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Jean Picard

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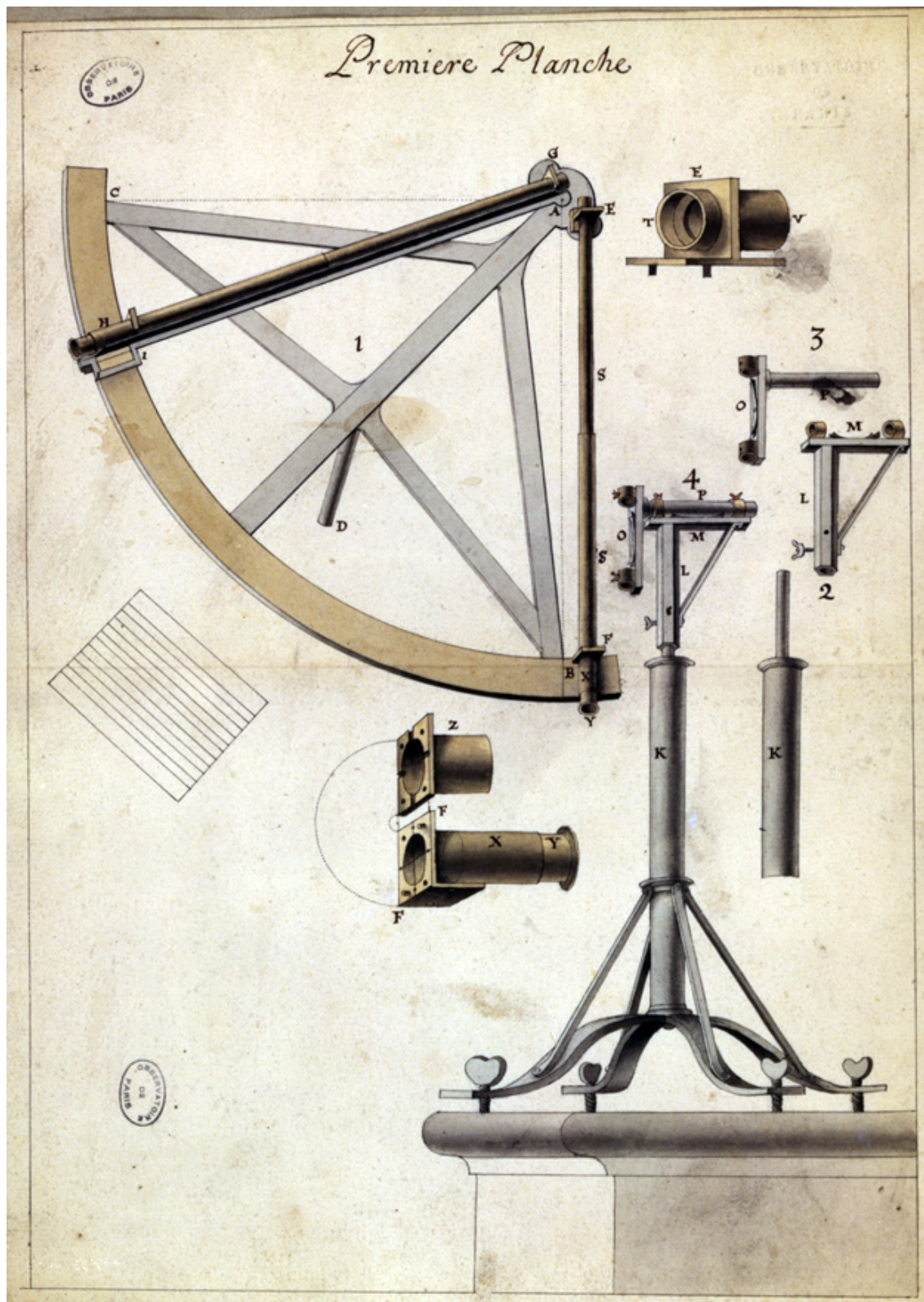
**Observatoire de Paris - PSL Centre de recherche en astronomie et
astrophysique**

Picard, with his geodesic measurements using a sector, and his work with the quadrant and spirit level, is generally considered to be the founder of astrometry in France.

Jean Picard was born on the 21st of July 1620 in La Flèche where he went to school at the Collège Henri IV, and we know of his observations of the 1645 solar eclipse, done in Paris under the supervision of Gassendi. We also know that he observed, still under Gassendi's supervision, a lunar eclipse in 1646 another in 1647, as well as an occultation of Jupiter by the Moon.

Right from the beginnings of the Royal Academy of Science in 1666, Picard was a member, together with three other astronomers, Auzout, Huygens and Roberval. The following year, these members of the Academy established a work programme, which included the determination of the size of the Earth. Picard was assigned to this task, and for it he created three instruments :

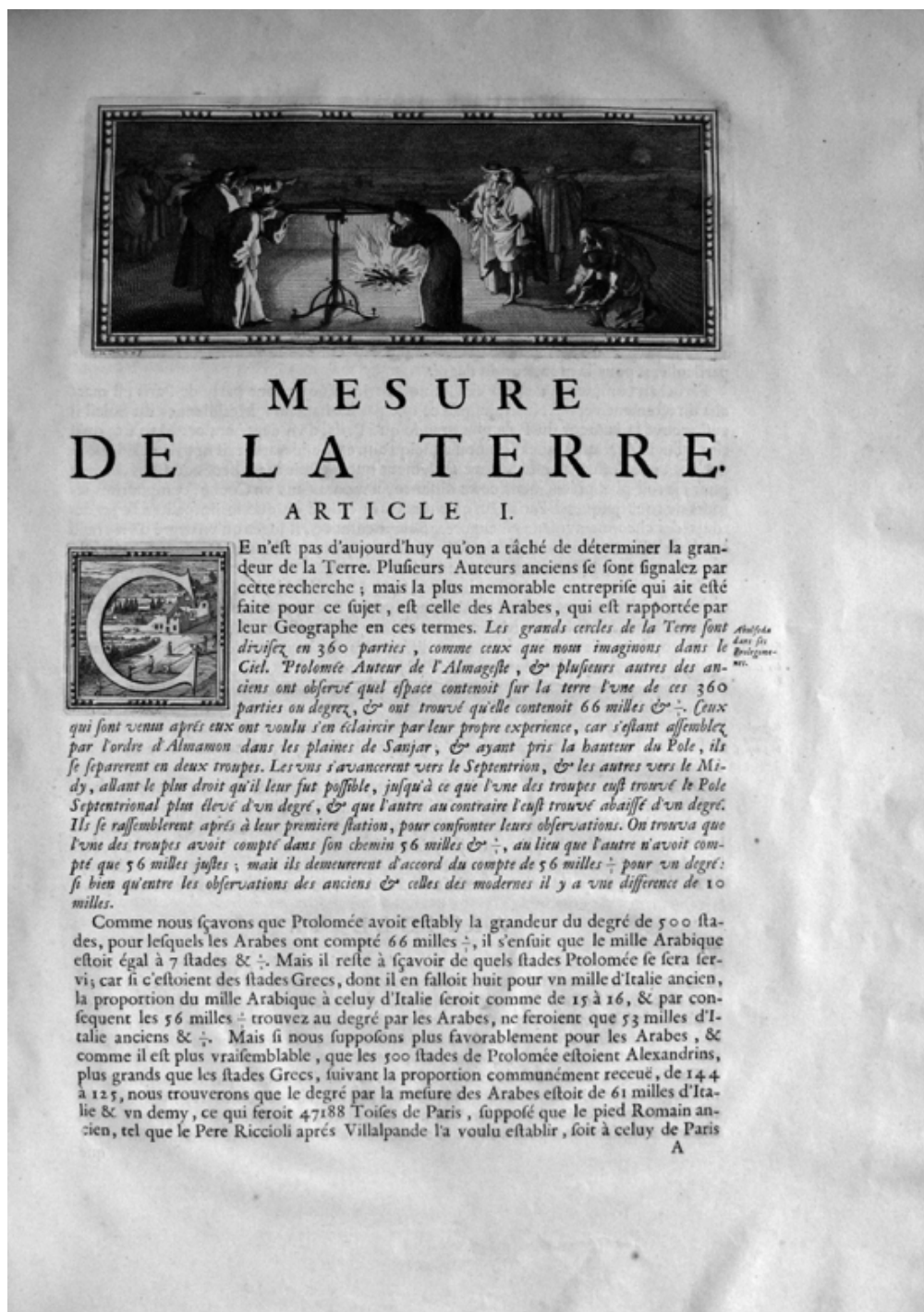
- " a telescope mounted on an 18 inch radius quadrant, equipped with a micrometer designed together with Auzout
- " an 18° sector with a radius of 10 feet
- " a spirit level with two telescopes.



Quart de cercle utilisé par J. Picard pour la Mesure de la terre en 1671. Planche préparatoire.

As an experienced field worker who could make measurement even while travelling, he continued his observations in Paris, in 1669 and 1670 ; Picard published the results of this work in 1671 in his book "Mesure de la Terre" (the Measurement of the Earth). He adopted and generalized the so-called triangulation method, which had been studied and tried in Holland. When he went to Denmark in 1671, Picard used the eclipses of the jovian satellites to link the meridian of Tycho Brahe's observations to that of Paris by a determination of the longitude ; Cassini made the

corresponding observations in Paris.



Opération géodésique au 17e siècle - "La Mesure de la Terre", Paris, 1671.

In 1668, Colbert asked the members of the Academy to create a general map of France. A first attempt to map the region around Paris was made, and enabled various methods to be tested under the supervision of Roberval and Picard. Starting 1669, an engineer worked on site ; the map was finished in 1674 and published in 1678. In the years between 1676 and 1681, Picard and La Hire, during many trips around the west coast of France, and Cassini in Paris or on the Mediterranean coast, worked out the general shape of Louis XIV's kingdom. When this work was

finished in 1682, Cassini continued the triangulation of the Royal Observatory's meridian ; this would constitute the basis on which was established, in the XVIIIth century, the map of France.

From 1674 on, Picard went frequently to Versailles where Louis XIVth's château was being built, for the supervision of the levelling work needed so that the pools and fountains could be supplied with water. The creation of two artificial pools in the Bois d'Arcy and in Trappes is due to Picard. His text on levelling appeared, thanks to la Hire, in 1728.