary W. *Cometography; a catalog of comets*. v. 1. Ancient–1799. Cambridge, New York, Cambridge University Press, 1999. xvi, 563 p. illus.
- Launert, Dieter. *Nicolaus Reimers (Raimarus Ursus). Günstling Rantzaus—Brahes Feind. Leben und Werk*. München, Institut für Geschichte der Naturwissenschaften, 1999. 378 p. illus., facsim., maps, ports. (Algorismus, Heft 29)
 Summary in English: p. 363–365.
- Li, Andrés de. *Reportorio de los tiempos*. Edited with an introd. by Laura Delbrugge. Rochester, N.Y., Tamesis, 1999. 157 p. illus. (Colección Tamesis. Serie A, Monografías, 180)
 Written in the last decade of the 15th century, the text "is an almanac which incorporates the lunar charts of Bernat de Granollachs, whose Catalan *Lunari* was first published in Barcelona in 1485. The *Reportorio* is an eclectic collection of calendar data, culled from centuries of time calculation, and as such offers a valuable Spanish interpretation of the western European calendar tradition."

- Littmann, Mark, Ken Willcox, and Fred Espenak. *Totality: eclipses of the sun*. New York, Oxford University Press, 1999. xviii, 268 p., [8] p. of plates. illus. (part col.), maps, ports.
- Lopes, Aurélio. *Tempo de solstícios*. Prefácio José Miguel Correa Noras. Santarém, Edição O Mirante, 1998. 302 p. illus. (Collecção Saber)
 Contents: Cosmogonia e mito.—Solaridades.—A metamorfose sincrética.—O modelo solsticial.—O solstício de verão.—O solstício de inverno.
- Maor, Eli. June 8, 2004: *Venus in transit*. Princeton, N.J., Princeton University Press, 2000. 186 p., [8] p. of plates. illus., facsim., maps, ports.
 "... tells the intriguing tale of the five Venus transits observed by humans and the fantastic efforts made to record them."
- Matvievskaja, Galina P., and Zinaida K. Sokolovskaia. *Ulugbek, 1394–1449*. Otv. redaktor, M. M. Rozhanskaia. Moskva, "Nauka," 1997. 151 p. illus., facsim., maps, plans, ports. (Nauchno-biograficheskaia literatura)
- Maunder, Michael J. de F., and Patrick Moore. *Transit: when planets cross the sun*. London, New York, Springer, 2000. 164 p. illus., maps, ports. (Practical astronomy)
 Contents: pt. 1. Transits down the ages.—pt. 2. Observing transits.
- Mgr Georges Lemaître, savant et croyant. *Actes du colloque commémoratif du centième anniversaire de sa naissance (Louvain-la-Neuve, le 4 novembre 1994)*. La physique d'Einstein. Texte inédit de Georges Lemaître; édités par Jean-François Stoffel. Louvain-la-Neuve, Centre interfacultaire d'étude en histoire des sciences, 1996. 371 p. illus., facsim., ports. (Reminiscences, 3)
 Contents: Avant-propos.—Bossy, L. *La physique d'Einstein* de Georges Lemaître (1922).—Gérard, J. M. Georges Lemaître et l'histoire de notre Univers.—Ladrière, J. La portée philosophique de l'hypothèse de l'atom primitif.—Lambert, D. Pie XII et Georges Lemaître: deux visions distinctes des rapports sciences-foi.—Leclerc, père M. La liberté intellectuelle de l'homme de sciences catholique.—Pérez de Laborda, A. Cosmologies et dogmatiques; un problème d'interférence et de représentation.—Stoffel, J. F. Mgr Georges Lemaître: bio-bibliographie.—*La physique d'Einstein*, texte inédit de Georges Lemaître. Édité par Jean-François Stoffel.
- Molnar, Michael R. *The star of Bethlehem: the legacy of the Magi*. New Brunswick, N.J., Rutgers University Press, 1999. xvi, 187 p. illus., facsim., maps.
- Montgomery, Scott L. *The moon & the Western imagination*. Tucson, University of Arizona Press, 1999. 265 p. illus., facsim., maps.
- Mysterium cosmographicum, 1596–1996*. Editor, Jaroslav Folta. Prague, National Technical Museum in Prague, Dept. of the History of Technology, Society for the History of Science and Technology, 1998. 314 p. illus., facsim., port. (Acta historiae rerum naturalium necnon technicarum, new ser., v. 2)
 "Proceedings of the Symposium held in Prague on 18th–22nd August 1996."
 Contents: Folta, J. Úvod; introduction [includes a memoir of Vladimír Vanýsek (1926–1997)]—Folta, J. Předmluva; preface.—Bialas, V. Kepler's winding path to true heliocentrism.—Field, J. V. Kepler's mathematization of cosmology.—Bennett, B. H. Kepler's response to the mystery: a new cosmographical epistemology.—Davis, A. E. L. Kepler, the ultimate Aristotelian.—Martens, R. M. Kepler's use of archetypes in his defense against Aristotelian scepticism.—Grasshoff, G. Kepler's research objective[s] in the *Mysterium* and their realization in the *Astronomia Nova* [abstract only]—Fempl-Madjarevic, J. Kepler—astronomer in astrology and astrologer in astronomy.—Duncan, A. Kepler on light and sound.—Pichler, F. Johannes Kepler and his contribution to applied mathematics.—Betsch, G. Kepler's theory of highly symmetric plane figures and solids.—Voss, W. A network over the world: Kepler and the graph theory.—Adam, A. "Cosmomorphistic geometry" in the unconscious geometry of Johannes Kepler.—Griffiths, P. L. The velocity of celestial bodies is determined by Kepler's distance law rather than by Newton's *Principia*.—Hamel, J. Die erste deutsche Übersetzung des Hauptwerkes von Nicolaus Copernicus um 1586. Ein Forschungsbericht.—Schuppener, G. Kepler's correspondence with Paul Guldin.—Šolc, M. Kepler and Tycho in Benátky: a case of collaboration or co-existence [abstract only]—Débarbat, S. V., and J. Lévy. Un cosmologiste oublié: Jean Henri Lambert.—Gropp, H. The cosmological ideas of the peoples in the ancient Near East [abstract only]—Stavinschi, M., and V. Mioc. Romanian astronomical activity in the Middle Ages.—Velan, A. K. The multi-universe cosmos: the origin and fate of our universe.—Hadravová, A., and P. Hadrava. Cosmological theories at the time of Tycho Brahe.—Flin, P. The large-scale distribution of galaxies.—Vavilova, I., and P. Flin. Wavelet analysis of galaxy in the Jagellonian field [abstract only]—Wolfschmidt, G. Island universe or big galaxy?—Vanýsek, V. Non-Friedmannian models [abstract only]—Gaina, A. B. Particles generation and Bose instability in primordial rotating black holes.—Guliáev, R. A. The use of old astronomical observations for detecting secular astronomical changes in the sun and the heliosphere.—Drobyshevskii, E. M. New explosive cosmology of minor bodies in the solar system [abstract only]—Fabregat Fillet, J. Kepler

- in curricula of the Agrarian Engineering School of Barcelona. — Ros, R. M. Kepler's laws and using photography to obtain numerical results. — Drobyshevskii, E. M. Solution of the solar neutrino problem can facilitate the realistic cosmology selection [abstract only] — Letter of Martin Rees.
- Natural catastrophes during Bronze Age civilisations; archaeological, geological, astronomical and cultural perspectives. Edited by Benny J. Peiser, Trevor Palmer and Mark E. Bailey. Oxford, Archaeopress, 1998. 252 p. illus., maps. (BAR international series, 725)
- Contents: Peiser, B. J., T. Palmer, and M. E. Bailey. Introduction. — Matthews, R. A. J. The past is our future. — Bailey, M. E. Sources and populations of near-earth objects: recent findings and historical implications. — Napier, W. M. Cometary catastrophes, cosmic dust and ecological disasters in historical times: the astronomical framework. — Steel, D. Before the stones: Stonehenge I as a cometary catastrophe predictor. — Verschuur, G. L. Our place in space. — Masse, W. B. Earth, air, fire, and water: the archaeology of Bronze Age cosmic catastrophes. — Courty, M. A. The soil record of an exceptional event at 4000 B.P. in the Middle East. — Baillie, M. G. L. Hints that cometary debris played some role in several tree-ring dated environmental downturns in the Bronze Age. — Peiser, B. J. Comparative analysis of late Holocene environmental and social upheaval: evidence for a global disaster around 4000 BP. — Nur, A. The end of the Bronze Age by large earthquakes? — Franzén, L. G., and T. B. Larsson. Landscape analysis and stratigraphical and geochemical investigations of playa and alluvial fan sediments in Tunisia and raised bog deposits in Sweden: a possible correlation between extreme climate events and cosmic activity during the late Holocene. — Geel, B. van, O. M. Raspopov, J. van der Plicht, and H. Renssen. Solar forcing of abrupt climate change around 850 calendar years BC. — MacKie, E. W. Can European prehistory detect large-scale natural disasters? — Heinsohn, G. The catastrophic emergence of civilization: the coming of blood sacrifice in the Bronze Age. — Pankenier, D. W. Heaven-sent: understanding cosmic disaster in Chinese myth and history. — Mullen, W. The agenda of the Milesian School: the post-catastrophic paradigm shift in ancient Greece. — Wolfe, I. The 'Kultursturz' at the Bronze Age/Iron Age boundary. — Clube, S. V. M. The problem of historical catastrophism. — Contributors.
- O Observatório astronómico de Pequim, séculos XVI a XIX. Shih liu chih shih chiu shih chi Pei-ching kuan hsiang t'ai. Exposição iconográfica integrada nas comemorações do IV Centenário do Colégio Universitário de São Paulo (1594–1994). Macau, Leal Senado; Instituto Cultural de Macau, 1994. [96] p. (on double leaves) facsimis.
- Olivares i Alfonso, Joan. Relloges i calendaris solars a la Vall de l'Albaida. Ontinyent, Caixa d'Estalvis d'Ontinyent, Obra Social, 1998. 94 p. illus. (part col.).
- Oriol, Jacques, and Hubert M. de Thier. Les Belges au Kenya pour l'éclipse du siècle. Hommage à Hubert Marie de Thier (1902–1983). Gilly, J. B. Editeur, 1991. 75 p. illus., maps, ports.
- On an expedition to observe the total solar eclipse of June 30, 1973, at Loiyangalani.
- Phares, Simon de. *Le Recueil des plus célèbres astrologues* de Simon de Phares. Édité pour la Société de l'histoire de France par Jean-Patrice Boudet. t. 1. Édition critique. Paris, Librairie H. Champion, 1997. 604 p.
- Pingree, David. From astral omens to astrology; from Babylon to B_k_ner. Roma, Istituto italiano per l'Africa e l'Oriente, 1997. 125 p. (Serie orientale Roma, v. 78)
- Contents: Introduction. — ch. 1. Mesopotamian celestial omens. — ch. 2. The origins of Greek astrology. — ch. 3. Babylonian omens and Greek astrology in India. — ch. 4. The recovery of Sasanian astrology. — ch. 5. Kanaka: an Indian (?) astrologer at Hārūn al-Rashid's court. — ch. 6. Arabic astrology in Byzantium. — ch. 7. *Tājika*: Persian astrology in Sanskrit. — ch. 8. Astronomy at the court of Anūpasimha.
- Pişmiş, Paris. Reminiscences in the life of Paris Pişmiş, a woman astronomer. In collaboration with Gabriel Cruz-Gonzalez. México, D.F., Universidad Nacional Autónoma de México, Instituto de Astronomía, Instituto Nacional de Astrofísica, Óptica y Electrónica, 1998. 103 p., [15] p. of illus. ports. (part col.)
- Includes as annexes four papers by Dr. Pişmiş.
- Ponzio, Paolo. Copernicanesimo e teologia. Scrittura e natura in Campanella, Galilei e Foscarini. Presentazione di William Shea. Bari, Levante editori, 1998. 193 p. (Vestigia, 15)
- Poundstone, William. Carl Sagan: a life in the cosmos. New York, H. Holt, 1999. xvii, 473 p., [16] p. of plates. illus., ports.
- Randles, W. G. L. The unmaking of the medieval Christian cosmos, 1500–1760; from solid heavens to boundless æther. Aldershot, Hants, Brookfield, Vt., Ashgate, 1999. xv, 274 p. facsimis., ports.
- Contents: Introduction. — 1. The medieval foundations of the Christian cosmos. — 2. Renaissance and Reformation challenges to the medieval cosmos and the response of the Counter-Reformation. — 3. The challenge of applied optics. — 4. The reception of new astronomical evidence. — 5. The challenge of infinity. — 6. The Emyprean in the late Renaissance and the Baroque age. — 7. The

cosmos in university textbooks.—8. The impact of Cartesianism and Copernicanism and the end of the medieval cosmos.—Conclusion.

Reis, António E. dos. *Métodos de navegação nos séculos XV–XVIII. Navigation methods during the fifteenth to eighteenth centuries.* Lisboa, Commissariado da Exposição Mundial de Lisboa de 1998, Parque EXPO 98, 1998. 57 p., [17] p. of plates. col. illus., col. facsim., col. maps. (Monografias; Monographs)

Text in Portuguese and English discusses latitude, nautical literature, longitude, and the introduction of the chronometer.

Richet, Pascal. *L'âge du monde; à la découverte de l'immensité du temps.* Paris, Éditions du Seuil, 1999. 381 p. illus., facsim., ports. (Science ouverte)

Contents: Avant-propos.—1. Un temps sans origine?—2. Du grand livre de Moïse.—3. La Genèse au prisme de la philosophie naturelle.—4. Les admirables médailles de la nature.—5. La marche des comètes.—6. Age héroïque, temps relatif.—7. La longue histoire de deux barons.—8. Le temps élastique.—9. La boîte de Pandore de la physique.—10. Le Soleil, la Terre, la radioactivité et la mort de Kelvin.—11. La longue quête d'Arthur Holmes.—12. De la bombe à l'âge de la Terre.—Épilogue.

Rigobello, Maria Beatrice, and Francesco Autizi. *Palazzo della Ragione a Padova: vita e arte sotto la volta degli astri.* Piazzola s/Brenta (PD), edizioni papergraf, 1998. 149 p. illus. (part fold., part col.), map, plans.

Includes chapters entitled "Il carattere astrologico e religioso del ciclo di affreschi" (p. 41–43) and "Lo Zodiaco di Palazzo della Ragione: i mesi, i caratteri, i lavori" (p. 44–98).

Rochberg, Francesca. *Babylonian horoscopes.* Philadelphia, American Philosophical Society, 1998. 164 p. illus. (Transactions of the American Philosophical Society, v. 88, pt. 1)

Rudavsky, Tamar M. *Time matters: time, creation, and cosmology in medieval Jewish philosophy.* Albany, State University of New York Press, 2000. xviii, 287 p. illus. (SUNY series in Jewish philosophy)

Scheuer, Hans G. *Der Glaube der Astronomen und die Gestalt des Universums; Kosmologie und Theologie im 18. und 19. Jahrhundert.* Aachen, Shaker Verlag, 1997. 330 p. illus., port. (Theologische Studien)

Contents: I. Einführung.—II. Isaac Newton (1642–1727).—III. Kosmologie und Theologie bei Thomas Wright of Durham.—IV. Die Verbindung von Astronomie, Kosmologie und Theologie im Schaffen englischer Astronomieprofessoren im 18. und 19. Jahrhundert.

Part IV includes sections on William Herschel, Samuel Vince, John Pringle Nichol, and James Challis.

Schiaparelli, Giovanni V. *Scritti sulla storia della astronomia antica.* Milano, Associazione Culturale Mimesis, 1997–98. 3 v. illus. (Collana Mimesis)

Reprint of the 1925–27 ed.

Contents: pt. 1 (v. 1–2). Scritti editi.—pt. 2 (v. 3). Scritti inediti.

The first volume of this set was cited in *JAH²* 1(2), no. 2.

Scienza, filosofia e teologia di fronte alla nascita dell'universo. *Reflections on the birth of the universe: science, philosophy and theology.* Atti del Convegno internazionale, a cura di padre Eligio, Giulio Giorello, Gioachino Rigamonti, Elio Sindoni. Como, Edizioni New Press, 1997. xix, 427 p., [8] p. of plates. illus. (part col.), col. facsim.

Contents: Prefazione.—Indirizzi di saluto.—Lettura introduttiva. Scola, A. Uomo e universo—origine e fine nella prospettiva teologica.—La Bibbia e l'origine del cosmo. Nobile, M. Immagini e concetti cosmologici dell'Antico Testamento. Ognibeni, B. Cosmogonia biblica? Laras, G. La creazione: riflessioni alla luce del pensiero dell'Ebraismo.—Concezioni filosofiche. Severino, E. Che cosa significa "origine"? Reale, G. Cosmologia e metafisica. Sini, C. Il problema dell'origine.—Teorie cosmologiche rivali. Barrow, J. D. The origin of the universe. Macchetto, F. D. Modern cosmological theories. Hack, M. Teorie cosmologiche rivali. Burbidge, G. Cosmological theories. Salvini, G. Elementary particles and cosmology. Progress and uncertainties. Accardi, L., and G. Rizzi. Oggettività e soggettività in cosmologia. Cavalleri, C., S. Covino, and E. Tonni. A new cosmological theory antithetical to the inflationary theory. Bersanelli, M. COBRAS/SAMBA: la missione spaziale europea dedicata alla cosmologia.—Concezioni teologiche. Polkinghorne, J. The theological significance of cosmological theories of origin. Coyne, G. V. A new physics and a new theology for an evolving universe. Russell, R. J. Philosophy, theology and cosmology: a fresh look at their interactions.—Cosmologie nella storia. Repellini, F. F. La cosmologia tra Platone e Aristotele. Parodi, M. Un'impossibile convivenza tra metafisica e fisica. Il problema della composizione della sostanza materiale nella riflessione medievale. Mamiani, M. La cosmologia newtoniana; ordine e caso. Guiderdoni, B. M. Dibattiti sull'origine del mondo nel medioevo islamico, al-Ghazâlî, Ibn Rushd e Ibn Arabi. Zanzi, L. Aspetti storiografici del problema

cosmologico. Bianchi, E. Cosmologie, cosmografie, simbologie esempi nel tempo e nello spazio.— Modelli cosmologici e comparsa della vita intelligente sulla terra. Chela-Flores, J. Cosmological models and appearance of intelligent life on earth: the phenomenon of the eukaryotic cell. Pasinetti, A. L. Cosmografia e cosmologia dell'acqua: la chiave della vita.— Cosmo e arte. Olmi, E. Chi guarda ancora le stelle? Bertola, F. La rappresentazione del cosmo attraverso i secoli.— Note biografiche.

Smith, Roy W. A union made in heaven; a history of Amateur Astronomers, Inc., 1949–1999. Elizabeth, NJ, R. W. Smith, 1999. 218 p., [8] p. of plates. illus., ports.

"Some 10,000 Americans are actively involved with the hobby of amateur astronomy as members of some 200 societies dedicated to promoting the science of astronomy through education, observing and research. One of the largest and most active of these societies is Amateur Astronomers, Inc. based at Union County College's William Miller Sperry Observatory in Cranford, NJ."

Stautz, Burkhard. Die Astrolabiensammlungen des Deutschen Museums und des Bayerischen Nationalmuseums. München, Oldenbourg, 1999. 425 p. illus. (Deutsches Museum. Abhandlungen und Berichte, n.F., B 12)

A history and general description of astrolabes is followed by detailed descriptions of 19 instruments in the Munich collections.

Steel, Duncan. Eclipse: the celestial phenomenon which has changed the course of history. London, Headline, 1999. 368 p. illus., maps.

Tardy, Jean N. Astrolabes, cartes du ciel: les comprendre et les construire. Aix-en-Provence, Édisud, 1999. 143 p. illus. (part col.)

Vargha, Magda. The Konkoly Observatory chronicle. In commemoration of its centenary. With the assistance of Dr. József Csaba and Robert Vida. Budapest, 1999. 158 p. illus., ports.

Warburg, Aby. The renewal of pagan antiquity; contributions to the cultural history of the European Renaissance. Introd. by Kurt W. Forster; translation by David Britt. Los Angeles, Getty Research Institute for the History of Art and the Humanities, 1999. 859 p. illus., facsim., maps, ports. (Texts and documents)

Translation of his *Die Erneuerung der heidnischen Antike: kulturwissenschaftliche Beiträge zur Geschichte der europäischen Renaissance* (Leipzig, B. G. Teubner, 1932. 2 v.).

Partial contents: An astronomical map in the Old Sacristy of San Lorenzo in Florence (1911).— Church and court art at Landshut (1909).— Italian art and international astrology in the Palazzo Schifanoia, Ferrara (1912).— On images of planetary deities in the Low German almanac of 1519 (1908).— Pagan-antique prophecy in words and images in the age of Luther (1920).— Astrology under oriental influence (1926).

The table of contents should be consulted for pagination of separate addenda as well as the essays themselves.

Waugh, Alexander. Time: from microseconds to millennia — a search for the right time. London, Headline, 1999. 277 p., [8] p. of plates. illus., ports.

Der Weg der Wahrheit. Aufsätze zur Einheit der Wissenschaftsgeschichte. Festgabe zum 60. Geburtstag von Walter G. Saltzer, hrsg. von Peter Eisenhardt, Frank Linhard, und Kaiser Petanides. Hildesheim, New York, G. Olms, 1999. 445 p. illus., facsim., map, ports. (Texte und Studien zur Wissenschaftsgeschichte, Bd. 1)

Partial contents: Eisenhardt, P., F. Linhard, and K. Petanides. Die Geburt der Naturwissenschaft aus dem Geiste des Griechentums; Einheit und Internationalität der Naturwissenschaftsgeschichte. Ein Manifest.— I. Astronomie. Barow, M. Edmond Halleys erste Publikation: eine Methode zur Bahnbestimmung eines Planeten. Charette, F. Der geflügelte Quadrant: ein ungewöhnliches Sinusinstrument aus dem 14. Jh. Kegel, W. H. Die Entdeckung der kosmologischen Rotverschiebung. Maeyama, Y. Astronomische Perioden und ewige Wiederkehr (περιοδικὸν καὶ ἀποκατάστασις). Nebel, V., and B. M. Deiss. Über eine von Galileo Galilei erfundene Beobachtung des Saturn. Stautz, B. Ein instrumentales Modell der Welt jenseits der Fixsternsphäre. King, D. A. Islamische Weltkarten mit Mekka als Mittelpunkt. Die Wiederentdeckung einer bemerkenswerten Tradition mittelalterlicher Kartographie. [Translated by W. D. Wagner] Kühn, E. Johannes Keplers stellvertretende Hypothese zur Planetenbewegung, seine Hypothesis vicaria. Maiër, K. Ein arabisches Astrolab aus Córdoba (11. Jh.) mit späteren altkatalanischen Inschriften. Schmidl, P. G. Zur Bestimmung der Qibla mittels der Winde.

Western learning and Christianity in China: the contribution and impact of Johann Adam Schall von Bell, S.J. (1592–1666). Edited by Roman Malek. Sankt Augustin, Jointly published by China-Zentrum and the Monumenta Serica Institute, 1998. 2 v. (xlvii, 1259 p.) illus., facsim., maps, ports. (Monumenta serica monograph series, 35)

"The papers presented here ... are mainly the proceedings of the International Schall Symposium held in Sankt Augustin in May 1992." Seventeen of the 54 papers are in Chinese.

See particularly part III, "Johann Adam Schall von Bell – Astrology, Astronomy, and Calendar" (p. 369–616).

Zach, Franz Xaver, *Freiherr* von. *Astronom, Weltbürger, Blasensteinpatient: Franz Xaver von Zachs Briefe an Rudolf Abraham von Schiferli, 1821–1832*. Eingeleitet und hrsg. von Leo Gosteli, Urs Boschung, Peter Brosche. Basel, Schwabe, 1998. 382 p. illus., ports. (Gesnerus. Supplementum, 45)

Zuidervaart, H. J. *Speculatie, wetenschap en vernuft. Fysica en astronomie volgens Wytze Foppes Dongjuma (1707–1778), instrumentmaker te Leeuwarden*. Ljouwert/Leeuwarden, Fryske Akademy, 1995. 206 p. illus., facsim., map, ports. (FA, nr. 814) (Fryske histoaryske rige, nr. 12)

Contents: 1. Inleiding. – 2. De vorming van een 'wiskundig vernufteling.' – 3. Rekenmeester, instrumentmaker & natuurfilosoof. – 4. Astronoom. – 5. Kometen, planeten en een collectieve angst voor de eindtijd. – 6. Invloed, context en betekenis.

Zuidervaart, H. J. *Van 'konstgenoten' en hemelse fenomenen; Nederlandse sterrenkunde in de achttiende eeuw*. Rotterdam, Erasmus Pub., 1999. 663 p. illus., facsim., maps, ports. (Nieuwe Nederlandse bijdragen tot de geschiedenis der geneeskunde en der natuurwetenschappen, nr. 58)

Contents: d. 1. Inleiding en probleemstelling. – d. 2. Achtergronden. – d. 3. Het probleem van de loopbaan van kometen. – d. 4. Het probleem van de zonne-parallax. – d. 5. Epiloog.

Supplements include lists of astronomical observatories active in Europe, 1710–1750; Netherlands publications on eclipses, 1700–1750; observations in the Netherlands of comets, 1715–1770; Netherlands observers of transits of Mercury and Venus, 1736–1769; and astronomical observers in the Netherlands, grouped by educational background, 1715–1770.

"Dutch astronomy in the 18th century" (English summary): p. 415–422.

Articles, Including Essays in Books and Papers in Proceedings

Abry, Joseph H. *Les catalogues d'étoiles, de l'astronomie descriptive à la république céleste*. In *Association des professeurs de langues anciennes de l'enseignement supérieur. Congrès, 28th, Saint-Étienne, 1995*. Actes du XXVIIIème Congrès international, Saint-Étienne, 19–21 mai 1995. Publié par Bernard Jacquinod. Saint-Étienne, Publications de l'Université de Saint-Étienne, 1995. p. 77–98. facsim.

Achar, B. N. Narahari. *On an astronomical concept in Visnupur_na*. *Indian journal of history of science*, v. 34, June 1999: 109–115.

Ackermann, Silke. *Sun, moon and stars: telling the time with astronomical instruments from the British Museum*. *Antiquarian horology*, v. 25, Sept. 1999: 31–46. col. illus.

Another illustration, showing three instruments, appears on the outside front cover of the issue.

Allison, Chantal. *The Ifriqiya uprising horoscope from On Reception by Masha'alla, court astrologer in the early 'Abbasid caliphate*. *Culture and cosmos*, v. 3, spring/summer 1999: 35–56. illus.

Altschuler, Eric. *An astronomical whodunnit*. *Astronomy & geophysics*, v. 40, Oct. 1999: 8. port.

Argues that the astronomical knowledge, or lack of it, in Shakespeare's plays supports the proposal of the Earl of Oxford as their author.

Aquilecchia, Giovanni. *Bruno at Oxford between Aristotle and Copernicus*. In *Giordano Bruno, 1583–1585: the English experience/l'esperienza inglese*. Atti del convegno (Londra, 3–4 giugno 1994) a cura di Michele Ciliberto e Nicholas Mann. Firenze, L. S. Olschki, 1997. (Istituto nazionale di studi sul Rinascimento. Atti di convegni, 20) p. 117–124.

Aricò, Denise. *Les "yeux d'Argos" et les "étoiles d'Astrée" pour mesurer l'univers*. *Les jésuites italiens et la science nouvelle*. *Revue de synthèse*, t. 120, avril/sept. 1999: 285–303.

Abstract in English.

"Comme la nova de 1604 et les trois comètes de 1618, qui engagèrent Galilée et les jésuites du Collège romain dans un long débat, la comète de 1664 a relancé la curiosité et l'attente des astronomes et des astrologues. L'article analyse quelques aspects de ce débat européen ..."

Armijo Canto, Maruxa. *División medieval del día astronómico: la hora*. In *Jornadas Medievales, 5th, Mexico City, 1994*. Caballeros, monjas y maestros en la Edad Media. Actas de las V Jornadas Medievales. Editores: Lillian von der Walde, Concepción Company, Aurelio González. México, Universidad Autónoma de México, 1996. (Publicaciones de Medievalia, 13) p. 507–519.

Aveni, Anthony F. *Astronomy in the Mexican Codex Borgia*. In *Archaeoastronomy*. no. 24; 1999. Cambridge, Science History Publications. p. S1–S20. illus., facsim.

Aveni, Anthony F. *The star of Bethlehem: was it a celestial event, a supernatural phenomenon, or a story made up by Matthew?* *Archaeology*, v. 51, Nov./Dec. 1998: 34–42. col. illus., facsim.

Includes a box, "Dialogue With the Firmament" (p. 39), on the widespread practice in antiquity of looking to the stars for guidance regarding the future.

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

See also comments by the editor in chief on p. 2.

Bakhouche, Béatrice. Musique et philosophie. Le De institutione musica de Boèce dans la tradition encyclopédique latine. *In* Association Guillaume Budé. Bulletin, oct. 1997: 210–232.

Includes discussion of the harmony of the spheres.

Bakhouche, Béatrice. La peinture des constellations dans la littérature aratéenne latine: le problème de la droite et de la gauche. *In* L'Antiquité classique. t. 66; 1997. Bruxelles. p. 145–168. illus.

Barker, Peter. Copernicus and the critics of Ptolemy. *Journal for the history of astronomy*, v. 30, Nov. 1999: 343–358.

Barker, Peter, and Bernard R. Goldstein. Realism and instrumentalism in sixteenth century astronomy: a reappraisal. *Perspectives on science*, v. 6, fall 1998: 232–258.

Barletti, Raffaele. La cosmologia medioevale con riferimento all'opera di Dante. *Giornale di astronomia*, v. 25, mar. 1999: 19–26. facsim. (part col.)

Baron, Pascal, Gérard Jubert, and Jean M. Trouvé. Ismaël Boulliau: le désir ardent de savoir. *In* Aventures scientifiques: savants en Poitou-Charentes du XVI^e au XX^e siècle. Poitiers, Les éditions de l'Actualité Poitou-Charentes, 1995. p. 30–43. facsim., col. port.

Barrow, John D., and Derek McNally. Sir William Hunter McCrea 1904–1999. *Astronomy & geophysics*, v. 40, Dec. 1999: 35–36. port.

"Fellow of the RAS; Secretary, Treasurer and Foreign Correspondent of the Society; distinguished international relativist and astrophysicist; inspiring teacher and leader; a good friend and a diligent ambassador for science."

Bartky, Ian R., Norman S. Rice, and Christine A. Bain. "An event of no ordinary interest" — the inauguration of Albany's Dudley Observatory. *Journal of astronomical history and heritage*, v. 2, June 1999: 1–20. illus., ports.

Includes a key identifying 58 of the 63 persons portrayed in Tompkins Matteson's painting of the scene at the observatory's inauguration.

Bartusiak, Marcia. Underground astronomer. *Astronomy*, v. 28, Jan. 2000: 64–67. col. illus., ports. (part col.)

"Ray Davis gave an active gold mine a second job — as a neutrino telescope."

Baum, Richard. Star-spots of Venus. *In* British Astronomical Association, London. *Journal*, v. 109, June 1999: 115–116. facsim.

Discusses observations reported by Schroeter and others.

Bausinger, Hermann. Uhren für die Ewigkeit: Philipp Matthäus Hahn — Theologe und Techniker. *In* *his* Ein bisschen unsterblich: schwäbische Profile. Tübingen, Verlag Schwäbisches Tagblatt, 1996. p. 97–112. illus., facsim., port.

Beck, Roger. The astronomical design of Karakush, a royal burial site in ancient Commagene: an hypothesis. *Culture and cosmos*, v. 3, spring/summer 1999: 10–34. illus., plan.

Bell, Trudy E. Ingenuity in the moon's shadow. *Sciences*, v. 39, Nov./Dec. 1999: 14–17. illus. (part col.) (Field notes)

"Intrepid nineteenth-century astronomers relied on mulish strength, native wit and blind luck to observe the sun in total eclipse."

Bell, Whitfield J. Charles Mason (1728–1786). American Society (corresponding member) 27 March 1767. *In* *his* Patriot improvers; biographical sketches of members of the American Philosophical Society. v. 1. 1743–1768. Philadelphia, American Philosophical Society, 1997. (American Philosophical Society, Philadelphia. *Memoirs*, v. 226) p. 366–373.

Bell, Whitfield J. Jeremiah Dixon (1733–1779). American Society (corresponding member) 1 April 1768. *In* *his* Patriot improvers; biographical sketches of members of the American Philosophical Society. v. 1. 1743–1768. Philadelphia, American Philosophical Society, 1997. (American Philosophical Society, Philadelphia. *Memoirs*, v. 226) p. 525–529.

Belmonte Avilés, Juan A., César Esteban López, Luis Cuesta, María A. Perera Betancort, and José J. Jiménez González. Pre-Islamic burial monuments in northern and Saharan Morocco. *In* *Archaeoastronomy*. no. 24; 1999. Cambridge, Science History Publications. p. S21–S34. illus., maps.

Bennett, J. A. Instruments in the history of astronomy. *Endeavour*, v. 23, no. 3, 1999: 98–99.

Summarizes talks on the history of instruments presented at the Fourth Biennial History of Astronomy Workshop, held in early July 1999 at Notre Dame University.

Berninger, Ernst H. Winkeldrucker, Wunderzeichen. Himmelserscheinungen auf frühen Einblattdrucken. *Kultur & Technik*, 23. Jahrg., Nr. 3, 1999: 32–33. facsim.

- Bertola, Francesco. Leonida Rosino, 1915–1997. *In American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1610. port.
- Bertozzi, Marco. Il fatale ritmo della storia: la teoria delle grandi congiunzioni astrali tra XV e XVI secolo. *In L'Uomo e la natura nel Rinascimento. A cura di Luisa Rotondi Secchi Tarugi. Milano, Nuovi orizzonti, 1996. (Mentis itinerarium) (Caleidoscopio, 6) p. 189–207.*
- Bezza, Giuseppe. Astrological considerations on the length of life in Hellenistic, Persian and Arabic astrology. *Culture and cosmos*, v. 2, autumn/winter 1998: 3–15.
- Biermann, Kurt R. Die Affäre Pasquich. Aus der Geschichte der Manipulierung von Daten. *In Gauss-Gesellschaft. Mitteilungen. Nr. 36. Göttingen, 1999. p. 47–48.*
- Blanca Carlier, José M. Julián Ortiz-Canelas, primer director del Observatorio de la Isla de León. *Revista de historia naval*, año 16, 3. trimestre 1998: 75–86. illus.
- Blank, Walter, Astrologische Prognostik als Planungsfaktor im Spätmittelalter. *In Mediävistenverband. Symposium, 5th, Göttingen, 1993. Rhythmus und Saisonalität. Kongressakten des 5. Symposiums des Mediävistenverbandes in Göttingen 1993. Hrsg. von Peter Dilg, Gundolf Keil und Dietz-Rüdiger Moser. Sigmaringen, J. Thorbecke, 1995. p. 171–180.*
- Böhm, Conrad. La velocità della luce secondo Ole Römer. *L'Astronomia*, anno 21, magg. 1999: 60–61. col. illus. (Osservatorio del passato)
- Bönoli, Fabrizio, and Marina Zuccoli. On two sixteenth-century instruments by Giovanni Antonio Magini (1555–1617). *Nuncius*, anno 14, fasc. 1, 1999: 201–212. illus., facsim., port.
- Bracher, Katherine. The 1925 total solar eclipse. *Mercury*, v. 29, Jan./Feb. 2000: 4. illus.
"Solar eclipses like that of last August have always moved that part of humanity touched by them."
- Brack-Bernsen, Lis, and Hermann Hunger. The Babylonian zodiac: speculations on its invention and significance. *Centaurus*, v. 41, no. 4, 1999: 280–292. illus.
- Brashear, William M., and Alexander Jones. An astronomical table containing Jupiter's synodic phenomena. *Zeitschrift für Papyrologie und Epigraphik*, Bd. 125, 1999: 206–210.
- Britton, John P., and Alexander Jones. A new Babylonian planetary model in a Greek source. *Archive for history of exact sciences*, v. 54, no. 4, 2000: 349–373. facsim.
- Brosche, Peter. Kanonikus Zach. *In Gauss-Gesellschaft. Mitteilungen. Nr. 36. Göttingen, 1999. p. 49–54.*
- Brück, Mary T. Agnes Clerke commemorated. *Astronomy & geophysics*, v. 40, Oct. 1999: 6. illus.
A plaque commemorating Agnes Mary Clerke and her sister Ellen Mary was unveiled at their birthplace in Skibbereen, County Cork, on 11 July.
- Brück, Mary T., and Sheelagh Grew. A family of astronomers – the Breens of Armagh. *Irish astronomical journal*, v. 26, July 1999: 121–128. facsim.
On Hugh Breen (1791–1848) and his sons Hugh (b. 1824), James (1826–1866), and John William (1832–1871).
- Brunner, Gisbert L. Die Turmuhr am Markusplatz in Venedig. *Klassik Uhren*, 22. Jahrg., Aug./Sept. 1999: 12–17. col. illus.
Includes a box, "Technische Daten in Kürze" (p. 16).
- Brush, Stephen G. Why was relativity accepted? *Physics in perspective*, v. 1, June 1999: 184–214. ports.
- Butler, C. John, and John G. Doyle. P. B. Byrne at Armagh Observatory. *In Solar and stellar activity: similarities and differences. Proceedings of a meeting held in Armagh, N. Ireland, 2–4 September 1998. Edited by C. J. Butler and J. G. Doyle. San Francisco, Astronomical Society of the Pacific, 1999. (Astronomical Society of the Pacific conference series, v. 158) p. xxvii–xxviii.*
- Buttmann, Günther. Karoline Herschel: zu ihrem 250. Geburtstag. *Sterne und Weltraum*, 39. Jahrg., Nr. 2/3, 2000: 180–181. port. (Geschichte)
- Cameron, Alastair G. W. Adventures in cosmogony. *In Annual review of astronomy and astrophysics. v. 37; 1999. Palo Alto, Calif., Annual Reviews. p. 1–36.*
- Carlson, John B., David S. P. Dearborn, Stephen C. McCluskey, and Clive L. N. Ruggles. Astronomy in culture. *Archaeoastronomy*, v. 14, no. 1, 1999: 3–21.
- Carlson, John B. Pilgrimage and the equinox "Serpent of Light and Shadow" phenomenon at the Castillo, Chichén Itzá, Yucatán. *Archaeoastronomy*, v. 14, no. 1, 1999: 136–152. illus., map, plan.
Another illustration appears on the outside front cover of the issue.
- Carone, Gabriela R. The ethical function of astronomy in Plato's *Timaeus*. *In Symposium Platonicum, 4th, Granada, 1995. Interpreting the Timaeus-Critias; proceedings of the IV Symposium Platonicum. Selected papers, edited by Tomás Calvo and Luc Brisson. Sankt Augustin, Academia Verlag, 1997. (International Plato studies, v. 9) p. 341–349.*
- Cavagna, Anna G. Opere e libri di un astronomo cartografo del XVIII secolo [Giovanni Giacomo Marinoni, 1676–1755]: tra erudizione e stato. *Nuncius*, anno 13, fasc. 2, 1998: 461–491.
Summary in English.

- Includes two appendices: "Osservazioni astronomiche attualmente note" (p. 488–489) and "Fonti bibliografiche su Marinoni ordinate cronologicamente" (p. 489–491).
- Cavagnaro, Elena. The *Timaeus* of Plato and the erratic motion of the planets. In *Symposium Platonicum, 4th, Granada, 1995*. Interpreting the *Timaeus-Critias*; proceedings of the IV Symposium Platonicum. Selected papers, edited by Tomás Calvo and Luc Brisson. Sankt Augustin, Academia Verlag, 1997. (*International Plato studies*, v. 9) p. 351–362.
- Chapman, Allan. The Royal Observatory, Greenwich: the finding of longitude at sea and the advancement of astronomy, 1675–1998. In *Yearbook of astronomy. 2000*. Edited by Patrick Moore. London, Macmillan, 1999. p. 265–280.
- Chapman, Allan. Summary of the RAS specialist discussion meeting on women in astronomy: an historical perspective, 1780–1940. *Observatory*, v. 118, Oct. 1998: 270–273.
The speakers were D. W. Hughes, A. Chapman, G. Wolfschmidt, J. M. Mitton, I. Elliott, B. J. Becker, and P. A. Wayman. The opening paper, by M. T. Brück, was read by J. M. Mitton.
- Chapman, David M. F. Edwin P. Hubble and the extragalactic nebulae. In *Royal Astronomical Society of Canada. Journal*, v. 93, Dec. 1999: 258–259. illus., port. (Reflections)
- Charette, François. A monumental medieval table for solving the problems of spherical astronomy for all latitudes. *Archives internationales d'histoire des sciences*, no 140, juin 1998: 11–64. illus.
Includes text in Arabic.
- Chevalier, Yves. Orientations of 935 dolmens of southern France. In *Archaeoastronomy*. no. 24; 1999. Cambridge, Science History Publications. p. S47–S82. illus., map.
- Ciappi, Maurizio. *Super stellisque micantibus aethera fixum*. Per l'interpretazione di un verso di Lucrezio (V 1205). *Maia*, nuova ser., anno 51, genn./apr. 1999: 33–40.
- Clark, William. Der Untergang der Astrologie in der deutschen Barockzeit. In *Im Zeichen der Krise: Religiosität im Europa des 17. Jahrhunderts*. Hrsg. von Hartmut Lehmann und Anne-Charlott Trepp. Göttingen, Vandenhoeck & Ruprecht, 1999. (Veröffentlichungen des Max-Planck-Instituts für Geschichte, 152) p. 433–472. facsimis.
- Clerq, Peter de. A pseudo-Tompion sundial. *Bulletin of the Scientific Instrument Society*, no. 62, Sept. 1999: 5–6. illus.
- Collins, George W., William P. Claspy, and John C. Martin. A reinterpretation of historical references to the supernova of A.D. 1054. In *Astronomical Society of the Pacific. Publications*, v. 111, July 1999: 871–880. illus.
- Conlin, Michael F. The popular and scientific reception of the Foucault pendulum in the United States. *Isis*, v. 90, June 1999: 180–204. facsimis., port.
- Corcy, Marie S. La photographie astronomique. *La Revue, Musée des arts et métiers*, no 27, juin 1999: 60–64. illus. (part col.), port.
On the work of pioneers such as Hippolyte Fizeau and Léon Foucault, Draper, De La Rue, Prosper and Paul Henry, Janssen, and Rutherford.
Another color illustration appears on the outside back cover of the issue.
- Cramer, Noël. L'éclipse de Soleil du 15 février 1961. *Orion*, 57. Jahrg., Juni 1999: 10–11. illus.
- Crowe, Michael J., and Matthew F. Dowd. Archaeoastronomy and the history of science. *Archaeoastronomy*, v. 14, no. 1, 1999: 22–38.
- Culbertson, Brenda. Refurbishing a dream. *Mercury*, v. 28, July/Aug. 1999: 11–15. illus., ports.
On the restoration of "a 100-year-old Warner and Swasey refractor" belonging to Washburn University in Topeka.
Includes a box, "How To Find an Antique Telescope Repairperson" (p. 14).
- Danezis, Emmanuel, Efstratios Theodossiou, Maria Stathopoulou, and Th. Grammenos. A presocratic cosmological proposal. *Journal of astronomical history and heritage*, v. 2, Dec. 1999: 125–130.
On a very modern-sounding cosmogony described by the poet Alcman.
- D'Aulaire, Per Ola, and Emily d'Aulaire. Taking the measure of time. *Smithsonian*, v. 30, Dec. 1999: 52–56, 58, 60–62, 64–65. col. illus., col. port.
"Throughout the ages, humankind's attempt to demarcate our days has resulted in a succession of breakthroughs, from sundials to wristwatches and atomic clocks."
Another color illustration appears on the outside front cover of the issue.
See also the letters commenting on this article, published in the Feb. 2000 issue, p. 13–14.
- Davoust, Emmanuel. L'œuvre de Jean Rösch [1915–1999] au Pic-du-Midi. *L'Astronomie*, v. 113, nov. 1999: 312–313. port. (Homage)
Débarbat, Suzanne V. À propos des éclipses totales de Soleil en Europe, depuis le XV^e siècle. *L'Astronomie*, v. 113, mai 1999: 128–133. facsimis., map.
A painting (artist unknown) of the scene at the Paris Observatory on the occasion of the last

eclipse visible there (22 May 1724) is reproduced in color on both sides of the front cover of the issue.

See also the color illustration of the total solar eclipse of 18 July 1860 on the outside back cover.

Débarbat, Suzanne V. Cassini et ses découvertes dans le système de Saturne. *L'Astronomie*, v. 113, oct. 1999: 248–257. facsim., map, port. (Histoire)

De Meis, Salvo. Alcune osservazioni astronomiche di Eustachio Manfredi e Vittorio Stancari a Bologna. *Giornale di astronomia*, v. 25, mar. 1999: 32–39. illus., facsim., map.

De Meis, Salvo. Sui telescopi babilonesi. *Giornale di astronomia*, v. 25, sett. 1999: 28–31. illus.

Another illustration is reproduced in color on the outside front cover of the issue.

Depuydt, Leo. Gnomons at Meroë and early trigonometry. *In* *Journal of Egyptian archaeology*. v. 84; 1998. London, Egyptian Exploration Society. p. 171–180. illus.

"Angles of the sun and shadows at Meroë at significant annual dates are given. Three graffiti in building 950 at Meroë, previously published by Garstang and probably dating to the first century BC or the first century AD, are discussed in the light of their astronomical implications. A new interpretation identifies a gnomon, an instrument that measures shadows, and its significance for the early history of trigonometry is noted. In one instance observation of the summer solstice at Meroë is suggested."

Dick, Steven J., and Dennis W. McCarthy. William Markowitz, 1907–1998. *In* *American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1605. port.

Dilaghi Pestellini, Elena. Astronomia e arte nel periodo barocco: una introduzione. *Giornale di astronomia*, v. 25, sett. 1999: 4–8. col. illus., facsim. (part col.)

Dimitrijević, Milan S. Life and activities of Nenad Dj. Janković. *Serbian astronomical journal*, no. 158, Nov. 1998: 131–145.

A short biographical sketch is followed by a list of Janković's publications.

Dimitrijević, Milan S. Life and scientific activity of Professor Ivan Atanasijević (1919–1998). *Serbian astronomical journal*, no. 158, Nov. 1998: 147–156. port.

See also the correction published in issue no. 159, Aug. 1999, p. 111.

Dollfus, Audouin. Observation de Mars avec la Grande Lunette de Meudon. *L'Astronomie*, v. 113, juil./sept. 1999: 230–238. illus., ports.

On observations made during the last close approach, late in 1988.

A color illustration dated Sept. 28, 1988, is reproduced on the inside back cover.

Dorce Polo, Carlos. Sobre el cuadrante solar de Alfonso X El Sabio. *Asclepio*, v. 51, fasc. 2, 1999: 167–184. illus., facsim.

Drozdowski, Henryk. Jan Heweliusz, badacz i konstruktor. *Fizyka w szkole*, r. 44, mar./kwiec. 1998: 114–118, 120. facsim.

A portrait of Hevelius is reproduced on the inside front cover of the issue.

Dufour, Adrián. Révolution galiléenne versus révolution copernicienne. *In* *Penser l'homme et la science. Betrachtungen zum Thema Mensch und Wissenschaft. Essais en honneur du professeur Evandro Agazzi à l'occasion de ses 60 ans. Beiträge zu Ehren von Professor Evandro Agazzi zu seinem 60. Geburtstag.* Édités par/hrsg. von Bernard Schumacher /Edgardo Castro. Fribourg, Éditions universitaires Fribourg, Universitätsverlag Freiburg, 1996. p. 171–202. illus.

Dunn, Francis M. The council's solar calendar. *American journal of philology*, v. 120, fall 1999: 369–380. Proposes a new reconstruction of the calendar used by the council of Athens late in the 5th century B.C.

Dunn, Francis M. Tampering with the calendar. *Zeitschrift für Papyrologie und Epigraphik*, Bd. 123, 1998: 213–231. illus.

On adjustments to the Athenian calendar. The author concludes that "Any claim that the archons were prompted by worthy or unworthy motives cannot be substantiated."

Dunn, Richard B., Raymond N. Smartt, and Jack B. Zirker. John Wainwright Evans Jr. *Physics today*, v. 53, Mar. 2000: 94–95. port.

Dyson, Freeman J. The inventor of modern science. *Nature*, v. 400, July 1, 1999: 27. col. illus., col. port. (Millennium essay)

"James Bradley laid the foundations of modern science in his aunt's attic. His impressively precise astronomical measurements gave birth to experimental physics as we know it."

Eastwood, Bruce S. Astronomical images and planetary theory in Carolingian studies of Martianus Capella. *Journal for the history of astronomy*, v. 31, Feb. 2000: 1–28. facsim.

Eelsalu, Heino. The rise and fall of small astronomical observatories: a case study, Dorpat/Tartu Observatory. *Journal of astronomical history and heritage*, v. 2, Dec. 1999: 111–123. illus., ports.

Egan, Frances. The moon illusion. *Philosophy of science*, v. 65, Dec. 1998: 604–623. illus.

Egginton, William. On Dante, hyperspheres, and the curvature of the medieval cosmos. *Journal of the history of ideas*, v. 60, Apr. 1999: 195–216.

- Egret, Daniel, *and* André Heck. Carlos Jaschek, 1926–1999. *In* American Astronomical Society. Bulletin, v. 31, no. 5, 1999: 1602. port.
- Ernst, Germana. Astri e previsioni: il *Pronostico* di Cardano del 1534. *In* Girolamo Cardano. *Le opere, le fonti, la vita*. A cura di Marialuisa Baldi e Guido Canziano. Milano, FrancoAngeli, 1999. (Filosofia e scienza nel Cinquecento e nel Seicento. Studi, 50) p. 457–475.
Includes the text of Cardano's *Pronostico generale* (p. 461–475).
- Ernst, Germana. "Veritatis amor dulcissimus". Aspetti dell'astrologia in Cardano. *In* Girolamo Cardano: Philosoph, Naturforscher, Arzt. Hrsg. von Eckhard Kessler. Wiesbaden, Harrassowitz Verlag in Kommission, 1994. (Wolfenbütteler Abhandlungen zur Renaissanceforschung, Bd. 15) p. 157–184.
Contents: 1. Il viaggio in Scozia e la stessura del *Commento*.—2. Le XII geniture.—3. Le opere astrologiche.—4. Il *Commento* a Tolomeo.—5. Oroscopi.
- Evans, James. The material culture of Greek astronomy. *Journal for the history of astronomy*, v. 30, Aug. 1999: 237–307. illus., facsimils., ports.
- Fatoohi, Louay J., *and* F. Richard Stephenson. Angular measurements in Babylonian astronomy. *In* Archiv für Orientforschung, internationale Zeitschrift für die Wissenschaft vom Vorderen Orient. Bd. 44/45; 1997/98. Wien, Selbstverlag des Instituts für Orientalistik der Universität Wien; Horn, F. Berger [1998?] p. 210–214. illus.
- Feast, Michael W. Stellar populations and the distance scale: the Baade-Thackeray correspondence. *Journal for the history of astronomy*, v. 31, Feb. 2000: 29–36.
- Fernie, J. Donald. The American Kepler. *American scientist*, v. 87, Sept./Oct. 1999: 398–401. col. illus., col. port. (Marginalia)
About Daniel Kirkwood.
- Ferrari d'Occhieppo, Konradin, Rolf Krause, *and* Theodor Schmidt-Kaler. Die Gefilde der altägyptischen Unterwelt: Spiegelbild der Sonnenbahnen im Jahreslauf. *Zeitschrift für ägyptische Sprache und Altertumskunde*, Bd. 123, Heft 2, 1996: 103–110. illus.
- Ferrarini, Monica. La biblioteca "Guido Horn d'Arturo" dell'Università di Bologna. *Giornale di astronomia*, v. 25, giugno 1999: 9–10.
- Fiume Garelli, Valentina. *Astronomia ed arte moderne e contemporanea*. *Giornale di astronomia*, v. 25, giugno 1999: 14–23. illus. (part col.)
Another color illustration appears on the outside front cover of the issue.
- Freeman, Kenneth C. Olin J Eggen 1919–1998. *Astronomy & geophysics*, v. 41, Feb. 2000: 36.
"Associate of the Royal Astronomical Society; astrophysicist, dedicated observer and pioneer of photoelectric photometry; Director of Mount Stromlo Observatory."
- Garland, Robert. Countdown to the beginning of time-keeping. *History today*, v. 49, Apr. 1999: 36–42. illus. (part col.), facsimils. (part col.)
- Gaspari, Adriano. L'astronomia dei primi monaci irlandesi. *L'Astronomia*, anno 21, giugno 1999: 30–39. col. illus., col. facsimils., col. map. (Archeoastronomia)
- Gehrz, Robert D., Frank B. McDonald, *and* John E. Naugle. Edward Purdy Ney, October 28, 1920–July 9, 1996. *In* National Academy of Sciences. Biographical memoirs. v. 76. Washington, D.C., National Academy Press, 1999. p. 268–287. port.
- Gingerich, Owen. Why is the day 24 hours, and when will the millennium begin? *Planetary report*, v. 19, July/Aug. 1999: 4–7. illus. (part col.)
- Goldstein, Bernard R., *and* José Chabás. An occultation of Venus observed by Abraham Zacut in 1476. *Journal for the history of astronomy*, v. 30, Aug. 1999: 187–200.
"Appendix: Zacut's report on an occultation of Venus: B, 39b–40a": p. 199–200.
- Golvers, Noel. The Latin treatises of F. Verbiest, S.J., on European astronomy in China: some linguistic considerations. *In* *Humanistica Iovaniensia*. v. 44; 1995. Leuven, Leuven University Press. p. 305–369.
- Granada, Miguel A. Thomas Digges, Giordano Bruno e il copernicanesimo in Inghilterra. *In* Giordano Bruno, 1583–1585: the English experience/l'esperienza inglese. Atti del convegno (Londra, 3–4 giugno 1994) a cura di Michele Ciliberto e Nicholas Mann. Firenze, L. S. Olschki, 1997. (Istituto nazionale di studi sul Rinascimento. Atti di convegni, 20) p. 125–156.
- Grebe, Sabine. Die Astronomie (8.803–887). *In* *her* Martianus Capella, 'De nuptiis Philologiae et Mercurii.' Darstellung der Sieben Freien Künste und ihrer Beziehungen zueinander. Stuttgart, B. G. Teubner, 1999. (Beiträge zur Altertumskunde, Bd. 119) p. 494–616.
Contents: 7.1. Grobe Gliederung und Überblick über die Fachliteratur.—7.2. Feingliederung. 7.2.1. Einleitung (803–813). 7.2.2. Himmelskugel (814–837). 7.2.3. Fixsterne (838–849). 7.2.4. Planeten (850–887).—7.3. Anfang und Ende thematischer Einheiten.

- See also, in the section entitled "Querverbindungen innerhalb des ganzen Werkes," the subsections entitled "Buch 8 und 9: Astronomie und Musik" (p. 744–755) and "Buch 6, 7 und 8: Geometrie, Arithmetik und Astronomie" (p. 755–767).
- Griffin, Roger F. Denis Wardlaw Beggs 1926–1993. *Astronomy & geophysics*, v. 40, Oct. 1999: 34.
"Fellow of the RAS, Senior Technical Officer of the Cambridge Observatories, constructor and operator of solar magnetograph."
- Grössing, Helmuth. Der Mann hinter dem "Doppler-Effekt": Christian Doppler (1803–1853). In *Heimat grosser Söhne ... Exemplarische Leistungen österreichischen Naturforscher, Techniker und Mediziner*. Helmuth Grössing, Gerhard Heindl (Hrsg.). Frankfurt am Main, New York, P. Lang, 1997. p. 27–34. port.
- Gros, Monique. Le CLEA et la formation des maîtres en astronomie. In *La Transmission des savoirs scientifiques*. Sous la direction de Remi Coutin, Henri Hudrisier et Marcel V. Locquin. Actes du 118^e Congrès national des sociétés historiques et scientifiques, Pau, 1993. Section des sciences. Paris, Éditions du CTHS, 1996. (Colloques du CTHS, 15) p. 97–107. facsim.
- CLEA = Comité liaison enseignants/astronomes.
- Guasti, Marcello, and Artemisia Viscoli. Arte fra umanesimo e scienza. *Giornale di astronomia*, v. 25, mar. 1999: 7–12. illus. (part col.)
Includes description of three astronomically related outdoor works of art, at Florence, Bagno a Ripoli, and Scandicci.
- Gurzadyan, V. G., and Steven W. Cole. Ur III eclipses revisited. *Akkadica*, no 113, mai/juin 1999: 1-5.
- Gussmann, Ernst A. Potsdamer Grosser Refraktor feierte 100jähriges Jubiläum. *Sterne und Weltraum*, 39. Jahrg., Nr. 2/3, 2000: 186–187. col. illus.
- Hack, Margherita. From OAO2 to HST. A quarter of a century of ultraviolet astronomy. In *Società astronomica italiana. Memorie*, v. 70, n. 2, 1999: 281–295.
- Hackett, Jeremiah. Aristotle, *astrologia*, and controversy at the University of Paris (1266–1274). In *Learning institutionalized; teaching in the medieval university*. Edited by John Van Engen. Notre Dame, Ind., University of Notre Dame Press, 2000. (Notre Dame conferences in medieval studies, no. 9) p. 69–110.
- Häfner, Reinhold. Die Sternwarte in Bogenhausen im Wandel ihrer Geschichte. In *Bogenhausen, vom bäuerlichen Pfarrdorf zum noblen Stadtteil*. Hrsg. von Willibald Karl mit Unterstützung des Stadtarchiv München. München, Buchendorfer Verlag, 1992. p. 61–71. illus., facsim., port.
- Hallyn, Fernand. Un poème inédit de Philippe Lansbergen sur l'étoile nouvelle de 1604. In *Humanistica lovaniensia*. v. 46; 1997. Leuven, Leuven University Press. p. 258–265.
Includes the Latin text and provides a French translation.
- Hamilton, James. Observing the sky: meteorology, astronomy and visions. In *his Turner and the scientists*. London, Tate Gallery Pub., 1998. p. 58–73. illus. (part col.)
- Hamilton, Norman T., and Asger Aaboe. A Babylonian Venus text computed according to System A: ACT no. 1050. *Archive for history of exact sciences*, v. 53, no. 3/4, 1998: 215–221. illus.
- Han, Qi. Patronage scientifique et carrière politique. Li Guangdi entre Kangxi et Mei Wending. *Études chinoises*, v. 16, automne 1997: 7–37.
Abstract in English.
Provides a list of characters for Chinese names and terms used.
- Hargittai, István, and Magdolna Hargittai. Johannes Kepler. In *their In our own image: personal symmetry in discovery*. New York, Kluwer Academic/Plenum Publishers, 2000. p. 26–51. illus., facsim., ports.
- Hari, K. Chandra. Intricacy of the Sidhantic solar year. *Indian journal of history of science*, v. 34, June 1999: 133–143.
- Hari, K. Chandra. On the origin of sidereal zodiac and astronomy. *Indian journal of history of science*, v. 33, Dec. 1998: 257–266.
- Harwit, Martin. The unfinished history of planet searches. In *Planets outside the solar system: theory and observations*. Edited by J.-M. Mariotti and D. Alloin. Dordrecht, Boston, Kluwer Academic Publishers, 1999. (NATO science series. Series C, Mathematical and physical sciences, v. 532) p. 3–11.
- Haug, Eberhard. Nachruf: Gerhard Elwert †. 1912–1998. In *Astronomische Gesellschaft. Mitteilungen*. Nr. 82. Hamburg, 1999. p. 9–10. port.
- Hecht, Hartmut. Neue Dimensionen wissenschaftlicher Reisen im 18. Jahrhundert. Maupertuis' Laplandexpedition. *Berichte zur Wissenschaftsgeschichte*, Bd. 22, Juli 1999: 81–93. illus., map.
Summary in English.
- Heim, François. Solstice d'hiver, solstice d'été dans la prédication chrétienne du Ve siècle. Le dialogue des évêques avec le paganisme, de Zénon de Vérone à saint Léon. *Latomus*, t. 58, juil./sept. 1999: 640–660.
- Helfand, David J. Rebecca Anne Elson, 1960–1999. In *American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1597–1598. port.

- Helfand, David J., and Gerry F. Gilmore. Rebecca Anne Wood Elson. *Physics today*, v. 52, Sept. 1999: 74, 76. col. port.
- Henry, Holly. Eclipse madness, 1927. *Astronomy & geophysics*, v. 40, Aug. 1999: 17–19. illus.
- Henschel, Klaus. Photographic mapping of the solar spectrum 1864–1900. *Journal for the history of astronomy*, v. 30, May–Aug. 1999: 93–119, 201–224. illus.
- This reference completes and corrects that listed in *JAH²* v.2 no. 2, in which the title was incorrectly cited.
- Heppenheimer, T. A. How the Soviets didn't beat us to the moon. *American heritage of invention and technology*, v. 15, summer 1999: 10–18. illus. (part col.), ports. (part col.)
- Another color illustration appears on the outside front cover of the issue.
- Hetherington, Norriss S. Plato's place in the history of Greek astronomy: restoring *both history and science* to the history of science. *Journal of astronomical history and heritage*, v. 2, Dec. 1999: 87–110. illus.
- Heuvel, Edward P. J. van den. Obituary. Johannes A. van Paradijs (1946–99). *Nature*, v. 402, Dec. 16, 1999: 742. col. port.
- "... one of the world's foremost astrophysicists."
- Higginbottom, Gail, and Roger Clay. Reassessment of sites in Northwest Scotland: a new statistical approach. *In Archaeoastronomy*. no. 24; 1999. Cambridge, Science History Publications. p. S41–S46. illus.
- Hilbert, Martin. Herschel's investigation of the nature of radiant heat: the limitations of experiment. *Annals of science*, v. 56, Oct. 1999: 357–378. facsimis.
- Hilditch, R. W. Philip W Hill 1937–1999. *Astronomy & geophysics*, v. 41, Feb. 2000: 35–36. port.
- "Fellow, Council Member and Vice-President of the RAS; meticulous practical observer and pioneer of astronomical computing."
- Hill, Donald R. XIV. Al-Bīrūnī's mechanical calendar. *In his Studies in medieval Islamic technology, from Philo to al-Jazari—from Alexandria to Diy_r Bakr*. Edited by David A. King. Aldershot, Hants, Brookfield, Vt., Ashgate Variorum, 1998. (Collected studies series, CS555) p. [237]–[261] illus., facsimis.
- Includes text in Arabic with English translation.
- First published in *Annals of Science*, v. 42, Mar. 1985, p. 139–163.
- Hingley, Peter D. Two weddings and a funeral ... *Astronomy & geophysics*, v. 40, Aug. 1999: 7. illus. (From the RAS archives)
- On the 1896 expedition organized by the British Astronomical Association to observe a total solar eclipse in Norway.
- Hingley, Peter D. An unrecorded Shropshire modeller of the Moon. *Astronomy & geophysics*, v. 41, Feb. 2000: 6. illus. (From the RAS archives)
- About Henry Blunt (d. 1853) and his models of the lunar surface.
- Hoepe, Götz. Leben mit den Sternen: die Astronomie der Manus in Papua Neuguinea. *Sterne und Weltraum*, 38. Jahrg., Nr. 12, 1999: 1046–1051. col. illus., col. map, col. group port.
- Hoffleit, Dorrit. Canadian astronomers, who earned the Ph.D. at Harvard in the Shapley era. *In Royal Astronomical Society of Canada. Journal*, v. 93, Dec. 1999: 262–271. illus.
- Contents: 1. Introduction.—2. Frank Scott Hogg (1904–1951), Ph.D. 1929.—3. Helen Battles Sawyer Hogg (1905–1993), Ph.D. 1931.—4. Peter M. Millman (1906–1990), Ph.D. 1932.—5. F. Shirley Patterson Jones (1913–), Ph.D. 1941.—6. Donald A. MacRae (1916–), Ph.D. 1943.—Summary.
- Hooykaas, Reijer. 'And the sun stood still.' *In his Fact, faith and fiction in the development of science. The Gifford lectures given in the University of St. Andrews 1976*. Dordrecht, Boston, Kluwer Academic Publishers, 1999. (Boston studies in the philosophy of science, v. 205) p. 147–181.
- On the Copernican revolution.
- See the book's index for references to astronomy in some of the other lectures.
- Horstmann, Frank. Ein Baustein zur Kepler-Rezeption: Thomas Hobbes' *Physica coelestis*. *Studia Leibnitiana*, Bd. 30, Heft 2, 1998: 135–160.
- Summary in English.
- Hoskin, Michael A., and Carme Sauch i Aparicio. Studies in Iberian archaeoastronomy. 6. Orientations of megalithic tombs of Badajoz and neighbouring Portugal. *In Archaeoastronomy*. no. 24; 1999. Cambridge, Science History Publications. p. S35–S40. illus., map.
- Howard, Russell A. Guenter E. Brueckner, 1934–1998. *In American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1596. port.
- Hu, Zhongwei, Jinyi Ren, Jiuli Guo, Xianliang Hu, and Dengli Xu. A Chinese observing site from remote antiquity. *Journal for the history of astronomy*, v. 30, Aug. 1999: 231–235. illus.
- Hübner, Wolfgang. Himmel und Erdvermessung. *In Die römische Feldmesskunst. Interdisziplinäre Beiträge*

zu ihrer Bedeutung für die Zivilisationsgeschichte Roms. Hrsg. von Okko Behrends und Luigi Capogrossi Colognesi. Göttingen, Vandenhoeck & Ruprecht, 1992. (Akademie der Wissenschaften in Göttingen. Philologisch-historische Klasse. Abhandlungen, 3. F., Nr. 193) p. 140–170. illus.

A summary by Cosima Möller of the discussion following presentation of this paper appears on p. 171.

In memoriam. Patrick Arthur Wayman 1927–1998. *In* International Astronomical Union. Information bulletin, 84, June 1999: 2.

Jakimiec, Jerzy. Professor Jan Mergentaler—90th birthday anniversary. *In* Consultation on Solar Physics, 14th, Karpacz, Poland, 1991. XIVth Consultation on Solar Physics. Conference proceedings. Ondřejov, Astronomical Institute of the Academy of Sciences of the Czech Republic, 1998. (Publications of the Astronomical Institute of the Academy of Sciences of the Czech Republic, no. 88) p. iii–v. port.

The portrait appears on the verso of the title page.

Janich, Peter. Naturzeit–Kulturzeit. Fragen nach dem Charakter, dem Ursprung und dem Inhalt von Zeit. *Kultur & Technik*, 23. Jahrg., Nr. 3, 1999: 44–50. illus.

Janle, Peter. Das Bild des Mondes. Vom Altertum bis zum Beginn der Weltraumfahrt. *Sterne und Weltraum*, 38. Jahrg., Nr. 8, 1999: 640–647. illus. (part col.), maps (part col.)

See also the letter from Hans Oberndorfer, "Zur Geschichte der Mondforschung," in 39. Jahrg., Nr. 1, 2000, p. 7, calling attention to the work of Philipp Fauth.

Jarrell, Richard A. J. S. Plaskett and the modern large reflecting telescope. *Journal for the history of astronomy*, v. 30, Nov. 1999: 359–390. illus.

Johnson, Kevin. Lovell radio telescope at Jodrell Bank. *Bulletin of the Scientific Instrument Society*, no. 63, Dec. 1999: 34–35. illus.

Jones, Alexander. The horoscope of Proclus. *Classical philology*, v. 94, Jan. 1999: 81–88.

Jones, Alexander. Notes on astronomical papyri. *Zeitschrift für Papyrologie und Epigraphik*, Bd. 121, 1998: 203–210. illus.

Jones, Alexander. Three astronomical tables from Tebtunis. *Zeitschrift für Papyrologie und Epigraphik*, Bd. 121, 1998: 211–218.

Jones, Alexander. Two astronomical tables: P. Berol. 21240 and 21359. *Zeitschrift für Papyrologie und Epigraphik*, Bd. 125, 1999: 201–205.

Joost, Ulrich. Nachträge zur Korrespondenz zwischen Lichtenberg und F. X. v. Zach. *In* Lichtenberg-Jahrbuch. 1997. Hrsg. im Auftrag der Lichtenberg-Gesellschaft von Wolfgang Promies und Ulrich Joost. Saarbrücken, Saarbrücker Druckerei und Verlag, 1998. p. 229–231.

Jurk, Rolf. Die Treppe zur Sonne. Sonnenteleskop und Heliostat im Deutschen Museum. *Kultur & Technik*, 23. Jahrg., Nr. 3, 1999: 34–36. illus. (part col.)

The heliostat was built in 1942, and the solar telescope, which projects the solar spectrum, was installed in 1992.

Kak, Subhash C. The solar numbers in Angkor Wat. *Indian journal of history of science*, v. 34, June 1999: 117–126. illus., plans.

Kanz, Kai T. Neues aus Lichtenbergs Korrespondenz mit Franz Xaver von Zach nebst einem Beitrag zur Geschichte naturwissenschaftlicher Übersetzungen. *In* Lichtenberg-Jahrbuch. 1997. Hrsg. im Auftrag der Lichtenberg-Gesellschaft von Wolfgang Promies und Ulrich Joost. Saarbrücken, Saarbrücker Druckerei und Verlag, 1998. p. 225–228.

Kemp, Cornelia. "Ach, wie schön ist dieses Gelb!" Die Sonne in der bildenden Kunst. *Kultur & Technik*, 23. Jahrg., Nr. 3, 1999: 26–31. illus. (part col.)

Kennedy, J. E. Airy and the survey of the Maine-New Brunswick boundary (1843–1845). *Journal of astronomical history and heritage*, v. 2, June 1999: 33–37. facsim., map.

Keppelmann, Norbert. Nachruf: Gerhard Krämer †. *In* Astronomische Gesellschaft. Mitteilungen. Nr. 82. Hamburg, 1999. p. 13–14. port.

Kertsch, Manfred. Isidor von Pelusion in der sog. Catena Andreae (Clavis PG C 176) zu Jud.12/13. Zur Nachwirkung des Origenes und seiner Vorgänger sowie zu einem bislang unbeachteten Reflex aus der antiken Astronomie. *In* Jahrbuch für Antike und Christentum. Jahrg. 40; 1997. Münster Westfalen, Aschendorffsche Verlagsbuchhandlung. p. 158–167.

Includes text in Greek.

Kiang, Tao. Patrick Arthur Wayman (1927–1998). *Observatory*, v. 119, Aug. 1999: 253–254.

King, Jerry, and Carol Ventura. A Southeastern Native American tradition: the Ofo calendar and related sky lore. *Archaeoastronomy*, v. 14, no. 1, 1999: 109–135. illus., facsim.

Kirchhoff, Jochen. Giordano Bruno und die Kosmologie der Unendlichkeit. *Sterne und Weltraum*, 39. Jahrg., Nr. 2/3, 2000: 134–141. illus., facsim., ports.

- Kitto, Tony. John Flamsteed, Richard Towneley and the equation of time. *Antiquarian horology*, v. 25, Dec. 1999: 180–184. facsim.
- Koch, Klaus, and Uwe Glessmer. Neumonds-Neujahr oder Vollmonds-Neujahr? Zu spätsraelitischen Kalender-Theologien. In *Antikes Judentum und frühes Christentum. Festschrift für Hartmut Stegemann zum 65. Geburtstag*. Hrsg. von Bernd Kollmann, Wolfgang Reinbold und Annette Steudel. Berlin, New York, W. de Gruyter, 1999. (Beiheft zur Zeitschrift für die neutestamentliche Wissenschaft und die Kunde der älteren Kirche, Bd. 97) p. 114–136.
- Koch, Robert H., and B. S. P. Shen. William Blitzstein, 1920–1999. In *American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1595. port.
- Kochhar, Rajesh K. Pre-telescopic astronomy in India. In *History of Indian science, technology and culture, A.D. 1000–1800*. Edited by A. Rahman. New Delhi, Oxford University Press, 1999. (History of science, philosophy and culture in Indian civilization. v. 3, Development of philosophy, science and technology in India and neighbouring civilizations, pt. 1) p. 171–197. illus.
Contents: 1. Introduction.—2. The Vedic age.—3. Evolution of the calendrical system.—4. Siddhāntic astronomy.—5. Zij astronomy.—6. Advent of modern astronomy.
- Kokott, Wolfgang. Kometenbeobachtungen im Spätmittelalter. In *Mediävistenverband. Symposium, 6th, Bayreuth, 1995. Mittelalter und Moderne: Entdeckung und Rekonstruktion der mittelalterlichen Welt. Kongressakten des 6. Symposiums des Mediävistenverbandes in Bayreuth 1995*. Hrsg. von Peter Segl. Sigmaringen, J. Thorbecke, 1997. p. 109–120.
- Kollarstrom, Nick. The path of Halley's comet, and Newton's late apprehension of the law of gravity. *Annals of science*, v. 56, Oct. 1999: 331–356. facsim.
"It is here argued that Halley's comet had a more pivotal role than has hitherto been believed in triggering Newton's acceptance of the law of gravity, dispelling his belief in Descartes' theory of vortices."
- Kraft, Robert P., and Richard L. Hilt. George Edward Langer, 1936–1999. In *American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1602–1603. port.
- Krishna, Gopal. [Vijay Kumar Kapahi (1944–99)] A tribute. In *Bharatiya Jyotir Vijnan Parishad. Bulletin of the Astronomical Society of India*, v. 27, June 1999: 229–230. port.
- Krusenstjern, Benigna von. Prodigenglaube und Dreissigjähriger Krieg. In *Im Zeichen der Krise: Religiosität im Europa des 17. Jahrhunderts*. Hrsg. von Hartmut Lehmann und Anne-Charlott Trepp. Göttingen, Vandenhoeck & Ruprecht, 1999. (Veröffentlichungen des Max-Planck-Instituts für Geschichte, 152) p. 53–78. facsim.
Chiefly about the comet of 1618.
- Kuhn, Dieter. Zwölf Tierzeichen. In *his Die Kunst des Grabbaus; Kuppelgräber der Liao-Zeit (907–1125)*. Heidelberg, edition forum, 1997. (Würzburger sinologische Schriften) p. 184–203. illus.
On the decoration of tomb ceilings with imagery of the 28 lunar mansions and the 12 animals that correspond to the signs of the zodiac.
- Kullmann, Wolfgang. 4. Zur wissenschaftlichen Methoden des Aristoteles in *De Caelo* I-II. Ermittlung der Fakten in der Astrophysik nach den Anal. post. In *his Aristoteles und die moderne Wissenschaft*. Stuttgart, F. Steiner, 1998. (Philosophie der Antike, Bd. 5) p. 116–137.
- Labrique, Françoise. L'escorte de la lune sur la porte d'Evergète à Karnak. In *Ägyptologische Tempeltagung, 4th, Cologne, 1996*. 4. Ägyptologische Tempeltagung, Köln, 10.–12. Oktober 1996: Feste im Tempel. Hrsg. von Rolf Gundlach und Matthias Rochholz. Wiesbaden, Harrassowitz in Kommission, 1998. (Ägypten und Altes Testament, Bd. 33. Akten der ägyptologischen Tempeltagungen, T. 2) p. 91–121. illus.
Includes hieroglyphic texts with romanizations and French translations.
- Lamarche-Vadel, Gaëtane. L'écriture céleste du jardin secret. In *her Jardins secrets de la Renaissance: des astres, des simples et des prodiges*. Paris, Éditions L'Harmattan, 1997. p. 123–134.
On the influence of the planets and the signs of the zodiac on the parts of the human body and the herbal remedies believed to restore ailing organs to health.
- Landolt, Arlo S., and Robert W. Milkey. Margaret Russell Edmondson, 1914–1999. Patron of the American Astronomical Society. In *American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1596–1597. port.
- Lankford, John. Eloge: Helen Wright, 1914–1997. *Isis*, v. 90, Dec. 1999: 768–769. port. (News of the profession)
- Lantink-Ferguson, Annie T. Drei tandwielsystemen voor een maankalender. *Gewina*, jaarg. 22, nr. 4, 1999: 195–220. illus.
Discusses three systems for the generation of lunar motion.
Summary in English: p. 217.

Launay, Françoise. L'inauguration de la place Laurent Cassegrain, 20 septembre 1998. *L'Astronomie*, v. 113, juin 1999: 189–191. illus.

This event took place in the village of Chaudon (Eure-et-Loir), following the identification in 1997 of Cassegrain, about whom nothing had been known.

Launay-Pelletan, Marie C. Nançay et la radioastronomie. *La Revue, Musée des arts et métiers*, no 25, déc. 1998: 24–32. illus. (part col.)

Leichty, Erle. Divination, magic, and astrology in the Assyrian royal court. In 10th Anniversary Symposium of the Neo-Assyrian Text Corpus Project, *Helsinki, 1995*. Assyria 1995. Proceedings of the 10th anniversary symposium of the Neo-Assyrian Text Corpus Project, Helsinki, September 7–11, 1995. Edited by S. Parpola and R. M. Whiting. Helsinki, Neo-Assyrian Text Corpus Project, 1997. p. 161–164.

Lena, Pierre. Jean-Marie Mariotti (1955–1998). In *Planets outside the solar system: theory and observations*. Edited by J.-M. Mariotti and D. Alloin. Dordrecht, Boston, Kluwer Academic Publishers, 1999. (NATO science series. Series C, Mathematical and physical sciences, v. 532) p. xi–xv. port.

Includes a list of Mariotti's publications.

Lerner, Michel P. Copernicus in Paris in 1612: a teaching text of *De revolutionibus*. *Journal for the history of astronomy*, v. 31, Feb. 2000: 55–67. facsim.

Leung, Kam-Ching. Disheng Zhai (1938–1997). In *Pacific Rim Conference on Recent Development on Binary Star Research, 3d, Chiang Mai, 1995*. Third Pacific Rim Conference on Recent Development on Binary Star Research. Proceedings of a conference sponsored by Chiang Mai University, Thai Astronomical Society, and the University of Nebraska-Lincoln held in Chiang Mai, Thailand, 26 October–1 November 1995. Edited by Kam-Ching Leung. San Francisco, Astronomical Society of the Pacific, 1997. (Astronomical Society of the Pacific conference series, v. 130) p. xii. port.

Leurquin, Régine. L'astrolabe plan. In *Le Réalisme. Contributions au séminaire d'histoire des sciences, 1993–1994*. Éditées par Jean-François Stoffel. Louvain-la-Neuve, Centre interfacultaire d'étude en histoire des sciences, 1996. (Réminiscences, 2) p. 99–117. illus.

Light, John D. Research note on William Wales' stone sundial from Fort Prince of Wales. *Rittenhouse*, v. 13, Dec. 1999: 107–114. illus.

Discusses the astronomy of the last two dynasties as well as subsequent and contemporary developments.

Lippiello, Tiziana. Divinazione e razionalità nella Cina del Seicento: l'interpretazione di un'eclisse lunare e di un parelio. In *Cina*. 27. Roma, Istituto italiano per l'Africa e l'Oriente, 1997. p. 39–59. facsim.

Provides a glossary of Chinese characters for terms used in the paper.

Lodén, Kerstin. Svenska Astronomiska Sällskapet fyller 80 år. *Astronomisk tidskrift*, årg. 32, dec. 1999: 9–12. illus., ports.

Longo, Giuseppe. I fantasmi del Sistema Solare. *L'Astronomia*, anno 21, magg. 1999: 27–33. illus. (part col.), ports. (Storia)

"Secoli di scoperte illusorie di pianeti e satelliti: la storia dell'astronomia è anche questa."

Lualdi, Alberto. Biagio Burlini, un ottico del '700 veneziano. *Nuncius*, anno 14, fasc. 1, 1999: 213–220. illus., facsim.

Summary in English.

Lynden-Bell, Donald, and V. G. Gurzadyan. Victor Amazaspovich Ambartsumian. 18 September 1908–12 August 1996. In *Royal Society of London. Biographical memoirs of Fellows*. v. 44; 1998. London. p. 21–34. port.

McLean, Brian. Barry Michael Lasker. *Physics today*, v. 52, June 1999: 78–79. col. port.

Magno, Pietro. L'horoscope d'Horace (*Odes*, II, 17, 17–24). *Les Études classiques*, t. 67, no 2/3, 1999: 251–254.

Mahoney, William A. James B. Willett, 1940–1998. In *American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1611–1612. port.

Mancha, José L. The Provençal version of Levi ben Gerson's tables for eclipses. *Archives internationales d'histoire des sciences*, no 141, déc. 1998: 269–352. facsim.

Marov, Mikhail IA., and David H. Grinspoon. The history of investigations. In *their* The planet Venus. With translations by Tobias Owen, Natasha Levchenko, and Ronald Mastaler. New Haven, Yale University Press, 1998. p. 16–96. illus., facsim.

From ground-based observations through findings made with instruments on spacecraft.

Marriott, R. A. The Association's awards and medals. In *British Astronomical Association, London. Journal*, v. 110, Feb. 2000: 29–37. illus., ports.

Gives the history of each of the five awards and lists the names of those who have received them.

Marriott, R. A. 1927: a British eclipse. In *British Astronomical Association, London. Journal*, v. 109, June 1999: 117–143. illus., facsim., maps, group ports.

One black-and-white and several color illustrations appear on the outside front cover of the issue, with a note on the inside front cover.

- Martinez, Patrick, and Philippe Morel. Ch. 4. Historique des éclipses totales de Soleil. *In their* Observer l'éclipse, pour tous. Préf. de Serge Koutchmy. Toulouse, Adagio, 1999. p. 47–84. illus., facsim.
- Martins, Rhonda. Kepler's solution to the problem of a realist celestial mechanics. *Studies in history and philosophy of science*, v. 30A, Sept. 1999: 377–394. illus.
- Mauersberger, Rainer, and Christian Henkel. Nachruf: Wilhelm Alt †. 1909–1997. *In* Astronomische Gesellschaft. Mitteilungen. Nr. 82. Hamburg, 1999. p. 5–7. port.
- Melrose, Donald B., and Harry C. Minnett. Jack Hobart Piddington 1910–1997. *Historical records of Australian science*, v. 12, no. 2, 1998: 229–246. port.

A chronological listing of Piddington's publications appears on p. 243–246.

- Merritt, David. Martin Schwarzschild's contribution to galaxy dynamics. *In* Galaxy dynamics; a Rutgers symposium. Proceedings of a symposium held at Rutgers University, Piscataway, New Jersey, USA, 8–12 August 1998. Edited by David Merritt, J. A. Sellwood, and Monica Valluri. San Francisco, Astronomical Society of the Pacific, 1999. (Astronomical Society of the Pacific conference series, v. 182) p. 3–10.
- Mestel, Leon, and Bernard E. J. Pagel. Roger John Tayler, O.B.E. 25 October 1929–23 January 1997. *In* Royal Society of London. Biographical memoirs of Fellows. v. 44; 1998. London. p. 403–416. port.
- Mestel, Leon. [Sir William Hunter ('Bill') McCrea] A tribute. *In* Bharatiya Jyotir Vijyan Parishad. Bulletin of the Astronomical Society of India, v. 27, Sept. 1999: 433–435.
- Methuen, Charlotte. Special providence and sixteenth-century astronomical observation: some preliminary reflections. *Early science and medicine*, v. 4, 1999: 99–113.
- Millis, Robert L. Arthur A. Hoag, 1921–1999. *In* American Astronomical Society. Bulletin, v. 31, no. 5, 1999: 1601–1602. port.
- Minois, Georges. L'âge de l'astrologie. Les étoiles règlent l'avenir, du XV^e au XVII^e siècle. *In* his Histoire de l'avenir: des prophètes à la perspective. Paris, Fayard, 1996. p. 269–381.

Contents: ch. 8. Avatars et déclin de la prophétie religieuse (XV^e–XVI^e siècle).—ch. 9. Le triomphe de l'astrologie (XV^e–milieu du XVII^e siècle).—ch. 10. L'astrologie, une nécessité socio-culturelle au XVII^e siècle.

See also the first section, "L'astrologie, victime de la restauration et de la raison en Angleterre (1660–1700)," in ch. 11, and treatment of the resurgence of astrology in contemporary life in ch. 16.

- Misch, Anthony. Casting for a horoscope. *Mercury*, v. 28, July/Aug. 1999: 21–25. illus., facsim., ports.
- Detailed account of the rediscovery of the Lick Observatory's Kepler manuscript by the man who brought it to light.

A portrait of Kepler also appears on the outside front cover of the issue.

- Molnar, Michael R. Firmicus Maternus and the star of Bethlehem. *Culture and cosmos*, v. 3, spring/summer 1999: 3–9. illus.
- Monaco, Giuseppe. Alcune considerazioni sul "Maximus Tubus" di Hevelius. *Nuncius*, anno 13, fasc. 2, 1998: 533–550. illus., facsim.

Summary in English.

- Moreau, Pierre F. Les sept raisons des *Pensées diverses sur la comète*. *In* Pierre Bayle: la foi dans le doute. Sous la direction d'O. Abel et P.-F. Moreau. Actes de la journée "Bayle" organisée par le C.E.R.P.H.I. de l'École Normale Supérieure de Fontenay et la Faculté de théologie protestante de Paris. Genève, Labor et Fides, 1995. (Histoire et société, no 32) p. 15–30.
- Morelon, Régis. Note sur les *Œuvres d'astronomie* de Thabit b. Qurra. *In* Cairo. Institut dominicain d'études orientales. Mélanges. 22. Louvain, Éditions Peeters, 1995. p. 413–416.
- Morrison, Leslie V. Summary of the RAS specialist discussion meeting on applied historical astronomy Observatory, v. 119, Apr. 1999: 67–70.

The ten speakers were C. B. F. Walker, L. J. Fatoohi, F. R. Stephenson, L. V. Morrison, T. Kiang, S. F. Gull, S. V. Débarbat, D. J. Asher, D. W. Hughes, and D. H. P. Jones.

- Moyer, Ann. The astronomers' game: astrology and university culture in the fifteenth and sixteenth centuries. *Early science and medicine*, v. 4, Aug. 1999: 228–250. illus., facsim.

"The formal study of both astronomy and astrology in later medieval Europe was firmly based in the universities. Instruction in astrology is attested by the presence of an educational board game, known as the *ludus astronomorum*, in several university-related miscellanies of fifteenth-century English provenance. William Fulke also published an edition of the game a century later (*Ouranomachia*, London, 1571), which is attested in a number of Elizabethan libraries. The game serves to rehearse for its players the celestial motions and astrological principles described by Ptolemy. It also employs principles of stellar rays described by al-Kindi in his *De radiis stellarum*."

- Mutschlecner, Joseph Paul, *and* David S. King. A brief biography of Arthur Nelson Cox. *In* A Half century of stellar pulsation interpretations; a tribute to Arthus N. Cox. Proceedings of a conference held in Los Alamos, New Mexico, 16–20 June 1997. Edited by P. A. Bradley and J. A. Guzik. San Francisco, Astronomical Society of the Pacific, 1998. (Astronomical Society of the Pacific conference series, v. 135) p. xxxi–xxxii. port.
- Napier, William M. Comets, dragons & prophets of doom. *Frontiers*, issue 2, spring 1998: 10–11. illus. (part col.)
- "Ancient myths suggest that a giant comet may have visited the Earth a few thousand years ago, raining fireballs and meteors."
- See the letters commenting on this article published in issue 3, autumn 1998, p. 31, from P. D. Fitzgerald-Morris and Mike Tittensor.
- Navarro Brotóns, Víctor. Astronomía, cosmología y humanismo en la época de Felipe II. *In* Felipe II, la ciencia y la técnica. Enrique Martínez Ruiz (director). Prólogo de Juan Carlos Elorza. Madrid, Actas Editorial, 1999. p. 197–216.
- Niccoli, Ottavia. Between astrology and prophecy: the flood of 1524. *In her* Prophecy and people in Renaissance Italy. Translated by Lydia G. Cochrane. Princeton, N.J., Princeton University Press, 1990. p. 140–167.
- Nickelsburg, George W. E. The Books of Enoch at Qumran. What we know and what we need to think about. *In* Antikes Judentum und frühes Christentum. Festschrift für Hartmut Stegemann zum 65. Geburtstag. Hrsg. von Bernd Kollmann, Wolfgang Reinbold und Annette Steudel. Berlin, New York, W. de Gruyter, 1999. (Beiheft zur Zeitschrift für die neutestamentliche Wissenschaft und die Kunde der älteren Kirche, Bd. 97) p. 99–113.
- Oberhammer, Heinz. Das anthropische Prinzip in der Kosmologie. *In* Achtung vor Anthropologie; interdisziplinäre Studien zum philosophischen Empirismus und zur transzendentalen Anthropologie. Michael Benedikt zum 70. Geburtstag. Hg. v. Josef Rupitz, Elisabeth Schönberger, Cornelius Zehetner. Wien, Turia + Kant, 1998. p. 213–216.
- Oberst, Jürgen, Ralf Jaumann, *and* Harald Hoffmann. Von den Apollo-Landungen bis heute—was wir über die Mondoberfläche gelernt haben. *Sterne und Weltraum*, 38. Jahrg., Nr. 8, 1999: 648–656. illus. (part col.)
- Oestmann, Günther. The Strasbourg Cathedral clock. *Antiquarian horology*, v. 25, Sept. 1999: 50–63. illus. (part col.), port.
- Olson, Donald W., *and* Laurie E. Jasinski. Abe Lincoln and the Leonids. *Sky & telescope*, v. 98, Nov. 1999: 34–35. facsim., col. port.
- Cites evidence that "makes it virtually certain that Lincoln saw the 1833 Leonids ..."
- Olson, Donald W., Edgar S. Laird, *and* Thomas E. Lytle. High tides and *The Canterbury Tales*. *Sky & telescope*, v. 99, Apr. 2000: 44–49. illus. (part col.), facsim. (part col.), port.
- "In one of his famous poems, Chaucer may have described a rare astronomical configuration that actually occurred in the 14th century."
- Olson, Roberta J. M. Pietro Lorenzetti's dazzling meteor showers. *Apollo*, v. 149, May 1999: 3–10. illus. (part col.)
- Opolski, Antoni. Okresy gwiazdowych obiegów planet w "De revolutionibus." *Urania—post_py astronomii*, t. 70, stycz./luty 1999: 4–7. illus., facsim.
- Orchiston, Wayne. Comets and communication: amateur-professional tension in Australian astronomy. *In* Astronomical Society of Australia. Publications, v. 16, July 1999: 212–221. ports.
- "Australasian amateur astronomers, Grigg and Ross, discovered four different comets between 1902 and 1907. Controversy surrounding these discoveries led to a deterioration in relations between Australia's leading amateur astronomers and Baracchi at Melbourne Observatory, and to the eventual transfer of the 'Australian Central Bureau' to Sydney Observatory."
- Orchiston, Wayne. Of comets and variable stars: the Afro-Australian astronomical activities of J. F. Skjellerup [1875–1952] *In* British Astronomical Association, *London*. Journal, v. 109, Dec. 1999: 328–338. illus., ports.
- Orlove, Benjamin S., John C. H. Chiang, *and* Mark A. Cane. Forecasting Andean rainfall and crop yield from the influence of El Niño on Pleiades visibility. *Nature*, v. 403, Jan. 6, 2000: 68–71. illus.
- Results of this study 'suggest that this centuries-old method of seasonal rainfall forecasting may be based on a simple indicator of El Niño variability.'
- Ostriker, Jeremiah P. Martin Schwarzschild (31 May 1912–10 April 1997). *In* American Philosophical Society, *Philadelphia*. Proceedings, v. 143, Sept. 1999: 485–489. port.
- Ostwald, Herbert. [Astronomie] *In his* Schädel, Steine, Sterne; Spaziergänge in die Berliner Schatzkammern der Wissenschaften. Fotos, Martin Esche. Berlin, Stattbuch Verlag, 1996. (Reisen) p. 99–110. illus., ports.

Contents: Himmelskundliches Museum Archenhold: ein Geschenk des Himmels.—Zeiss-Grossplanetarium: Sternstunden im Kuppelbau.—Wilhelm-Foerster-Sternwarte: Mond für einen Groschen, Meteoriten für einen Fünfer.—Bruno H. Bürgel-Sternwarte: Mondsucht und Sonnenhunger.

- Palmieri, Paolo. Re-examining Galileo's theory of tides. *Archive for history of exact sciences*, v. 53, no. 3/4, 1998: 223–375. illus., facsim.
- Pang, Kevin D., Kevin K. C. Yau, and Hung-hsiang Chou. Absolute chronology of the Xia, Shang and Zhou dynasties by dating 17 eclipses. In *21st Century Chinese Astronomy Conference, Hong Kong, 1996*. Proceedings of the 21st Century Chinese Astronomy Conference. Dedicated to Prof. C. C. Lin. Hong Kong, 1–4 August 1996. Editors, K. S. Cheng, K. L. Chan. Singapore, River Edge, N.J., 1997. p. 523–526. illus.
- Pankenier, David W. Applied field-allocation astrology in Zhou China: Duke Wen of Jin and the battle of Chengpu (632 B.C.). In *American Oriental Society. Journal*, v. 119, Apr./June 1999: 261–279. illus. "... offers an account of the ancient Chinese system of judicial astrology known as 'field-allocation' (*fenye*) astrology."
- Pantin, Isabelle. New philosophy and old prejudices: aspects of the reception of Copernicanism in a divided Europe. *Studies in history and philosophy of science*, v. 30A, June 1999: 237–262.
- Parisot, Jean P. Le petite histoire du calendrier. In *La Transmission des savoirs scientifiques*. Sous la direction de Remi Coutin, Henri Hudrisier et Marcel V. Locquin. Actes du 118^e Congrès national des sociétés historiques et scientifiques, Pau, 1993. Section des sciences. Paris, Éditions du CTHS, 1996. (Colloques du CTHS, 15) p. 79–95.
- Parker, Chas. Castle in the sky: the story of the Royal Greenwich Observatory at Herstmonceux. In *Yearbook of astronomy*. 2000. Edited by Patrick Moore. London, Macmillan, 1999. p. 281–291.
- Pasachoff, Jay M. Halley as an eclipse pioneer: his maps and observations of the total solar eclipses of 1715 and 1724. *Journal of astronomical history and heritage*, v. 2, June 1999: 39–54. maps.
- Passarge, Michael. Pulkovo – das Zentralobservatorium der Russischen Akademie der Wissenschaften. *Orion*, 57. Jahrg., Dez. 1999: 4–8. illus., ports.
- Pease, Rendel S., and S. Lindqvist. Hannes Olof Gösta Alfvén. 30 May 1908–2 April 1995. In *Royal Society of London. Biographical memoirs of Fellows*. v. 44; 1998. London. p. 1–19. port.
- Pfeiffer, Jens. Macht der Sterne oder Miasmen der Erde: Heinrich von Mügeln und Konrad von Megenberg über die Pest von 1348. In *Artes im Mittelalter*. Ursula Schaefer (Hg.). Berlin, Akademie Verlag, 1999. p. 110–123.
- Pickering, Keith A. Evidence of an ecliptical coordinate basis in the *Commentary* of Hipparchos. *Dio*, v. 9, June 1999: 26–29. illus.
- Plofker, Kim. The astrolabe and spherical trigonometry in medieval India. *Journal for the history of astronomy*, v. 31, Feb. 2000: 37–54. illus.
- Plomp, Reinier. A longitude timekeeper by Isaac Thuret with the balance spring invented by Christiaan Huygens. *Annals of science*, v. 56, Oct. 1999: 379–394. illus., facsim.
- "The recent discovery of an extremely interesting clock signed *Thuret A Paris* reveals that this clockmaker was much more closely involved in the development of a clock to be used for finding longitudes at sea than has generally been assumed."
- Popović, Georgije M. Danilo J. Zulević (1937–1998). *Serbian astronomical journal*, no. 158, Nov. 1998: 1. port.
- Porres de Mateo, Beatriz, and José Chabás. Los cánones de las *Tabulae Resolutae* para Salamanca: origen y transmisión. *Cronos, cuadernos valencianos de historia de la medicina y de la ciencia*, v. 1, dic. 1998: 51–83.
- "The manuscript now in Oxford, Bodleian Library, Canonici Misc. 27, dated in the 15th century and of Spanish origin, contains several astronomical works in Latin. Among them is a treatise in 18 chapters, transcribed here for the first time, explaining the use of some astronomical tables called *Tabulae Resolutae*, also found in this manuscript. The author has been identified with Nicolás Polonio, who first held the chair of astronomy in Salamanca (ca. 1460)."
- Pouille, Emmanuel. Quelques reconstructions d'horloges astronomiques. In *Société nationale des antiquaires de France. Bulletin*. 1995. Paris, Édition-diffusion de Bocard, 1997. p. 289–301. illus.
- Radelet-de Grave, Patricia. Copernic, Stevin, Galilée et la réalité des orbites célestes. In *Le Réalisme. Contributions au séminaire d'histoire des sciences*, 1993–1994. Éditées par Jean-François Stoffel. Louvain-la-Neuve, Centre interfacultaires d'étude en histoire des sciences, 1996. (Réminiscences, 2) p. 119–151.
- Ramsey, Norman F. Edward Mills Purcell (30 August 1912–7 March 1997). In *American Philosophical Society, Philadelphia*. Proceedings, v. 143, Set. 1999: 479–483. port.

- Randazzo, Donatella. Le donne in astronomia nell'800: il fenomeno Klumpke. *Giornale di astronomia*, v. 24, dic. 1998: 5–11. illus., ports.
- Rang, Hans. Ormbäraren. *Astronomisk tidskrift*, årg. 32, juni 1999: 10–15; sept.: 18–23; dec.: 22–25. illus. Contents: d. 5. I pyramidens skugga.—d. 6. Osäker mark.—d. 7. Vrånge steg.
- Ratkowitsch, Christine. Astrologie und Selbstmord im Mathematicus. Zu einem Gedicht aus dem Umkreis des Bernardus Silvestris. *In Wiener Studien*. Bd. 112; 1999. Wien, Verlag der Österreichischen Akademie der Wissenschaften. p. 175–229.
- Rawlins, Dennis. British Neptune-disaster file recovered. *Dio*, v. 9, June 1999: 3–25.
Missing for many years, the records recently came to light, and copies have been made available for scrutiny.
- Reeves, Eileen. Old wives' tales and the new world system: Gilbert, Galileo, and Kepler. *Configurations*, v. 7, fall 1999: 301–354.
- Renshaw, Steven, and Saori Ihara. Archaeoastronomy and astronomy in culture in Japan: paving the way to interdisciplinary study. *Archaeoastronomy*, v. 14, no. 1, 1999: 59–88. illus.
- Richter, Peter H. Nachruf: Dieter Gerdes †. 1933–1998. *In Astronomische Gesellschaft. Mitteilungen*. Nr. 82. Hamburg, 1999. p. 11–12. port.
- Rizvi, Syed Aftab Husain. Glimpses of astronomy in medieval India. *In History of Indian science, technology and culture, A.D. 1000–1800*. Edited by A. Rahman. New Delhi, Oxford University Press, 1999. (History of science, philosophy and culture in Indian civilization. v. 3, Development of philosophy, science and technology in Indian and neighbouring civilizations, pt. 1) p. 198–220. illus. Contents: 1. Astronomy in medieval times.—2. The planetary theory.—3. Zijes and astronomical observatories.
- Robinson, Leif J. Charles Anthony Federer, Jr., 1909–1999. *In American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1598–1599. port.
- Romer, Alfred. The welcoming of Copernicus's *De revolutionibus*: the *Commentariolus* and its reception. *Physics in perspective*, v. 1, June 1999: 157–183. illus.
- Rose, Lynn E. The Sothic date from the Ptolemaic temple of Isis at Aswan. *Bibliotheca orientalis*, jaarg. 56, jan./apr. 1999: columns 14–34.
- Rossi, Massimiliano. Astronomia e arte nel periodo barocco. *Giornale di astronomia*, v. 25, sett. 1999: 9–14. col. illus., facsim.
- Rothman, Patricia. By 'the light of his own mind': the story of James Ferguson, astronomer. *In Royal Society of London. Notes and records*, v. 54, Jan. 2000: 33–45. illus., facsim., port.
- Ruffner, J. A. Newton's propositions on comets: steps in transition, 1681–84. *Archive for history of exact sciences*, v. 54, no. 4, 2000: 259–277. illus., facsim.
- Ruggles, Clive L. N., and David J. Medyckyj-Scott. Site location, landscape visibility, and symbolic astronomy: a Scottish case study. *In New methods, old problems; geographic information systems in modern archaeological research*. Edited by Herbert D. G. Maschner. Carbondale, Ill., Center for Archaeological Investigations, Southern Illinois University at Carbondale, 1996. (Southern Illinois University at Carbondale. Center for Archaeological Investigations. Occasional paper, no. 23) p. 127–146. maps.
- Rutten, Robert J., and Karel Schrijver. Cornelis Zwaan, 1928–1999. *In American Astronomical Society. Bulletin*, v. 31, no. 5, 1999: 1612–1613. port.
- Ryle, S. F. Fate, free will and providence in the *Zodiacus Vitae* of Marcello Palingenio Stellato. *In L'Uomo e la natura nel Rinascimento*. A cura di Luisa Rotondi Secchi Tarugi. Milano, Nuovi orizzonti, 1996. (Mentis itinerarium) (Caleidoscopio, 6) p. 209–226.
- Sadžakov, Sofija N., and Bozidar Jovanović. Life and scientific activity of Professor Branislav M. Ševarlić. *Serbian astronomical journal*, no. 159, Aug. 1999: 93–104.
- Saladyga, Michael. The "pre-embryonic" state of the AAVSO: amateur observers of variable stars in the United States from 1875 to 1911. *In American Association of Variable Star Observers. Journal*, v. 27, no. 2, 1999: 154–170. ports.
- Saliba, George. Critiques of Ptolemaic astronomy in Islamic Spain. *Al-Qantara*, v. 20, fasc. 1, 1999: 3–25. illus.
- Salvini Pierallini, Elena. Astronomia e arte: l'intervento di un'artista. *Giornale di astronomia*, v. 25, mar. 1999: 13–18. col. illus.
- Sánchez, Francisco. Astrofísico en España. *In Un Siglo de ciencia en España*. Madrid, Publicaciones de la Residencia de Estudiantes, 1998. p. 208–219. illus. (part col.)
- Sandage, Allan R. The first 50 years at Palomar: 1949–1999. The early years of stellar evolution, cosmology, and high-energy astrophysics. *In Annual review of astronomy and astrophysics*. v. 37; 1999. Palo Alto, Calif., Annual Reviews. p. 445–486. illus., ports.

- Sarma, Sreeramula Rajeswara. Yantrarāja: the astrolabe in Sanskrit. *Indian journal of history of science*, v. 34, June 1999: 145–158. illus.
- Savoie, Denis. Les éclipses anciennes: la chronologie et la mécanique céleste. *L'Astronomie*, v. 113, mai 1999: 134–139. illus., maps.
- Savoie, Denis. Ptolémée et la 'variation' de la Lune. *Archives internationales d'histoire des sciences*, no 140, juin 1998: 3–10.
- Schaefer, Bradley E. Astronomy in historical studies. *Archaeoastronomy*, v. 14, no. 1, 1999: 89–108.
- Segre, Michael. Galileo: a 'rehabilitation' that has never taken place. *Endeavour*, v. 23, Mar. 1999: 20–23. illus., ports.
- Seitter, Waltraut C., and Hilmar W. Duerbeck. Carl Wilhelm Wirtz – pioneer in cosmic dimensions. *In* Harmonizing cosmic distance scales in a post-Hipparcos era. Proceedings of a colloquium held at Hagenau, France, 14–16 September, 1998. Edited by Daniel Egret and André Heck. San Francisco, Astronomical Society of the Pacific, 1999. (Astronomical Society of the Pacific conference series, v. 167) p. 237–242. illus.
- Sheehan, William. Christian Heinrich Friedrich Peters, September 19, 1813–July 18, 1890. *In* National Academy of Sciences. Biographical memoirs. v. 76. Washington, D.C., National Academy Press, 1999. p. 388–312. port.
Includes a list of asteroids discovered by C. H. F. Peters.
- Sheehan, William, and Thomas A. Dobbins. Mesmerized by Mercury. *Sky & telescope*, v. 99, June 2000: 109–114. illus., facsim., col. port.
"With less than half its surface mapped by Mariner 10, much of Mercury remains as unknown today as it did in the time of Denning and Schiaparelli."
- Sheehan, William, and Thomas A. Dobbins. The TLP myth: a brief for the prosecution. *Sky & telescope*, v. 98, Sept. 1999: 118–123. illus., ports.
After studying the records of transient lunar phenomena, the authors "suspect that even the most 'ironclad' TLP cases could not withstand close scrutiny and a critical appraisal."
- Shields, Gregory A. A brief history of active galactic nuclei. *In* Astronomical Society of the Pacific. Publications, v. 111, June 1999: 661–678.
- Shoemaker, Carolyn S. Ups and downs in planetary science. *In* Annual review of earth and planetary sciences. v. 27; 1999. Palo Alto, Calif., Annual Reviews. p. 1–17. port.
The portrait faces p. 1.
- Silver, Larry. Nature and nature's God: landscape and cosmos of Albrecht Altdorfer. *Art bulletin*, v. 81, June 1999: 194–214. illus. (part col.)
- Silverman, Barbara. Leslie C. Peltier. *In* Royal Astronomical Society of Canada. Journal, v. 93, Aug. 1999: 190–193. (The History of astronomy)
- Simek, Rudolf. Die Form der Erde im Mittelalter und die Erfinder der Scheibengestalt. *In* Mediävistenverband. Symposium, 6th, Bayreuth, 1995. Mittelalter und Moderne: Entdeckung und Rekonstruktion der mittelalterlichen Welt. Kongressakten des 6. Symposiums des Mediävistenverbandes in Bayreuth 1995. Hrsg. von Peter Segl. Sigmaringen, J. Thorbecke, 1997. p. 139–147. illus., maps.
- Sinachopoulos, Aneta, and Dimitris Sinachopoulos. Plato's theological astronomy. II. *The Laws*: an old man looking back. *Journal of astronomical history and heritage*, v. 2, June 1999: 21–31.
The previous article, "The Teaching of Astronomy in Plato's Republic," appeared in the *Astronomy Quarterly*, v. 8, no. 3, 1991.
- Smirnova, M. A. Iz istorii Sluzhby vremeni GAISH. *In* *Astronomicheskii kalendar*. vyp. 100; 1998. Moskva, Kosmosinform, 1997. p. 287–295.
- Smith, Robert C., and Leon Mestel. Sir William Hunter McCrea, FRS (1904–1999). *Observatory*, v. 119, Aug. 1999: 254–256.
- Smoller, Laura A. The Alfonsine tables and the end of the world: astrology and apocalyptic calculation in the later Middle Ages. *In* The Devil, heresy and witchcraft in the Middle Ages; essays in honor of Jeffrey B. Russell. Edited by Alberto Ferreiro. Leiden, Boston, Brill, 1998. (Cultures, beliefs and traditions, v. 6) p. 211–239.
- Sorbello, Alessandra. Un calendario xilografato per l'anno 1531 (Ulm, Matthias Hoffischer). *In* Gutenberg-Jahrbuch. 73. Jahrg.; 1998. Im Auftrag der Gutenberg-Gesellschaft hrsg. von Stephan Füssel. Mainz, Gutenberg-Gesellschaft. p. 154–164.
- Sorrenson, Richard. George Graham, visible technician. *British journal for the history of science*, v. 32, June 1999: 203–221.
- Spalinger, Anthony J. Calendrical evidence and Hekanakhte. *Zeitschrift für ägyptische Sprache und Altertumskunde*, Bd. 123, Heft 1, 1996: 85–96.
- Steele, John M. Eclipse prediction in Mesopotamia. *Archive for history of exact sciences*, v. 54, no. 5, 2000:421–454.

- Steele, John M. On the use of the Chinese *Hsuan-ming* calendar to predict the times of eclipses in Japan. *In* London. University. *School of Oriental and African Studies*. Bulletin, v. 61, pt. 3, 1998: 527–533. illus.
- Stephenson, F. Richard, and David M. Willis. The earliest drawing of sunspots. *Astronomy & geophysics*, v. 40, Dec. 1999: 21–22. illus., col. facsim.
- A report of two sunspots seen 8 Dec. 1128, included in the manuscript of John of Worcester's chronicle, "is accompanied by a colorful drawing (albeit somewhat idealized) showing the positions of the two spots on the solar disk. This would appear to be the earliest known illustration of sunspots, despite the fact that they had already been recorded in China for many centuries prior to that date."
- Strano, Giorgio. The absent star. *Nuncius*, anno 14, fasc. 1, 1999: 19–29. illus.
- "Identification of entry no. 482 of Claudius Ptolemy's star catalogue ... and circumstance that has prevented it up to now."
- Sullivant, Rosemary. An unlikely revolutionary. *Astronomy*, v. 27, Oct. 1999: 52–57. col. illus., col. ports.
- "Nicolas Copernicus, circumscribed by orthodoxy and steeped in Catholicism, triggered a scientific transformation."
- Die Supernova 1054: neues Datum. *Sterne und Weltraum*, 38. Jahrg., Nr. 8, 1999: 631.
- Swerdlow, Noel M. Acronychal risings in Babylonian planetary theory. *Archive for history of exact sciences*, v. 54, no. 1, 1999: 49–65. illus.
- Tagliaferri, Guido, and Pasquale Tucci. Carlini and Plana on the theory of the moon and their dispute with Laplace. *Annals of science*, v. 56, July 1999: 221–269.
- Tedlock, Barbara. Maya astronomy: what we know and how we know it. *Archaeoastronomy*, v. 14, no. 1, 1999: 39–58. illus.
- Tihon, Anne. L'astronomie byzantine au tournant du Moyen Age et de la Renaissance (de 1352 à 1490). *In* Mediävistenverband. Symposium, 6th, Bayreuth, 1995. *Mittelalter und Moderne: Entdeckung und Rekonstruktion der mittelalterlichen Welt*. Kongressakten des 6. Symposiums des Mediävistenverbandes in Bayreuth 1995. Hrsg. von Peter Segl. Sigmaringen, J. Thorbecke, 1997. p. 121–129.
- Tihon, Anne. Théorie et réalité: l'exemple de l'astronomie ancienne. *In* Le Réalisme. Contributions au séminaire d'histoire des sciences, 1993–1994. Éditées par Jean-François Stoffel. Louvain-la-Neuve, Centre interfacultaire d'étude en histoire des sciences, 1996. (Reminiscences, 2) p. 7–23. illus.
- Topper, David. Galileo, sunspots, and the motions of the earth: redux. *Isis*, v. 90, Dec. 1999: 757–767. illus. (Critiques & contentions)
- Torres-Peimbert, Silvia. Obituary. *Paris Pi_mi_*, 1911–1999. *Revista mexicana de astronomía y astrofísica*, v. 35, oct. 1999: 231–232. port.
- Torres-Peimbert, Silvia. *Paris Marie Pi_mi_*, 1911–1999. *In* American Astronomical Society. Bulletin, v. 31, no. 5, 1999: 1607–1608. port.
- Treves, Aldo. Ricordo di Enrico Graziano Tanzi. *In* Società astronomica italiana. Memorie, v. 70, n. 2, 1999: 277–278. port.
- Trimble, Virginia. Beyond the bright searchlight of science: the quest for the edge of the world. *In* October Astrophysics Conference, 9th, College Park, Md., 1998. After the dark ages: when galaxies were young (the universe at $2 < z < 5$). Ninth Astrophysics Conference, College Park, Maryland, October 1998. Editors, Stephen S. Holt, Eric P. Smith. Woodbury, N.Y., American Institute of Physics, 1999. (AIP conference proceedings, 470) p. 3–12.
- Trimble, Virginia. Can't you keep Einstein's equations out of my observatory? pt. 2. Spectroscopy and the rise of astrophysics. *Beam line*, v. 29, spring 1999: 21–25. illus., ports. (The Universe at large)
- Trimble, Virginia. A century of drivers of astronomical progress. *Journal of astronomical history and heritage*, v. 2, Dec. 1999: 81–86.
- Trimble, Virginia. Daniel M. Popper, 1913–1999. *In* American Astronomical Society. Bulletin, v. 31, no. 5, 1999: 1608–1610. port.
- Trimble, Virginia. Looking backward: themes of 20th-century astronomy. *Sky & telescope*, v. 99, Jan. 2000: 50–57. illus. (part col.), ports. (part col.)
- "As told to Alan M. AcRobert."
- Contents: The triumph of mediocrity. — Cosmic expansion and the Big Bang. — The lives of the stars. — All widgets welcome. — Astronomers themselves. — And all the rest.
- Trimble, Virginia. 99 things about the last 100 years of astronomy. *Mercury*, v. 28, Nov./Dec. 1999: 16–23. illus., ports.
- "Even though the past century of astronomy has been one of seemingly innumerable achievements and discoveries, let's just see if we can count the more prominent ones."
- Trümper, Joachim. Der Vorstoss in den Kosmos: wie die Astrophysik ein wesentlicher Forschungsbereich der Max-Planck-Gesellschaft wurde. *In* Forschung an den Grenzen des Wissens; 50 Jahre Max-Planck-Gesellschaft 1948–1998. Dokumentation des wissenschaftlichen Festkolloquiums und der

- Festveranstaltung zum 50jährigen Gründungsjubiläum am 26. Februar 1998 in Göttingen. Göttingen, Vandenhoeck & Ruprecht, 1998. p. 135–153. col. illus., col. port.
- Tsvetkov, Milcho K., Katia P. Tsvetkova, Gerold A. Richter, Gerhard Scholz, and P. Böhm. Lohse's historic plate archive. *Astronomische Nachrichten*, v. 320, no. 2, 1999: 63–70. illus.
- Provides description and analysis of "Oswald Lohse's astrographic plates, collected at the Astrophysical Observatory Potsdam in the period 1879–1889."
- Tucker, R. H. Kenneth Charles Blackwell 1911–1999. *Astronomy & geophysics*, v. 41, Feb. 2000: 35.
- "Fellow of the RAS, supernumerary computer, diligent observer and valued colleague."
- Turner, Anthony J. A biblical miracle in a Renaissance sundial. *Bulletin of the Scientific Instrument Society*, no. 61, June 1999: 11–14. illus.
- "The dial of Ahaz then never existed. Born of a non-historical interpretation of sacred texts by present-minded scholars, the myth thus created nonetheless had the unforeseeable consequence of adding an entire, and highly ingenious, chapter to the development of sundials in the Renaissance when scholars and diallists strove to recreate something that had never been. Even as we expunge the dial of Ahaz from our history of gnomonics, we are forced, paradoxically, to acknowledge its importance for that history."
- Uppgren, Arthur R. Willem Jacob Luyten, March 7, 1899–November 21, 1994. *In National Academy of Sciences. Biographical memoirs. v. 76. Washington, D.C., National Academy Press, 1999. p. 198–216. port.*
- Van Brummelen, Glen. The astronomical system in M_{sa} ibn Nawbakht's astrological treatise, the Kit_b al-K_{mil}. *Centaurus*, v. 41, no. 3, 1999: 213–243. illus.
- Van den Bergh, Sidney. The early history of dark matter. *In Astronomical Society of the Pacific. Publications*, v. 111, June 1999: 657–660.
- "The history of the discovery of dark matter in the universe is briefly reviewed. Special emphasis is placed on the early work by Zwicky, Babcock, and Oort."
- Vargha, Magda, and Zoltán Kolláth. The first century of the Konkoly Observatory. *Astronomy & geophysics*, v. 40, Oct. 1999: 17–20. col. illus., col. port.
- On "the history and achievements of the Konkoly Observatory, Budapest, founded 100 years ago."
- Vashkov'iák, S. N., and N. V. Emel'iánov. Evgeniï Petrovich Akesenov. *In Astronomicheskiï kalendarø. vyp. 100; 1998. Moskva, Kosmosinform, 1997. p. 262–264. port.*
- Vermij, Rienk H. Johannes Lulofs als vertegenwoordiger van het newtonianisme in de Republiek. *Gewina*, jaarg. 22, no. 3, 1999: 136–150. facsim., port.
- Summary in English.
- Vialle, Jacques. Les livres anciens d'astronomie. La Médiathèque de La Rochelle. *L'Astronomie*, v. 113, mars/avril 1999: 76–82. facsim.
- Tries to account for the presence of so many notable old works on astronomy in the collections of the Bibliothèque municipale of La Rochelle.
- Vicente Maroto, María Isabel. El arte de navegar. *In Felipe II, la ciencia y la técnica. Enrique Martínez Ruiz (director). Prólogo de Juan Carlos Elorza. Madrid, Actas Editorial, 1999. p. 343–368.*
- Voelkel, James R. Publish or perish: legal contingencies and the publication of Kepler's *Astronomia nova*. *Science in context*, v. 12, spring 1999: 33–59.
- Voigt, Hans H. Nachruf auf Dieter Gerdes. *In Gauss-Gesellschaft. Mitteilungen. Nr. 36. Göttingen, 1999. p. 59.*
- Voss, Angela. The music of the spheres: Marsilio Ficino and Renaissance *harmonia*. *Culture and cosmos*, v. 2, autumn/winter 1998: 16–38. facsim., port.
- Wall, Jasper V., and Chas Parker. Bill Martin 1940–1999. *Astronomy & geophysics*, v. 41, Feb. 2000: 37–38.
- "Fellow of the RAS; photometrist; tireless organizer at the RGO, in South Africa and La Palma; lively colleague and good friend."
- Watase, Masatada. Kakinomoto no Hitomaro, Chinese astronomy, and Chinese traditions concerning the Seventh Night Story: the "Seventh Night Poems" in the *Hitomaro Kashu*. *Acta asiatica*, no. 77, July 1999: 30–49. illus.
- Wayman, Patrick A. P. B. Byrne at Dunsink Observatory. *In Solar and stellar activity: similarities and differences. Proceedings of a meeting held in Armagh, N. Ireland, 2–4 September 1998. Edited by C. J. Butler and J. G. Doyle. San Francisco, Astronomical Society of the Pacific, 1999. (Astronomical Society of the Pacific conference series, v. 158) p. xxiv–xxvi. port.*
- Weill-Parot, Nicolas. Causalité astrale et "science des images" au Moyen Age: éléments de reflexion. *Revue d'histoire des sciences*, t. 52, avril/juin 1999: 207–240.
- Summary in English.

- Weise, Wilfried, *and* Johann Dorschner. Die Volkssternwarte Urania in Jena. *Sterne und Weltraum*, 38. Jahrg., Nr. 11, 1999: 954–960. illus. (part col.), group ports.
- Welther, Barbara L. The founding of the AAS: the status of amateurs versus women. *In* American Association of Variable Star Observers. *Journal*, v. 27, no. 2, 1999: 177–178.
Abstract only.
- Welther, Barbara L. Leonardo da Vinci and the moon. *Sky & telescope*, v. 98, Oct. 1999: 40–44. illus. (part col.), col. facsim., col. ports.
"The famous Renaissance artist and scientist made an insightful interpretation about our nearest neighbor in space."
- Wendland, Folkwart. Das Pallaseisen. *In his* Peter Simon Pallas (1741–1811). *Materialien einer Biographie*. T. 1. Berlin, New York, W. de Gruyter, 1992. (Veröffentlichungen der Historischen Kommission zu Berlin, Bd. 80/1) p. 605–627.
"Insgesamt hat Pallas durch seine wissenschaftsorganisatorischen Aktivitäten und die Forschungsarbeit an der sibirischen Eisenmasse dazu beigetragen, den Boden für die Meteoritentheorie von E. F. F. Chladni zu bereiten, wofür er das Kommunikationsnetz der russisch-europäischen Wissenschaftsbeziehungen genutzt hat."
Additional references to the meteorite in this biography can be found under the term "Pallaseisen" in the Sachregister (T. 2, p. 1146).
- Wilhelmina Iwanowska. *In* Royal Astronomical Society of Canada. *Journal*, v. 93, June 1999: 152.
Brief obituary.
- Wilk, Stephen R. Further mythological evidence for ancient knowledge of variable stars. *In* American Association of Variable Star Observers. *Journal*, v. 27, no. 2, 1999: 171–174.
- Williams, Iwan P. Sir William McCrea 1904–1999. *Physics world*, v. 12, July 1999: 49–50.
- Williams, Thomas R. Telescopes, marriages, and Mars: the life of John E. Mellish. *Sky & telescope*, v. 98, Nov. 1999: 84–88. illus., ports.
"A noted telescope maker and comet discoverer blazed a trail in amateur astronomy despite much personal turmoil."
- Winnberg, Anders. Olof Rydbeck 1911–1999. *Astronomisk tidsskrift*, årg. 32, juni 1999: 33. col. port.
- Witt, Volker. Die Christian-Doppler-Gedenkstätte in Salzburg. *Sterne und Weltraum*, 38. Jahrg., Nr. 8, 1999: 682–685. illus. (part col.), port. (SuW Besuch)
- Witt, Volker. 150 Jahre Hugo von Seeliger (1849–1924). *Sterne und Weltraum*, 38. Jahrg., Nr. 12, 1999: 1096. port. (Geschichte)
"An der Wende vom 19. zum 20. Jahrhundert waren die Kenntnisse vom Bau des Milchstrassensystems noch mangelhaft. Die Erforschung unseres Sternsystems mit den Methoden der Stellarstatistik wird für immer mit dem Namen des grossen Astronomen Hugo von Seliger verbunden sein."
- Witt, Volker. Zum 200. Geburtstag von Friedrich Wilhelm Argelander. *Sterne und Weltraum*, 38. Jahrg., Nr. 10, 1999: 898. port. (Geschichte)
- Wright, D. C. Arthur Stanley Williams. *Observatory*, v. 118, Aug. 1998: 229–230.
"... it is worth recalling that the groundwork of Jovian knowledge was largely secured by Arthur Stanley Williams (1861–1938). This was through amateur observations made a century ago."
- Wünsch, J. The accuracy of Hevelius's astrometric instruments. *Journal for the history of astronomy*, v. 30, Nov. 1999: 391–406. illus.
- Zik, Yaakov. Galileo and the telescope. The status of theoretical and practical knowledge and techniques of measurement and experimentation in the development of the instrument. *Nuncius*, anno 14, fasc. 1, 1999: 31–67. illus.
- Zsoldos, Endre, *and* Zsuzsa Lévai. "Novae" over Kiskartal. *Journal for the history of astronomy*, v. 30, Aug. 1999: 225–230. illus.
- Zuber, Marta S. Dialectic, dialogue, and controversy: the case of Galileo. *Science in context*, v. 11, summer 1998: 181–203.



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