

Lavanha, João Baptista | Encyclopedia.com

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(b. Portugal, ca. 1550; d. Madrid, Spain, 31 March 1624)

cosmography, mathematics.

Lavanha was appointed professor of mathematics at Madrid in 1583. (At that time Spain and Portugal were united [Philip II](#).) From 1587 he served as chief engineer and several years later became chief cosmographer; although provisionally named to this post in 1591, he did not actually assume its duties until 1596. Responsible for the technical aspects of navigation, he maintained in Lisbon a chair for the teaching of mathematics to sailors and pilots. He also inspected the maps and instruments used in navigation prepared in the cartography workshops and supervised the construction of astrolabes, quadrants, and compasses. In addition he was placed in charge of the examinations required of all who wished to become pilots, cartographers, or instrument makers for the navy.

The best-known of Lavanha's works is undoubtedly the *Regimento nautico* (1595; 2nd ed., 1606), which contains important texts for pilots, including rules for determining latitude and tables of the declination of the sun, corrected by Lavanha himself. Around 1600 Lavanha was the first to prepare tables of azimuths at rising and setting for the observation of magnetic declination by taking the rhumb line of the rising or setting of the sun with the magnetic compass.

As an engineer Lavanha carried out fieldwork for the tracing of topographical maps, the most important of which is the map of the kingdom of Aragon (1615-1618); to determine the coordinates of the fundamental points of the map Lavanha used a goniometer of his own design. This instrument was later perfected and proved very useful in surveying.

BIBLIOGRAPHY

I. Original Works. The *Regimento nautico* underwent two eds. during the author's lifetime (see text). Lavanha's other works are "Tratado da arte de navegar," library of the National Palace, Madrid, MS 1910; still unpublished, this MS contains Lavanha's lectures given at Madrid in 1588; *Naufrágio de nau S. Alberto* (Lisbon, 1597); *Itinerário do reino de Aragon* (Zaragoza, 1895), which contains the notes taken by Lavanha during his travels in the course of preparing the topographical map of Aragon; "Descripción del universo," National Library, Madrid, MS 9251, a brief and carefully done treatise on cosmography dedicated to the crown prince and dating from 1613; *Quarta década da Ásia* (Madrid, 1615), a new ed. of the work of the same title by João de Barros, rev. and completed by Lavanha; and *Viagem da catholica real magestade del rey D. Filipe N. S. ao reyno de Portugal e relação do solene recebimento que nelle se the fez* (Madrid, 1622), an account of the festivities held in honor of the visit of [Philip II](#) to Portugal. Lavanha also wrote on history and the nobility.

II. Secondary literature. See Armando Cortesão, *Cartografia e cartógrafos portugueses dos séculos XVI e XVII*, II (Lisbon, 1935), 294-361; and Sousa Viterbo, *Trabalhos nauticos, dos Porugueses nos séculos XVI e XVII* (Lisbon, 1898), pp. 171-183.

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