ANTIQUARIAT
Michael Kühn

55

Detlev Auvermann
RARE BOOKS

IVLII ALEXAN-
DRINI SERENISSIMI ROMA,
DOCTVM REGII PHYSICI, DE MEDICINA
ET MEDICO, DIALOGVS, LIBRIS
QVINQVE DISTINCTVS.

ALESSANDRINI, Giulio.

De medicina et medico dialogus, libris quinque distinctus. Zurich, Andreas Gessner, 1557. 4to, ff. [6], pp. 356, ff. [8], with printer's device on title and 7 woodcut initials; a few annotations in ink to the text; a very good copy in a strictly contemporary binding of blind-stamped pigskin, the upper cover stamped '1557', red edges, ties lacking; front-fly almost detached; contemporary ownership inscription of Werner Rolfinck on title (see above), as well as a stamp and duplicate stamp of Breslau University library.

EUR 3.800.-

First edition of Alessandrini's medical dialogues, his most famous publication and a work of rare erudition.

Giulio Alessandrini (or Julius Alexandrinus de Neustein) (1506–1590) was an Italian physician and author of Trento who studied philosophy and medicine at the University of Padua, then mathematical science, and Greek language and literature. A physician of great renown, he served the emperors Ferdinand I., Maximilian II. and Rudolph II. He was a devoted follower of both Galen and Plato, and translated many of Galen's works into Latin, adding his own commentary, as well as those of the Byzantine physician Joannes Actuarius. Maintaining that the famous De Theriaca ad Pisonem was falsely attributed to Galen, he opposed the use of theriac in fevers. He also entered into a drawn-out dispute with Giovanni Argentero over galenic teaching. His writings are marked by the actuality of the topic, as for example in his Salubrium sive de sanitate tuenda in which he discusses methods to preserve health and prevent illness, advocating amongst other physical exercise, rest, and alimentation.

Alessandrini was celebrated by Pietro Andrea Mattioli as an innovator of 16th-century medicine.

Provenance: Werner Rolfinck (1599-1673), German physician, scientist and botanist, with his inscription on title. Rolfinck studied at Wittenberg under Daniel Sennert, and at Leiden, Oxford, and Padua. He became a Professor at Jena University in 1629, and rearranged and expanded the botanical garden there. His experimental research involved chemical reactions and the biochemistry of metals, acquiring him the title of 'director of chemical exercises'. He rejected the view that other metals could be transformed into gold.

DG 3.1188; Adams A 713; Durling 161; IA 103.268; VD16 A 1752; not in Bird, Lesky, Osler, Waller, or Wellcome.

AVTOLYCI. DE. VARIO
ORTV. ET. OCCASV
ASTRORVM. INER-
RANTIVM.
LIBRI. DVO.
NVNC. PRIMVM. DE. GRÆCA
lingua in Latinam conuersi: Scholiis antiquis
& figuris illustrati, de Vaticana
Bibliotheca deprompti.
IOSEPHO. AVRIA. NEAPOLITANO
INTERPRETE.

ROMAE: Ex Typographia Vincentij Accolti, in Burgo.
Superiorum permissu. M. D. LXXXVIII.

AUTOLYKOS (AUTOLYCUS OF PYTANE).

Autolyci De vario ortu et occasu astrorum inerrantium libri dvo nunc primum de graeca lingua in latinam conuersi … de Vaticana Bibliotheca deprompti. Josepho Avria, neapolitano, interprete. Rome, Vincenzo Accolti, 1588. 4to, ff. [6], pp. 70, [2]; with large woodcut device on title, and several woodcut diagrams in the text; title a little browned, else a fine copy in 19th-century vellum-backed boards, new endpapers.

EUR 4.200.-

Very rare Latin edition, translated from a Greek manuscript at the Vatican library, of Autolycus' work on the rising and setting of the fixed stars.

Little is known about Joseph Auria, who translated and edited the work from a Greek manuscript at the Vatican. '[Auria] is believed to have lived in Naples around 1590, where he was renowned as a mathematician. His name might be derived from Italian Doria. He translated Heron and Diophan-tos from Greek into Latin and edited new translations of the books of Autolycus, Theodosius of Tripoli, and Euclid's Phaenomena …

'For his Diophantos edition, Auria wrote a number of preparatory manuscripts preserved now in libraries (Paris and Milan). Auria's edition could have become a synthesis of the two classes of Diophantos manuscripts, alongside the emendations by the humanists. The undertaking was nearly successful, but unfortunately the manuscript never got to print' (Ad Meskens, Travelling mathematics, pp. 161-162).

Autolycus was a Greek mathematician and astronomer, who probably flourished in the second half of the 4th century B.C., since he is said to have instructed Arcesilaus. His extant works consist of two treatises: his Περὶ κινουμένης σφαίρας contains some simple propositions on the motion of the sphere, and his other work, Περὶ ἐπιτολῶν καὶ δύσεων, in two books, discusses the rising and setting of the fixed stars. The former treatise is historically interesting for the light it throws on the development which the geometry of the sphere had already reached even before Autolycus and Euclid. There are several Latin versions of Autolycus and a French translation by Forcadel (1572).

Adams A 2296; Index Aureliensis 110.934; KVK locates copies at Aschaffenburg, Munich, Berlin, Erfurt, Göttingen, and Wolfenbüttel; in addition to the copy at Cambridge, COPAC locates copies at Oxford, and Royal College of Physicians; OCLC locates three copies in the US, at Harvard, Getty, and the Huntington.

The famously rare Medici Press printing, based on a Florentine manuscript, of the epitome of all precedent development, the final codification of all Graeco-Arabic medicine

AVICENNA [Abū ʿAlī al-Husayn ibn ʿAbdallāh IBN SĪNĀ].

[Arabice:] Liber canonis. Libri quinque canonis medicinae.' Rome, Typographia Medicea, 1593. Three parts in one vol., Folio, pp. [xii, with Arabic title], 610, [2, blank], 268, [63]; here bound, as sometimes, without Avicenna's compendium of logic, metaphysics, and philosophy, al-Najat; small restored hole to lower inner margin of title, minimally affecting typographical border, two small restored holes to final leaf; both these leaves a little stained; a little browned throughout, only occasionally heavier; an exceptionally clean and very crisp copy in late 18th-century Italian calf, gilt; finely rebacked with most of the original spine preserved, lower compartment expertly renewed; early inscription on title washed away.

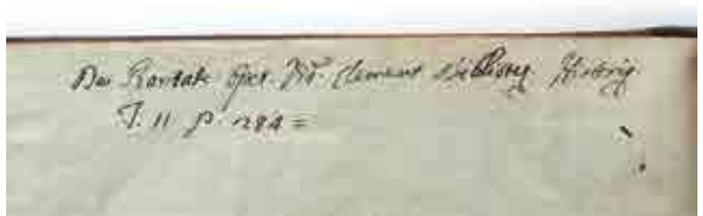
EUR 80.000.-

First edition and with the exception of a couple of tiny repairs to the title and final leaf a wonderful copy, void of the extensive repairs or restorations commonly encountered in this first Arabic printing of Avicenna's Canon of Medicine.

The Canon (al-Qānūn or 'Code of laws') of Avicenna (980-1037) 'is a compendium of Greek and Muslim medical knowledge of Avicenna's time, coordinating the teachings of Galen, Hippocrates and Aristotle. It superseded all previous works – even the great medical encyclopaedia of Rhazes – and in its Latin translation became the authoritative book in all universities … The Canon was translated into Hebrew (1491), the first Arabic printing appeared in 1593, and there were many editions of and commentaries on, the Latin translation by Gerardus of Cremona (1114–1187). Through these printings Avicenna's work transmitted to the West ideas of the great Greek writers and also introduced ideas of his own which in some respects superseded them' (Printing and the Mind of Man). The Arabic edition 'was printed under the auspices of Cardinal de'Medici from Arabic fonts designed by the French typographer Robert Granjon' (Norman).

'Ibn Sina divided his Canon of Medicine into five books. The first book – the only one to have been translated into English – concerns basic medical and physiological principles as well as anatomy, regimen and general therapeutic procedures. The second book is on medical substances, arranged alphabetically, following an essay on their general properties. The third book concerns the diagnosis and treatment of diseases specific to one part of the body, while the fourth covers conditions not specific to one bodily part, such as poisonous bites and obesity. The final, fifth, book is a formulary of compound remedies' (M. Nasser, A. Tibi, and E. Savage-Smith, 'Ibn Sina's Canon of Medicine: 11th century rules for assessing the effects of drugs' in J R Soc Med, 2009).

As described above, this copy contains the complete Canon, and is here bound without the collection of philosophical and metaphysical treatises, al-Najat. The imprimatur of the Typographia Medicea being located at the end of the index to Avicenna's Liber canonis, it suggests the al-Najat, which commonly follows, to be a late addition or an afterthought. Whether the composition of this copy represents an early issue or is due to the publishers' choosing regarding the make-up of the volume, which included issues with either a Latin or Arabic title-page depending on the intended market, the al-Najat is usually found bound in last when present. A further reason for its occasional absence maybe due to a rather interesting fact pointed out by Schnurrer, who provides a rare and more thorough or thoughtful bibliographical reference on this particular Medici Press production. Schnurrer notes a marker found in the margins of the last four pages to the al-Najat, in which the Medici Press's editor points out passages 'repugnant' to the Catholic faith contained in the work: 'Paginis postremis quatuor passim signum aliquod positum est in margine: quid significet, declarat notatio editoris scripta in fine, nimirum, signo isto notari dicta Catholicae fidei repugnantia' (Schnurrer, Bibliotheca Arabica, p. 450).



The fine state of preservation of this copy shows no signs of an earlier presence of these independent tracts. The Arabic edition of Euclid from the same press is equally known in variant printings, with some copies comprising twelve, some thirteen books, and again with either a Latin or an Arabic title (see Thomas-Stanford, Early Editions of Euclid's Elements p. 17). The copy preserved at the American University of Beirut is bound exactly as here.

Provenance: the rear free end-paper with the note 'De Raritate Oper[a]. Vid[e]. Clement Biblioteq. Historiq. (sic) T. II. p. 284' (i.e. David Clément, Bibliothèque curieuse, historique et critique, ou Catalogue raisonné de livres difficiles à trouver, Göttingen, Hannover and Leipzig, 1750–60) in a late 18th-century hand. This appreciation finds further expression in the label adorning the second compartment of the spine, reading 'Extr[ema] Rarit[as]', a highly unusual feature not generally seen on a relatively old binding.

Although a number of copies of the Medici Press Avicenna are recorded in institutions, many are seriously defective and the work is extremely rare on the market.

Adams A 2322 (with the al-Najat); Bibliothèque Nationale, Inventaire des Livres Imprimés Arabes, 1514-1959, p. 415; Durling 376 (no proper collation provided); Garrison and Morton 44 (without collation); Index Aureliensis 110.626; LeFanu, Notable Medical Books p. 53 (a copy with a Latin title page); Norman 1951 (with the al-Najat); Schnurrer, Bibliotheca Arabica 393 (with a complete collation); not in the Wellcome catalogue.

BACHMEYER, Wolfgang.

Calender-Vereinigung. Das ist: Wolmeinend und unvorgreifliches Bedenken und Gutachten, wie beede, Alt und Newe Calender zuverbessern, mit einander zuvereinigen, und in eine richtige und beständige Form zu bringen. Hiebevor Anno 1654. .... Ulm, gedruckt durch Balthasar Kühnen, bestellten Buchtruckern daselbst, 1661. Quarto (190 x 150 mm) 20 Bll. (incl. engraved title), 174 pp., 21 Bll. 18th century mottled calf, green morocco lettering piece, gilt spine in compartments. From the "South Library", Shirburn Castle of the Earls of Macclesfield, with engraved Exlibris on inner cover, fine condition.

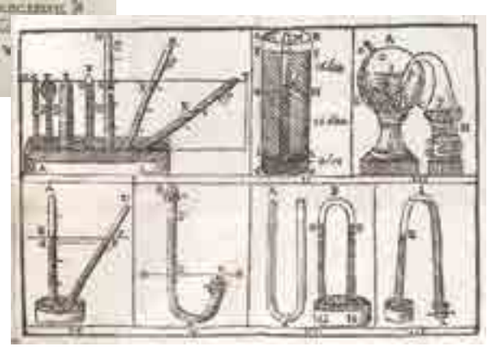
EUR 3.400.-

Only edition, a rare work on the calendar reform by the Protestant pastor, astronomer and cartographer from Ulm, Wolfgang Bachmeyer (1597-1685), a friend of Kepler who reviewed the Rudolfinian tables, and who supported the calendar reform and the introduction of the Gregorian calendar in the Protestant areas of Southern Germany. To this end, he played a leading role in the lengthy discourse on the introduction of the Gregorian calendar in the Protestant and Reformed territories. Before he had printed this work, he submitted expert reports to the Reichstag in Regensburg in the years 1653 and 1654 in which he proved the advantage of the new calendar and recommended it to be introduced. In the appendix to this book, he published an Easter calendar for the years 1650-1800 and an everlasting church calendar. The beautiful engraved allegorical title show the association of old & new calendar: "Dess Alten unn Newen Calenders Vereinigung".- VD17 39:119205A; Houzeau-Lancaster 13873.

BARTOLI, Daniello.

La tensione e la pressione disputanti qual di loro sostenga l'argentovivo ne' cannelli doppo fattone il vuoto dal .... – Bologna: Longhi, 1677. 12° (150 x 85 mm). pp. 282 with 2 fold. woodcut plates. Carta rustica, uncut copy. Little browning, else fine.

EUR 1.800.-



Important work on the experiments of Torricelli, Pascal, Otto v. Guericke and Boyle on the vacuum & on the theory of capillarity. One of two variants in the same year.

Daniello Bartoli (1608–1685) was an Italian Jesuit writer, celebrated by the poet Giacomo Leopardi as the "Dante of Italian prose". His father, Tiburzio was a chemist associated with the Este court of Alfonso II d'Este. Under Jesuit scientists Giovanni Battista Riccioli and Niccolo Zucchi the young Bartoli, together with his younger contemporary Francesco Grimaldi was involved in noteworthy experiments and discoveries of the planetary heavens. Bartoli along with Zucchi is credited as having been one of the first to see the equatorial belts on the planet Jupiter on May 17, 1630. And in his old age he would return to the world of science as here.- Gamba, 1774; Piantanida, 1514; Honeyman, 231: "Rare early work on the barometer"; Sommervogel I, 980. Lit.: Michael Gorman. Jesuit explorations of the Torricellian space: carp-bladders and sulphurous fumes; in: Melanges de l' Ecole francaises de Rome, 106 (1994) pp. 7-32.


DEL
SVONO
DE'
TREMORI ARMONICI
E
DELL'VDITO
TRATTATI
DEL
P. DANIELLO BARTOLI
della Compagnia di GIESV.
IN ROMA,
A Spese di Nicolò Angelo Tinassi, M DC LXXIX.
CON LICENZA DE' SUPERIORI.

BARTOLI, Daniello.

Del suono de' tremori armonici e dell udito. Rome, Nicolò Angelo Tinassi, 1679. 4to, pp. [16], 330, [1], with several woodcut initials and diagrams in the text; a very good copy in contemporary vellum; title with traces of an early ink inscription of a Jesuit college.

EUR 1.900.-

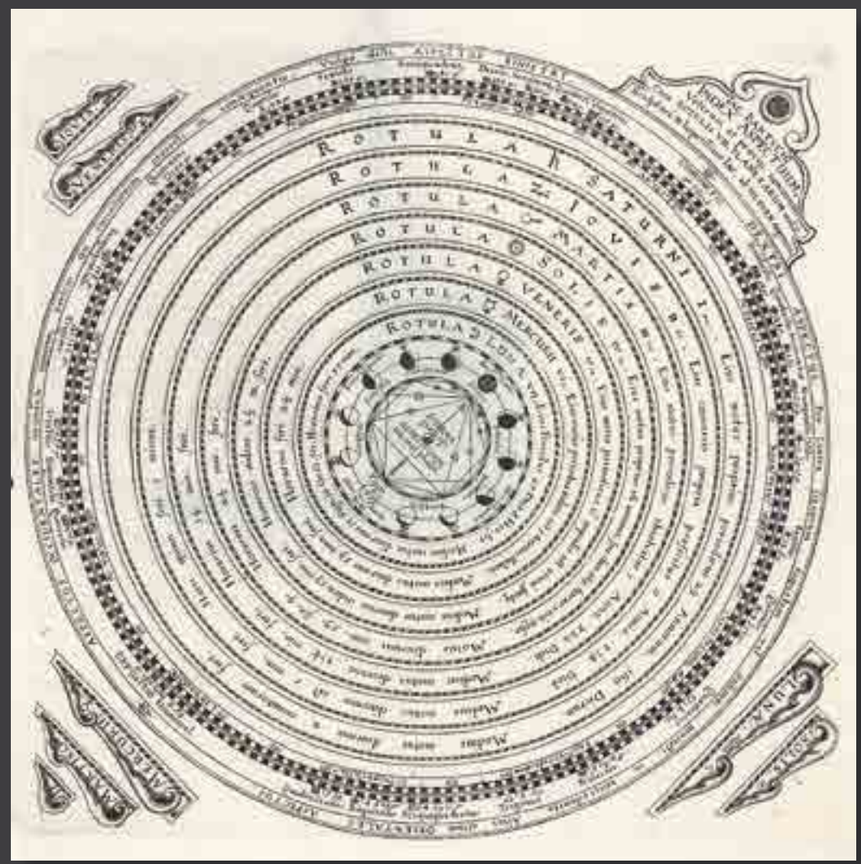
Scarce first edition of Daniello Bartoli's work on acoustics and the sense of hearing, a treatise in which 'the search for the physical basis of music went hand in hand with the search for its anatomical and physiological basis in line with the musical studies carried out by the scientists of the Royal Society of London and the Academie Royale des sciences in Paris (Wilbur Applebaum, editor, Encyclopedia of the Scientific Revolution: From Copernicus to Newton).

Daniello was the youngest of three sons and barely fifteen when embraced a vocation to the Society of Jesus in 1623. Debarred by his superiors because of his manifest literary talents from the missions in the Indies he would later describe, he attained high distinction in science and letters. Giacomo Leopardi later celebrated him as the 'Dante of Italian prose'. After a novitiate of two years at Novellara, Bartoli resumed his studies in Piacenza in 1625. In Parma (1626–29) he completed his philosophate and (1629–34) he taught grammar and rhetoric to the boys of the Jesuit collegio. Under Jesuit scientists Giovanni Battista Riccioli and Niccolo Zucchi the young Bartoli, together with his younger contemporary Francesco Maria Grimaldi was involved in noteworthy experiments and discoveries of the planetary heavens. Bartoli along with Zucchi is credited as having been one of the first to see the equatorial belts on the planet Jupiter on May 17, 1630. And in his old age he would return to the world of science.

He was ordained a priest in 1634 and continued his studies in Milan and Bologna. In his thirties he was an esteemed preacher delivering the Lenten sermons at the principal Jesuits churches of Italy including Ferrara, Genoa, Florence and Rome. He took his final vows as a professed Jesuit in Pistoia on July 31, 1643. In 1645 his treatise on the man of letters, L'huomo di lettere catapulted him to national celebrity and international fame as a leading contemporary writer of his Baroque age. For the rest of the century Dell'huomo di lettere difeso ed emendato became a staple of the Italian printing industry and was much sought after and translated abroad. During the process of her conversion to Roman Catholicism at the hands of the Jesuits in the 1650s Christina, Queen of Sweden specifically requested a copy of this celebrated work be sent to her in Stockholm. Heading to preach in Palermo he survived a shipwreck off Capri in 1646, but lost the manuscripts of his sermons. Because of his growing fame his superiors put an end to his decade as an itinerant preacher and brought him permanently to the order's headquarters in Rome. In 1648 his was appointed Jesuit historiographer and spent the next four decades writing his great history, as well as moral, spiritual and scientific treatises.

Bartoli's work on sound and hearing was of some influence and the work was almost immediately reprinted, with a Bologna edition appearing in 1680.

Gamba 1775; Wellcome II p. 109; this first edition not in Krivatsy; OCLC locates six copies in the US, at Burndy, Huntington, New York Public, Pennsylvania, Stanford, and Case Western.



BARTSCH, Jacob.

Usus Astronomicus Indicis Aspectuum veterum et praecip. novorum, compendiose sine Calculo simul omnium inveniendorum. Nuremberg: P. Fürsten, 1661. Small 4to. (183 x 138 mm) pp. 27 with two folding engraved plates. Title within ornamental type border. An attractive antique calf, small stain in outer blank margin, spine gilt, red morocco lettering piece on spine.

EUR 4.900.-

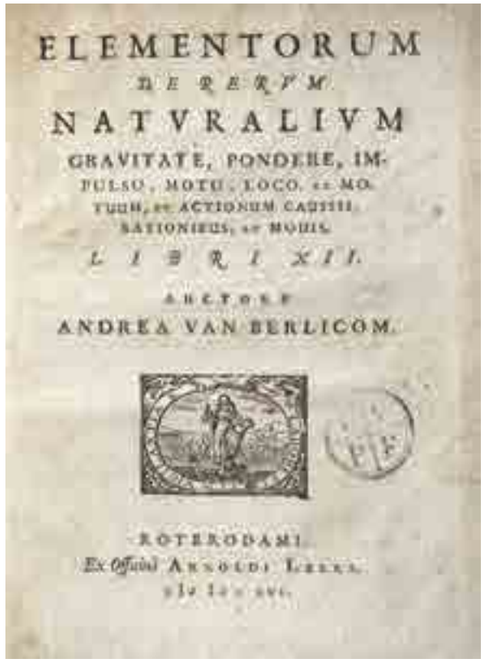
Second enlarged edition (1st ed.: 1624). The 1624 edition was a paper instrument with introductory text. This planetarium was designed by Jacob Bartsch and engraved by Jacob van der Heyden of Strasbourg. A seven disc set in a 330 mm square box with largest disc 305 mm. It was priced by E. P. Goldschmidt cat. 29, no 24 with 24 GBP. No other records of the first edition since then. This second edition here has an enlarged text and new plates and is different.

In the introduction Bartsch praised the Strasbourg instrument maker Johann Friedrich Schmiedt for his knowledge and skills. He has probably seen a similar instrument with him.

He then describes the instrument based on aspects newly introduced by Kepler. In astrology, an aspect is an angle the planets make to each other in the horoscope, also to the ascendant, midheaven, descendant and other points of astrological interest. Aspects are measured by the angular distance in degrees and minutes of ecliptic longitude between two points, as viewed from Earth. According to astrological tradition, they indicate the timing of transitions and developmental changes in the lives of people and affairs relative to the Earth.

The instrument show seven concentric orbits of the planets in the ptolemaic system with the time of the circulation, daily way at heaven, etc. including a hand or movable ruler.

Bartsch (1600-33), was Kepler's son-in-law and helped him compile his table of logarithms, assisted him on the Tabulae Rudolphinae, and, after Kepler's death, took over the printing of the Somnium but died before publication was completed. Bartsch studied astronomy at the University of Leipzig and medicine at the universities of Strasbourg and Padua. This is a work of practical astronomy and is most remarkable for its large (330 x 320 mm.) engraved plate depicting a horizontal planetarium (its workings are described in the text). In three of the outer corners there are engraved seven moving pointers intended to be cut up and mounted. Fine copy. The 1624 is very rare, and the plates are often missing (see copies in Göttingen, Munich, Halle) Lalande, p. 249. Zinner, Instrumente, p. 245; Suzanne Karr Schmidt (May 2006). Catalogue of European Single-Sheet Interactive Prints, 1450-1700 no. 289; Kaestner, Geschichte IV, 407 ff.



ELEMENTORUM
DE RERVM
NATVRALIVM
GRAVITATE, PONDERE, IMPULSU, MOTU, LOCO, ET MOTUUM, ET ACTIONUM CAUSSIS, RATIONIBUS, AC MODIS.
LIBRI XII.
AUCTORE
ANDREA VAN BERLICOM.

ROTERODAMI,
Ex Officina ARNOLDI LEERS.

BERLICOM (Berlicum; Burlicom), Andreas (Andries) van.

Elementorum de rerum naturalium gravitate, pondere, impulsu, motu, loco, et motuum, et actionum caussis, rationibus, ac modis. Libri XII. – Rotterdam: Ex officina Arnoldi Leers, 1656. Quarto (202 x 152 mm). ff. [4] Bl., pp. 230 [i.e. 236] with woodcut device on title, initials, woodcut diagrams, including one full-page, variable browning, spotting and staining throughout, a few darker spots affecting letters, final leaf torn at margin. Contemporary vellum, handwritten title on spine. Provenance: "C. V. P. F." (stamp on title).

EUR 3.800,-

Very rare book on motion, maybe also translated into Dutch as: In de natuirliicke dingen aen te mercken, haer mate, reden, en gewicht, de oorsaecken van de bewegingen: beweeghselen . . . of the same year.

The book is a treatise on metaphysics, astronomy, and biology, arranged somewhat spuriously in Euclidean sequences of 'definitions' and 'theorems', and expounding a broadly mechanistic physics which distinguishes between several different kinds of fundamental motion. Abraham du Prat wrote to Hobbes in April 1656 on this book and Huygens made notes out of it.
Andreas van Berlicom (ca. 1587–1656) studied philosophy and law at Leiden, became Secretaris of Rotterdam in 1628 (succeeding the famous Cornelius Musch), and was appointed curator of the latin school there in 1641. He was an amateur mathematician and as an important figure in Rotterdam had some contacts with both Descartes and Huygens and also with the mathematician Jan Stampioen. He remained Secretaris of Rotterdam until his death in July 1656. One entry in the Dutch biogr. Dictionnary says that his Elementorum was published in 1654, but this must be an error: the dedicatory epistle to Louis XIV is dated in October 1655. - Widekind, Verzeichniss raren Büchern 401; not in 17cent. Dutch Philosophers.

KVK: Stabi Berlin (?); Göttingen, Hamburg, Lübeck, Wolfenbüttel, Fulda, Dresden; Basel; COPAC: BL London, Cathedral Library, Edinburgh Univ., Oxford, Royal College Physicians, UCL, Wellcome; OCLC: ?


De Vniuersitate Libri tres, quibus universa de natura philosophia continetur, Nicolao Biesio Gandauensi Authore.

Ad Optimum & Invictissimum Principem, Dominum Philippum, Hispanorum, Angliae Franciaeque Regem, &c. Burgundiae Septentrionalis Galliae, & inferioris Germaniae Ducem & Comitem, &c.

ANTVERPIAE, Apud Martinum Nutium sub Ciconijs.

BIESIUS (Biese, Biesen), Nicolaus van.

De universitate libri tres, quibus universa de natura philosophia continetur. – Antuerpiae (Antwerpen): Apud Martinum Nutium (Martin Nuyts) sub Ciconijs anno salutatis, 1556. 4to (199 x 140 mm). pp. (8), 224, (16) with one fold. table at T3. Woodcut device on title, initials, geometrical diagrams, folding letterpress table, errata leaf at end, variable spotting, staining and browning throughout, a few darker spots occasionally affecting letters, a few marginal tears or chips without loss. Contemporary limp vellum, new endpapers, spine rather worn, bowed. Old rebacking.

EUR 4.000.-

First edition of his natural philosophical poem influenced by Lucretius.

Nicolaus (Nicolaas) Biesius (or Biese or Biesen) is a somehow forgotten humanist scientist of the Louvain circle. He had studied at Ghent and at Louvain, travelled to Spain to study in Valencia, studying furtheron in Siena, before he became prof. of medicine at Louvain University in 1558 to teach galenic medicine and a sort of natural philosophy. He lectured less on surgery and practical medicine, more on philosophy and medical methodology. He was in contact with several humanist, like Crato, Camutius, Clusius, Guenther of Andernach, Hajek, and Alexandrinus. When John Dee travelled on the Continent between 1548 to 1551 he met in Louvain 'with some learned men, and chiefely mathematicians, as Gemma Frisius, Gerardus Mercator, Gaspar à Mirica, Antonio Gogava, &c., but also Biesius' atomistic philosophy seems to have attracted Dee. Biesius was undoubtedly one of the influences on Dee's thinking at this time: He had listed various kinds of occult art and observed that they all seemed to have originated in the precept that all things are bound in an inevitable series of causes and that all bodies were governed by incorporeal forces. (Deacon, Dee 20-21) Biesius also became academic orator to the Duke of Alva. Due to his fame he was invited in 1571 by roman emperor Maximilian II. to became his personal physician in Vienna. Cornelius Gemma has already succeeded him as prof. of medicine in Louvain in 1569. Biesius died in Vienna after a heart attack in 1573 and Rembertus Dodoens followed him in the post as personal physician to Maximilian II.- Adams B2035; Thorndike II, 395. Provenance: later [17th-cent.] biographical annotation about the author to an old blank leaf at the front and an illegible signature to the upper cover in a similar hand. KVK: Neuburg/ Donau; Erlangen; Stabi Berlin (war lost), Tier, Münster, Diozöse Köln; Zentralbibliothek Zürich; COPAC: Edinburgh, Cambridge, Chetham; OCLC: not in NLM

BOEDDICKER, Otto.

The Milky Way from the north pole to 10° of the south declination drawn at the Earl of Rosse's observatory at Birr Castle. – London: Longmans, Green & Co., 1892. 2 preliminary leaves, 4 lith. plates in size 460 x 590 mm. Original blue cloth folder.

EUR 2.500.-

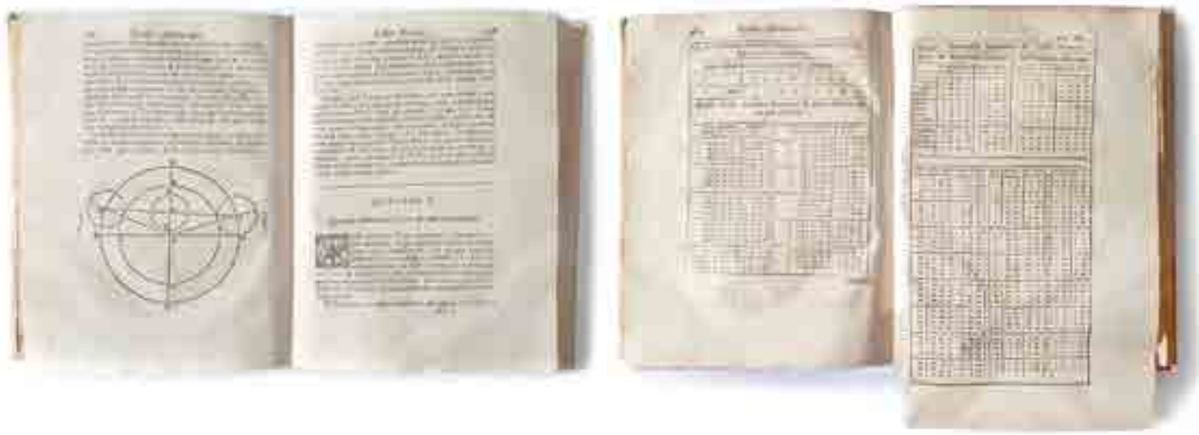
Rare first edition of Boeddicker's drawings of the Milky Way, with later handwritten dedication by Patrick Moore on the label.

"Boeddicker's work may be considered almost the only detailed representation of the northern portion of the Galaxy." Most previous drawings were either more prominent features of the Milky Way, or like the one by Heis are mainly intended to show the relative intensity of different areas.

The drawings by Trouvelot, executed in 1874–76 fairly represent the naked-eye appearance of the Milky-Way, but in far less detail than Boeddicker's in which the complexity of structure is very remarkable.

"By the late 19th century, constellation figures no longer graced the pages of scientific star atlases. Yet these artful lithographs of the Milky Way from a leading English observatory show how art and scientific astronomy were not disjoined but might remain associated in other ways. Boeddicker's drawings of the Milky Way as it appears to the unaided eye were based on observations made over a five-year period. At Birr castle, near Dublin in Ireland, Lord Rosse devoted his considerable wealth to building better and better telescopes in an effort to continue the legacy of William Herschel. When Boeddicker's drawings were displayed at the Royal Astronomical Society in London in 1889, they were highly praised for their careful delineation of the Milky Way's intricate structure. This work consists of four lithograph reproductions of Boeddicker's drawings. Plate II shows the Milky Way in the vicinity of the constellation Cassiopeia, and Plate IV gives a panoramic overview. Otto Boeddicker (1853–1937), a german astronomer, published drawings of naked-eye observations of the Milky Way made over a period of six years (1884–89) as an astronomical assistant of Lawrence Parsons, 4th Earl of Rosse (1840–1908) at Birr Castle in Ireland. Parsons was the son and successor of the astronomer William Parsons who built the "Leviathan of Parsonstown", the largest telescope of its day. The telescope was dismantled in 1908. The original drawings were exhibited at the Meeting of the Astronomical Society in November 1889.

His very rare major astronomical work



BILLY, Jacques de.

Opus astronomicum in quo siderum hypotheses, eorum motus tum medij tum veri, tabularum condendarum ratio, eclipseon putandarum methodus, observationem praxes, caeterorumque omnium qua ab astronomis pertractantur, scientificus calculus, brevi ac facili via exponent. Dijon, Pierre Palliot, and Paris, Elias Josset, 1661. 4to, pp. [40], 517, [1], [1, errata], with numerous tables and diagrams (many half page) in the text; an unsigned leaf 'tabula parallaxeon Lunae' following Y4 mounted on a stub at the time of binding (see below), slightly short at outer margin, but uncut and with page numbers supplied in contemporary manuscript; one oversized table outside foliation bound in after leaf Mmm4, mounted on a stub and with the lower margin folded in to avoid cropping; another table similarly inserted on a stub after Ppp2 and equally folded in at lower margin; a few marginal paper flaws, one that occurred during printing, affecting a few letters on Kk3; some intermittent browning owing to the quality of the paper of the period; a few leaves with tiny worm tracks to lower gutter, four leaves with dampstain to upper outer corners; nonetheless overall a very good, large copy with many uncut lower edges in contemporary vellum over soft boards.

EUR 6.000.-

First edition, the Paris issue (see below) of this very rare and major astronomical work by a highly esteemed mathematician and early champion of diophantine analysis.

'Billy taught mathematics at Reims from 1631 to 1633. Around this time he became a close friend of Claude Gaspar Bachet de Méziriac, the commentator on Diophantus who introduced him to indeterminate analysis. Billy became master of studies and professor of theology at the Collège de Dijon, where one of his students was Jacques Ozanam, whom he taught privately because there was no chair of mathematics at the collège, and in whom he instilled a profound love for calculus. Finally, a professorship having been created in mathematics, he taught his favorite subject from 1665 to 1668 ... In astronomy Billy published numerical tables applicable to the three important theories (Ptolemy, Brahe, Copernicus) of the time' (DSB).
Divided into 9 books the Opus astronomicum presents a complete course in astronomy. Book I treats the Sun, book II the Moon, book III eclipses, IIII the fixed stars, V Saturn, VI Jupiter, VII Mars, VIII Venus, and IX Mercury. The third book includes a catalogue of solar and lunar eclipses from 754 B.C. to 1659. Much of the observational data is based on Tycho, supplemented by more recent data collected by Kepler, Gassendi, and several others, and seemingly some of de Billy's own. Copernicus is referred to on several occasions, including in his survey of the history of astronomy which forms part of the prefatory material of his work, where he is referred to as the astronomer 'cuius nomen celebre est ob motum terrae'.
Printing: the book was printed by Palliot in Dijon, but the work was also distributed in Paris by Elias Josset, as with our copy. There are slight changes to the title page and with the Paris imprint added. The separately printed 'tabula parallaxeon Lunae' with its pagination supplied by hand at the time, and the oversized tables contained here, mounted on stabs and inserted outside foliation, are possibly found in our issue only. Page 517 (with a page of printed privilege on the verso, and the leaf here signed Ttt3) has a slip with printed text pasted onto the upper outer section of the recto of that leaf, whilst not in any way defective in terms of paper. The online scan of the Dijon issue provided by the Bayerische Staatsbibliothek, Munich (and apparently the only online copy available), shows this same page with identical text, but slightly different in layout, and signed Sss3, and the separately printed and inserted 'tabula' as well as the oversized tables outside collation are absent there.
Provenance: three 18th-century stamps on title, including one of the library of Santa Maria Paradiso, Viterbo, and a private stamp of the Friar Minor Philippo de Carboneano; a third early stamp is partly erased; front free end-paper with the purchase inscription, dated 1738, 'Jo Franc:o Velti comprai il presente Libro dal Sig: Abb:e D. Saverio Brunatti, and with references in a different hand to the stamps found on the title below.

OCLC locates copies at the Bibliothèque Nationale (the Paris, Josset issue), Bibliothèque de l'Observatoire de Paris (the Paris, Josset issue), Bibliothèque Sainte-Geneviève (the Dijon issue), and Lyon (unidentified), Gottfried Wilhelm Leibniz Bibliothek and Zentrale Hochschulbibliothek (both possibly the Paris, Josset issue), University College London, Oxford (the Paris issue), New York Public (the Paris issue), University of California, Berkeley (the Dijon issue), Columbia University (lacking title and part of preface and therefore undetermined), and Oklahoma (the Paris, Josset issue).


REGOLA
DI MARCO
BVSSATTI
DA RAVENNA,
Per la quale brevemente s'insegna di trouare l'Epatta, l'Aureo numero, & li tempi della Luna, in perpetuo, & la cagione della correttione dell'anno.
IN RAVENNA
Appresso Francesco Tebaldini,
M D LXXXIII.

BUSSATTI, Marco.

Regola ... per la quale brevemente s'insegna di trovare l'Epatta, l'Aureo numero, & li tempi della luna, in perpetuo; & la cagione della correttione dell'anno. Con una tavola delle Feste mobile, & altre cose curiose, & molti utili à chi di ciò diletta. Ravenna, Francesco Tebaldini, 1583. 4to, ff. [6], pp. 1-[58], [2, blank], [36], with woodcut arms on title and several woodcut initials; with the exception of one double page table the text within typographic border throughout; the unnumbered pages 57 and 58 of the first part misprinted, with the final page appearing on the recto and the penultimate on the verso; a little foxing; hole to outer margins of the final two leaves, minimally touching one border; occasional light marginal dampstaining; a good copy in contemporary vellum; inner hinge cracked.

EUR 1.900,-

First edition of Bussatti's work inspired by the recent calendar reform allowing for the calculation of the epact in determining the date of Easter, and the calculation of the lunar phases.

The opening section of the Regola explains the application of a Golden Number to each year in sequence to indicate the year's position in 19-year Metonic cycle, which approximates to a common multiple of the solar year and the lunar month. A double page table that follows shows the epacts for every month of the years 1583 to 1594. He explains the calculation of moveable fests, accompanied by a table of calculations up to 1606. The later part of the work discusses topics related to the calendar and the months and seasons of the year, some in question and answer form.

Appended is a discourse by Alessandro Fusconi of philosophical considerations regarding virtue and honour, ending in praise of Bussatti's publication.

Knowledge of the lunar phases then and now is equally a subject of much importance in agriculture and gardening. Bussatti's influential Giardino di agricoltura appeared in 1592.

This work appears to be extremely rare, with no copies recorded in OCLC.

Tornado

SOPRA
IL TURBINE
Che la notte tra gli XI. e XII Giugno del MDCCXLIX danneggiò una gran parte di Roma.
DISSERTAZIONE
DEL
P. RUGGIERO GIUSEPPE BOSCHOVICH
DELLA COMPAGNIA DI GESÙ
DEDICATA A SUA EMINENZA
IL SIGNOR CARDINALE
SILVIO VALENTI
SEGRETARIO DI STATO,
E CAMERLENGO DI SANTA CHIESA.
IN ROMA MDCCXLIX.
APPRESSO NICCOLÒ, E MARCO PAGLIARINI.
CON LICENZA DE' SUPERIORI.

BOSCOVICH, Roger Joseph.

Sopra il turbine che la notte tra gli XI., e XII. Giugno del MDCCXLIX danneggio una gran parte di Roma. Dissertazione del … In Roma: Appresso Niccolo, e Marco Pagliarini, 1749. small Quarto (204 x 132 mm) 224 pp., (6), (2, blank) Contemporary vellum, label on spine faded, first pages with crease in white border.

EUR 2.800.-

First edition. At the behest of the Pope, Boscovich carried out a damage survey of a tornado in Rome and published it, along with a review of existing tornado theories. It was probably the most complete description of the early scientific efforts to understand tornadoes prior to Alfred Wegener's book in 1917.

In Italy, the astronomer and mathematician Geminiano Montanari (1633–87) had already studied a tornado that occurred in the Veneto region (northeastern Italy) on 29 July 1686. Published posthumously in 1694, Montanari's study is one of the earliest detailed accounts of a tornado in Europe. But the most influential studies on tornadoes in Europe published before the nineteenth century was written by Boscovich in 1749. (Peterson 1982). Roger Joseph Boscovich (1711–87), a Jesuit polymath who was a precursor of atomic theory and made contributions to astronomy and geodesy, investigated a tornado that occurred on the night of 11–12 June 1749. The tornado started as a waterspout over the Tyrrhenian Sea and then moved inland, parallel with the river Tiber from Ostia to Rome. At the request of Cardinal Silvio Valenti Gonzaga (1690 –1756), Boscovich conducted a three-week study of the damage caused by the tornado in Rome, and the results were published in a book in 1749. The book, which also contains information on other tornadoes that occurred in Italy and discussions on tornado formation, had a great influence on Benjamin Franklin's theories on the formation of waterspouts, which he described in a February 1753 letter to Massachusetts physician John Perkins (1698–1781). Riccardi I, 176.37, Whyte, Boscovich 215.

With appendix on 'Numerali operationi'

[Ptolemy] BOTTRIGARI, Hercole.

Trattato della descrittione della sfera celeste in piano di Cl. Tolomeo Alessandrino Dal Sig. Hercole Bottrigaro tradotto in parlare italiano. Et molti luochi di quello corrotti, oscuri, & difficili alla sua integritate ridotti, & dichiarati. Aggiontovi anche la ragionevole confirmatione d'alcune demostrationi, et operationi, et nel fine tutte l' occorrenti operationi numerali … Bologna, Alessandro Benaccio, 1572. Quarto, ff. [8], pp. 94, [2], with woodcut printer's device on title-page, repeated at the end, and numerous astronomical woodcuts in the text; the first leaf with a short tear (repaired), and a repair to the gutter; lower margin of leaf 8 soiled; a good copy in contemporary limp vellum, endpapers replaced; 17th-century inscription 'ad uso di fra' Michel Angelo Bibbiena' on title-page; Novacco library bookplate to front paste-down.

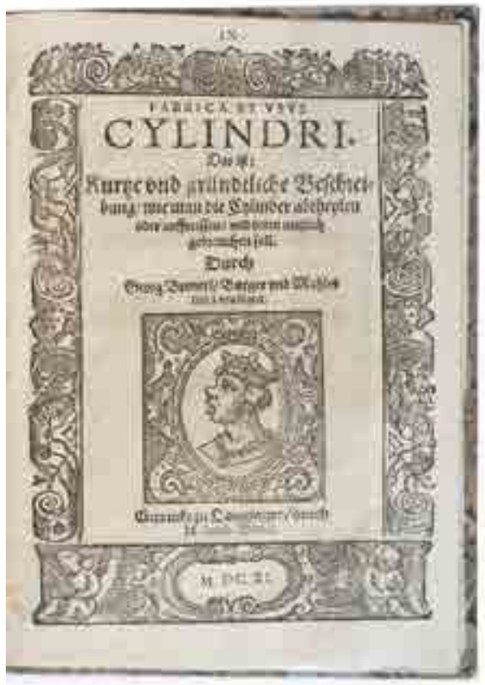
EUR 6.500,-

Very rare first edition of the first Italian translation of Ptolemy's Planisphaerium, including a learned commentary and Bottigardo's own observations.

Ptolemy's Planisphaerium can be translated as 'celestial plane' or 'star chart'. In this work Ptolemy explored the mathematics of mapping figures inscribed in the celestial sphere onto a plane by what is now known as stereographic projection. This method of projection preserves the properties of circles. Originally written in ancient Greek, Planisphaerium was one of many scientific works which survived from antiquity in Arabic translation. One reason why Planisphaerium attracted interest was that stereographic projection was the mathematical basis of the plane astrolabe, an instrument which was widely used in the medieval Islamic world. In the 12th century the work was translated from Arabic into Latin by Herman of Carinthia, who also translated commentaries by Maslamah ibn Ahmad al-Majriti. The translator was the wealthy humanist & musician Ercole Bottrigari (1531–1612), who was educated at home and Bologna University, and whose interests included science, mathematics, architecture, Greek philosophy, and music. Having acquired profound learning in several scientific and artistic disciplines, he devoted much of his work to theoretical musical subjects. He wrote remarkable essays on music theory and practice and published books of madrigals, including Il primo libro di madrigali a quattro voci (1558) and Libro terzo de madrigali a cinque voci (1583). In 1546 Bottrigari established a small private press with the help of his father, but very few works from it survive. In 1576 he fled to Ferrara, where he got to know Torquato Tasso, and where he gathered information for his 1594 treatise Il Desiderio, overo de' concerti di varii strumenti musicali. In 1586 he moved back to Bologna, where he was in touch with intellectuals such as Zarlino and A. Melone.

At page 67, with separate title page, starts an interesting section dedicated to **mathematics**: 'Numerali operationi occorrenti nel trattato'.- BMSTC p. 543; Brunet V 1500; Federici 273. Fantuzzi vol. II, 322; Gamba 2437; Riccardi I, 186.

Early time measurement with paper instruments



BRENTEL, Georg.

Fabrica et Usus Cylindri. Das ist: Kurtze und gründtliche Beschreibung/ wie man die Cylinder abtheylen oder auffreissen/ und dann nutzlich gebrauchen soll/ Durch Georg Brentel/ Burger und Mahler inn Laugingen. – Laugingen: Winter. 1611. Quarto (190 mm) 6 leaves and one engraved plate (= 7 Bll.). The plate in black (also known in red). Later marbled boards. (with:) Brentel, Georg. Sciotericum Generale in Forma Crucis; Das ist: Ein allgemeine Sonnenuhr inn Creützgestalt gebracht / beschriben / und Zu Ehren / auch sonderbarem gefallen dedicirt und inscribirt dem Wolgebornen Herrn Johann Wilhelm von Rietheim Freyherrn zu Angelberg (et)c. …. Getruckt zu Laugingen/ durch Jacob Senfft/ im Jahr M.DC.XIIII (1614). (2) leaves and one engraved fold. plate. The title with image of Laugingen most probably from the hand of Jacob Senfft.

EUR 4.800.-

Very rare works on two newly designed sun-dials: a cylinder sundial clock and a cruciform sundial with copper plates intended as paper instruments.

Paper sundials were commonly made in the imperial merchant city of Nuremberg in the late sixteenth and early seventeenth centuries. Such paper dials could be easily traded between scholars, and the engraved copper plates used to make them updated for innovations and new discoveries. A guide to create a polyhedral dial from a flat pattern is seen in one of Brentel's later works which includes his characteristically detailed vignettes.

Georg Brentel the younger (1581–1634), son of a map painter, was a south-German artist (painter & draftsmen), engraver and instrument-maker; he constructed especially different sun-dials.

Brentel was a painter & architect, but evidently he was more zealous with mathematics and astronomy, writing works in these subjects and creating instruments. He developed a special interest in the design of sundials. Since 1603 until 1619 several short writings on different sundials and instruments appeared every year. He had a high reputation and was mayor of Lauingen. In 1621 due to re-Catholicization in Lauingen he lost all his mayor functions and had to fled to Nördlingen. Brentel was still a painter in Nördlingen, but he was kept in the tax books as a town builder (1624–26 and 1633–34), as well as as a hospital master (1627–29). He did not, however, return to scientific activity. Brentel himself died in November 1634 as one of the numerous victims of the siege and conquest of the city by the imperial troops in August 1634.

Among Brentel's writings on mathematical or astronomical subjects, there are many who deal with sundials. There are instructions to construct various types of sundials: like Horologium achas, a shadow sundial (1609), a heart-shaped sirens of the time (1611), a column-shaped sundial (1611), a Cruciform sundial (1613), a cylinder sundial clock (1615). They contain copper engravings, which - as either the full inscription or a monogram proves - go back to the originals of Brentel and in a few cases were engraved by himself. The etching of the plates Brentel, however, left mostly to others; Most frequently this work was taken over by a C. Senft, who was related to the Lauinger printer Jacob Senft. In some cases the dials were engraved as dials, and in some cases such dials were placed separately. Such a dial served as a support on a specially shaped wooden plate for the manufacture of a sundial. "Maler in Lauingen schrieb über verschiedene Sonnenuhren, darunter auch über den Versuch, den Rückgang des Schattens an der Sonnenuhr des Achas zu erklären, und veröffentlichte solche Drucke mit Kupferstichen, sowie Kupferstiche als Einblattdrucke, die teils als Vorlagen für die Herstellung von Sonnenuhren dienten, teils auf entsprechend geformte Holzstöcke aufgeklebt wurden. Er begann seine Tätigkeit mit dem Stich des nördlichen Stern-Himmels und beendete seine Tätigkeit 1619. Die Entwürfe fertigte er selbst an und stellte teils selbst, teils stellten C. Senfft in Lauingen und andere Mitarbeiter die Kupferstiche her." (Zinner, Instrumente pp. 264 - 66).

1.) VD17 3:000105A KVK: München, Göttingen, Wolfenbüttel, Dresden, Halle (partly with missing the plate), Zürich, Paris; COPAC: no copy; OCLC: Houghton, Univ. Michigan, Langsam Library

2.) VD17 12:155067Q KVK: München, Göttingen, Zürich; COPAC: Edinburgh Univ. OCLC: no copy.

The great comet of July 1819 observed by Piazzi's successor at the Royal Observatory, Palermo

CACCIATORE, Niccolò.

Della Cometa apparsa in luglio del 1819 osservazioni e risultati. [Palermo], della Reale Stamperia, 1819. 4to, pp. [iv], 72, with an engraved title vignette, one engraved head-piece, and a folding engraved plate; the first three or four leaves a little browned or spotted at upper blank margins; a few leaves near the end with a narrow wormtrack to inner margins; the plate with a short tear to blank area near the gutter, far away from the image, and a bit stained in the margins; a very good copy, printed on thick paper, in contemporary calf-backed boards; inner hinges a little weak and the binding lightly soiled and with a little wear to the extremities; presentation inscription in ink to front free end-paper (see Provenance, below).

EUR 1.800.-

First edition, very rare, of Cacciatore's observations of the comet of 1819, one of the finely produced publications printed by the Reale Stamperia on behalf of the observatory.

Born at Casteltermini, Sicily, Niccolò Cacciatore (1770–1841) studied mathematics and physics at Palermo. He there became acquainted with Giuseppe Piazzi, head of the Palermo Astronomical Observatory. He became a graduate student at the observatory in 1798, and a member of staff in 1800. Cacciatore helped Piazzi compile the second edition of the Palermo Star Catalogue (1814), and in fact did the bulk of the work. He succeeded Piazzi as director in 1817, two years before the present publication.

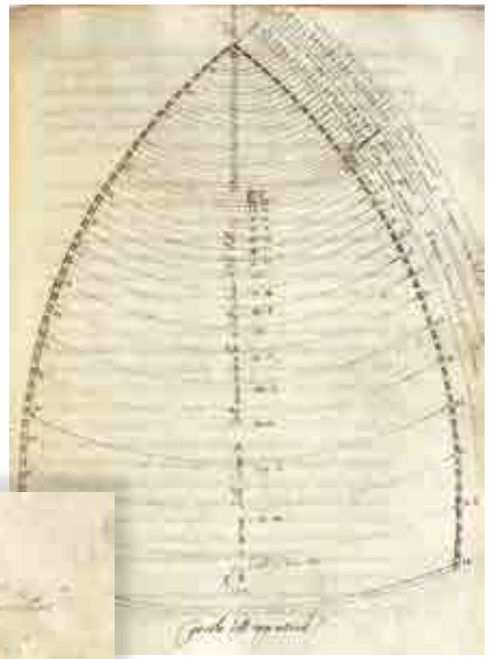
The Great Comet of 1819, an easily visible, exceptionally bright comet, was discovered on July 1, by Johann Georg Tralles in Berlin, Germany. Visible in Palermo only from July 3, Cacciatore began his observations on that date, ending on August 11, 1819. Besides extensive tables documenting the comet's progress and path, he records barometric readings, and temperature.

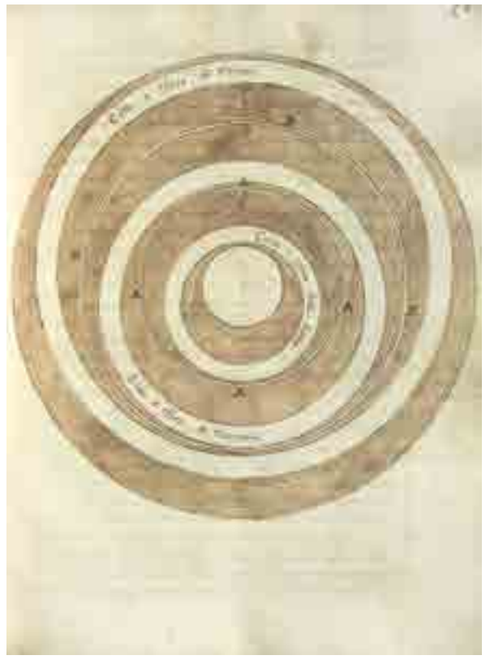
On the same day that Cacciatore began his observations, François Arago analysed the light from the comet's tail using a polarimeter, and discovered that it was polarized. He then observed the nearest star, Capella, which did not show polarized light. This indicated that some light from the comet's tail was reflected from the sun. This marked the first polarimetric observation of a comet.
The folding plate shows a detailed diagram of the comet's parabolic path, with two small images of its shape and appearance at top and one at lower right.

Provenance: front free end-paper inscribed 'Alla gentilissima Sig.ra D. na Caravina di Simone in testimonianza di stima e rispetto / l'Autore'.

Outside Italy OCLC records a copy at the Royal Library, Denmark, and five copies for North America, at Stanford, Smithsonian, Harvard, Michigan, and Wisconsin.

A post-Galilean manuscript course absorbing the new astronomy





CALCAGNI, Girolamo, attributed to.

Della fabrica del mondo ouero cosmografia. Trattato, nel quale si discorre di tute le parti componente questa gran machina con brevità e facilità in modo de Dialogo. [Manuscript on paper in Italian and Latin]. [Italy, possibly Ferrara, c. 1643]. 4to (185 x 140 mm), c. 155 leaves in brown and red ink, including 15 leaves of tables, with a decorative armorial device on title-page, and numerous diagrams in the text, some with ink wash; the title soiled, damp-stained, and strengthened with a paper strip on verso at inner margin; the final, blank leaves, partly damp-stained and soiled; otherwise overall very well preserved; rebound in the 20th-century in vellum-backed boards.

EUR 24.500.-

A highly interesting and finely illustrated astronomical treatise in dialogue form in the immediate post-Galilean period, discussing and absorbing the new astronomy.

Still largely unstudied, this is the earlier of two recorded versions of this text, the other originally stemming from the collection of the noted historian of science and Galileo expert, Stillman Drake, and now held at the Fisher library, Toronto.

Possibly compiled for private instruction, and highly likely inspired by Galileo's Dialogo, this extensive manual employs two interlocutors, a Pellegrino Cantelli, and Girolamo Calcagni, whose arms are found on the title-page.

Leading through from the elemental to complex astronomy, the treatise - apparently compiled the year after Galileo's death in 1642 - frequently cites, then questions and challenges the teachings of the ancients, whilst cautiously presented and phrased: 'L'opinione e la dottrina de moderni astrologi e piu conforme al vero, e l'isperienza (sic) stessa mostra il contrario di quello che hanno insegnato gli antichi. Dicemo dunq[ue] che in realtá non sono distinti i cieli, si che ciascuno pianeta conosca il suo, ma non ci e altro che un cielo solo . . .' (folio 7, recto).

The third dialogue of the first part carefully treats the motion of the earth, first discussing the question of a revolutionary motion, then the possibility of rotation: '. . . Questo prova che la terra non si muova con movimento retto accostandosi o discostandosi dal cielo, ma non prova che non si possa movere circolarmente . . .' (Girolamo on folio 10).

Whilst arguments in favour are always refuted, the purpose of the questioning tone appears clear.

A number of dialogues discuss geographical questions and details, and a table provides longitudinal and latitudinal data on various European cities. Folios 40-44 provide brief information on distances and sizes of various countries, kingdoms, and islands, including Sumatra, Borneo, the Philippines, the Moluccas, Japan, Cuba, and Hispaniola.

Following a 7 page index to this first part there is another group of dialogues concerning astronomical questions such as parallax, as well as astrological questions, illustrated with a number of finely executed diagrams, some in ink wash. Folio 74 recto includes a reference to the existence of moving sun-spots; the verso of the leaf mentions the telescope, and refers to Kepler. There are discussions of solar eclipses, the epicycles of the various planets and, from folios 96 to 102, a dialogue on comets and cometary theory, including the important question whether comets are sublunary phenomena or not. The final dialogues are on the stars, the milky way, the constellations, and astrology.

A famous center of study, Calcagni's Ferrarese roots (see provenance, below) may well have influenced the forward looking, inquisitive tone displayed in the presentation of these dialogues. Galileo's provocative Dialogo was published in 1632; he was tried by the Inquisition the following year. The Jesuit, Melchior Inchofer's Tractatus syllepticus – a theological refutation of the heliocentric theory -, immediately followed the trial of 1633. Galileo was to remain under house arrest until his death in 1642.

As mentioned before, the passages concerning the 'moderns' contained in this manuscript are cautiously phrased, and all of the side-notes found in the margins refer to the traditional model only. Galileo is nowhere mentioned.

Our manuscript appears to form the basis of another, later version of this text, originally in the collection of the noted historian of science and Galileo expert Stillman Drake, and now preserved at the Thomas Fisher Library, Toronto. Written in the same hand, the neater Fisher manuscript shows some changes to the text, and was possibly intended to form the basis of a printed version.
Provenance: contemporary armorial device on title page of the Calcagni family of Ferrara in the province of Emilia-Romagna, one of the most thriving centers of Italian Renaissance culture – the place where Copernicus earned his degree in Canon Law, and Paracelsus his degree in medicine –, inscribed 'Comitis Hieronymus Calcanei' beneath the escutcheon, presumably the Girolamo Calcagni of the text, and maybe the same Girolamo Calcagni recorded as the purchaser in 1610 of the Castello di Montecastagneto in the same province; later ownership inscription (partly washed away) in Latin, signed 'Marsilii Antonii' and dated 1725 below; an addendum, in the same hand as the text, to one of the blank leaves at the end of the manuscript and dated 20 February 1643, lists two publications that may have been of particular interest to the author: Regiomontanus' De cometis of 1472 and Girolamo Sirtori's Telescopium of 1618, the first published work on telescopes.

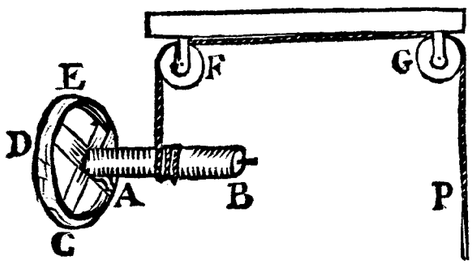
CAPELLI, Giovanni Battista.

Relazione dei principali fenomeni osservati nel totale eclisse solare del giorno 8 luglio 1842 ….– Milano: presso l' incisore Dom. Bonatti, 1842. 8° (230 x 150 mm) pp. 32 with one fold. map and one engraved fold. plate showing the eclipse. Green Publisher wrappers., fine copy.

EUR 600.-

First edition of this description of the solar eclipse which occurred on July 8, 1842, with the path of the eclipse shown on the map. A solar eclipse occurs when the Moon passes between Earth and the Sun, thereby totally or partly obscuring the image of the Sun for a viewer on Earth. Francis Baily observed the total solar eclipse from Italy, focusing his attention on the solar corona and prominences and identified them as part of the Sun's atmosphere. Abate Giovanni Battista Capelli (1801 near Pavia–1877) joined the Brera Astronomical Observatory (Milano) in 1828 and was appointed Assistant in 1839. In 1862 he had achieved the rank of First Assistant and in 1872 he became the Third Astronomer. He devoted himself above all to meteorological observations, discussing the results in order to establish the Milan climate. He also dealt with position astronomy by publishing the results of his observations in the Milan Astronomical Ephemerides.- Lit.: G. Schiaparelli, Vierteljahresschrift der Astronomischen Gesellschaft, XIII, 1878; Pogg. KVK: outside Italy only St. Andrews; Columbia Univ.

CASATI, Paolo



Mechanicorum libro octo. In quibus uno eodemque principio vectis vires physice explicantur & geometrice demonstrantur, atque machinarum omnis generis componendarum methodus proponitur. – Lyon, Anisson, Jean Poseul and Claude Rigaud, 1684. 4to (231 x 170 mm). [xvi], 799 pp., with printer's device on title and numerous woodcut illustrations and diagrams in text; title repaired without loss, heavy stain to half title not affecting letters, variable browning, spotting and staining throughout. 18th-century burgundy morocco gilt, spine gilt in compartments, some worming to spine, rubbed.

EUR 1.400.-

First edition of this detailed textbook of mechanics, demonstrating how Jesuit scientists were quite able to adopt and build upon Galileo's physics. Paolo Casati (1617-1707) was professor of mathematics at the Collegio Romano in Rome and later rector at the University of Parma from 1677 until his death.- Riccardi I, 272; Sommervogel II, 801


OPTICÆ
DISSERTATIONES
IN QUIBUS
Plura Physice explicantur
DE VISIBILIBUS,
DE VISIONE,
DE APPARENTIIS VISUS.
AUTHORE
PAULO CASATO
PLACENTINO
SOCIETATIS JESU.
PARMÆ, MDCCV.
Ex Typographia Joseph Rosati.
SUPERIORUM FACULTATE.


AD LECTOREM.

CASATI, Paolo.

Opticae dissertationes: in quibus plura physice explicantur de visibilibus de visione, de apparentiis visus. – Parmae: ex typographia Joseph Rosati, 1705. Quarto (217 x 162 mm) pp. (8), 92, (4) with half title, title with woodcut device, headpieces and initials, large woodcut diagram (some spotting, staining and browning throughout, a few darker spots occasionally affecting letters). Contemporary vellum, lightly stained.

EUR 4.500.-

Very rare first edition of his last work: on optical sciences, vision and apparitions.

Paolo Casati (1617–1707) is an interesting and understudied figure in Jesuit intellectual life in the generation after Galileo. After he had finished his mathematical and theological studies, he moved to Rome, where he took on the role of Professor at the Collegio Romano, the Jesuit university. After teaching philosophy and theology, he was given, due to his outstanding mathematical ability, the chair in mathematics. In 1677 he moved to Parma, where he remained until his death. He is best known as the principal "handler" of Queen Cristina's highly politicized conversion to Catholicism, leaving no doubt about his orthodoxy. He also wrote a work on a Galileian – style proportional compass and is credited by Baldini as a champion of Galileian mechanics, on which Casati lectured in Rome.

The astronomical work Terra machinis mota (1658) imagines a dialogue between Galileo, Paul Guldin, and Marin Mersenne on various intellectual problems of cosmology, geography, astronomy and geodesy. For example, they discuss how to determine the Earth's dimensions, floating bodies, the phenomena of capillarity, and also describe the experiment on the vacuum made by Otto von Guericke in 1654. The work is remarkable for the fact that it represents Galileo in a positive light, in a Jesuit work, only 25 years after Galileo's condemnation by the Church. Casati also discussed the hypothesis of horror vacui, that nature abhors a vacuum, in his thesis Vacuum proscriptum, published in Genoa in 1649. Casati confuted the existence of both vacuum and atmospheric pressure, but he did not rely entirely on scientific observation, and refers to Catholic thought in order to back his claims. The absence of anything implied the absence of God, and hearkened back to the void prior to the story of creation in the book of Genesis. This book is due to its rarity not yet properly studied.- Riccardi I, 272 (with longer entry); Sommervogel II, 801; KVK: only Dresden, COPAC: BL London, UCL, Royal College Surgeons; OCLC: no copies (?)

Milestone in the history of thematic mapping

CHARPENTIER, Johann Friedrich Wilhelm von.

Mineralogische Geographie der Chursächsischen Lande von Johann Friedrich Willhelm Charpentier, … Mit Kupfern. – Leipzig: Bey Siegfried Lebrecht Crusius, 1778. Quarto. [i]–xliv, [i]–xvi, pp. [1]–432, [2], with engraved frontispiece, engraved title vignette, one large folded handcolored map (376 x 550 mm), and 6 fold. engraved partly handcol. plates. Contemporary half calf, spine with 6 raised bands, red gilt-lettered label, covers a bit rubbed, inside some browning.

EUR 3.600.-

Very scarce, an influential work with one of the earliest colored geological maps; also a classic text in the early geological literature of Germany. The Mineralogische Geographie gives an excellent description of the veins and other mineral occurrences of Saxony and some of the adjacent areas, and in the last few pages of the book the question of the probable origin of the ores is discussed. It is an admirable presentation of the facts gathered during the author's long years of mining experience. He considers in succession those facts which have a definite bearing on the question of the genesis of the ore deposits, and, based on them, he offers an explanation of their origin, which, he says, cannot be considered as more than a conjecture but which he believes represents the closest approximation to the truth attainable at that time. Next to G. Gläser and the map that appeared in his Versuch einer mineralogischen Beschreibung (1775) the map of Saxony in Charpentier's book is the earliest colored geological map of Germany. He uses eight tints to distinguish granite, gneiss, schist, limestone, gypsum, sandstone, river sand, clay and loam. He uses symbols to show the location of basalt, serpentine, etc.
"Johann Friedrich Wilhelm von Charpentier (1738–1805), a colleague of the famous Werner at Freiberg, adopted a color scheme similar to the one as proposed by Werner over the years.

The first maps used symbols to characterize single outcrops; later maps introduced shaded areas to display the distribution of specific rock-types, but due the high printing-costs these maps were printed only in black & white, making them hard to read. Maybe the first colored map was hand drawn by the German mineworker and later mine inspector Christian Lommer (1741–1786) in 1768, as a supplement to his travel account to the mining districts of Saxony. Lommer identified various minerallocalities and also distinguished between basic rock-types: granite-shown with an area colored in red, basalt-black, slate-blue, limestone-brown and sand with a dotted signature. Lommer was inspired in part by the appearance of the rocks, as basalt is often dark in color and also the signature for sand seems obvious, other colors seem to be used just for convenience. However this map was never intended for a wider distribution or larger public and only one copy survives today. In the following years other naturalist produced regional maps with "rock-colors" added to make them easier to read, especially to the aristocratic landowners (interested in the distribution of resources on their proper-ties and potential buyers of the costly maps). The Freiberg Mining Academy was one of the first scientific institutions were this method was widely adopted. In 1775 a former student of the Academy became professor there – the famous Abraham Gottlob Werner (1749–1817). Werner not only established a basic rock classification scheme but also proposed a specific color scheme to display these rock-types. With Werner the Freiberg Mining Academy became the most important geological institution of the time and not only German, also many foreign naturalists visited the academy and attended lectures there. Soon the color scheme as proposed by Werner was known by most geologists of the time.
Adams, Birth and Development, 1938, 313; Engewald, Gisela-Ruth. "Einige Gedanken zum Erscheinen der ersten farbigen petrographischen Karte Sachsens von Johann Friedrich Wilhelm von Charpentier vor 200 Jahren", Zeitschrift für geologischen Wissenschaften, 8 (1980), no. 2, 159-69; Freilich Sale no. 125; Hoover Collection 220; Sinkankas, Gemology 1254; Ward & Carozzi, Geology Emerging 475; Cobres 55.

CLAVIUS, Christoph.

Iosephi Scaligeri elenchus, et Castigatio Clandarij Gregoriani a Christophoro Clavio Bambergensi Societatis Iesu castigate. Rome, Aloysio Zannetti, 1595.

8vo, pp. 144, [1, errata]; with title printed in red and black and woodcut Jesuit device; the dedication leaves a little soiled and frayed our margins; two leaves torn at inner margins and repaired, one minimally affecting a few letters; a few leaves with a short and very narrow worm track to blank outer margins; otherwise a very good copy, entirely uncut in contemporary carta rustica, rear hinge loosened in the gutter but intact.

EUR 2.800,-

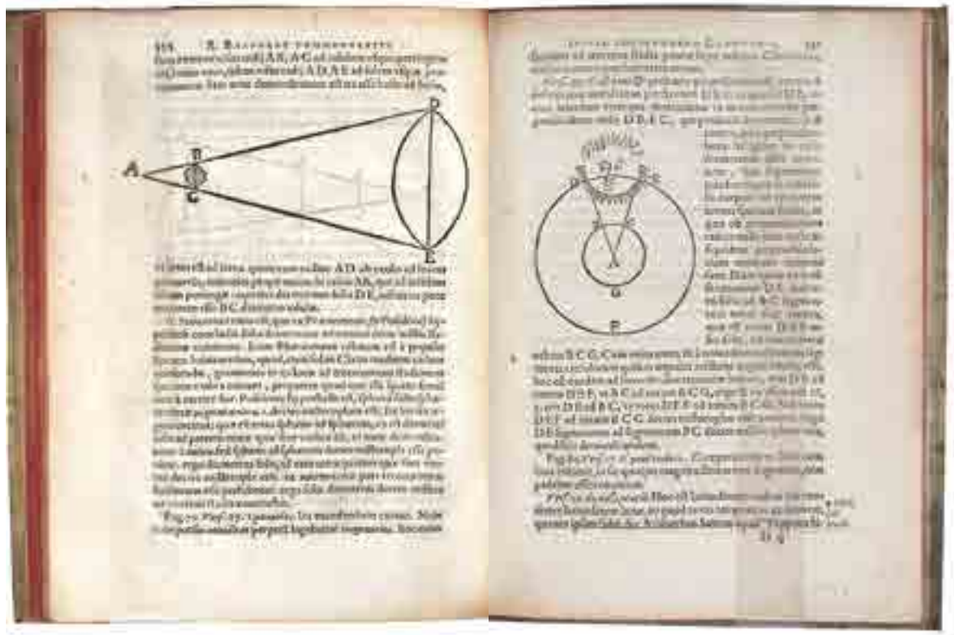
First edition of Clavius reply to Scaliger's attack on the reform of the Julian calendar, one of his rarest works.

Originally proposed by the Italian physician, astronomer and philosopher Aloysius Lilius, Clavius modified Lilius' work into the modern Gregorian calendar upon the former's death, resulting in the publication of the Novi Calendarii Romani apologia of 1588, some six years after the issuance of Gregory's bull 'Inter gravissimas' of February 24, 1582. Widely criticised on religious, mathematical, and astronomical grounds the introduction of the calendar and Clavius' Apologia was met with a number of attacks in the form of letters and in print.

'Mention must … be made of Clavius' improvement of the Julian calendar. Pope Gregory XIII brought together a large number of mathematicians, astronomers, and prelates, who decided upon the adoption of the calendar proposed by Clavius, which was based on Reinhold's Prussian Tables. To rectify the errors of the Julian calendar it was agreed to write in the new calendar 15 October immediately after 4 October of the year 1582. The Gregorian calendar met with a great deal of opposition from scientists such as Viète and Scaliger and from the Protestants' (DSB).

A step by step rebuttal, Clavius first prints Scaliger's critique on each of which his answer follows.

OCLC locates three copies in France, two for Germany, at Leipzig and Freiburg, three in Spain, two copies in the Netherlands, at Maastricht and Leiden, one in Belgium, one in Switzerland, two for the UK, at the National Library, Scotland, Aberdeen, and the British Library, and seven for the United States, at Illinois, Brown University, Claremont Colleges, Smithsonian, Harvard, Wisconsin, New York Public.



CLEOMEDES [BALFOUR, Robert, editor & translator]

Meteora Graece et Latine. A Roberto Balforeo ex ms. codice bibliothecae illustrissimi Cardinalis Ioyosii multis mendis repurgata, Latinè versa, & perpetuo commentario illustrata … Two parts in one volume. Bordeaux, Simon Millanges, 1605. Quarto. [xvi], 126 pp., [2, blank], [129]–285 pp., [9], [2, blank]. Greek text and Latin translation in parallel columns; title printed in red and black with typographical ornament, title to the second part (p. 129) with woodcut printer's device, wood-cut diagrams in the text. A very good copy in contemporary stiff vellum, spine lettered in ink; from the library of Sir Edward Sherburne and the Macclesfield Library.

EUR 4.800.-

First edition of Cleomedes handbook on Greek astronomy edited by Robert Balfour.

"Cleomedes' work belongs to the class of handbook written to popularize the main ideas in the purely technical treatises of the scientists (particularly astronomers); such books were common in Alexandrian and later Greek literature and exerted considerable influence on Roman and medieval writers" (cf. W. H. Stahl, Roman Science [Madison, Wis., 1962], p.32f.) The treatment of much of the material (usually derived not from the scientific works at first hand but through intermediary sources; e.g. Cleomedes evidently knew Hipparchus' work only at second hand [II, i, 83] became standardized, and there are many correspondences in both style and subject matter between extant examples of the handbook tradition, as in the astronomical works of Geminus (first century b.c.), Cleomedes, Theon of Smyrna (early second century a.d.), and Achilles (third century a.d.).

Cleomedes' chief authority is Posidonius, and it is unlikely that he himself added anything original (two sentences affixed to the end of the manuscripts expressly state this), but he also used other sources that sometimes disagreed with Posidonius' views (see I, vi, 32–33). His own astronomical knowledge was that of the well-educated Stoic writer of his time, and its limitations are sometimes apparent—in I, vi, 28, after giving a highly inaccurate arithmetical scheme for calculating the length of the day, he asserted that the zodiac intersects the equator "nearly at right angles"; in II, iv,105 he rejected altogether the possibility of annular solar eclipses; and in II, vi,123 that of the "paradoxical" case, when the eclipsed moon rises while the sun appears to be still above the horizon. Where he understood his sources, however, he gave a clear and useful account of basic astronomical phenomena. (Dicks in: DSB).

Rare German prognosticon

CNOLLIUS (Knoll), Christoph.

Prognosticon generale perpetuum. Ein allgemeine Practica/ auff alle und jede Jahr/ biß ans ende der Welt/ nützlich zugebrauchen/ in drey besondere Theyl unterschieden. Das Erste ist von den Morgens/ Mittags/ Abends und Nacht Zeichen und Vorbothen des vorstehenden Gewitters: Von bedeutunge der Finsternüsse (sic) der Sonnen und des Mondes/ der Cometen und ungewöhnlichen Zeichen am Himel (sic): Von Vorbothen der fruchtbaren oder unfruchtbaren Zeit: Kranckheiten/ Pest/ Krieges und allerley Verenderungen (sic). Das Ander von natürlichen erwehlten JahresZeiten und Tagen zu Säen/ Pflantzen/ Pfropffen/ Holtzfällen/ Artzneyen/ Aderlassen und Schrepffen (sic) dienstlich. Das Dritte von den zugelassenen natürlichen Vorsagungen aus der unleugbarn krafft der Sternen: … Zusammen getragen und beschrieben durch Christophorum Cnollium. Görlitz, H. Rambau, 1616 (in chronogram). Quarto (180 x 155 mm) 9 Bll., 112 pp., 3 Bll. Contemporary flexible vellum, using a late 14th century musical page from a Breviarium. Rubbed and soiled, inner hinges with small worm track in first gathering.

EUR 3.900.-

Extremely rare astrological prognostic by the deacon and hymn writer of Sprottau, Christoph Cnoll the younger (circa 1588–after 1638, active between 1616–1638). He defends here Kepler, Peucer and Tycho Brahe.

There is a confusion about father and son with same name. The elder Christoph Knoll (Cnoll, Cnollius) was born in Sprottau (Szprotawa) north of Görlitz and studied privately with Bartholomaeus Scultetus at the University of Wittenberg. During this time he already dealt with mathematics and astronomy. In 1584 or 1586 he became a teacher in the school of Sprottau. Since 1591 he worked there as a deacon, and privately began astrological investigations and wrote calendars. Christoph Cnoll the Younger studied since July 1606 at the University of Frankfurt / Oder. In May 1612, Christoph Cnoll, together with Johannes Cnoll, a younger brother, enrolled at the University of Wittenberg. Apparently he eventually acquired the Magister, because on the calendar for 1631 he described himself as a master. In 1616 he became cantor in Sprottau, attained the citizenship there on May 8, 1617 and was ordained on April 6, 1623 as a pastor in Eulau (Polish Iława) at Sprottau. His first calendar was written for the year 1623. One calender contains a text on the "Vmbkehrung / Umung und der alter Erden", in which the author addressed the then much discussed question about a possible movement of the earth. Cnoll refers to Johannes Schöner (1533), who had refuted the mobility of the earth, whereas other mathematicians spoke out for a movement of the earth (rotation).

STC C 745, Brüning 728, ADB XVI, 320. Vgl. VD17 23:265570A; Houzeau-Lancaster 15046; Zinner n. 4539; Cantamessa N. 1720. Koch, Gesch. des Kirchenlieds u. s. f., 3. Aufl., Bd. II, S. 271 f.; Wackernagel, Das deutsche Kirchenlied, Bd. I, S. 814; Bd. V, S. 350; Fischer, Kirchenliederlexikon, 1. Hälfte, S. 291 f. KVK: Stabi Berlin, HAB, Hannover, Kiel, Stabi München (only Microfiches); COPAC: BL London; OCLC: only NOAA.

The supernova of 1604 – a divine exclamation point

COLOMBE, Ludovico Delle.

Risposte piacevoli e curiose alle considerazioni di certa maschera saccente nominata Alimberto Mauri, fatte sopra alcuni luoghi del discorso, del medesimo Ludouico dintorno alla stelle apparita l'anno 1604. Florence, Giovanni Antonio Caneo and Raffaello Grossi, 1608. 4to, ff. [2], 131, [2, errata]; leaves 28 and 59 misnumbered 24 and 53 respectively; occasional marginal worming (minimally touching a few letters; some of the worming filled-in); occasional light browning and marginal foxing; a good copy in recent half vellum over marbled boards, red edges; title stamped 'Congr. Orat. Philippi Nerii Bonon.'; obliterated inscription in brown ink above imprint.

EUR 8.500.-

First edition of an exceedingly rare book in the debate about the supernova of 1604 by the Florentine Aristotelian philosopher.

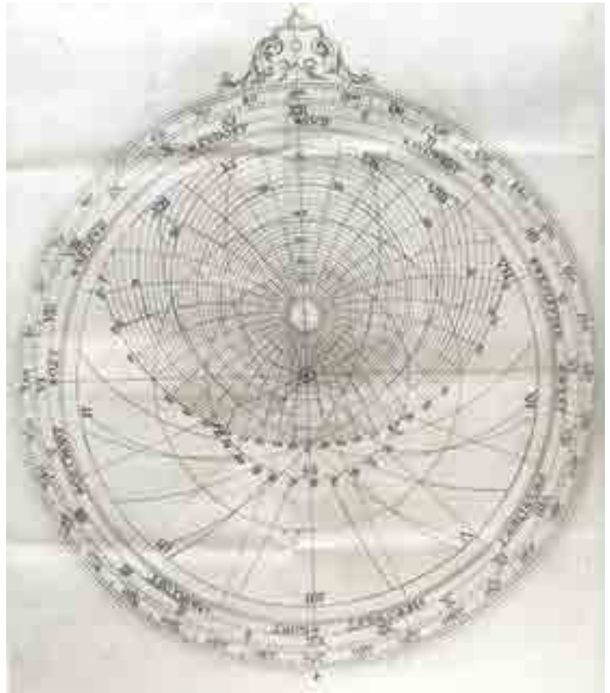
'The nova of 1604 lacked the full burden of novelty of the earlier occurrence [in 1572] in the sense that the possibility of this kind of event was now established. Although it was widely believed that God could do anything, no one in 1572 had foreseen that he would choose to make a star appear where none had existed before. The 1604 nova, by contrast, appeared not as a solo event but as a kind of divine exclamation point for the conjunction that the prognosticators had anticipated. Perhaps this unanticipated union of ordinary and preternatural circumstances is one reason that the writings about the 1604 nova took a more urgently naturalistic turn. The early seventeenth-century controversialists (whatever position they staked out) were as much preoccupied with the question of parallactic displacement as their predecessors, but many were no less concerned with defending physical explanations of the star's origins. The new star of 1604 pushed open the question of whether a deviant and unanticipated occurrence warranted an immanent, naturalistic explanation rather than one that was transcendental and miraculist . . . In Italy, the nova's appearance of 1604 led quickly to an outbreak of local controversy with universities at the center of contention. In early December 1604, Galileo's lectures at the university in Padua became the occasion for a series of exchanges . . . Between 1605 and 1606, Padua, Florence, Rome and Venice were witness to no fewer than ten publications – some spaced as closely as a month apart . . .

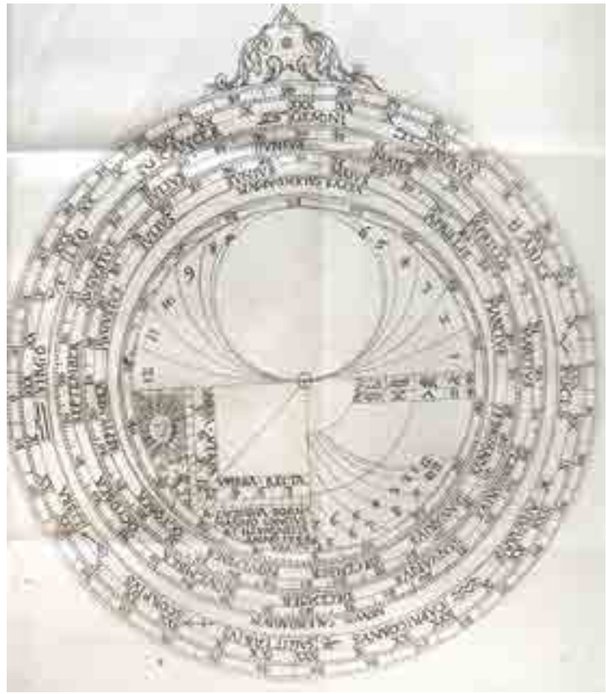
'Ludovico delle Colombe, who soon became one of Galileo's great antagonists in Florence, believed the nova to be an already-existing entity, the visibility of which was blocked by patches of density in the starless crystalline sphere that lay beyond the fixed stars. As transparent regions of the sphere came between an observer and the previously hidden star, visibility was enabled in much the way that a pair of spectacles assists the nearsighted. The last quarter of Colombe's book was devoted to an all-out, Piconian-style attack on astrology and astrologers' (Westfall, The Copernican Question pp. 384-389).

Ludovico delle Colombe first entered the controversy on the supernova in 1606, which was much criticized by 'Alimberto Mauri', a pseudonym behind which he believed Galileo to be hiding. The present Risposte piacevoli is a point by point rebuttal of Mauri's Considerazioni of 1606, and include Ludovico's arguments against the theory of the corruptibility of the Heavens, as held by Cecco de Ronchitti.

Carli and Favaro 29; Cinti 20; OCLC records only three US locations, at Michigan, Brigham Young, and Huntington.

Early astronomical instrument





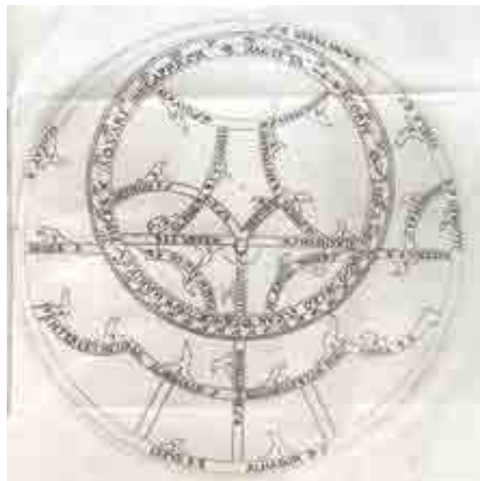
COPP, Johannes / BORNMANN, Zacharias.

Astrolabium sampt einem kurtzen Unterricht, wie man solch Instrument brauchen sol, nicht allein den Erzten, sondern auch den Bawmeistern, Bergleuten, Büchssenmeistern, und andern, so sich der Astronomischen und Geometrischen Kunst gebrauchen. Erstlich Anno 1525 aus dem Latein inns Deudsche gebracht. Jetzo aber auffs newe ubersehen und gebessert durch Z. Bornman, Jlluministen zu Bresslaw. Bresslaw (Breslau): Johann Scharffenberg, 1584. Quarto (205 x 160 mm). ff. nn. 45 with 5 folding engraved plates. Modern calf period style, fine.

EUR 4.500.-

First edition of Zacharias Bornmann's (1500-1599) revision of Johannes Copp's Astrolabium, first published in 1525.

Johannes Copp von Raumenthal, also known as Johan Copp (ca. 1487–died before 1563) came from a southern german nobility family. He worked as physician at Joachimsthal, Vienna University and at the Imperial Court in Prague (under Ferdinand I.) and was asked by Gustav Vasa in 1555 to become his personal physician. He was summoned by Gustav Vasa to Sweden. He served as a kind of mediator of the king and the dukes. Copp seems to have been a well-educated person for his time. Zacharias Bormann is also known through his published star atlas: Astra (1596). An astrolabe (al-Asturlāb) is an elaborate inclinometer, historically used by astronomers and navigators to measure the inclined position in the sky of a celestial body, day or night. It can thus be used to identify stars or planets, to determine local latitude given local time (and vice versa), to survey, or to triangulate. It was used in classical antiquity, the Islamic Golden Age, the European Middle Ages, and the Renaissance for all these purposes. The astrolabe is effective for determining latitude on land or calm seas, although it is less reliable on the heaving deck of a ship in rough seas.



Zweite Ausgabe, die erste in der Bearbeitung von Z. Bornmann. Johannes Copp (1487–1563) war Arzt in Joachimsthal u. wurde von Ferdinand I. zum Königl. Arzt in Prag ernannt. 1524 verfasste er eine lateinische Schrift über das Astrolab, die er selbst übersetzte und 1525 erstmals veröffentlichte. Auf Betreiben von Zacharias Bornmann wurde die Schrift 1584 neu aufgelegt und von ihm erweitert.- VD 16, B 6731; IA 144.404; Adams C 2605; Zinner, Literatur 3132 u. Instrumente 282; Houzeau-L. 3259.

Only edition with a photograph of Darwin

DARWIN, Charles.

Über die Entstehung der Arten im Thier- und Pflanzenreich durch natürliche Züchtung, oder Erhaltung der vervollkommneten Rassen im Kampfe um's Daseyn. Nach der dritten Englischen Auflage und mit neueren Zusätzen des Verfassers für diese deutsche Ausgabe aus dem Englischen übersetzt und mit Anmerkungen versehen von H. G. Bronn. Zweite verbesserte und sehr vermehrte Auflage. – Stuttgart: Schweizerbart, 1863. 8°. VIII, 551 pp., (1, blank) with 1 lithograph. plate & as frontispiece a photographic portrait of Darwin by Henry Maull (reproduced by Buchner). Contemporary gilt printed embossed cloth, name on front-fly (Heinrich Fowarger)

EUR 1.400.-

Second edition of the German translation of the "Origin of Species", notable for the only book in Charles Darwin's life-time to include an original photograph of him. The photograph is by Henry Maull and was probably made in 1857. Henry Maull received from Darwin the permission to distribute it in late 1862.

The photograph was produced after Maull's original by Carl Johann Sigmund Buchner (1821-1918) who worked as artist in Stuttgart and became photographer of the Württemberg Court in 1885 (Th./B. V, 180)

By 1853, Darwin's life as a naturalist was well established, and he was gaining in popularity thanks to his account of his journey on the Beagle and his two volumes of Journal of Researches that resulted from that five- year voyage. The photographers Maull and Polyblank (later known as Maull and Fox) operated a studio in London and made at least four different exposures of Darwin between 1853 and 1857.
They took a now well-known photograph of Darwin in 1855 for their Literary and Scientific Portrait Club – a series of prints of notable Victorian men, sold on subscription. The photograph was taken about one year after Darwin started full-time work on his species theory. He was then around 45. A Darwin letter to J. D. Hooker on 27 May 1855 refers to a photograph: 'if I really have as bad an expression, as my photograph gives me, how I can have one single friend is surprising.' (The correspondence of Charles Darwin vol. 5, 339.)

While this image is notable as the first popular image of Darwin, the extent to which Darwin disliked it is also remarkable. Referring to the copy he had sent five years previously in his 1860 letter to Hooker, Darwin ex-claimed "for Heaven-sake oblige me & burn that now hanging up in your room. It makes me look atrociously wicked." One of the photographs was used as a frontispiece in the german edition of 1863 and as an engraved frontispiece for Francis Darwin's The life and letters of Charles Darwin (1887). The archives of Maull and Fox had been destroyed by fire, so the date is unsure.- Jonathan Smith. Charles Darwin and Victorian Visual Culture 217 ff.; Freeman 673; Carter-Muir 344; Volpi I, 352.

Darwin to Laugel, an early, important champion of Darwin's theories in France

DARWIN, Charles.

A fine, personal autograph letter, signed in full ('Charles Darwin'), written shortly before resuming work on the manuscript of The Variation of Animals and Plants under Domestication. To the author of Problèmes de la Nature, Auguste Laugel, thanking him for the receipt of a copy of his recently published work, and explaining that he has not yet been able to read it due to protracted illness. Down, Bromley, Kent, 4 September, [1864]. 8vo, two and a half pages, (one bifolium); on headed writing paper.

EUR 19.500.-

'Dear Sir,

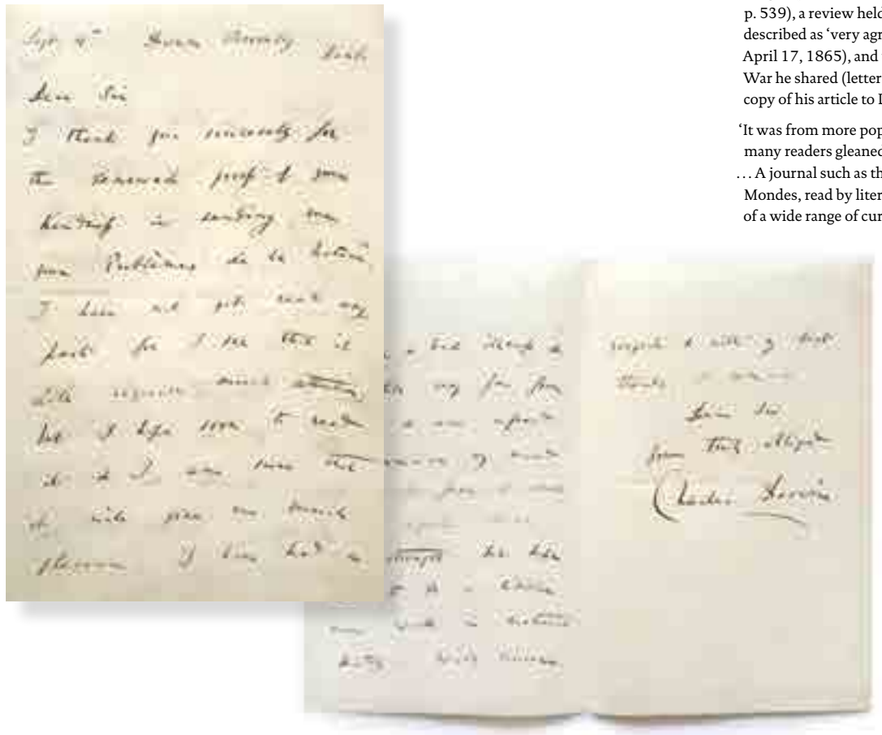
I thank you sincerely for the renewed proof of your kindness in sending me your Problèmes de la Nature. I have not yet read any part for I see that it will require much attention; but I hope soon to read it & I am sure that it will give me much pleasure. I have had a very long & bad illness & am still very far from strong & am afraid to exercise my mind much. I fear I shall never again have much strength but hope still to do a little more work in natural history.

With sincere respect & with my best thanks, I remain, dear Sir, your truly obliged Charles Darwin'

The book's author and recipient of the letter, Antoine-Auguste Laugel (1830-1914), was a French historian, engineer and geologist, educated at the École Polytechnique, Paris. He was later appointed director of the French railway company 'Chemins de fer de Paris à Lyon et la Méditerranée.'

Laugel published articles in various journals, such as the Revue des Deux Mondes, including an 'excellent and appreciative notice of the Origin' (Francis Darwin, The Life and Letters of Charles Darwin vol. I, p. 539), a review held in high regard by Darwin from a man whom he described as 'very agreeable, clever, & charming' (letter to J.D. Hooker, April 17, 1865), and whose views on slavery and the American Civil War he shared (letter to Asa Gray, April 19, 1865). Laugel had sent a copy of his article to Darwin at the time of its appearance in the Revue.

'It was from more popular or accessible sources than translations that many readers gleaned their notions of what Darwin said or meant . . . A journal such as the long-lived and influential Revue des Deux Mondes, read by literate audiences all over Europe, carried reviews of a wide range of current books, including the Origin of Species; the reviewer, Auguste Laugel, a young Frenchman trained as an engineer or geologist, wrote an ample and discerning review (1860), grasping some of the implications and the difficulties of the theory, and also enthusiastically greeting the possibilities the theory suggested of transplanting flora and fauna around the world from and to a variety of landscapes: trade and exploration were strong concerns of the journal. Laugel even included an examination of current breeding experiments. Darwin, who followed his own reception with great care, invited the young writer to visit him and his family at their home at Down' (Thomas F. Glick and Elinor Shaffer, editors, The Literary and Cultural Reception of Charles Darwin in Europe, vol. III, p. 4).



Auguste Laugel's defense of Darwin in the literary journal La Revue des Deux Mondes – which had published Les fleurs du mal a few years earlier – summarized the main theoretical innovations of Darwin's evolutionism, namely his concept of natural selection and his emphasis on the "transitionary characters" of species, an understanding that radically challenged the concept of species then current in France. Laugel's was key to circulating Darwin's ideas, particularly his challenges to the exceptional status of human beings by deflating qualitative distinctions between humans and animals' (J. Dubino, Z. Rashidian, and A. Smyth, Representing the Modern Animal in Culture, 2014).

Throughout his life Darwin suffered from periods of gastrointestinal distress, as well as headaches, fatigue, trembling, faintness, and dizziness. The particular bout of illness Darwin refers to in this letter set on in the spring of 1863.

'Because of poor health, Darwin corresponded little during the first three months of 1864, dictating nearly all his letters and having scientific papers read to him. In March, his health improved enough for him to make some observations of dimorphic plants with [his son] William's help . . . In the same month, Darwin began to consult William Jenner, professor of clinical medicine at University College, London, and physician-in-ordinary to Queen Victoria. Jenner prescribed a variety of antacids and purgatives, and limited Darwin's fluid intake; this treatment differed considerably from that of the five physicians Darwin had consulted in 1863. In a letter of 26[-7] March [1864], Darwin exclaimed to his close friend, the botanist Joseph Dalton Hooker: 'Hurrah! I have been 52 hours without vomiting!!' In April he decided that Jenner had done him much good; his sickness had subsided enough for him to carry out tasks like counting seeds of Lythrum, crossing cowslips with polyanthuses, and searching for specimens of the dimorphic aquatic cut-grass Leersia.

'In May, Darwin finished his paper on Lythrum ("Three forms of Lythrum salicaria") and sent it to the Linnean Society of London, thus completing the work he had started on the genus in 1862. His varied botanical observations and hybridising experiments continued throughout the summer. When he finished a preliminary draft of his paper on climbing plants in mid-September, he noted in his 'Journal' and in letters to several friends that on the very next day he resumed work on the manuscript of The variation of animals and plants under domestication, the long-awaited sequel to On the origin of species that he had set aside the previous summer.

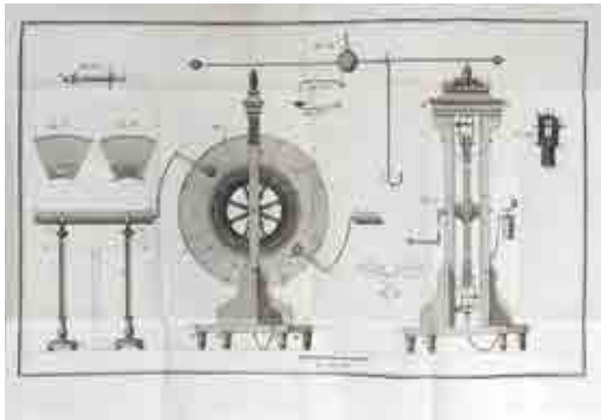
'In October, Darwin let his friends know that on his good days he could work (presumably at writing) for two hours. As his health grew worse during the last two months of the year, he again complained to correspondents of feeling weak and unusually unwell, and he received more letters of advice from Jenner. In a letter of 15 December [1864] to the surgeon and naturalist Francis Trevelyan Buckland, Darwin described his symptoms in some detail: 'I have suffered from almost incessant vomiting for nine months, & that has so weakened my brain, that any excitement brings on whizzing & fainting feelings, when I cannot speak; & much of this makes me for days afterwards very unwell' (Darwin Correspondence Project, online).

Darwin Correspondence Project, no. 4607F.

DAL NEGRO, Salvatore.

Nuovo Metodo di construire macchine ellettriche di grandezza illimitata e nuovi sperimenti diretti a rettificare l' apparato elettrico dell' abate … Venezia, per Pietro Zerletti, 1799. 8° (235 x 155 mm) pp. XXXII, 112 with one fold. engrav. plate (495 x 325 mm) Contemporary blue wrappers, an excellent copy on thick paper.

EUR 1.200.-



First edition of this scarce treatise. Dal Negro (1768–1839) first studied law at Padua, but his interest shifted toward experimental physics, and the construction of electrostatic machines. This, his first book, describes how he constructed his electrostatic machine, and some of the experiments he conducted with it. The folding plate illustrates the machine, which accompanies the instructions on how to build it. In the next few years he made various improvements to the pile of Volta, a recent invention, which he called electric motors (batteries). His interests were in the field of physics, where he devoted himself to the improvement of systems already known, but he also invented new ones. In 1809, for example, he invented a device for measuring very short spans of time, which he called an "oligocronometro" based on a compound pendulum. The apparatus was improved several times and ultimately was used to measure both the time of falling bodies and the initial velocity of projectiles. In 1810 he perfected the hydraulic ram, invented by Montgolfier. He also worked on topics related to electromagnetism. A member of many scientific societies, Dal Negro was appointed professor of experimental physics at the University of Padua. He constructed the first electric motor in 1830 and the first generator in 1832.

His contributions to physics have not as yet been fully explored and evaluated.

DENORES, Jason.

Tavole … del mondo, et della sphere, le quli saranno, come introduttione a'libri di Aristotile Del Cielo, Delle Meteore, & de gli Animali. Con la spheretta del clarissimo M. Triphon Gabriele, nella quale con brevita, et chiarezza si descrivono i Cerchi Celesti. Padua, Paolo Meietto, 1582. 4to, ff. [2], 24, with woodcut device on title, and two half-page woodcuts in the text; a fine copy in 18th-century carta rustica.

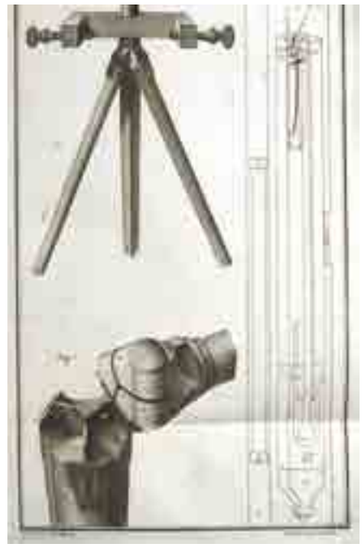
EUR 2.100,-

Only edition of the Cypriot's scholar's Aristotelian cosmology, here rendered into synoptic tables.

Divided into succinct paragraphs and columns, Denores treats the simple and circular motion of bodies, the immobility of the earth, imperfect mixed natural bodies such as fire, air and water, perfect mixed bodies consisting of the elements but greatly altered and perfectly mixed to reach a fifth state, imperfect mixed bodies such as comets, shooting stars, the appearance of the Milky Way, thunder and lightning, the winds, and earthquakes.

He eventually proceeds to the celestial sphere, the signs of the Zodiac, ascension and descension, the Parallels, Equinoxes, etc. The last part consists of the Trattato de la Spheretta, by Triphon Gabriele, here rendered into Italian from the Latin original by Denores. Famed as 'the new Socrates' Triphon Gabriele published nothing himself during his lifetime. Most works were published by his nephew and heir, Giacomo. OCLC records one location for the UK, at the British Library, two for Germany, at Wolfenbüttel and Berlin, one in Poland, three in France, and seven in North America, at Michigan, Pennsylvania, Brown University, Boston Public, New York Public, Minnesota, and Toronto. Not in Riccardi

De Saussure's copy



DE LUC, Jean-Andre.

Recherches sur les Modifications de l' Atmosphere. Contenant l' Histoire Critique du Barometre et du Thermometre, un Traite sur la Construction de ces Instrumens, des Experiences Relatives a leuirs Usages, et principalement a la Mesure des Hauteurs & a la correction des Refractions Moyennes. 2 volumes. – Geneva: [no publisher], 1772. 4to (272 x 215 mm). (4), VIII, 416 pp.; XI, (1), 489 pp., (1) with half titles, tables, one of which folding, 7 engraved plates, 5 of which folding, occasional spotting, browning and staining. Contemporary decorated paper boards, old manuscript labels, rubbed & stained. Uncut copy on strong paper.

EUR 2.400.-

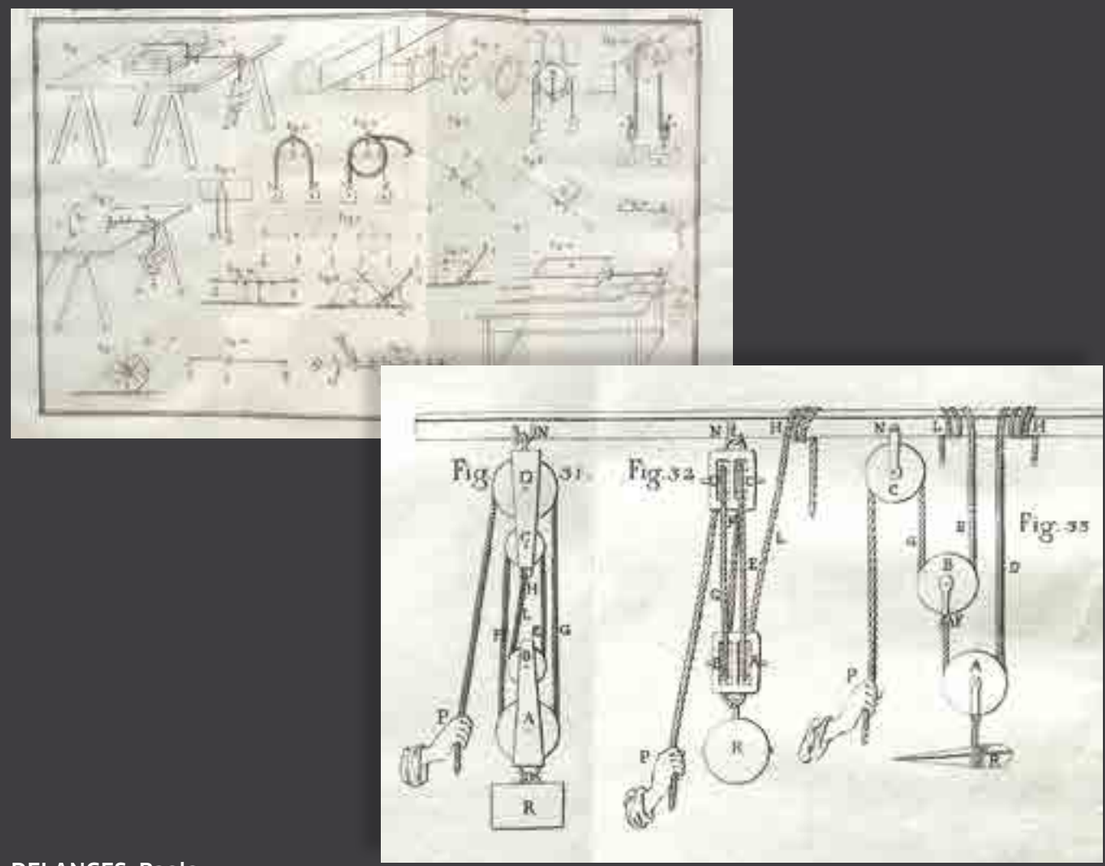
First edition of an important work by a major figure in meteorology who, in these Recherches sur les Modifications de l' atmosphere (1772) and his later Idees sur la Meteorologie (1786–1787) proposed significant advances in the design of meteorological instruments. A fine association copy.

The book is an encyclopaedic compendium on the design and theory of barometers. There is a detailed history of the device along with a commentary on fourteen different designs. In conjunction with this detailed exposition De Luc reviews and criticizes the theoretical work of the principal 17th and 18th century commentators on hydrodynamics (as it relates to barometer design and theory). No less than D. Bernoulli and Leibniz come under Deluc's scrutiny. It is in the context of this discussion that he introduces the idea of latent heat into physics (later rigorously defined by Black). Deluc's treatise touches on many key problems of instrument design and dramatically illustrates the practical and the-oretical issues.

"The barometric controversy between H. B. de Saussure, professor of philosophy at Geneva, and Deluc is one of lasting scientific interest. In Essais sur l' hygromètre (1783, p. 282) Saussure stated that some of Deluc's findings were based on specious reasoning and inadequate experimentation: "Mr. Deluc supposes that pure air is heavier than air mixed with water vapor.... This supposition explains well why a lowering of the barometer is a sign of rain...." Saussure, experimenting with closed containers, had found little difference in weight between dry air and humid air, and considered the differences quite inadequate to explain the large variations in barometric pressure that occurred at ground level in Europe. Modern meteorology has proved that Deluc was right, whereas Saussure was groping toward the influence of air masses and of the passage of cyclonic depressions and anticyclones." (DSB).

Jean-Andre De Luc (1727–1817) was a swiss chemist, meteorologist, and geologist who made several firsts in scientific discovery. He first used the term "geologie" (1778), and interpreted the six days of Mosaic creation as epochs of geological time. He was first to provide correct measurement of the heights of mountains by the effects of heat and pressure on a thermometer and to publish the correct rules for equivalent heights to barometric pressure. Along with other meteorological instrument ideas, he invented a hygrometer using gut as the medium for measuring the humidity of the air and became involved with French scientist Horace de Saussure (1740–1799) in arguments over evaporative theory. He noted the independence of vapor pressure to atmospheric air pressure before John Dalton (1766–1844); described the chemical and electrical effects of the electric pile; and shared with Joseph Black (1728–1799) the discovery of latent heat.- DSB IV, 27 - 29; Pogg. I, 545.

Provenance: H(orace) de Saussure (old signatures on half titles); later inscription on title: G. B. Jain; later signatures on front pastedown: Vicomte G. de Leusse; Ex Libris: Svante Arrhenius. Some old annotation on rear pastedown of vol. II. and within text.



DELANGES, Paolo.

Meccanica Pratica in cui si dimostra la maniera di determinare l' equilibro delle macchine, computando le resistenze degli sfregamenti. – Verona: Per gli Eredi di Marco Moroni, 1783. Quarto (292 x 215 mm) XIII, (1), 159 pp., (1) with woodcut device on title, headpieces and initials, tables, 2 folding engraved plates [bound with:] Paolo Delanges. La Trisegante nuova curva; e pensieri sulla formula cardanica. Verona: eredi di Marco Morodi, 1783. (IV), 5–28 pp. with woodcut device on title, head-pieces and initials, one folding engraved plate. Fresh and uncut copy, with very light marginal spotting. Contemporary carta rustica.

EUR 2.800.-

First editions; both are quite uncommon. Rare Sammelband of two works on applied mathematics by the italian engineer & mathematician Paolo Delanges (or Deslanges) (1750 (?) - 1810).

"The first work contains the first separate appearances of three papers by Delanges: 'Esperienze per determinare le leggi colle quali procede la resistenza dello sfregamento del legno, e de' metalli, e quella prodotto dalla durezza e ruvidita delle funi,' 'Difesa e conferma delle leggi seguite dalla resistenza dello sfregamento de' solidi, dedotte dalle sperienze esposte nella prima Sezione,' 'Dell'equilibrio delle macchine, considerando in esse le resistenze degli sfregamenti' . . . The second work appears to be the first publication on the curve which Delanges named the "trisegante'."(Roberts & Trent, Bibliotheca Mechanica, 88). The second work is concerned with the trisection of any angle, one of the three famous problems which faced the ancient Greek mathematicians. This was a topic which interested Cardano and Delanges' monograph is based on the earlier mathematician's discoveries.

Much of his work was dedicated to hydrostatics and hydrodynamics and he contributed with his studies to the regulation of water in the Venetian provinces. Born at Brescia, he was captain of the corps of engineers for the republic of Venice, then professor of mathematics at the military school at Verona, later serving as director of the hydraulic commission. He was a member of the Societa Italiana and of the Italian National Institute. He often worked with Lorgna and published frequently in the Transactions of the Societa Italiana. After the end of the Venetian Republic he retired to Brescia where he was a honorary Inspector General of Waterworks and Roads.- Riccardi, I, 400-01; KVK: Lübeck, Göttingen; Schlatt.

Lenses, microscopes, telescopes and chromatic aberration


LETTERA
DI EVSTACHIO DIVINI
ALL'ILL. SIG. CONTE
CARL' ANTONIO
MANZINI.
Si ragguaglia di vn nuouo lauoro, e componimento di Lenti, che seruono à Occhialoni, ò semplici, ò composti.
IN ROMA:
Per Giacomo Dragondelli 1663.
Con licenza de' Superiori.

DIVINI, Eustachio.

Lettera … all'ill.mo Sig. Conte Carl'Antonio Manzini. Si ragguaglia di un nuovo lavoro, e componimento di lenti, che servono à occhialoni, ò semplici, ò composti. Rome, Giacomo Dragondelli, 1663. 8vo, pp. [1], 5–62, [2, blank]; bound without the blank leaf A2 (see below); some very light browning and foxing; a very good copy in contemporary, possibly original, carta rustica.

EUR 6.500,-

First edition of this rare work by the famous Roman instrument maker and astronomer, the main rival of Giuseppe Campani, in which Divini presents his latest experiments and improvements in the making of lenses and the construction of microscopes and telescopes with various multiple lens combinations.

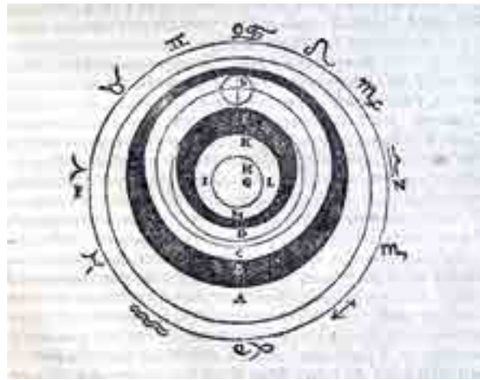
Eustachio Divini was one of the foremost makers of optical instruments in the seventeenth century (see King, The history of the telescope pp. 58-59). He 'was among the first to develop technology for the production of scientifically designed optical instruments. He established himself in Rome about 1646 as a maker of clocks and lenses … During this same period he experimented with the construction of telescopes of long focus … He experimented with the elimination of achromatic aberration in his lenses with some success. He had received some scientific training from Benedetto Castelli, one of Galileo's disciples' (DSB).

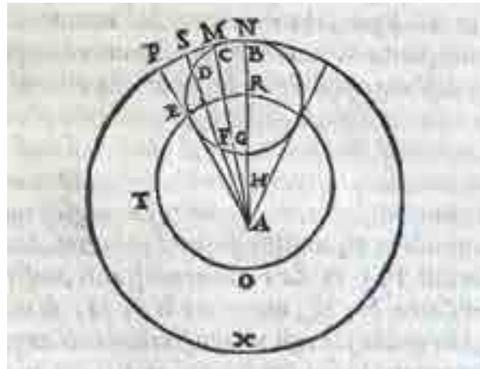
'From 1662 to 1665, there was another quarrel between Divini and Campani. Both worked in Rome, so some rivalry between them was inevitable. In those years, however, the rivalry became a hot dispute. Many "comparisons" were made between the instruments of these rivals, which Divini mentioned in his letter to Count Antonio Manzini (1666). The first public comparison took place at the end of October 1663 in the garden of Mattia de' Medici, in the presence of the some famous astronomers like Giovanni Cassini. The contest ended in a draw since they acknowledged that Campani's telescope had better focusing but Divini's had bigger magnification' (Biographical Encyclopedia of Astronomers p. 302).

Divini's experiments aiming at the elimination of chromatic aberration are found on the final pages. It is there too that he describes his micrometer eyepiece, first employed by him in his mapping of the moon in 1649.

Riccardi I/1 413.3 ('Questa lettera e di molta importanza pel modo proposto dall a[utore] di togliere dai cannocchiali l'iride dei colori: metodo che il Dollond, cui generalmente viene attribuito, non fece che perfezionare'); outside Italy OCLC locates single copies in France, at the Bibliothèque Nationale, the British Library for the UK, and the Gottfried Wilhelm Leibniz Bibliothek, Germany, and five copies in the US, at NLM (with the collation given as here), Stanford, Cornell, Rochester, and Wisconsin; see the online scan at the Fondazione Biblioteca Europea BEIC, where leaf A2 is also omitted.


THEORICHE
OVERO
SPECVLATIONI INTORNO
ALLI MOTI CELESTI
Del R. P. F. Paolo Donati
Carmelitano,
Nelle quali senza Eccentrici, Epicicli, Spire, Circitori, Reuluenti, o Deferenti, con nouo modo si salvano le celesti apparentie,
Alla Serenissima Altezza di Guglielmo Gonzaga Duca di Mantoua & Monferrato.
CON PRIVILEGIO.
IN VENETIA,
Appresso Francesco Bernardino Osana, Libraro in Mantoua. M D LXXV.





DONATI, Giovanni Paolo.

Theoriche overo Speculationi Intorno alli Moti Celesti … nelle quali senza Eccentrici, Epicicli, Spire, Circitori, Revoluenti, o Deferrenti, con nouo modo si salvano le celesti apparentie. – Venice: Appresso Francesco Bernardino Osano, 1575. 4to (215 x 153 mm). pp. (10), 68 with woodcut device on title, headpieces and initials, diagrams, the first few leaves browned, spotted & stained, title and one leaf repaired at foreedge, first 2 leaves somewhat crudely rehinged, some worming to last leaf affecting a few letters. 18th century mottled calf, spine gilt with red morocco lettering – pieces, some worming, extremities rubbed. Later endpapers, but overall a nice copy.

EUR 4.600.-

First edition of this strange, highly technical astrological work dedicated to Guglielmo Gonzaga who had some interest in astrology and ordered a horoscope-related scheme for the decoration of the so-called zodiac room at the ducal palace in Mantua for the same reason that Borso d'Este had ordered the scheme of constellations for his Hall.

"Text of astronomy (of content almost impenetrable to me), in which two chapters are dedicated to the criticism of the astrological discipline, whose followers are charged with chimerical concepts." (Cantamessa)

Little is known of the author apart from the fact that he was born in Mantua, became a Carmelite and participated in the Council of Trent. The astronomer Magini wrote several astrological works that were admired in their time and also served later the Gonzaga dukes of Mantua as judicial astrologer beginning in 1599 and as teacher of mathematics to the princes-and received about 400 ducats per year. He dedicated his books on astrology to the Duke of Mantua. The book here was the first book that Ossano printed (Magnaguti, 1926-27, pp. 66).

All over Europe, but with differing results in a variety of works, sixteenth-century scholars interested in astrology echoed a similar theme: the need for a new, revised, reformed astrology. They furthermore expressed their opinions about the precise way the revision must be carried out. Astronomers, philosophers, theologians, physicians, and astrologers all discussed the subject, determining the parts of astrology that were acceptable and respected human free will and the divine power from those parts that contradicted them. The debate about the legitimacy of astrology characteristic of the second half of the sixteenth century.- Cantamessa 2235; Riccardi I, 418.- KVK: only Stabi Berlin, Lugano; COPAC: no copy (?); OCLC: NY, Cornell, Folger, Smithsonian, Huntington.

EHINGER, Elias.

Cometen Historia. Das ist: Kurtze Beschreibung der fürnembsten Cometen / so von der Regierung an deß Römischen Kaysers Augusti / und der gnadenreichen Geburt unsers Herrn und Heylands Jesu Christi / innerhalb 1618 Jahren sein gesehen worden. Auß den Historicis kurtz und summarischer weiß zusamen getragen unnd verteutscht / Von M. Elia Ehinger … Gedruckt zu Augspurg: bey Johann Schulten, (1619). Quarto (187 x 153 mm) Title-page with woodcut, 43 pp., (2, blank) Modern paper card period style. Fine.

EUR 2.800.-


Cometen Historia
Das ist:
Kurtze Beschreibung der fürnembsten Cometen, so von der Regierung an deß Römischen Kaysers Augusti und der gnadenreichen Geburt unsers Herrn und Heylands Jesu Christi innerhalb 1618. Jahren sein gesehen worden.
Auß den Historicis kurtz und Summarischer weiß zusamen getragen und verteutscht.
Von M. Elia Ehinger, der Lateinischen Schulen S. Anna in Augspurg Rectore.
Psalm 102.
Meine Tage.
EQVATOR
ZODIACVS
Gedruckt zu Augspurg, bey Johann Schultes.

First and only edition, describing 151 comets from antiquity until his time and the comets he observed especially the famous comet in 1618.

Ehinger (1573–1653) here lists all the historical comets and the ones he had observed. After a busy early life Ehinger became director of the higher school in Rothenburg a. d. Tauber and then librarian in Augsburg, where he published another work on comets in 1618. The comet described here: C / 1618 W1 was a comet that could be seen by the naked eye in 1618 and 1619 and was the first comet to be observed with telescopes (as well as two smaller ones of the same year). While leading scientists such as Kepler, Cysat, Gassendi, or Snellius made accurate observations, others discussed at an Ulm colloquium whether these comets were divine signs (because of the recent pan-European war) or purely natural phenomena. The comets of 1618 were the first to be observed after the invention of the telescope with such instruments. In addition to more precise observation of their appearance, this also allowed much more precise measurement of their positions in the sky, which should later facilitate the calculation of the track elements. Kepler wrote about the three comets of the year 1618 in his De cometis libelli tres (1619), linking it to a cognition of Brahe and Mastlin. In 1577 the two succeeded in determining the parallax on the comet of 1577. They were able to prove that the comets are not structures in the earth's atmosphere, but real celestial bodies that move in circular orbits. In contrast, Kepler defended his assumption of a straightforward comet movement. In Ulm, a dispute arose between the mathematician Faulhaber and the physician Remmelin on the one hand and the director of the Ulmer Gymnasium Hebenstreit, the pastor Zimbertus Wehe and the mathematician Johannes Krafft on the other. Shortly after the outbreak of the Thirty Years' War, the question was whether the comets that appeared in the sky in 1618 were "miraculous signs" announcing the wrath of God and his punishment, or natural phenomena without any influence were at war and death, hunger and misery. On October 18, 1619, a colloquium of some scientists, including the mathematician Descartes, took place to clarify the issues in Ulm.- VD17 23:289405M; Brüning 811; Brucker 112; ADB V, 697; Bircher A1008; Zinner 4631 (1618); Cantamessa 2326.

KVK: Harvard; Staatsbibliothek Berlin; Deutsches Museum München; Augsburg; München; Wolfenbüttel; Univ. München; Coburg; National Library of Scotland; British Library; ETH Zürich; Basel.

EPP, Franz.

Systematische Beschreibung einer sichtbaren Sonnenfinsterniß, Die wir hier zu München 1778 den 24. Brachmonats ungefähr um 4 Uhr 45 M. … München: Johann Paul Vötter, 1778. 8°. 35 pp., (3) with one fold. plate. Contemporary brown papercard boards.

EUR 650.-

Original scientific study on a solar eclipse .

The versatile and committed author (1733–1789), originally Jesuit and lastly city preacher in Munich, taught in Dillingen and Munich physics, became a member of the Academy of Sciences there and promoted among other things meteorological observations. He wrote on electricity, magnetism and astronomy.- ADB VI, 157; Backer/S. V, 194; Poggendorff 1, 672;

ERCKER, Lazarus.

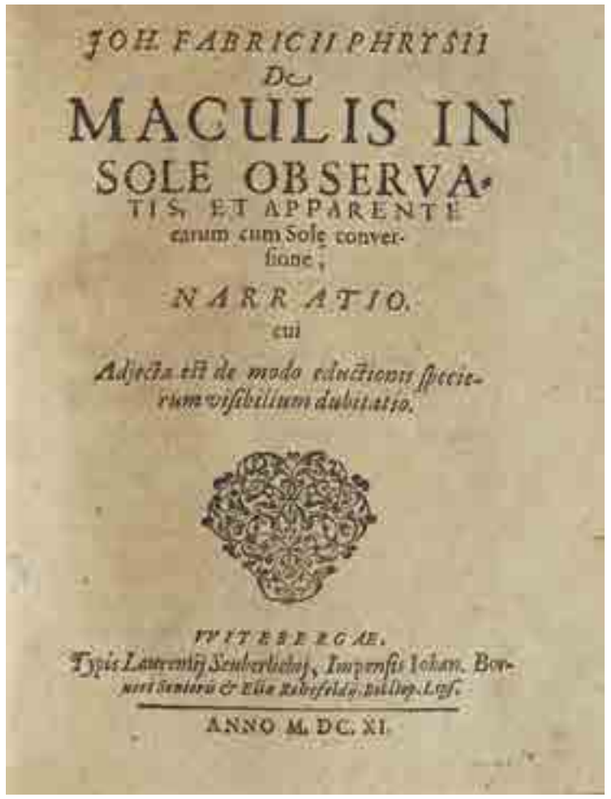
Beschreibung allerfürnemisten Mineralischen Ertzt unnd Bergwercks arten, wie dieselbigen, unnd eine jede in sonderheit, jrer Natur und Eigenschafft nach, auff alle Metaln Probirt, und im kleinem ewer sollen versucht werden, mit Erklerung etlicher fürnehmen nützlichen Schmeltzwercken im grossen fewer, auch schaidung Goldt, Silber vnnd andere Metalln sampt einem Bericht des Kupffer saigerns, messing brennens unnd Salpeter Siedens, auch aller saltzigen Minerischen proben und was denen allen anhengig in fünff Bücherverfast vergleichen zuuorn niemals in Druck kommen. – Prague, Georg Schwartz, 1574. Folio (298 x 193 mm), ff [4] CXXXX [6, including terminal blank], title in red and black with woodcut illustration of furnaces, smelting and distillation operations and 33 large woodcut illustrations in text; lower outer quarter of leaf CXV (Ff3) torn away with old (early seventeeth-century paper with foolscap watermark) neat manuscript replacement, affecting portion of woodcut on recto and several lines of text on verso, light toning of paper throughout, marginal spotting, the last ten leaves with some heavier staining on lower third, still an attractive and appealing copy, untouched, in its original binding of a eleventh/twelfth-century Carolingian manuscript (see below), darkened and worn but intact.

EUR 66.500.-

First edition, an appealing copy of this great rarity, despite the early restoration of a defective leaf. This is the first manual of analytical and metallurgical chemistry and, along with Agricola's De re metallica, the most important book on metallurgy and assaying in the sixteenth century. 'In 1574 Ercker published his magnum opus, Beschreibung allerfürnemisten mineralischen Ertzt. The only one of Ercker's works to contain many drawings, it presents a systematic review of the methods of testing alloys and minerals of silver, gold, copper, antimony, mercury, bismuth, and lead; of obtaining and refining these metals, as well as of obtaining acids, salts, and other compounds. The last chapter is devoted to saltpeter. Ercker described laboratory procedures and equipment, gave an account of preparing the cupel, of constructing furnaces, and of the assaying balance and the method of operating it. He used as his model Agricola's De re metallica, yet was quite original and included only the procedures he himself had tested. Ercker was so hostile to alchemy that he did not use alchemical symbols, although his Probierbuchlein (1556) included a full list of them' (DSB).
Only two copies are recorded to have sold at auction in the past 50 years (the Honeyman copy, sold at Sothebys in 1977 and again in 1988, and the Norman copy, sold at Christie's in 1998, and at Sothebys in 2001 for $ 87,000.

Binding: a vellum bifolium from an eleventh/twelfth-century Carolingian manuscript, each side in two columns, minuscule, the text on the upper board from the history of Obadiah, according to legend the first bishop of Babylon, (from the Historiae Apostolicae autore Abdia Babyloniae episcopo, Liber IV), and that on the lower board an excerpt from the life of Saint Christina of Bolsena (from the Passio Sanctæ Christinæ Martyris).Provenance: library of Carl Sahlin (1861–1943), given to him by the bibliophile Dr. Otto Smith (1864–1935) with inscription, 'Present of Dr. O Smith: Karlshamm till Carl Sahlin d. 19.8.1933'. Sahlin was a metallurgist, industrialist, and writer on the science of mining and metallurgy. He became head of the Ironworks part of the Stora Kopparbergs Bergslags AB (1893–1900), and then manager at Laxå Bruk. He was President of the Swedish Iron and Steel Works Association 1904–1928, and on the board of the Swedish Ironmasters Association. He wrote extensively about mining and foundry history, as well as numismatics, and founded the Bergslagets library and museum. He was also one of the founders of the Museum of Technology in Stockholm, to which he donated his vast collections on mining and related history, including part of his library in 1933Dibner 89; Ferguson I, p 245; Honeyman 963; Hoover 280; Norman 707.

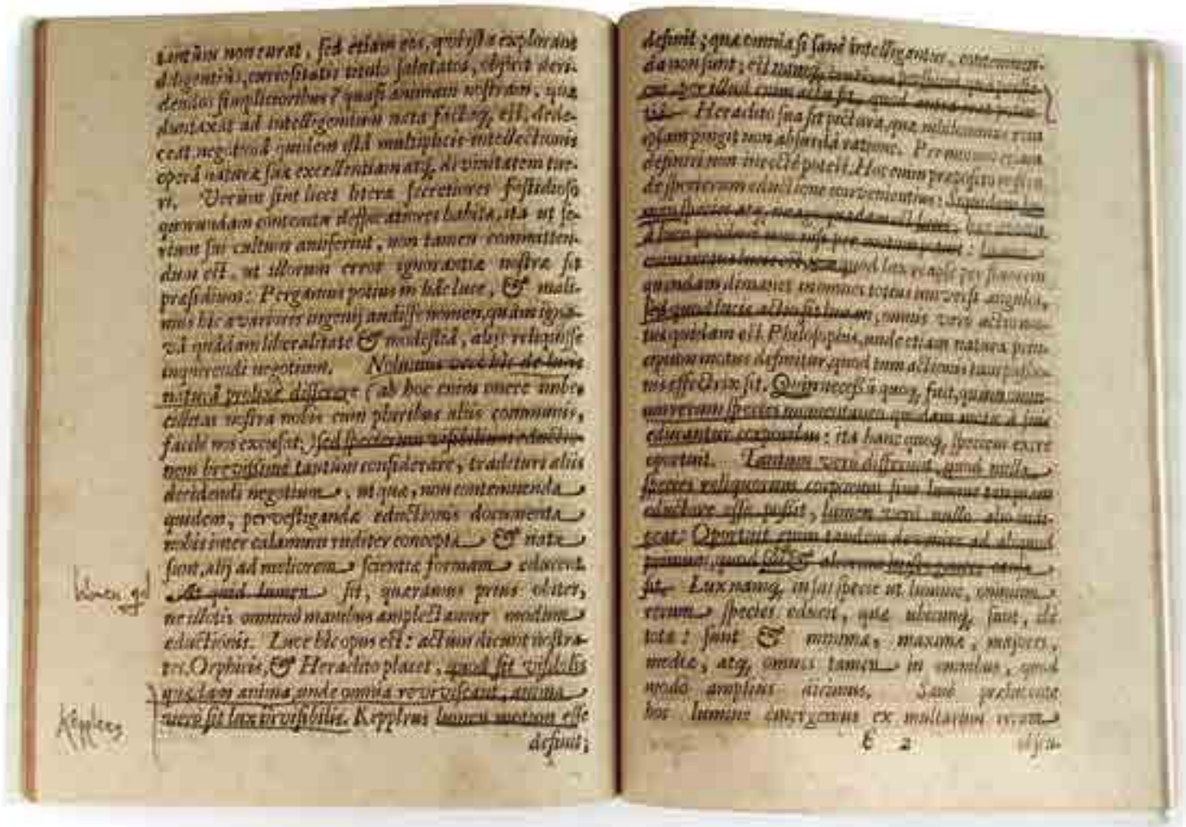
The first published account of sunspot observations & the sun rotating



JOH. FABRICII PHRYSII
De
MACULIS IN
SOLE OBSERVA-
TIS, ET APPARENTE
earum cum Sole conver-
sione;
NARRATIO.
cui
*Adjecta est de modo eductionis specie-
rum visibilium dubitatio.*

VVITEBERGAE.
Typis Laurentij Seuberlichij, Impensis Iohan. Bor-
neri Senioris & Eliae Rehefeldij, Bibliop. Lips.

ANNO M. DC. XI.



FABRICIUS, Johann.

De Maculis in Sole observatis, et apparente earum cum Sole conversione; Narratio cui Adjecta est de modo eductionis specierum visibilium dubitatio. Wittemberg, Lorenz Seuberlich for Johannes Borner the elder and Elias Rhefeld of Leipzig 1611. 4to, ff. [22]; lightly browned, a number of contemporary annotations in ink (some cropped); a fine copy in marbled wrappers.

EUR 28.000.-

Extremely rare first edition of the first ever published work on sunspots, its publication preceding both Scheiner's and Galileo's, as noted already by Kepler and Simon Mayr at the time.

Fabricius describes the spots as adhering to or imbedded in the surface of the sun whilst rotating with it, in stark contrast to the later publications by Scheiner, who interpreted the maculae as solar satellites, and to Galileo, who interpreted them as 'clouds' on the surface of the sun. Kepler himself had observed a sunspot in 1607 using a camera obscura, interpreting the phenomenon as mercury transiting the sun.

'Johann Fabricius was one of the first astronomers to observe sunspots with a telescope, and was the first person to publish an account of his observations. Fabricius was the eldest son of the famed astronomer, astrologer, and Lutheran Pastor David Fabricius (1564–1617), who was a friend of Johannes Kepler and correspondent of Tycho Brahe, Willem Blaeu, Simon Mayr and others. Johann first studied medicine, mathematics, and astronomy at the University of Helmstedt in 1605, and then enrolled at Wittenberg University the following year. In December 1609 he moved on to Leiden University, where he matriculated as a student of medicine, but was eventually awarded a Magister Philosophiae degree in September 1611. While in Leiden, sometime near the end of 1610, Fabricius acquired one or more telescopes, which he brought home to his father's house in Osteel, East Frisia [northwest Germany].

'Already well aware of the astronomical potential of the telescope from Galileo Galilei's Sidereus Nuncius, the father-and-son team began telescopic observations, on the lookout for something new. Johann first noticed sunspots at sunrise on 9 March 1611 . . . and for many weeks following was engaged with his father in daily observations whenever the weather permitted. Most of their observations were carried out via the camera obscura technique, which consists of forming a projected image of the Sun through a pinhole opening into a suitably darkened room. They had first observed the Sun directly through the telescope, a harrowing experience that Johann later related in his Narratio.

"Having adjusted the telescope, we allowed the sun's rays to enter it, at first from the edge only, gradually approaching the center, until our eyes were accustomed to the force of the rays and we could observe the whole body of the sun. We then saw more distinctly and surely the things I have described [sunspots]. Meanwhile, clouds interfered, and also the sun hastening to the meridian destroyed our hopes of longer observations, for indeed it was to be feared that an indiscreet examination of a lower sun would cause great injury to the eyes, for even the weaker rays of the setting or rising sun of the inflame the eye with a strange redness, which may last for two days, not without affecting the appearance of objects."

In his Narratio [which was sold at the Frankfurt Book Fair in autumn 1611,] Fabricius correctly identified the spots as belonging to the Sun. On the basis of the varying shape and apparent speed of these spots as they move across the solar disk, he also correctly interpreted his observations as indicating an axial rotation of the Sun. Fabricius was already aware of the latter idea being a theoretical possibility, from the writings of his father's friend Kepler, who in his 1609 Astronomia Nova had postulated solar rotation as the magnetically mediated motive force responsible for planetary orbital motion.

'Practically nothing is known of the final 5 years of Fabricius' life [he died on March 19, 1616]. In a few surviving letters to Kepler, he affirmed his dedication to astronomy, and announced a method for weather prognostication of unprecedented reliability. Following his death, and that of his father, the young Fabricius was rapidly eclipsed in the priority controversy then flaring between Galilei and the Jesuit Christoph Scheiner over the discovery of sunspots. In their writings, both Kepler and Simon Mayr attempted to establish Fabricius' precedence on the topic, but to no avail.

'It was only in 1723, following the discovery of a copy of his 1611 pamphlet, that Fabricius' remarkable deductions regarding sunspots and solar rotation were once again brought to the attention of the astronomical world' (Paul Charbonneau in BEA I, 353/54).

Folio 10 of Fabrisius' Narratio includes an early note regarding the invention of the telescope and its wonderful magnifying abilities: 'Notum est, quae nuper Batavis inventae sint perspicillae, quae res etiam procul dissitas incredibile magnitudine cum admirabili lineamentoru[m] & colorum distinctione nobis repraesentant intuendas.' The final six leaves of the tract contain Fabricius' highly original ponderings on the nature of light and shadow, showing him well acquainted with Kepler's recent publications on optics.

Whilst copies of Fabricius' tract are held by several institutional (see below), it is of extreme rarity, and with no copy recorded at auction in many decades.

VD17 23:237090L; KVK locates copies at München, Augsburg, Staatsbibliothek Berlin (lost in the war), Mannheim, Tübingen, Erfurt, Herzog August Bibliothek, Wolfenbüttel, and Leipzig; there also is a copy in Switzerland, at ETH Zürich; COPAC locates copies at the British Library, Oxford; Cambridge, the Wellcome Library, Southampton, and the National Library Scotland; OCLC locates three copies in North America, at Tulane University, Yale, and Oklahoma.

Mechanism of gravitation?

F*** DE F*****

PHYSICÆ EXPERIMENTALIS ET MATHESEOS REGII QUONDAM ..... NUNC PERO IMPERIALIS ANNÆ PROFESSORIS

DE

NEWTONIANA ATTRACTIONE

NON VERA

COHÆRENTIÆ NATURALIS CAUSSA

DISSERTATIO

PHYSICO-EXPERIMENTALIS POLEMICA

ADVERSUS

Dn. G. E. HAMBERGERUM.

Excipiunt specie velli.

ANNAL.

Ex Typographia Imperialis Collegii, MDCCLVII.

[Newton] FELICE, Fortuné-Barthélemy de.

De newtoniana attractione unica cohaerentiae naturalis causa dissertatio physico – experimentalis adversus Dn. G. E. Hambergerum quam conscripsit atque in almo Bernensi Conlegio die 1. decembris publicae exposuit concertationi Fortunatus de–Felice, in Neapolitana studiorum Universitate physices experimentalis et matheseos regius quondam professor. – Bernae: ex officina typographica illustrissimae Reipublicae, Quarto. pp. (8), 172 Carta rustica, text browned throughout, partly heavily.

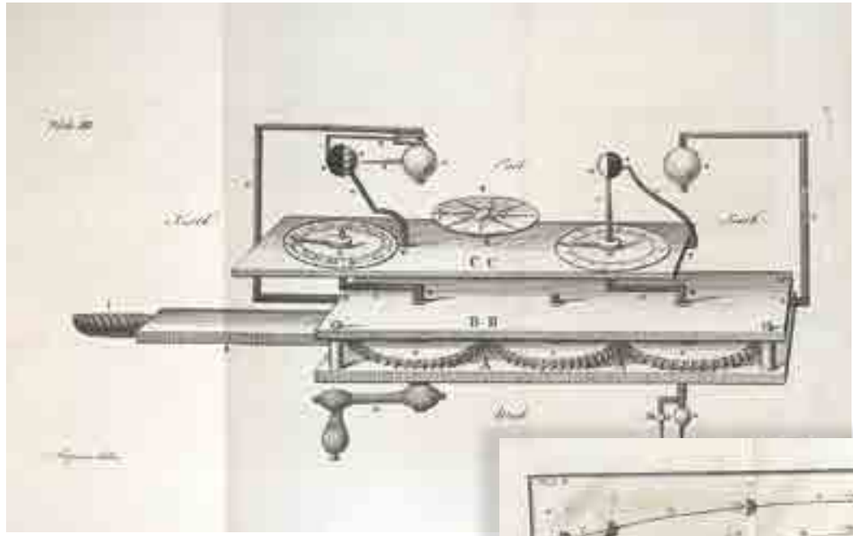
EUR 1.400.-

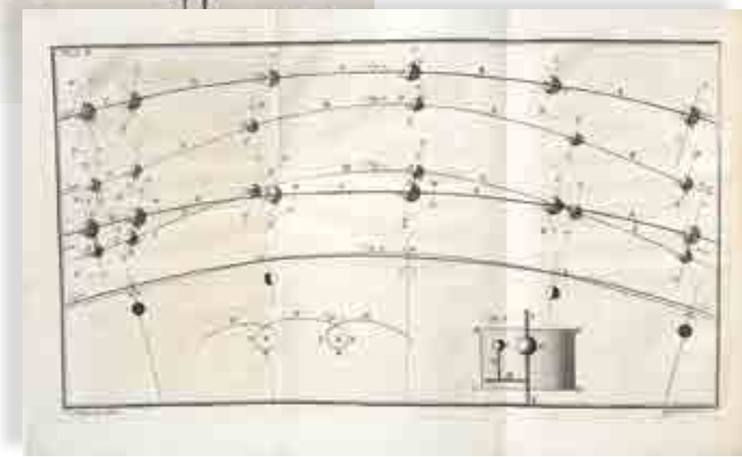
First printed in 1757, this appears to be a reissue of the original sheets with a new title-page. Clearly this issue, not in WorldCat, is much rarer than its rare predecessor. The Babson catalogue does not include this issue, but does have the 1757, calling it: "seems to be rare".

This Latin tract supports the views of Newton on gravitation, as opposed to those of G. W. Leibniz and Georg Erhard Hamberger (1697–1755), the German professor of medicine and botany, who is known for his physiology of respiration, especial with respect to breathing. His writings included the study of gravitation and the ascension of gases.
During most of the eighteenth century the primary challenge the Principia presented to philosophers revolved around what to make of a mathematical theory of forces in the absence of a mechanism, other than action at a distance, through which these forces work. The new method of Newton, which proved most controversial at the time, was the willingness to hold questions about the mechanism through which forces effect their changes in motion in abeyance, even when the mathematical theory of the species and proportions of the forces seemed to leave no alternative but action at a distance. This aspect remained somewhat tacit in the first edition of the Principia, but then, in response to criticisms it received, was made polemically explicit in the General Scholium added at the end of the second edition. A lot of physicist of the 18th century still preferred the mechanistic Cartesian universe with celestial spaces of vortices carrying the planets.

Fortunato Bartolommeo Felice (1723–1789), Comte de Panzutti, was an Italian nobleman, a famed author, philosopher, scientist, and is said to have been one of the most important publishers of the 18th century. He is considered a pioneer of education in Switzerland, and a formative contributor to the European Enlightenment. de Felice was extremely productive as a writer and educator. He was interested in many fields, including philosophy and science. He translated works by Bonnet, Bertrand, Haller, Descartes, d'Alembert, Maupertuis, and Newton into Italian or French. The book seems to be rare, as it is not listed in Gray or among the author's works in the Biographie Universelle.
See: Eugene Maccabez, F. B. de Felice, 1723–1789, et son Encyclopedie: Yverdon 1770–1780, Bale, 1903. Riccardi, 1, 449; KVK: Darmstadt, Basel, Bern; a few copies in italian libraries (all 1757, partly printed in Bern, partly in Valendas) ("Annae"); no copies of this in WorldCat, unrecorded on OCLC.

A mechanical planetarium





FERGUSON, James.

A dissertation upon the phaenomena of the harvest moon. Also, the description and use of a new four–wheel'd orrery, and an essay upon the moon's turning round her own axis. – London: printed for the author, 1747. 8°. pp. 72 [i.e. 74], with three folded engraved plates. Red morocco, gilt spine in compartment, gilt cover borders, gilt edges, spine renewed. Inside clean & fresh. A fine copy.

EUR 3.600.-

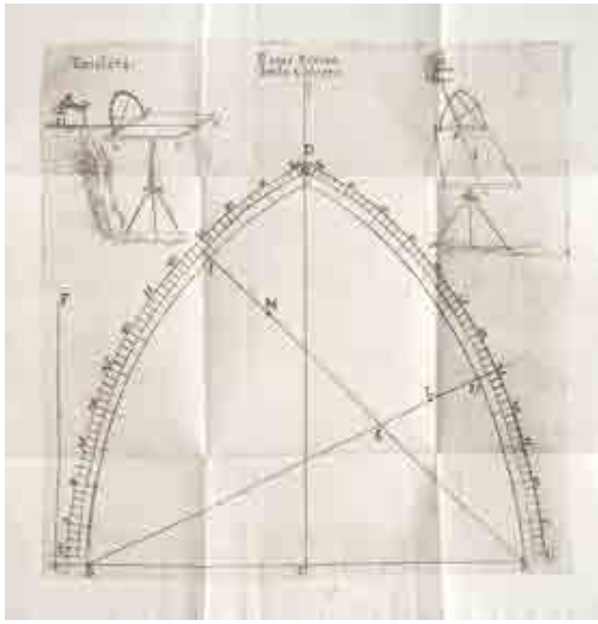
Very rare description of an invention of him: an orrery or mechanical planetarium. His first work.

James Ferguson (1710-1776) was the son of a Scottish tenant farmer and received little formal education. While working at a variety of domestic jobs, he mastered the elements of surveying, horology, astronomy and portraiture.

Colin Maclaurin discovered Ferguson's mechanical abilities and introduced him to Martin Folkes, who encouraged Ferguson to lecture to the Royal Society about his astronomical contrivances. A skilled designer of clocks and planispheres (as well as a 'solar eclipsareon'), he became an accomplished public speaker and expounder of Newtonian ideas, especially after the publication of his Astronomy Explained Upon Sir Isaac Newton's Principles (1756), which went through seventeen editions.- Houzeau & Lancaster 9945

www.revolutionaryplayers.org.uk/a-philosopher-lecturing-on-the-orrery-1764-1766/

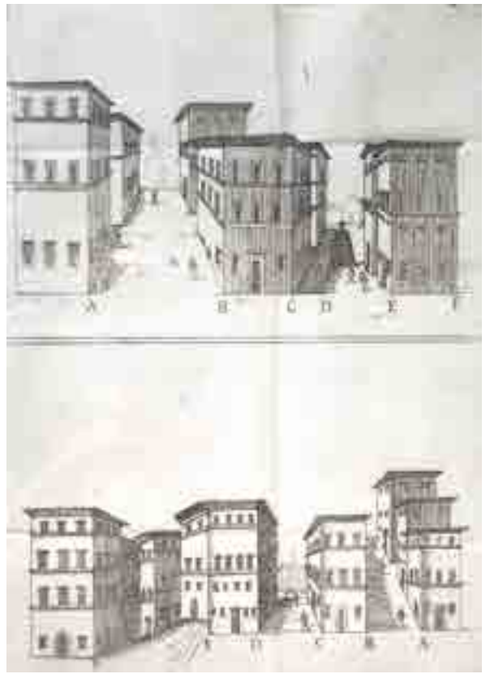
Engineering Instrument



GARGIOLLI, Guglielmo.

Iride celeste di Guglielmo Gargiolli già Lettore delle Mattematiche nello Studio di Siena … Strumento con il quale con facilità si può disegnare qualsiuoglia veduta, e sapere la sua giusta altezza, larghezza, e lontananza dal luog'oue si stà à disegnarla. – Florence, Giovanni Antonio Bonardi, 1655. 4to, pp. 93 (including frontispiece with the author's portrait), [1 leaf, errata], and five folding engraved plates; a very good copy in contemporary limp vellum; the binding slightly rubbed.

EUR 7.800.-



Exceedingly rare first edition.

The Italian mathematician and engineer describes here the 'iride celeste', an instrument for drawing precise views with ease. The book was noted for its explanation of how to estimate from a distance the height of an object and its distance from the observer. This is the only printed work carried out by the author, a correspondent of Galileo, and in the service of the Medici. Guglielmo Gargiolli was Professor at the University of Siena (or Studio of Siena) and Preceptor of the Paggi del Gran Duca in Florence. Together with Giovan Francesco Cantagallina, Alessandro Bartolotti, and Pietro Petruccini, Gargiolli was commissioned by Ferdinand II of Habsburg to dry up the lake of Castiglione. Gargiolli penned many other scientific treatises which are still unpublished in the National Library of Florence.

As in the Vinciana library copy, the illustrations on pages 74-75 were corrected in the printing shop by attaching new separately printed diagrams.

Riccardi mistakenly records an earlier edition of 1619 relying on Targioni, Atti, I, p. 334, but the date is obviously incorrect in respect of Gargiolli's rather obscure biography. The beautiful portrait by Della Bella is listed by De Vesme (pp. 95) as an engraving made in 1655.

See 'Le opere dei discepoli di G. Galilei, Carteggio (1642–48)', vol. I, a cura di P. Galluzzi e M. Torrini, Firenze 1975, no. 11; the work is excessively rare, with Cambridge being the only recorded location outside of Italy.

Comet of 1736

GHISILIERI, Antonio.

Predizione della cometa dell' anno 1736. Con riflessioni varie sopra le comete passate, e future ove si tratta il loro sistema, e calcolo … Bologna: nella Stamperia di Lelio dalla Volpe, 1735. 4to, pp. [6], 246, [2], with engraved title and 10 folding engraved plates; a very clean, fresh copy in contemporary carta rustica.

EUR 2.600.-

One of two variants, this being probably the earlier version, later found bound together with the pamphlet on the comet of 1736.

The Marchese Antonio Ghisilieri (1685–1734) was a humanist and lecturer of law at Bologna University and a vivid amateur astronomer. He defended the correctness of the Ephemerides of Flamino Mezzavacca against Eustachio Manfredi, who had begun an alternative series of Ephemerides. This created some animosity with Antonio Ghisilieri, who considered himself Mezzavacca's heir.
'Ghisilieri in 1731 published nearly a hundred pages of errors in Manfredi's ephemerides, although modern computations show that Manfredi's positions were generally better' (Lankford (ed.), History of Astronomy p. 507. Cantamessa 3069; not in Brüning, Kometen-Literatur; OCLC locates copies at Zürich, Paris Observatory; Columbia; Brown, and Ohio State, of which some with the variant title Pronostico avverato fatto da monsignore Antonio Ghisilieri vescovo d'Azoto.

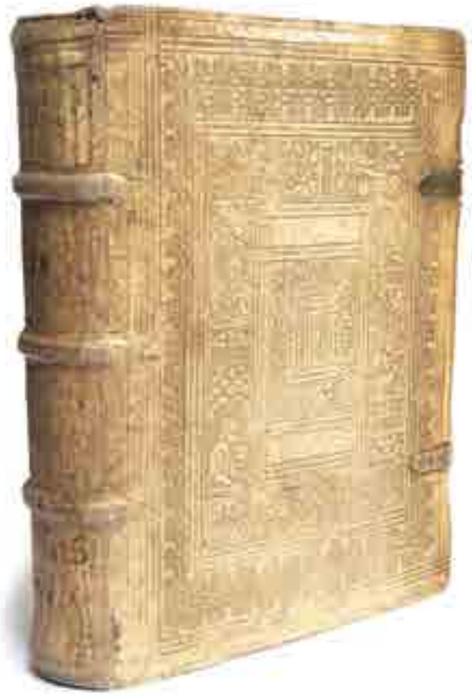
GILETTA, Jean (photogr.)

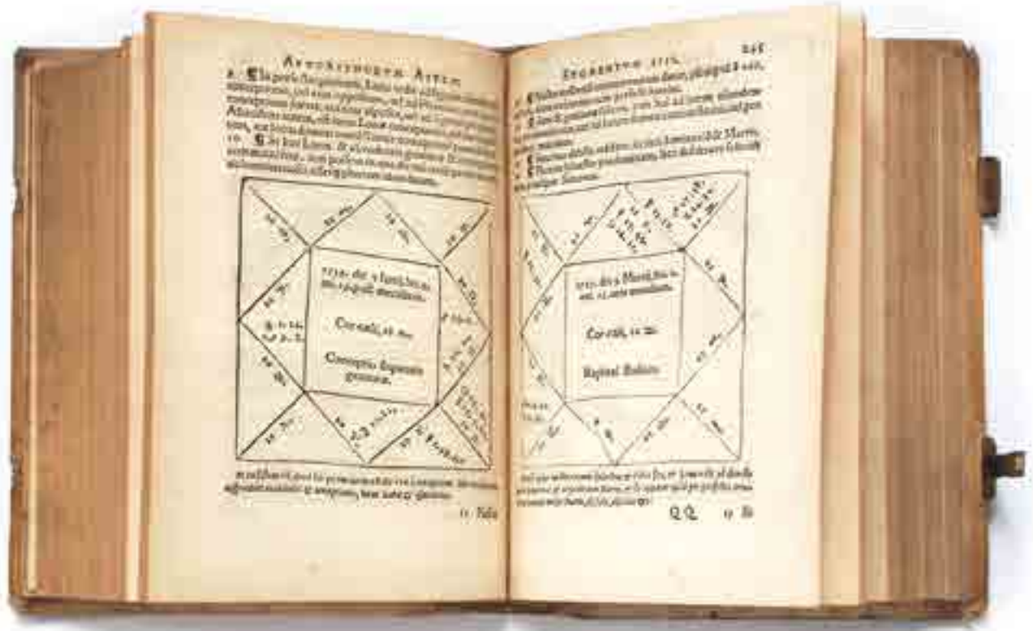
Universite de Paris. L' Observatoire de Nice. Foundation Raphael Bischoffsheim. F. Giletta, Nice. (Cover title) L' Observatoire de Nice. Portfolio with twelve mounted photographs by F. Giletta, phot. (Nice, 1911) Folio (400 x 500 mm) 12 mounted photographs, all titled in print on heavy paper. Image size: 215 x 280 mm. In cloth portfolio, heavily rubbed and soiled. Boards stocked, else fine. A few photographs silvered.

EUR 1.800.-

Fine and exceedingly rare portfolio showing the Nice Observatory and its instruments.

The observatory was founded in 1879, by the banker Raphael Bischoffsheim. The architect was Charles Garnier, and Gustave Eiffel designed the main dome. The 77 cm (30 inch) refractor telescope made by Henry and Gautier became operational around 1886–1887, was the largest in a privately funded observatory, and the first at such high altitude (325 m or 1,066 ft above sea level). It was slightly bigger in aperture, several metres longer, and located at a higher altitude than the new (1895) 76 cm (30 in) at Pulkovo observatory in the Russian Empire, and the 68 cm (27 in) at Vienna Observatory (completed early 1880s). In the records for the largest refracting telescopes all three were outperformed by the 91 cm (36 in) refractor installed at the Lick Observatory at 1,283 m altitude in 1889. Jean Gilletta (1856 Levens – 1933), born Jean-Baptiste Gilletta and whose name is sometimes spelled Jean Giletta, was a French photographer who was active in Nice, France and founded a postcard company in 1897. He was a student of Jean Auguste Theodore Walburg de Bray and having travelled extensively throughout the south east of France – often on a tricycle – to take over 10,000 iconic shots of its landscapes, architecture and subjects from the end of the Second Empire to the 1930's. The content: Le personnel scientifique (18. Febr. 1911), Pavillon du Petit Meridien, Le Grand Cercle Meridien, Pavillon du Grand Meridien, L' Equatorial Coudé, Le petit Equatorial, La petite Coupole, Le Grand Equatorial, La Grande Coupole, La Bibliotheque, la bibliotheque et la direction, L'entree.





HAGECIUS ab Hayek, Thaddeus (Tadeas).

Astrologica opuscula antiqua. Fragmentum Astrologicum … quomodo medicatio ad astrologicam rationem sit accomodata. Liber regum de significationibus planetarum in duodecim domicillis coeli … liber Hermetis centum aphorismorum … Pragae: Georg Melantrich, 1564. 4to. 61 Bll. Contemporary pigskin over wooden boards, monogr. M. G. (Haebler I, 150 f. probably Matthäus or Matthias Gärtner from Augsburg), one clasps of two missing. Different notes from antiquarian booksellers incl. small stamp Helmuth Domizlaff (1902–1983) on endpapers and Ex-Libris of J. B. Holzinger.

(bound with:) **CARDANO, Girolamo.**

Libelli quinq(ue). Quorum duo priores, iam denuo sunt emendati, duo sequentes iam primum in lucem editi, et quintus magna parte auctus est. I. De supplemento Almanach. II. De restitutione temporum et motuum coelestium. III. De iudiciis geniturarum. IIII. De revolutionibus. V. De exemplis centum geniturarum. Additis insuper Tabulis ascensionum rectarum et obliquarum eclipticae et stellarum et radiorum, usque ad latitudinem octo partium. Eiusdem, antea non edita, Aphorismorum Astronomicorum Segmenta VII. Opusculum incomparabile. Cum Privilegio Caesar. atque Reg. Maiest. ad Sexennium. Norimbergae apud Iohan. Petreium, 1547. [4] Bll., 309 Bll., [1] Bll.

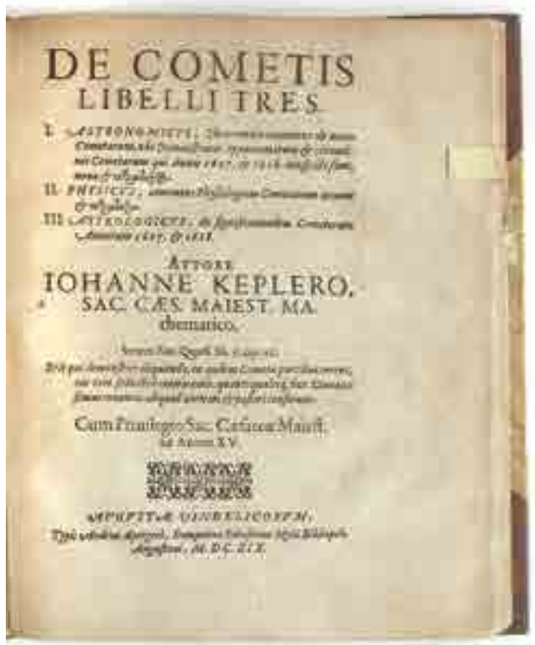
EUR 6.900.-

Very rare book on astrology, edited by Tadeáš Hájek z Hájku (Hagecius) in 1564 and accompanied by his commentaries. The book consists of three astrological treatises: Fragmentum astrologicum vetus, Liber regum, and Hermetis astrologi centum aphorismorum liber also known as Centiloquium, which is attributed to the legendary Hermes Trismegistus. There is a controversy among scholars regarding the identification of the first two titles, whereas the third one is a well-known medieval Hermetic treatise. By joining together the first two texts, Hagecius created a sort of elementary astrological encyclopaedia, while in the case of the third one he felt the need to provide it with a more extensive commentary. Esoteric and Hermetic interests of Tadeáš Hájek are well-known. According to it, the Sun, the Moon, and the planets influence earthly events through a network of the sympathetic and antipathetic relations. They also affect the balance of the four Galenic humours which account for human health. Astrology is thus useful not only for prediction of future events – including weather in a given year or diseases originating in certain climatic conditions – but can also be applied to medicine, where it can help to choose the appropriate cure for an illness or guide the composition of an effective medicament.

Thaddaeus Hagecius ab Hayek (1525–1600), was a Czech naturalist, personal physician of the Holy Roman Emperor Rudolph II. and an astronomer of high reputation. Tadeáš Hájek was the son of Šimon Hájek (ca. 1485–1551) from an old Prague family. He was ennobled in 1554 and knighted in 1571 by Maximilian II. In 1548–1549, he studied medicine and astronomy in Vienna and in 1554 he studied medicine in Bologna and went to Milan the same year to listen to lectures b Girolamo Cardanoy, but he soon returned to Prague, where he became a professor of mathematics at the Uni. of Prague in 1555. He published the Aphorismi Metoposcopici in 1561, dealing with divination and diagnosis by interpreting lines on the forehead. He triangulated the area around Prague and co-authored a map of it in 1563. In 1564 he received the Emperor's privilege stating that no astrological prognostication could be printed in Prague before he had seen and approved it. In 1566–1570, he served as an army doctor in Austria and Hungary during the war with the Ottoman Empire. He published his studies of a supernova in the constellation Cassiopeia in 1572. Tadeáš Hájek was in frequent scientific correspondence with the recognized astronomer Tycho Brahe (1546–1601) and played an important role in persuading Rudolph II to invite Brahe (and later Kepler) to Prague. His voluminous writings in latin were mostly concerned with astronomy and many regarded him as the greatest astronomer of his time. Throughout his life he also published numerous astrological prognostics in Czech language and that is why he was until recently viewed as an "occultist" rather than a great scientist. He corresponded with John Dee as a result of their common interest geometry.- not in Adams; Cantamessa 3528; Zinner 2338; Gardner 551; Graesse III, 196."Selon Zinner, Astronomische Literatur, il s'agirait d'extraits d'Arnaud de Villeneuve. Tel est le cas de la deuxième partie du Fragmentum astronomicum, comme Hajek lui-même le pensait. Il s'agit de la fin du "De Judiciis astronomiae". Mais le texte ne faisait pas immédiatement suite à la première partie du Fragmentum dans le manuscrit édité par Hajek. Cette 1ère partie reste encore anonyme. Le liber regum [da F1 verso a H1 verso] est attribué à Gergis, alias Germa de Babylone, selon Thorndyke, History, t. II, p. 718". KVK: British Library; Bodleian Library; UCL; National Library of Scotland; Manchester; Münster; Bayerische Staatsbibliothek; Erlangen; Augsburg; University of Michigan; Northwestern University; Harvard University; Stanford; University of Pennsylvania.

First edition, rare. Girolamo Cardano, an Italian physician, was born Sep. 24, 1501. Cardano led a tumultuous life in Milan and Bologna, constantly involved in scrapes involving gambling or professional rivalry. His older son, whom he cherished, was convicted and executed for poisoning his wife. Cardano himself was briefly imprisoned on suspicion of heresy. Yet in spite of his woes, Cardano became one of the most sought-after physicians in Italy, second perhaps only to Andreas Vesalius, even being invited to Scotland to cure an archbishop there. That he lived to be almost 75 is quite astonishing, as he himself confesses in his delightful Autobiography. Like many physicians in the Renaissance, Cardano strongly believed in the importance of astrology for practicing medicine, and he wrote several astrological treatises in the 1540s. The Libelli quinque (Five Books, 1547) is especially interesting because it contains the genitures of important Renaissance individuals, including several scientists (a geniture, a specific kind of horoscope, shows the positions of the planets and signs of the zodiac at the moment of birth). There are the genitures of the great pre-Copernican astronomer Regiomontanus, the revolutionary anatomist Vesalius, and the geometer-artist-engraver, Albrecht Dürer. There is no horoscope of Cardano in the book, but he does include a portrait of himself on the verso of the title page.- Contains: 1. De supplemento almanach (reprints from Libelli duo; Cantamessa 1413) 2. De restitutione temporum et motuum coelestium (also from Libelli duo) 3. De iudiciis geniturarum 4. De revolutionibus 5. De exemplis centum geniturarum 6. Aphorismorum astronomicorum segmenta septem.- VD16 C941; IA 132.054; Adams C 684; Zinner 1908; Cantamessa 1415; Riccardi I, 1, 251-252 ("raro"); Gardner 199 ("very rare"); Graesse VII, 156; Houzeau-Lancaster 4835; Thorndike VI, 101. KVK: BNF; Strasbourg; Wellcome Library; Middle Temple Library; Cambridge; Oxford; Erlangen; Regensburg; Augsburg; München; Freiburg; Leipzig; Mannheim; Dresden; Berlin; Göttingen; Wolfenbüttel; Basel; ÖNB; Amsterdam; Minnesota; Duke; Chicago; New York Academy of Medicine; University of Texas; Yale; Kansas City; Berkeley; UCLA; Smithsonian Institution; McGill.

Kepler on comets: a remarkable work with some of his findings considered equivalent to the modern theory of tail formation, Kepler's *de cometis* furthermore opened a new chapter in physical astronomy



DE COMETIS
LIBELLI TRES.

I. ASTRONOMICUS, Theoremata continens de motu Cometarum, ex Demonstratione Geometrica & Observationibus Cometarum per Annos 1607. & 1618. manifestissimis, nunquam ante publicatis.

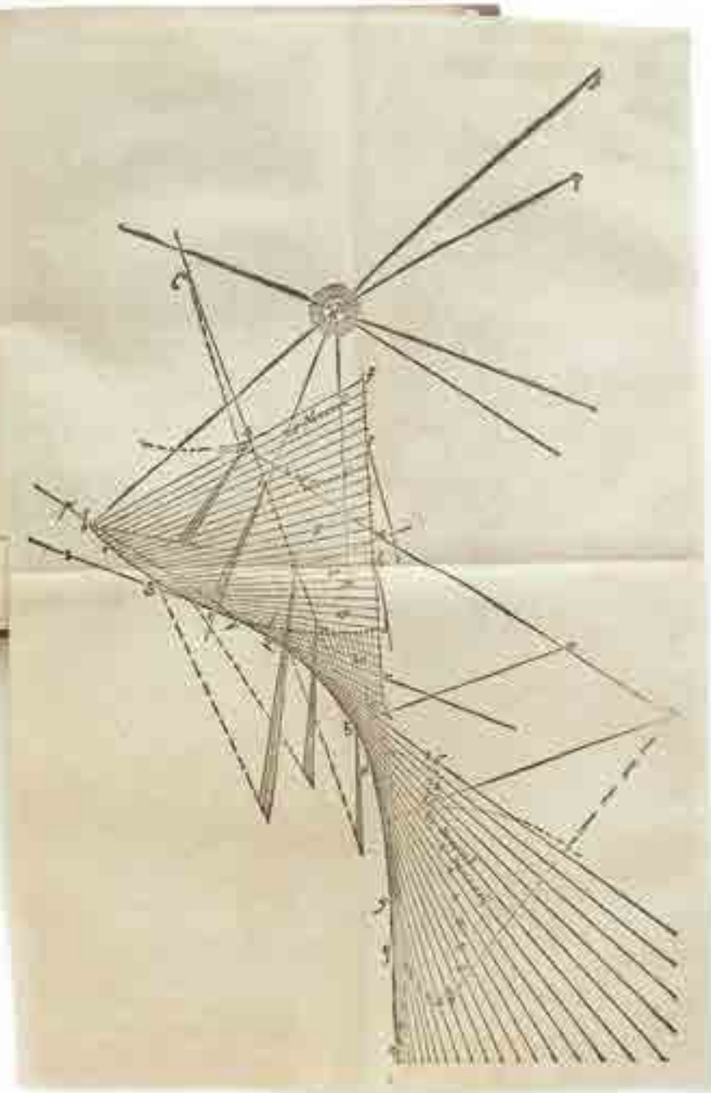
II. PHYSICUS, continens Physiologiam Cometarum novam & Metaphysicam.

III. ASTROLOGICUS, de significationibus Cometarum Annorum 1607. & 1618.

AUTORE
IOHANNE KEPLERO,
SAC. CÆS. MAIEST. MATHEMATICO.

Cum Privilegio Sac. Cæsareæ Maiest. ad Annos XV.

AUGUSTÆ VINDELICORUM,
Typis Andreæ Apergeri, Bonapetrus Paltenius Aedis Bibliopolis Augustani. M. DC. XIX.



KEPLER, Johannes.

De Cometis libelli tres. I. Astronomicus, theoremata continens de motu cometarum … II. Physicus, continens Physiologiam Cometarum novam … III. Astrologicus, de significationibus Cometarum Annorum 1607. & 1618. Augsburg, Andreas Aperger, 1619[-20]. 4to, pp. [viii], 138, [2, blank]; with two folding woodcut diagrams and five folding letterpress tables (two in duplicate, see below); one diagram with an old tape repair; glazed yellow thumb markers to title and sectional titles; void of the usual heavy browning; a very good copy, with some uncut leaves, in 18th-century style calf-backed boards; stamp of the 'K[öniglich K[aiserliche] Universitätsbibliothek, Vienna' to several leaves, including versos of most tables, and with their duplicate or release stamp superimposed.

EUR 29.500.-

First edition of one of Kepler's rarest works, his remarkable publication on the comets of 1607 and 1618.

'The appearance of a bright comet in 1618 turned Kepler's attention to these objects, which he considered in De cometis libelli tres (1619). Reflecting on their ephemeral nature, he proposed a strictly rectilinear trajectory, which appeared more complex because of the Earth's motion. Besides the comet of 1618 he discussed in detail the comet of 1607; these latter observations were of special interest to Edmond Halley, who, at the end of the century, showed its periodic nature [henceforth it was known as Halley's comet].

'The comet of 1618 aroused a considerable controversy among Italian astronomers including Galileo, and Kepler entered the fray in 1625 with his Hyperastices, a polemical defence of Tycho's comet theories against the Aristotelian views expressed by Scipione Chiaramonti in his Antitycho. In the appendix, Kepler took Galileo to task for some of his erroneous views on comets, and he drew Galileo's attention to the fact that the phases of Venus could be as easily explained in the Tychonic system as in the Copernican' (R. Taton & C. Wilson, editors, Planetary astronomy from the Renaissance to the rise of astrophysics, p. 71).

'[Kepler's work] on comets is remarkable because Kepler – following Tycho Brahe but differing, for example from Galileo – no longer considers the comets as atmospheric exhalations, but rather as celestial bodies; why he did not ascribe to them straight line orbits is difficult to understand. The problem of the comet played later on a particular role in the Galileo trial, but also for Kepler himself, since an Italian circle of Jesuits which had adopted the Brahe-Kepler views was sharply attacked by Galileo… Remarkable, too, are Kepler's considerations about the origin of cometary tails, which usually point away from the Sun. The rays from the Sun expel matter of the Corpus (we say cometary head) and illuminate it' (Walther Gerlach in Kepler, Four Hundred Years, p. 79).

'[Kepler] assumed that the head of a comet is a globe of transparent nebula-like matter which is denser than the surrounding ether, but is not solid and indissoluble. When the sun's rays pass through the head they expel a stream or effluvium of the nebulous matter of the head in the opposite direction. This stream, which obviously is denser than the pure ether, reflects the sun's rays and becomes visible as the tail of the comet. Evidently, the matter of the head is gradually consumed and the head finally dies out, or as Kepler stated "the tail represents the death of the head."

'Kepler's theory is almost equivalent to the modern theory of tail formation, which was developed after the theoretical discovery and experimental verification of the pressure of light. Although this modern theory has been mentioned in almost all writings related to Kepler's theory of comets, a very important aspect of his theory has not been discussed adequately. The theory, due to its novel approach in treating celestial phenomena, opened a new chapter in physical astronomy.

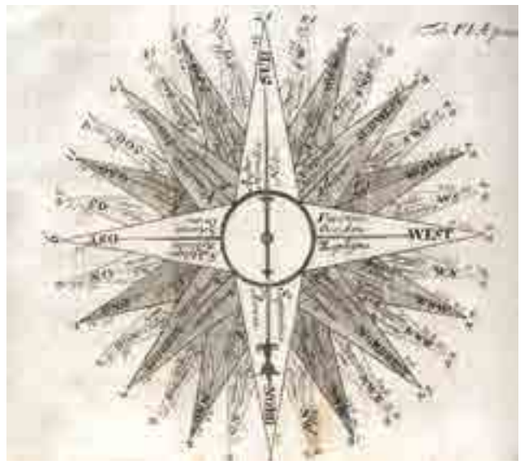
'Kepler's theory of comets, on the one hand, explained the formation and change of the tails based on mechanical interaction of celestial bodies, and on the other hand, it acknowledged a kind of matter circulation (or redistribution) in the heavens. Later, modified versions of these concepts formed the foundation of Newton's theory of comets' (Tofigh Haidarzadeh, A History of Physical Theories of Comets, From Aristotle to Whipple, pp. 65-66).

As mentioned above two of the folding letterpress tables (those to pages 44 and 72) are bound in twice.

Provenance: relatively unusually the two large folding diagrams carry manuscript notes with instructions to the binder in black ink to the outer and inner margins respectively. The much more exten-sive one to the outer margin of the first reads: 'diese figur gehört auch zwischen 36 und 37: doch muss nicht [the 'nicht' crossed out] hinder die andre eben diese seite, und nicht die lincke, fest gemacht werden'. Scanned on-line versions taken from other copies of this work apparently do not contain similar notes.

Caspar 60; Zinner 4739; Parkinson, Breakthroughs p. 69.

Tsar Peter's instrument maker

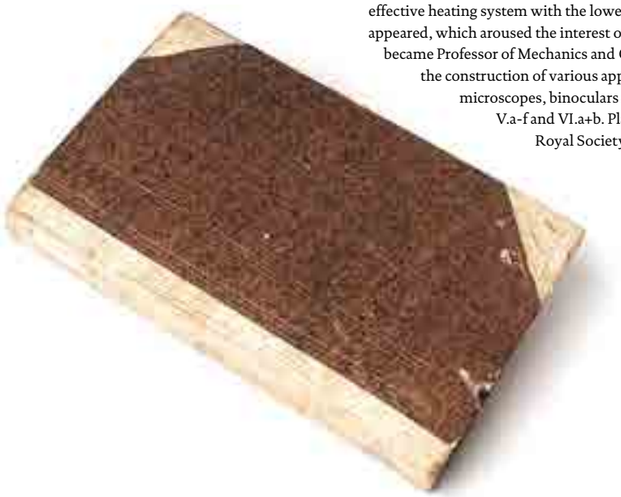


LEUTMANN, Johann Georg.

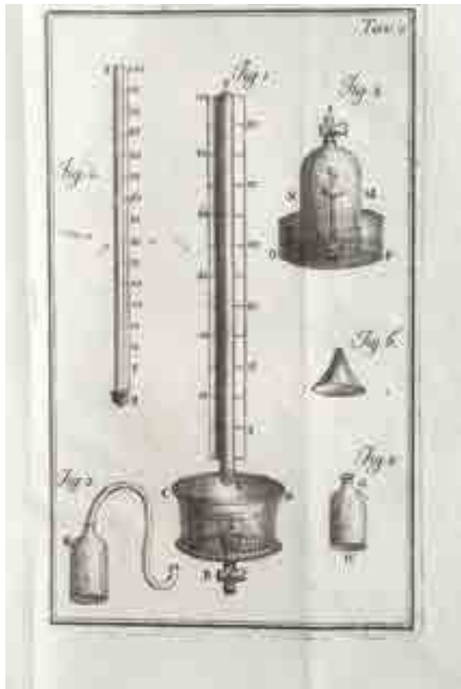
Instrumenta Meteorognosiae Inservientia, I. Thermoscopia, II. Baroscopia; III. Hygroscopium; IV. Anemometrum, V. Plagoscopium, VI. Hyetometrum, quorum constructio in plurimis correcta …– Wittenberg: Sumptibus B. Godofr. Zimmermanni, 1725. 8vo (168 x 105 mm). 14 Bll. incl. frontispiece, 175 pp., (1) with mezzotint frontispiece, title printed in red and black, headpieces, tables, 16 engraved plates, partly folding. Contemporary half vellum, rubbed and chipped, some browning, but a fine copy in original binding.

EUR 2.800.-

First edition, a rare book on instruments, especially for meteorology. Johann Georg Leutmann (Leitmann) (1667–1736), a learned and versatile glass cutter & instrument maker from Wittenberg, was one of the academics from Germany, who worked at the St. Petersburg Academy of Sciences. After completing his studies at Wittenberg University, he worked as a pastor in nearby Dabrun, where he set up his own mechanical workshop. At that time he wrote a book on the basics of heating technology and demanded an effective heating system with the lowest possible consumption of fuels. Also in 1718, his book on watches appeared, which aroused the interest of tsar Peter I who invited Leitmann to St. Petersburg in 1726. He became Professor of Mechanics and Optics at the Academy of Sciences there. He devoted himself to the construction of various apparatuses and instruments like measuring instruments, pumps, microscopes, binoculars and rifles.- VD18 11412674 (Note; the plates are numbered I-XI, but V.a-f and VI.a+b. Plate III is bound later as listed in binder's report).- COPAC: BL London, Royal Society; OCLC: Harvard, National Oceanic; Madison, Wisc.; Vancouver.



Eudiometer invented



LANDRIANI, Marsilio.

Ricerche fisiche intorno alla salubrita dell'aria … Milan: G. Marelli, 1775. 8° (204 x 135 mm) pp. (2), XIII, (1), (2), 92 with engraved title page, two engraved head-pieces, and three folding engraved plates by G. Cattaneo, partly affected by worming. Clean and fresh, printed on strong paper. Carta rustica, inner cover with Ex Libris: Bibliotheca Sormani Andreani Verri.

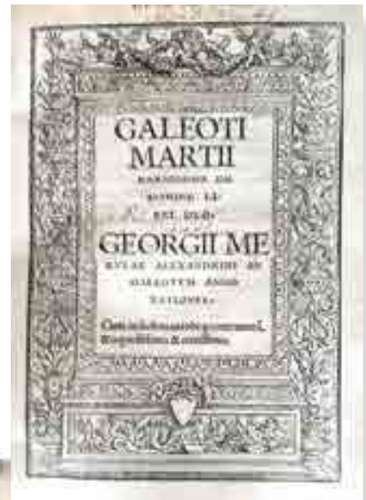
EUR 2.800.-

Rare first edition of this important work in the history of chemistry, his first book which translates as: Physical investigations on the salubrity of air, in which he described a new instrument, the eudiometer, to measure the purity of air, which was later improved by Volta with the addition of spark wires.

Throughout the 18th century, a bewildering variety of 'airs' was discovered. In Twickenham, Stephen Hales used a water trough to collect 'nitrous air' (nitric oxide) produced by nitric acid's reaction with metals, keeping it from the atmosphere with which it otherwise gave acrid orange fumes. In London, Henry Cavendish isolated 'inflammable air' (hydrogen) from the reaction of metals with acids. Combustion was crucial to these studies, but it was poorly understood. A substance of fire, phlogiston, was invoked to explain the process: materials rich in phlogiston burned in air until the air became saturated with phlogiston and combustion ceased. 'Phlogisticated air' (N2 and CO2) was isolated by Daniel Rutherford and Black. By keeping careful track of the volumes of gas he was mixing, Joseph Priestley made a remarkable observation: when 'nitrous air' mixed with ordinary air in the presence of water, there was a startling one-fifth contraction in the volume. Priestley believed he had found a way to measure the 'goodness' of the air. This finding caused a huge stir across Europe. In Milan, Priestley's work was read avidly by Marsilio Landriani (1751–1815), the son of a patrician lawyer. Landriani devoted himself to 'pneumatic studies' under Pietro Moscati, professor of surgery at Milan's main hospital. As Landriani wrote in his book, there was so much to be discovered that even a beginner such as he might contribute. What intrigued him was that measuring the 'goodness' of air might explain both the origin of disease and another enduring mystery – the motion of mercury in Evangelista Torricelli's barometer.
He repeated Priestley's experiment. But rather than using clumsy gas jars, Landriani designed a compact system. He mounted a glass bulb above a graduated glass tube of similar volume linked by a stopcock. The tube sat in a movable bowl of water, and could be sealed at the bottom with a waxed plug attached to a metal spiral. After filling the apparatus with water from the top, nitrous air was drawn into the bulb by removing the plug at the bottom. Next the water was allowed to fall to the bottom of the tube, drawing in a slug of air. With the device stoppered, the slow mixing of the gases caused the water to be drawn back up the tube giving the change in volume. Landriani proudly named it an eudiometer, from the Greek for 'wholesomeness of air'. But as Landriani wrote up his work, Moscati became aware that the Tuscan court physicist Felice Fontana in Pisa had built a very similar device. Crestfallen, Landriani presented Fontana with a copy of his book, fawningly pointing out his priority. Fontana generously conceded. But in spite of Landriani corresponding with Priestley and sending him an eudiometer, it was the better-connected Fontana's version that was noticed abroad.

However, Landriani's friend A. Volta went one step further. He equipped an eudiometer with spark wires to study gas combustion. Though he noticed 'dew' on the glass after exploding 'inflammable air', it was Cavendish and Lavoisier, working in dry glassware, who realised water was being produced; it was the dawn of a new chemistry. Landriani's work brought him acclaim in Italy and the chair of experimental physics at the Brera 'Gymnasium' in Milan, and he remained a lively correspondent with scientists across Europe. Between 1787 and 1788 Guyton de Morveau and Antoine-Laurent Lavoisier tried to convince Landriani to change over to the new chemistry, but he never was able to decide between phlogiston and oxygen. But his attachment to phlogiston theory left him marooned in a scientific time warp; he eventually switched to an unsuccessful career in diplomacy. During his career he enjoyed a popularity comparable only to that of Alessandro Volta and Spallanzani, of all Italian scientists of that time.- Neville, Historical II, 10; not in Duveen, Edelstein, Ferguson, Osler, etc.; Blake 255; Bolton 601; DSB VII, 620-21; Ferchl 295; Partington III, 323; Wellcome III, 443.

The complete anatomy of a perfect if simple 16th-century North European vellum binding



MARZIO, Galeotto (MARTIUS Galeotti).

De homine libri duo. Georgi Merulae alexandrine in Galeotum annotationes. Cum indicibus utrobiq[ue] contentoru[m] & copiosissimis & certissimis. [Colophon:] Basle, Johann Froben, May, 1517. 4to, ff. [10], 133, [1]; title within a fine woodcut border by Hans Holbein, numerous fine woodcut initials, two over 9 lines; Froben's large woodcut device at end; a fine copy, bound in a stiff contemporary vellum sheet (see below).

EUR 5.000,-

First Froben edition, the first printing of the sixteenth century and the first printing outside Italy, of Marzio's work on human anatomy, beautifully produced and here preserved in a wonderful example of a strictly contemporary, ascetic vellum binding.

Martius Galeotti(1442–1494) was an Italian astrologer, born in Narni, Umbria. He settled first in Boulogne and then went to Hungary after his religious views proved unpopular with the Catholic Church. In Hungary he became secretary to King Matthias Corvinus (Matthias I), and also tutor to the latter's son, Prince John. His work De jocose Dictis et Factis Regis Matthias Covirni further incurred the displeasure of the church and he was taken to Venice where he was imprisoned for a time. He was released following the intervention of Pope Sixtus IV, whose tutor he is said to have been at an earlier date. He subsequently returned to France where he became state-astrologer to King Louis XI.

De homine is arranged in the classic way, describing the various parts of the body from head to toe, and with discussions of various diseases interspersed. Besides references to authorities such as Cornelius Celsus and Pliny, most others are to classical poets including Plautus, Persius, Manilius, Lucretius, Horace and Vergil. Galen and Hippocrates are not generally named, but appear cumulatively as (auctores) 'Graeci'. Appended to Martius' work is a critical commentary by the Italian humanist and classical scholar Giorgio Merula (c. 1430–1494). The greater part of his life was spent in Venice and Milan, where he held a professorship and continued to teach until his death. While he was teaching at Venice, he was the subject of a personal polemic by Cornelio Vitelli, directed at his scholarship.

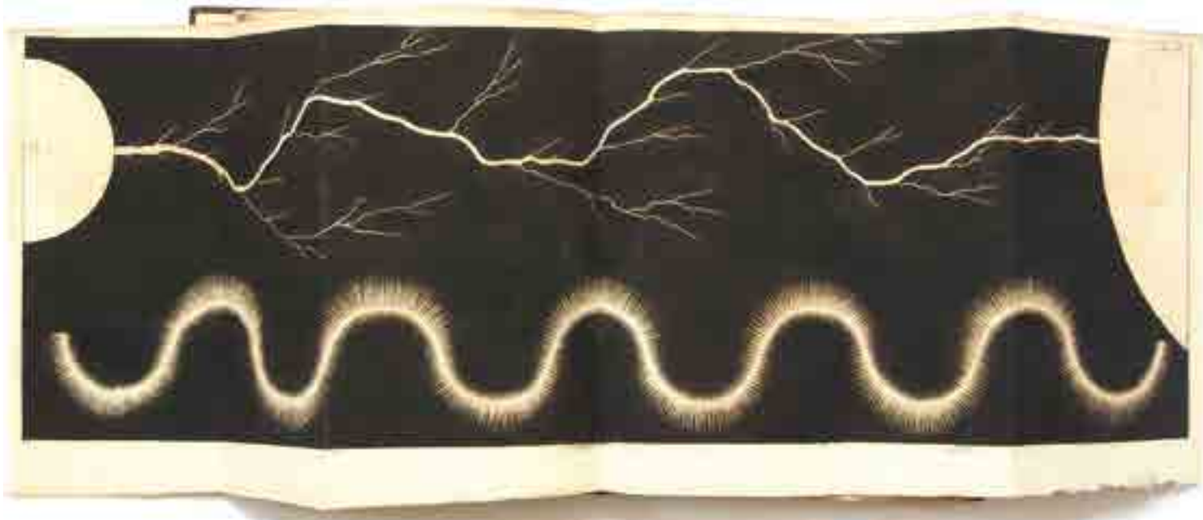
Merula produced the editio princeps of Plautus (1472), of the Scriptores rei rustica, Cato, Varro, Columella, Palladius (1472) and possibly of Martial (1471). He also published commentaries on portions of Cicero, on Ausonius, Juvenal, Curtius Rufus, and other classical authors

De homine was first printed in Italy around 1471 two further incunable editions followed. The first joint appearance of Martius' work with Merula's critical commentary appended was the Milan edition of 1490. Froben's, the first sixteenth century printing, appears to be the most influential. There were subsequent editions and commentaries.

Binding and provenance: bound in a thick vellum sheet, a generous section of the outer edges folded in; the vellum sheet attached to the book block via two strips of sinew and twirled across the spine; no front- or rear paste-downs, as per its original structure; the book block stitched across its back and onto three sets of thick cords over short vellum guards; the cords' loops equally exposed at the back, the whole allowing for perfect insight into the entire, original structure of the binding and the process of its making; smudged inscription to the first (of two) front fly-leaves; near-contemporary inscription 'Caspar von Escherlbach' at head of title below what appears to be a Latin motto; another inscription, with the surname partly erased and dated 1646 to the center of the title-page; a third early inscription ' Ex Supellectili Jo[ann]is Philippi Flachichierni (?), Sti Lubentij on f. 133 verso.

Adams M 746; Hieronymus 239; VD 16 M1306; Wellcome I 4095.

Presentation copy



MARUM, Martinus van.

Description d' une très grande Machine Électrique, placée dans le Museum de Teyler a Haarlem, et des Experiments faits par le moyen de cette machine / Beschryving eener ongemeen groote Electrizeer-Machine … (french / dutch). (with: Premiere Continuation des expériences, faites par le moyen de la Machine Électrique Teylerienne, …).- A Haarlem: chez Jean Enschede et fils, et Jean van Walré, 1785-1787. Quarto (260 x 200 mm) pp. XXXI, (3), 205, (1, blank); XIX, (1), 231, (1), 233-266 pp., (12) with 17 engraved plates, partly short cut. Plate 1 and 1a of vol. one bound at the end of vol. two with 12 pages explanation to plates (Byvoegzel tot de Beschryving der Electrizeer-Machine) as often. Half calf period style, marbled edges. Waterstain two both vols., in vol. one it is heavier in the blank margins. In vol. one is a dedication by the author (?): "donné par l'auteur la 6. Aoust 1785" on half-title. Still a fine copy.

EUR 4.500.-

First edition of Marum's description of his huge electric machine, including the rare famous plate of the large electrostatic generator built by John Cuthbertson. The present work contains the descriptions of the experiments with the largest electrostatic generator of the 18th-century. The engraved plates show the enormous machine, its functioning and conducted experiments. The 8 colored plates in the second part illustrate the calculations of various metals and binary alloys.

"The dripmeister Jackson Pollock of the Enlightenment was Martin van Marum and of course he wasn't making art at all. At the Teylers Museum in Haarlem in the late eighteenth century, van Marum demonstrated the large electrostatic generator designed by the English instrument-maker John Cuthbertson (bap.1743-d.1821) and conducted a series of eventually published electrical researches. In common with many scientists working before the age of high speed photography, he had a major difficulty in representing electrical phenomena that could be very fast, or quite ephemeral. His engraver was likely unfamiliar with such visual effects, not having witnessed them, let alone experienced their crackle and fizz: while for von Marum's reading audience, electricity might be an exotic and unrecognizable novelty. These patterns were created by von Marum as he ran high charges through different metal wires – in this case an alloy of tin and lead. He found that as the wire exploded, he could capture the effect directly on paper or glass. Scientifically it has been considered as the first stirring of plasma physics, but it is also an ingenious and beautiful solution to a practical illustrative problem. If you have it on paper already, the engraver and colourist can simply copy it." (Keith Moore at royalsociety.org)

"In 1784 Van Marum was appointed director of Teyler's cabinet of curiosities and the library in Haarlem. … soon he obtained a large electrical machine made under his supervision by John Cuthbertson of Amsterdam. Its disks had a diameter of sixty-five inches, the largest possible at the time. Van Marum thought that results obtained with such enormous discharges were bound to bring order to the chaos of concepts about the mysterious 'electrical matter'. He described the experiments with this machine and great battery of Leyden jars in three volumes of Verhandelinge uitgegeven door Teyler's tweede genootschap (1785, 1787, 1795)." (DSB). The last supplement is missing as nearly always.

"These experiments were greatly admired and repeated all over Europe … Van Marum concluded that Franklin was correct in his theory of a single electric fluid … Volta also greatly admired van Marum's work…" (DSB).

The large electrostatic generator (Dutch: Van Marum electriseer-machine) was and is a large handcrafted electro-me-chanical instrument designed by Martin van Marum and built by John Cuthbertson in 1784 for the Teyler's Museum in Haarlem, where it forms the centerpiece of the instrument room. The concept of an electrostatic generator was new, and the battery (array) of Leiden Jars was the largest ever built (only one of the 4 sets of Leiden jars is today on display to conserve space). The two glass disks of the generator are 1.65 meters in diameter, and the machine is capable of generating a potential of 330,000 volts.

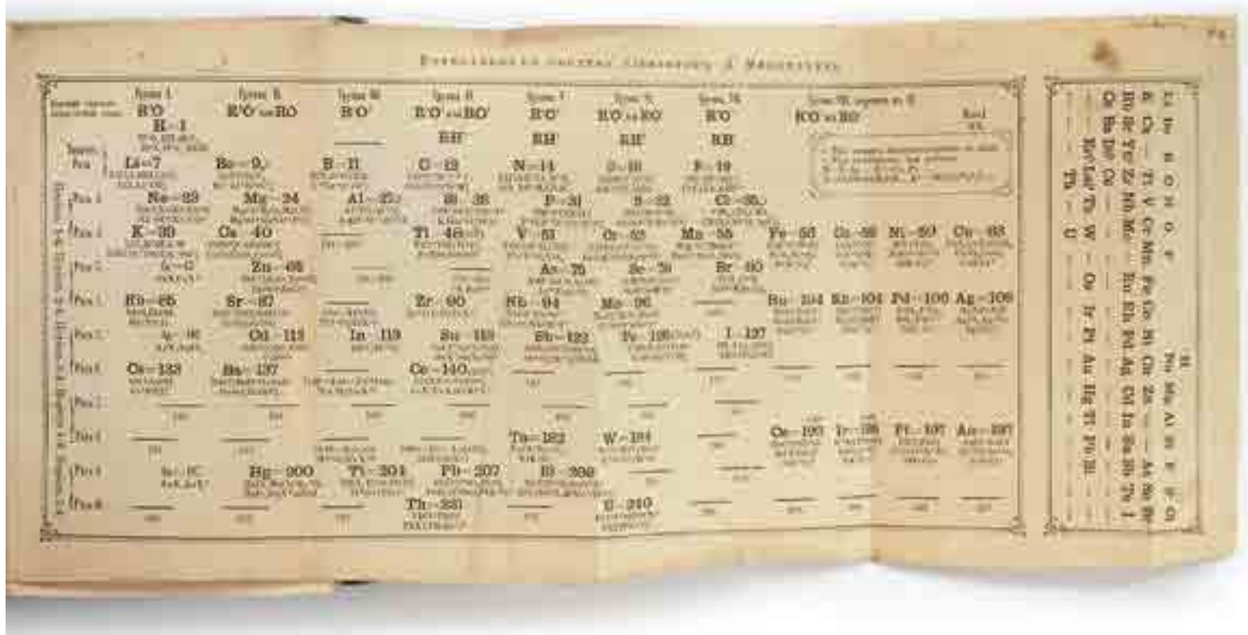
Ekelöf 531: "At the Teyler's Museum, van Marum installed what was probably the largest electricity machine in the 18th century. It is still at the museum." Engelmann 238. Poggendorff II, 69. Ronalds 331; Dibner, Early electric machines, pp. 43-49; DSB IX,151-153.

The Periodic Law – an extremely rare annotated copy

MENDELEEV [or MENDELEYEV], Dmitry Ivanovich.

[in Cyrillic:] Osnovy Khimii [Principles of Chemistry]. – St Petersburg, (Tovarishchestvo 'Obshchestvennaya Pol'za', for the author), 1869–71. 5 parts in 2 vols., 8vo, pp. [ii], [i–] iii [–iv, with the periodic table], 816; [iv], 951, [1], with a large folding table in vol. II and numerous wood-engraved illustrations in text; small restoration to inner margin of half title to volume II; the sheets of one gathering in the same volume fed askew through the press during the printing process, causing misalignment of the text on recto and verso with loss of pagination numerals and one headline on one leaf, and with a couple of words minimally shaved; the first leaf of text in volume I with a long tear (repaired); the fragile folding table laid down; a few spots or light stains; otherwise a very good copy in contemporary Russian calf-backed marbled boards, rebacked with the original spines laid down; corners and edges a little worn; red stamps 'Biblioteka A. P. Mikhnevich' at or towards the end of either volume; annotated in pencil throughout (see Provenance below).

EUR 55.000.-



Very rare first edition – and extremely so annotated as here – of Mendeleev's path-breaking work containing the first appearance of the periodic table of the elements and 'a fundamental milestone in the literature of modern chemistry' (Neville).

'Mendeleyev was a Russian chemist whose name will always be linked with his outstanding achievement, the development of the periodic table. He was the first chemist to understand that all elements are related members of a single ordered system. He converted what had hitherto been a highly fragmented and speculative branch of chemistry into a true, logical science ... 'According to Mendeleyev the properties of the elements, as well as those of their compounds, are periodic functions of their atomic weights (relative atomic masses). In 1869, he stated that "the elements arranged according to the magnitude of atomic weights show a periodic change of properties"...

'Mendeleyev compiled the first true periodic table, listing all the 63 elements then known. Not all elements would "fit" properly using the atomic weights of the time, so he altered iridium from 76 to 114 (Modern value 114.8) and beryllium from 13.8 to 9.2 (modern value 9.013) ... Also, in order to make the table work Mendeleyev had to leave gaps, and he predicted that further elements would eventually be discovered to fit them. These predictions provided the strongest endorsement of the periodic law ...

'Far-sighted though Mendeleyev was, he had no notion that the periodic recurrences of similar properties in the list of elements reflect anything in the structure of their atoms. It was not until the 1920s that it was realized that the key parameter in the periodic system is not the atomic weight but the atomic number of the elements - a measure of the number of nuclear protons or electrons in the stable atom. Since then great progress has been made in explaining the periodic law in terms of the electronic structures of atoms and molecules' (Hutchinson Dictionary of Scientific Biography pp. 475-7).

'Mendeleev's work toward the Osnovy khimii thus led him to the periodic law, which he formulated in March 1869: "Elements placed according to the value of their atomic weights present a clear periodicity of properties". Mendeleev's first report of his discovery was "Opyt sistemy elementov, osnovannoy na ikh atomnom vese i khimicheskom skhodstve" ("Attempt at a System of Elements Based on their atomic weight and chemical affinity" (DSB).

This in fact is in Osnovy khimii, and is the heading to the periodic table that appears on p. [iv] of the preface, which is dated March 1869. Mendeleev had discovered the periodic arrangement on March 1 1869, and immediately sent his draft to the printers for inclusion in the first part of his textbook Osnovy khimii, which had been printed but not yet distributed. This appearance of the table is from the same setting of type as two single-sheet printings, with legends in French and Russian, which were printed at the same time for presentation to colleagues. Mendeleev then at a later date presented a slightly modified version, with a different title, to the Russian Chemical Society, in whose Journal it was published (this is the work cited by Horblit). The Journal version utilises the same setting of type of the table itself (with minor variations due to locking up the type a second time), but with a different heading and additions to the text. It is therefore the second printing, with a revised text. Mendeleev himself makes clear, in the preface to the fifth edition of the Osnovy khimii, that he first published the periodic table in the first edition of this work.

Not only does the Osnovy khimii contain the first appearance of the table, in its earliest version, but also Mendeleev's expanded version of 1871, in which the periodic table assumes more or less its modern form (with the elements in the same group arranged vertically, instead of horizontally as in the first table), and his further researches into the 'periodicity' of the elements, including predictions of elements to be discovered based upon gaps in the table (including a whole series of rare earths).

Mendeleev didn't achieve instant recognition for what he had done. Robert Bunsen, the celebrated German chemist of the time, rebuked one of his students who had tried to explain to him the profound significance of the discovery: 'Don't get to me with these guesses. The same "regularities" can be found in stock-market reports! It was not until the late 19th and early 20th centuries that Mendeleev's theory was finally acknowledged. In the first decade of the 20th century, Mendeleev was nominated for the Nobel Prize three times (1905, 1906 and 1907) and it was for purely circumstantial reasons that he did not receive it. He opposed the Nobel brothers' politics in respect of Russia oil industry, and having failed to win twice, he was robbed of the Prize after being awarded it on his third nomination, because of his untimely death in early 1907.

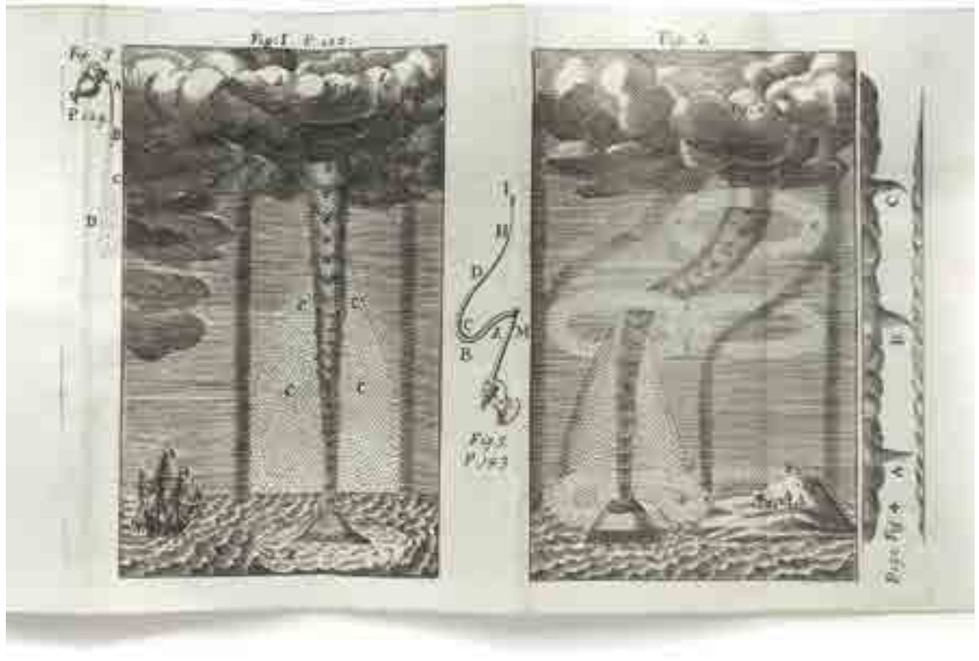
Provenance: from the library of the Russian engineer, teacher, and writer, Alexander Petrovich Mikhnevich (1853–1912), signed and dated '1871' on the front free end-paper of volume I, and with his red ownership stamp at foot of p. 811 of volume I, and to the final leaf of Index of vol. II. A significant part of Mikhnevich's publications was connected with the Russian journal Pedagogical collection (1864–1918), to which he contributed essays on literature, geography, chemistry and history from 1888–1912. He put together his pedagogical views and knowledge of these sciences to create several works that were taught to students. The Pedagogical collection was the oldest journal of general pedagogy published by the General Directorate of Military Educational Institutions in Saint-Petersburg between 1864–1918. It paid great attention to the issues of the theory, methodology and practice of education and teaching. The journal contained Mikhnevich's works about famous Russian writers like Pushkin, Gogol, and Zhukovsky, the Russian military leader Alexander Suvorov, as well as Mikhnevich's reviews of geography and chemistry books, both for students and teachers, and his own essays on natural history. These works contributed much to the development of Russian pedagogy in the 19th century.

Mikhnevich's pencil underlining or marginalia in Russian are found throughout the book. In vol. I he adds a few elements to the periodic table as well as the phrase: 'somewhat different table in the new edition', a very rare instance of proof of a contemporary's interest and occupation with Mendeleev's work.

OCLC locates a total of seven copies only, two in Denmark and five in the US, at University of California, Yale, Illinois, the Neville copy at the Chemical Heritage Foundation, and a defective copy at the New York Public Library. There also is a copy of vol. II only at the University of Michigan.

Dibner 48 (citing the German translation of 1891); Horblit 74 (citing the Journal appearance); Neville Historical Chemical Library II, pp. 161-162; Parkinson, Breakthroughs p. 373.

Tornados in Italy

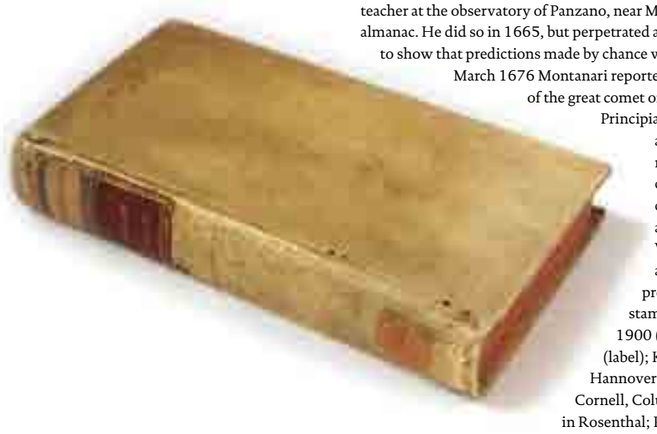


MONTANARI, Geminiano.

Le Forze d' Eolo. Dialogo Fisico-Matematico Sopra gli effete del Vortice, o sia Turbine, detto negli Stati Venti La Bisciabuova. Che il giorno 29 Luglio 1686 ha scorso e flagellato molte Ville, e Luoghi de' Terri-torj di Mantova, Padova, Verona, &c. Opera Postuma. - Parma: Ad instanza d' Andrea Poletti, 1694. 12mo (150 x 80 mm). ff. [24], pp. 342, ff. [3] with half title, folding engraved plate of tornadoes, some light mainly marginal spotting and staining. Contemporary vellum, red morocco lettering-piece. Paper label on spine.

EUR 3.400.-

Rare dialogue on a tornado which had devastated the Venetian hinterland in 1686, written by the Italian astronomer Geminiano Montanari and published posthumously by Francesco Bianchini. From pp. 271-312 there is a: Discorso del vacuo. Montanari (1633–1687) was also a lens-maker and a proponent of the experimental approach to science. He is best known for his observation, made around 1667, that the second-brightest star (called Algol) in the constellation of Perseus varied in brightness. It is likely that others had observed this effect before, but Montanari was the first named astronomer to record it. In 1662 or 1663 he moved to Bologna, where he drew an accurate map of the Moon using an ocular micrometer of his own making. He also made observations on capillarity and other problems in statics, and suggested that the viscosity of a liquid depended on the shape of its molecules. In 1669 he succeeded Cassini as astronomy teacher at the observatory of Panzano, near Modena, where one of his duties was to compile an astrological almanac. He did so in 1665, but perpetrated a deliberate hoax by writing the almanac entirely at random, to show that predictions made by chance were as likely to be fulfilled as those made by astrology. On 21 March 1676 Montanari reported a sighting of a comet to Edmund Halley and his observations of the great comet of 1680 are mentioned twice in the third volume of Newton's Principia. In 1679 Montanari moved to a teaching post in Padua, but almost all records of this period of his life have been lost. A new chair of astronomy and meteorology was created for him, carrying a very high salary. But, the Republic of Venice, not content to have him, merely teaching, expected his advice and assistance on, the control of rivers and the protection of the Venetian Lagoon, military fortifications and the training of, the artillery, and especially the organization of the, mint and all problems having to do with currency.- Provenance: "A.N." (old stamp on title); Royal Meteorological Society. Symons Bequest 1900 (label); sold by order of the Royal Meteorological Society 1973 (label); KVK: München, Stabi Berlin, Einstein Zentrum Potsdam, Hannover; COPAC: Cambridge, Wellcome, BL London; OCLC: McGill, Cornell, Columbia, Princeton, Toronto, Smithsonian, Oklahoma, et al.; not in Rosenthal; Piantanida, 1594; Riccardi, II, 175



A very rare anatomical atlas

NOVARINI, Antonius.

Anatomia Curiosa Das ist, Deß aller fürtrefflichsten höchsten und edelsten Geschöpffs aller Creaturen, deß Menschen, … Wahrhafftige Beschreibung und vortreffliche Vorstellung, darinnen nachsinnlich von deß Menschen wunderbarlich- und hoch verwunderlichen Ursprung … Ferner von allen eüserlich- und unaußsprechliche Miracul und Wunder… discurriret würd… Frankfurt, Franz Mayer, 1681. Folio; pp. 103, with an engraved title, the lettering there printed in red and black, and 31 plates on 25 sheets; the first eight leaves with a small oily stain, touching a few images; one page with a paper flaw; otherwise a very good copy in contemporary calf, hinges cracked at head of spine.

EUR 6.000,-

First edition of a very rare surgical work and anatomical atlas by an otherwise unknown author.

In addition to chapters on anatomy, the work contains precise instructions on various operations such as caesarean section, removal of the tonsils, amputations, and operations on the brain. The beautiful anatomical engravings (not woodcuts as some libraries note) are mainly based on earlier designs.

Novarini's Anatomia was first published in 1681 in Frankfurt by Franz Mayer in one volume, as here. The work must have enjoyed at least some success, medical or commercial, as it was reprinted in 1682 by Noah von Millenau at Rothenburg ob der Tauber, accompanied by a second part or volume.

The plate numbering is confusing. The plates are: title engraving, 1 unnumbered plate with instruments, then plates numbered: IIII, V, VI, I + VII, VIII, X, XI, XIII, II + XII + XIV + XIX, XV (folded), XVI, IX + XVII, XVIII, XX, XXI, XXII, XXIII, XXIV, XXV, XXVI, XXVII, XXVIII, XXIX, XXX. Plate 31 contains flaps to be mounted on the figure on plate 15. The printer's device at the end is probably missing.

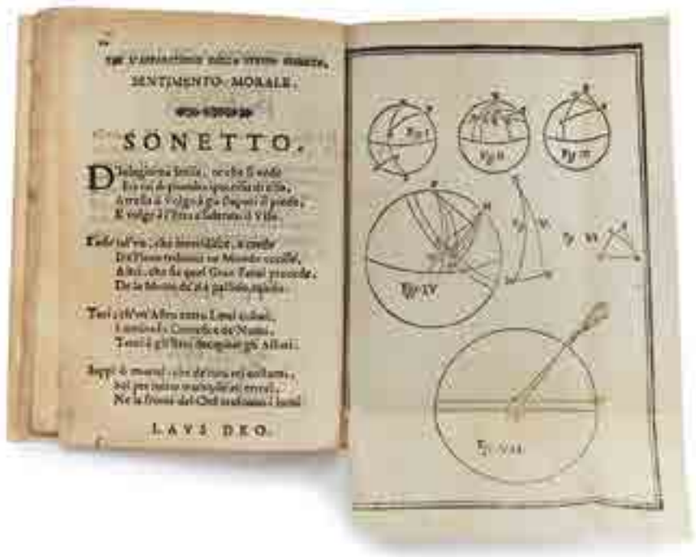
VD 17 15:740884M; Krivatsy 8353 (30 plates); Wellcome IV, p. 250; Waller 307; KVK locates copies at Leipzig (citing woodcuts), Copenhagen, Staatsbibliothek Berlin (citing 31 woodcuts, but lost during the war), Munich (citing an edition of 1681/82 with an Ellwangen (?) imprint); the British Library and Wellcome erroneously cite the Frankfurt edition with a second part; the Halle online copy of the Rothenburg edition lacks the instrument plate.

PETER, Francesco.

Di un Antico Orologio Solare Recentemente Trovato. Dissertazione. – Rome: Presso Francesco Bourlie, 1815. 4to (277 x 205 mm). 36 pp., (2) with engraved illustration of the antique clock on the title, and one engraved text illustration. Contemporary patterned wrappers. Provenance: Christopher St. J. H. Daniel (later stamp on front free endpaper); manuscript "errata" in ink on blank verso of final leaf, with, and on pp. 36, the printed name "C. K. Kockerell" corrected to "C. R. Cockerell" in the same hand.

EUR 800.-

Rare first edition; description of a wind and sun-dial which was found in 1814 in the Vigna Cassini, near Via Appia, Rome. It had been used as a gravestone in an Arenaria which formed part of the Catacombs of St. Calixtus. The names of the twelve winds were inscribed on it in Greek, and as it was made of Pentilic marble from quarries which were owned by Herod Atticus, Francesco Peter concluded that it had belonged to Herod's villa, which was little more than half a mile from the place where the dial was found.- COPAC: Oxford; OCLC: no copy (?)



PISELLI, Giuseppe.

Per la noua cometa dell' anno MDCLXXX (1680). Computo trigonometrico, fondato sopra le due Osseruationi fatte in Perugia, ed in Todi li 14. Gennaro 1681, oue si dimostra la quantità della sua paralasse, con tutte le Geometriche Delineationi, dal che euidentemente si conclude la distanza della Medesima dal Centro del Mondo. Di Giuseppe Piselli academico humorista. – In Todi: per Vincenzo Glassi, 1681. Quarto (200 x 148 mm) 12 pp. with one fold. woodcut plate (geometrical diagrams). Little short cut, shaved signature. Backstrip.

EUR 1.200.-

Only two copies known in Italy, very rare trigonometrical measurement of the distance earth - comet. The author calculated the distance of the comet with 579.006 ital. miles. We have also Presagi d'Urania from him.- Brüning 1468; Riccardi I, 285.1; not in Robinson.

PIROVANO, Gabriele.

Defensio astronomiae. Milan, Leonardo de Vegiis, for Alessandro Minuziano, 1507. Folio, ff. [72], with one large woodcut diagram in the text; narrow paper strip to inner gutter of the first two leaves; the final leaf with a repaired tear to lower outer corner; occasional light marginal foxing; a few spots or small stains; a very good copy in recent calf.

EUR 9.000,-

Very rare first edition of Pirovano's influential work. In defence of astrology and in opposition to Pico della Miranda's writings on the subject.

Pirovano's Defensio 'contributed to continuing the influence of the medieval astronomico- astrological scientific vision, both in respect to astrological medicine and in respect to larger issues of predicting all universal and popular events, even if only in a probable and not necessary sense, for the entire Cinquecento, according to the accommodation of stellar transformations into not causes but signs' (Brendan Dooley, A Companion to Astrology in the Renaissance pp. 132-133).

Pirovano taught the abacus at Milan from 1450 to 1478. Between 1480 and 1490 he was under the patronage of Gian Galeazzo Sforza, nephew of Ludovico Maria Sforza, and taught at Pavia University. Together with Ambrogio Varesi da Rosate, Pirovano then served as physician-astrologer at Ludovico's court at Milan. Both are recorded in the dedication to Lodovico Sforza in Luca Pacioli's Divina proportione as participants in a 'scientific duel' of the so-called 'Academia Leonardo da Vinci' at Ludovico castle in Milan on February 9, 1498.

'For its form and content, the opening chapter that constitutes Pacioli's dedicatory letter to the Duke warrants special attention. There, Pacioli recalls how in February 1498, Duke Ludovico assisted, at his Milanese residence in the Castle of Porta Giovia, at the performance of a laudable scientific duel ("scientifico duello"). Presumably the duel was staged as a disputation on the nobility of geometry and mathematics, a topic that features prominently in the opening chapters. Both lay and ecclesiastical personalities who tended to frequent his court accompanied the Duke. From Pacioli's account it seems clear that this was a large- scale event that gathered together the most influential personalities of the time ...

Pacioli's dedicatory letter contains much additional information on the circumstances of the duel and on the events that led him to write the book. Together with ecclesiastical personalities, courtiers, secretaries, and men of arms, Pacioli records the presence at court of "eminent orators, expert in the noble arts of medicine and astrology." In order, these figures are: Ambrogio Varesi da Rosate, "famous scholar of Serapion and Avicenna, expert investigator of the celestial bodies and interpreter of future events"; Aloisio Marliani, "learned man who can cure any ailment"; Gabriele Pirovano, "keen observer of all matters related to medicine"; Nicolò Cusano, "who is estimated and venerated by all the aforementioned gentlemen in all those arts"; and, finally, Andrea Novarese, "very expert in the aforementioned professions." Pacioli then briefly mentions the presence of illustrious doctors in law, secretaries and chancellors but without explicitly naming any of them. He concludes by introducing Leonardo da Vinci as one of the most illustrious participants ...

'A study of the archival and historical sources pertaining to the court of Milan reveals that all these figures were extremely important representatives of Ludovico's courtly entourage. Ambrogio Varesi da Rosate, Gabriele Pirovano, Nicolò Cusano and Aloisio Marliani were among the most acclaimed natural philosophers, doctors, astrologers, and scientific intellectuals at court.

'Not only were these learned physicians trusted members of the court but – at least in the case of Varesi and Pirovano – they were also the representatives of that class of "celestial" mathematicians practicing astrology and astronomy who considered themselves superior to scholars like Pacioli. While Pirovano is now better known for his role in the polemics over astrology he took up with Ficino and Pico della Mirandola, Varesi's reputation rested almost solely on his astrological predictions for the Duke' (Monica Azzolini, Anatomy of a Dispute, pp. 118-122 passim).

Published posthumously by his brother Michele, Gabriele Pirovano's Defensio is presented in dialogue form. The work was republished at Basel in 1554, together with two related works by Lucio Bellanti. Pirovano is known to have written several other texts and calculated astronomical tables which survive in manuscript; a number of letters relating to the health of various members of the Sforza family survive in Milanese archives.
Adams P 1275; Houzeau and Lancaster 4749; Proctor 13632; Riccardi I/2 281; this first edition is very rare outside Italy, with OCLC recording several copies in France, a single copy in Germany, at Tübingen, a single copy in Spain, at Salamanca, two copies in the UK, at the British Library and Cambridge, and three copies in North America, at Chicago University, Harvard, and New York Public Library.

PORPORINO, Baroncino.

Ad Kalendarium Romanum Amiterni effossum minuscula commentaria. Naples, Ludovico Cavalli, 1680. 4to, pp. [8], 34, plus one large folding engraved plate; old inscription cut away from lower blank margin of title, and with an old patch; the title and last leaf verso a bit dust-soiled; some foxing throughout; bound in modern carta rustica.

EUR 1.500,-

Only edition of this rare antiquarian study by a monk of the Celestine Order of a Roman calendar excavated at amiternum (San Vittorino Amiterno) in the Abruzzo region, an important Roman site and the birthplace of Sallust. The large folding plate copies the inscriptions on the tablet. Porporino's description was reprinted in Sallengre's Novus thesaurus antiquitatum romanarum in 1716.
OCLC locates copies of the original, 1680, Naples edition at the Bayerische Staatsbibliothek, Munich, and Amory University only.

"Spy-cam" then

(STIRN's Geheim-Camera)

"Photographien mit C. P. Stirn's patent. Photograph. Geheim-Camera". square Octavo (115 x 175 mm) 6 gilt printed boards (110 x 170 mm) with each 6 circular 4 cm photographic images, altogether 48 small photographs. Leporello in red gilt printed original portfolio.

EUR 800.-

Advertisement or Sample catalogue for a "buttonhole or concealed vest camera" known in Germany as C. P. Stirn's Geheim-Camera. Stirn's Concealed vest pocket camera, based on patents by R.D. Gray, was introduced in October 1886 and continued to about 1892. It consisted of a fine nickel plated or oxidized apparatus six inches round that carried 1 plate for 6 sharp instantaneous photos measuring 1 3/4 inch diameter. The package came with six plates and carrying case for taking 36 pictures. The camera was designed to be carried under a coat, invisible to the eye, with only the lens exposed. A long string hangs from the camera to operate the shutter, this would have been hidden in a trouser pocket. The black walnut carrying case could also be used for tripod mounting for taking time exposures. Ads claim that 13,000 were sold in two years, 15,000 in three years and 18,000 in 4 years. All sold by the sole agents, Stirn and Lyon of New York, and Rudolph Stirn in Berlin, Germany. - Yearbook British Phot. 1888, p. cxlv. Phot. Journal 1887, p. xxx. Lothrop, Century, p. 29; Christie's Cat. 23/3/2004 lot 148. L'Invisible in a box. Christie's Cat. 12/6/1997 lot 595. A model 2 in a case. Christie's Cat. 16/8/1984 lot 220.

A most important dedication copy linking Rantzau and Tycho Brahe

RANTZAU, Heinrich.

Tractatus astrologicus de genethliacorum thematum iudiciis pro singulis nati accidentibus. Ex vetustis et optimis quibusq. … – Frankfurt am Main: Johann Wechel, 1593. 8° (180 x 110 mm) 8 ff., 355 pp., 14 ff. with 3 fold. tables. Woodcut printers device on title, small woodcut portrait recto title, a few diagrams within text. (Sign.: f8, A-Z8, Aa8) Contemporary binding over wooden boards, two clasps, gilt edges, gilt cover stamps, these oxidized and faded. Little worming inside, else a very fine copy in first appearance.

EUR 6.800.-

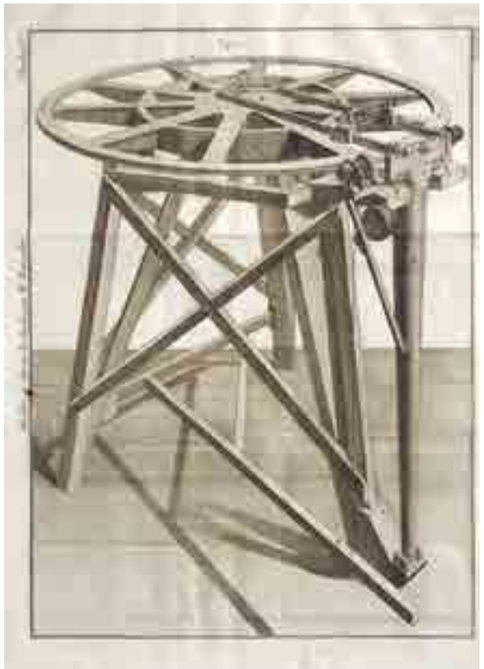
First edition, the most important work of Heinrich Rantzau, a clear and systematic exposition on astrology according to the principles of Ptolemaios, Campanus, Alchabitius and Gaurico thereby summarizing the methods of ancient and contemporary astrologers (Albohali, Cardano, Schöner, Ringelberg). Rules of interpretation and examination of various cases follow the exposition (death, marriage, prison, friends and enemies, honors and riches, etc.). The last part of the work deals judicial astrology and includes an examination of the author's horoscope. Heinrich Rantzau or Ranzow (Ranzovius) (1526 – 1598) was a German humanist writer, statesman, and a prolific astrologer and an associate of Tycho Brahe. He was Governor of the Danish royal share in the Duchy of Holstein, a rich man and celebrated book collector. Rantzau is per-haps best remembered as a patron of scholars (Georg Rollenhagen, Nikolaus Reusner, David & Nathan Chytraeus, Justus Lipsius, Heinrich Meibom, Raimerus Ursus). His own Tractatus astrologicus de genethliacorum thematum appeared in 1597, and went through five editions by 1615. In his own time, he was regarded as a generous supporter of artists and writers. Rantzau was also a successful merchant with trading interests in the east-west trade through Husum and Lübeck.

Dedication copy to Jakob Kurz von Senfftenau (Jacob Curtzius), dated 1593 (seven lines) with a dedication binding: "Henricus Ranzovius" and "Produx cimbricus" and coat of arms of the author (front cover), at the back cover "Anno dn 1593" and "aetatis 68" with stamp of a lily.

Jacob Curtzius (1554–1594) was the Imperial prochancellor (Reichsvizekanzler) for the Emperor Rudolph II. In addition to high politics he was also a contact between the Emperor and contemporary scholars, notably the astronomer Tycho Brahe. He was born to a noble family whose many members filled high governmental position for the Habsburgs during the 16th and 17th century and he was given a good education that included natural sciences. Kurz, as a high official at the Imperial court in Prague, built a splendid house near the Prague Castle. Kurz organized the move of Danish astronomer Tycho Brahe to Prague, and designed a quadrant for him. Brahe arrived in 1594 and was offered Kurz's house to live in. Brahe died there in 1601, and the house was later occupied by Kepler.

"Heinrich Rantzau präsentiert ein astrologisches Kompendium für den praktizierenden Astrologen. Ohne auf philosophische Grundlagen oder Streitigkeiten über den Wert und die Berechtigung der Astrologie einzugehen, werden Ausdeutungen und Regeln systematisch abgehandelt. Dabei werden die Aussagen von Albohali (Jahja b. Galib), Ptolemaios (Centiloquium), Schoener, Cardano und Ringelberg aufgelistet. Rantzau zitiert auch einen verschollenen Segeberger Codex aus seiner Bibliothek. Das Werk ist in fünf Teile unter-gliedert. Teil I. beinhaltet eine kurze Beschreibung von fünf Methoden der Häusereinteilung: Teilung des Himmelsäquators nach Regiomontanus, die äquale Manier von Schoener, Teilung des ersten vertikals (Campanus, Gazulus), Methode des Alchabitius und Johannes de Saxonia, Methode des Porphyrius verwendet von Luca Gaurico. Teil II. behandelt die allgemeinen Ausdeutungen, d.h. die astrologischen Bedeutungen der Häuser (Loci), Tierkreiszeichen und Planeten. In den Teilen III-V werden die die speziellen Deutungen (specialem iudicii genethliaci methodum) beschrieben: z.B. über das Leben im allgemeinen, Temperament, Geistesgaben, Glück, gesellschaftliche Stellung, et al. dann Deutungen aufgrund von Direktionen zum Aszendenten und Jahreshoroskope." (Oestmann 42 ff.) - VD16 R256; Honeyman 2576; Houzeau/L. 4965; Rosenthal 3509; Zinner 3551; Dorbon-Ainé 3889: "un des traités anciens d'astrologie judicaire le plus complete"; Graesse VI, 24; Cantamessa 6559; Lit.. Oestmann. Heinrich Rantzau und die Astrologie.- 2001.

Holdings: COPAC: Glasgow; Bodleian Library; KVK: Greifswald; Halle; Kiel; Wolfenbüttel; Göttingen; Hamburg; Tübingen; Berlin; Augsburg; München; OCLC: Cornell; Columbia; New York Public Library; Brown University; University of Virginia.



RAMSDEN, Jesse.

Description d' une Machine pour Diviser les Instruments de Mathematiques … Publiee a Londres, en 1787, par ordre du Bureau des Longitudes; Traduite de l' Anglois; Augmentee de la description d' une machine a diviser les lignes droites, et de la notice de divers ouvrages de M. Ramsden par M. de La Lande … Pour faire suite a la Description des moyens employes pour mesurer la base de Hounslow-Heath. - A Paris: Chez Firmin Didot, 1790. small folio (283 x 208 mm). pp. 46 with 7 folding engraved plates printed on pale blue paper, some variable browning, staining and spotting throughout, although plates much less affected, a few darker spots. Contemporary half calf over marbled boards, short split to upper joints, extremities lightly rubbed, red morocco lettering piece.

EUR 3.200.-

First French edition of "Description of an engine for dividing mathematical instruments" of 1777, translated with comments by Jerome de Lalande after he could borrow a copy of Prof. Shepherd. As is pointed out in the preface to this first French edition, most copies of the first (English) edition of 1777 (not 1787 as the title wrongly states) were destroyed in a fire ("consumee par un incendie") at the printer's warehouse.

Ramsden (1735–1800) was a British pioneer in the design of precision tools. Ramsden was apprenticed as a boy to a cloth worker, but in 1758 he apprenticed himself to a mathematical instrument maker. He went into business for himself in London in 1762. He designed dividing engines of great accuracy for both circles and straight lines and produced highly accurate sextants, theodolites, and vertical circles for astronomical observatories. He also built barometers, manometers, assay balances, and other instruments. He was elected to the Royal Society in 1786 and awarded the Copley Medal in 1795.

Ramsden's dividing engine allowed instruments to be made smaller while being just as accurate in measurements. The rights for a portable sextant designed by Ramsden and used for maritime navigation was obtained by the Board of Longitude in 1777 for £ 300. An additional £ 315 was paid to allow for its construction details to be used by other craftsmen. Ramsden was of a genial disposition, but at the same time he infuriated his clients with his tardiness in delivering their purchases, particularly of the larger commissions. The acrimony sometimes got out of hand. For example, Ramsden's three-year delay in providing William Roy with the theodolite for the Anglo-French Survey 1784–1790 provoked a public row within the portals of the Royal Society and in the Philosophical Transactions. In his favour it should be pointed out that many delays could be attributed to Ramsden's quest for perfection, continually refining his designs as the slightest shortcomings were revealed.- Provenance: later library stamps to title and to versos of plates.- Lit.: Anita McConnell. Jesse Ramsden (1735–1800): London's Leading Scientific Instrument Maker. 2007; Taylor, Mathematical Practitioners of Hanoverian England, 57–59, 244–245; Repsold, Geschichte der astronomischen Messwerkzeuge, 82–87

(RED CROSS).

Das Rothe Kreuz in der Wiener Weltausstellung 1873 dargestellt auf Anregung Ihrer Majestät der Kaiserin Augusta durch das Central-Comité zur Pflege verwundeter und erkrankter Krieger (printed cover title). - Wien, Verlag der concessionirten Wiener Photographen-Association, 1873. Square Imperial-Folio. (420 x 560 mm.) Photographic Portfolio with 58 vintage photographs (size: 200 x 250 mm and smaller) pasted on 40 card boards, albumen prints with photographers signature, number and title within negative. All card boards with printed captions, titled and photographers address: Oscar Kramer.

EUR 8.500.-

Probably the earliest photographic documentation regarding the work of the "Red Cross", exhibited at the Viennese World Fair in 1873. Until the middle of the 19th century, there were no organized and/or well-established army nursing systems for casualties and no safe and protected institutions to accommodate and treat those who were wounded on the battlefield. A devout reformed Christian, the Swiss businessman Jean-Henri Dunant, in June 1859, traveled to Italy to meet French emperor Napoleon III. with the intention of discussing difficulties in conducting business in Algeria, at that time occupied by France. He arrived in the small town of Solferino on the evening of 24 June after the Battle of Solverino, an engagement in the Austro-Sardinian War. In a single day, about 40,000 soldiers on both sides died or were left wounded on the field. Jean-Henri Dunant was shocked by the terrible aftermath of the battle, the suffering of the wounded soldiers, and the near-total lack of medical attendance and basic care. He completely abandoned the original intent of his trip and for several days he devoted himself to helping with the treatment and care for the wounded. He took point in organizing an overwhelming level of relief assistance with the local villagers to aid without discrimination. Back in his home in Geneva, he decided to write a book entitled A Memory of Solferino (PMM 350; Norman 670; Garrison-M 2166; Grolier/Norman 73; Waller 2639; Heirs of Hippocrates, 1945; En Français dans le Texte 284) which he published using his own money in 1862. He sent copies of the book to leading political and military figures throughout Europe, and people he thought could help him make a change. In addition to penning a vivid description of his experiences in Solferino in 1859, he explicitly advocated the formation of national voluntary relief organizations to help nurse wounded soldiers in the case of war, an idea that was inspired by Christian teaching regarding social responsibility, as well as his experience after the battlefield of Solferino. In addition, he called for the development of an inter-national treaty to guarantee the protection of medics and field hospitals for soldiers wounded on the battle-field. The wide interest generated by Dunant's book led in 1863 to the formation of a committee which later became the International Red Cross, and in 1864 to the establishment of the Geneva Convention. Dunant shared with Frédéric Passy the first Nobel Peace Prize in 1901.

The photographs show: View of the sanitary pavilion with military tents; Field pharmacy; Field operation table, Rescue stretcher, Transportable beds, Stretcher with frame for wagons; Wheels stretchers; Pushcart, mountain car; Dolly for wounded; Railway medical train, et al.

The Viennese Photographers Association was an organizational union of the Viennese companies Oscar Kraemer, M. Frankenstein & Comp., J. Löwy and György Klösz on the occasion of the Vienna World Fair in 1873. They employed the photographers Max Jaffé (1845–1939), Gustav Jägermayer and Philipp Georg von der Lippe. For stereo photographs Pierre Elénor Ernest Lamy and for the process of heliogravure / photogravure Johann Baptist Obernetter (1840–1887) was used. The recordings were made in cabinet format, in carte-de-visit format and partly in stereo format. These have been combined into trivets, Leporellos or bound albums in various designs and offered for sale in a private pavilion. In another pavilion, the glass plates were developed in the wet collodion and further processed. The photographers had assistants who carried camera equipment and chemicals off-road and kept them ready. There were also retouchers and bookbinders. Around 50 people were used for the pictorial documentation. The total image production was about 2,200 images.- OCLC: Stabi Berlin (lost in war), Oldenburg (with lithographs not photographs); Landesarchiv Baden-Württemberg; not in OCLC or COPAC.

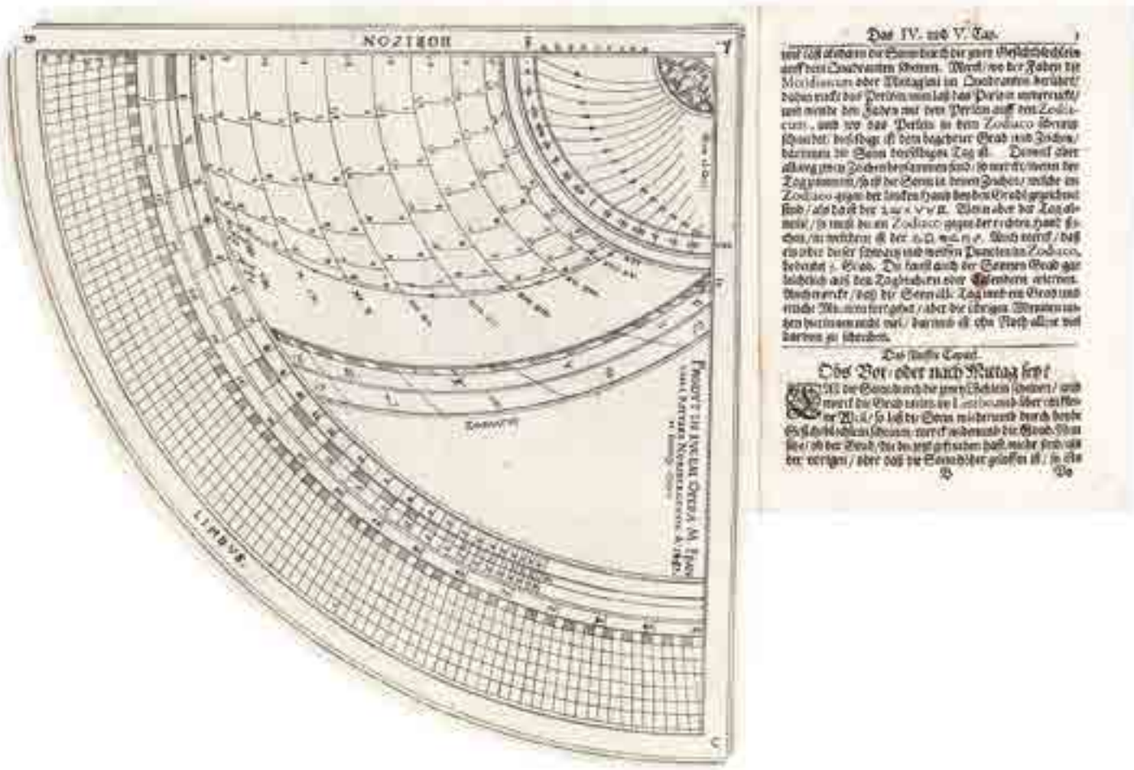
With a paper instrument

RITTER, Franz.

Instructio Instrumentalis Quadrantis Novi. Das ist: Beschreibung und Unterricht, eines neuen Quadranten, mit welchem man allerley Gebäu, Thürn, Höhe und Länge, ohn eigene Rechnung abzumessen, dessgleichen in den Graden der Gestirn- Höhe, die Minuten finden kan … Auffs neu auffgelegt. – Nuremberg: P. Fürsten, n. d. [ca. 1660]. sm. Quarto (182 x 138 mm). 2 p.l., 12 pp. with one folding engraved plate. Title within ornamental type border. Attractive antique calf (minor worming at head), spine gilt, red morocco lettering piece on spine.

EUR 4.500.-

First published in 1597, this is a description of the author's newly invented quadrant – depicted on the plate – which could be used by engineers for surveying. This plate is missing in most copies. It was an extremely successful text with at least five later editions. Franz Ritter (1579–1641), a native of Nuremberg, was an astronomer and innovative cartographer, famous for his "sundial" world map. He had studied under Johann Praetorius at the University of Altdorf. Ritter specialized in the design and manufacture of astrolabes, sundials, and other astronomical, horological and cartographical instruments. Fine copy.- VD17 23:277201H; Kiely, Surveying Instruments, pp. 165-80. Pilz, 600 Jahre Astronomie in Nürnberg, 263-65. Zinner, Instrumente, pp. 491-92.



The first bright comet after 1618

ROCCAMORA, Gian Domenico.

Tractatvs, in quo examinantur, & soluuntur iuxta varietatem sententiarum probabilium omnia; quae spectant ad cometas; in quo agitur praesertim de eo, qui caepit observari hic circa medium mensis Decembris Anni 1664 compositus a Patre D. Ioanne Dominico Roccamora, Abbate Silvestrino …. – Romae: Apud Successorem Mascardi, [1668 –] 1670. 12° [145 x 80 mm] pp. [20], 311, [1] with one fold. woodcut plate between pp. 230 / 31 and full-page woodcut on 193. Contemporary vellum. Some browning, but a genuine copy.

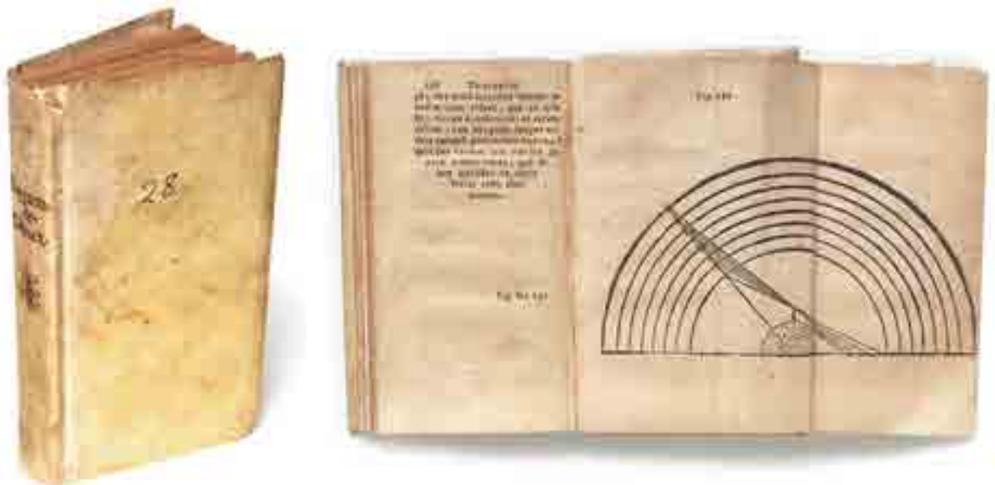
EUR 2.800.-

Very rare discussion on the comets of 1664; the author (died 1685) was prof. of philosophy and mathematics at Sapienza University in Rome and tried to reconcile Aristotelian theories with more modern aspects similar to Chiaramonti before him.

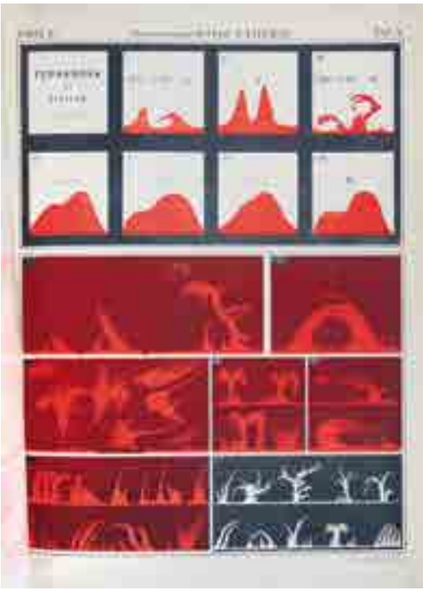
The controversy on comets dates back to Tycho Brahe almost a century earlier and concerned the location of comets, whether they travel in the celestial or terrestrial realms. When Tycho observed the 1577 comet from his observatory on the island of Hven, he hoped to determine its distance from Earth using parallax. … Because the comet displayed far less apparent movement against the background of the stars compared to the Moon, Tycho concluded that comets must be celestial objects. In 1619, following the appearance of another bright comet, Galileo in a dispute with Orazio Grassi, a Jesuit mathematician from the Collegio Romano and a supporter of Tycho's cometary claims, took the unusual position of denying Tycho's parallax observations, despite the support such observations could lend to Copernicanism. Rather than grant any credibility to Tychonic astronomy, which retained an Earth-centered cosmos, Galileo preferred to argue that comets were nothing more than illusions created by reflections of light on an accumulation of vapours just above the surface of the Earth. While Galileo refused to acknowledge the merits of Tycho's work with parallax, Scipione Chiaramonti, a prominent Italian philosopher and outspoken Aristotelian, also published lenghty criticisms of Tycho's observational methods and the Tychonic claims regarding the corruptibility of the heavens. In several publications during his career, Chiaramonti maintained a strict Ptolemaic and Aristotelian world view and engaged in a campaign to deny the use of parallax in cometary observations. (Bo-schiero)

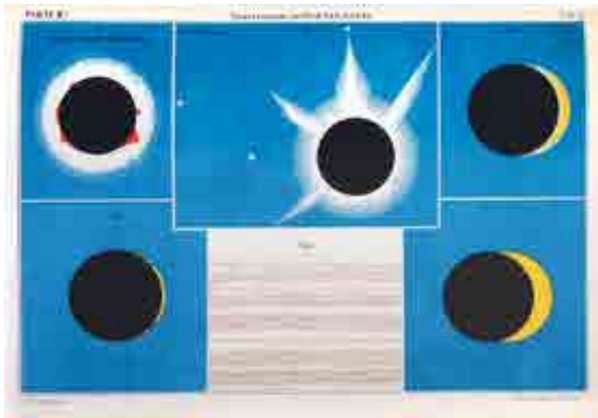
"In 1664 and 1665 two bright comets appeared, and between them occurred an eclipse of the Moon. Such a triple omen was unique. One can almost hear the collective intake of breath in anticipation of the unparalleled disasters that surely must follow. Lest anyone be uncertain about the meaning of these omens, John Gadbury, an English astrologer, thoughtfully interpreted them in his book of 1665, De Cometis. 'These Blazeing Starrs! Threaten the World with Famine, Plague, & Warrs,' he trumpeted. 'To Princes, Death: to Kingdoms, many Crises: to all Estates, inevitable Losses!' He can hardly have believed his luck when London was hit by the Black Death in 1665 followed by the Great Fire the year after. Unwittingly, he had demonstrated a fact that modern-day astrologers know well: the laws of chance ensure you can't be wrong all the time. While London suffered, in Danzig one of the greatest astronomers of the day, Johannes Hevelius, was watching the comets with scientific detachment. He published his observations in 1668 in a volume entitled Cometographia in which he theorized that comets are thrown out by the planets, notably Jupiter and Saturn, and move past the Sun on boomerang-shaped curves. Unlike boomerangs, though, they never came back. One attractive feature of Hevelius's book is a series of drawings of comets. To the untu-tored eye they may resemble the amputated tails of small furry mammals, but they were the most accurate renditions up to that time. A number of astronomers began to suspect that comets orbited the Sun on paths like exaggerated versions of the planets' orbits, but no one could prove it." (Ian Ridpath).- Brüning 1265; Rosenthal 3624; Riccardi I,2, 385; KVK: no copy in Germany & Switzerland; COPAC: BL London, Cambridge Special Coll.; OCLC: Oklahoma, Columbia, Toronto.

L. Boschiero. Giovanni Borelli and the Comets of 1664-65; in: Journal of the History of Astronomy Vol. 40 (2009), 11-30.



Spectroscopy, the birth of astrophysics and the total eclipse of 1870





SANTINI, Giovanni, Gaetano CACCIATORE, and others.

Rapporti sulle osservazione dell'eclisse totale di Sole del 22 Dicembre 1870. – Palermo, Lao, 1872. Folio (333 x 235 mm) [8], 214 pp.; with a lithographic frontispiece and 15 plates, some folding; a few spots or marginal stains; some of the tissueguards wrinkled. Bound in contemporary paper-backed boards, red morocco label, rubbed and soiled. Inner cover with presentation Ex Libris from Gaetano Cacciatore to Prof. Halle at Wroclaw Observatoy.

EUR 1.800.-

First edition of this extensive and groundbreaking collaborative study of the total solar eclipse of 1870, consisting of individual reports by the leading italian astronomers of the time, including Angelo Secchi, G. B. Donati, Gaetano Cacciatore, Pietro Blaserna, A. Nobile, P. Tacchini, et al.

'In the early 19th Century the studies on spectral lines by Joseph von Fraunhofer and Gustav Kirchhoff led to "the joining of physics and chemistry into astronomy ... as the essential result of a more general approach", thus determining the birth of astrophysics. The application of two new techniques, such as photography and spectroscopy, to astronomical observations of total solar eclipses contributed greatly to further the development of solar physics. In 1851 astronomers obtained the first photographic image of the total phase of a solar eclipse showing that the corona was part of the solar atmosphere rather than the Moon's one. Thanks to the use of the spectroscope, in 1868 astronomers observed hydrogen lines in the spectrum of solar prominences and found the presence of a yellow line that later was to be associated to a new chemical element, Helium.

'After the first studies on the stellar classification by Giovanni Battista Donati and Angelo Secchi, Italian astronomers wishing to get involved in this field, did not miss the opportunity represented by the total solar eclipse of December 22 1870, whose area of totality would have covered eastern Sicily. A scientific commission was set up and formed by the directors of Naples, Milan, Florence, Palermo, and Padua Observatories. The astronomer from Rome Angelo Secchi, joined the commission, being "the only one able to compete with foreigners in terms of spectroscopy". In September 1869, the Commission met up in Florence to define the sites and programs for the observations.

'The observational stations were placed in the old convent of the Capuchins close to Terranova (now Gela), and on the terraces of the Augusta castle. The scientific program focused on the spectroscopic studies of chromosphere, corona and solar prominences. Having set up two stations, it was possible to host other scientists who collaborated in the astronomical, meteorological and magnetic observations. To move to Sicily instruments and astronomers, the Italian Royal Navy placed a steamer already used in the Expedition of the Thousand, Plebiscito, at the Commission's disposal. The "senators" of Italian astronomy were located at the Augusta station, undoubtedly more comfortable than the Terranova site, which was reserved to younger astronomers and their assistants. Between its arrival and the start of the eclipse, the large group of Italian scientists had the opportunity to work together – for the first time in the history of the unified country – and acquire new skills in astronomical spectroscopy, a field of which little was known to the majority of Italian astronomers.

'Following the results of this scientific expedition, on October 5 1871, the main actors involved founded Società Italiana degli Spettroscopisti, the first scientific organization in the world devoted to "physical astronomy". The reports written by the astronomers based on the results of their observations were published in 1872 in a volume that gained wide appreciation also in the international scientific circles. "Rapporti" was presented to many Italian and international politicians and intellectuals, including Giuseppe Garibaldi. In the effort to compete with foreign astronomers, the main actors of the expedition soon managed to implement high-quality research programs that led Italy to stand out in astrophysical studies until the end of the 19th Century, favouring the establishment of Catania Royal Observatory, the first astrophysical observatory in Italy, and the institution at Catania University of an academic chair in astrophysics, the first one in the world' (Emilia Olostro Cirella and Mauro Gargano, The Solar Eclipse of 1870, online).- BEA

Molyneux's Question – English philosophy in Italy

SARTI, Cristofano.

L' ottica della natura e dell' educazione indrizzata a risolvere il famoso problema di Molineux (Molyneux). Opera del .... – Lucca: presso Francesco Bonsignori, 1792. 8° (222 x 143 mm). pp. XVI, 227, 48 with frontispiece within pagination. Contemporary papercard boards, rubbed and soiled. Fine uncut copy.

EUR 1.200.-

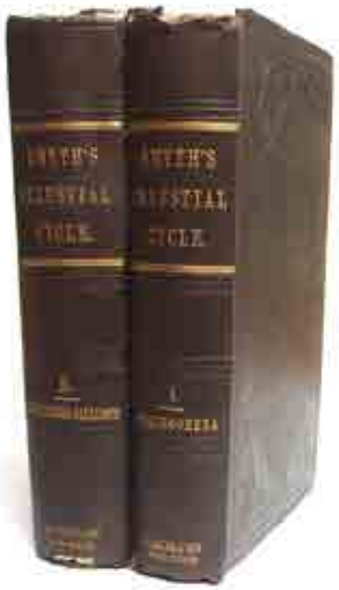
First edition of a lesser known essay on Molyneux's question by a professor at Pisa University.

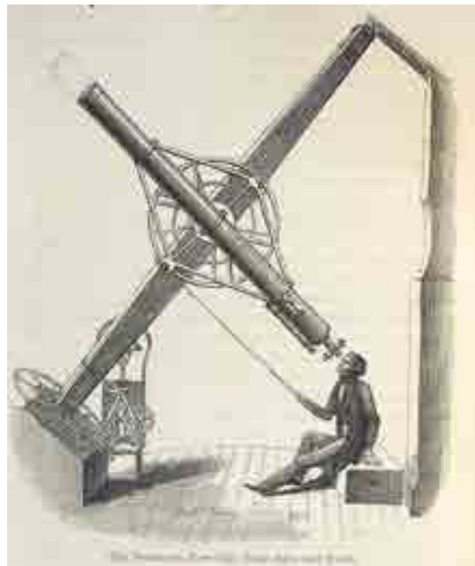
On 7 July 1688 the Irish scientist and politician William Molyneux (1656–1698) sent a letter to John Locke in which he put forward a problem which was to awaken great interest among philosophers and other scientists throughout the Enlightenment and up until the present day. In brief, the question Molyneux asked was whether a man who has been born blind and who has learnt to distinguish and name a globe and a cube by touch, would be able to distinguish and name these objects simply by sight.

In this formulation Molyneux's problem attracted the attention of lots of philosophers and other men of learning, such as Berkeley, Leibniz, Voltaire, Diderot, La Mettrie, Helmholtz and William James.

Discussion concerning Molyneux's problem took a new turn once the English surgeon and anatomist William Cheselden (1688–1752) published an account of what a congenitally blind person had seen after his cataracts had been removed (1728). The publication led philosophers to regard the Molyneux problem no longer as a simple thought-experiment, but as a question which could be answered by experimentation.
Others, however, such as La Mettrie and Diderot, regarded Cheselden's account as wholly ambiguous in its implications. They pointed out that it was possible that the boy had been unable to make valid perceptual judgments because his eyes had not been functioning properly. They suggested that this could have been due to the fact that his eyes had not been used for a long time, or to their not having had enough time to recover from the operation. They pointed out that Cheselden had, perhaps, asked the boy leading questions. Some philosophers also believed that the results of the inquiry depended on the intelligence of the patient.

Those who criticised the significance of Cheselden's account in this way (most of them were French philosophes) made proposals as to how to avoid the problems mentioned. They suggested that one should prepare the patient carefully for the operation and for the interrogation, that one should allow his eyes time to recover from the operation and that one should give him the opportunity to exercise his eyes in darkness. What is more, one should avoid asking leading questions. Some philosophers were even more radically critical of operations like that performed by Cheselden. Mérian, for example, noticed that Cheselden's observations, like all observations of blind people whose cataracts have been extracted, present difficulties because cataracts do not cause complete blindness and complete blindness cannot be cured. It could not be concluded from this that Molyneux's problem could not be solved experimentally, however, for it could be maintained that patients operated upon for cataracts are directly relevant to the solution of it. They are unable to perceive form before they are operated upon, and the essential issue at stake when posing Molyneux's problem is the ability to distinguish and name forms. This is a point of view which was taken by many philosophers.





SMYTH, Captain William Henry

A Cycle of Celestial Objects, for the Use of Naval, Military, and Private Astronomers. In two Volumes. Volume I: Prolegomena; Volume II: The Bedford Catalogue. – London: John W. Parker, 1844. 8vo (215 x 140 mm). viii, [4], 516 pp., 4; [iv], xx, 560 pp. Half-titles, numerous engraved figures, index, ads. Original black blind-stamped cloth, gilt-stamped spines; neatly rebacked preserving original spines. Endpapers foxed, else fine.

EUR 1.200.-

The true first edition of William Henry Smyth's classic handbook intended for amateur astronomers. His Cycle of Celestial Objects has long been regarded as the patriarch of celestial observing guides, particularly the second volume, which was named The Bedford Catalogue after the site of Smyth's private observatory. 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. 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 1830's, 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.

Smyth (1788–1865) had an interesting career: although born in England, had a father who was a colonial resident of New Jersey and emigrated to England as a Loyalist after the Revolutionary War; he was also a descendant of Captain John Smith, the principal founder of the first permanent English colony in North America at Jamestown, Virginia. The early part of Smyth's career was with the Royal Navy, with which he served in the Mediterranean during the Napoleonic conflicts. During this period he visited the noted Sicilian astronomer Giuseppe Piazzi, famous for his discovery in 1801 of the first asteroid ever found-Ceres. Smyth's visit to Piazzi's Palermo Observatory was decisive in turning his interests to astronomy, and after retiring from the Royal Navy in 1825, he settled in Bedford, England, and started building what was then the finest private observatory in that country. It was equipped with a 6-inch refractor, a substantial instrument back then for an astronomical hobbyist. During the 1830's Smyth put this instrument to good use, observing a huge variety of deep-sky objects, including clusters, nebulae, double stars, and much else. He kept detailed systematic notes of these observations, and was particularly interested in double stars. These notes were the basis of his Cycle of Celestial Objects which appeared in 1844 and was so well received that the Royal Astronomical Society awarded Smyth its gold medal and made him its president for one term.


ΘΕΟΦΡΑΣΤΟΥ
ΠΕΡΙ ΠΥΡΟΣ.
THEOPHRASTI DE IGNE.
PARISIIS M. D. LII.
Apud Adr. Turnebum typographum regium.


ΘΕΟΦΡΑΣΤΟΥ ΠΕΡΙ
ΠΥΡΟΣ.

THEOPHRASTUS.

Περι πυρος *[with:] De igne. Paris, Adrien Turnèbe, 1552[-1553]. Two vols. in one, 4to, pp. [4], 25, [3]; occasional browning; the first title a little soiled; very good copies in 18th-century calf-backed boards.*

EUR 5.500.-

First editions of both the Greek original and the Latin translation of Theophrastus' interesting work on fire and rarely found together.

'Concerning Theophrastus' account of the four elements, it has been debated to what extent this conforms to the Aristotelian doctrine. In particular, it is not clear whether Theophrastus followed Aristotle in holding that the heavens are made of a fifth element, the ether, distinct from the four sublunary elements, or whether he claimed that the heavens are simply made of fire . . . It has been argued, for instance, that Theophrastus abandoned the fifth element, but used it only in arguments against Plato without endorsing it himself (see Steinmetz 1964). There is no doubt, on the other hand, that he gave prominence to the element of fire.

In his short treatise On Fire, Theophrastus distinguished heavenly fire from terrestrial fire, which is always mixed with other elements, and pointed out that, in contrast to the other three elements, terrestrial fire can be generated artificially and constantly requires refueling. Most importantly, Theophrastus postulated that fire, or heat, is active while the other three elements are passive . . . In fact, this Theophrastean view has been interpreted as a serious departure from Aristotle's physics, according to which hot and cold are active while moist and dry are passive. Against this interpretation, however, it has been remarked that, since the Aristotelian biology postulates only the hot as active, Theophrastus did nothing but extend Aristotle's view to physics in general (see Longrigg 1975). Furthermore, although some scholars have presented the action of the hot as constituting for Theophrastus the reason for the interchanges between the elements, others have counterclaimed that these should be understood as qualitative and not just due to a mechanical mixture (see Steinmetz 1964; Gottschalk 1967)' (Stanford Encyclopedia of Philosophy, online).

Provenance: Dr Askew sale, Baker and Leigh, 4 March 1775, lot 3145 (manuscript auction label to upper cover); Michael Wodhull sale, Sotheby's, January 1886, lot 2555; William O'Brian, bequest booklabel dated 1899; library stamp on front free endpaper.

Adams T 580 & T 581; with the Greek text apparently decidedly rarer than the Latin, the few copies containing both the Greek and Latin versions located by OCLC are at the University of Firenze Humanities Library, Staatsbibliothek Berlin, British Library, Cambridge, and Manchester; the Latin version is held by the Biblioteca Nazionale Centrale Vittorio Emanuele II, Leiden University, Universität Mannheim, Sächsische Landesbibliothek, Dresden, National Library Poland, Oxford, and Edinburgh; threre appears to be no copy of the Greek text in North America, and a single copy of the Latin text, at the Othmer Library of the History of Chemistry, Philadelphia.


DISCORSO
ET RAGIONAMENTO
di l'ombre di . M. Vespasiano
Theriaca .

ROMAE apud Antonium Bladum.
M. D. LII.

THERIACA, Vespasiano.

Discorso et ragionamento di l' ombre di M. Vespasiano Theriaca. – Romae: apud Antonium Bladum, 1551. Small quarto (189 x 130 mm) ff. [12]; with Blado's woodcut device on title showing a crowned eagle hovering above hills and holding a cloth in its claws, and one large opening woodcut initial; some light staining and spotting; margins cut a little short but not affecting text; bound in later paper-covered flexible boards; the date of the imprint changed to 1552 in brown ink and with an owner's initials below, both possibly in the same, early hand.

EUR 4.500.-

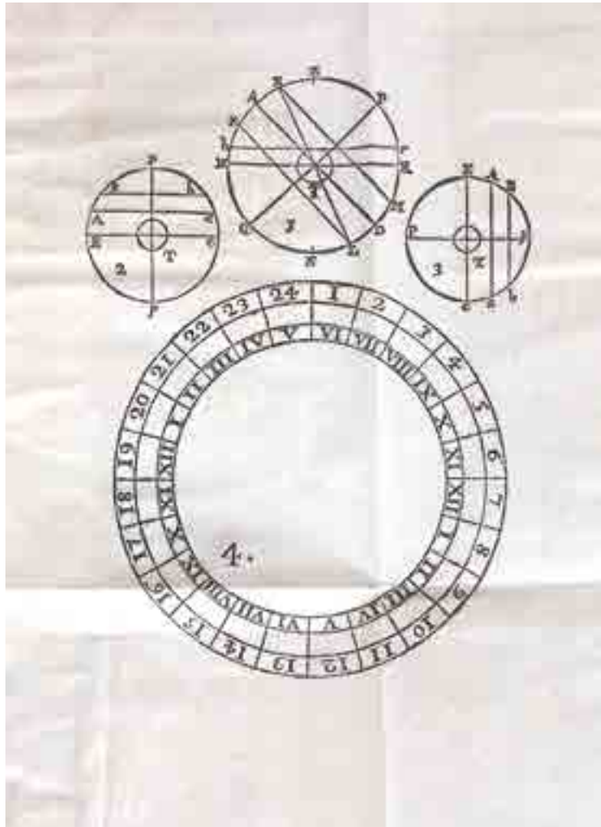
An exceedingly rare work of philosophical ponderings on shadow, its opposite, light, obscurity, and clarity.

In his dedication to the Roman Catholic Cardinal, Francisco Mendoza de Bobadilla (1508–1566) the author voices his intent to pronounce 'four words on shadows'. Most likely a pseudonym, the tract opens with 'Theriaca's' thoughts regarding the alternation of day and night, considerations regarding crepuscule as the meeting point of the two opposites, and the shadows created by smaller things, inanimate or animate.

He continues with much related astrological observation including eclipses and the Zodiac, to finally discuss the 'behaviour' of shadows or a shadow on the example of a person moving in a lit room with a light source at a median height, with the shadow shortening or lengthening against the wall depending on movement towards or away from the source, as well as on the example of a light source from above.

Whilst the work has not found entry in Kirsti Andersen's The Geometry of an Art, it has been recognised as pertaining to the history of perspective.

Cicognara 864; CNCE 24656; Riccardi I, II, 518; Cicognara Cat. I, 159; Cantamessa 7952; OCLC appears to record microform copies only.



TROILI, Domenico

Dell' oriuolo oltramontano ragionamento di Domenico Troili della Compagnia di Gesù dedicato all' altezza serenissima di Maria Teresa principessa ereditaria di Modena ec. ec. – Modena: Eredi di Bartolomeo Soliani …, 1757. small Quarto (210 x 145 mm) 59, [1] pp., with a folded leaf of tables within pag., and folded leaf of plates. (Sign.: A-C^{8} D^{6}*). Halfvellum with handwritten title on spine, inscription in ink on title partly removed, title with spots, else fine and fresh.*

EUR 1.800.-

First edition of his report about the Western European method of hour-reckoning: familiar to us, but "foreign" (ultramontane) in Italy, of two sequences of twelve fixed hours each, not adjusted according to seasonal daylight; it was called "small" or "half clock" in the Old World, from an Italian perspective orologio (oriuolo) oltramontano.
Domenico Troili (1722–1792) was an Italian Jesuit, who was responsible for the library of the Este family in Modena. He is known today as the first person who documented the fall of a meteorite, in 1766. Troili was a pupil of Boscovich at the Collegio Romano, and he supported his master's atomic theory explaining the properties of matter. In 1766, Troili witnessed the fall of a stone from the sky near the town of Albareto. He collected reports from many other eyewitnesses, closely examined the stone and detected in it small grains of a brassy mineral. Troili summarized the results of his research in a 43-page document, Ragionamento della caduta di un sasso ("Concerning the fall of a stone from the air"). Although the work by Troili is widely recognized as describing a meteoritic fall, Troili himself, though searching for a scientific explanation in the spirit of the Enlightenment, did not recognize its extraterrestrial origin, but instead attributed the event to a by-product of a volcanic eruption: "the true cause of the fall of a stone in Albereto in mid-July, 1766, is a subterranean explosion that hurled the stone skyward".-
COPAC: Oxford, NL Scotland; OCLC: Chicago, Columbia, Yale. Riccardi I, 560.1.

Hevelius' Comet of 1661


Speculum Uranicum
Aquilæ Romanæ Sacrum
Himels Spiegel/
Comet/
unter dem Adler
des H. Römischen Reiches
Erhardo VVeigelio Mathem.

WEIGEL, Erhard.

Speculum Uranicum / Aquilae Romanae Sacrum / Das ist / Himels Spiegel / darinnen ausser denen ordentlichen auch die ungewöhnlichen Erscheinungen des Himmels / mit gebührender Anführungen abgebildet / vornemlich aber 7 der im Gestirne des Adlers / jüngsthin entstandene Comet / nebst einer neuen Himmels-Charte unter dem Adler des H. Römischen Reiches / dargestellt wird / von Erhardo VVeigelio, … Jena (Jehna) bey Samuel Krebsen, in Verlegung Thomas Matthias Götzen, 1661. Quarto (198 x 160 mm) 64 Bll. with engraved frontispiece, engraved star map (globe gore) and four woodcut plates, a few woodcut diagrams within text. Later wrapper period style.

EUR 2.000.-

Rare astronomical work on the comet of 1661 by the astronomer Erhard Weigel, a teacher of Gottfried W. Leibniz. The frontispiece shows Weigel with astronomical instruments before the building of the University of Jena and the comet within the star constellation of the Eagle (Adler). The engraved plate by J. R. Schildknecht similar to an engraved globe gore show the comet strait within star constellations. Erhard Weigel (1625–1699) was professor of mathematics at the University of Jena, who attempted to rename the classical constellation patterns, replacing them with figures from modern european heraldry. Thus 'ursa Major' became "The elephant of Denmark or 'Cygnus' became "the Ruta and Swords of Saxony". His uranography has not survived him. He is known as instrument and globe producer and has had an enormous influence on many german astronomers & mathematicians including Gottfried W. Leibniz, Johann Christoph Sturm (1635–1703) and Georg Christoph Eimmart (1638–1705). "Erhard Weigel, astronomer, astrologer, and mathematician, frequently attacked for his pansophic tendencies. In spite of the mathematical precision and the good astronomical observation it is rather the significance of comets which interests Weigel most." (Faber du Faur).- Brüning 1061; Pogg. II, 1283; Struve 17; Bircher A1193; FdF 1506-07; not in Houzeau-L.; Lit.: Klaus-Dieter Herbst (ed.). Erhard Weigel (1625-1699) und die Wissenschaften. Frankfurt a.M.: Peter Lang 2013

A better kind of astrolabe

WELPER, Eberhard.

Usus quadrantis astronomici geometrici, Das ist: Beschreibung des Gebrauchs eines Astronomische(n) und Geometrischen Quadranten: welcher zu vielen schönen und nützlichen Sachen zugebrauchen … (Nürnberg: Paul Fürst; Gerhard, after 1661, ca. 1665) sm. Quarto. (182 x 138 mm) 40 (i.e. 38) pp., one blank leaf, with the rare folding engraved plate showing the paper instrument, which is often lacking. Engraved vignette on title depicting the instrument mounted on a stand, title within ornamental type border. Attractive antique calf, spine gilt, red morocco letter piece on spine.

EUR 4.500.-

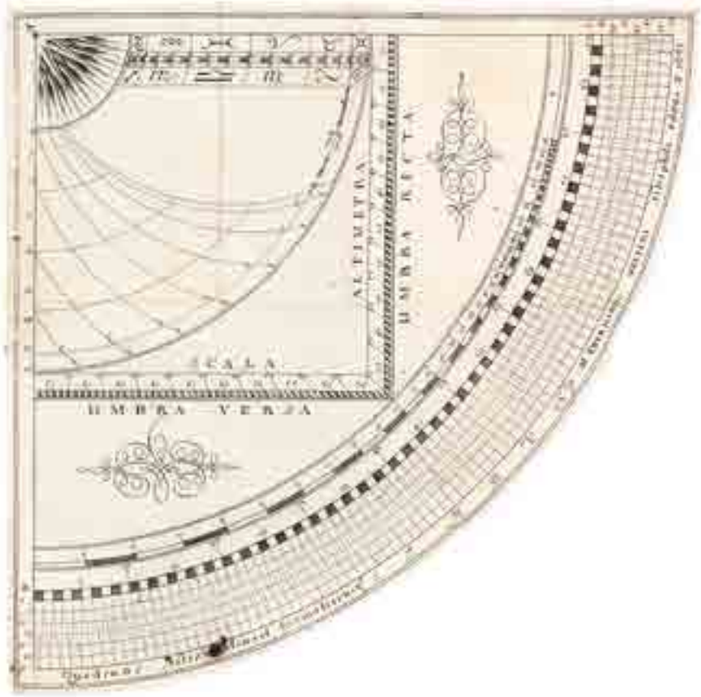
First published in Strasbourg in 1619, this is an enlarged edition of Welper's description of his quadrant to be used by astronomers, navigators, and engineers.

The folding plate with the paper instrument (Quadrans Astronomicus et Geometricus M. Eberhardi Welperi Astrophili, editus A(nn)o 1661) is often missing, because it was pasted to wood to use it as an instrument.

Eberhard Welper (1590–1664) studied astronomy at Tübingen and taught mathematics at the University of Strasbourg where he was also active as an instrument and calendar maker and as a publisher. Paul Fürst (1608–1666), art dealer and also a publisher from Nürnberg, published mainly engravings and pamphlets, so that he became known as "Bildermann". In addition, he brought out numerous copper engravings. Around the middle of the 17th cent., Paul Fürst reprinted older works with paper instruments, like the engravings of the globe stripes of Johannes Oterschaden, the globe gores and paper instruments of Isaac Habrecht and those by Eberhard Welper. Nuremberg was one of the European center of scientific instrument makers and these paper instruments had have a market there. The new technology of printing had an important bearing on the diffusion of paper instruments, such as volvelles or cut-out quadrants. The accurate plates were intended to be used after cutting them out and pasting them on wooden frames. That's is why often the instrument plate is missing. (see: Andrew Hunter (ed.) Thornton and Tully's scientific Books, Libraries and Collectors.

A study. (2000). VD17 23:277216C (most copies in German libraries are missing the plate / Beil.) WorldCat locates no copy in North America; Zinner, Instrumente, p. 583–(listing the German ed.).

Theodor Hampe: Paulus Fürst und sein Kunstverlag. Mitteilungen aus dem Germanischen Nationalmuseum 1914/15, S. 3-127; 1920/21, S. 137-170; Lore Sporhan-Krempel; Th. Wohnhaas: Zum Nürnberger Buch-handel und graphischem Gewerbe im 17. Jahrhundert. Archiv für die Geschichte des Buchwesens 13 (1973), Sp. 1021-1080.



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