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## Acquisitions • October 2015

### Important Works on Longitude



**1. ARNOLD, Thomas.** The American Practical Lunarian, and Seaman's Guide...

*Thick octavo, 15 plates (some folding), many tables and text illustrations, original calf binding. Philadelphia, Robert Desilver, August 1822.*

First and only edition: a remarkable compendium of naval information for the ready use of mariners, including lunar tables for reckoning the longitude at sea. The author, Thomas Arnold, was the proprietor of a Nautical Academy located on the Philadelphia river-front, and was an authority of navigation at sea. Curiously, it also includes the earliest published map based on the Freycinet voyage, being an engraved sketch-map of French Bay in the Falkland Islands where the Uranie ran aground.

\$5500

**2. [BOARD OF LONGITUDE].** The Nautical Almanac and Astronomical Ephemeris, for the Year 1818.

*Octavo, very good in original polished calf, faithfully rebaked. London, John Murray 1815.*

Rare copy of the Nautical Almanac for 1818, a fundamental inclusion in the shipboard library of any Admiralty-sponsored voyage. The Almanac was used for reckoning the longitude at sea by the lunar method, and was closely studied by officers of the Royal Navy. The continued publication of such almanacs is further proof that the invention of the chronometer, (whilst revolutionary), did not completely supersede the necessity for other fail-safes. The slim survival rate is ample testament of the hard use to which the almanacs were put.

\$885

**3. [BUREAU DES LONGITUDES].** *Connaissance des tems, a l'usage des Astronomes et des Navigateurs pour l'an X...*

*Octavo, folding world map and two folding tables; an attractive copy in contemporary marbled calf, gilt, red spine label. Paris, l'Imprimerie de la République, Fructidor, An VII, that is circa August 1799.*

A handsome copy of this rare work by the French Bureau des Longitudes, for use by naval officers for the year 1802 and 1803. The volume includes a handsome map of the world showing the track of a solar eclipse that occurred in August of that year. Much like the British equivalent, these tables were published far in advance of the year under review, in anticipation of their use on long voyages of exploration (in this instance the 1800-1804 Baudin voyage to Australia and the Pacific).

\$925





4. [HALLEY, Edmund]. MOUNTAIN, William and James DODSON. A Correct Chart of the Terraqueous Globe...

Large oblong map measuring 555 x 1470 mm., in two sections, laid-down; a most attractive copy. London, Laurie & Whittle 1794.

Splendid late-eighteenth-century world chart showing variations of the compass with 'isogonic lines', an innovation introduced almost a century earlier by renowned astronomer Edmund Halley following his command of the first British voyage of scientific discovery. As the engraved caption indicates, it was believed that eventually compass variation could be used to calculate longitude at sea. Although unsuitable for practical use, this method remained a tantalising possibility at the close of the eighteenth century when this map was printed, as marine chronometers remained inordinately expensive and beyond the means of most mariners. Perry & Prescott p. 75.

\$8500

5. [HARRISON, John]. KEILL, John. An Introduction to the True Astronomy...

Octavo, with 25 folding plates in series and two finely engraved folding lunar charts, in the original contemporary calf binding. London, J. Buckland and others, 1760.

*E Libris Jn. Harrison July 23 1766*

A wonderful survival: an important eighteenth-century handbook of astronomy from the library of the great watchmaker John Harrison, inventor of the marine chronometer that revolutionised the study of longitude and which was prized by Captain Cook and his compatriots. The book bears Harrison's armorial bookplate and ownership inscription 'E Libris Jn. Harrison July 23d 1766' above the initials 'JH' to the title-page in Harrison's distinctive hand. It contains three separate discussions of longitude showing widely accepted approaches to the problem.

\$7500

6. [HUTCHINSON, John]. Article on John Hutchinson's longitude clock...

Octavo, 48 pp., disbound. London, D. Henry, November 1775.

Complete issue of the Gentleman's Magazine for November 1775 containing an interesting biographical article on John Hutchinson (1674-1737), a natural scientist who in 1712 invented and built a novel chronometer for ascertaining longitude. This issue also includes a succinct notice of Atkyn's 1735 voyage to Guinea, wherein a serious effort to determine longitude with timekeepers was attempted.

\$375

7. [PARLIAMENT OF GREAT BRITAIN]. An Act for Providing a Publick Reward...

Folio, with 4 pp. table; bound with 22 other parliamentary acts for the session in contemporary plain calf with shelf label. London, John Baskett, 1714.



The first publication of the Longitude Act, a pivotal document in maritime history: 'nothing is so much wanted and



desired at Sea, as the Discovery of the Longitude'. The act – more often seen in disbound form – is here in its appropriate context in the full printing of the twenty-three Acts of the first session of parliament in 1714. Other acts in the session are of some interest: for example one act removes the “ad valorem” tax on imported books and prints, another is for “Encouraging the Tobacco-Trade”.

Horblit, 42a; Norman, 2.

\$14,500

**8. [PARLIAMENT OF GREAT BRITAIN].**  
An Act for explaining and rendering more effectual Two Acts... for discovering the Longitude...

*Folio, title page, pp. 367-374, fine. London, Mark Baskett, January 1765.*

An important Longitude Act, bringing John Harrison closer to reward but insisting the secret workings of his chronometers be revealed. Having outlined the successful sea trials during voyages to Jamaica and Barbados, this Act formalises the demand for Harrison to deliver the prototype H-4 and two identical operational copies of the chronometer (complete with diagrams) within a space of six months to be considered for the reward. The Act also rewards two German professors, Euler and Mayer, for their contribution to the lunar method – accordingly it directs that £300 to be paid to Euler and £3000 to the widow of Tobias Mayer.

\$2250

**9. [PARLIAMENT OF GREAT BRITAIN].**  
An Act for... making Experiments of Proposals made for discovering the Longitude.

*Folio, title, pp. 675-678; disbound yet fine. London, Mark Baskett, 1762.*

This Act empowers the Commissioners of Longitude power to expend sums up to £2,000 on experimental projects. As such, it significantly expands the scope of the Board to rigorously test plausible proposals from a wide range of applicants. This large experimental budget accommodated the Jamaica trial of Harrison's chronometer while providing widespread impetus to other contenders.

\$1200

**10. [PARLIAMENT OF GREAT BRITAIN].**  
An Act for... making Experiments of Proposals made for discovering the Longitude.

*Folio, title, pp. 271-274; disbound yet fine. London, Mark Baskett, 1765.*

This Act clarifies the process of paying out prize monies, stipulating that the Commissioners of the Board of Longitude are to pass on the particulars of any individual deemed worthy to the Commissioners of the Navy (who in due course instruct the Naval treasurer to issue a bill of payment). This process is limited to the disbursement of sums up to £2000: greater amounts required parliamentary approval.

\$1200



11

**11. [PARLIAMENT OF GREAT BRITAIN].**  
Ten Acts of Parliament discussing the reward for discovering the longitude at sea.

*Ten individual acts, folio, housed in an attractive red quarter morocco bookform box. London, various printers for Parliament, 1762- 1818.*

A substantial collection, including three pivotal Acts regarding prize payments to John Harrison with stipulations for provision of prototype chronometers. Other Acts in this collection concern the publication of lunar tables, and detail the distribution of prize monies to those advancing the lunar method for reckoning the longitude.

A full collation is available on request.

\$18,500

**12. ROSSEL, Paul-Édouard.** Autograph letter signed, concerning the lunar method for calculating longitude.

*Manuscript letter, 231 x 186 mm., on a bifolium sheet, letter comprising first page with three blank pages, dated and signed by Rossel. [Paris?], 15 June 1819.*

Rossel, astronomer of the d'Entrecasteaux expedition in search of La Pérouse, writes to Louis Marie Bajot, inspector-general of the library of the Ministry of the Marine and an editor of some standing. Bajot had previously asked Rossel to review some articles on the lunar method, however he reports the method is unsatisfactory and should be abandoned since the difficulty of accurately measuring the height of the moon is too great and

liable to “grandes erreurs”.The letter reflects Rossel's considerable practical experience in reconciling the dual sciences of astronomy and navigation, and the high regard accorded by his peers.

\$2400



12

13. **SCRIVEN, E. (engraver). [Nevil] Maskelyne.** From the original Picture by Vanderburgh in the possession of the Royal Society.

*Stipple engraving measuring 130 x 105 mm., beautifully preserved within ample margins with engraved description. London, Charles Knight, circa 1830.*

A finely engraved portrait of the Astronomer Royal, Nevil Maskelyne (1732-1811). A pre-eminent figure in eighteenth-century English science, Maskelyne was deeply involved in solving the riddle of calculating longitude at sea.

\$350



14. **WALES, William and William BAYLY.** The Original Astronomical Observations made in the course of a Voyage towards the South Pole...

*Quarto, with a double-page plate, two folding plates and a folding map; attractively bound in full calf, spine ornately gilt to a period design. London, printed by Strahan for Nourse, Mount and Page, 1777.*



Very rare: 'the true appendix to Cook' (Beaglehole), this publishes the official astronomical results of Cook's second voyage. As the introduction makes clear, the work was commissioned by the Board of Longitude, who undertook to send two representatives on Cook's second voyage to test recent innovations such as Shelton's astronomical clock and the two chronometers by Larcum Kendall and John Arnold (both constructed on the principles of John



Harrison).  
 Beddie, 1287; Hocken, p.17; Holmes, 26; Kroepelien, 1336; not in the catalogue of the Hill collection; O'Reilly-Reitman, 3999; Rosove, 342. A1.

\$44,000