

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. iv, 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., facsimis., 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., facsimis., 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., facsimis., 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 ‘Azzūz 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-Masīh 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 Murrellius 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.), facsimils., 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., facsimils.

Christianson, John R. *On Tycho's island; Tycho Brahe and his assistants, 1570–1601.* Cambridge, New York, Cambridge University Press, 2000. 451 p. illus., facsimils., 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.), facsimils. (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. Cosmic imaginings, 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., facsims. (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. Kalendar 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. Prirodoznanstveni 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. facsims. (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. facsims. (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 1a 699 der Universitätsbibliothek Basel.

Dréville, Hervé. Lire et écrire l'avenir: l'astrologie dans la France du Grand Siècle (1610–1715). Seyssel, Champ Vallon, 1996. 282 p. facsims. (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. facsims. (Biblioteca 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 sociohistórica 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 Antolín. 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., facsims. (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. facsims., 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.), facsims., 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.), facsims. (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 ATKearney, 1998. 199 p. illus. (part col.), facsims. (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)

Huizinga, Erwin. Een nutteliike practijke van cirurgien. Geneeskunde en astrologie in het Middelnederlandse handschrift Wenen, Österreichische Nationalbibliothek, 2818. Hilversum, Verloren, 1997. 537 p. illus., facsims. (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.), facsims. (part col.)

Contents: Introduction.—ch. 1. Du Big Bang à la grotte.—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.), facsims. (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., facsims. (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., facsims. (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., facsims., plans, ports.

Kratkaia istoriia kalendaria. IUrchenko È. I., sostavlenie. [Moskva?] Mosgorpechat', 1998. 80 p. illus. Contents: Vekovaia oshibka Petra I i nashi kalendarny problemy.—Istoriia nashego kalendaria.—Iulianskii kalendar'.—V poiskakh tochki otschëta.—Nashe letoschislenie---éra "ot rozhdestva Khristova."—Vvedenie grigorianskogo kalendaria.—Novoiulianskii kalendar'.—Kalendar' v Rossii.—Novyi god nad Evropoi.—Prilozheniya.

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., facsims., 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 Támesis. 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., facsimis., maps, ports.

"... tells the intriguing tale of the five Venus transits observed by humans and the fantastic efforts made to record them."

Matvievskaya, Galina P., and Zinaida K. Sokolovskaya. Ulugbek, 1394–1449. Otv. redaktor, M. M. Rozhanskaia. Moskva, "Nauka," 1997. 151 p. illus., facsimis., maps, plans, ports. (Nauchno-biograficheskaya 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., facsimis., 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'atome 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., facsimis., maps.

Montgomery, Scott L. The moon & the Western imagination. Tucson, University of Arizona Press, 1999. 265 p. illus., facsimis., 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., facsimis., 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 cosmogoniste 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.—Hadraová, 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.—Guliaev, 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.

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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).

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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.

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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.

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"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*."

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Napier, William M. Comets, dragons & prophets of doom. *Frontiers*, issue 2, spring 1998: 10–11. illus. (part col.)

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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.

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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. facsims., 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.), facsims. (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—postępy astronomii*, t. 70, stycz./luty 1999: 4–7. illus., facsims.

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