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Planisphere Terrestre ou sont marquées les Longitudes de divers Lieux de la Terre, trouvees par les Observations des Eclipses Satellites de Iupiter . . . Par Mr. de Cassini, le Fils de l'Acadamie Royale des Sciences . . . 1696

Stock#: 32236mp
Map Maker: Nolin / Cassini
Date: 1696
Place: Paris
Color: Uncolored
Condition: VG
Size: 22 x 22 inches
Price: SOLD



Description:

Extremely rare first edition of Giovanni Domenico Cassini's landmark Planisphere, published in Paris by Jean Baptiste Nolin in 1696.

In addition to being a landmark in the history of the science of cartography, the first edition includes fascinating information on the known coastlines of Australia, New Zealand and the Northwest Coast of America, which appear in a much fainter outline, but clearly reflect contemporary thought on the unknown coasts of these regions.

The Cassini-Nolin map is the first printing of Cassini's monumental 24 foot diameter hand-drawn map of the world based upon astronomical observations, originally drawn by Cassini on the floor of the Paris Observatory between 1679 and circa 1690. Cassini's work was the final chapter of the centuries old quest to map the world based upon Astronomical Observations, dating back to the ancient geographers of Greece and perhaps before. As noted by Alexander Vietor:

This rather self-evident observation [that the world could be measured and mapped based



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upon astronomical observations] was completely understood by the ancients who struggled with their limited technology to try to form from terrestrial and celestial data an accurate picture of the globe they inhabited. The closest to a modern calculation of the earth's size was achieved by the Greek philosopher Eratosthenes, who came within 14 percent of the correct circumference of the earth by measurements made in the Nile Valley and the relative angles of the sun's shadow at widely separated points along what was roughly the arc of a meridian.

Knowledge of the size of the earth was likewise bound up with the voyages of exploration in the 15th Century and earlier. It was in part due to rejection by Columbus of Eratosthenes' figures for those of Poseidonius . . . which postulated a globe roughly one-quarter too small, that the discoverer tried to reach the Indies by sailing west. In this, Columbus was only following a belief that was held by Claudius Ptolemy . . .

Cassini's map is one of the landmark accomplishments in modern cartographic history and represents a milestone in the transformation of the mapmakers art into the modern era. In his fine article on the Cassini map, Alexander Vietor states:

The Cassini planisphere is assuredly one of the greatest cartographic landmarks connected with the furtherance of accurate map-making, and it is one of the first successful attempts to plot the shape of the earth from exact astronomical observations--and numerous observations, judging from the map. Thus the ultimate desire of the ancient classical geographers for astronomical accuracy for place locations was at last achieved, at least in part, through Cassini's efforts.

Cassini's map was constructed based upon observations of the eclipses of Jupiter and other celestial data compiled in 43 locations around the world by various correspondents of the French Academie Royale (including a young Edmund Halley), taken in places ranging from Quebec, Santiago, the Cape of Good Hope, Goa and Beijing. The map was constructed on the equidistant azimuthal projection developed by Mayerne-Turquet in 1648, As noted in *Jewels in Her Crown: Treasures of Columbia University Libraries Special Collections*:

This is the first map constructed using scientific data. Under Giovanni Domenico Cassini's



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direction, coordinates of latitude and longitude for points throughout the world were collected by the Académie Royale des Sciences for over thirty years. These were placed on the floor of the Paris Observatory, creating a planisphere that was 24 feet in diameter, with the North Pole at the center. Cassini's son Giovanni drew the much reduced version that was then engraved by Nolin.

With respect to the "faint coastlines" shown on the map, these lines offer a fascinating insight into modern cartographic thought at the end of the 17th Century. The engraved lines show a more complete coastline for Australia and New Zealand, a narrow passage between Asia and Terre de Iesso (named Destroit de Vriez, a reference to Maarten Gerritsz De Vries voyage of 1643) and a continuous direct Northwest Passage, from the Straits of Anian to Baye de Baffins. Papua New Guinea also appears with a finished coastline.

The treatment of these coastlines by the Cassini-Nolin map raises fascinating questions about French knowledge of these regions at the end of the 17th Century. The first question is, did Cassini's original manuscript map include these coastlines. The second question, from which we can infer an answer, is why were these coastlines depicted in faint lines. The answer would seem to be that these coastlines were speculative in nature. The third question is, what information were Cassini and Nolin relying upon for these coastlines. In some instances, the controversy over the Northwest Passage and Straits of de Vries were widely discussed and addressed. However, the coastlines chosen for New Zealand and Australis seem to be a greater mystery. Given Thevenot's recent contribution to the mapping of Australia, it is not inconceivable that these were simply the best available conjectural coastlines for a region yet to be mapped, although it seems more likely that this information was being derived from attempts by Nolin, De L'Isle and others working in Paris to reconcile the best available information with existing maps, much in the same way the De L'Isle's manuscript maps of the late 17th Century led to Nolin's mapping of the Bay of the West circa 1700.

The Cassini-Nolin map offered here (the "le Fils" edition) is the extremely rare first printed version of Cassini's 30 year masterpiece. For many years, this "le Fils" edition was in fact believed to be the equally rare second edition of the map. However, as noted by Rodney Shirley:

Two states of the map are known, one of which bears the circumferential title as indicated above [Par Mr. de Cassini, le Fils de l'Académie Royale des Sciences]. The other has the signature of "Mr. de Cassini Directeur de l'Observatoire Royale." Not unnaturally, it was for



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many years believed that the reference to Mr. de Cassini as Director denoted [Giovanni Domenico] Cassini the elder, whereas the wording "Mr. de Cassini le Fils . . ." referred to his son Jacques. In response to a query by [Rodney Shirley] on this point, Mme. Monique Pelletier of the Bibliotheque Nationale has ingeniously proposed that in fact the reverse is true. In 1696 when the map was first produced, Jacques Cassini the son was a member of the Academie Royale des Sciences and hence it was state I that bears this attribution. However, in November 1712 after the death of his father . . . , Jacques became the Director of the Royal Observatory, and the second state thus carries his new designation.

Vietor noted that the Cassini-Nolin map is of the utmost rarity, with the copy acquired by Columbia University in 1959 being only the 5th known example of this landmark work (citing Lloyd Brown's location of other copies at the Clements Library, Yale and 2 examples at the Bibliotheque National de Paris).

As later noted by Rodney Shirley, at the time Vietor and Brown were writing about the Cassini-Nolin map, it was believed that the "Directeur" edition was the first edition of the map. Shirley noted that Yale and Clements hold copies of the **second edition**, identifying only the two Bibliotheque Nationale de France examples as being a first edition. Columbia's on line exhibition (the copy about which Vietor was writing in 1958) shows that Columbia holds an example of the second edition. Our on-line research also notes that the John Carter Brown Copy, catalogued as being the "1712 revised state," is in fact Shirley's first edition. Accordingly, in addition to our example, there are currently 3 known examples of the first edition (BNF-2 copies and John Carter Brown) and 3 known examples of the second edition (Yale, Clements Library and Columbia).

Of the two copies held by the BNF, one is from the collection of the geographer Jean-Baptiste Bourguignon d'Anville (1697-1782), which was given to King Louis XVI in 1782 and deposited in the National Library of France in 1924. Both are illustrated on line.

Giovanni Domenico (also known as Jean-Dominique) Cassini was born in Perinaldo, in the Comte of Nice in 1625. He quickly rose in his studies to be awarded the Chair of Astronomy at the University of Bologna in 1650. Pope Alexander VII commissioned Cassini to study the navigation of the Po and Reno Rivers. One of Cassini's earliest astronomical masterworks was his calculation of the orbits of the moons of Jupiter, which resulted in the publication of his table of the eclipses of Jupiter's moons in 1668.

In 1669, Jean Baptiste Colbert recruited Cassini to come to Paris and join the French Royal Academy. Cassini became a naturalized citizen in 1673. While Cassini's main investigations were astronomical in



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nature, in 1679, King Louis XIV commissioned Cassini to construct a scientific map of France based upon Astronomical Observations, one of Cassini's other masterworks. In the same year, Cassini began laying out a World Map on a North Polar Projection based upon astronomical observations gathered from around the globe. A 24 foot diameter hemispheric projection was drawn in ink on the third floor of the Observatory of the Royal Academy outside of Paris. The map shows 43 places, from Quebec to Santiago, from Goa to Beijing, each marked with a star, with latitudes accurately measured using a method that relied upon observation of the moons of Jupiter.

By 1690, the ink drawing on the floor of the Observatory was fading, so at some time during the 1680s, it was transferred to paper and ultimately printed in a single sheet format for the first time by J.B. Nolin in 1696, placing a star in each of the 43 locations where astronomical observations were taken.

Detailed Condition:

Repaired hole in blank portion of map and some minor creasing and soiling.