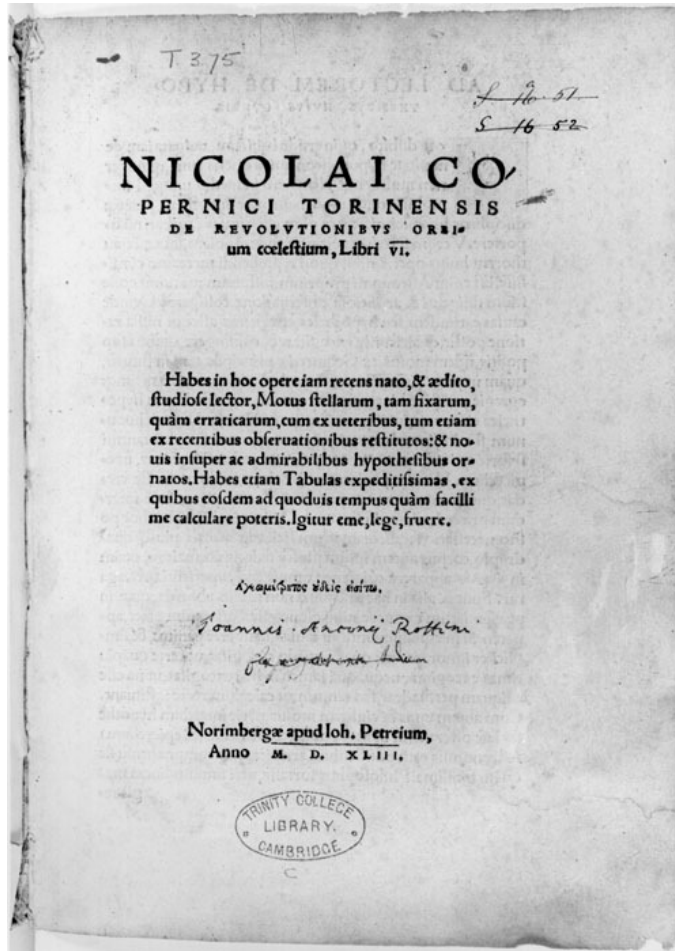


NÝÖLD

Sólmiðjukenningin

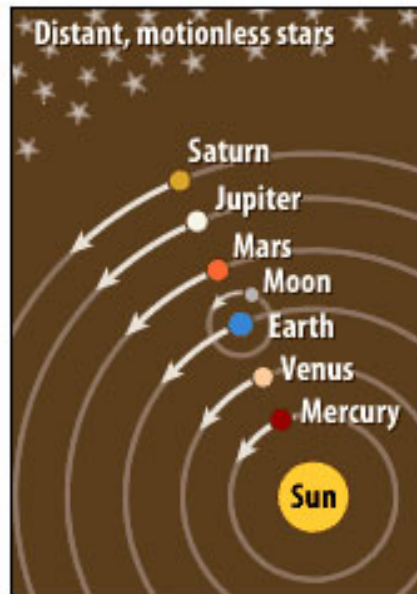
Kóperníkus (1473-1543)



De revolutionibus orbium coelestibus 1543

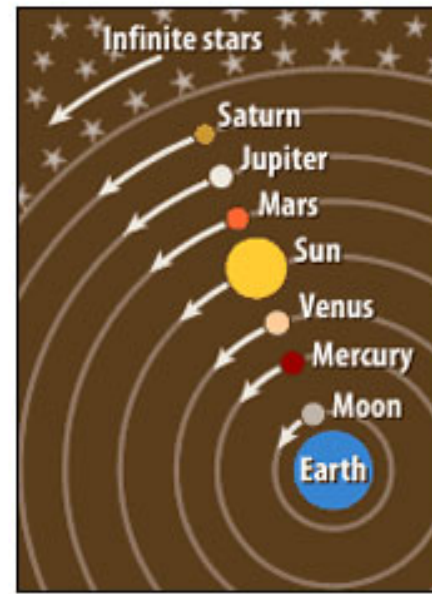
Sólmiðjukenning vs. jarðmiðjukenning

Heliocentric Theory



Reikistjörnur snúast um kyrrstæða sól

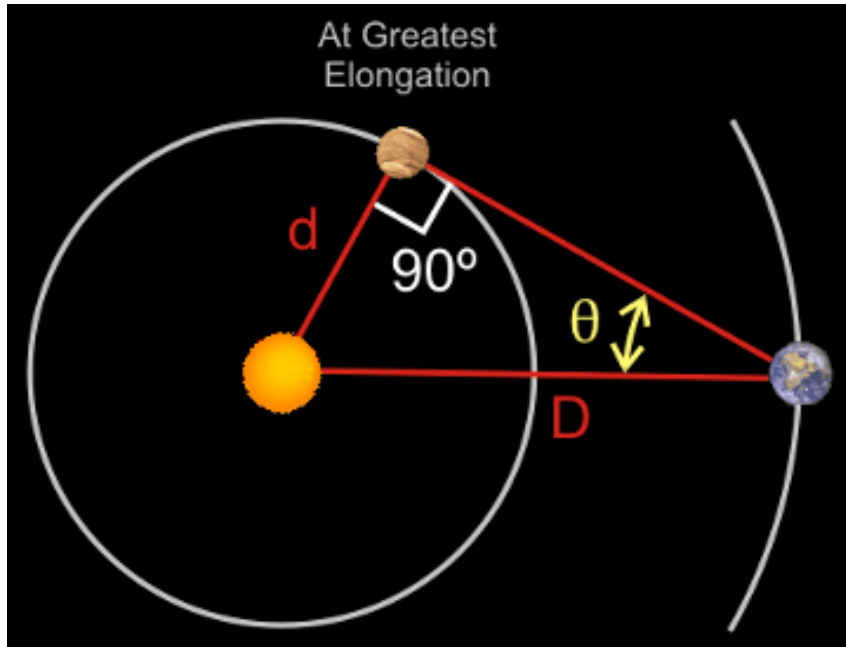
Geocentric Theory



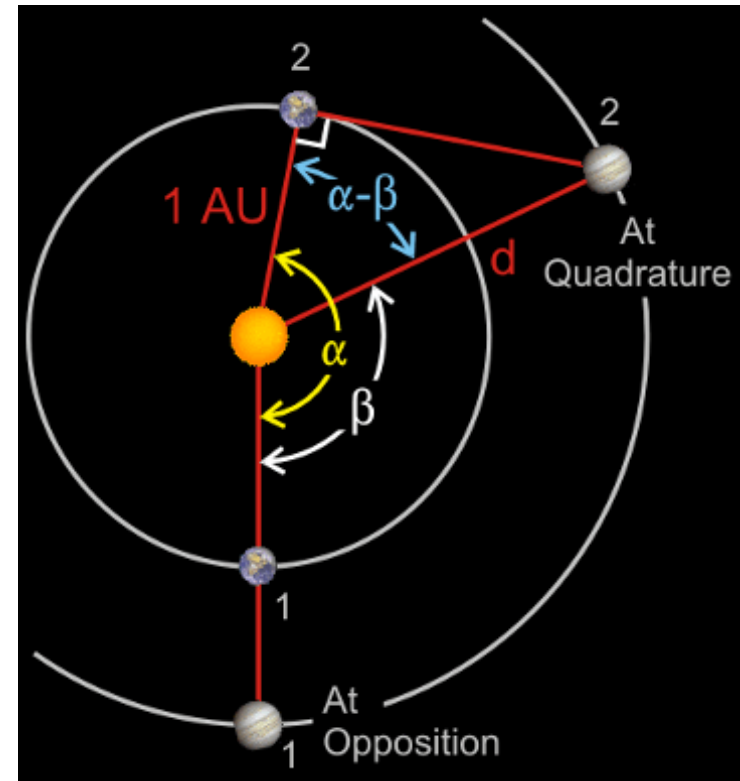
Föruhnettir snúast um kyrrstæða jörð

Reikistjörnuheimur Kóperníkusar var u.þ.b. helmingi minni en föruhhattaheimur Ptólemaíósar, en fjarlægðin til fastastjarnanna var mun meiri (hliðrun ekki sjáanleg).

Hlutfallsleg stærð brauta í sólmiðjukerfinu

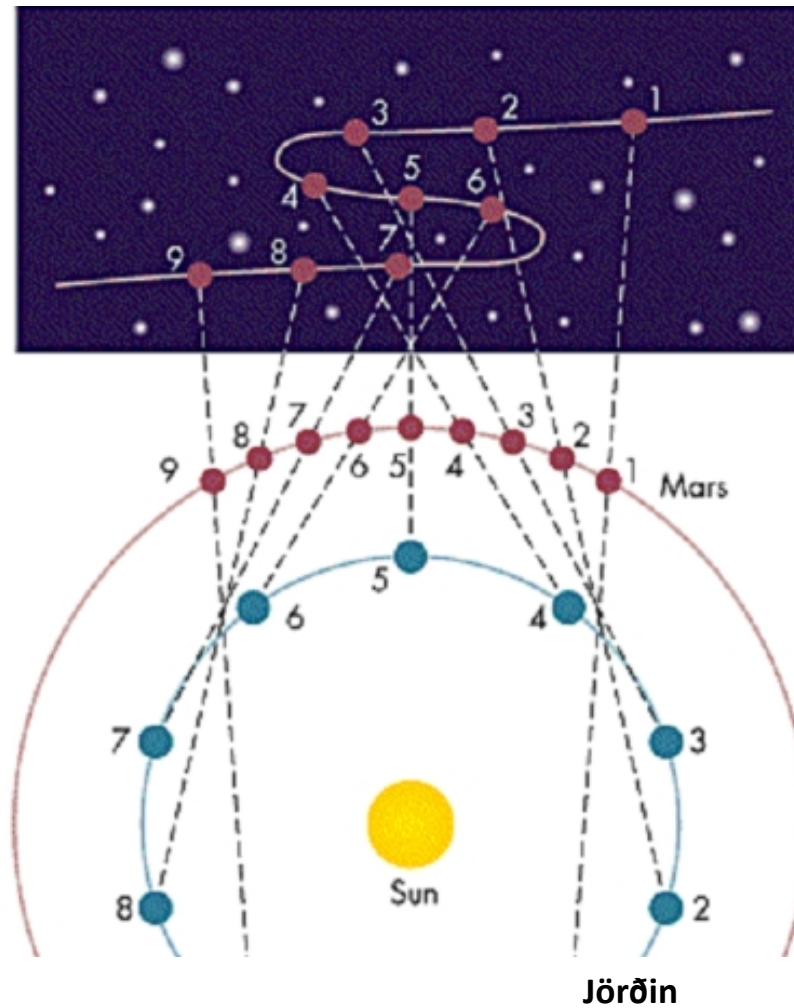


Fjarlægð innri reikistjörnu frá sólinni = d .
 $D = 1$ AU (AU = stjarnfræðieining)

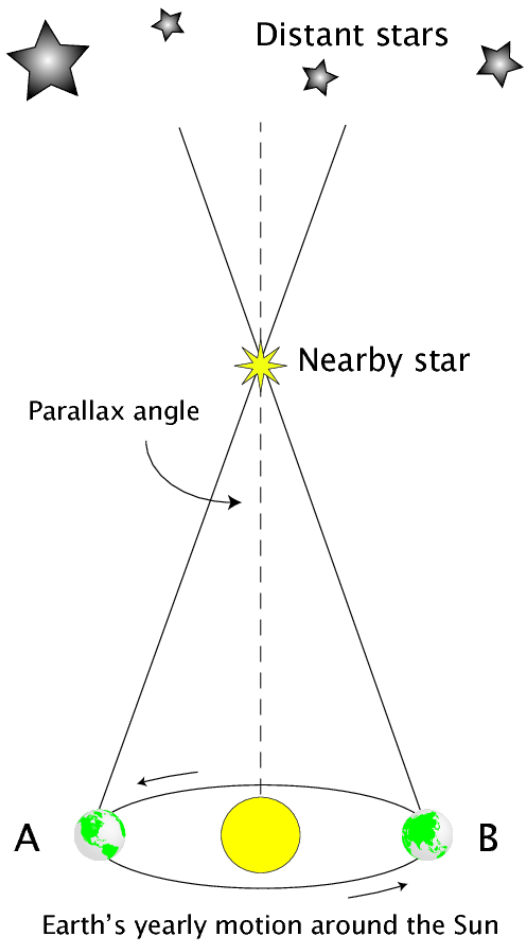


Fjarlægð ytri reikistjörnu frá sólinni = d

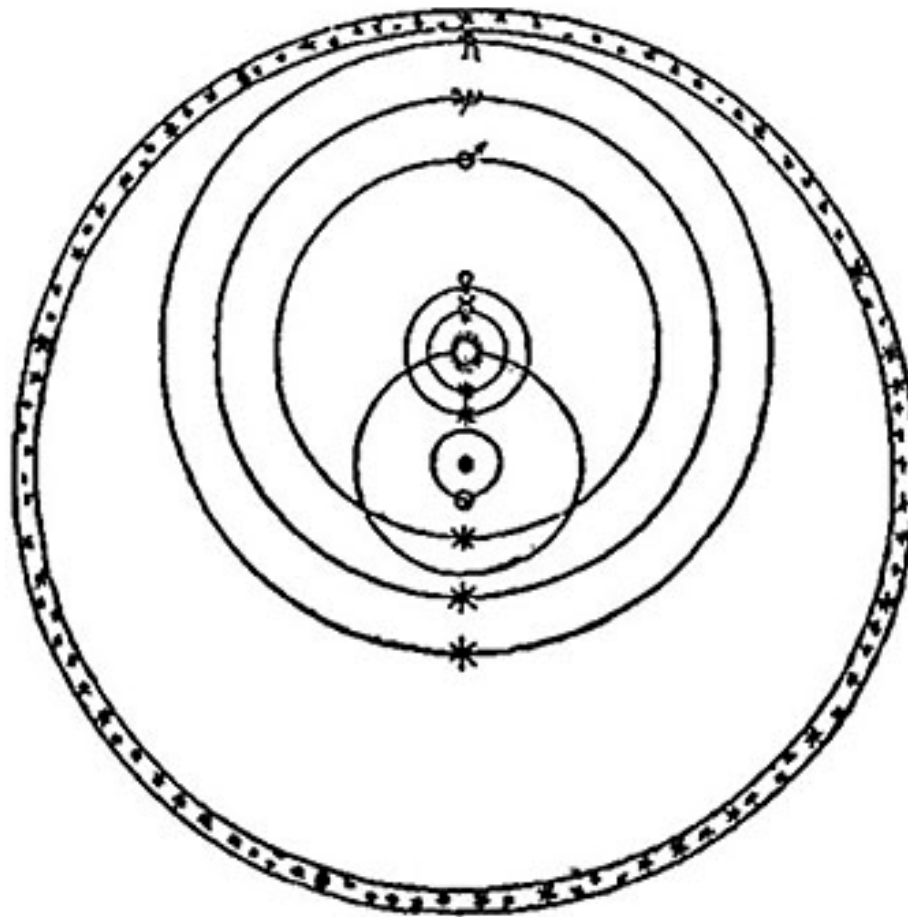
Bakhreyfing skv. sólmiðjukenningunni



Árleg hliðrun fastastjarna

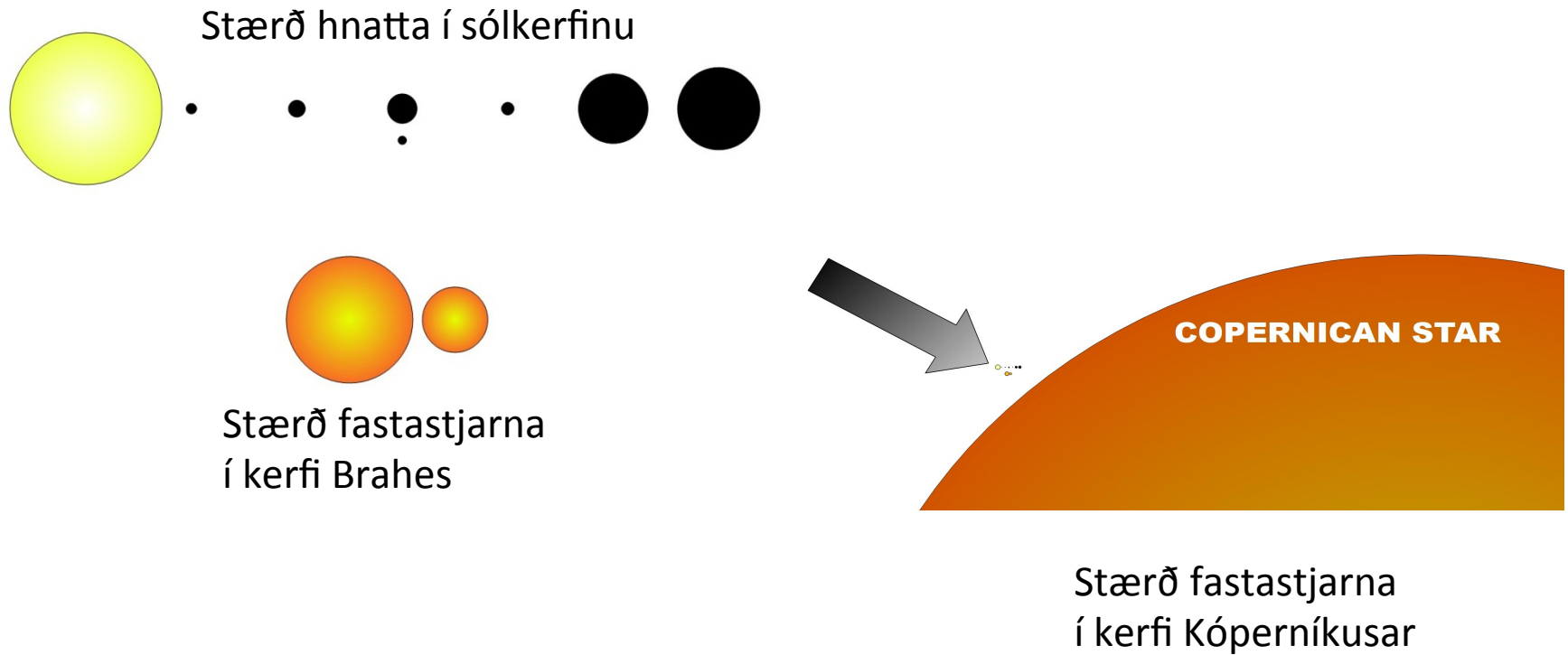


Jarðmiðjukenning Tycho Brahe (1546-1601)

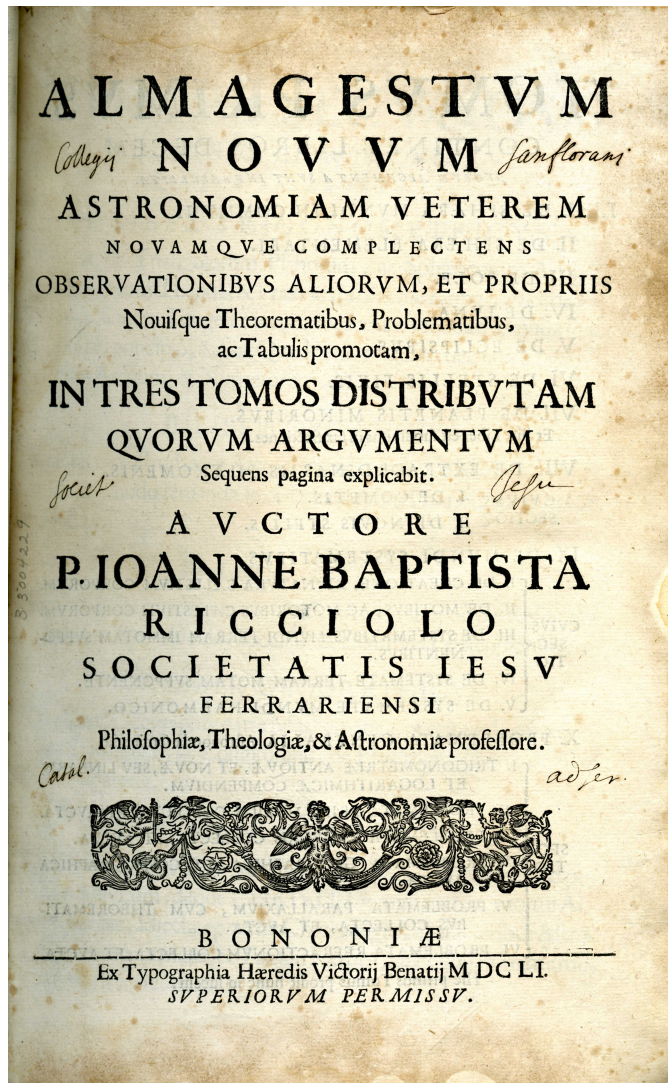


Myndin birtist á prenti 1588

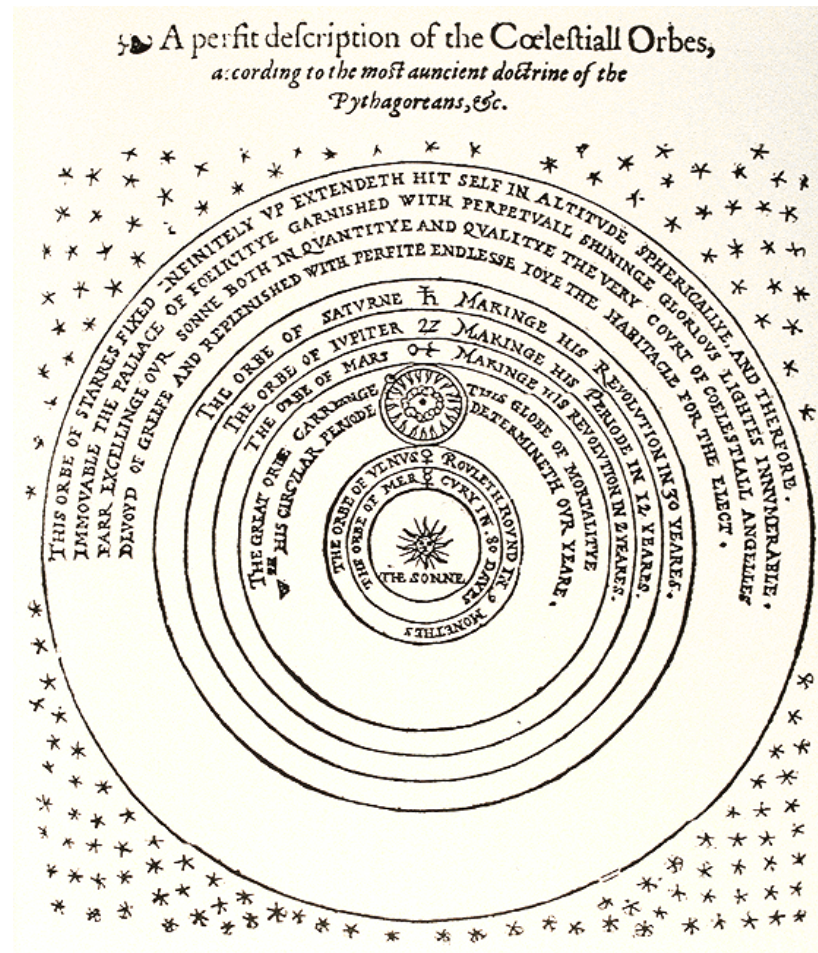
Mat Tychos Brahe á stærð fastastjarna



Giovanni Riccioli (1598-1671)

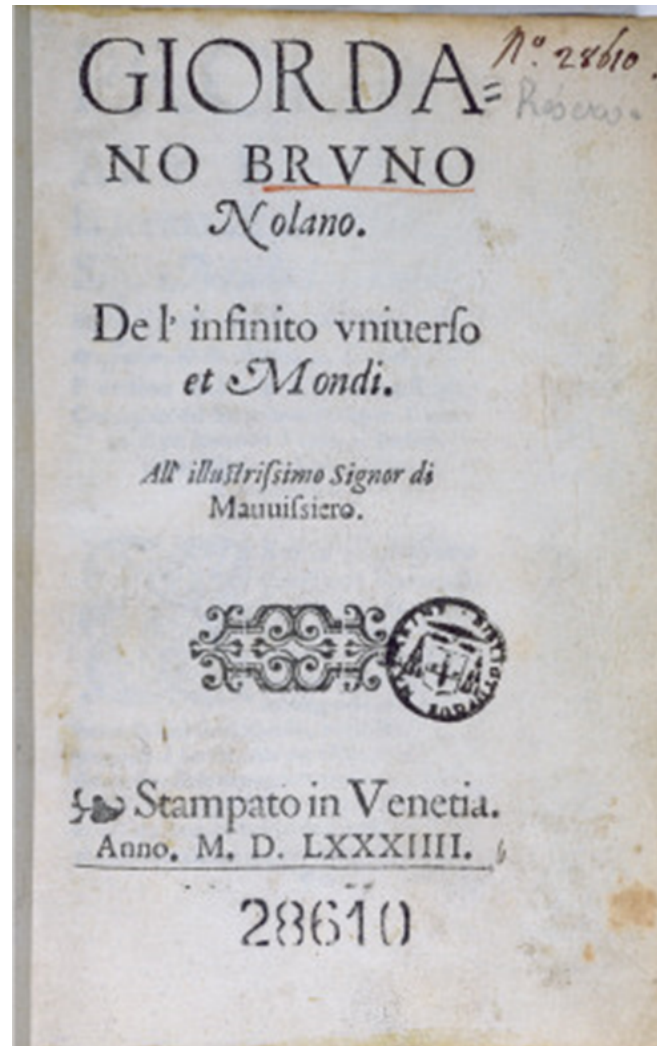


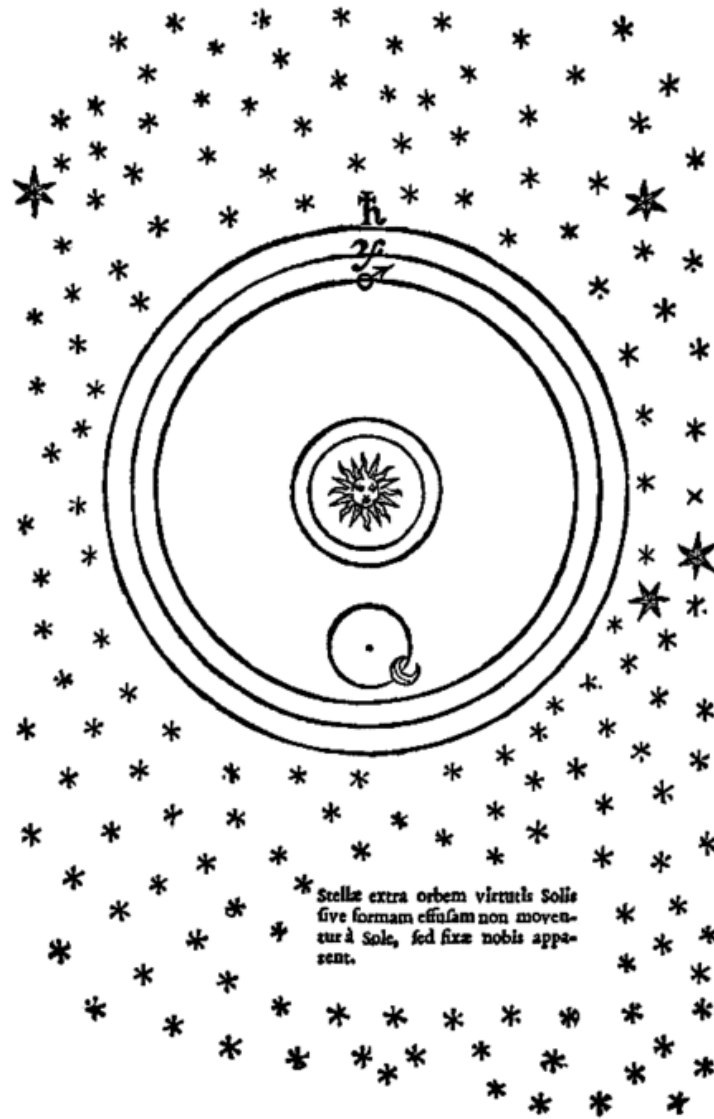
Óendanlegur heimur?



Úr bók Tómasar Digges (1546-1595) frá 1576

Giordano Bruno (1548-1600)

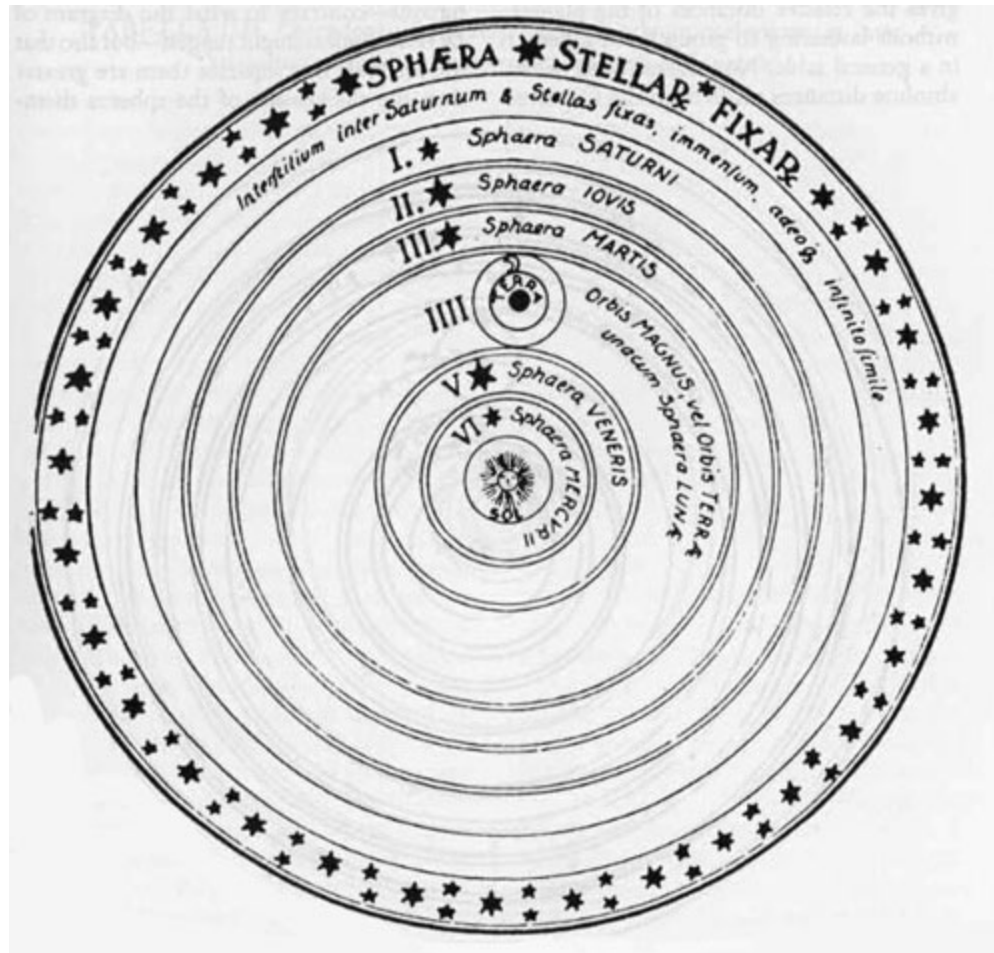




Úr bók Williams Gilbert (1544-1603) *De mundo sublunari* frá 1651

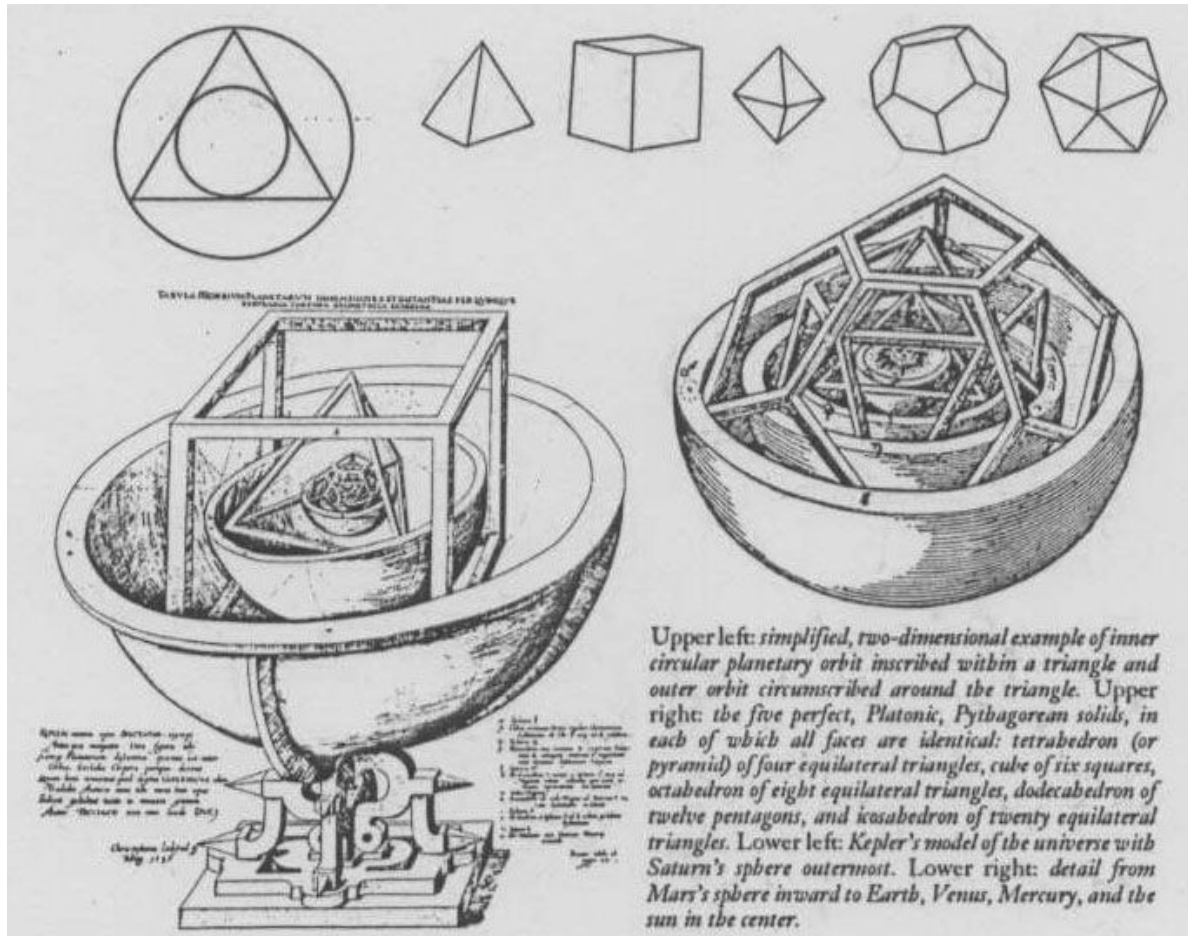
Jóhannes Kepler (1571-1630)

Hinn endanlegi heimur Keplers



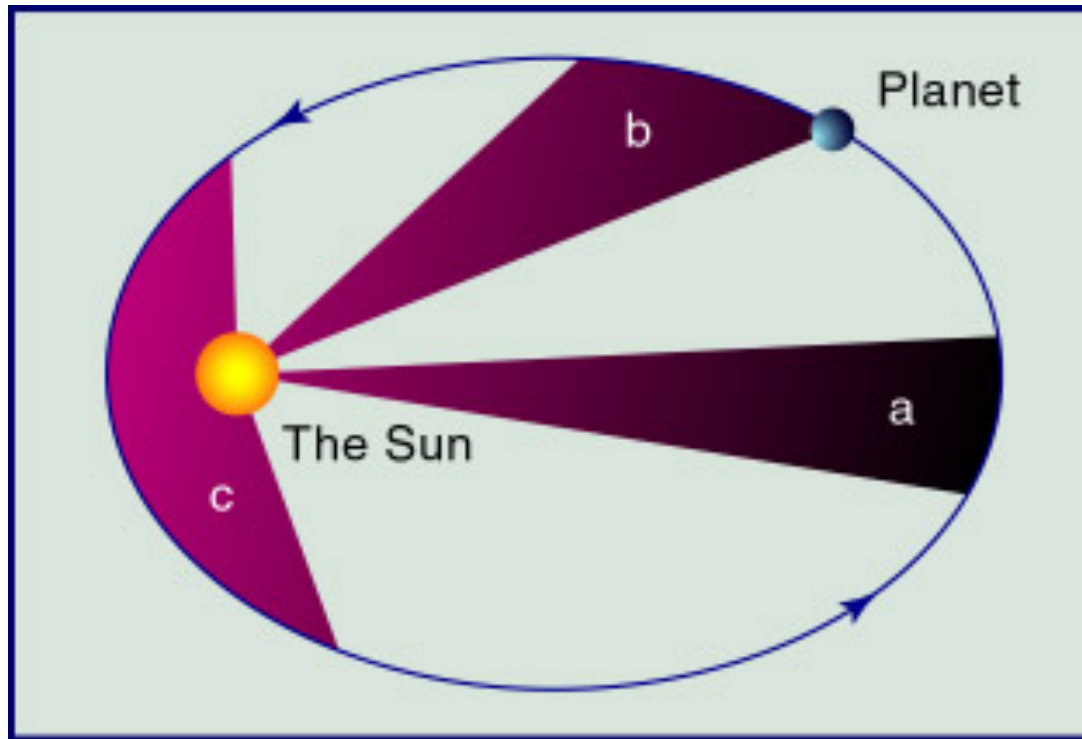
Mynd úr verki Rheticusar, *Narratio prima*,
sem Maestlin (kennari Keplers) gaf út 1596

Margflötungalíkan Keplers



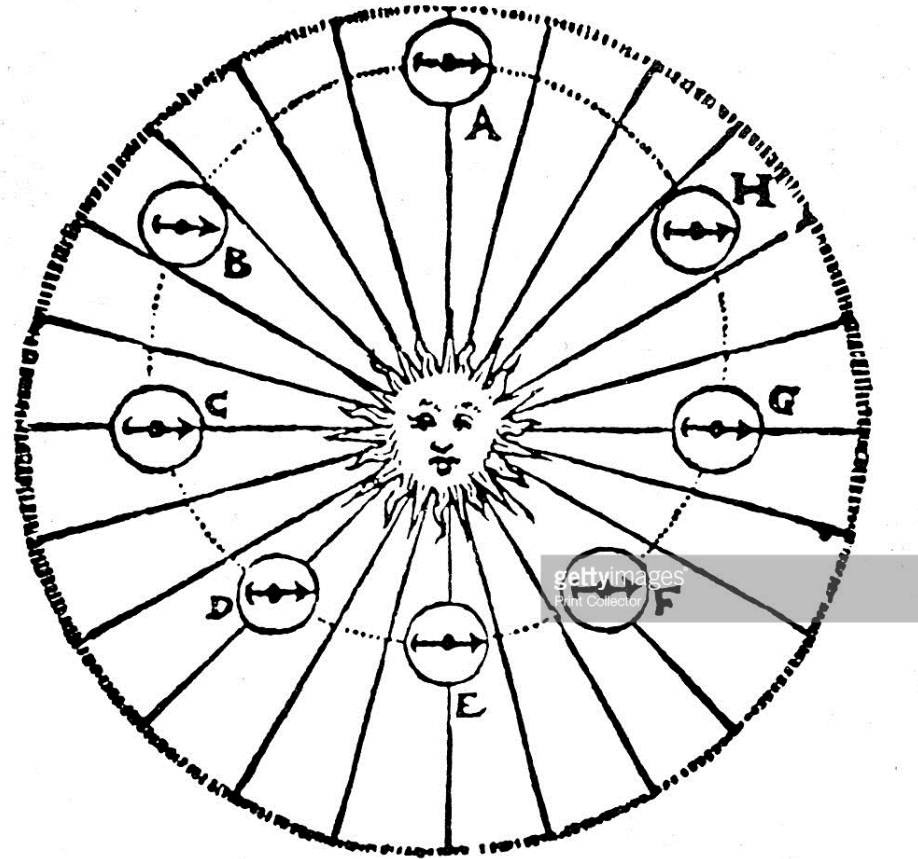
Úr *Mysterium Cosmographicum* frá 1596

Lögmál Keplers



Fyrsta og annað 1609; þriðja 1619

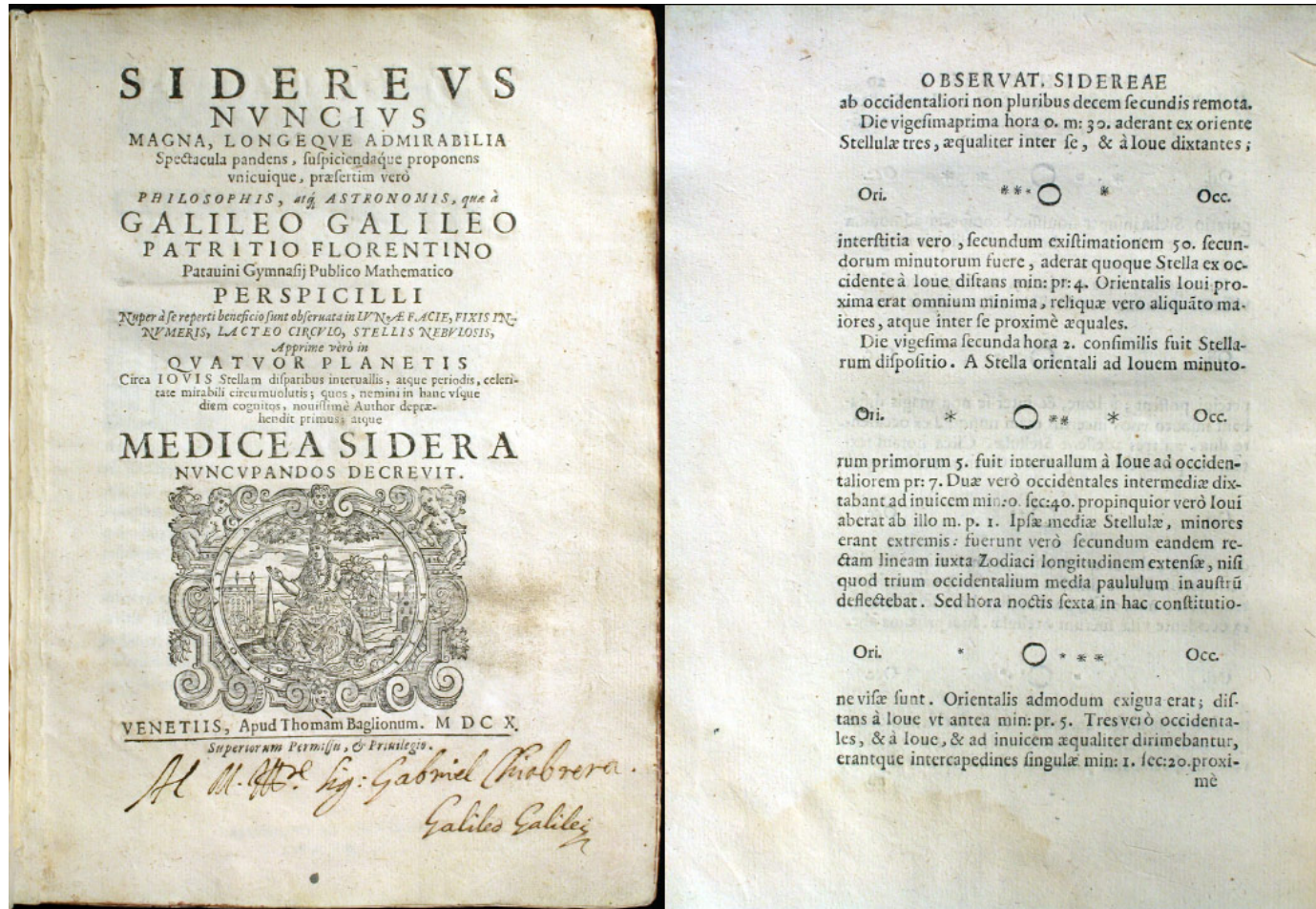
Kenning Keplers um segulafli sólar



Galileo Galilei (1564-1642)

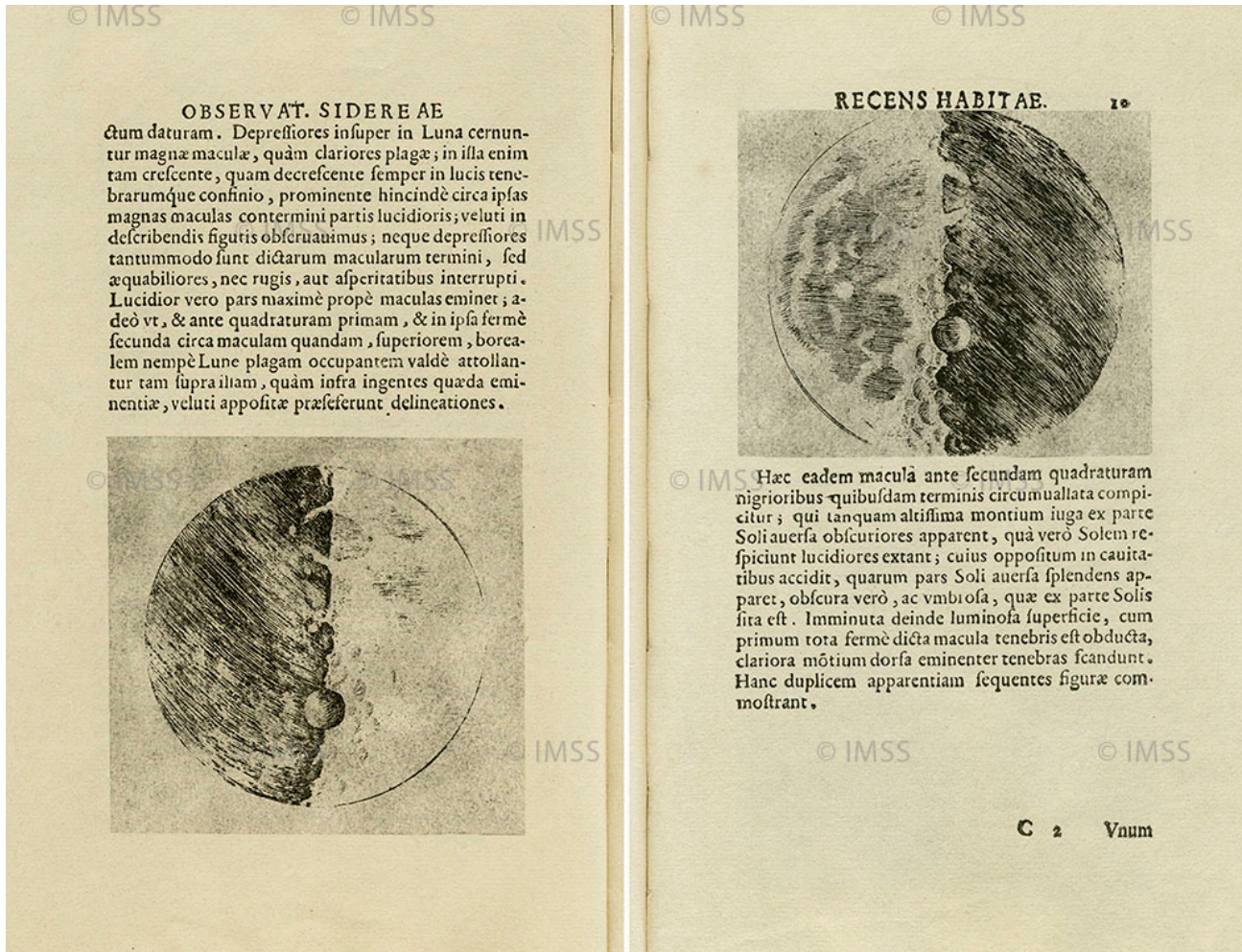


Tungl Júpíters

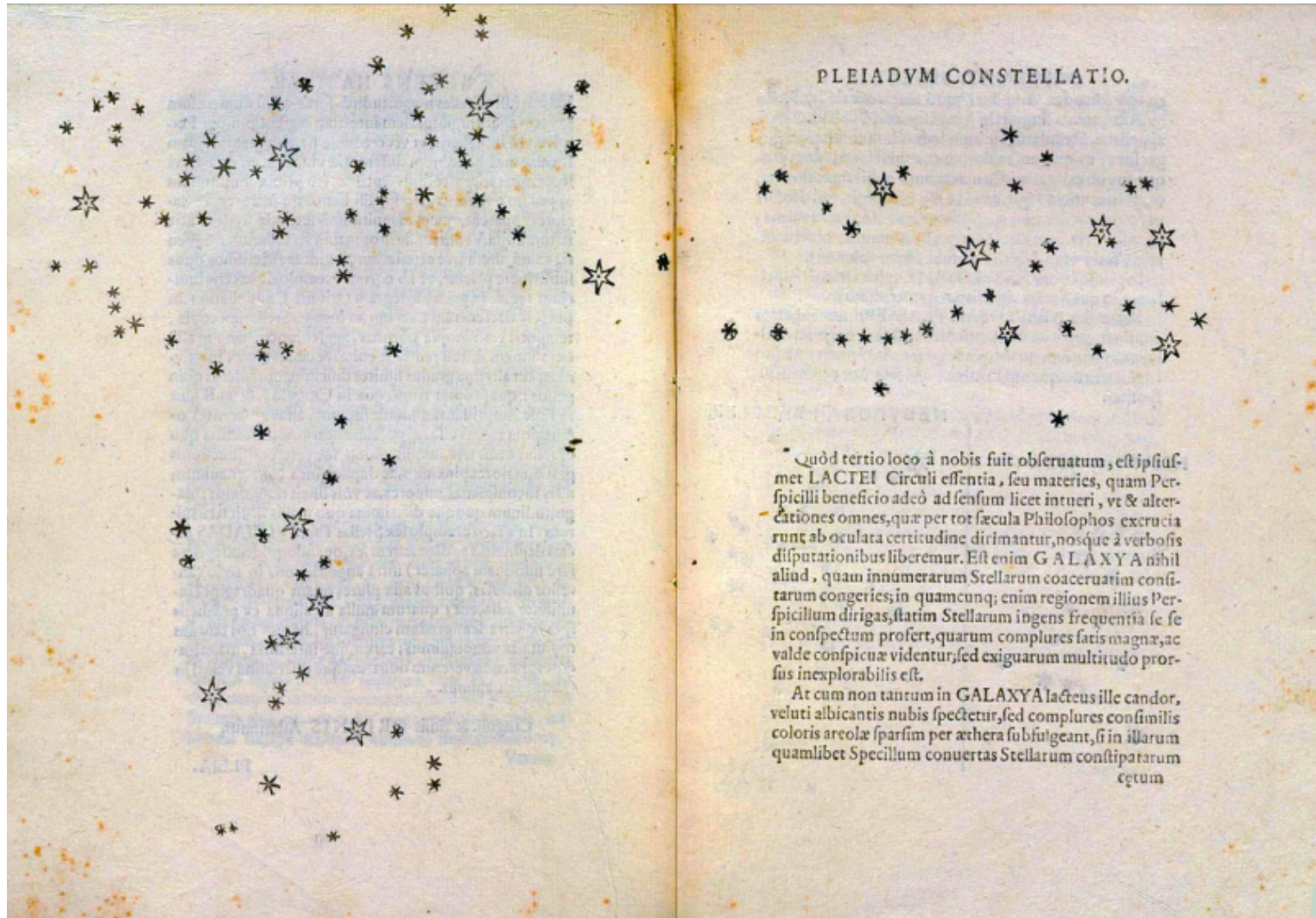


Úr Sidereus nuncius frá 1610

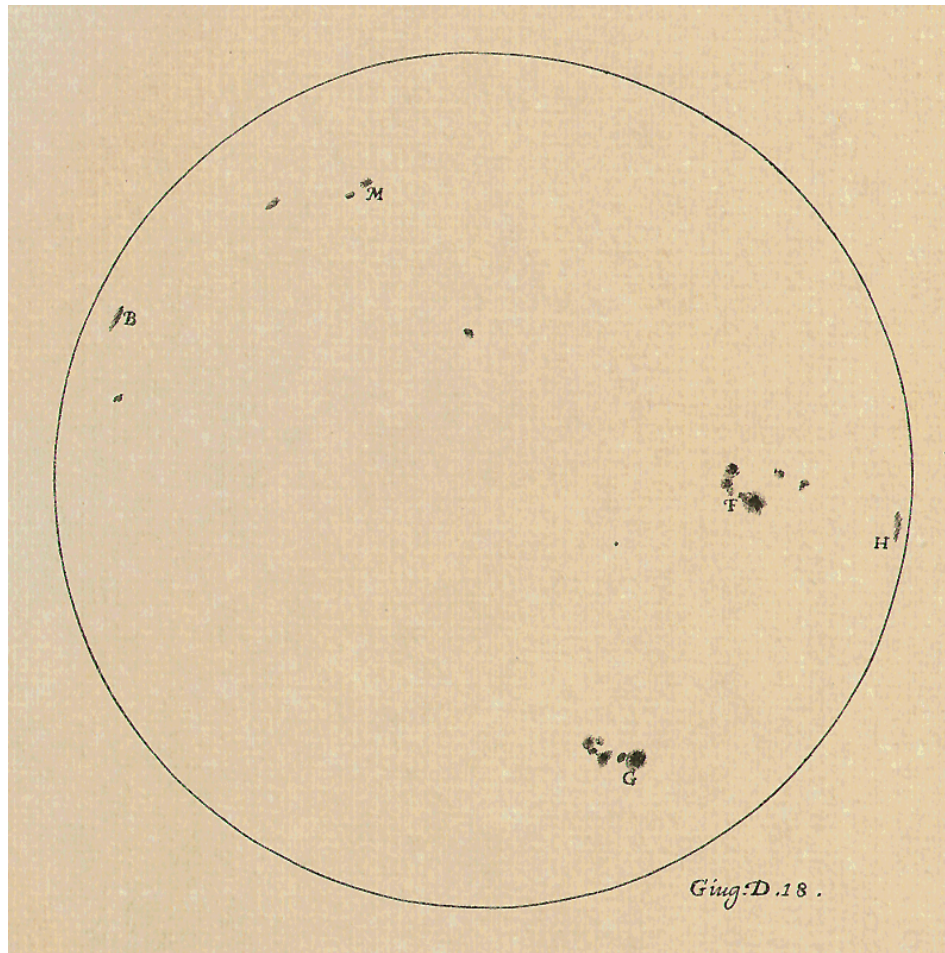
Fjöll á tunglinu



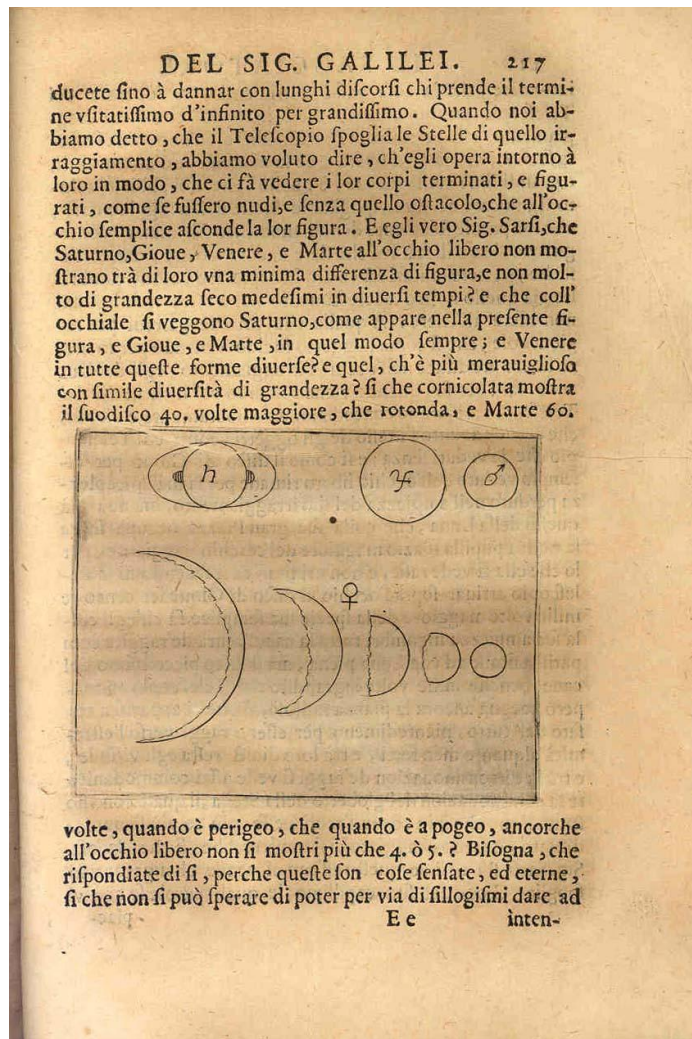
Vetrarbrautin (til vinstri) – Sjöstirnið (til hægri)



Úr bréfum um sólbletti 1613

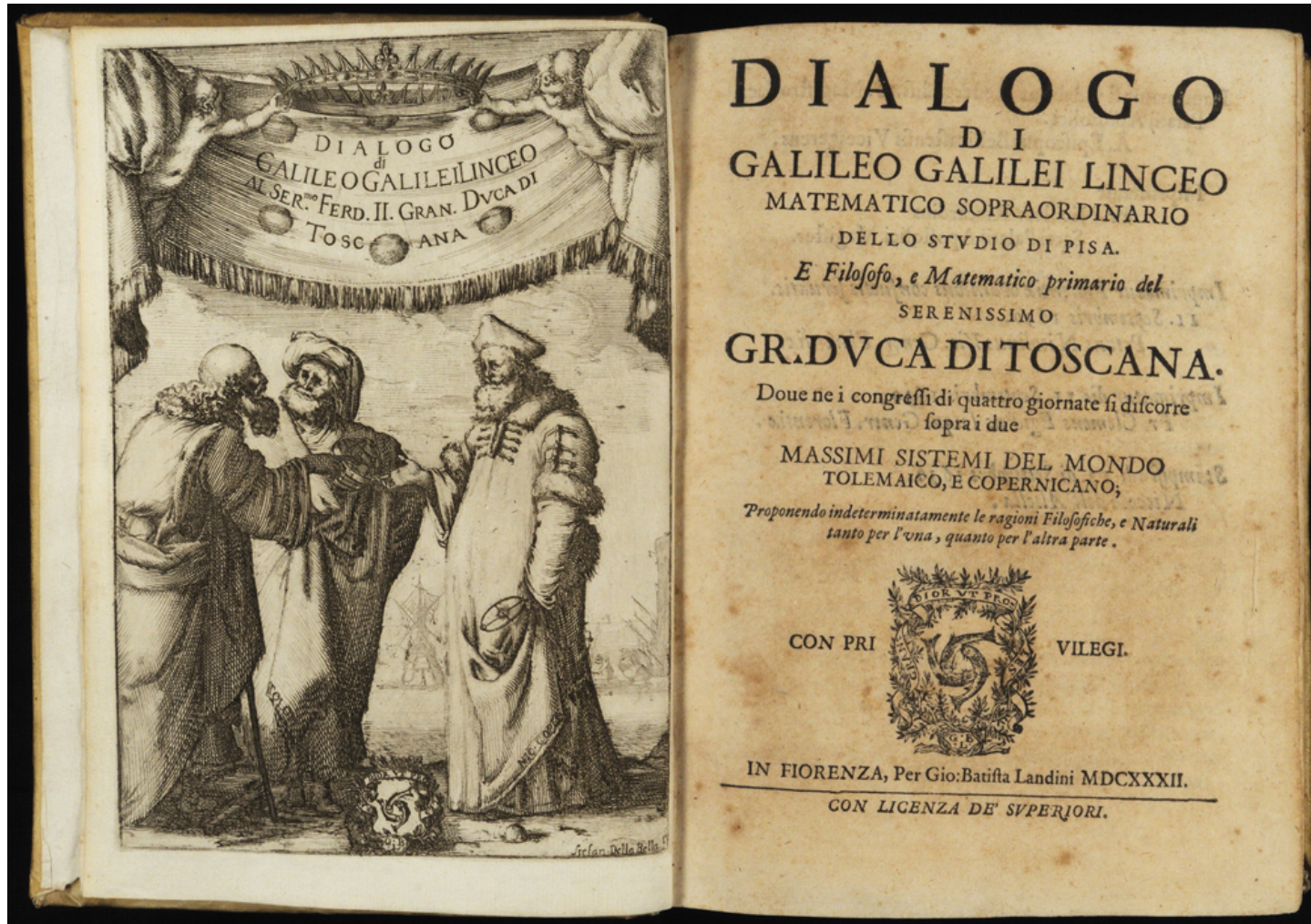


Fasaskipti Venusar og eyru Satúrnusar



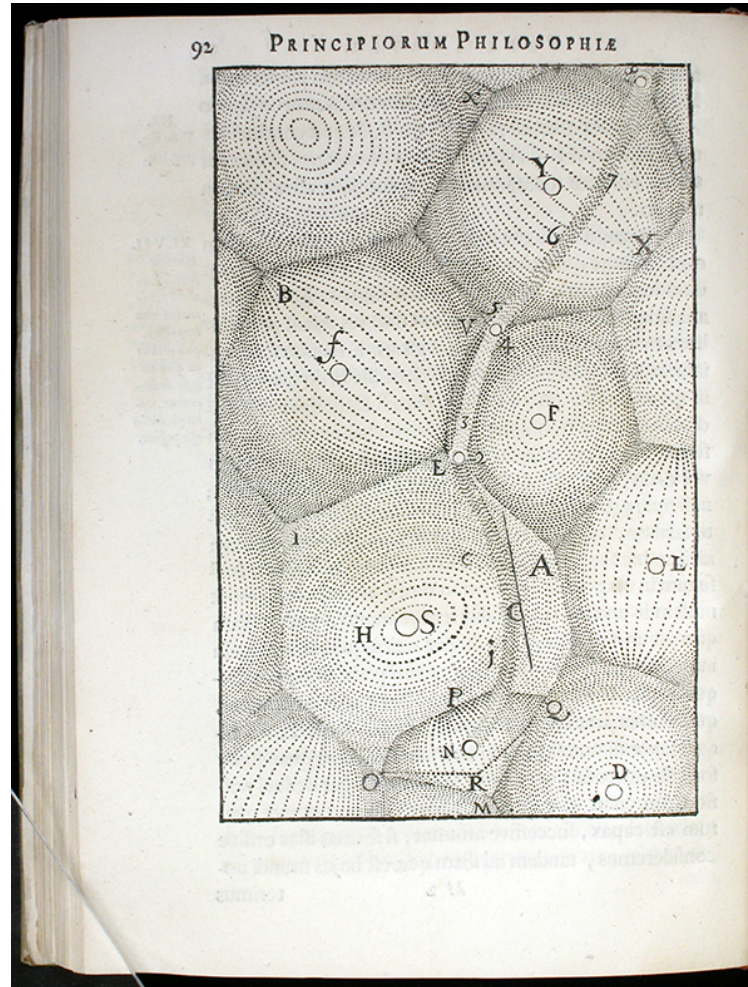
Úr *Il Saggiatore* frá 1623

Um heimskerfin tvö (1632)

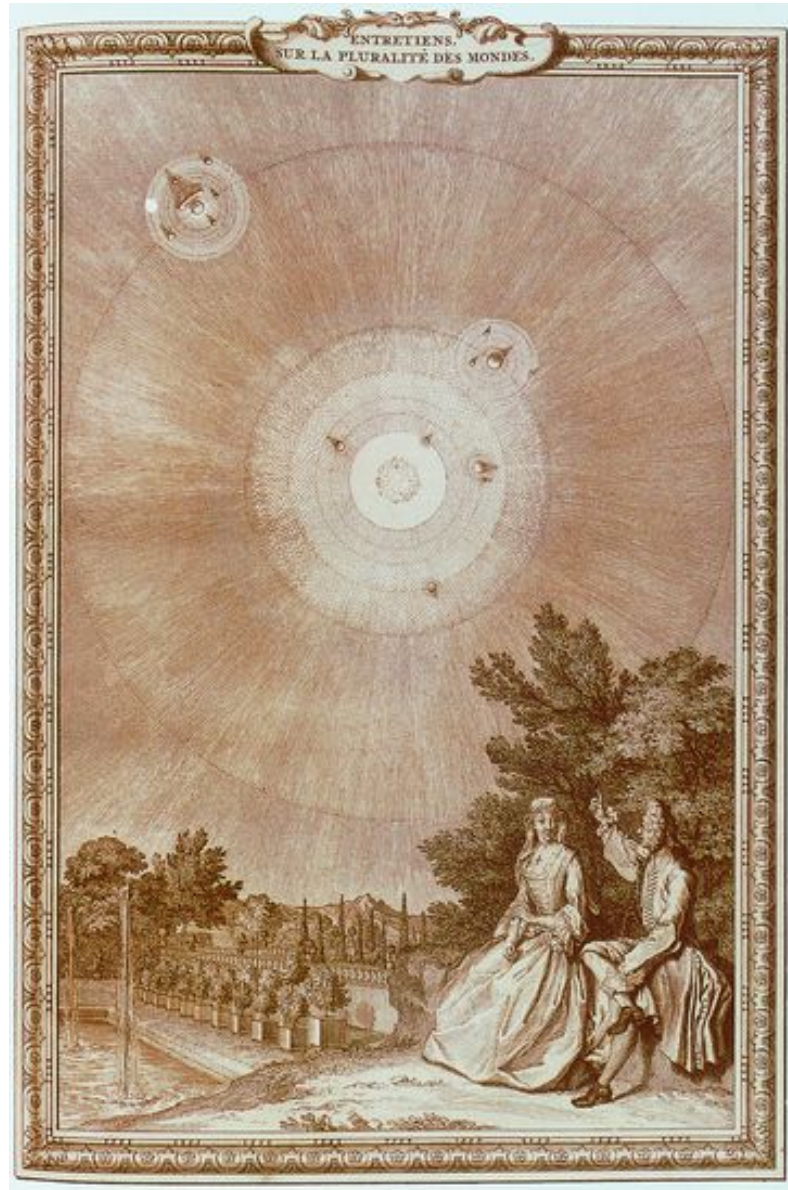


Simplisíó Sagredó Salvíatí
(Ptólemaíos) (Kóperníkus)

Hvirflar Descartes (1596-1650)

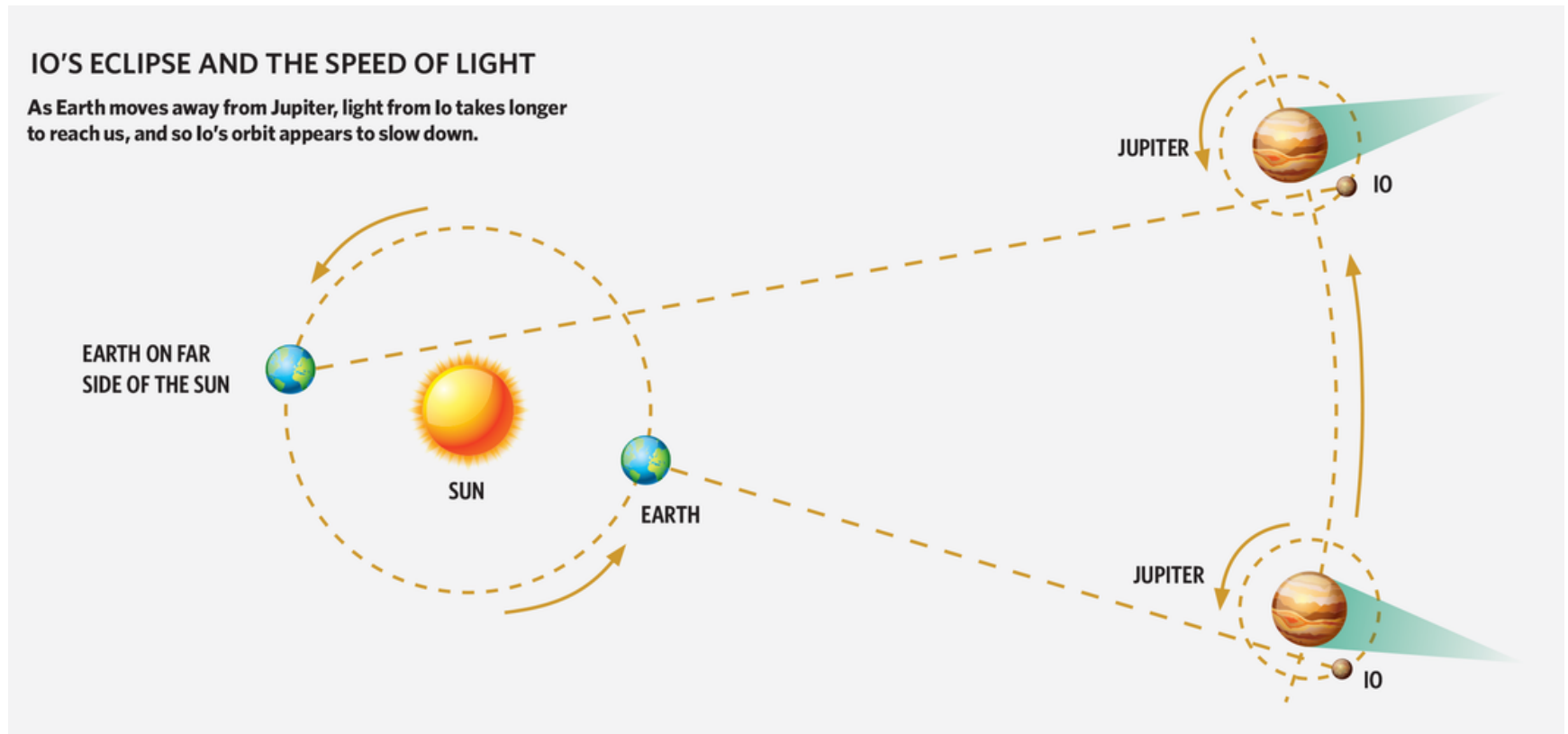


Úr *Principia philosophiae* frá 1644



Fontenelle 1686

Ole Römer og hraði ljóssins 1676



Niðurstaða: Ljóshraðinn er um 220 þúsund km/s (rétt gildi er 300 þúsund km/s)