



# Summary:

- Archaeoastronomy
- Models of the solar system
- The scientific method

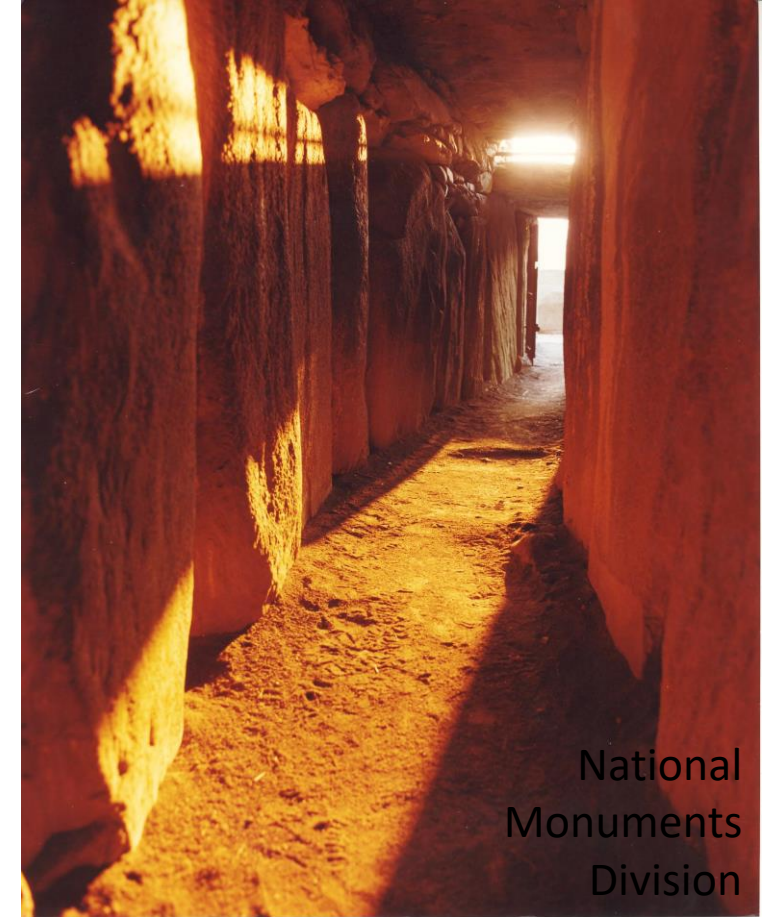


# Astronomy

A History

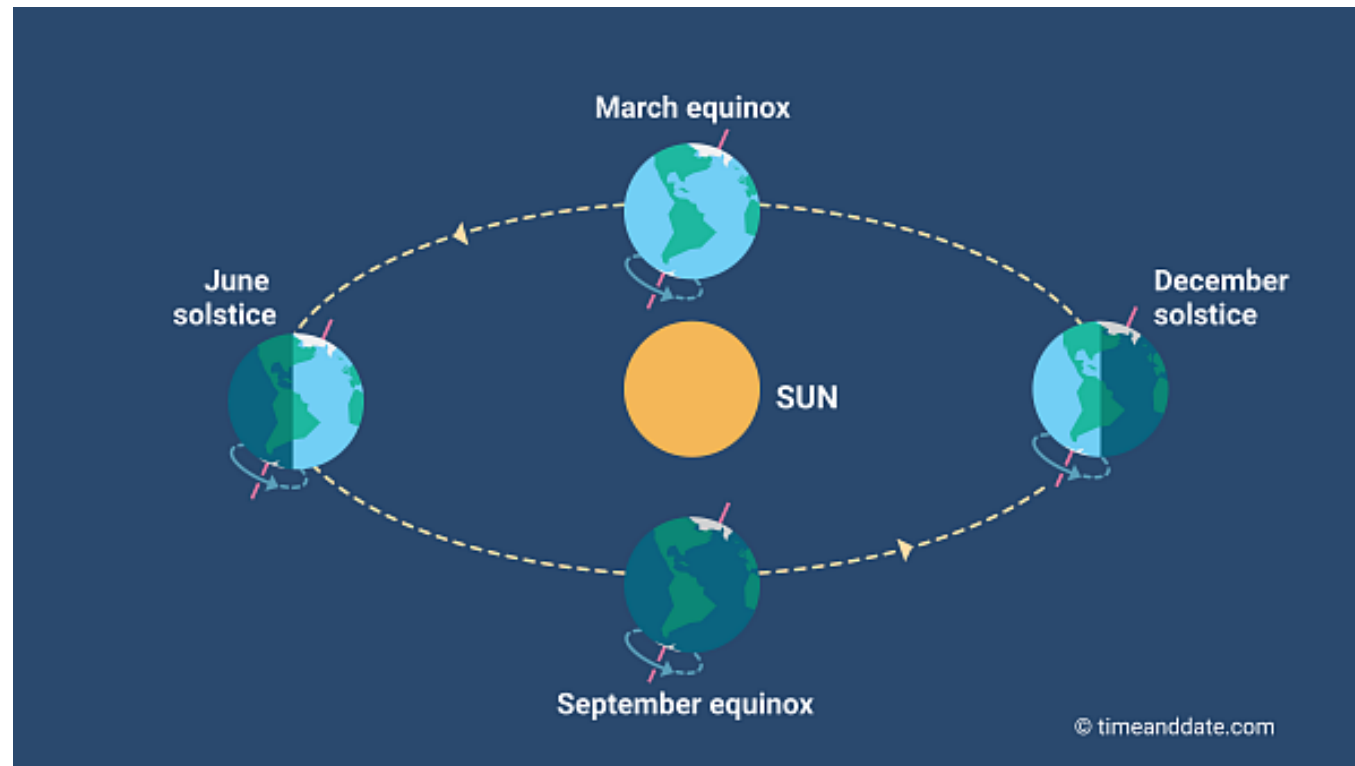
# Archaeoastronomy

- The study of how celestial phenomena influenced ancient cultures



# Solstice

The time when the sun is at its highest or lowest point in the sky, giving us the longest (summer) and shortest (winter) days of the year



# Stonehenge





# Mayans - Chichén Itzá



# Egypt – Great Pyramids



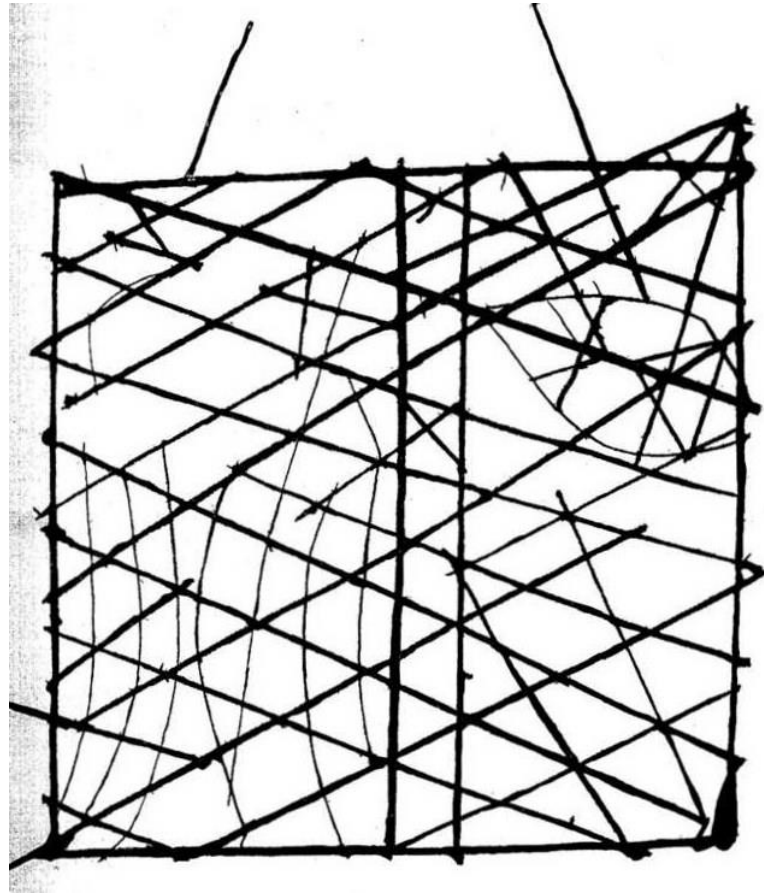


# Antikythera mechanism





# Polynesian Navigation



NZETC

# Hawaii - Makahiki



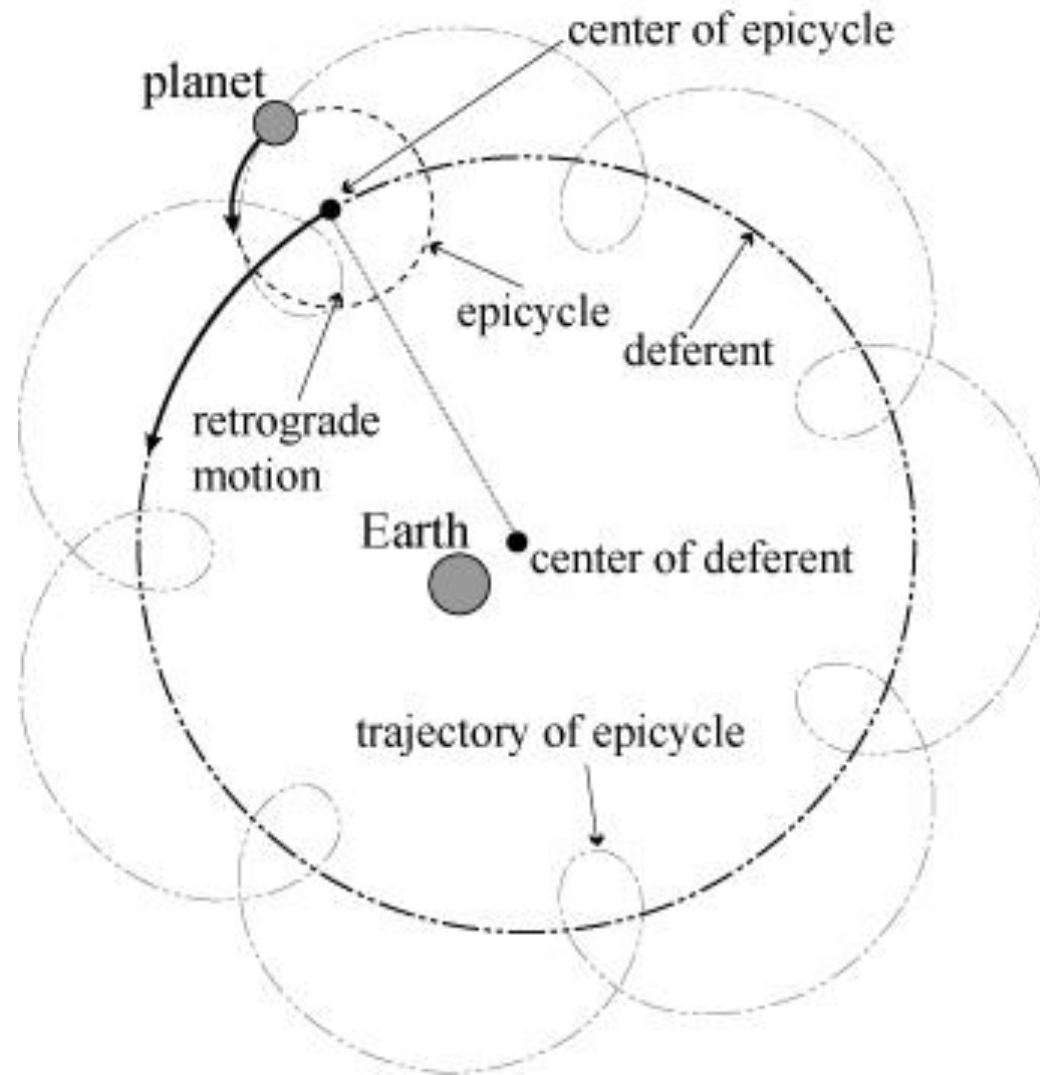
# Solar System Models

Each of these famous astronomers/scientists helped improve our model for the solar system by making new observations or taking new data

- Ptolemy
- Pythagoras
- Aristarchus

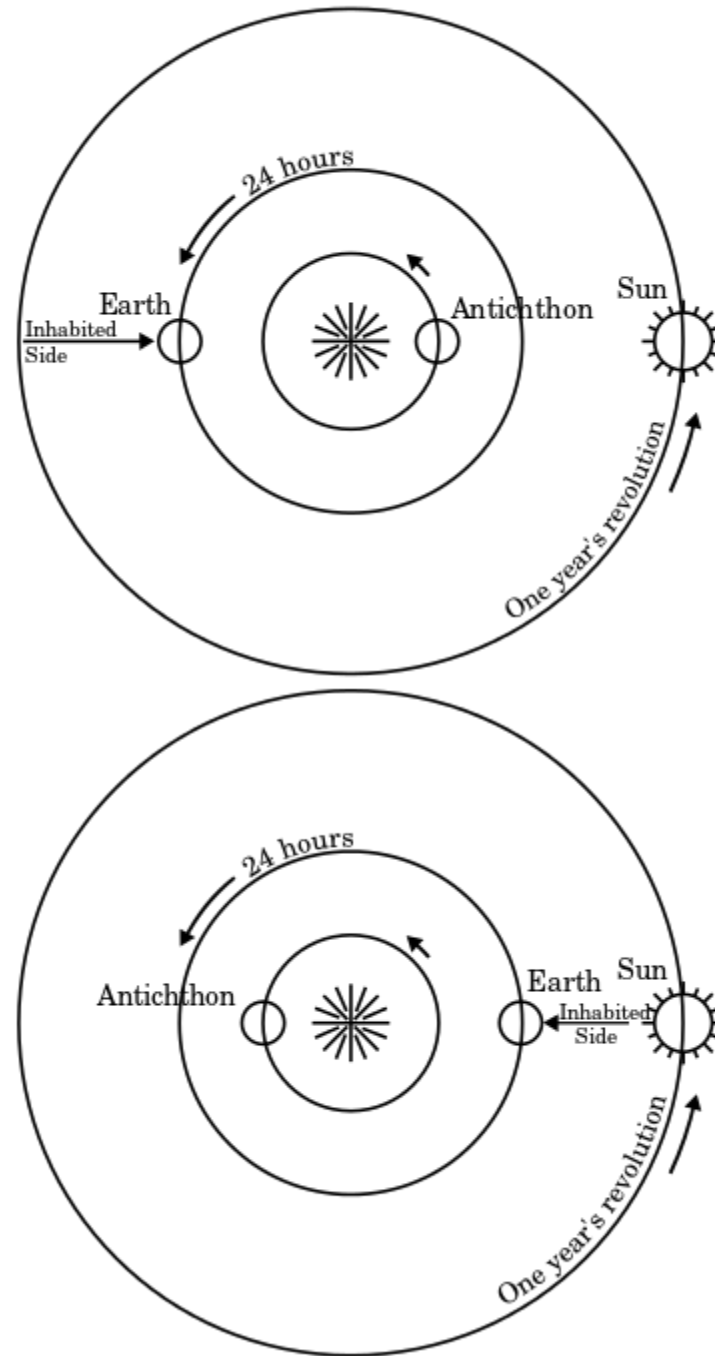
- Copernicus
- Tycho
- Kepler
- Galileo

# Ptolemy

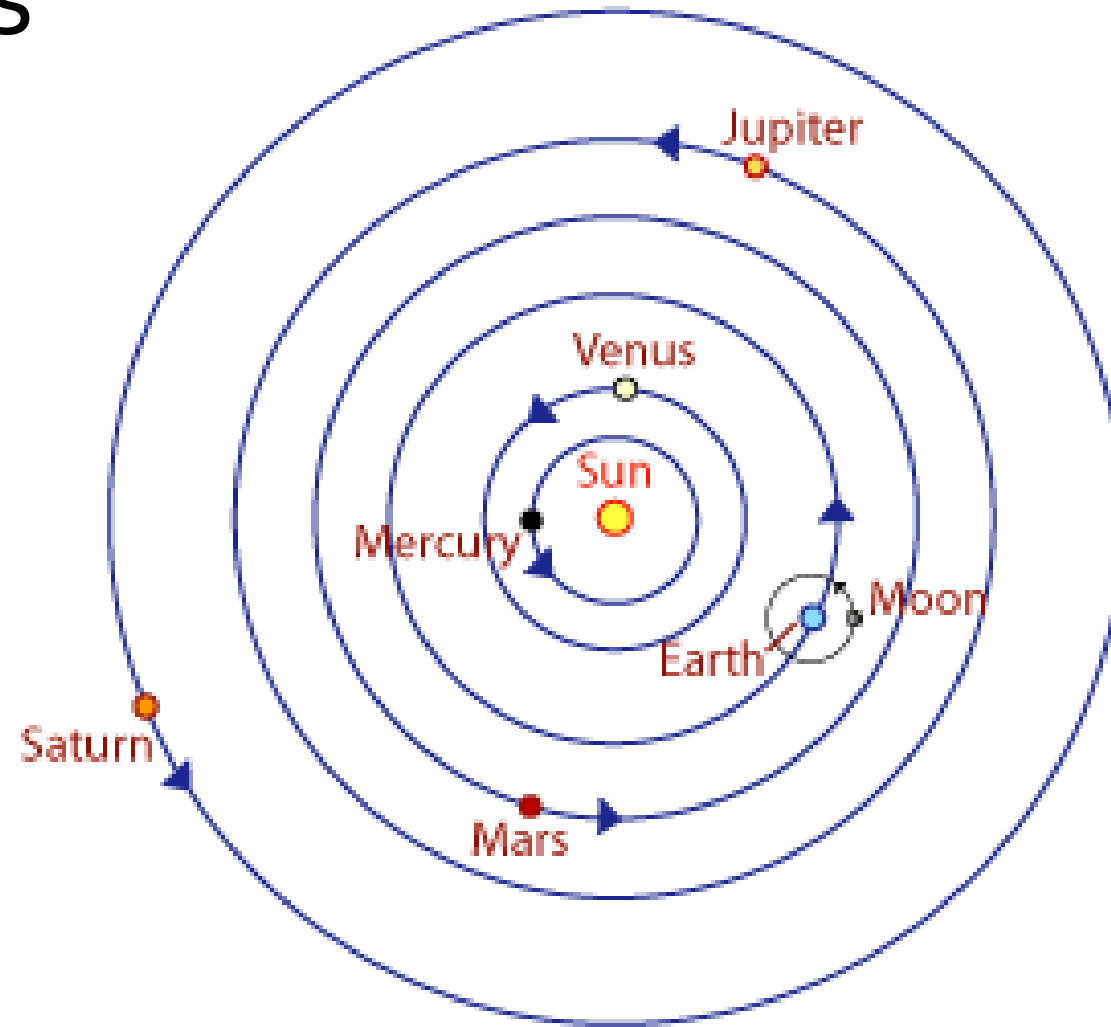




# Pythagoras

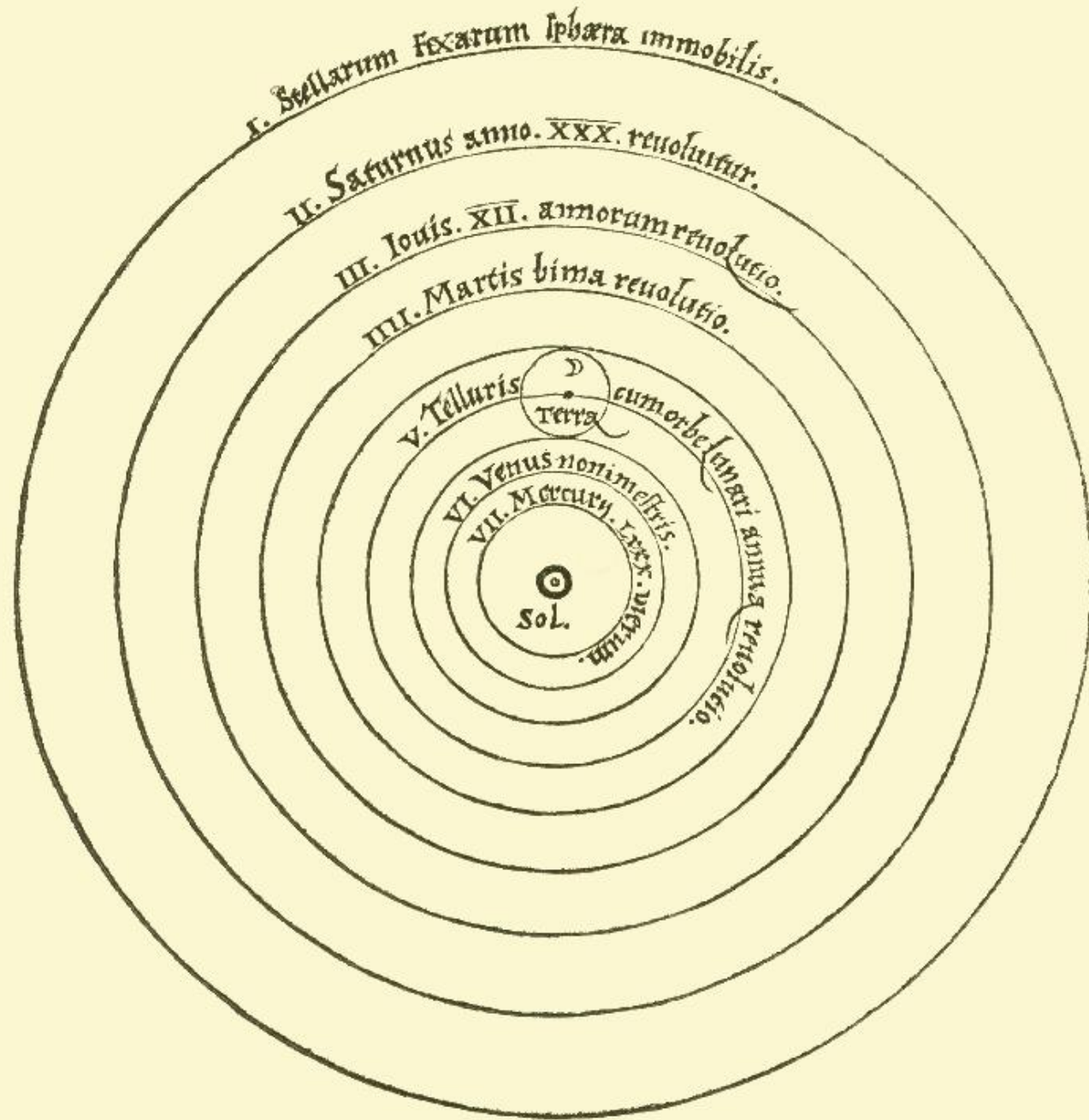


# Aristarchus

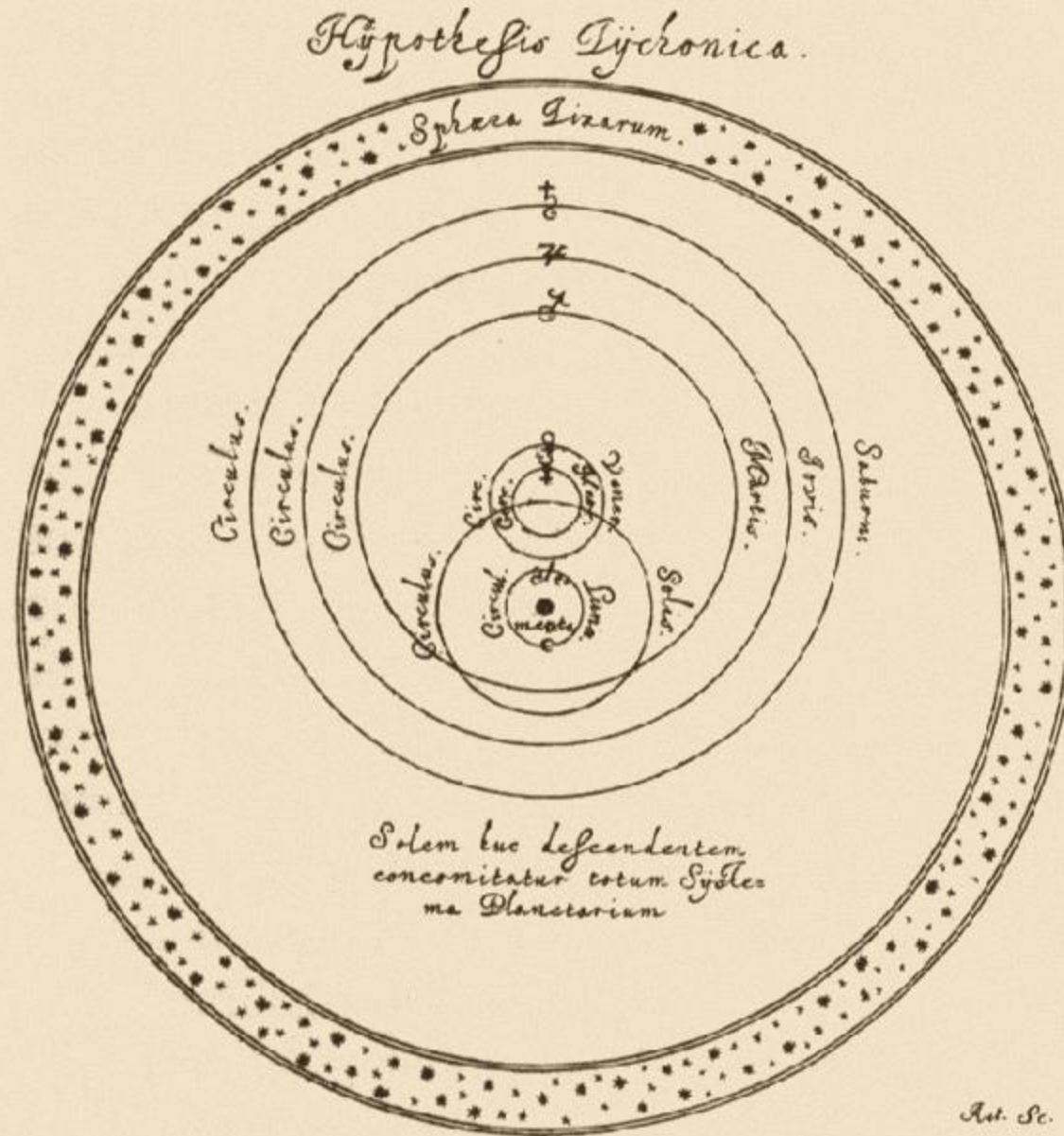


*Aristarchus' Heliocentric Model*  
(Not to scale)

# Copernicus



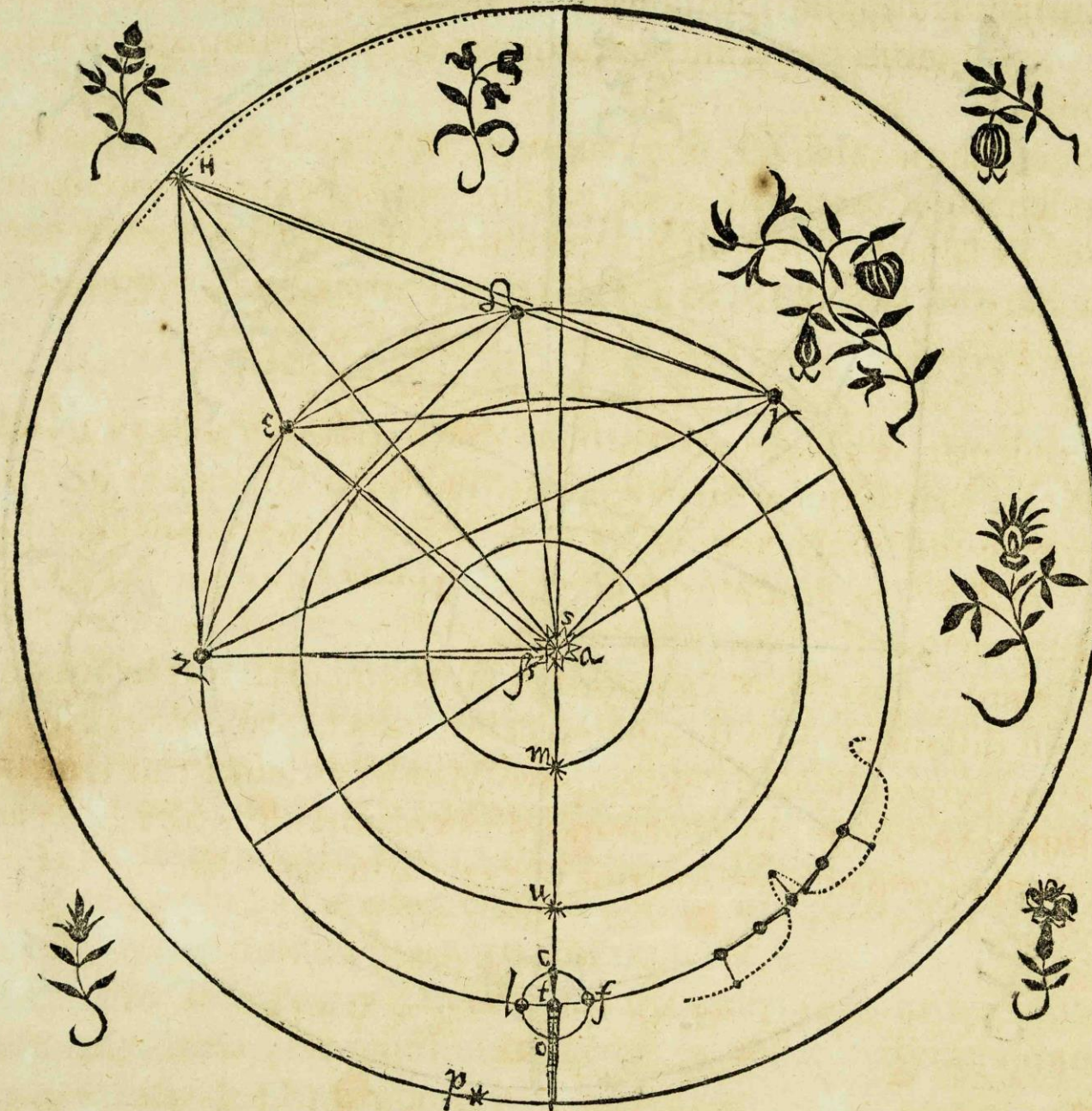
# Tycho





Kepler

DE MOTIB. STELLÆ MARTIS





# Galileo

Sex<sup>mo</sup> Principe.

Galileo Galilei Humilis<sup>o</sup> Servo della Ser<sup>a</sup> V.<sup>a</sup> inuigilan-  
do assiduamente, et da ogni spirito p<sup>o</sup> potere n<sup>o</sup> solam<sup>te</sup> satisfare  
alcunio che tiene della lettura di Matematici nello stu-  
dio di Padoua,

Inuere dauere determinato di presentare al Sex<sup>mo</sup> Principe  
l'Orchiale et A<sup>o</sup> p<sup>o</sup> essere di giouamento inestimabile p<sup>o</sup> ogni  
negozio et impresa marittima o terrestre stimo di tenere quel-  
lo nuovo artificio nel maggior segreto et solam<sup>te</sup> a disposizione  
di V. Ser<sup>a</sup>. L'Orchiale auuto dalle piu<sup>e</sup> u<sup>e</sup> d'ite speculazioni di  
prospettina ha il uantaggio di scoprire Legni et Vele dell' inimico  
p<sup>o</sup> due hore et piu<sup>e</sup> di tempo prima ch' egli scoupra noi et distinguendo  
il numero et la qualita<sup>e</sup> de i Vasselli giudicare le sue forze  
pallottarsi alla caccia al combattimento o alla fuga, o pure anco  
nella campagna aperta uedere et particolarmente distinguere ogni suo  
moto et preparatione.

Adi 7. di Gennaio

Gione si uede u<sup>e</sup>

Adi 8 u<sup>e</sup>

Adi 12. si uede in tale costituzione

Adi 13. si uede u<sup>e</sup> u<sup>e</sup> a Gione 4 stelle

Adi 14 è rugolo

Adi 15 la press<sup>a</sup> a 4 ora la m<sup>o</sup> la 4<sup>a</sup> ora di

stante dalla 3<sup>a</sup> il doppio liara

Lo spazio delle 3 u<sup>e</sup> u<sup>e</sup> u<sup>e</sup> ora

maggior del diametro di 7 et e =

rano in linea retta.



# The Heliocentric Model

- Galileo's observations of the phases of Venus and the Galilean moons of Jupiter proved that not everything orbits the Earth
- His observations of sunspots and lunar craters proved the heaven was not perfect
- He suggested that we couldn't actually measure stellar parallax yet and that some stars are so distance they have no parallax
- Galileo showed that we can move with the motion of the Earth around the sun (as can the moon) without being left behind as Earth moved in its orbit by formulating an early version of Newton's first law of motion

How does evolution follow the Scientific Method?



Up next:

# The Earth: Orbit

