

RECENT PUBLICATIONS RELATING TO THE HISTORY OF ASTRONOMY

Books and Pamphlets

Après Galilée. Science et foi: nouveau dialogue. Sous la direction du cardinal Paul Poupard. 1. Une déjà longue histoire. Paris, Desclés de Brouwer, 1994. p. 17-107.

Contents: 1. Mayaud, P. N. Deux textes au cœur du conflit: entre l'Astronomie Nouvelle et l'Écriture Sainte: la lettre de Bellarmin à Foscarini et la lettre de Galilée à Christine de Lorraine.—2. Poupard, P. Compte rendu des travaux de la commission pontificale d'études de la controverse ptoléméocopernicienne aux XVI^e-XVII^e siècles.—John Paul II, Pope. Discours à l'Académie pontificale des sciences.

Arkheoastronomiâ—problemy stanovleniâ. Tezisy dokladov mezhdunarodnoi konferençii (15–18 oktiâbriâ 1996 g.). Moskva, Rossijskaia akademija nauk, Institut arkheologii, 1996. 159 p. illus.

Contents: Predislovie.—Antonova, E. V. Specifika uslovnnykh izobrazheniî dopis'mennyykh kul'tur i problema ikh interpretatsii kak znakov svetil.—Ashikhmina, L. I. Sviatilishche—observatoriâ (?) Vomyn"iag na Verkhnei Vy chegde.—Bannikov, K. L. Baal-baly v pazyrykskoj kosmologii. (Po materialam polevykh issledovaniî na plato Ukok.)—Bekbasarov, N. M. Astronomicheskie aspekty kurganov s "usami."—Belokon', A. T. Figury pustyni Naska kak vozmozhnyi arkheoastronomicheskiy ob'ekt.—Berezkin, Iû. E. Areal'nye zakonomernosti v solarno-lunarnoi mifologii indeñsev Latinskoj Ameriki i zaselenie Novogo Sveta.—Varenov, A. V. Otrazhenie kalendarno-astronomicheskih sootnoshenii v chislennom sostave i strukture in'skikh voinskikh podrazdelenij.—Viktorova, V. D. Mifologicheskâ kartina mira èneoliticheskogo naseleniia gorno-lesnogo Zaural'ia.—Vlasov, V. G. Agrarnyi kalendar' i narodnaia astronomiia v drevnei Rusi. Podkhody k interpretatsii krugovogo ornamenta.—Vokhmenšev, M. P. Zaural'skie pamiâtniki s krugovoj planirovkoj.—Galkin, L. L. Dvenadsatiletniy zhivotnyi skl na monetakh zolotoi ordy.—Gogin, N. D., and N. O. Kirsanov. Ob odnoi modeli Mira u pribaltiiskikh finnov.—Gusakov, M. G. Dneprovskie gorodishcha-sviatilishcha lesnoi polosy. (Problemy arkheoastronomii.)—Dement'ev, M. S. Sravnenie (drevnimi astronomami) zvezdnoi karty neba a geograficheskoi kartoi zemli.—Demeshchenko, S. A. Diskovidnye podelki v kul'ture paleoliticheskogo cheloveka.—Dmitireva, I. V., E. P. Zaborova, and V. N. Obridko. Stikhiinye bedstviâ i solnechnaia aktivnost' (po dannym letopisei).—Dëvlet, E. G. Astronomicheskie ob'ekty v naskal'nom iskusstve.—Ershova, G. G. Astronomicheskie teksty na arkheologicheskikh pamiâtnikakh maiâ.—Zhitoimirskii, S. V. "IAvleniia" Arata—unikal'nyi pamiâtnik istorii astronomii.—Zhuravlev, A. P. Kul'tovy kompleks Pegrema-40.—Karapet' fâns, A. M. Problema proiskhozhdeniâ drevnekitaiskogo Zodiaka.—Kaurov, È. N. Istoki i evolûtsiâ drevnekitaiskikh astronomicheskih nablûdenij.—Kirillov, A. K., and G. B. Zdanovich. Arkheoastronomicheskie issledovaniia na gorodishche Arkaim (epoka bronzy).—Kifishin, A. G. "Otkrytoe" i "zakrytoe" nebo po dannym protoshumerskogo arkhiva Kamennoi Mogily i shumero-vaviloniskim traktatam.—Klimka, L. A. Etnokosmologiâ i arkheoastronomiâ v Baltiiskikh stranakh.—Kovaleva, V. T. Kosmogonicheskie predstavleniâ naseleniâ tashkovskoi kul'tury.—Kosarev, M. F. Nekotorye aspekty fâzycheskogo kosmologicheskogo znanija (po uralo-zapadnosibirskim arkheologo-ètnograficheskim materialam).—Kochmar, N. N., A. V. Pen'kov, and P. S. Knurenko. Pervye opety arkheoastronomiceskogo issledovaniâ pisaniâ Iâkutii.—Larichev, V. E. Skul'pturnoe izobrazhenie surka iz mal'ty (rasshifrovka znakovoî zapisi i semantika obraza).—Marsadolov, L. S. Drevnee sviatilishche na gore Ocharovatel'noi v Zapadnom Altai.—Marsadolov, L. S., and V. L. Gorshkov. Astronomicheskie raschety dlja sviatilishcha na gore Ocharovatel'noi.—Nagovitsyn, Iû. A. Podkhod mnogomernoj statistiki k issledovaniu temperaturnykh anomalij pogody po materialam russkikh 1000-letnikh khronik.—Nagovitsyn, Iû. A. Rekonstrukciâ solnechnoî fâklichnosti v XII-XVII vekakh na osnove nelineinoi matematicheskoi modeli.—Nikitin, V. V. Kalendar' v ornamente posudy i ukrashenijakh finno-ugrov Povolzh'ia i Urala.—Otroshchenko, V. V. K voprosu o modeli mira u naseleniâ srubnoi obshchnosti.—Povileiko, R. P., and T. D. Petrovskaia. Zakon "Velikolepnoi semerki" 7+2. (Ob'em vospriâtiâ informacii chelovekom segodniâ i v proshлом. K postanovke problemy.)—Potemkina, T. M., and V. A. Iûrevich. Drevneishâa "astronomiceskâa observatoriâ" na territorii Rossii.—Potemkina, T. M. Kalendarno-obriadovaia praktika naseleniâ Zaural'ia v III tys. do n.e.—Raevskii, D. S. Zodiakal'nâa simbolika na predmetakh kelermesskogo kurgana.—Salles, R., and D. D. Polozhenšev. Astronomicheskiy aspekt drevnego arkheologicheskogo pamiatnika Bolivii

"Tiauanako."—Svatopolk-Chetvertynskiĭ, I. A. Vliianie faz Luny na bozhestvennuu i chelovecheskuu sfery soglasno shumero-vavilonskoî tradišii. (Neskol'ko slov o prodvizhenii deshifrovki shumero-vavilonskoî formul'noi sistemy.)—Fedorova, I. K., and O. M. Fedorova. Zodiak i Mlechnyi Put' v predstavleniakh drevnikh polineziifsev.—Khudiakov, Š. S. Istoriko-arkheologicheskie aspekty izuchenija svidetel'stv stolknovenija zemli s opasnymi kosmicheskimi ob'ektami.—Chudinov, V. A. Nekotorye astronomicheskie terminy russkogo kerneslova kak vyrazhenie drevneishego vzgljada na mir.—Chudinov, V. A. Astronomicheski-ritual'naa interpretatsija risunka-nadpisi iz Kammenoi Mogily.—Shilov, Š. A. Stanovlenie arkheoastronomii na Ukraine (istoriograficheskii ocherk).—Šrevich, V. A. Astronomicheskaja orientatsija amerikanskikh arkheologicheskikh pamiatnikov.—Šrevich, V. A. Astronomicheskie napravlenija arkheoastronomii.—Spisok uchastnikov mezhdunarodnoi konferencii "Arkheoastronomija: problemy stanovlenija."

Astronomija na krutykh poverotakh XX veka. Redaktor-sostavitel': Eremeeva A. I. Dubna, Feniks, 1997. 473 p. illus., map, ports.

Errata sheet laid in.

Eighty-one papers presented at a conference held at Pulkovo in April 1995 to mark the 50th anniversary of the victory over Nazi Germany.

Includes an English translation by I. B. Pustyl'nik of Eremeeva's introductory essay, "Astronomy at the Sharp Turns of the XXth Century History" (p. 12-18).

The papers are organized into seven sections, the titles of which are given below.

Contents: Glava I. Kontrasty razvitiâ sovetskoi astronauu v predvoennoe desiatiletie.—Glava II. Astronomy na fronte. ch. 1. Geroi ne umiraût v nashei pamjati. ch. 2. Velikaâ otechestvennaâ voïna v vospominaniakh astronomov-frontovikov.—Glava III. Astronomija dlja fronta.—Glava IV. Sud'by astronomiceskikh sentrov v raionakh boevykh deistviij, v blokade i okkupacii.—Glava V. Sozdanie novykh i deiatel'nost' starykh astronomiceskikh sentrov v tylu.—Glava VI. Voennaâ tekhnika i noveishaja tekhnologija na sluzhbe astronomii.—Glava VII. Uspekhi astronomii v gody voïny i v pervoe poslevoennoe desiatiletie.

La Bellezza dell'universo. A cura di Francesco Bertola, Massimo Calvani, Umberto Curi, Massimo Donà. Padova, Il Poligrafo, 1996. 126 p. illus. (Percorsi della scienza; storia, testi, problemi, 6)

Papers presented at a conference held in Venice, December 1993.

Contents: Sini, C. Il cosmo e il caos.—Dallaporta, N. Bellezza ed arte nell'ambito dei mondi tradizionali.—Pasqualotto, G. Forme orientali di universo.—Pomodoro, G. La bellezza dell'universo nella distanza attuale fra arte e scienza.—Kafka, F. Che cos'e la bellezza? Sulla teoria sistematica della creazione.—Boniolo, G. Vedo le stelle in cielo ...—Bertotti, B. Criteri estetici in fisica teorica.—Sciama, D. W. Contributo alla discussione.

Blaauw, Adriaan. ESO historical archives (EHA). Inventory per December 1992. Garching, European Southern Observatory [1992?] 40 leaves. facsimis.

Bradshaw, Joseph. The night sky in Egyptian mythology. London, H. Bradshaw, 1997. 1-178, [62], 179-182 p. illus.

Obtainable from H. Bradshaw, 85 Balfour Road, London N5 2HE.

Doscientos aniversario del Almanaque Náutico y Efemérides Astronómicas, 1792-1992. Volumen conmemorativo. San Fernando, Real Instituto y Observatorio de la Armada, 1992. 80 p. illus., facsimis., ports. (Boletín ROA, no. 1/92)

3 × [Dreimal] Foerster. Beiträge zu Leben und Werk von Wilhelm Foerster, Friedrich Wilhelm Foerster und Karl Foerster. Hrsg. im Auftrag des URANIA-Vereins "Wilhelm Foerster" Potsdam e.V. von Mathias Iven. Milow, Schibri-Verlag, 1995. 267 p. illus., facsimis., ports.

Partial contents: Iven, M. "3 × Foerster" und die Potsdamer URANIA.—Zu Leben und Werk von Wilhelm Foerster.—Ausgewählte Veröffentlichungen.—Foerster, K. Der Mann, der neun Jahrzehnte erfüllte. Zum 100. Geburtstag des Astronomen Wilhelm Foerster.—Feyl, R. Wilhelm Foerster.—Lührs, O. Wilhelm Foerster und die Gründung der Urania.—Tiemann, K. H. Wilhelm Julius Foerster und die

"Vereinigung von Freunden der Astronomie und kosmischen Physik" (1891 bis 1914).—Zenkert, A. Der Einfluss Wilhelm Foersters auf Bruno H. Bürgel.—Buschmann, E. Wilhelm Foersters Einfluss auf die Entwicklung der Höheren Geodäsie.—Kummer, H. J. Wilhelm Foerster und Ludwig Strasser—ein Freundschaft im Dienste der Deutschen Chronometrie.—Dick, W. R. Über das Schicksal des Nachlasses von Wilhelm Foerster.—Wilhelm Foesters Briefe an Eduard Schönfeld.

Edson, Evelyn. *Mapping time and space: how medieval mapmakers viewed their world*. London, British Library, 1997. 210 p. facsims. (part col.) (The British Library studies in map history, v. 1)
 See particularly chapter 4, "Space and Time in the *Computus Manuscript*" (p. 52–71), and chapter 5, "Three Maps in *Computus Manuscripts*" (p. 72–96).

Foderà Serio, Giorgia, and Donatella Randazzo. *Astronomi italiani dall'unità d'Italia ai nostri giorni: un primo elenco*. Firenze, Società astronomica italiana editore, 1997. 116 p.
 Small portraits of 36 of the astronomers are reproduced on the outside front cover of the volume.

Gandt, François de. *Force and geometry in Newton's Principia*. Translated by Curtis Wilson. Princeton, N.J., Princeton University Press, 1995. xiv, 296 p. illus.
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George Gamow Symposium, *George Washington University, 1996*. The George Gamow Symposium. Sponsored by the George Washington University and the Carnegie Institution of Washington, 12 April 1997 [i.e. 1996] Edited by E. Harper, W. C. Parke, and G. D. Anderson. San Francisco, Astronomical Society of the Pacific, 1997. 157 p. illus., facsims., ports. (Astronomical Society of the Pacific conference series, v. 129)
 "Appendix: The Publications of George Gamow": p. 141–151.

Partial contents: Stewer, R. H. Gamow, alpha decay, and the liquid-drop model of the nucleus.—Bethe, H. Influence of Gamow on early astrophysics and on early accelerators in nuclear physics.—Alpher, R. A. Cosmochemistry and the early universe.—Herman, R. The prediction of the cosmic microwave background radiation.—Rubin, V. C. What George Gamow did not know about the universe.—Rich, A. Gamow and the genetic code.—Teller, E. Some personal memories about George Gamow.—Reminiscences of George Gamow [presented by Igor Gamow, Marshall Nirenberg, James Follin, Vera Rubin, Alexander Rich, Ralph Alpher, Robert Herman, and Philip Abelson]

Gillispie, Charles C. *Pierre-Simon Laplace, 1749–1827; a life in exact science*. With the collaboration of Robert Fox and Ivor Grattan-Guinness. Princeton, N.J., Princeton University Press, 1997. 322 p. illus., port.

Graf-Stuuhlofer, Franz. *Humanismus zwischen Hof und Universität. Georg Tannstetter (Collimitius) und seine wissenschaftliches Umfeld im Wien des frühen 16. Jahrhunderts*. Wien, WUV-Universitätsverlag, 1996. 192, [20] p. illus., facsims., maps, ports. (Schriftenreihe des Universitätsarchivs Universität Wien, 8. Bd.)
 "Georg Tannstetter, genannt Collimitius (1482–1535), und sein Schaffen als Mathematiker und Astronom, wird in diesem Band ausführlich dokumentiert."

International Astronomical Union. *Symposium, 172d, Paris, 1995. Dynamics, ephemerides and astrometry of the solar system*. Proceedings of the 172nd Symposium of the International Astronomical Union, held in Paris, France, 3–8 July 1995. Edited by S. Feraz-Mello, B. Morando and J. E. Arlot. Dordrecht, Boston, Kluwer Academic Publishers, 1996. xviii, 508 p. illus., facsims., port.

Partial contents: Arlot, J. E., and S. Ferraz-Mello. Bruno Morando (1931–1995).—Morando, B. Deux cents ans de mécanique céleste sous les auspices du Bureau des longitudes.—Pang, K. D., and K. K. C. Yau. The need for more accurate 4000-year ephemerides, based on lunar and spacecraft ranging, ancient eclipse and planetary data.—Seidelmann, P. K. Evolution of ephemerides representation and diffusion.—Débarbat, S. V. Des éphémérides astronomiques annuelles en préliminaire à l'Annuaire du Bureau des longitudes.—Toulmonde, M. Les diamètres du Soleil dans la *Connaissance des temps* depuis 1795.

Morando's paper is preceded by a lengthy abstract in English.

Krauss, Rolf. Astronomische Konzepte und Jenseitsvorstellungen in den Pyramidentexten. Wiesbaden, Harrassowitz, 1997. 297 p. illus. (Ägyptologische Abhandlungen, Bd. 59)

Leopardi, Giacomo. Storia della astronomia dalla sua origine fino all'anno MDCCCXIII. Con uno scritto di Armando Massarenti e un'appendice di Laura Zampieri. Milano, La Vita felice, 1997. 459 p. (Philobiblon, 2)

Contents: Massarenti, A. Leopardi e la leggerezza delle scienze.—Introduzione.—1. Storia della astronomia dalla sua origine sino alla nascita di Talete.—2. Storia dell'astronomia dalla nascita di Talete sino a quella di Ptolomeo.—3. Storia dell'astronomia dalla nascita di Ptolomeo sino a quella di Copernico.—4. Storia dell'astronomia dalla nascita di Copernico sino alla cometa dell'anno 1811.—5. Progressi fatti dalla astronomia.—Giunte alla storia dell'astronomia.—Opere delle quali si è fatto uso nello scrivere la storia della astronomia.—Dissertazione sopra l'origine, e i primi progressi dell'astronomia. 1814.—Zampieri, L. Appendice: Annotazioni leopardiane inedite relative alla *Storia dell'astronomia*.

Lindgren, Uta. Die Artes liberales in Antike und Mittelalter. Bildungs- und Wissenschaftsgeschichtliche Entwicklungslinien. München, Institut für Geschichte der Naturwissenschaften, 1992. 161 p. illus., facsimis., port. (Algorismus, Heft 8)

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Methuen, Charlotte. Kepler's Tübingen: stimulus to a theological mathematics. Aldershot, Hants, Brookfield, Vt., Ashgate, 1998. 280 p. maps. (St Andrews studies in Reformation history)

Miller, Dorcas S. Stars of the first people: native American star myths and constellations. Boulder, Colo., Pruett Pub. Co., 1997. xv, 346 p. illus., maps.

Oestmann, Günther. Schicksaldeutung und Astronomie: der Himmelsglobus des Johannes Stoeffler von 1493. Mit Beiträgen von Elly Dekker und Peter Schiller. Ausstellungskatalog. Stuttgart, Württembergisches Landesmuseum Stuttgart, 1993. 71 p. illus. (part col.), facsimis., ports.

The exhibit was held Dec. 2, 1993–Mar. 6, 1994.

Ondřejovská hvězdárna, 1898–1998. Sborník o české a moravské astronomii uspořádaný ke 100. výročí Ondřejovské hvězdárny a 650. výročí University Karlovy. Uspořádali Petr Hadrava, Marian Karlický, Jan Palouš, Martin Šolc. Praha, Astronomický ústav AV ČR v nakl. Vesmír, 1998. 373 p. illus. (part col.), facsimis. (part col.), maps (part col.), ports.

Contents: Hadrava, P., M. Karlický, J. Palouš, and M. Šolc. Předmluva.—Historické kořeny astronomie v Čechách a na Moravě. Pleslová-Štíková, E. Zdeněk Horský: protagonista středoevropské archeoastronomie (in memoriam). Hadravová, A., and P. Hadrava. Středověká astronomie v Čechách. Hadravová, A., and P. Hadrava. Astronomie v rudolínské Praze. Šolcová, A. Matematika a astronomie v době pobělohorské. Šíma, Z. Klementinská hvězdárna. Vetešník, M. Astronomie v Brně včera, dnes a zítra.—Zakládání hvězdárny. Šíma, Z. Jan Neruda a rozvoj české astronomie. Fričová-Brázdilová, A., and J. Brázdil. Historie založení hvězdárny v Ondřejově. Kopecký, M. Historický archiv astronomické observatoře v Ondřejově. Vondrák, J. Historie cirkumzenitálu. Krejčí, G. Knihovna bratří Fričů. Jarolím, M. Knihovna Astronomického ústavu AV ČR v minulosti a současnosti. Polášková, Š. Historie parku ondřejovské observatoře.—Historie hvězdárny a Astronomického ústavu Akademie věd ČR. Šolc, M. František Nušl, ČAS a Ondřejov. Plavec, M. Ondřejovská hvězdárna za druhé světové války. Šolc, M. František Link. Hadrava, P. Historie gravitačních čoček. Šíma, Z. Dr. Bohumil Sternberk. Ptáček, V., L. Webrová, and R. Weber. Časová služba. Zacharov, I., and L. Neužil. Vysoká atmosféra. Ceplecha, Z. Výzkum meteorů. Šimek, M. Meteorická radioastronomie. Ambrož, P., V. Bumba, and Z. Švestka. Sluneční astronomie. Plavec, M. Přes překážky ke hvězdám. Perek, L., J. Zicha, and P. Koubský. Dvoumetrový dalekohled. Perek, L., and L. Kohoutek. Hvězdná dynamika a planetární mlhoviny. Ruprecht, J. Otevřené hvězdokupy a OB asociace. Fárník, F., S. Fischer, L. Sehnal, and B. Valníček. Historie kosmického výzkumu. Perek, L., V. Bumba, J. Kleczek, Z. Švestka, J. Palouš, L. Sehnal, and M. Burša. Mezinárodní organizace. Harmanec, P. BAC. Havlíček, K., P. Ambrož, J.

Boček, and F. Žďárský. Vývojové dílny v Ondřejově. Kleczek, J., and M. Páleník. Sluneční energie. Kleczek, J. Řeč astronomů. Řezba, P. Výpočetní středisko ASÚ.—Současnost. Heinzel, P., M. Karlický, and F. Fárník. Sluneční fyzika. Hubený, I. Teoretická hvězdná spektroskopie v Ondřejově. Harmanec, P. Stelární oddělení. Spurný, P., J. Borovička, P. Pravec, and M. Šimek. Meziplanetární hmota. Vandas, M., R. Peřestý, and J. Klokočník. Fyzika okolí Země. Šídlichovský, M., and J. Vondrák. Dynamika sluneční soustavy. Palouš, J. Dynamika Galaxií. Hudec, R., and P. Hadrava. Astrofyzika vysokých energií.

Orchiston, Wayne. Nautical astronomy in New Zealand: the voyages of James Cook. Wellington, N.Z., Carter Observatory, 1998. 131 p. illus., maps, ports. (Occasional papers, no. 1)

Contents: Acknowledgements.—Moore, P. Foreword.—ch. 1. Introduction.—ch. 2. The astronomers.—ch. 3. The astronomical instruments and equipment.—ch. 4. The astronomical observations.—ch. 5. Cook voyage astronomy in historic perspective.—ch. 6. Conclusion.

Reisinger, Reiner. Historische Horoskopie. Das iudicium magnum des Johannes Carion für Albrecht Dürers Patenkind. Mit einem Geleitwort von Dieter Wuttke. Wiesbaden, Harrassowitz, 1997. 339 p. illus., facsimis., ports. (Gratia, Bamberg Schriften zum Renaissanceforschung, 32)

Rozenfel'd, Boris A., and Nadezhda D. Sergeeva. Akhmad al-Fergani, IX vek. Otv. redaktor, M. M. Rozhanskaia. Moskva, "Nauka," 1998. 85 p. illus. (Seriiia "Nauchno-biograficheskaiia literatura")

Contents: 1. Ot Fergany do Kaira.—2. Zhizn' i trudy.—3. Matematika.—4. Astronomiia.—5. Astronomicheskie instrumenty.—6. Khronologiiia.—7. Geografiia.—8. Vliianie "Elementov astronomii" al-Fergani na dal'neishhee razvitiie nauki.

Russo, Lucio. La rivoluzione dimenticata; il pensiero scientifico greco e la scienza moderna. Prefazione di Marcello Cini. Milano, Feltrinelli, 1996. 380 p. illus. (Campi del sapere)

Argues that much of modern western science developed from rediscovery of the science of ancient Greece, which had been neglected and lost during the centuries of Roman domination. Astronomy is among the many topics treated.

Schaldach, Karlheinz. Römische Sonnenuhren; eine Einführung in die antike Gnomonik. Thun, H. Deutsch, 1997. 123 p. illus., map.

Contents: 1. Grundlagen.—2. Zur Geschichte.—3. Sonnenuhrentypen.—4. Zur Analyse.—5. Beispiele.

Turner, Gerard L'E. Scientific instruments, 1500–1900; an introduction. Berkeley, Calif., University of California Press, 1998. 144 p. illus. (part col.)

First published as *Antique Scientific Instruments* in Poole by Blandford Press in 1980.

See particularly "Astronomy and Time-Telling" (p. 11–28) and "Navigational Instruments" (p. 29–37). Telescopes are discussed on p. 98–100 in the section entitled "Optical Instruments."

The Universe unfolding. Edited by Sir Hermann Bondi and Miranda Weston-Smith. Oxford, Clarendon Press, 1998. 406 p., [4] p. of plates. illus. (part col.), facsimis., ports.

The Milne Lectures, 1977–96.

Contents: Kington, B. Foreword.—Milne lecturers.—Bondi, Sir H. Introduction.—Hoyle, Sir F. Comets: a matter of life and death (1977).—Lyttleton, R. A. Gravitation, ancient eclipses, and mountains (1978).—Chandrasekhar, S. E. A. Milne: his part in the development of modern astrophysics (1979).—Rees, Sir M. Our universe and others (1980).—Cowling, T. G. Astrology, religion and science (1981).—Wolfendale, Sir A. The origin of cosmic rays (1982).—Kendall, D. G. Statistics, geometry and the cosmos 1983).—King-Hele, D. G. The earth's atmosphere ideas old and new (1984).—McCrea, Sir W. Time, vacuum and cosmos (1985).—Fowler, W. A. The age of the observable universe (1986).—Atiyah, Sir M. Geometry, topology and physics (1987).—Radhakrishnan, V. Polarization—its message in astronomy (1988).—Gold, T. Carbon—the element of life: what is its origin on earth? (1989).—Sciama, D. Cosmology and particle physics: a new synthesis (1990).—Dyson, F. J. Hunting for comets and planets (1991).—Longair, M. S. Modern cosmology—a critical assessment (1992).—Taylor,

J. H. Binary pulsars and relativistic gravity (1993).—Kirshner, R. P. Taking the measure of the universe (1994).—Mather, J. C. Observing the Big Bang (1995).—Penrose, Sir R. The complexity of our singular universe (1996).

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