

Between Land and Sea: Cartography of the Brazilian Coastline by Jesuit Mathematicians in the 1730s

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Between 1730 and c. 1740 two Jesuit mathematicians and astronomers, Domenico Capacci (1694–1736) and Diogo Soares (1684–1748), produced the cartography of the Brazilian coast, part of a program to create a general Atlas of Portuguese America. In my talk I will discuss the context from which this program arose as well as the poorly known methods and instruments operated by the two Jesuit cartographers. Capacci arrived in Lisbon on September 1722 with his Neapolitan fellow Giovanni Battista Carbone (1694–1750), after several months of study with the chair of Mathematics of the Roman College, Orazio Borgondio (1675–1741). Both were intended to work in the Brazilian Atlas, but Carbone never left the metropolis, assuming in 1724 the duties of royal mathematician and private secretary to King João V of Portugal (1689–1750). In Lisbon, an intense period of practical training in astronomy followed. Capacci and Carbone acquired, with the generous support of the king, the best astronomical instruments and set up observing stations in the Royal Palace and at the Jesuit College of Santo Antão. Eclipses of the Sun and Moon, but especially those of the Galilean moons, were regularly and meticulously observed to obtain accurate geographical coordinates. In 1726 and 1727, before his departure to Brazil in November 1729 – accompanied by Diogo Soares, a former Portuguese professor of mathematics – Capacci conducted geodetic work in central and northern Portugal. There he performed several astronomical observations to determine coordinates of towns and cities in the region.

In my analysis I will focus on recently found manuscripts that shed some light on the issue of reference books and field instruments effectively owned and used by Soares and Capacci in their American mission. The relevance of establishing the exact position of the coastline – with implications for navigation – is stressed by the fact that the majority of surviving maps depict the boundaries between land and sea.

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