

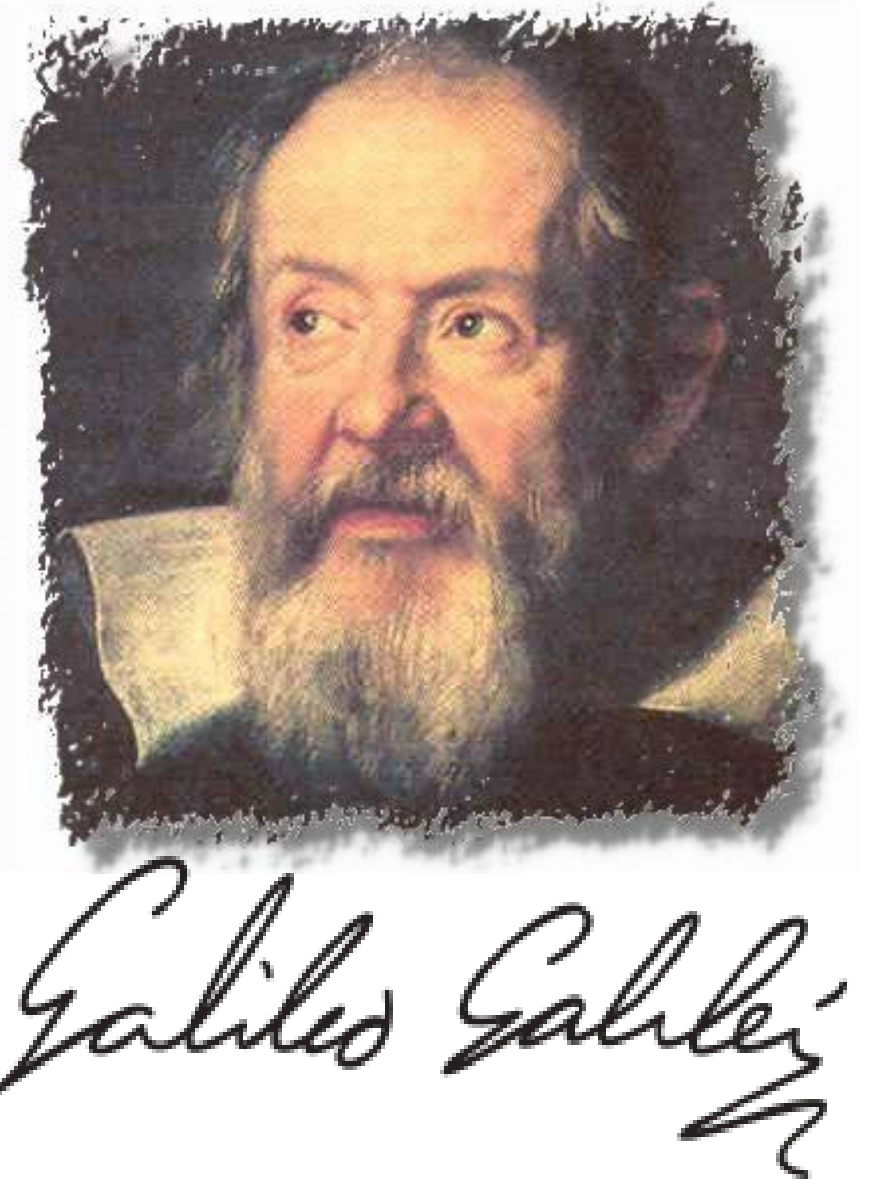
LOCATING

A NEW DIMENSION IN THE OBSERVATION OF THE HEAVENS

GALILEO



Pisa 1564
Arcetri-1642

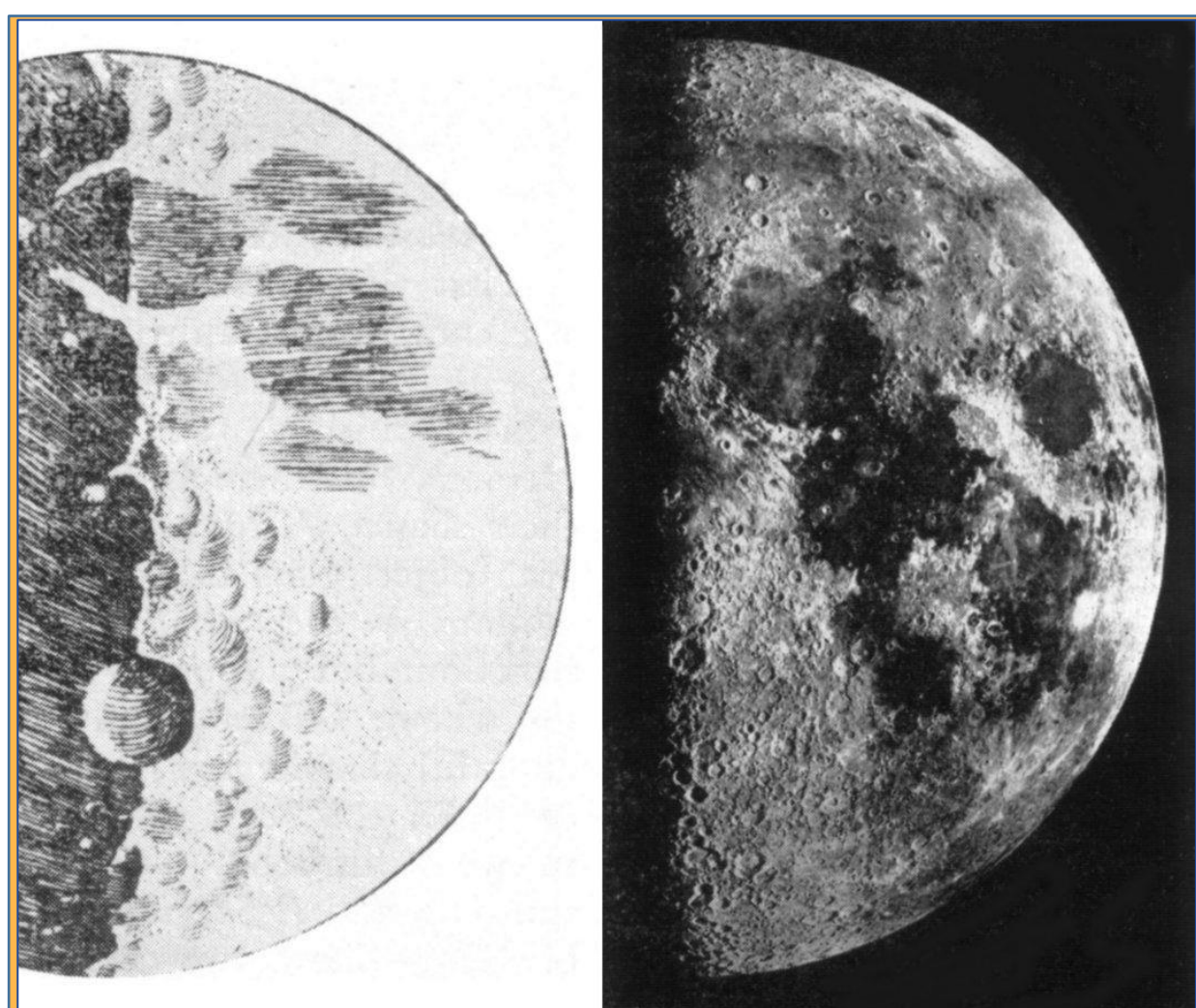


October 1604: a new star, as bright as Venus, appeared in the sky. By using purely observational methods, free from the prevailing dogmatism, to show it really was a star, Galileo (then professor of mathematics at Padua) would strike the first blow to the Aristotelian model and the immutability of its "sphere of fixed stars".

Telescopes had been in circulation in Europe for some years, but during the summer and autumn of 1609, Galileo appropriated and perfected this instrument "thanks to which, objects very distant from the observer's eye are seen very distinctly, as if they were close".

The telescopes Galileo used were very small (37mm diameter and magnification 20x) and of an optical quality far below what can be found today for a few euros. His visual acuity was impressive.

TERRAIN OF THE MOON



At the start of 1610, he was already able to present his observations of the Moon "irregular, rough, possessing cavities and swellings, just like the Earth" and the Milky Way "clusters of tiny stars." A few days later, he discovered the satellites of Jupiter.

Diagram by Galileo Current Photo



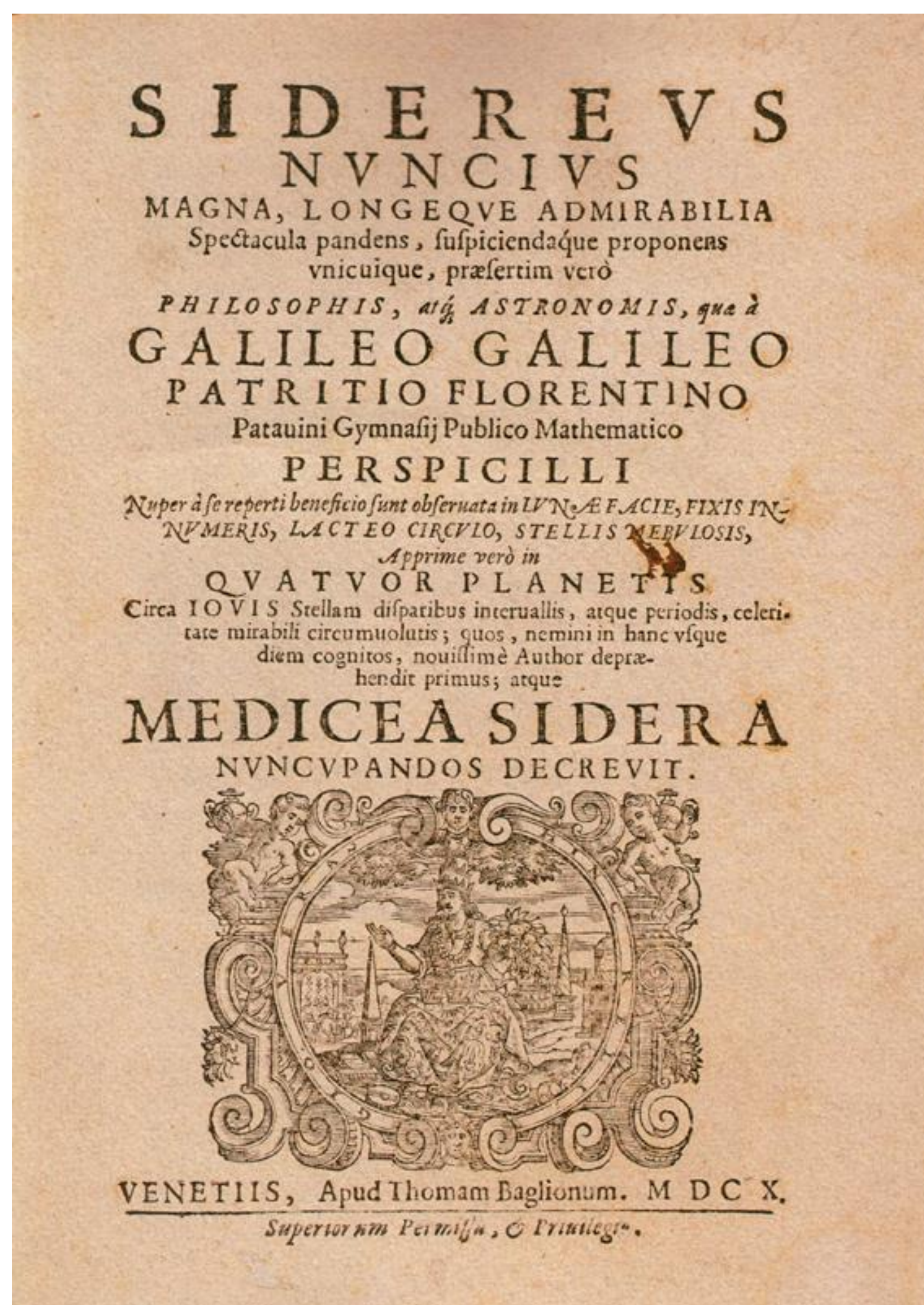
SATELLITES OF JUPITER

Date	Ori.	*	*	○	*	Occ.
7 janvier 1610		*	*	○	*	
8 janvier 1610				○	*	*
10 janvier 1610		*	*	○		
11 janvier 1610		*	*	○		
12 janvier 1610		*	○	*		
13 janvier 1610		*	○	*	*	
15 janvier 1610			○	*	*	*
15 janvier 1610			○	*	*	*
16 janvier 1610		*	○	*		*



The successive positions of the satellites of Jupiter as described in "The Starry Messenger"

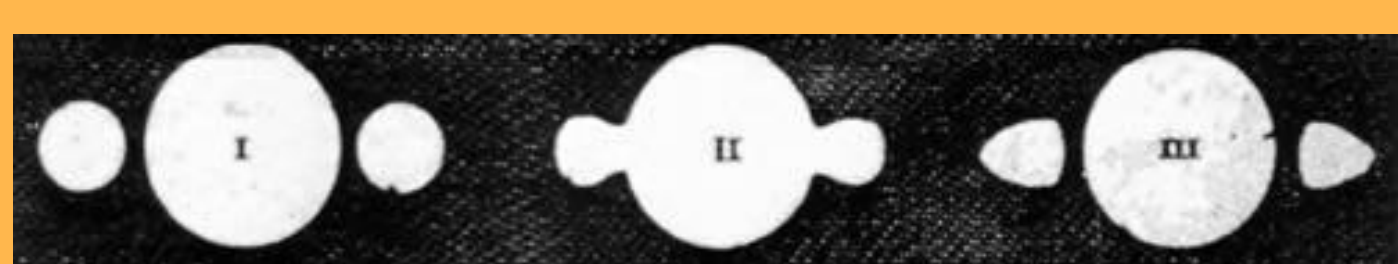
Galileo's 'offer' of the satellites of Jupiter to Cosimo II de' Medici, calling them the "Medicean planets", earned him the honour of a well-paid job in Florence, without the obligation of teaching and hence the opportunity to devote all his time to his researches. Today they bear the names of Io, Europa, Ganymede and Callisto.



On 12 March, 1610, the "The Starry Messenger" (Sidereus Nuncius), one of the most important books in the history of science and cosmological ideas, appeared in Venice, announcing all of these revolutionary discoveries.

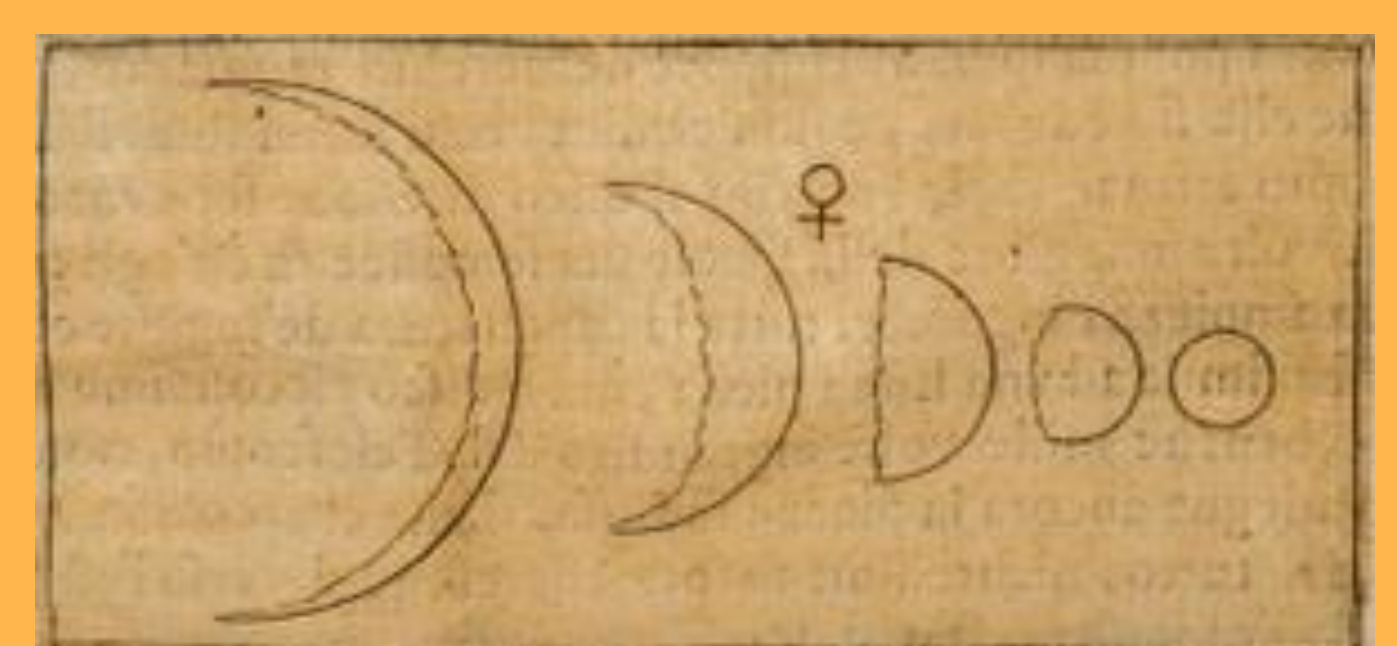
The multiple influences of his family, social and artistic environments are fundamental to his work and to the interpretations of what he was able to do.

SATURN



Still in this same miraculous year, 1610, Galileo observed sunspots, and then, in July, the strange shape of Saturn "which is not a single star but three together, that touch, the one immobile in relation to others" and in September the phases of Venus "the mother of love imitates the phases of the Moon".

PHASES OF VENUS



The impact of these findings was significant and definitively forged the Galileo's reputation. They would shake the geocentric structure of Aristotle and Ptolemy and, after many years of struggle, result in the victory of the heliocentric model of Copernicus.