The background of the entire page is a composite image. The upper portion shows a total solar eclipse with the sun's corona radiating from a dark central disk. The lower portion shows a large, multi-towered stone castle with red-tiled roofs, situated on a rocky outcrop overlooking a valley with rolling hills and a river under a sunset sky.

*COMETS  
ECLIPSES  
TRANSITS  
THE MOON  
PLANETS &  
SOLAR SYSTEM*

*Being selections from  
A Private Astronomy Library  
with additions . . .*

*Jeff Weber &  
& Rare Books*

*Carlsbad, California*

*Catalogue 215*

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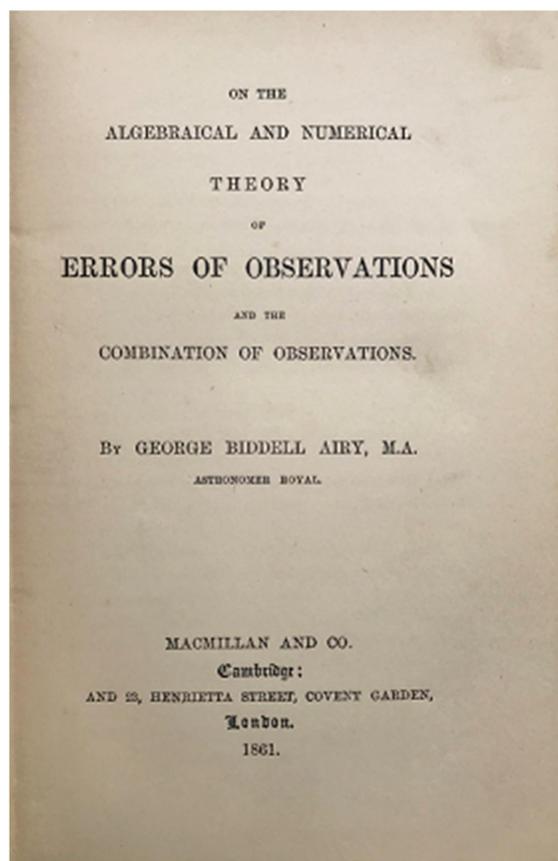
Selections from the Library of Professor John Westfall, with additions

1. **AIRY, George Biddell** (1829-1883). *On the Algebraical and Numerical Theory of Errors of Observations and the combination of observations.* Cambridge: Macmillan, 1861. ¶ Small 8vo. xvi, 118, [2] pp. Half title, addendum, errata. Original blind- and gilt-stamped olive green cloth; rubbed, light wear to corners. Ownership signatures of Theo G. Ellis, Ayre, 1867; J.P. Gram, June 1923.

\$ 75

First edition. Sir George Biddell Airy KCB PRS (1801-1892), was an English mathematician and astronomer, Astronomer Royal from 1835 to 1881.

Ian Hacking points out that astronomers and mathematicians were greatly influenced by the error theory. Physicists are among those who did not begin regular reporting of errors until the 1890s. See: *The Morals of Measurement*, edited by Graeme J. N. Gooday, Cambridge University Press, 2004. Section 2: Meanings of Measurement and Accounts of Accuracy; 2.5: Reporting Accuracy: The protocols and languages of error. p. 74.



2. **ANDERSON, Mark.** *The Day the World Discovered the Sun: An Extraordinary Story of Scientific Adventure and the Race to Track the Transit of Venus.* Philadelphia: Da Capo Press, 2012. ¶ First edition. 8vo. vii, [3], 280 pp. Illus., index. Hardcover, dust-jacket. ISBN 13: 9780306820380

\$ 3.95



*Frederick Ira Ordway III's Copy*

3. **BAILLY, Jean Sylvain** (1736-1793). *Histoire de l'Astronomie Moderne Depuis la Fondation de l'Ecole + Traite de l'Astronomie Indienne et Orientale, Ouvrage qui peut Servir de Suite à l'Histoire de l'Astronomie Ancienne*. [4 volumes]. Paris: Freres de Bure, 1779; 1782; 1787. ¶ 4 volumes. Tall 8vo. xvi, [728]; [iv], 751, [1]; [iv], 415, [1]; [4], clxxx, 427, [1] pp. 18 plates, decorative headpieces. Full calf, leather gilt-stamped spine labels, raised bands; extremities worn, corners showing, mild water damage; *Traite de l'Astronomie Indienne* has a similar but slightly different binding. Bookplates of Frederick I. Ordway III (*Histoire de l'Astronomie* only). Very good. RW1308

\$ 2,500

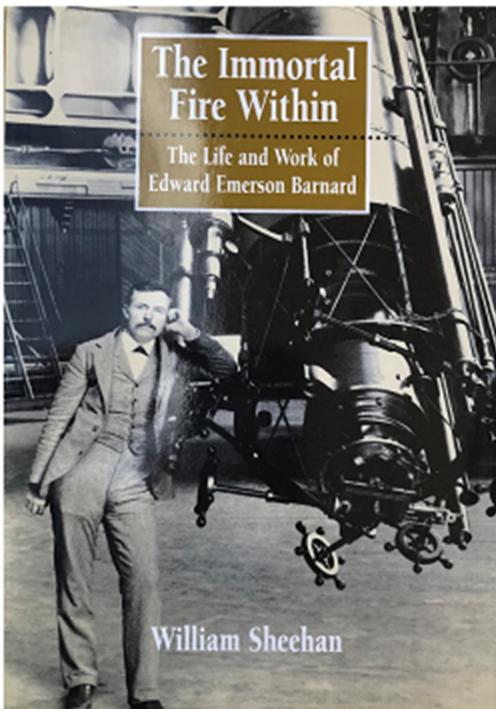
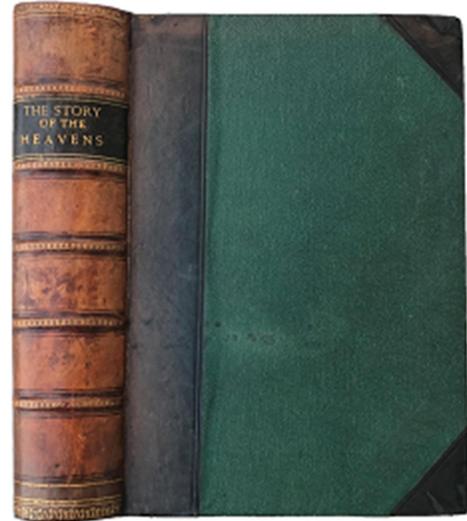
First edition. “Jean-Sylvain Bailly, a French astronomer and politician, was largely known for his contributions to astronomy and his tragic political career. After studying with Nicolas de La Caille and Alexis Clairaut, Bailly computed orbits of various comets and, using Clairaut’s theory, made the first effort to improve the tables of the satellites of Jupiter. Such tables were widely used for navigation and surveying purposes at the time. By applying theoretical rather than empirical methods, Bailly attempted to predict the perturbations in their orbits more accurately and thus make the tables more accurate.” – *Biographical Encyclopedia of Astronomers*, Vol. I, p. 83.

PROVENANCE: “Frederick Ira Orway III (1927-2014) was an educator, consultant, researcher, and author on space flight and energy programs.

4. **BALL, Sir Robert Stawell** (1840-1913). *The Story of the Heavens*. New and revised edition. London, Paris, New York & Melbourne: Cassell and co., 1901. ¶ Large 8vo. xii, 568 pp. 26 plates (some color), 101 figures, index. Contemporary half calf, cloth blind-embossed cloth, edges speckled. Early bookplate of James G. Budge [British Navy]; rubber-stamp of F.J. Wright, Steam-printer, Devonport. Very good.

\$ 55

Beautifully bound copy. Sir Robert Stawell Ball FRS (1840-1913), Irish astronomer, worked for Lord Rosse from 1865 to 1867. In 1867 he became Professor of Applied Mathematics at the Royal College of Science in Dublin. There he lectured on mechanics and published an elementary account of the science. In 1874 Ball was appointed Royal Astronomer of Ireland and Andrews Professor of Astronomy in the University of Dublin at Dunsink Observatory. Ball expounded the tides in *Time and Tide: a Romance of the Moon*. In 1892 he was appointed Lowndean Professor of Astronomy and Geometry at Cambridge University at the same time becoming director of the Cambridge Observatory. He was a fellow of King's College, Cambridge. Ball became celebrated for his popular lectures on science. He gave an estimated 2500 lectures between 1875 and 1910 in towns and cities across Britain and Ireland. His work *The Story of the Heavens* is mentioned in the "Ithaca" chapter of *Ulysses*. [Wikip.]



5. [BARNARD, Edward Emerson (1857-1923)] **William SHEEHAN**. *The Immortal Fire Within; The life and Work of Edward Emerson Barnard*. Cambridge: Cambridge University Press, 1995. ¶ Large 8vo. xiv, 429, [1] pp. Illustrations, index. Black cloth, dust-jacket. Near fine. ISBN: 0521444896

\$ 225

First edition. "This, the first full-length biography of E.E. Barnard, tells the remarkable tale of endurance and achievement of one of the leading astronomers of the late nineteenth century and early twentieth century. Barnard scoured the heavens endlessly, leaving an astonishing legacy of observations -- of planets, satellites, comets, double stars, bright and dark nebulae, and globular clusters -- that make him one of the greatest observers of all time.

This book traces Barnard's life from impoverished origins to status as an internationally recognized astronomer. His success as a professional astronomer unfolds in 1842 as he discovers the fifth satellite of Jupiter (the

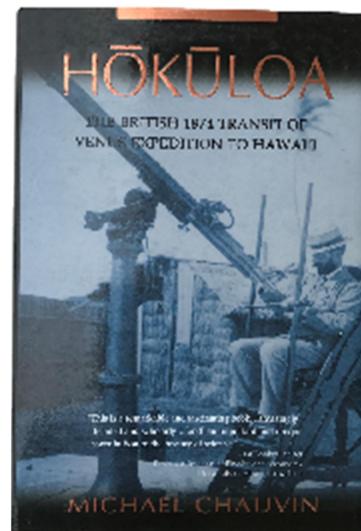
first since Galileo) and pioneers wide-angle photography of the Milky Way, which leads to the recognition of dark nebulae--clouds of dust on the galactic plane. / Beautifully illustrated throughout, this book provides a complete history of Barnard's fascinating life and work, based largely on previously unpublished archival material, that will be of interest to astronomers and historians of science." [CUP] Also issued in paperback in 2007; this is the hardcover original issue.

REVIEW: [1] "...Barnard's achievements are remarkable, and with this biography William Sheehan has given us the first detailed account of Barnard's step-by-step journey toward scientific prominence....a well-written and meticulously researched biography that makes judicious use of voluminous archives. With its numerous photographs (including many of Barnard's own) it is a handsome and well-produced volume....this biography recounts an inspiring example of what one individual can accomplish with hard work and dedication, against all odds. It is a lesson that should not go unheeded by students or professionals, even in the era of big science." Steven J. Dick, *Science*. [2] "...chock full of footnotes and contains an extensive bibliography. Sheehan's prose is eloquent and easily understandable to Astronomy readers. Barnard's photographs appear throughout, and Sheehan quotes frequently from Barnard's own papers. The *Immortal Fire Within* not only gives the reader a comprehensive overview of Barnard's life, but it also conveys a real feeling for what it was like to be an astronomer at the turn of the century, when the science was undergoing profound transformations." Robert Naeye, *Astronomy*.

6. **CHAUVIN, Michael.** *Hōkūloa; The British 1874 Transit of Venus Expedition to Hawai'i*. Honolulu, Hawaii: Bishop Museum Press, 2004. ¶ 8vo. xvi, 262 pp. Numerous small figs., index. Black cloth, dust-jacket. Near fine. ISBN 10: 1581780230

\$ 21.95

Spanning several centuries and connecting two distant (and very different) island nations, Hōkūloa provokes political and military maneuvering, confronts death and disappointment, descends into madness, and rises to heroism—all in pursuit of what was considered the most important astronomical observation of the nineteenth century—a transit of Venus that would yield calculation of the elusive astronomical unit (AU). Exactly how far was the sun from Earth? And could an eclipse-like “transit” of the sun by Venus reveal the answer? Superbly crafted and authoritative in every detail, Hōkūloa is a fascinating examination of Hawai'i and Britain's bond in astronomical research history. Reviewed: [1] “An excellent book . . . full of original material . . . . It uses primary archival information to deal with a topic pretty well untouched in the scholarly literature.”—Dr. Allan Chapman, F.R.A.S., Faculty of Modern History, Oxford University. [2] “A scholarly, well-documented treatise written in a pleasing style readily understandable by laymen as well as being of special interest to professional astronomers and historians of science.”—Dr. Dorrit Hoffleit, Department of Astronomy, Yale University. [3] “In his Hōkūloa, Michael Chauvin . . . has pieced together insiders' views of one of the most elaborate and expensive scientific expeditions of the 19th century. His keen perceptions of the physical and cultural scene in Hawai'i are evident in the sections describing the on-site work . . . [and] the text is lucid and readable . . . a topical, 35-chapter narrative that builds dramatically toward the event.”—Dr. Gordon Bigelow, *The Pacific Circle*.



7. [CLARK, Alvan] Deborah Jean WARNER. *Alvan Clark & Sons, Artists in Optics*. Washington, DC: Smithsonian Institution Press, 1968. ¶ Series: United States National Museum Bulletin, 274. 8vo. [vi], 120 pp. 28 figures. Gilt-stamped blue cloth. Front pastedown ownership label. Fine. \$ 25
8. CLERKE, Agnes M. (1842-1907). *A Popular History of Astronomy during the nineteenth century*. London: Adam and Charles Black, 1902. ¶ 8vo. xv, [3], 489, [3] pp. Original mounted photographic frontispiece & title vignette, 6 plates, index; occasional foxing. Original green blind- and gilt-stamped cloth; extremities lightly worn. Very good.

\$ 50

Fourth edition, revised and corrected. Clerke was an astronomer and historian during a time when both fields were dominated by men. *A Popular History of Astronomy* was her most influential book—at the time of her death it was considered "the standard work" in the field by the Royal Astronomical Society. Clerke was a member of the British Astronomical Society.

9. DAUMAS, Maurice (1910-1984). *Scientific Instruments of the Seventeenth and Eighteenth Centuries and their Makers*. London: Portman Books, (1989). ¶ Second edition. 8vo. (vi), 361 pp. 142, 11 figs, index. Cloth, dust jacket; jacket torn at rear edge. Very good.

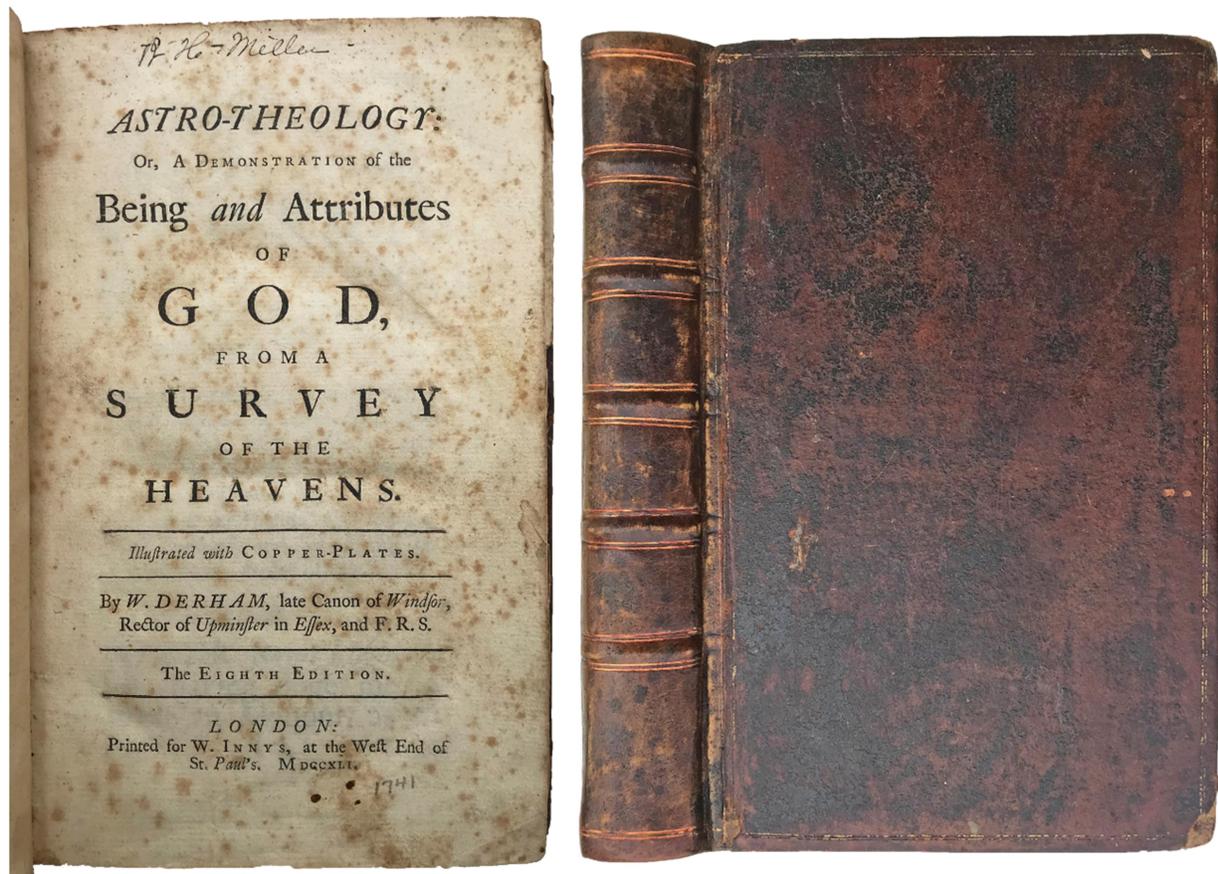
\$ 40

"Daumas published numerous papers and memoirs dealing with interrelations between science, particularly chemistry, and technology. He was particularly interested in the role of scientific instruments in the progress of science and industrial archaeology. His books and edited publications include: *Les Matières Plastiques* (1941); *Lavoisier* (1941); *Arago* (1943); *l'Acte Chimique, Essai sur l'Histoire de la Philosophie Chimique* (1945); *Les Instruments Scientifiques aux XV<sup>e</sup> et XVI<sup>e</sup> Siècles* (1953); *Lavoisier, Théoricien et Expérimentateur* (1955); *L'Encyclopédie de la Pléiade: Histoire de la Science*, (Ed., 1957); *Histoire Générale des Techniques* (Five Volumes, Ed., 1962–1979); *Scientific Instruments of the Seventeenth and Eighteenth Centuries and their Makers* (translated by Mary Holbrook 1972); *l'Archéologie Industrielle en France* (1980); *Les Grandes Étapes du Progrès Technique* (1981); and *Le Cheval de Cesar* (1985). / Daumas was a laureate of the Prix Pelloit (1953) and the Prix Freycinet (1957) of the Académie des Sciences. In 1965 he received the Leonardo da Vinci Medal of the Society for the History of Technology. In 1968, he was cofounder of the International Committee for the History of Technology. He was its first secretary-general and organized its first conference at Pont-à-Mousson, France, in 1970. Under the auspices of the Historic Works Committee, he founded the publication *Archeologie Industrielle en France* (1976). / In 1980, Maurice Daumas received the Dexter Award for his numerous contributions to the history of chemistry and in particular for his biographical studies of Lavoisier and his work on scientific instruments. He died suddenly in Paris on March 18, 1984." [Obituary, Division of History of Chemistry of the American Chemical Society].

10. DEL REY, Lester [pseud. for Leonard Knapp] (1915-1993). *Space Flight; the Coming Exploration of the Universe. Illustrated by John Polgreen*. New York: Golden Press, 1959. ¶ Small 8vo. 56 pp. Illustrated With printed number 7710 on upper right corner of cover; rubbed. Very good.

\$ 5

First Golden Press issue; previously issued by General Mills, 1957, 1958. Del Rey was an American pulp fiction, science fiction writer.



11. **DERHAM, William** (1657-1735). *Astro-Theology: Or, a Demonstration of the Being and Attributes of God, from a Survey of the Heavens. The eighth edition.* London: Printed for W. Innys, 1741. ¶ 8vo. lvi, [8], 246, [10]pp. 3 folding plates, index, woodcut head piece and initial letter; some foxing. Original full mottled calf, gilt border, rebacked, raised gilt-stamped bands, inner joints reinforced. Earlier ownership signature of R. H. Miller. Very good.

\$ 150

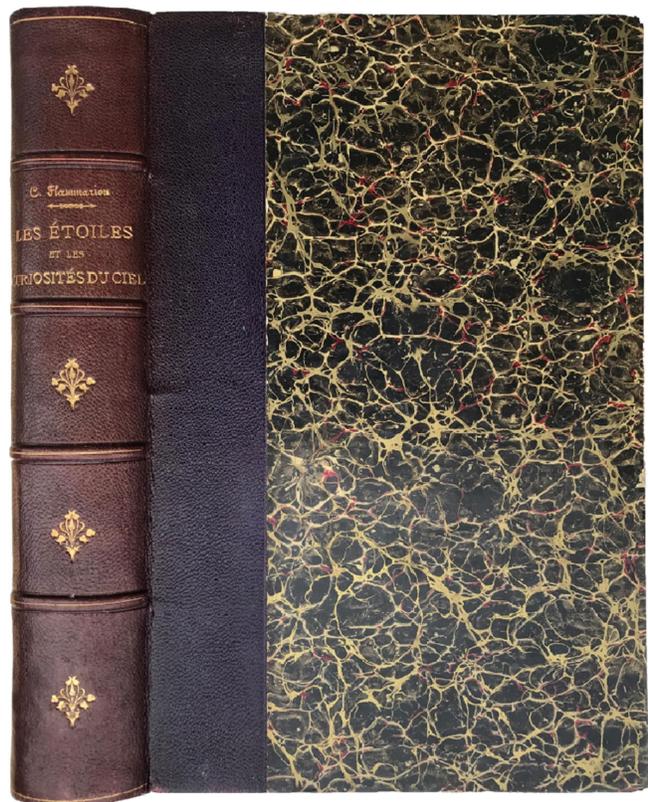
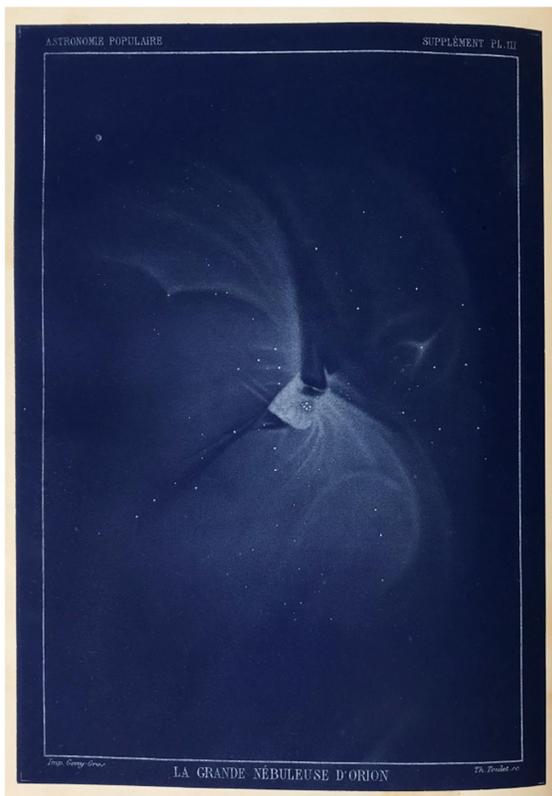
Eighth edition. "William Derham's *Astro-Theology* can serve as a more extensive example. The setting for this work is the claim in Psalm 19 that the heavens declare God's glory. Derham declared his purpose as showing "That observation of the Psalmist is agreeable to experience, is manifest from the deductions which all nations have made from God's works, particularly from those of the heavens; namely, that there is a God; and that such as have pretended to atheism and have deduced God's works from chance, etc. are singular and monstrous in their opinions." [Randy L. Maddox, "John Wesley's Precedent for Theological Engagement with the Natural Sciences." Within: Thomas Jay Oord (ed.), *Divine Grace and Emerging Creation: Wesleyan Forays in Science and Theology of Creation*, Pickwick, 2009.

"Rational analysis of nature, they held, showed that the world cannot be explained by natural causes alone but must be the work of God. Newtonian science demonstrated the need for a Creator, who graciously sustains a world totally incapable of sustaining itself" (Deason, pp. 185-186).

"The physic-theological tradition became prominent in the late sixteenth and early seventeenth centuries through the writing of such well-known figures as Pieter van Musschenbroeck and J. Albert Favbricus in Holland, and John Ray and William Derham in England" (Ruderman, p. 357).

Derham was the author of *The Artificial Clockmaker*, 1696. Of his subsequently written works, the best known are *Physico-Theology*, published in 1713; *Astro-Theology*, 1714; and *Christo-Theology*, 1730. *Astro-Theology* includes several newly identified nebulae, or rather, star-clusters.

CONTENTS (Preliminary discourse): The Author's Glasses and Observations; Of the Ptolemaick System; Of the Copernican System; By whom cultivated; Why preferred by the Author; Objections against it from Scripture; Answered; Of the Sun's Recess; Objections from Sense answered; Objections from Philosophy answer'd; Of the New System; Why most flavoured by the Author; Fixt Stars are Suns; The Author's Opinion about the Whiteness of the Galaxy; The Author suspects there are more New Stars than ever yet have been taken notice of; His Observations of them; How to be observed; The Planets are Worlds; Mr. Huygens denies Seas being in the Moon; The Author's Proof and Observations of them. What Creatures inhabit the Planets. MAIN CONTENTS (in brief): Introduction; I: The Magnitude of the Universe; II: Number of Heavenly Bodies; III: The due Situation of the Heavenly Bodies; IV: The Motions of the Heavens; V: Of the Figure of the Heavenly Bodies; VI: Of Attraction or Gravity; VII: Of Light and Heat; VIII: Practical Inferences from the foregoing Survey.



[FLAMMARION]

12. **FLAMMARION, Camille** (1842-1925). *Les Etoiles et les Curiosités du Ciel; description complète du ciel visible à l'œil nu et de tous les objets célestes faciles à observer, supplément de l'astronomie populaire*. Paris: C. Marpon et E. Flammarion, [1882]. ¶ Large 8vo. [vi], 792 pp. Frontis. portrait, 400 beautiful figures; foxed throughout. Contemporary gilt stamped quarter maroon morocco over marbled boards, raised bands, decorative endpapers. Binding is near fine.

\$ 125

This is a supplemental volume to the author's 1879 "Popular Astronomy" text, an instant best-seller of its day. Many editions were printed and it was also translated. The text is concerned with the stars and heavens, primarily the constellations and zodiac.

Nicolas Camille Flammarion (1842 — 1925) was a French astronomer and author, a grand popularizer of astronomy. He was a prolific author of more than fifty titles, including popular science works about astronomy, several notable early science fiction novels, and several works about Spiritualism, the occult, psychic phenomena, etc. He wrote of life on both the Moon and Mars. "Flammarion also believed in "metempsychosis": the transmigration of souls. In his *Tales of the Infinite* (1872) he described how a spirit might re-incarnate in different forms on other worlds." He also published the magazine *L'Astronomie*, starting in 1882. He maintained a private observatory at Juvisy-sur-Orge, France.

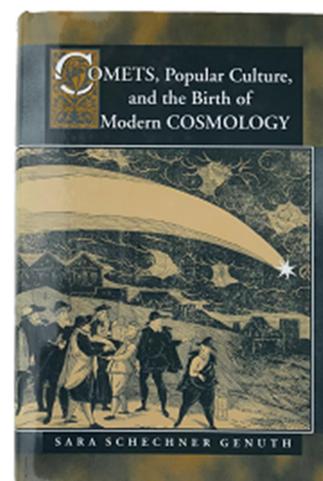
"Flammarion earned the amorous attention of a French countess who died prematurely of tuberculosis. Although they never met, the young woman made an unusual request to her doctor, that when she died he would cut a large piece of skin from her back, bring it to Flammarion, and ask that he have it tanned and used to bind a copy of his next book. (The woman also had a picture of Flammarion tattooed on herself!) Flammarion's first copy of *Terres du Ciel* was bound thus, with an inscription in gold on the front cover: 'Pious fulfillment of an anonymous wish/ Binding in human skin (woman) 1882!.' – This is not that copy!

Michael J. Crowe writes that Flammarion's *Popular Astronomy* was claimed by its translator, J.E. Gore, to be printed in one hundred thousand copies, probably the most popularly sold scientific book up to its time. Thus it was responsible from a wide increasing interest in astronomy. An entire chapter was devoted to life on the Moon. And by such writing Flammarion is accurately described as "enthusiastic and imaginative to a fault." Crowe, *Extraterrestrial Life Debate, 1750-1900*, (1999), p.386.

13. **GENUTH, Sara Schechner**. *Comets, Popular Culture, and the Birth of Modern Cosmology*. Princeton, NJ: Princeton University Press, 1997. ¶ First edition. 8vo. xvi, 365, [3] pp. 53 illus., index. Silver-stamped blue cloth, dust-jacket. Near fine. ISBN: 0691011508

\$ 10.95

In a lively investigation into the boundaries between popular culture and early-modern science, Sara Schechner presents a case study that challenges the view that rationalism was at odds with popular belief in the development of scientific theories. Schechner Genuth delineates the evolution of people's understanding of comets, showing that until the seventeenth century, all members of society dreaded comets as heaven-sent portents of plague, flood, civil disorder, and other calamities. Although these beliefs became spurned as "vulgar superstitions" by the elite before the end of the century, she shows that they were nonetheless

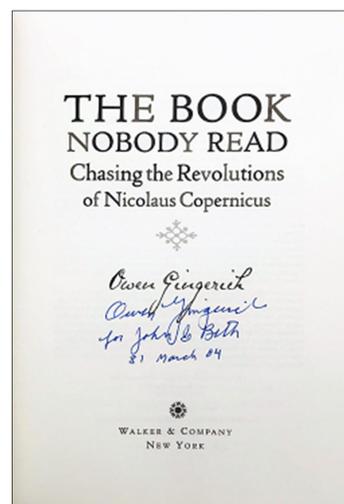


absorbed into the science of Newton and Halley, contributing to their theories in subtle yet profound ways.

Schechner weaves together many strands of thought: views of comets as signs and causes of social and physical changes; vigilance toward monsters and prodigies as indicators of God's will; Christian eschatology; scientific interpretations of Scripture; astrological prognostication and political propaganda; and celestial mechanics and astrophysics. This exploration of the interplay between high and low beliefs about nature leads to the conclusion that popular and long-held views of comets as divine signs were not overturned by astronomical discoveries. Indeed, they became part of the foundation on which modern cosmology was built.

Sara J. Schechner is a scholar-in-residence at the American Institute of Physics and a research fellow at the National Museum of American History. After many years as the Curator of the History of Astronomy Collection at the Adler Planetarium & Astronomy Museum in Chicago, she is now the principal of Gnomon Research, a firm specializing in science exhibits, educational outreach, and collections-based research.

Reviewed: [1] "Comet literature is extensive but, to the best of my knowledge no previous work has quite the grasp of this one. There are some books dealing with restricted subjects that seem certain to become standard references for many years to come. This is one, and it should be in every serious scientific library."--Patrick Moore, *The Times Higher Education Supplement*. [2] "A work of serious scholarship that is rich in fascinating material.... Judiciously selected quotations and fifty three illustrations, some exceptionally striking, add to the pleasure of reading this very engaging story, which is filled with surprises, ironies, and fresh insights."--Michael J. Crowe, *Physics Today*.



14. **[COPERNICUS] GINGERICH, Owen.** *The Book Nobody Read: Chasing the Revolutions of Nicolaus Copernicus*. New York: Walker & Co., 2004. ¶ Second printing. Sm. 8vo. xii, 306 pp. Illus., index. Boards, dust-jacket. Near fine. INSCRIBED BY THE AUTHOR. ISBN 10: 0802714153 ISBN 13: 9780802714152

\$ 55

Inscribed by "Owen Gingerich, for John & Beth [Westfall] . . ."

15. **[COPERNICUS] GINGERICH, Owen.** *The Great Copernicus Chase and other adventures in astronomical history*. Cambridge: Cambridge University Press, 1992. ¶ Large 8vo. xii, 304 pp. Illus., index. Cloth, dust-jacket.

\$ 25

A chance conversation and a surprising motto penned into a sixteenth-century astronomy classic prompted Owen Gingerich to begin his Great Copernicus Chase - a search for all existing copies of Copernicus' monumental *De Revolutionibus*. He tells of his testifying at a trial in which he was the key person who recognized a stolen copy of Copernicus' *De Revolutionibus*, being the same one reported stolen from the Franklin Institute. This book contains 36 of Gingerich's delightful essays on a myriad of topics.

16. **EDBERG, Stephen J.; David H. LEVY.** *Observing Comets, Asteroids, Meteors, and the Zodiacal Light.* Cambridge: Cambridge University Press, 1994. ¶ Series: Practical Astronomy Handbook, 5. First edition. Royal 8vo. xv, [1], 243, [1] pp. Figs., index. Maroon gilt-stamped cloth, dust-jacket. Near fine. ISBN 10: 0521420032

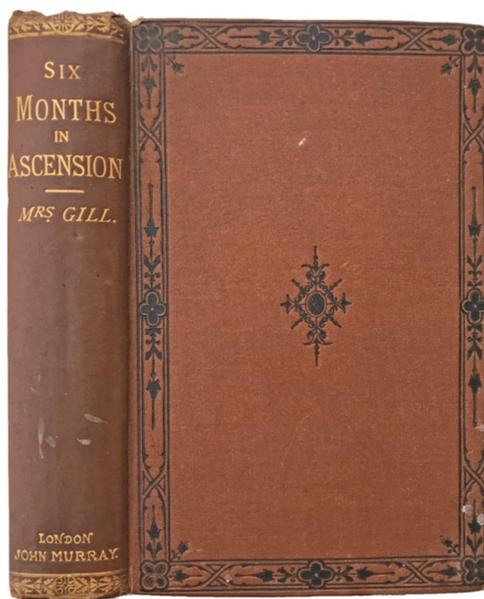
\$ 12.95

"If you are an amateur astronomer, and comets, asteroids, meteors, and the zodiacal light are your quarry, then this is the book for you. Comet observers can learn how to make visual estimates of brightness and size, and how to make photographic studies of cometary heads and tails. Asteroid hunters will find a "life list" of objects and guidelines on how to search for them and then how to photograph or electronically image them. Practical photographic and electronic methods for studying meteors and meteor showers are provided. Visual and photographic techniques show you how to examine the often elusive zodiacal light. The more adventurous are provided with advanced techniques on how to make successful astrometric, spectroscopic and electronic observations. David Levy is the author of *The Sky: A User's Guide* (CUP, 1991). Both authors have had asteroids named after them." [CUP]. Reviews: [1] "...Edberg and Levy guide the beginner every step of the way, never taking anything for granted. But though they start simple, they take you as far as you could want to go...if you are interested in astronomy you can start simple and work your way up to professional standard. This is an excellent place to start on that road." John Gribbin, *New Scientist*. [2] "This collaboration is a comprehensive reference and guide to exactly what the title suggests. Even those not engaged in systematic observation will find the book clarifies how observations are conducted. This is an excellent addition to libraries, for it will be consulted every time any of these phenomena command attention." *Griffith Observer*.

17. **GILL, Mrs. Isabel Sarah Black** (1849-1919). *Six Months in Ascension; an unscientific account of a scientific expedition. Second edition.* London: John Murray, 1880. ¶ Small 8vo. liv, 285, [1], 32 pp. Half-title, frontispiece, fig. (pp. ix, 9), ads. (dated Jan. 1879). Original brown cloth, stamped with black and gilt; rubbed, front inner joint reinforced with kozo (neat). Later owner's inscription, 1884. Very good.

\$ 150

Second edition. In 1874, David Gill joined the expedition to Mauritius to observe the transit of Venus. Three years later he and his wife went to Ascension Island, in the South Atlantic, to observe a near approach of Mars and to calculate its distance. The calculations enabled her husband, David Gill, to measure the distance of the sun from the earth by observing the opposition of the planet Mars. Funded by the Royal Astronomical Society, Sir David Gill led the expedition and used a heliometer and other scientific instruments. Mrs. Gill's account provides personal details and stories omitted from the scientific reports on the expedition as submitted by members of the team. "His measurements of Mars's position as it neared the Earth enabled him to roughly calculate the solar parallax." [Enc. Britannica]



"With the support of the Astronomer Royal, Sir George B. Airy, and the Royal Astronomical Society he undertook an expedition to the island of

Ascension, from June 1877 to January 1878, where he used Lindsay's heliometer and the diurnal method to observe a favourable opposition of the planet Mars and derive an accurate value for the astronomical unit. This value was widely adopted and earned him the gold medal of the Royal Astronomical Society in 1882 as well as a medal from the French Academy of Sciences." [Biographical Database of Southern African Science].

Sir David Gill KCB FRS FRSE FRAS LLD (1843-1914), astronomer, was educated at Dollar Academy and at Marischal College, Aberdeen, Scotland. He attended the lectures of James Clerk Maxwell. [DNB].

18. **GINGERICH, Owen** (editor). *The General History of Astronomy: Astrophysics and twentieth-century astronomy to 1950. Part A*. Cambridge: Cambridge University Press, 1984. ¶ Royal 8vo. x, [2], 198, Aviii, Ivi pp. [A=appendix; I=Index]. Illustrated. Red & navy blue, black, printed wrappers. INCLUDES ROY PORTER'S REVIEW [as an offprint]. Near fine. ISBN: 9780521135429

\$ 35

"Volume 4 of *The General History of Astronomy*, originally published in 1984, concerns the birth of modern astrophysics in the nineteenth century, the growth of astronomical institutions to around 1920, and the development of instrumentation. The volume commences in the 1850s, with the first astronomical applications of photography and spectral analysis. It closes in the 1950s, before the explosive growth made possible by new electronic devices and computers. In Part A, there are eleven chapters, written by an international panel of eighteen authors, on subjects such as observatories, large telescopes, astronomy in the southern hemisphere, and early radio astronomy. Intended for general readership, this book formed part of an in-depth synthesis of the development of astronomy from the earliest times."

19. **HALL, James A., III**. *Moons of the Solar System; From Giant Ganymede to Dainty Dactyl (Astronomers' Universe)*. New York: Springer, 2016. ¶ 8vo. xxxviii, 297, [1] pp. Profusely illustrated (some color), index. Original printed wrappers. Like new. ISBN: 9783319206356

\$ 22

Introduces every moon, including Earth's Moon and the recently discovered Trans-Neptunian Objects (TNOs), that is currently known in the solar system, not just the bigger, more well-known ones. / This book captures the complex world of planetary moons, which are more diverse than Earth's sole satellite might lead you to believe. New missions continue to find more of these planetary satellites, making an up to date guide more necessary than ever. Why do Mercury and Venus have no moons at all? Earth's Moon, of course, is covered in the book with highly detailed maps. Then we move outward to the moons of Mars, then on to many of the more notable asteroid moons, and finally to a list of less-notable ones. / All the major moons of the gas giant planets are covered in great detail, while the lesser-known satellites of these worlds are also touched on. Readers will learn of the remarkable trans-Neptunian Objects – Pluto, Eris, Sedna, Quaoar –including many of those that have been given scant attention in the literature. More than just objects to read about, the planets' satellites provide us with important information about the history of the solar system. Projects to help us learn more about the moons are included throughout the book. Most amateur astronomers can name some of the more prominent moons in the solar system, but few are intimately familiar with the full variety that exists in our backyard: 146 and counting. As our understanding of the many bodies in our solar system broadens, this is an invaluable tour of our expanding knowledge of the moons both near and far.

20. [HALLEY, Edmond (1656-1742)]. Alan COOK. *Edmond Halley; Charting the Heavens and the Seas*. Oxford: Clarendon Press, 1998. ¶ 8vo. xvi, 540 pp. 18 plates, tables, figures, bibliography, index. White-stamped teal cloth, dust-jacket; some creasing to jacket. Very good. [S12563] ISBN: 0198500319

\$ 22

First edition. "Edmond Halley (1656-1742), MA, LLD, FRS, Capt. RN, Savillian Professor of Geometry and Astronomer Royal, stands pre-eminent among Oxford, English, and European scientists." [Clarendon Press].

"WHEN you spend 14 years of your life working in an office above Edmund Halley's old observatory, and you walk through what was his bedroom, study and kitchen every time you want a cup of coffee, you tend to get somewhat attached to the chap. And in the late evenings, when the tourists have left the old observatory at Greenwich, it is very easy to imagine yourself transported back to Halley's era. Luckily, Alan Cook's Edmond Halley is a masterly biography that can easily flesh out your imaginings.

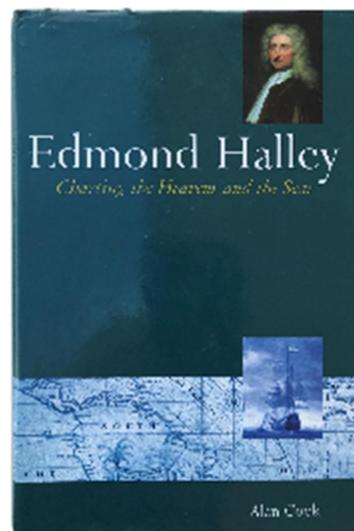
"Halley was a Londoner and lived through one of the most dramatic periods of that city's history.

"Born in 1656 Halley had four great advantages in life. First, he was an extremely clever and industrious general scientist who not only had many bright and original ideas, but who also approached science with a drive, practicality and enthusiasm that never left him. Secondly, he enjoyed 50 years of active scientific endeavour at a time when the subject was advancing at a great rate. Thirdly, he got on well with his friends and acquaintances and was greatly liked, which meant he had many useful and helpful scientific and social contacts. And finally, his father was both rich and generous, so Halley had financial independence, and all the patronage he needed.

"The four cardinal points of Halley's career were his clerkship at the Royal Society, his unofficial role as hydrographer and chief scientist to the Royal Navy, his work as Savilian professor of geometry at Oxford, and his appointment as England's second Astronomer Royal. He died in 1742.

"Today, we remember Halley for his periodic comet, but in his time he was famous as an adventurous navigator who travelled across the Atlantic to the realms of the southern ice. He was also noted for his knack of taking huge bodies of data and reducing them to manageable and sensible forms. His maps of the deviation of the compass needle from true north and his charts of the tides are perfect examples. As an outstanding empirical natural philosopher he compared these observations with abstract models, gaining a deep insight into their underlying physical causes.

"Halley showed a refreshing faith in the importance and usefulness of historical material. He realised the cosmos was changing. This was confirmed by his discovery that certain stars had changed their celestial positions during the previous two millennia, and that the Moon was moving away from the Earth. Halley also stressed the Earth was older than the contemporary biblical chronologists insisted, and its magnetism slowly varied.



"He believed deeply that a useful scientific hypothesis not only accounted for what is already known, but should also be able to predict what has yet to be discovered. Halley was also a generous communicator with an altruistic concern for the advancement of learning and knowledge.

"Unfortunately, the main problem for a biographer of Halley is that our knowledge of the man is seriously unbalanced. His scientific, naval and diplomatic activities are well documented. But his social and family life are sparsely recorded.

"Cook has done his best to overcome this and has written an erudite, thorough and extremely readable biography based on primary sources. Cook provides us with a masterly insight not only into Halley's science but also into the relationship between Halley and the society of the day. What I liked was the way in which Cook was not side-stepped by the bitter carpings of John Flamsteed about Halley's supposedly irreligious attitudes.

"This book is well illustrated and extremely well referenced. It is a worthy tribute to the life of this country's second greatest scientist." [Carole Stott, book review, *New Scientist*, 14 February 1998.

21. **HILL, Harold**. *A Portfolio of Lunar Drawings*. Cambridge: Cambridge University Press, 1991. ¶ 4to. xxiv, 240 pp. Illustrated throughout. Blue cloth, dust-jacket; jacket gently worn (1 tear on rear). WITH A LENGTHY TYPED, SIGNED LETTER FROM THE AUTHOR, 18 July 1991. Very good. ISBN 10: 0521381134 / ISBN 13: 9780521381130

\$ 75

First edition. "Harold Hill's lunar portfolio is a unique collection of drawings now published for the first time. Each illustration is supplemented with notes made at the time of observation. Astronomical drawing still has an important place alongside photography in the same way that photography has not supplanted the artist in the fields of botany and ornithology, for example. Indeed, since astronomical images tend to shimmer because of turbulence in the Earth's atmosphere, drawings constructed by an artist who takes advantage of the fleeting moments of perfect vision are often more detailed than photographs. No one can fail to be impressed by the beauty and artistry of this work and, to the initiated, the accuracy and attention to detail is remarkable. This is a book for astronomers, amateur and professional alike, and for those who would simply like to know more about the moon." [CUP]. REVIEW: '... Hill combines artistry with accuracy, a rare combination! ... This book will appeal greatly to all lunar observers.' *Journal of the British Astronomical Association*. This work was also, [later, in 2003], issued in paperback; this is the hardcover first edition.

22. [**HORROX, Jeremiah** (1618-1641)] **Arundell Blount WHATTON** (editor). *Memoir of the Life and Labors of the Rev. Jeremiah Horrox; to which is appended a translation of his celebrated discourse upon the transit of Venus across the Sun*. Cambridge: Cambridge University Press, 2010. ¶ Small 8vo. xvi, 216 pp. Original printed wrappers. Fine. ISBN 10: 1108014410

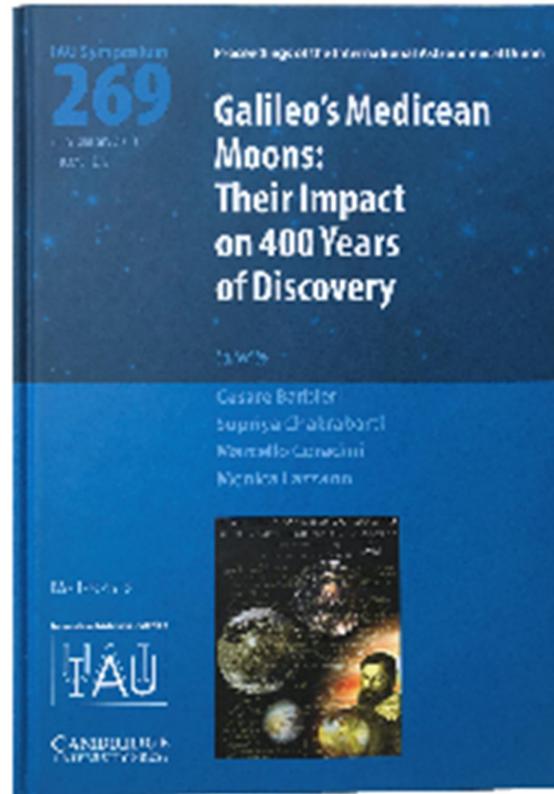
\$ 12

Reprinting the edition that first appeared in 1859. "This memoir of 1859 was part of a Victorian revival of interest in Horrox. It includes a translation of his major work, *Venus in Sole Visa*, a draft of a treatise on the transit of Venus, in which he describes the conjunction of Venus with the sun, which he correctly calculated and observed in 1639." CUP.

23. **International Astronomical Union; BARBIERI, Cesare** (et.al). [editors]. *Galileo's Medicean Moons: their impact on 400 years of discovery : proceedings of the 269th Symposium of the International Astronomical Union held in Padova, Italy, January 6-9, 2010*. Cambridge: Cambridge University Press, 2010. ¶ Series: International Astronomical Union [IAU S269], Symposium 269. Large 8vo. xxii, 271, [3] pp. 150 illustrations (some color), 20 tables, subject index. Pictorial blue boards. Very good copy. ISBN: 9780521195560

\$ 20

"IAU Symposium 269 celebrates the 400th anniversary of Galileo Galilei's discovery of the Medicean Moons, Jupiter's four largest satellites, exploring the impact his findings have had on science and the humanities. Galileo's instrumental discovery and his belief that the planets and moons in our Solar System could be habitable worlds encouraged a deeper understanding of our place in the Universe. Today, ongoing space missions to Jupiter's moons, our own Moon, Mars, Saturn, and Enceladus, reveal our continued fascination with the possibilities of alien life, but this time with a focus on potential host sites for primitive life forms. These critical reviews examine our present knowledge of the Jupiter system, and consider how future space missions and improvements in telescopes will bolster the contemporary vision of our Solar System, of the many known extrasolar planetary systems, and of life forms beyond the Solar System."



CUP points out that this work [1] Presents an overview of Galileo Galilei's astronomical discoveries, explaining how his findings pushed us towards a deeper understanding of our place in the Universe. [2] Examines our current knowledge of Jupiter and its moons. [3] Considers how future space missions will bolster our contemporary vision of the Solar System, of extra-solar planetary systems, and of potential life forms beyond our Solar System.

Jointly edited by: Cesare Barbieri, University of Padua; Supriya Chakrabarti, Boston University; Marcello Coradini, European Space Agency; Monica Lazzarin, University of Padua.

With contributions by: George V. Coyne, S. J., Dava Sobel, Tobias Owen, Scott Bolton, Giulio Peruzzi, Alberto Righini, Michael Mendillo, Kaare Aksnes, Torrence V. Johnson, Margaret G. Kivelson, Xianzhe Jia, Krishan K. Khurana, Supriya Chakrabarti, Marina Galand, Nicholas M. Schneider, Wing-Huen Ip, Scott J. Bolton, the Juno Science Team, Robert T. Pappalardo, Lev Zelenyi, Oleg Korablev, Elena Vorobyova, Maxim Martynov, Efraim L. Akim, Alexander Zakahrov, Sushil K. Atreya, Louise M. Prockter, Peter D. Bedini, Thérèse Encrenaz, Kevin P. Hand, Chris McKay, Carl Pilcher, Guy Consolmagno, S. J., Roger M. Bonnet.

24. **International Astronomical Union; KURTZ, D. W.** (editor). *Transits of Venus: New Views of the Solar System and Galaxy*. Cambridge: Cambridge University Press, 2005. ¶ 8vo. xvi, 538 pp. Illustrated throughout, author index. Pictorial hardcover. Near fine. ISBN 10: 0521849071

\$ 40

IAU C196 coincided with the 8 June 2004 transit of Venus, producing the exciting, eclectic mix that can be found in these proceedings: the amazing history of the English North-country astronomers of the seventeenth century; the AU at a precision of 1.4 m; the explanation for the infamous black drop effect; a possible Mayan observation of a transit of Venus in the thirteenth century; the vexed question of leap seconds and time scales; history, distances, parallaxes, the solar system at exquisite precision and future space missions that will revolutionize astronomy.

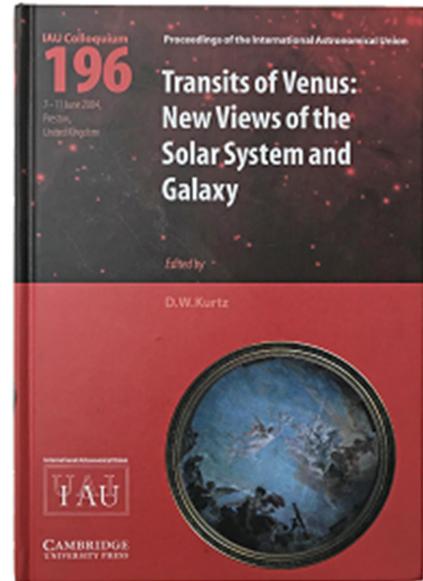
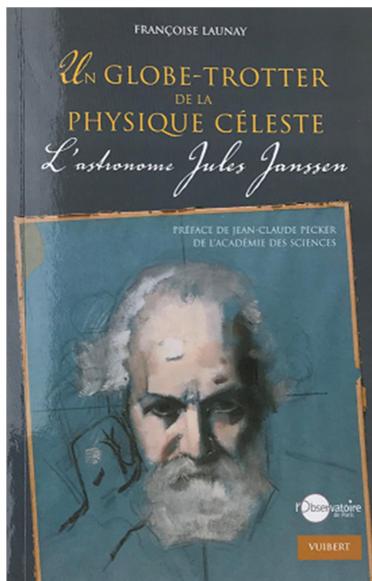


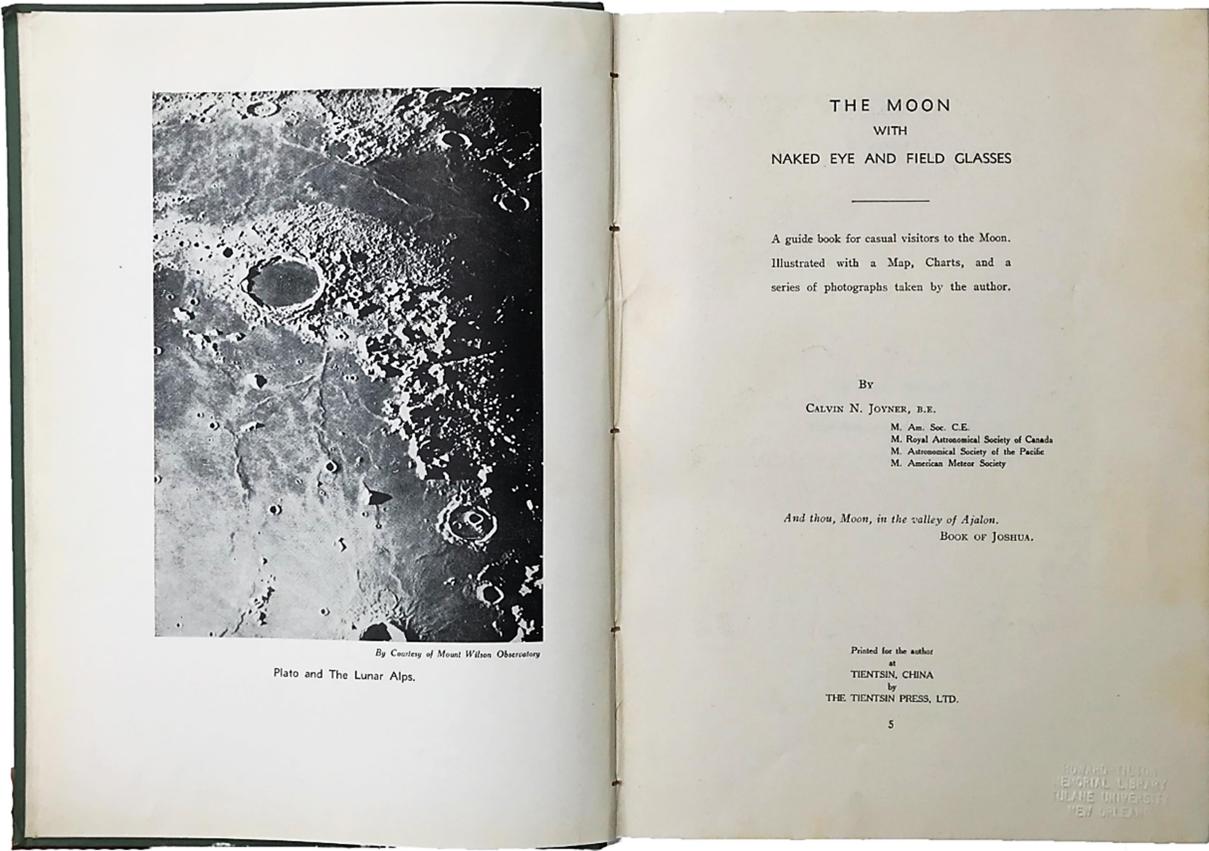
Table of Contents: Part I. Transits of Venus: History, Results and Legacy: Part II. The AU and the PC. / Part III. Transits, the Solar System and Extra-Solar Planets. / Part IV. The Jeremiah Horrocks Memorial Public Lecture. / Part V. New Views of the Galaxy: Parallaxes, Distances and Implications for Astrophysics. / Part VI. New Views of the Galaxy: Future Space and Ground-Based Programmes. / Part VII. Summary. [D. W. Kurtz, Lancaster University].



25. **[JANSSEN, Jules (1824-1907)] Françoise LAUNAY.** *Un Globe-Trotter de la physique celeste. L'astronome Jules Janssen*. Paris: Vuibert, 2008. ¶ 8vo. 281, [1] pp. Gray pictorial wrappers. Near fine. ISBN 13: 9782711770694

\$ 18

"Pierre Jules César Janssen, also known as Jules Janssen, was a French astronomer who, along with English scientist Joseph Norman Lockyer, is credited with discovering the gaseous nature of the solar chromosphere, and with some justification the element helium." [Wikip.].



*Printed in Tientsin, China*

26. **JOYNER, Calvin N. (Nicolas)**. *The Moon with Naked Eye and Field Glasses*. A guide book for casual visitors to the moon. Tientsin, China: Printed by the Tientsin Press Ltd., 1936. ¶ Small 4to. 135, [1] pp. 11 photographic plates, large folding map in rear pocket. Original green cloth. Ex-library (withdrawn) bookplate, embossed stamp on title, a few minor rubber-stamps. INSCRIBED BY THE AUTHOR TO HIS PARENTS "To mother and father, with love from Calvin . . ." Very well preserved copy.

\$ 200

First edition and quite scarce. F.S. Hogg reviewed this book, "The author, a diligent amateur working in China with a twelve-inch reflector, has prepared this book to serve as an introduction to the study of the topography of the moon."

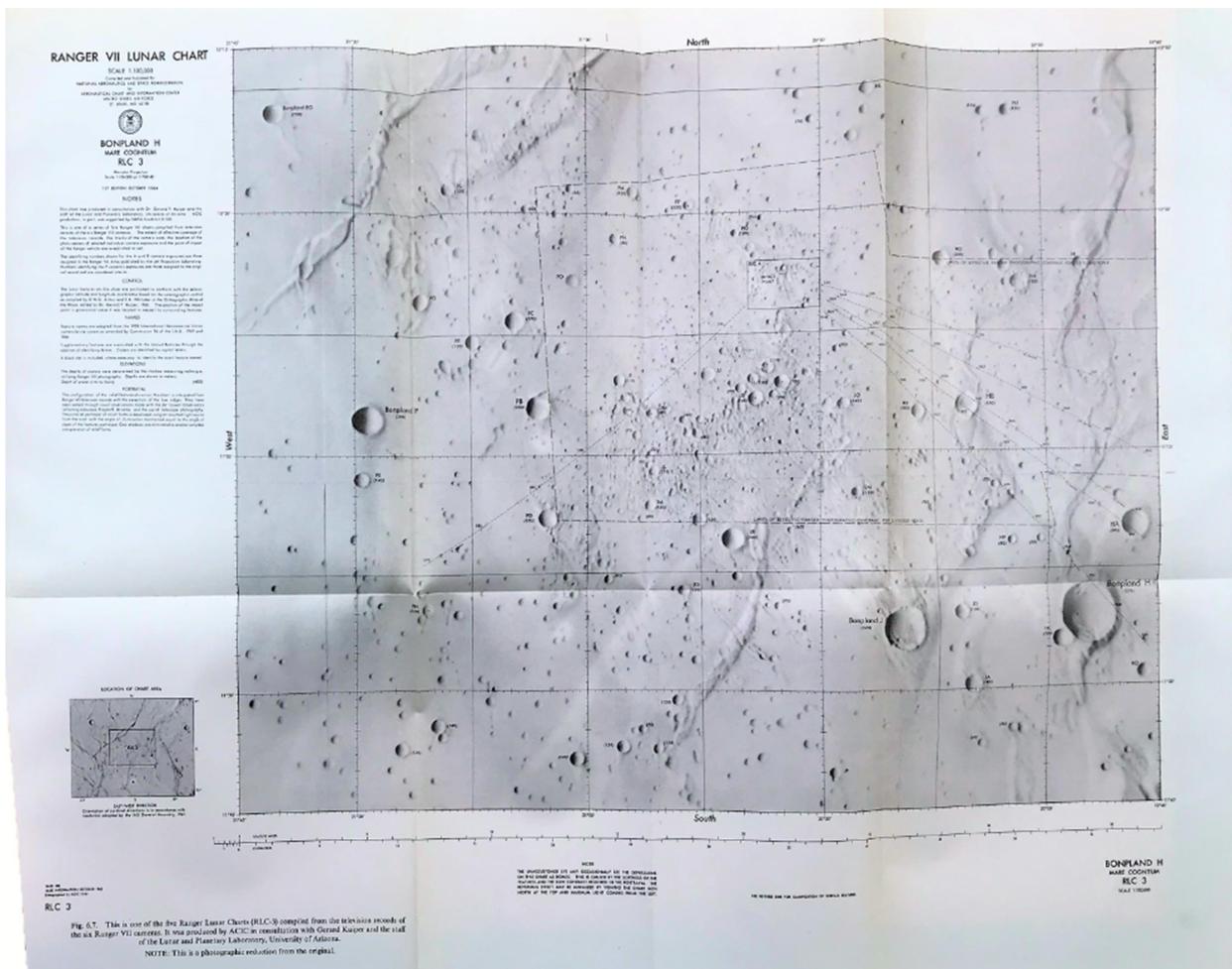
With the over-sized folding map which is found in the rear pocket.

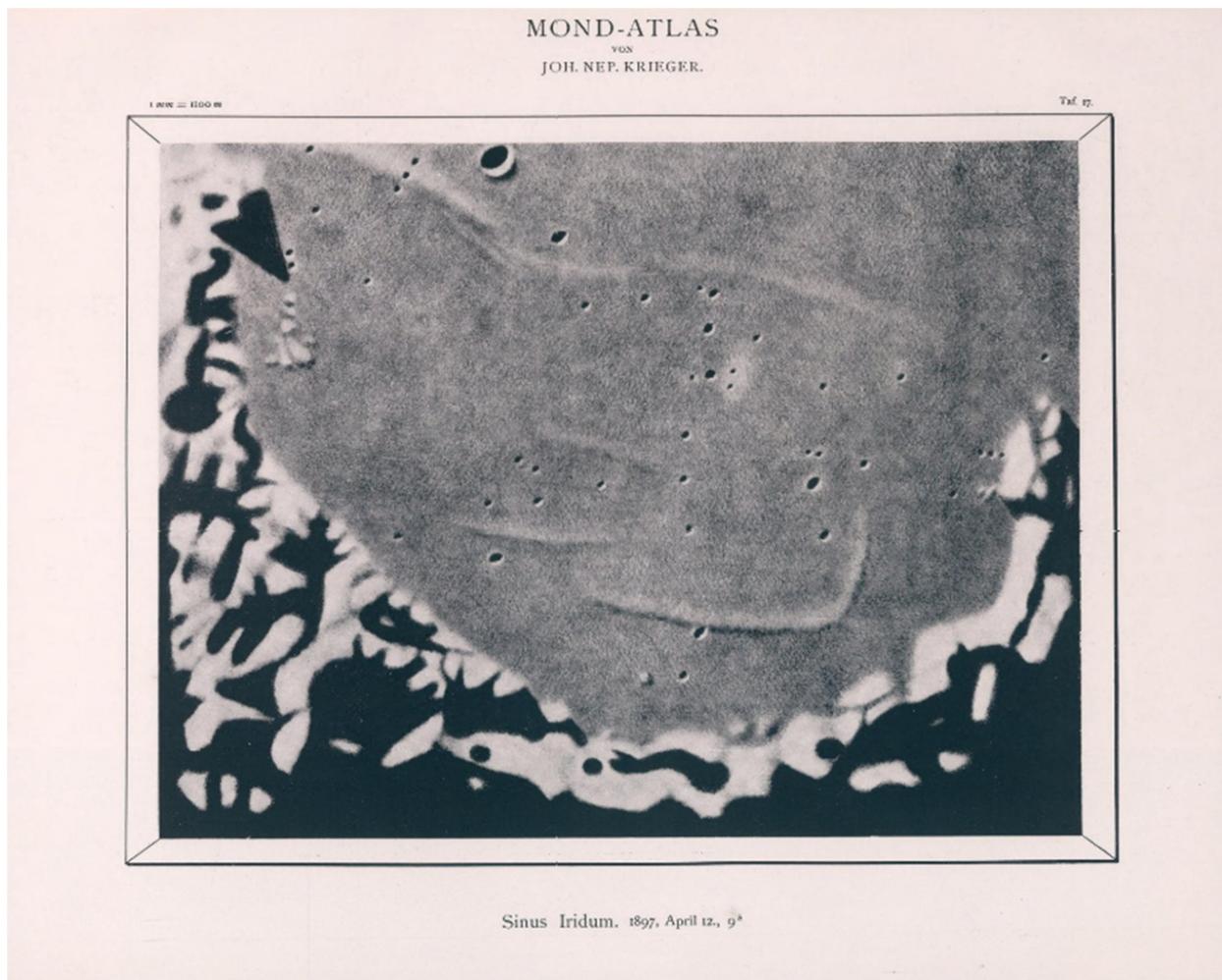
*Standard History of the Telescope*

27. **KING, Henry C.** *The History of the Telescope*. New York: Dover, [1955]. ¶ 8vo. xvi, [2], 456 pp. Illus., index. Printed wrappers. Very good. Ownership label affixed to front inside cover. ISBN 10: 0486432653 \$ 7.50
28. **KOPAL, Zdenek** (1914-1993); **Robert W. CARDER.** *Mapping of the Moon; past and present*. Dordrecht-Holland & Boston: D. Reidel, 1974. ¶ Series: Astrophysics and Space Science Library, vol. 50. 8vo. viii, 237, [3] pp. Illustrated (3 plates are folding), index. Gray cloth with blue printed lettering. Ownership signature of John Westfall. ISBN: 9027703981 \$ 90

First edition. Important work. Includes a history of lunar mapping 1600-1960.

"Kopal was born and grew up in Litomyšl (Czechoslovakia, now Czech Republic). In his early astronomical career, he studied variable stars and in particular close eclipsing binary stars. He attended Cambridge University in 1938 and later that year he went to Harvard College Observatory. After the war he became head of the astronomy department at the University of Manchester. He later assisted NASA with the Apollo program as an external expert. He was Editor-in-Chief of the journal *Astrophysics and Space Science* since its foundation in 1968 until his death in 1993." [Wikip.]





*Arnaldo Faustini's Copy*

29. **KRIEGER, Johann Nepomuk** (1865-1902). *Mond-Atlas entworfen nach den Beobachtungen an der Pia-Sternwarte in Triest*. Triest: Ed. Heinr. Mayer, 1898. ¶ Small folio. 20 pp. 28 plates. Original portfolio. Bookplate of "A.F." (being a collector of Arctic voyages: Antonio Zeno Barentz, Franklin, James C. Ross, Adrien de Gerlache, Scott); title-page signed "A. Faustini", [Brooklyn], 1924.

WITH:

**KONIG, Rudolf** (1865-1927). *Job. Nep. Kriegers Mond-Atlas; nach seinen an der Pia-Sternwarte in Triest angestellten Beobachtungen unter Zugrundelegung der hinterlassenen Zeichnungen und Skizzen. Bearb. und mit Unterstützung der kaiserl. Akademie der Wissenschaften in Wien aus den Mitteln der Treitl-Stiftung, hrsg. von Rudolf König. Neue Folge*. Vienna: In Kommission bei Eduard Heinrich Mayer, 1912. ¶ Two volumes [Text & Atlas]. XVIII, 376 pp. 31 illustrations. Atlas: 58 plates, numbered from 29-86, with an

additional unnumbered large folding map-plate of the Moon. Original cloth; recased. Title-pages both signed "A. Faustini", [Brooklyn], 1924.

[Together, 3 volumes] \$ 3,000

FIRST EDITIONS. Krieger was a draftsman and selenographer who produced detailed hand-drawn maps of the lunar surface at his Italian observatory. Krieger decided to create a definitive map of the Moon. For this purpose he obtained a series of low-resolution negatives of the lunar surface that had been taken at the Lick and Paris observatories. He enlarged these images and used them to provide positional accuracy for his subsequent drawings. His illustrations of the Moon were made in charcoal, graphite pencil, and ink, and were considered superior to any previously produced lunar maps in their accuracy and level of detail, and continue to be considered works of art.

He lived long enough to see his first 28 plates published as volume 1 of his "Mond Atlas". However his health had suffered, possibly due to his long nightly labors at his telescope. About 10 years following his death, his remaining drawings and sketches were published in a second volume by the Austrian selenographer Rudolf König [included].

Rudolf König (1865 – 1927), born in Vienna, was an Austrian merchant, amateur astronomer and selenographer. He was friends with Krieger and finished the book his friend had intended, though it would appear by enhancing it much further.

PROVENANCE: Arnaldo Faustini (1872–1944) was an Italian polar explorer, geographer, writer, and cartographer. He is considered by some to be the first South European polar specialist. Born in Rome, he received his doctorate at the University of Rome at the age of 21. Faustini worked at a newspaper based in Rome as scientific editor. He had a special interest in polar subjects, and published 19 books on polar subjects in his native Italian. He also wrote numerous articles. Among the polar explorers Faustini knew personally were Roald Amundsen, Ernest Shackleton, Robert F. Scott, and Adrien de Gerlache, of the Belgian Antarctic Expedition. Faustini translated into Italian De Gerlache's French language account of his voyage. Faustini also drew the map of the area explored by the Belgians. In gratitude, De Gerlache gave him the flag from the expedition's ship, the SS Belgica.

The polar explorer Augustus Greely invited Faustini to the United States in 1915 for a lecture tour. While lecturing at Columbia University, Faustini met Amelia Del Colle, who later became his wife.

Faustini's interests were wide-ranging. In an unpublished 1918 manuscript entitled *Catalogo Descrittivo di Ponti ed Archi Naturali* ("Descriptive Catalog of Natural

Bridges and Arches”), Faustini wrote: "Completed under every standpoint, for a future, eventual publication – text, topographical sketches, illustrations, contents, indexes, etc., that I think to be my greatest work of physical geography." He was fluent in French, English, Spanish and Russian and understood Greek.

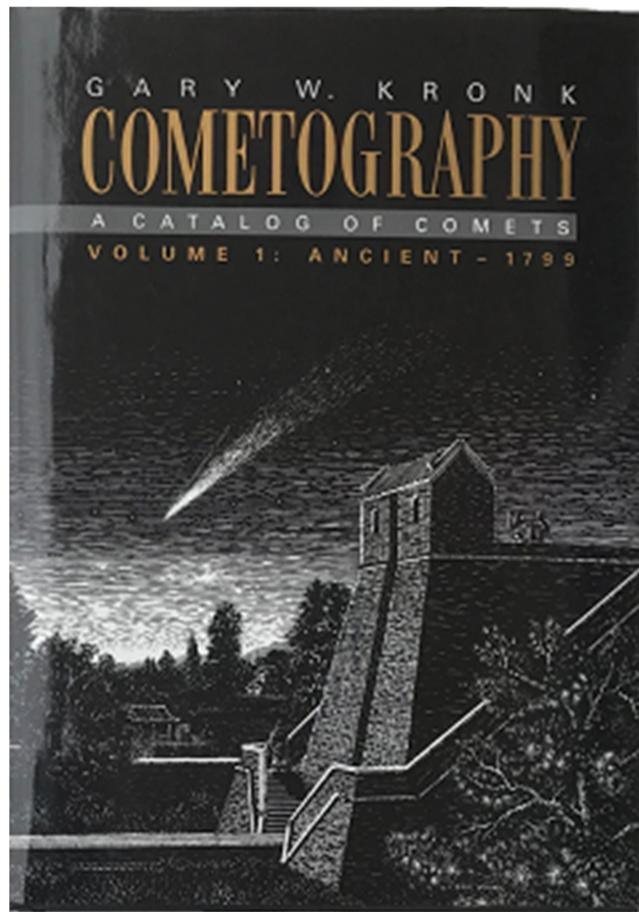
The crater Faustini on the Moon is named after him. His papers on the Arctic and Antarctic are held in the Archives of the Istituto Geografico Polare "Silvio Zavatti" (Zavatti Polar Institute) in Fermo. In 1908 his polar geography appeared, *Le Terre Polari*. In 1912 was issued his Eskimo & their customs book, *Gli eschimesi; la razza, gli usi e i costume*.

30. **KRONK, Gary W.** *Cometography; A Catalog of Comets. Volume 1: Ancient-1799.* Cambridge: Cambridge University Press, 1999. ¶ Large 8vo. xvi, 563, [1] pp. Black gilt-stamped cloth, dust-jacket. Fine. ISBN 10: 052158504X

\$ 165

"Cometography is a multi-volume catalog [6 volumes] of every comet observed throughout history. It uses the most reliable orbits known to determine the distances from the Earth and Sun at the time a comet was discovered and last observed, as well as the largest and smallest angular distance to the Sun, most northerly and southerly declination, closest distance to the Earth, and other details to enable the reader to understand the physical appearance of each well-observed comet. Volume 4 provides a complete discussion of each comet seen from 1933 to 1959. It includes physical descriptions made throughout each comet's apparition. The comets are listed in chronological order, and each listing includes complete references to publications relating to the comet. This book is the most complete and comprehensive collection of comet data available, and provides amateur and professional astronomers, and historians of science, with a definitive reference on comets through the ages." Reviewed: '... an indispensable reference for historians, comet researchers, and true enthusiasts of the field ... the book's value is inestimable and I can only give [it] my highest praise.'

Source: Sky Telescope. '... the most complete and comprehensive collection of comet data available ...' Source: Spaceflight.





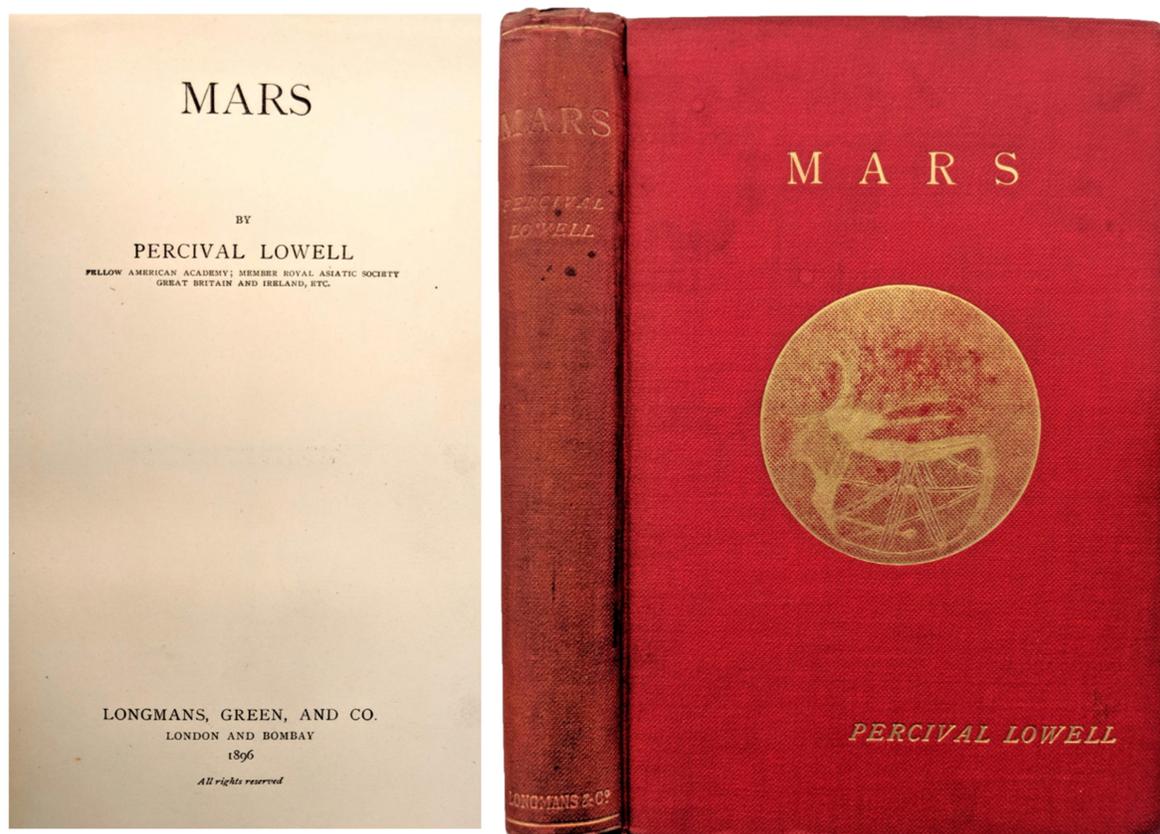
together. 8vo. (Begins with vol. XIX) 72, 134 pp. 16 photographic plates & 2 folding plates, figs., tables; vol. XIX lacks: title, contents & part IV. Early half green crushed morocco, gilt spine, green cloth boards, original blue printed wrappers bound at rear; corners showing, spine slightly worn, minor stain to front board. Very good. S7533

\$ 125

FIRST EDITION. Features fascinating observations on: comets, the Sun, Mars, & Jupiter, with 16 photographic plates & 2 folding plates. Parts II & III of vol. XVII are by E. M. Antoniadi and deal with observations of Mars in 1905 & 1907 respectively, and feature 2 folding Mars maps.

Frederick William Levander F.R.A.S. was also known as Fred Levander. He was born in 1839 at Exmouth, Devon, England; and his birth was recorded at St Thomas Registration district in the June quarter 1839. He was the son of James Levander and Julia Jones. Frederick William Levander F.R.A.S.

He married Susannah Elizabeth Oakes on 22 December 1866 at Holy Trinity, Clapham, Surrey, England; and their marriage was registered in the December quarter 1866 at Wandsworth Registration district; Frederick was a Tutor of Clapham and Susannah was living in Bromley, Kent. Frederick William Levander F.R.A.S. was recorded as a Tutor/Private Tutor on the Christening records of his seven children between 21 October 1868 and 26 November 1883. He appeared on the census of 2 April 1871 at 81 Richmond Road, Islington, London, England, as Head, married, age 31, birthplace Exmouth, Devon, and he was a 'Teacher of Mathematics....' He was living with his Wife Susannah and Daughters Mary and Florence. He was the author of 'Solutions of the Questions in Magnetism and Electricity: Set at the Preliminary Scientific and First B. Sc Pass Examinations of the University of London from 18?? to 1879' published in 1880, 'now ready fcp 8vo. 2s.6d.' 12 February 1881, and 'Second Edition, corrected and enlarged' in 1885 between 1880 and 1885. He appeared on the census of 3 April 1881 at 30 North Villas, St Pancras, London, England, as Brother [Head: Henry C Levander], married age 41, birthplace Exmouth, Devon, and he was a Tutor. He was listed in 'Post Office London Directory, 1882' as follows: 'Levander Frederick William, F.R.A.S., 30 North villas, Camden square NW' and he shared the premises with his brother Henry Charles Levander.



33. **LOWELL, Percival** (1855-1916). *Mars*. London: Longmans, Green, 1896. ¶ 8vo. vi, 228 pp. Original red blind- and gilt-stamped cloth, top edge gilt; spine ends slightly frayed, lower corner lightly bumped, marginal wear to title. Very good. RW1534

\$1,000

First edition. A great believer of life on Mars, Lowell, a very wealthy man, "had a profound influence on the general public." *DSB VIII*, p. 520.

Lowell has always suffered for his status as an amateur astronomer, but he nonetheless was both influential and he touched a chord of interest in the aspect of life on Mars and the evidence thereof (i.e., the canal system). Ray Bradbury said it with his own science-fiction brand, "We are the Martians." – *The Martian Chronicles*.

Lowell worked tirelessly to study and popularize his understanding of the planets, and it was hard work that played a key role in the discovery of Pluto. While many of his theories have been debunked with the advent of modern technology, his name is inextricably linked with the history of thought about our neighboring planets and in particular Mars.

34. [LOWELL, Percival] David STRAUSS. *Percival Lowell, The Culture and Science of a Boston Brahmin*. Cambridge: Harvard University Press, 2001. ¶ 8vo. xi, [3], 333, [1] pp. Frontis., 4 illus., index. Black cloth, dust-jacket. Very good. ISBN 10: 0674002911 ISBN 13: 9780674002913

\$ 40

"This engaging and wide-ranging biography casts new light on the life and careers of Percival Lowell. Scion of a wealthy Boston family, elder brother of Harvard President Lawrence and poet Amy, Percival Lowell is best remembered as the astronomer who claimed that intelligent beings had built a network of canals on Mars. But the Lowell who emerges in David Strauss's finely textured portrait was a polymath: not just a self-taught astronomer, but a shrewd investor, skilled photographer, inspired public speaker, and adventure-travel writer whose popular books contributed to an awakening American interest in Japan. / Strauss shows that Lowell consistently followed the same intellectual agenda. One of the principal American disciples of Herbert Spencer, Lowell, in his investigations of Japanese culture, set out to confirm Spencer's notion that Westerners were the highest expression of the evolutionary process. In his brilliant defense of the canals on Mars, Lowell drew on Spencer's claim that planets would develop life-supporting atmospheres over time. / Strauss's charming, somewhat bittersweet tale is the story of a rebellious Boston Brahmin whose outsider mentality, deep commitment to personal freedom, and competence in two cultures all contributed to the very special character of his careers, first as a cultural analyst and then more memorably as an astronomer." The author, David STRAUSS, is an emeritus professor of history, Kalamazoo College. REVIEW: "A good biography keeps two elements in delicate balance: what they did and why they did it. David Strauss...has got it exactly right in Percival Lowell... Strauss's gripping and erudite biography is a marvelous portrait of this American aristocrat and maverick of science, and his conflicts and achievements. They really don't make astronomers like that anymore."—David Hughes, *New Scientist*.

CONTENTS: Introduction: Percival Lowell and the Boston Brahmins; I. The Private Lowell; 1. The Making of an Improper Bostonian; 2. Lowell and His Peers; 3. Preparation of a Polymath; 4. New Careers; II. Lowell as Spencerian; 5. Cosmic Philosopher; 6. Image-Maker; 7. Psychical Researcher; 8. Cosmogonist; III. Lowell as Astronomer; 9. From "Astronomical Picnic" to Observatory; 10. Lowell's Campaign for the Canals of Mars; 11. The Establishment Responds; 12. The Search for Recognition; Conclusion: A Proper Bostonian on Mars Hill.

35. **MANLY, Peter L.** *Unusual Telescopes*. Cambridge: Cambridge University Press, 1995. ¶ Small 8vo. xvii, [1], 221, [1] pp. Illustrated, index. Red gilt-stamped cloth, dust-jacket; two cellophane strips applied to the rear of the jacket. Ownership signature of John Westfall. Very good. ISBN 10: 0521382009 ISBN 13: 9780521382007

\$ 22

"In this book, Peter Manly surveys more than 150 unusual telescope designs. These are telescopes built by amateur and professional astronomers to suit some special need. There is, for instance, an inflatable telescope and one with a liquid mirror. Every so often a neglected design comes back into fashion: the largest telescopes now under construction use the alt-azimuth design that was ignored for over a century, and liquid mirror telescopes can be used for zenithal astronomy. The author shows why a particular engineering approach makes each telescope unique and explains the rationale behind the design. The effects on telescope performance are discussed where possible. This is not just a collection of weird and wonderful devices that proved to be false starts; the author also discusses the first instrument to measure star diameters and the first useful radio telescope. This book is a resource and stimulus for anyone who likes to build astronomical telescopes or is interested in the history of telescope-making." [CUP]. REVIEWS: [1] "...amatuer astronomer Peter Manly takes us on an unforgettable tour... the reader leaves this book with an increased sense of awareness of how varied and beautiful the history of telescopes has been." David H. Levy, *The Strolling Astronomer*; [2] "...this book takes its task seriously, resulting in a good read for people interested in learning about how telescope designs evolved; how some oddball shapes of one time turned into the accepted design of another." David H. Levy, *The Strolling Astronomer*. [3] "This well-illustrated book takes delight in the offbeat designs that have popped up throughout nearly four centuries of telescope making." R. W. Sinnott, *Sky & Telescope*.

CONTENTS: Preface; 1. Optics; 2. Telescope mounts; 3. Telescope and mount materials; 4. Strange drivers; 5. Moving the whole telescope; 6. The moving eyepiece; 7. The stationary eyepiece; 8. Limits; 9. Whimsy.

36. **MANNING, Thomas G.** *U.S. Coast Survey vs. Naval Hydrographic Office; A 19<sup>th</sup> - Century Rivalry in Science and Politics*. Tuscaloosa & London: University of Alabama Press, 1988. ¶ Series: History of American Science and Technology. 8vo. xii, [2], 202 pp. Index. Gray cloth, dust-jacket. Near fine. ISBN: 0817303901 \$ 5

37. **MOREUX, The Abbé Th. (Théophile)** (1867-1954). *A Day in the Moon*.

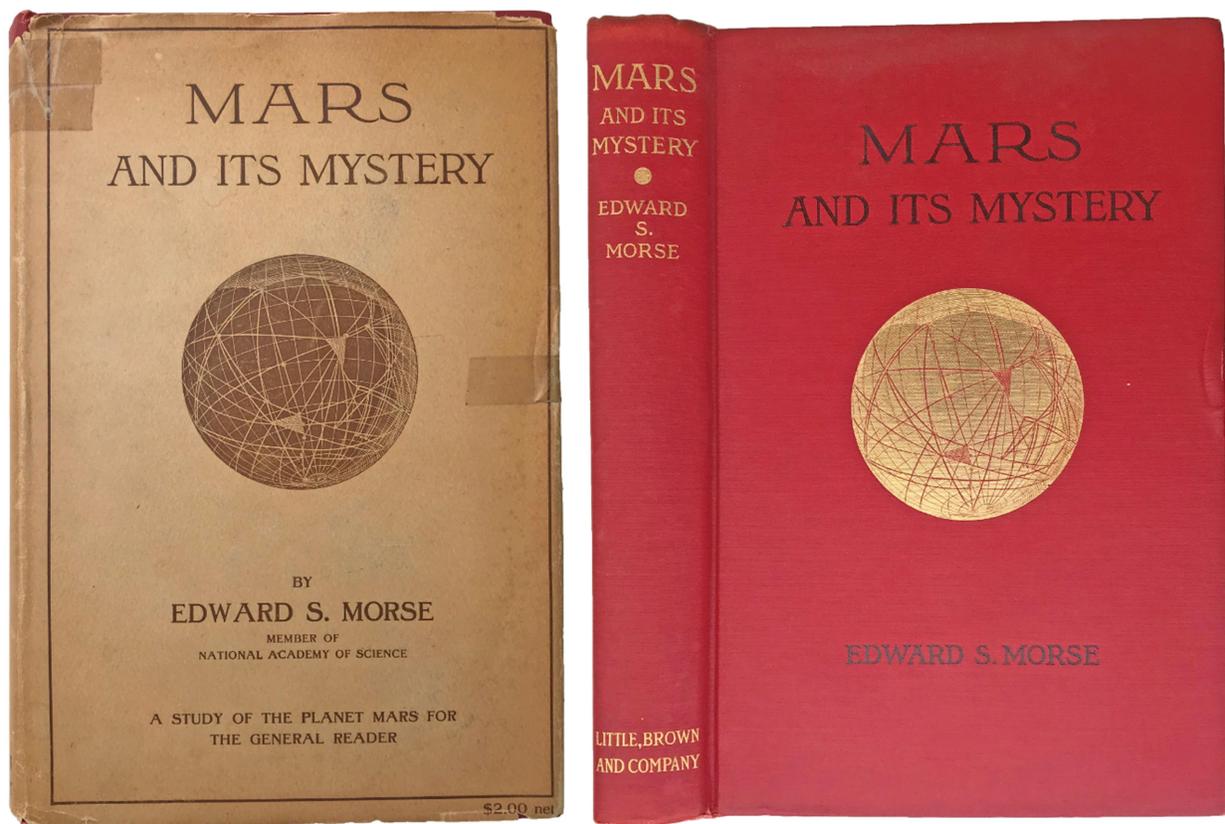
London: Hutchinson and co., 1913. ¶ Small 8vo. viii, 199, [1] pp. 40 illustrations from photos and drawings, index; lightly foxed, a few minor pencil notes (attributed to A. Faustini), fore-margin dent at rear text block. Original navy blue blind- and gilt-stamped cloth, t.e.g. Bookplate [A.F.] and ownership signature of A. [Arnaldo] Faustini, 1923. Signature of Ben Ray Redman, Astronomical Section. Very good.

\$ 30

First edition. The French astronomer Moreux took observations of the Moon and Mars. In this volume he studies the Moon and all its aspects.

PROVENANCE: Arnaldo Faustini (1872–1944) was an Italian polar explorer, geographer, writer, and cartographer. He is considered by some to be the first South European polar specialist. Born in Rome, he received his doctorate at the University of Rome at the age of 21. Faustini worked at a newspaper based in Rome as scientific editor. He had a special interest in polar subjects, and published 19 books on polar subjects in his native Italian. He also wrote numerous articles. Among the polar explorers Faustini knew personally were Roald Amundsen, Ernest Shackleton, Robert F. Scott, and Adrien de Gerlache, of the Belgian Antarctic Expedition. Faustini translated into Italian De Gerlache's French language account of his voyage. Faustini also drew the map of the area explored by the Belgians. In gratitude, De Gerlache gave him the flag from the expedition's ship, the SS Belgica. / The polar explorer Augustus Greely invited Faustini to the United States in 1915 for a lecture tour. While lecturing at Columbia University, Faustini met Amelia Del Colle, who later became his wife. / Faustini's interests were wide-ranging. In an unpublished 1918 manuscript entitled *Catalogo Descrittivo di Ponti ed Archi Naturali* ("Descriptive Catalog of Natural Bridges and Arches"), Faustini wrote: "Completed under every standpoint, for a future, eventual publication – text, topographical sketches, illustrations, contents, indexes, etc., that I think to be my greatest work of physical geography." He was fluent in French, English, Spanish and Russian and understood Greek. / The crater Faustini on the Moon is named after him. His papers on the Arctic and Antarctic are held in the Archives of the Istituto Geografico Polare "Silvio Zavatti" (Zavatti Polar Institute) in Fermo. In 1908 his polar geography appeared, *Le Terre Polari*. In 1912 was issued his Eskimo & their customs book, *Gli eschimesi; la razza, gli usi e i costume*.

PROVENANCE: Ben Ray Redman (1896-1961), screenwriter, editor and critic, he wrote numerous book reviews, and was a regular contributor to the Saturday Review of Literature. He died purposefully, taking an overdose of sleeping pills, being despondent about the world situation in 1961.



*Darwinism & Christianity Applied to Life on Mars*

38. **MORSE, Edward S.** (1838-1925). *Mars and Its Mystery*. Boston: Little, Brown, 1906. ¶ 8vo. (viii), [4], 192, (4) pp. Frontis., 9 plates, 4 portraits, index. Red black- and gilt-stamped cloth, t.e.g., printed dust-jacket; jacket is chipped, browned, cellophane tape in five locations on jacket. Ownership inscription, Hopland [California], November second, 1906, "D. M. Brevens[?!] from R.B.D." Small bookseller's ticket: [Harry] Robertson, San Francisco [rear]. Very rare in jacket.

\$ 150

First edition. Morse was a close friend of Lowell and dedicated this volume to him. With this volume he defended Lowell's controversial views that life does exist on Mars.

"Since earth has evolved geologically and biologically, he argued that other planets must also have evolved. The astronomer Percival Lowell, an admirer of Morse's knowledge of Japan and of his advocacy of biological evolution, introduced Morse to the planetary view, especially about Mars. Morse visited Lowell for over a month in 1905 at his Flagstaff observatory when Mars was in opposition. There the two men agreed the Arizona desert was similar to the dry conditions on Mars. Narrow lines of

greenery only existed in Arizona along irrigation ditches or seasonally along arroyos. Both men became enthusiastic about seasonal canals existing on Mars, backing their claim mainly on guesses from dim telescope images of the planet."

"Criticism of religion can be intolerant itself. While Morse's criticism was anchored in zoology, his excursion into planetary astronomy was another venture used to convince people that the earth-centered focus of Christianity was in error. Life also existed on Mars, he wrote, as witness the canals observed there. Morse scorned the conservative astrophysicists who were opposed to the idea of extraterrestrial life, just as he berated the conservative Christians opposed to the idea of biological and geological evolution on earth, but he was more successful as a publicist of biology than astronomy. As an evolution publicist he resembled Thomas Huxley in England." [A. Baer, "Edward S. Morse, zoologist: from Maine to Meiji Japan," Department of Integrative Biology, Oregon State University.

39. **POVENMIRE, Harold R.** (1939-). *Fireballs, Meteors & Meteorites*. Indian Harbour Beach, FL: JSB Enterprises, 1980. ¶ 8vo. vii, [1], 215, [1] pp. Black gilt-stamped cloth, dust-jacket; jacket a bit worn. INSCRIBED, WARMLY, FROM THE AUTHOR. Very good.

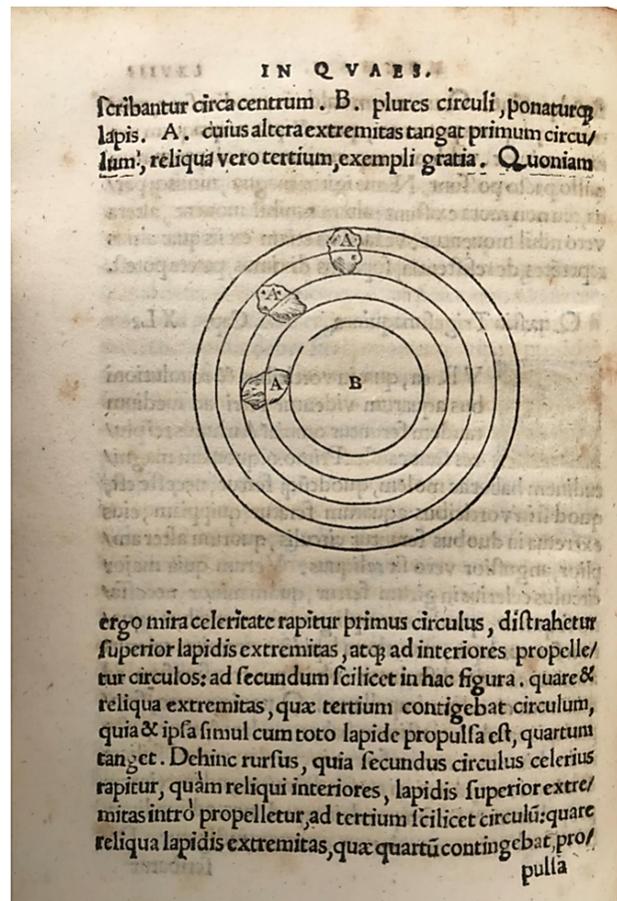
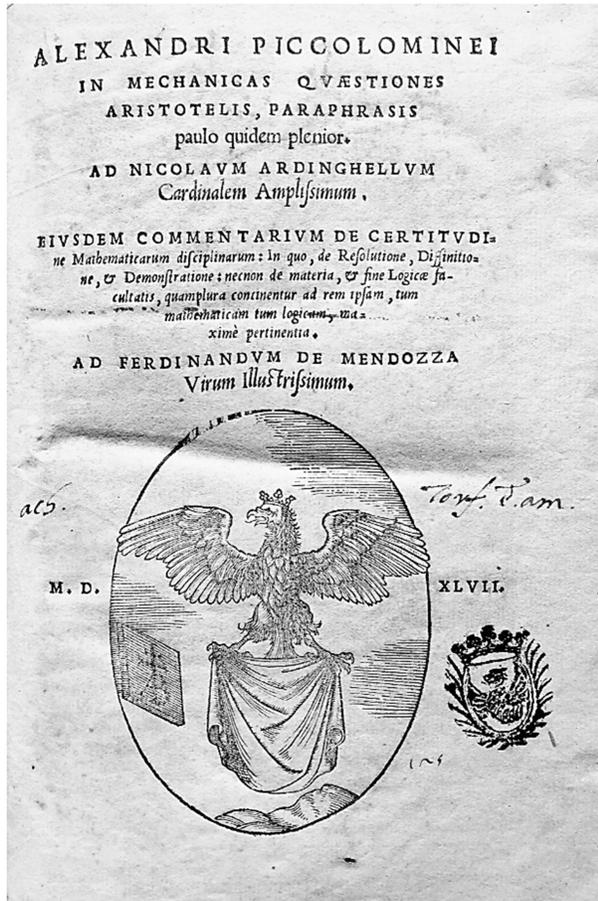
\$ 25

First edition. The author has tracked meteors for many years. He offers his observations on meteors, the meteor showers, the Florida Fireball Patrol, The Upsilon Pegasid Meteor Shower, George Tektites, Comets, Asteroids, etc.

40. **PROCTOR, Mary** (1862-1957). *Romance of the Moon*. New York & London: Harper & Brothers, 1928, [1929]. [Issue: F-D, June 1929]. ¶ Small 8vo. xii, [2], 262 pp. 7 plates, index. Original full turquoise, black-stamped cloth, printed dust-jacket; jacket faded, rubbed. Ownership signature of John Westfall. Very good copy.

\$ 25

First issued in 1928, this is printed the following year. Mary Proctor was the daughter of Richard Proctor. She contributed a number of popularly oriented astronomical works, including this third one on the Moon. Others were on the Sun, stars, Comets, heavens, etc. The present work offers chapters on the tides, lunar scenery, the idea of a lunar rocket, weather on the Moon, "Is the Moon inhabited?" (she mentions specifically Jules Verne, H.G. Wells, Fontenelle (quoting opinions of many astronomers and scientists), lunar folk lore, and ancient Moon worship.



41. **PICCOLOMINEI, Alexandri [Alessandro Piccolomini].** *In Mechanicas Quaestiones Aristotelis, Paraphrasis paulo quidem plenior. Ad Nicolaum Ardinghellum Cardinalem Amplissimum.* . . Romae: Apud Antonium Bladum Asulanum, 1547. ¶ Sm. 4to. [viii] pp., CX ff. Signatures: A-2E 2FA<sup>2</sup>. Printer's woodcut device on title, woodcut initials, geometric diagrams throughout and occasional woodcut figures [balance scales [XXI-XXII], unknown device [XXXV], wedge [XXXIX], pulley [XL], well [LX], 2-man team with poles braced between them, on their shoulders in order to lift a heavy rock [LXII], concentric circles as in a solar system model, incl. rocks in place of planets [LXVIII]; f. XL bottom corner torn away. Early quarter vellum, marbled boards, later endleaves; worming at spine joints, vellum present, but gnarled. Ownership signature and black stamps on title. Very good. SS13204

\$ 1,450

First edition. This book ignited a debate "over the certainty of mathematics, which was sparked in 1547 by Alessandro Piccolomini's commentary on pseudo-Aristotle's *Problemata Mechanica*." – Niccolò Guicciardini, *Isaac Newton on Mathematical Certainty and Method* - Issue 4 – 2009, pp. 3-4.

42. **PROCTOR, Richard A.** (1837-1888). *The Moon: Her Motions, Aspect, Scenery, and Physical Condition. Fifth edition.* New York: D. Appleton, 1902. ¶ Small 8vo. xi, [1], 314 pp. 8 plates (some folding), 35 figures. Original full blind- and gilt-stamped black cloth. Ownership signatures of J.B. Morris and John Westfall [Antioch, Calif.]. A rather choice copy, as clean as this one is. \$ 20

43. **PROCTOR, Richard A.** (1837-1888); **Arthur Cowper RANYARD** (1845-1894). *Old and New Astronomy.* London: Longmans, Green, 1892. ¶ Thick 4to. viii, 816 pp. 31 plates, 472 figures, index; lightly foxed. Original full navy blue gilt-stamped in elaborate and impressive Arabesque design (featuring a telescope facing a night sky), cloth, t.e.g.; rubbed. Ownership signature of Chs. Toope, London, 1893; John Westfall [ca.2010].

\$ 125

First edition. The ultimate Proctor work on astronomy. The text covers historical views on astronomy, measuring and weighing the solar system; the Sun, The Sun's Surroundings; The Inferior Planets; Earth; The Moon as a planet; Mars; Asteroids; Jupiter; Saturn; Uranus; Neptune; Stars, etc.

44. **PROCTOR, Richard A.** (1837-1888). *Saturn and its System, containing discussions of the motions and telescopic appearance of the planet Saturn, its satellites and rings, the nature of the rings, and the habitability of the planet, to which are appended notes on Chaldaean astronomy, Laplace's nebular theory, and a series of tables, by Richard A. Proctor, ... Second edition, revised.* London: Chatto & Windus, 1882. ¶ 8vo. x, [2], 211, [1], 32 pp. 13 plates (including folding frontispiece, tissue guard), ads (dated May 1882). Original full light blue black- and gilt-stamped cloth, bound by Burn & Co. (with their binder's ticket). William McGee, bookseller's ticket. Bound with staples holding the gatherings (a singularly bad 19<sup>th</sup> century technique!), causing rust and potential damage to paper, signatures have or will spring away from spine. Generally a very good copy.

\$ 100

Second edition, revised, originally issued in 1865 (his self-commissioned first book). Proctor had a significant role in popularizing astronomy during his day. Chapter VI "Habitability of the Giant Planets".

45. **PROCTOR, Richard A.** (1837-1888). *The Universe and the Coming Transits: presenting researches into and new views respecting the constitution of the heavens: together with an investigation of the conditions of the coming transits of Venus.* London: Longmans, Green, and Co., 1874. ¶ 8vo. [ii], xiv, 303, [1] pp. ads., half-title, folding frontispiece (Flamsteed star chart), 21 plates, 22 figs. Original blind- and gilt-stamped cloth; front joint repaired with kozo. Bookplate of Edmund Giles Loder. Very good copy. Scarce.

First collected edition. "This valuable work is a reproduction in chronological order of its author's papers on the constitution of the universe, from 1867 to 1873. It is profusely and finely illustrated. Amongst other plates we have two sections of the marvelous chart of 324,198 stars, which at first sight looks like various shadings produced by random touches of a fine pen, but examined with a magnifying glass each minute dot is seen to be round and distinct. The sublimest department of astronomy is discussed in these papers, and an entrance made hopefully into a field where observation and speculation will both find scope for many a year to come. It is one, too, requiring many observers, and in which amateurs may render important service, and Mr. Proctor points out how usefully their labours may be directed. [etc.]" [*Astronomical Register*, 1879].

Contents: [I] THE UNIVERSE: Star-streams; Star-streams and star-sprays; Notes on Nebulae; A new theory of the universe; What fills the star-depths; Star-drift; Are there any Fixed Stars?; News from the Stars; Essay on a Chart of 324,198 Stars; On two rich Nebular Regions; The Construction of the Heavens; Notes on Star-gauging. ; Principles of Star-gauging; Summary and Conclusion. [II] THE COMING TRANSITS: The Transit of Venus in 1874; Corrections of the Astronomer Royal's Statements; On the Application of Photography; The Discussion Resumed; The Astronomer Royal's Reply; Remarks on Sir G. Airy's Letters; Tabular Statement of Time-differences in 1874; The Transit of Venus in 1874; The Direct Method of Observing Transits; Risk of Absolute Failure; Appeal to America; On Stereographic Charts of the Transits of 1822 & 1874; A New Method of Observing the Transits of Venus; On the Southern Region in which reconnaissance should have been made between 1869 and 1874 to find what stations, if any, are convenient and suitable for observing the Transit of Venus in 1874.

A second edition was issued in 1878.

PROVENANCE: Sir Edmund Giles Loder (1849-1920), educated at Eton College, and Trinity College, was an English aristocrat, landowner and plantsman. He resided at Beach House in Worthing, West Sussex.

46. **RHETICUS, Georg Joachim.** *G. J. Rheticus' Treatise on Holy Scripture and the Motion of the Earth. With translation [from the Latin], annotations, commentary, and additional chapters on Ramus-Rheticus and the development of the problem before 1650 by Reijer Hooykaas.* Amsterdam: North-Holland Publishing Company, 1984. ¶ 8vo. 188 pp. 15 black-and-white illustrations, index, books of Holy Scripture cited. Paper wrappers, dust-jacket. Ownership signature. S10588

Includes original Latin text of the untitled treatise by Rheticus (1514-1574), perhaps best remembered as Nicolaus Copernicus' only student. Fine.



TRAITTE'  
D'HORLOGIOGRAPHIE,  
CONTENANT  
PLVSIEVRS MANIERES DE  
construire sur toutes surfaces toutes  
fortes de lignes horaires, & autres  
cercles de la Sphere.

AVEC QUELQUES INSTRUMENS  
pour la mesme pratique, & pour connoistre  
les heures durant la nuit, & l'heure du  
flus & reflux de la Mer. Avec les deux  
Boussoles qui sont en usage pour la navi-  
gation des deux Mers.

Plus, la methode de couper en pierre, ou en bois  
les corps reguliers & autres Polyèdres, par  
le cube & par le cylindre.

Reueu, & augmenté en cette quatrième Edition,  
de plusieurs Remarques, & Figures.

Par DOM PIERRE DE SAINTE MARIE MAGDELEINE,  
d'Abbeville, de la Congregation des Feuillans.



A LYON,  
Chez FRANÇOIS DEMASSO, rue Mercière,  
à la Juste Paix.

M. DC. LXXIV.  
AVEC PERMISSION.

47. **SAINTE MARIE MAGDELEINE, Pierre de.** *Traite d'horlogiographie: contenant plusieurs manieres de construire sur toutes surfaces toutes sortes de lignes horaires, & autres cercles de la sphere: avec quelques instrumens pour la mesme pratique, & pour connoistre les heures durant la nuit, & l'heure du flus & reflux de la Mer. Avec les deux boussoles qui sont en usage pour la navigation de deux mers. Plus, la methode de couper en pierre, ou en bois les corps reguliers & autres polyedres, par le cube & par la cylindre / par Dom Pierre de Sainte Marie Magdeleine d'Abeville se la Congregation des Feuillans.* Lyon: Francois Demasso, 1674. ¶ Small 8vo. [xiv], 324pp. [Signatures: [1], a6, A-V8, X2]. Additional engraved title, woodcut initial letters, tailpieces, and 81 engraved plates (plates numbered 1 to 72 [the last is a double-page folding pl.], + plates 18a, b, c, d, 31a, 36a and 52a, b, c), errata. Pages 58, 206 and 220 are wrongly numbered 52, 106 and 120 respectively. Nineteenth century quarter vellum, marbled paper over boards; slightly rubbed and soiled, a few gatherings browned, fore-margin of a few plates cut close sometimes shaving a plate number or illustration. Very good copy. SS13498

\$ 1,000

Fourth edition, revised and augmented with added material and figures. A fine horological work, mostly given to gnomonic instruments, detailing sundials and other chronographs. The author gives a method of telling time at night by means of measuring the moon and stars. The first edition was issued in 1641 by Melchior Tavernier, and contained 59 engraved plates. A second edition was issued in 1645. All editions are rare.

This work is rare and little known, not being recorded by Baillie, Bromley, Delalande, Poggendorff, Graesse, Brunet, and others. Besides being a treatise on clockmaking, the author also offers material on astronomy, navigation, currents and tides, instruments with illustrations and notes on usage, tables of latitudes of cities, zodiacal data, and more. This work remained in print as late as 1701. Little is known of Father Pierre de Saint Marie Magdeleine, a member of the Congregation des Feuillants, a reformed branch of the Cistercians.

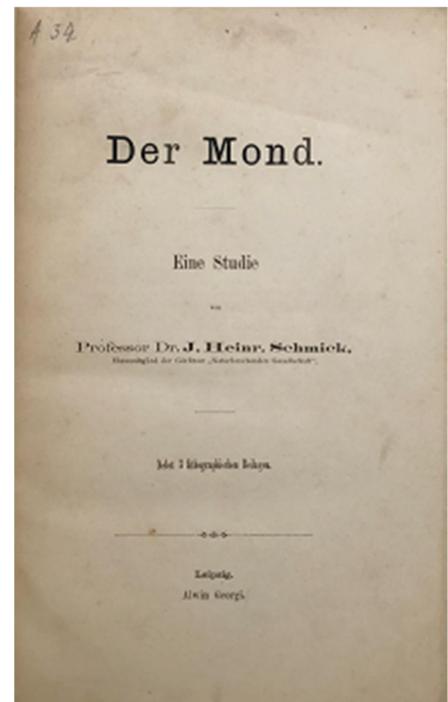
REFERENCES: Barchas Collection 1659 (Paris, 1663); BM Readex, XX, p. 325 (under Pierre de . . .) (1st ed., Paris, 1641, 3rd ed., 1665); Zeitlinger, (Sotheran, 2nd Suppl., Vol. I, p. 315) (Paris, 1701).

48. **SCHMICK, Jakob Heinrich** (1824-1905). *Der Mond als glänzender Beleg für die kosmisch bewirkte säkulare Umlegung verschiebbarer Bestandtheile der Weltkörper*. Leipzig: Carl Scholtze, 1876. ¶ 8vo. [v], 68 pp. 3 lithographic plates, 68 figs. Original half dark green cloth, marbled boards, gilt-stamped spine. Astronomically-themed bookplate of Mag. F. Fischer, dated 1923 [bookplate signed "A.P."]. Very good.

\$ 125

Curious work on the Moon by this author, who was a spiritualist.

PROVENANCE: Mag. F. Fischer, Prague, was an astronomer.



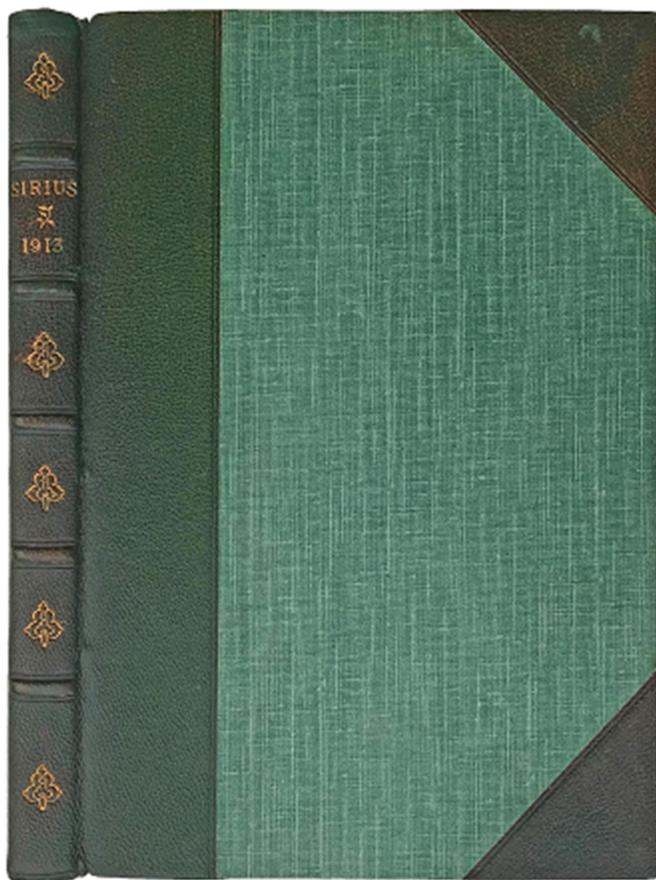
[Sidebar note:] "Likewise, Schiaparelli probably was not enthused about the 1879 book written by the German poet, philosopher, linguist, and spiritualist Jakob Heinrich Schmick . . . to introduce German readers to the new Mars. Although Schiaparelli was himself involved in spiritualism, he was no doubt distressed by some of the claims made in Schmick's book . . ." See: Michael J. Crowe, *The Extraterrestrial Life Debate 1750-1900: The Idea of a Plurality* . . .

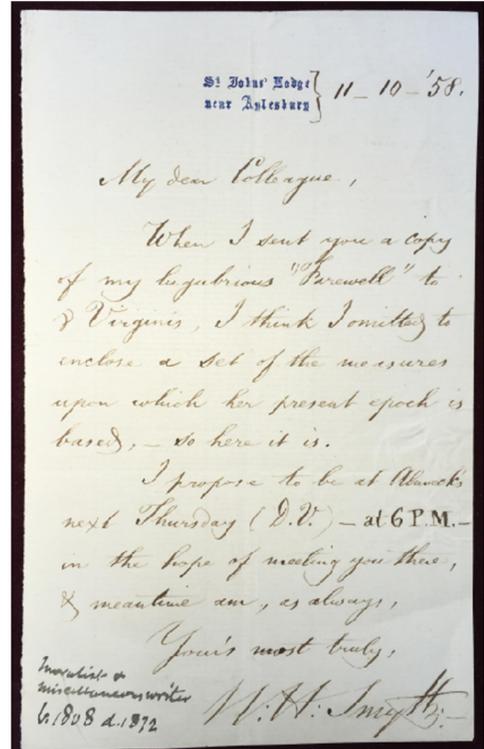
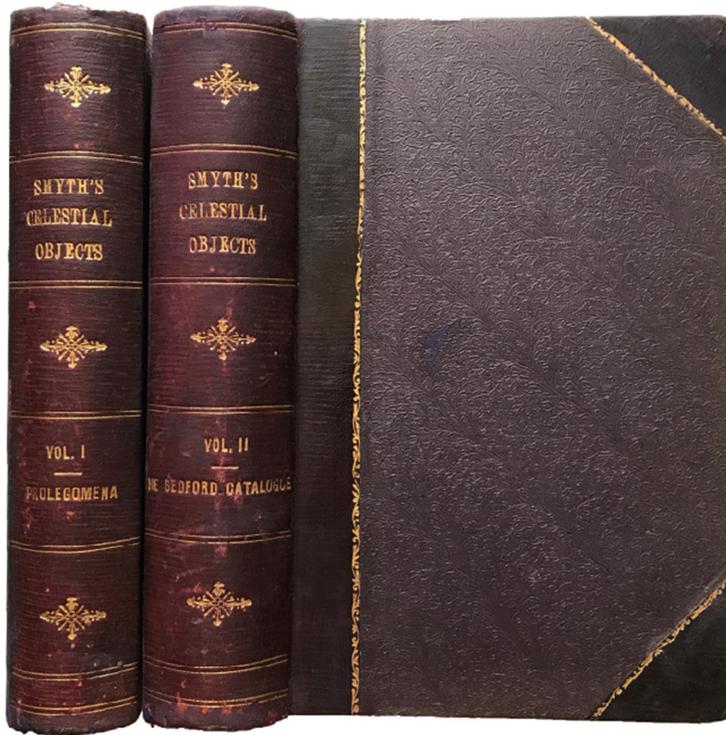
49. **SIRIUS; Prof. Dr. Hermann J. Klein** (editor). *SIRIUS; Zeitschrift für populäre Astronomie*. 46. Band oder neue Folge 41. Band. 1913. Leipzig: Eduard Heinrich Mayer, 1913. ¶ 8vo. VIII, [2], 288 pp. Illustrated (14 plates, figs.). Original half dark green morocco, cloth boards, top edge gilt; gentle kozo repair to spine head. Near fine.

\$ 45

PARTIAL CONTENTS: Über neue Sterne und das gegenwärtige Aussehen einiger derselben. [Of new stars; referencing Edward Emerson Barnard, p. 248]. Plan eines Instituts für theoretische-astronomische Forschung. [Plan for a new institute]. Die feinen scharfen Absorptionslinien im Spektrum der Nova Geminorum 2 vom Jahre 1912 (p. 253). Nebelfleckbeobachtungen auf der Sternwarte Königstuhl-Heidelberg. [Nebulae observations at the Königstuhl-Heidelberg Observatory, p. 226]. Ein neuer Apparat zur Veranschaulichung der scheinbaren Planetenbewegungen. [A new apparatus to illustrate the spiraling planetary motions, p. 204]. Plate X shows drawings of Mars from 1911, by Prof. Karl Bohlin (1860-1939), Stockholm. Das Erdlicht oder die Helligkeit des Mitternachtshimmels ohne Sternenlicht. [The earth light or the brightness of the midnight sky

without starlight, p. 180]. Beobachtungen des Mars in seiner Erdnahe 1911 auf der Sternwarte zu Stockholm. [Observations of Mars in its Erdnahe 1911 at the observatory to Stockholm, by Karl Bohlin, p. 179]. Friedrich Wilhelm Ristenpart (1868-1913) obituary. pp.161-3, he was one of the German astronomers who worked in Chile. Eine photographische Aufnahme der südlichen Milchstrasse. [A photograph of the Southern Milky Way, Prof. Solon Irving Bailey (1854-1931)] - Bailey was acting director of Harvard College Observatory from 1919 to 1921 after the death of Edward Charles Pickering and prior to the appointment of Harlow Shapley. J.N. Kriegers Mondatlas [Moon Atlas of Krieger, p. 12].





50. **SMYTH, Captain William Henry** (1788-1865). *A Cycle of Celestial Objects for the Use of Naval, Military, and Private Astronomers. Volume 1: Prolegomena; Volume II: The Bedford Catalogue.* London: John W. Parker, 1844. ¶ 2 volumes. 8vo. viii, [4], 516; xx, 560 pp. Original half purple calf, gilt-stamped spines, decorative publisher's cloth sides, green floral pattern endleaves; rubbed. Ownership signatures of H.J. Lewis [or T.H. Lewes?] and Rev. J.B. Allison (of Chesterfield, a star-gazer in 1883). Very good. WITH AN AUTOGRAPH LETTER SIGNED BY THE AUTHOR. Very Scarce. S13118

\$ 2,500

The true first edition of William Henry Smyth's classic handbook intended for amateur astronomers. George Lovi calls it "THE FIRST TRUE CELESTIAL BAEDEKER and not just another 'cold' catalogue of mere numbers and data."

AN AUTOGRAPH LETTER SIGNED BY THE AUTHOR [to an unknown astronomer]: On his personal stationary "St. John's Lodge, near Aplesbury, [U.K.]. dated 11-10-'58 [October 11, 1858]. "My dear colleague, When I sent you a copy of my lugubrious "Farewell" to e Virginis, I think I omitted to enclose a set of the measures upon which her present epoch is based, - so here it is.

I propose to be at Almack's next Thursday (D.V.) at 6 P.M. in the hope of meeting you there, & meantime am, as always, Yours most truly, W.H. Smyth."

St. John's Lodge [Cardiff] was the author's home as well as the place where he made many of his astronomical observations and calculations.

"In 1825 Smyth established a private observatory in Bedford, England, equipped with a 5.9-inch refractor telescope. He used this instrument to observe a variety of deep sky objects over the course of the 1830s, including double stars, star clusters and nebulae. He published his observations in 1844 in the *Cycle of Celestial Objects*, which earned him the Gold Medal of the Royal Astronomical Society in 1845 and also the presidency of the society. The first volume of this work was on general astronomy, but the second volume became known as the *Bedford Catalogue* and contained Smyth's observations of 1,604 double stars and nebulae. It served as a standard reference work for many years afterward; no astronomer had previously made as extensive a catalogue of dim objects such as this. It was reprinted in 1986, and in the Foreword to that edition George Lovi . . . writes, 'What makes it so special is that it is the first true celestial Baedeker and not just another 'cold' catalogue of mere numbers and data. Like the original Baedeker travel guidebooks of the last century, this work is full of colorful commentary on the highlights of the heavenly scene and heavily influenced several subsequent works of its type, even to the present day. . . . It is in the descriptive material that Smyth is a delight. He not only describes what the user of a small telescope will see, but also includes much fascinating astronomical, mythological, and historical lore. Many of these descriptions are especially valuable for the novice and user of small telescopes of a size similar to Smyth's.'"

☞ See: (2008). William H. Smyth, "The Bedford Catalog from *Cycle of Celestial Objects*; foreword by George Lovi, 1986."

Admiral William Henry Smyth KFM DCL FRS FRAS FRGS FSA (1788-1865), born in Westminster, England, was an English naval officer, hydrographer, astronomer and numismatist. He is noted for his involvement in the early history of a number of learned societies, for his hydrographic charts, astronomical work, and a wide range of publications and translations. He died at his home in St. John's Lodge, Cardiff, and buried in the little churchyard at Stone near Aylesbury.

51. **SMYTH, Admiral William Henry; George F. CHAMBERS.** *A Cycle of Celestial Objects observed, reduced, and discussed.* Oxford: Clarendon Press, 1881. 8vo. Title-page inscribed A. Faustini, Brooklyn, New York, 1917. ¶ 8vo. xxii, [2], 696 pp. 51 figures, index. Original full reddish-brown blind- and gilt-stamped cloth; extremities mended with kozo. HEAVILY ANNOTATED COPY, with pencil marginalia everywhere. Some inserted pencil notes on separate sheets included. Sold as is (text is complete, this is a scholar's copy, with all annotations as indicated). Second edition. MUST SEE!

\$ 100

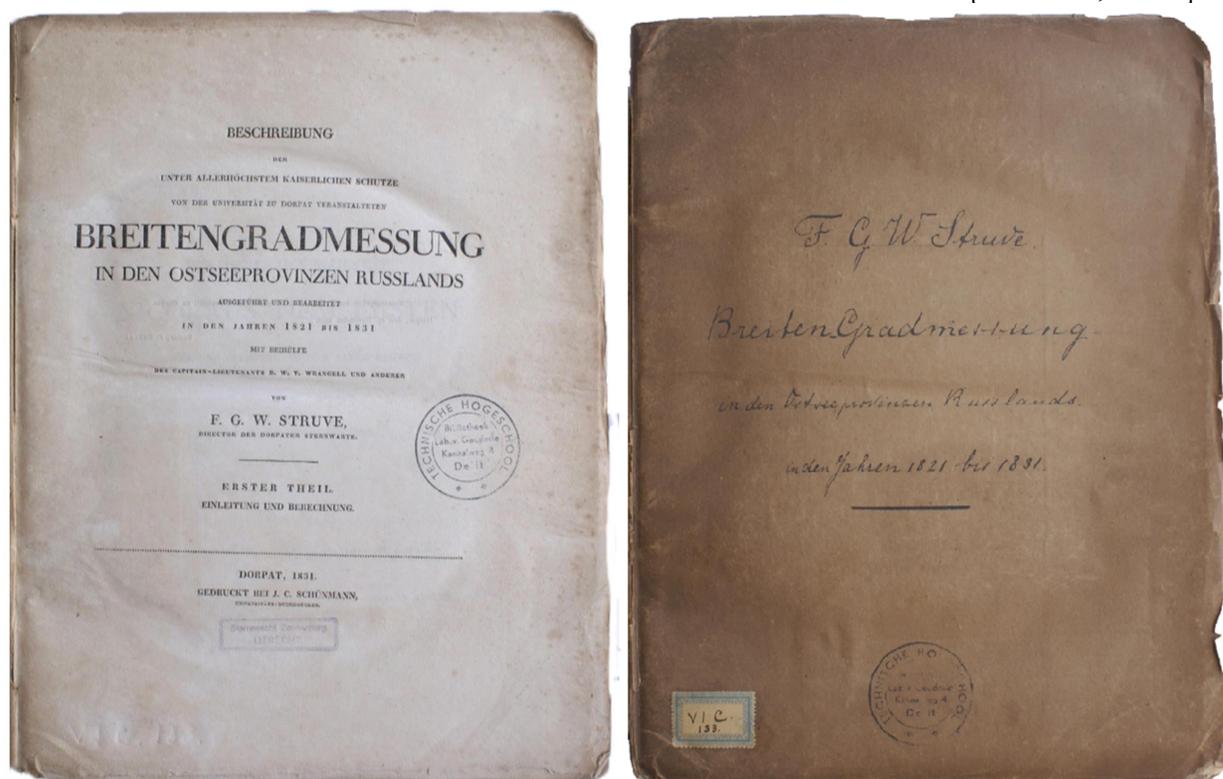
PROVENANCE: In A. Faustini's manuscript hand: "Mr. [George F.] Chambers has recently published a revised and enlarged edition of the "Bedford Catalogue" omitting many of the erroneous measures of the more interesting double-star [-] items, of which several hundred are given not contained in the original edition. – J. A. W. Oliver, in this *Astronomy for amateur etc.*, London, 1888. Preface.

52. **STEWART, John.** *Moons of the Solar System, an Illustrated Encyclopedia.* Jefferson, NC: McFarland & Company, 1991. ¶ 8vo. xvi, 244 pp. Illustrated (some color pls.). Black gilt-stamped cloth. Fine. ISBN 10: 0899505686

\$ 18

First edition. Hardcover issue.

[STRUVE, below]



*Original Brown Wrappers, Untrimmed*

53. **STRUVE, Friedrich Georg Wilhelm** (1793-1864). *Beschreibung der unter allerhöchstem kaiserlichen Schutze von der Universität zu Dorpat veranstalteten Breitengradmessung in den Ostseeprovinzen Russlands ausgeführt und bearbeitet in den Jahren 1821 bis 1831 mit Beihülfe des Capitain-Lieutenants B. W. V. Wrangell und Anderer.* Dorpat, Estonia: J. C. Schünmann, 1831. ¶ 2 volumes in 1. 4to. [8], 360; [8], 424, [3] pp. 13 folding plates; light scattered foxing especially at plates and through p. 20, pages largely un-opened. Original printed wrappers; edges and spine chipped, top spine edges torn, hand-written ink front cover title. Spine and front cover library labels, rubber stamps to front cover and title-page. UNTRIMMED IN ORIGINAL PUBLISHER'S PLAIN WRAPPERS, AS ISSUED. Near Fine. S13208

\$ 3,500

FIRST EDITION of Struve's pioneering geodetic work. These measurements represent the initiation of the Struve Geodetic Arc, "a chain of survey triangulations stretching from Hammerfest in Norway to the Black Sea, through ten countries and over 2,820 km, which yielded the first accurate measurement of a meridian" (*Wikipedia*).

The plates are mainly diagrams of scientific instruments employed by Struve.

"In 1819, M. Struve, who was then director of the observatory of Dorpat, while engaged in the survey of Livonia, suggested to the University of Dorpat the desirableness of measuring the arc of the meridian included between the island of Hogland in the Gulf of Finland, and the town of Jacobstadt in the province of Courland. The sanction of the emperor having been obtained for the project, the operations were commenced and were finally completed in the year 1827.... In the same year in which M. Struve brought to a close the operations connected with this arc, General Tenner also completed measurement of the arc of the meridian included between Bristen in Courland, and Belin in the province of Grodno.... It became desirable to connect trigonometrically the two arcs together. This was effected in 1827-8, by M. Struve and General Tenner, independently of each other, and the results upon being transmitted separately in sealed letters to Bessel, were found to exhibit a most satisfying accordance" (Knight, p. 349).

"From 1828 to 1831 Struve and Tenner had been engaged in joining their respective measurements of meridian arcs. The description of this operation was published in 1832; the full account of Struve's work having appeared in 1831 in the...*Breitengradmessung*" (Abbe, p. 375).

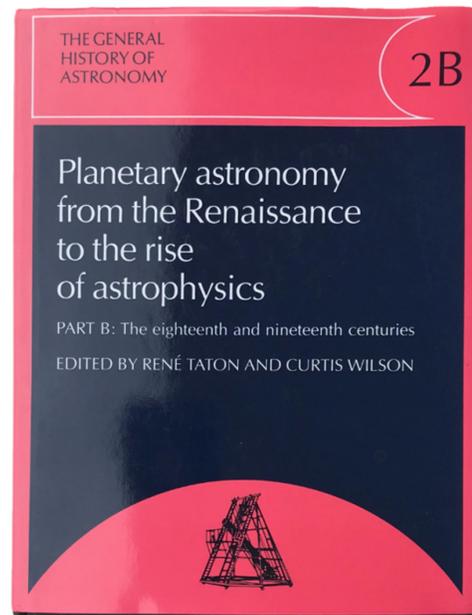
Struve was a Danish-Norwegian astronomer who is best known for his studies of double stars, making micrometric measurements of 2714 of them from 1824-1837, and his work in the field of geodesy. He taught astronomy at the University of Dorpat for many years, before becoming director of the Central Observatory in Pulkova, Russia, in 1839. "At Pulkova, he determined anew the constant of aberration, but was chiefly occupied in working out the results of former years' work and in the completion of the geodetic operations in which he had been engaged during the greater part of his life. He had commenced them with a survey of Livonia (1816-19), which was followed by the measurement of an arc of meridian of over 34 in the Baltic provinces of Russia" ("Struve," *Encyclopaedia Britannica*, p. 641).

☼ Knight, Charles. "Geodesy." *English Cyclopaedia*. Vol. 4. London: Bradbury, Evans, 1867; Abbe, Cleveland. "Dorpat and Poulkova." *Annual Report of the Board of Regents of the Smithsonian Institution*. Washington, DC: Government Printing Office, 1868; "Struve." *The New Werner Twentieth Century Edition of the Encyclopaedia Britannica*. Vol. 22. Chicago: Werner, 1907.

54. **TATON, René**, - Alexandre Koyre Research Centre, Paris; **Curtis WILSON**, St John's College, Annapolis. *The General History of Astronomy. Volume 2B. Planetary Astronomy from the Renaissance to the Rise of Astrophysics*. Cambridge: Cambridge University Press, 1995. ¶ Royal 8vo. xiii, [1], 281, [1] pp. Illus., index. Black gilt-stamped cloth, dust-jacket. Near fine. ISBN: 0521351685

\$ 45

Hardcover issue. Part B of Planetary Astronomy from the Renaissance to the Rise of Astrophysics continues the history of celestial mechanics and observational discovery through the eighteenth and nineteenth centuries. It provides a synoptic view of the main developments and furnishes details about the lives, ideas, and interactions of the various astronomers involved. Twelve different authors have contributed their expertise to this book that begins with the reception of Newton's inverse-square law. In the remainder, a large place is given to the development of the mathematical theory of celestial mechanics from Clairaut and Euler to LeVerrier, Newcomb, Hill, and Poincaré. This emphasis is balanced by other chapters on observational discoveries and the rapprochement of observation and theory (for instance, the discovery of Uranus and

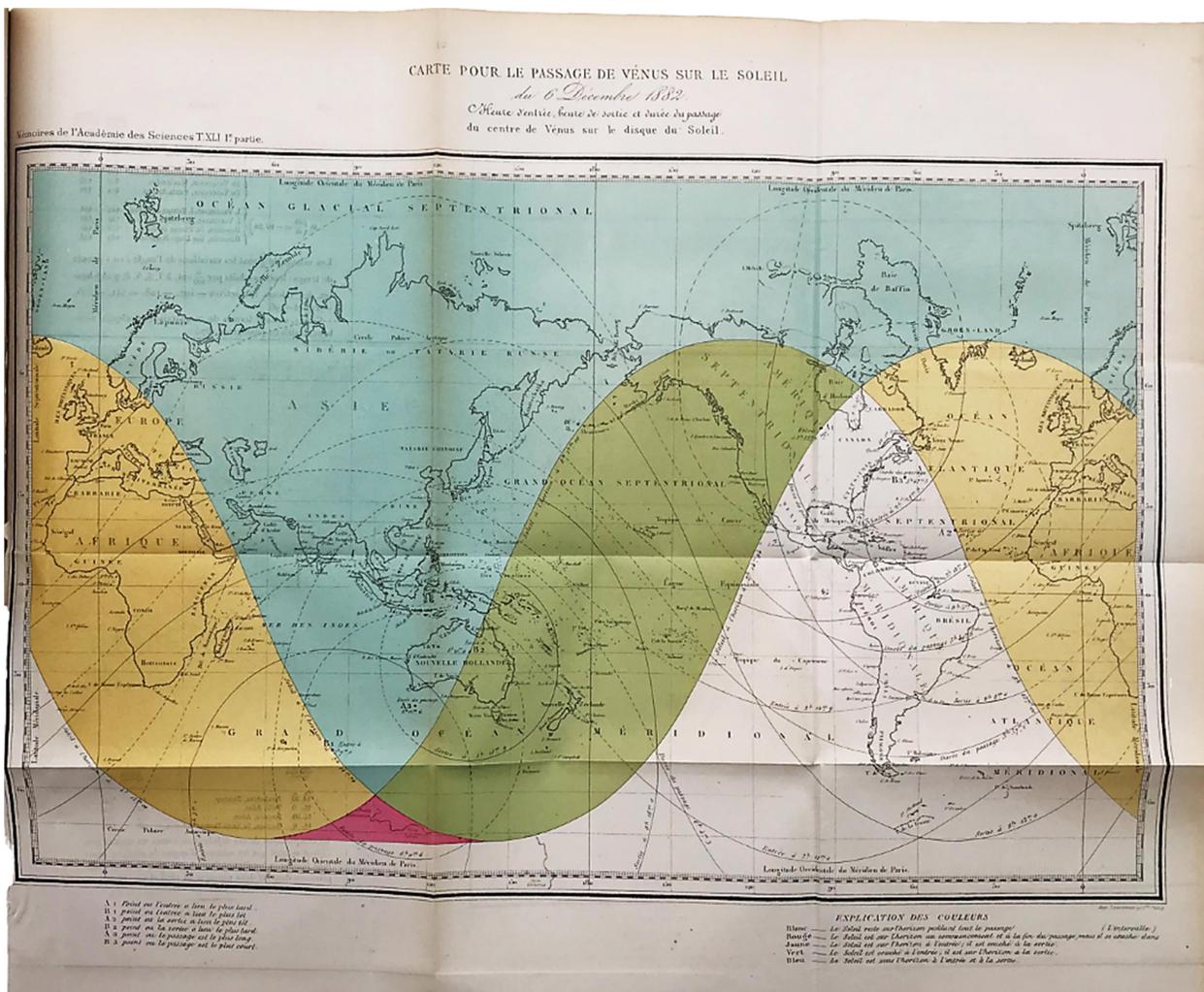


the asteroids, use of Venus transits to refine solar parallax, introduction of the method of least squares, and the development of planetary and satellite ephemerides). Lists of "Further Reading" provide entry to the literature of the several topics. This book will be of great interest to historians of science and astronomers."

Table of Contents: Part V. Early Phases in the Reception of Newton's Theory: 14. The vortex theory in competition with Newtonian celestial dynamics Eric J. Aiton / 15. The shape of the Earth Seymour L. Chapin / 16. Clairaut and the motion of the lunar apse: The inverse-square law undergoes a test Craig B. Waff / 17. The precession of the equinoxes from Newton to d'Alembert and Euler Curtis Wilson / 18. The solar tables of Lacaille and the lunar tables of Mayer Eric G. Forbes and Curtis Wilson / 19. Predicting the mid-eighteenth-century return of Halley's Comet Craig B. Waff. Part VI. Celestial Mechanics During the Eighteenth Century: 20. The problem of perturbation analytically treated: Euler, Clairaut, d'Alembert Curtis Wilson / 21. The work of Lagrange in celestial mechanics Curtis Wilson / 22. Laplace Bruno Morando. Part VII. Observational Astronomy and the Application of Theory in the Late Eighteenth and Early Nineteenth Century: / 23. Measuring solar parallax: The Venus transits of 1761 and 1769 and their nineteenth-century sequels Albert Van Helden / 24. The discovery of Uranus, the Titius-Bode and the asteroids Michael Hoskin / 25. Eighteenth-and nineteenth century developments in the theory and practice of orbit determination Brian G. Marsden / 26. The introduction of statistical reasoning into astronomy: from Newton to Poincaré Oscar Sheynin / 27. Astronomy and the theory of errors: from the method of averages to the method of least squares F. Schmeidler. Part VIII. The Development of Theory During the Nineteenth Century: / 28. The golden age of celestial mechanics Bruno Morando. Part IX. The Application of Celestial Mechanics to the Solar System to the End of the Nineteenth Century: / 29. Three centuries of lunar and planetary ephemerides and tables Bruno Morando / 30. Satellite ephemerides to 1900 Yoshihide Kozai.

*Discoverer of the Planet Pluto*

55. **[TOMBAUGH, Clyde] David H. LEVY.** *Clyde Tombaugh, Discoverer of the Planet Pluto.* Tucson: University of Arizona Press, 1991. ¶ Second printing. 8vo. xii, [viii], 211, [1] pp. Illus., index. Original printed wrappers; creased. Very good. INSCRIBED BY THE AUTHOR to Beth & John Westfall . . . Your friend, David, RTMC, 1992." ISBN 10: 0816513171 \$ 25



56. [Transit of Venus] Academy of Sciences, Paris; La Commission du Passage de Venus. [32 papers on the Transit of Venus, including:] [1] DELAUNAY, Charles Eugène (1816-1872). "Notice sur la Distance du Soleil a la Terre." (pp. 3-112); [2] Charles Joseph Étienne WOLF (1827-1918) & C. L. F. ANDRE, Recherches sur les apparences singulieres qui ont souvent accompagne l'Observation des Contacts de Mercure et de Venus avec le Bord du Soleil. (pp. 115-172); [3] FAYE, Sur l'Observation Photographique des Passages de Venus et sur un appareil de M. Laussedat. (pp. 175-185); [4] Ernest LAUGIER (1812-1872), Rapport presente au nom de la Commission du Passage de Venus. Sur le Choix des Stationes et le Materiel Astronomique. (pp. 187-198); [5] PUISEUX, l'Observation de Passage de Venus sur le Soleil du 8 Decembre 1874. (pp. 199-205); [6] PUISEUX, Note sur la Determination de la Parallaxe du Soleil . . . en 1874 (pp. 207-220); [7] Aime LAUSSEDAT (1819-1907), Projet d'appareil pour l'Observation du Passage de Venus. . . (pp. 223-225); [8] Hervé FAYE (1814-1902), . . . Le Role de la Photographie dans l'Observation de Passage de Venus.

(pp. 227-256); [9] L'Amiral Paris, *Projet d'Inscription Photographique du Temps* . . . (pp. 257-263); [10] Marie Alfred CORNU (1841-1902), *Note sur la Transformation de l'Achromatisme Optique des objectifs en Achromatisme Photographie*. (pp. 265-269); [11] C. WOLF & Ad. MARTIN, *Projet d'appareil photographique pour l'observation du Passage de Venus*. (pp. 271-293); [12] Jules JANSSEN (1824-1907), *Methode pour obtenir photographiquement les Circonstances Physiques des Contacts* . . . (pp. 295-197); [13] Marie Alfred CORNU, *L'Approximation en Valeur Absolue des Pointes* . . . (pp.299-3313); [14] Armand FIZEAU (1819-1896), *Sur la Photographie par Images Directes*. (pp. 315-321); [15] WOLF, *Note Additionelle*; [etc., etc.]. [Within:] *Recueil de Mémoires, Rapports et Documents relatifs a l'Observation de Passage de Venus sur le Soleil*. Paris: Firmin Didot Frères, fils et Cie, 1874. ¶ 4to. [ii], 460 pp. 5 plates; paper browned throughout. Contemporary quarter brown morocco, marbled boards, raised bands, gilt spine title. Rubber ownership stamp of Léon Coulon. Very good in a lovely binding.

\$ 250

The 1874 transit of Venus, which took place on 9 December 1874 (01:49 to 06:26 UTC), was the first of the pair of transits of Venus that took place in the 19th century, with the second transit occurring eight years later in 1882. There were six official French expeditions. One expedition went to New Zealand's Campbell Island, the other five travelling to Île Saint-Paul in the Indian Ocean, Nouméa in New Caledonia in the Pacific, Nagasaki in Japan (with an auxiliary station in Kobe), Peking in China, and Saigon in Vietnam.

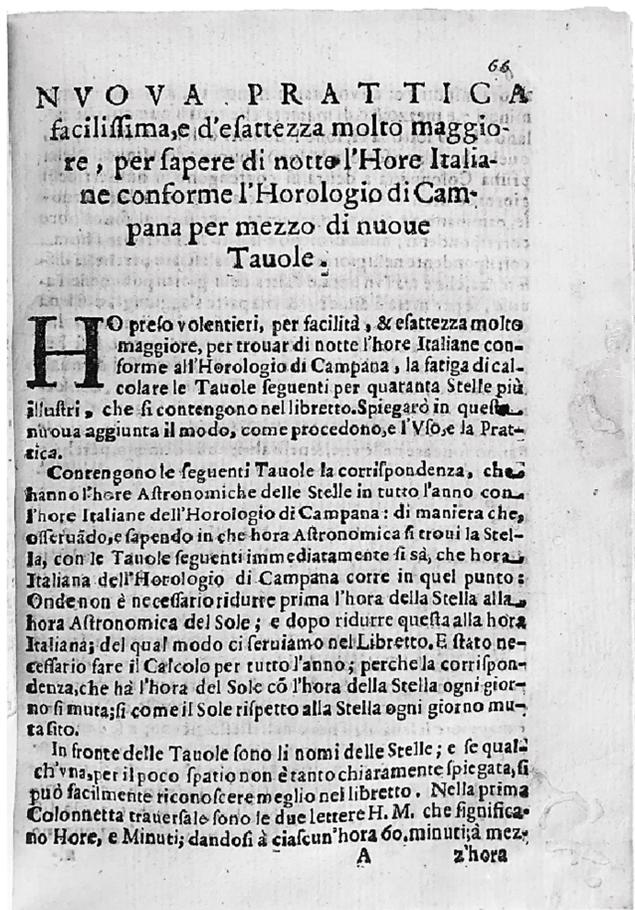
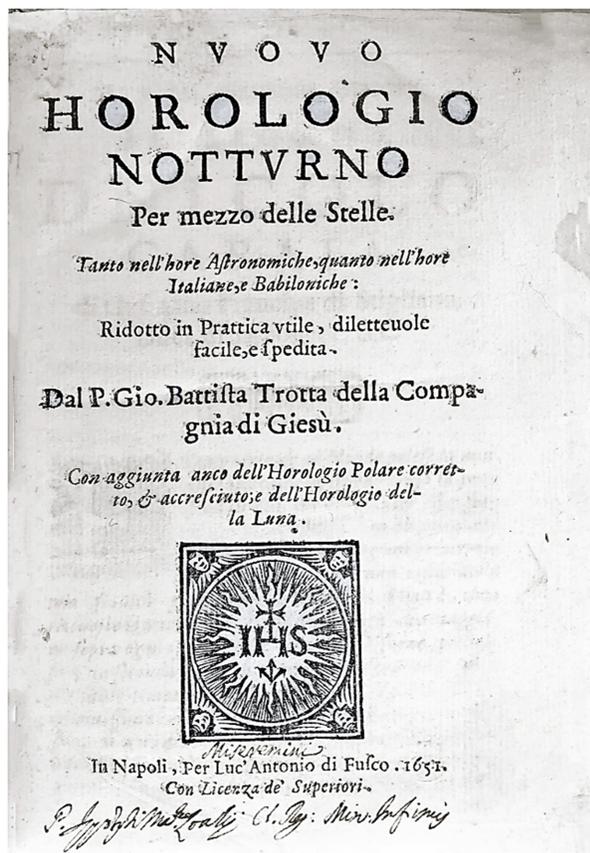
"The application of photography to astronomical research developed very slowly before the late 1880s. Technical and social factors help explain the reluctance of most astronomers to employ the new research technology. Wet plates were slow and difficult to work with. They were coarse-grained and permitted only short exposures. Refracting telescopes were corrected for the visual (yellow-green) region of the spectrum, not the blue to which most plates were most sensitive. Astronomers were heavy career investments in research projects involving visual observing programs were reluctant to make major revisions in their work." – Lankford.

Delaunay's paper first appeared in 1866, presented to the Bureau of Longitude.

PROVENANCE: Léon Coulon.

See: Arsene Thevenot, *Biographie de Charles-Eugene Delaunay, Memoires de la Societe academique de l'Aube*, vol. 42, 1878. Jimena Canales, *Photogenic Venus; The "Cinematographic Turn" and Its Alternatives in Nineteenth-Century France*, ISIS 93, no. 4: 585-613.

See: John Lankford, "Photography and the 19<sup>th</sup> Century Transits of Venus." *Technology and Culture*, Vol. 28, No. 3 (Jul., 1987), pp. 648-657.

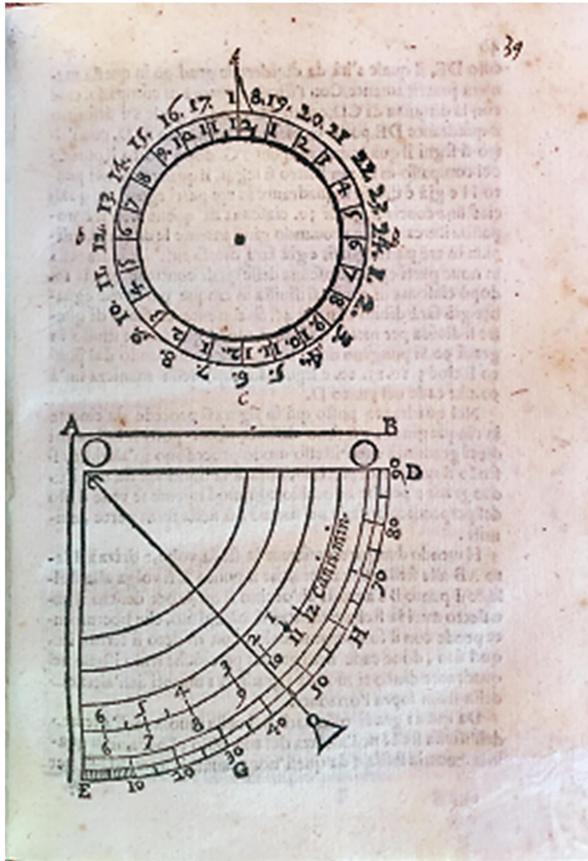


57. **TROTTA, Giovanni Battista** (1585-1656). *Nuovo horologio notturno per mezzo delle stelle. Tanto nell'hore astronomiche, quanto nell'hore italiane, e babiloniche: ridotto in pratica vtile, diletteuole facile, e spedita. Dal p. Gio. Battista Trotta della Compagnia di Giesu. Con aggiunta anco dell'horologio polare corretto, & accresciuto; e dell'horologio della luna.* Naples:, Luc' Antonio di Fusco, 1651. ¶ Small 4to. 56, [1], 57-58, [3]; 66-104 [i.e. 105], [1] pp. Collation: [A-G<sup>2</sup> [H]Â<sup>2</sup>; A-E<sup>2</sup>]. NOTE: other copies collated either as 56, [1], 57-58, [4]; 65 pp. [A-G<sup>2</sup>, [H]Â<sup>2</sup>; A-H<sup>2</sup> IÂ<sup>2</sup>]. [Oxford University copy\*]; [or] 56, [1], 57-58, [3], 1-104 [i.e. 105], [1] pp. [Biblioteca Nazionale Centrale di Roma] Jesuit title vignette, woodcut initial letters and tail piece, calculation tables. Modern vellum, dark red gilt-stamped spine labels; frequent marginal repairs to wormholes. Early ownership inscription on foot of title "Misevemini" [? unreadable]. VERY RARE. SS13499

\$ 250

First edition of this treatise, a manual on the manufacture and use of instruments and astronomical clocks, using the latest calculations to measure time as viewed in

the region from Italy to Babylonia. Trotta also wrote about a lunar and solar clocks.



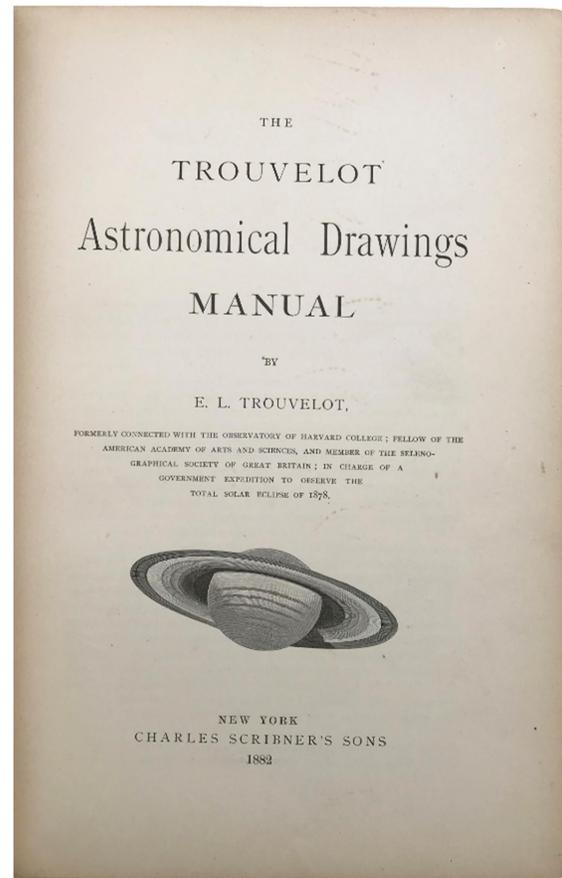
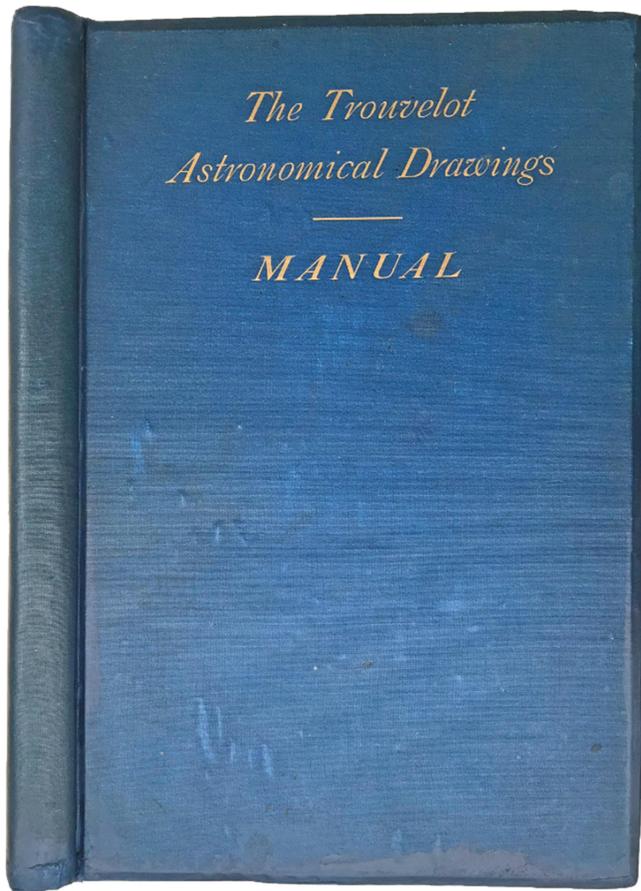
"... un manuale utile alla fabbricazione ed all'uso di uno strumento da lui inventato, on il quale, a suo dire, si eliminavano gli inconvenienti che si riscontravano neli orologi notturni allora in circolazione." [Gato, Romano (ed.). *Tra scienza e immaginazione: le matematiche presso il collegio gesuitico napoletano (1552-1670 ca.)*, Olschki, 1994, p. 179. \*The Oxford University copy: collates the same as this copy for the first part; their copy follows with a new title: "Osservazioni nelle seguenti Tavole" which paginates 1-65; at this point their copy ends. We have pp. 66-104 [i.e. 105], to complete a third part entitled "Nuova Prattica facilissima . . ."

In brief: This book is really issued in 3 sections. The Oxford copy has parts 1 & 2. The JWRB copy has parts 1 & 3.

Trotta was born in Popoli, in the Abruzzo region of Italy. He was Jesuit and a famous mathematician, and instrument maker. He wrote, *Praxis horologiorum expeditissima*, 1631.

☞ See: Pier Luigi Pizzamiglio, *Orologi solari da usare e da leggere: rassegna degli scritti e degli strumenti di gnomonica conservati nella Biblioteca "Carlo Viganò" e nella Collezione "Alberto Viganò"*, Brescia: La Scuola, 2004 (p. 43).

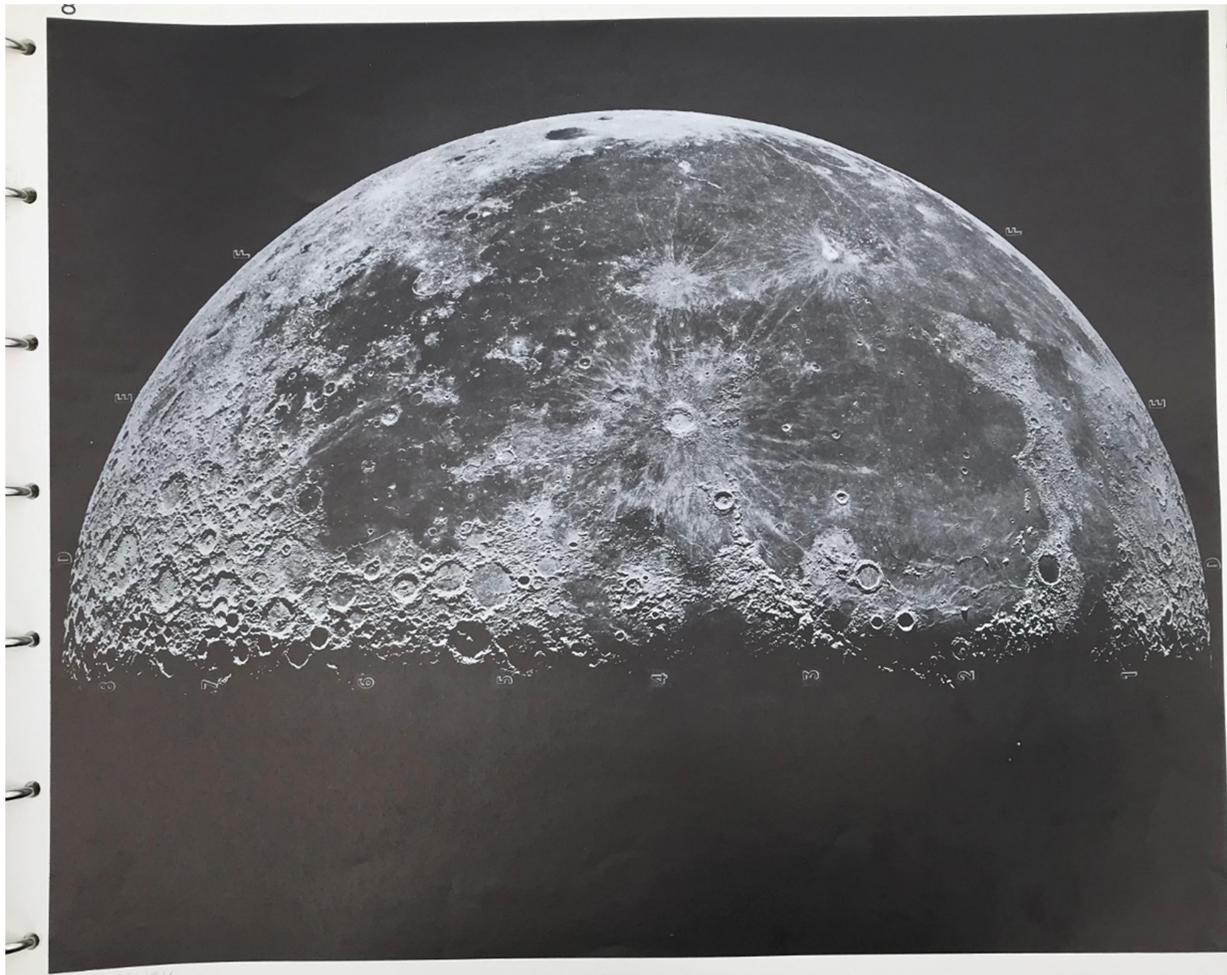
Giovanni Giuseppe Origlia Paolino, *Dizionario storico continente quanto vi ha di piu notabile nella . . .* [Vol. 2]. 1757. p. 288.



58. **TROUVELOT, E. L. (Étienne Léopold)** (1827-1895). *The Trouvelot Astronomical Drawings Manual*. New York: Charles Scribner's Sons, 1882. ¶ 8vo. xii, 167, [1] pp. Small title vignette; minor (but frequent) light pencil marginalia. Original gilt-stamped blue cloth on beveled boards; discrete kozo repairs to spine ends. Ownership signature of Norman Sperling. Very good. This text volume is **QUITE RARE**.

\$ 175

FIRST (and only) EDITION. French artist, etymologist and astronomer, Trouvelot, writes that his study of the heavens for more than fifteen years, resulted in "a large number" of observations pertaining to physical astronomy. He was keen interested in bringing forward the "most interesting celestial objects and phenomena." The text volume was published to accompany the set of magnificent set of drawings and chromo-lithographic plates Trouvelot created, and displayed in 1876. The text discusses, in detail, the Sun, Moon, planets, the Auroral and Zodiacal lights, comets and meteors, and the stellar systems.



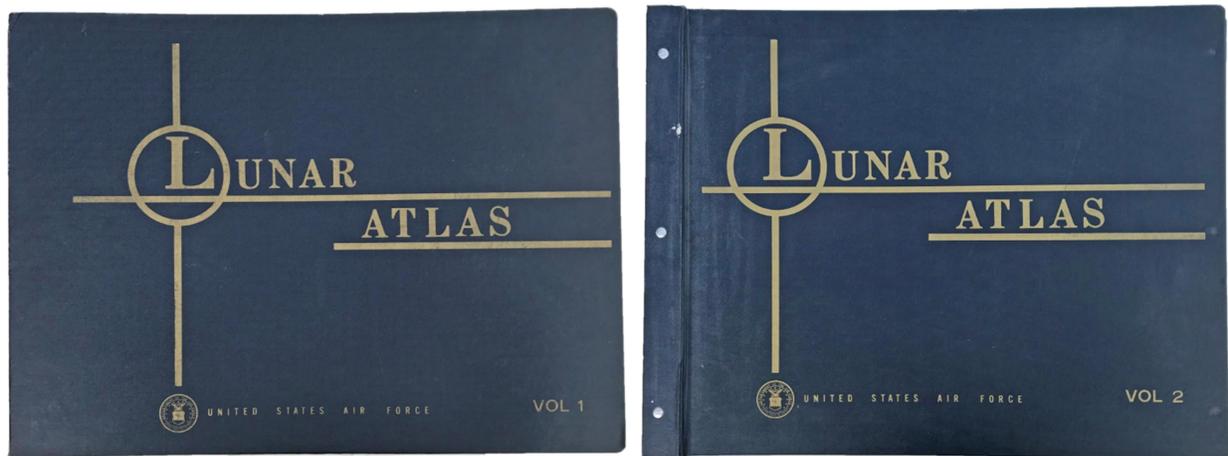
59. **United States Air Force; Dr. Gerard Pieter KUIPER [Gerard Peter]** (1905-1973). *Lunar Atlas*. St. Louis: Aeronautical Chart and Information Center, 1960. ¶ 2 volumes. Large format binders. [18.5 x 25 inches; 47 x 63.5 cm.] x, leaves. Lacks plate F2d, title lower corner torn. Both binders in navy gilt-stamped cloth. Very good.

\$ 750

First edition, being the very rare format issued from the St. Louis Aeronautical Chart and Information Center. The more usual alternative was published by the University of Chicago Press. There were two supplements issued.

This note is printed on the copyright page: "A civil edition of this Lunas Atlas as compiled by the staff of Yerkes observatory will be offered for sale to the public by the University of Chicago Press." [i.e., NOT THIS ITEM, the other being as follows:]. The University of Chicago Press issue measures 17 x 21 inches, an accompanying 23 page booklet, 230 plates (containing 281 lunar photographs. That is titled differently: *Photographic Lunar Atlas: Based on Photographs Taken at the Mount Wilson, Lick, Pic du Midi*,

*McDonald, and Yerkes Observatories.* University of Chicago Press, 1960. Contained in a red clamshell box.



"The Photographic Lunar Atlas, published in 1960, was the magnificent product of the enormous effort invested by Kuiper and his collaborators."

"The last great photographic lunar atlas based on images recorded from earth was undertaken by Gerard Kuiper and a number of colleagues, most notably Ewen Whitaker, in 1955. The atlas utilized photographs from five observatory collections--Mount Wilson, Lick, Pic du Midi, McDonald, and Yerkes--supplemented as necessary by new ones. The complete atlas has 281 photographs, covering 44 fields under different angles of illumination. The photographs in the main body of the atlas are printed four to a sheet, and folded, so that they might be used at the telescope." [Linda Hall Library, *The Face of the Moon*, no. 38]

"Until 1960, the Paris photographic Atlas of the Moon by Loewy and Puiseux remained the most expensive work of its kind in existence. That year it was, however, superseded by a new *Photographic Lunar Atlas*, edited by G. P. Kuiper in collaboration with D.W.G. Arthur, E. Moore, J.W. Tapscott and E.A. Whitaker (Chicago, 1960). This atlas contains 281 illustrations, of which 212 exhibit 44 lunar regions under 4-5 different conditions of illumination by the Sun, on the scale of 1:370000. All these illustrations are based on enlargements of the photographs secured by many different astronomers at the Lick, Mt. Wilson, McDonald, Pic du Midi, and Yerkes observatories, and collected by the compilers. Moreover, a subsequent appendix to this Atlas (Orthographic Atlas of the Moon, compiled by D.W.G. Arthur and E.A. Whitaker in 1962) contains overprints of lunar co-ordinates superimposed over photographs of a major part of the visible lunar hemisphere; while a second appendix (in the form of Rectified Lunar Atlas, by E.A. Whitaker, G.P. Kuiper, W.K.

Hartmann and L.H. Soradley, 1964) contains reproductions of photographs of the entire visible lunar hemisphere rectified by projection on a sphere."

☞ THIS ITEM (above) EXTRA LARGE & HEAVY. Special shipping required.

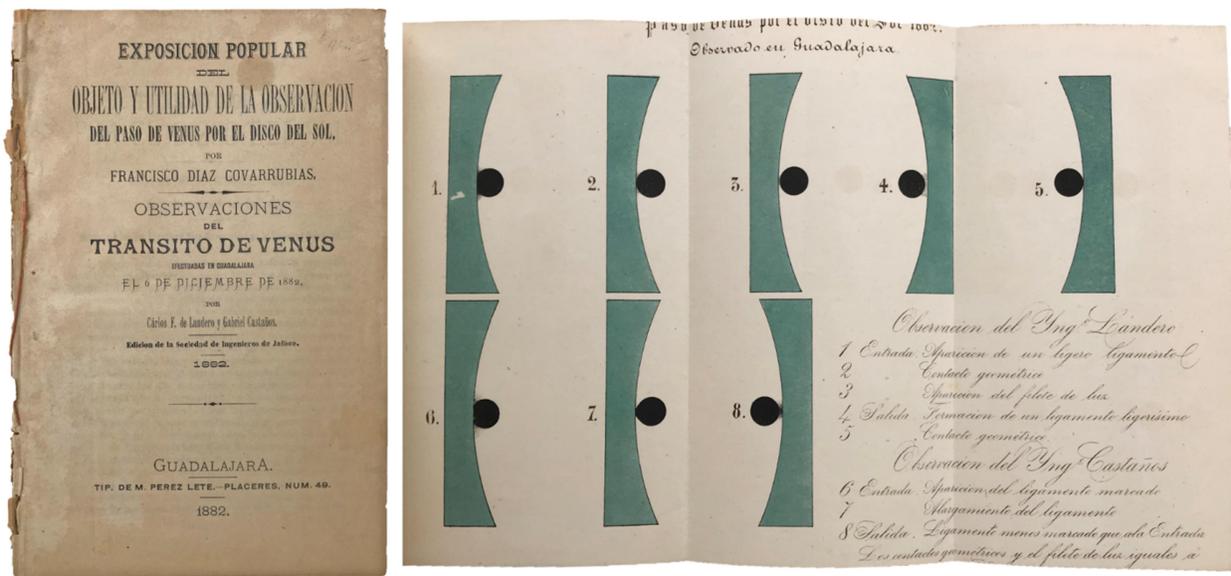
60. **WOOLF, Harry** (1923-2003). *The Transits of Venus; a study of eighteenth-century science*. Princeton, NJ: Princeton University Press, 1959. ¶ 8vo. xiii, [1], 258 pp. Illus., index. Gray cloth. Ex-library copy (withdrawn). Former ownership signature of Norman Sperling, 1980.

\$ 5

First edition. Harry Woolf (August 12, 1923 – January 6, 2003) was an American educator and historian of science who served as provost of The Johns Hopkins University and was later the fifth Director of the Institute for Advanced Study.

61. **YEOMANS, Donald K.** *Comets: A chronological history of observation, science, myth, and folklore*. New York: John Wiley & Sons, 1991. ¶ 8vo. x, 485, [1] pp. illustrations, photographs, tables, diagrams, index. Silver-stamped black hardcover, dust-jacket; jacket tear closer with cellophane tape. Generally very good. ISBN 10: 0471610119

\$ 6



62. **[Venus, Transit of] Francisco Diaz Covarrubias** (1833-1889). *Exposicion Popular del Objeto y Utilidad de la Observacion del Paso de Benuus por el Disco del Sol. Por Francisco Diaz Covarrubias. Observaciones del transito de Venus efectuadas en Guadalajara el 6 de diciembre de 1882, por Carlos F. de Landero y Gabriel Castaños. Edición de la Sociedad de ingenieros de Jalisco. 1882*. Guadalajara: Tip. de M. Perez Leté, 1882. ¶ 8 x 5 1/4 inches. Small 8vo. 41, [1] pp. 1 folding color plate with 8 figs. Disbound. VERY RARE.

\$ 45

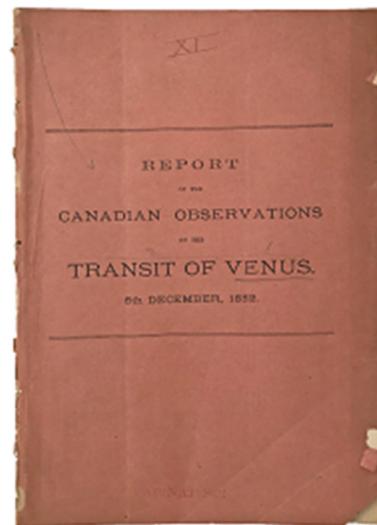
The only copy showing on WorldCat is at the Bibliotheque Nationale, Paris. Francisco Díaz Covarrubias was born on January 23, 1833 in Xalapa, Veracruz. Son of the poet and journalist José de Jesús Díaz, and Guadalupe Covarrubias. He was the first of six children, three boys and three girls. At an early age they were orphaned as a father, and together with their mother they moved to Mexico City. He entered the Mining College of Mexico City, where he studied topography, geodesy and astronomy. In 1853 he obtained his degree as a geographer engineer, and the following year he became an interim professor in topography, geodesy and cosmography classes. In 1856, he was assigned to carry out the survey of the geographic and topographical map of the Valley of Mexico , which would be published in 1864. His studies were approved and referred to the Greenwich Meridian. In 1862 he was appointed to the position of Director of the National Astronomical Observatory in Chapultepec that was owned by the federal government. And in 1863 they installed the observation room with the most modern instruments at the time.

63. **[Venus, Transit of] Toronto Observatory, Canada; Clement Henry MacLeod [McLEOD].** *Report of the Canadian Observations of the Transit of Venus. 6th December, 1882.* Toronto: Toronto Observatory, 1883. ¶ 8vo. 25 pp. Tables, folding color map showing position of transit of Venus station, Winnipeg; corner torn off (but present) pp. 1-2 (minor). Original printed wrappers; extremities chipped. Very good.

\$ 25

Professor Clement Henry McLeod, McGill College, a well-known Canadian Astronomer, was elected a Corresponding Member of the Astronomical and Physical Society of Toronto on 1894-01-09.

"In 1882, McLeod was one of the observers in an international effort to watch and record the transit of Venus. By observing (from various locations) the rare event of Venus passing in front of the sun, it was an opportunity to get a better estimate of the size of the solar system. McLeod went to Winnipeg to observe the event, while another observer at McGill also attempted observations but there were some problems with clouds over Montreal and the readings were not accurate enough. In 1886, McLeod and Howard Barnes (Macdonald Professor of Physics) measured the temperature differences between the observatory and the top of Mount Royal. They found changes in temperature at the Observatory that were anticipated by corresponding changes at the



top of the mountain, varying from 4-24 hours. This work was ahead of its time, detecting the passage of cold-fronts and warm-fronts before such things had been discovered or conceived. In 1889 he was made Fellow of the Royal Society of Canada (RSC) and his work was published in the Transactions of the RSC. McLeod died on December 26th, 1917. His legacy was that he made McGill a centre for research in meteorology and geodesy for over 60 years." [The Royal Astronomical Society of Canada].



64. **[Star/astronomical Atlas] WEISS, Edmund** (1837-1917). *Bilder-Atlas der Sternenwelt: eine Astronomie für jedermann. 41 fein lithographierte Tafeln nebst erklärendem Texte und mehreren Text-Illustrationen.* Eßlingen bei Stuttgart: J. F. Schreiber, 1888, 1887. ¶ Tall 4to. [4], 54 pp. Title printed in red & black. Index, 41 lithographic plates, additional text figs. Original half calf, blue cloth sides, gilt-stamping, fine dark green decorative endleaves; rubbed, corners showing, some leaves with edge tears, browning. Bookplate [ca.1929?] of Heinz Kreutz (bookplate signed Rudolf Oeffinger, Switzerland).

\$ 275

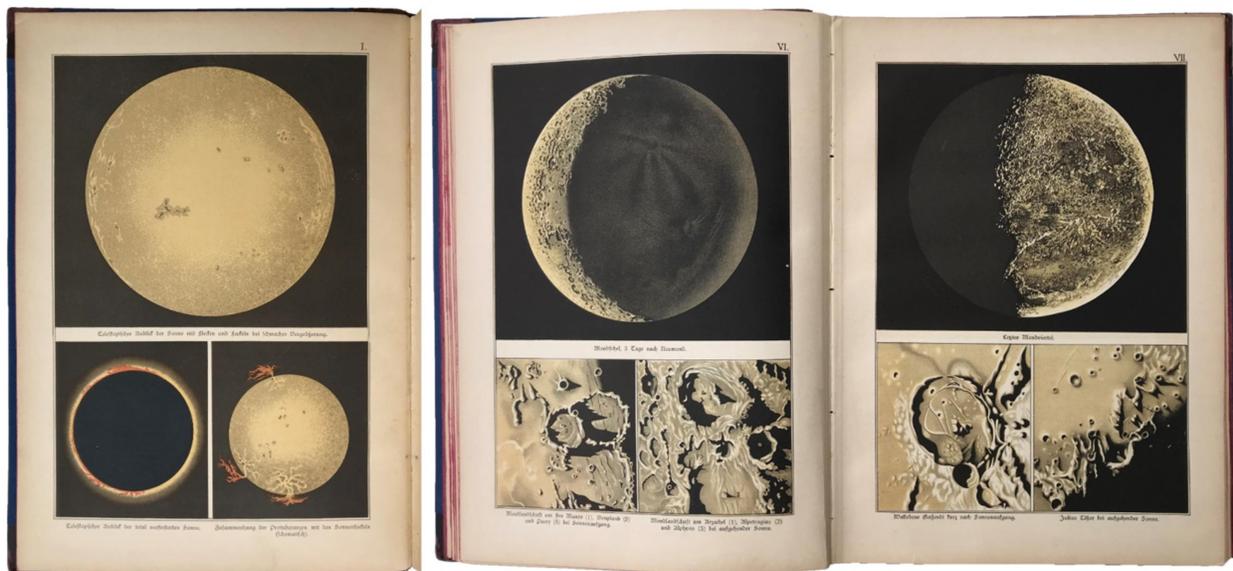
First edition of this popular and beautifully illustrated atlas of astronomical phenomena.

The 41 lithographic plates depict the Sun, sunspots, prominences, Moon, solar system, asteroids, comets, crab nebula, spectra, stars of the Orion Nebula, path of the 19 August 1887 Solar Eclipse, "shooting stars" [meteors, or Sternschnuppen], zodiacal light on the savannas of Mexico [p. XXVII], Moonscape [pl. XI], solar eclipse [pl. XII], lunar eclipse [pl. XIII], etc.

Edmund Weiss (1837-1917), studied astronomy, mathematics, physics at Vienna, then took a position as assistant astronomer in 1858, appointed full professor in 1875, then in 1878, he was named director of the observatory and professor of astronomy at the University of Vienna. He came to the UK and the US in 1872 to study observatory designs and optical factories. "His main contributions to astronomy concern the determination of the orbits of comets, of minor planets, and of meteor showers." The DSB cites the 1892 atlas, and Worldcat cites an 1888 edition as well the 1892. This copy shows a date of 1887 on the main title.

PROVENANCE: Heinz Kreutz.

DSB, XIV, pp. 242-3.



[WEISS]

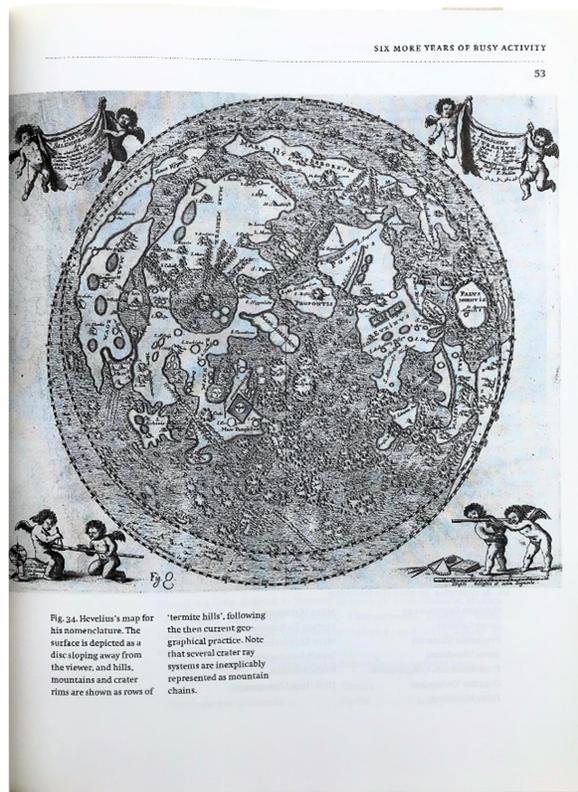
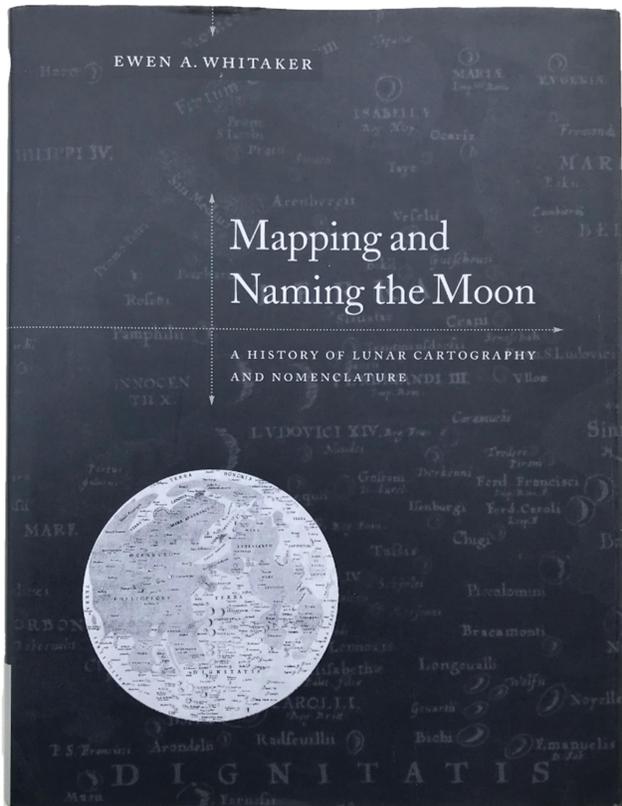


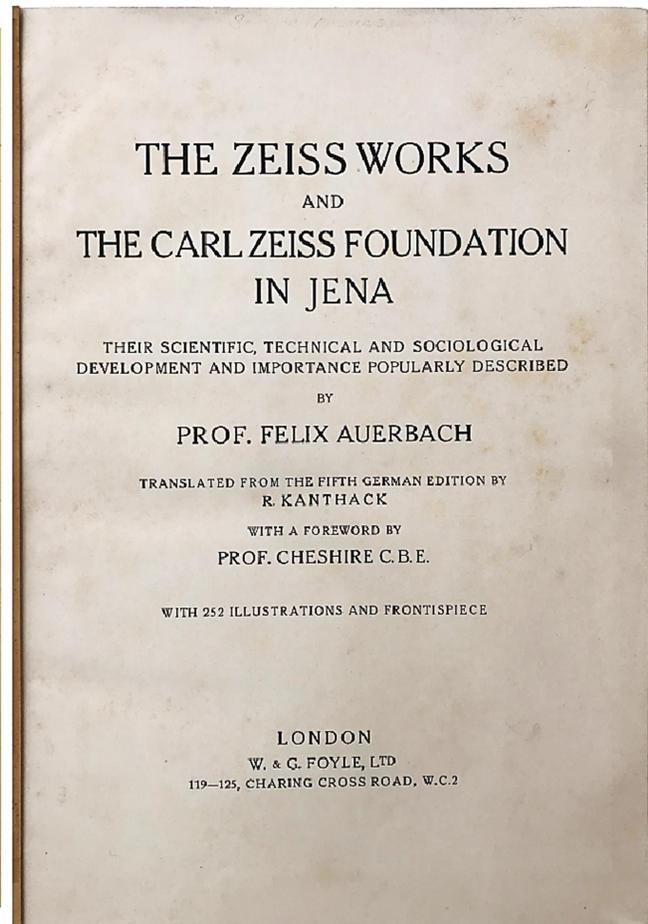
Fig. 24. Hevelius's map for his nomenclature. The surface is depicted as a disc sloping away from the viewer, and hills, mountains and crater rims are shown as rows of 'hermitic hills', following the then current geographical practice. Note that several crater ray systems are inexplicably represented as mountain chains.

65. **WHITAKER, Ewen A.** *Mapping and Naming the Moon; a history of lunar cartography and nomenclature.* Cambridge: Cambridge University Press, 1999. ¶ Large 8vo. xix, [1], 242, [2] pp. Illustrated throughout, brief index. Navy blue cloth, dust-jacket. Very good. ISBN 10: 0521622484 ISBN 13: 9780521622486

\$ 50

First edition. "Almost thirty years after the Apollo missions, "Tranquillity Base", "Hadley Rille", or "Taurus-Littrow" are names still resonant with the enormous achievements represented by the lunar landings. But how did these places get their names? Who named Copernicus crater? Where did all those names on lunar maps come from, and what stimulated their selection? Ewen Whitaker traces the origins and evolution of the present-day systems for naming lunar features such as craters, mountains, valleys and dark spots. The connections between the prehistoric and historic names, and today's gazetteer are clearly described. Beautiful lunar maps spanning four centuries of progress wonderfully illustrate the unfolding of our ability to map the Moon. Rare, early photographs add to the sense of history. Comprehensive appendices and the bibliography make this delightful book a work of lasting reference and scholarship." [CUP].

REVIEWS: [1] "...a well-illustrated and substantive reference of value to every astronomical library. Those invested in sky lore, astronomical history, and lunar depth will want a copy..." Griffith Observer. [2] "...a welcome new book on the history of lunar mapping. Ewen Whitaker probably knows more about selenocartography and lunar nomenclature than anyone alive." Sky & Telescope. This work also issued in paperback [2003]; this is the first edition in hardcover.



66. [ZEISS, Carl] Felix AUERBACH (1856-1933). *The Zeiss Works and the Carl Zeiss Foundation in Jena. Their scientific, technical and sociological development and importance popularly described. Translated from the fifth German edition by R. Kanthack.* London: W. & G. Foyle, [1927]. ¶ 8vo. [iv], 273, [1] pp. Frontispiece (with facing tissue) of Ernst Abbe, 253 illustrations, folding plate at rear; lightly foxed. Original full gilt-stamped navy cloth; extremities gently mended with kozo. Very good.

\$ 65

A comprehensive review of the work and manufacture of Zeiss instruments. Of particular interest are the microscopes, and all kinds of other apparatus are covered: glass works, optical projection, photography, astronomical instruments, telescopes,

rangefinders, signaling apparatus, searchlights, triple mirrors, measuring instruments, geodetic tools, micrometers, spectacles, and more on the company itself.

In 1889, Auerbach took over the professorship of theoretical physics at the University of Jena which had been established by Ernst Abbe (thus the frontispiece). Auerbach and his wife were both Jewish. Because of the situation in 1933 they both took their own lives in face of the rise of Nazism.

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