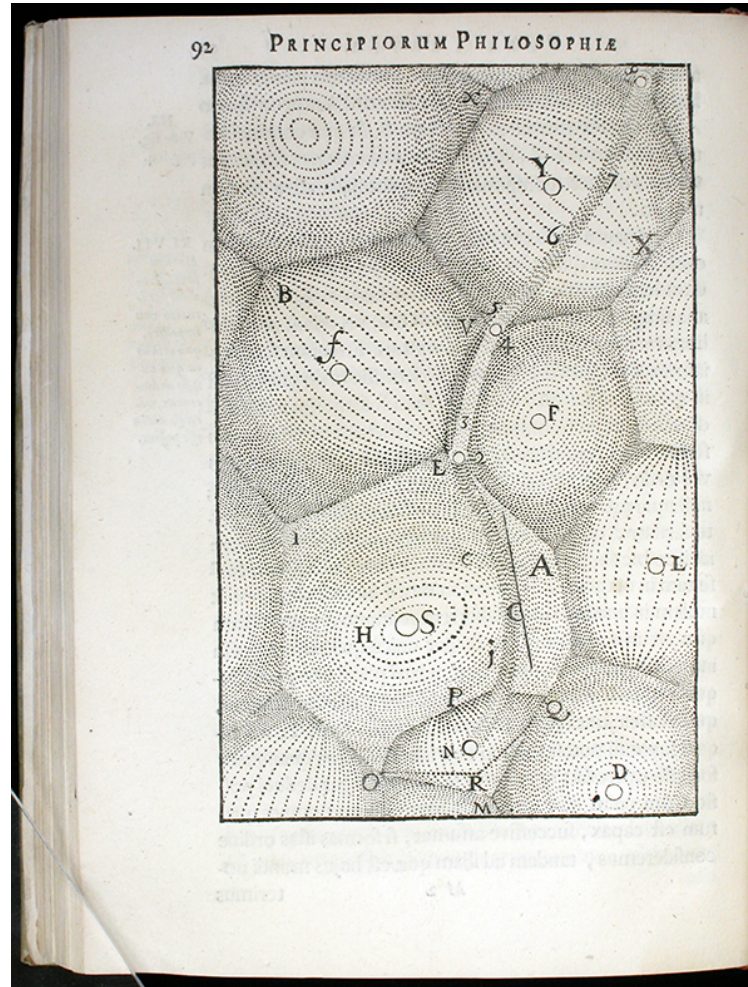
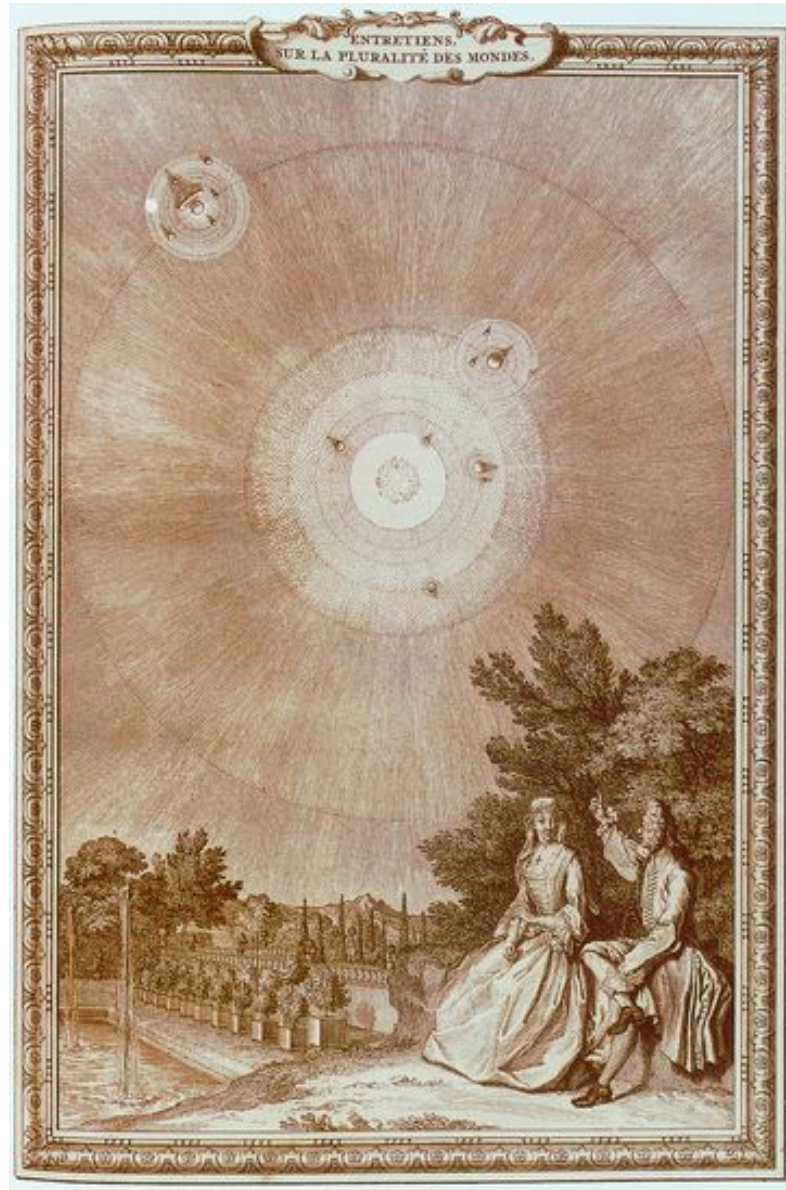


LOK LÆRDÓMSALDAR
OG
UPPLÝSINGIN

Hvirflar Descartes (1596-1650)



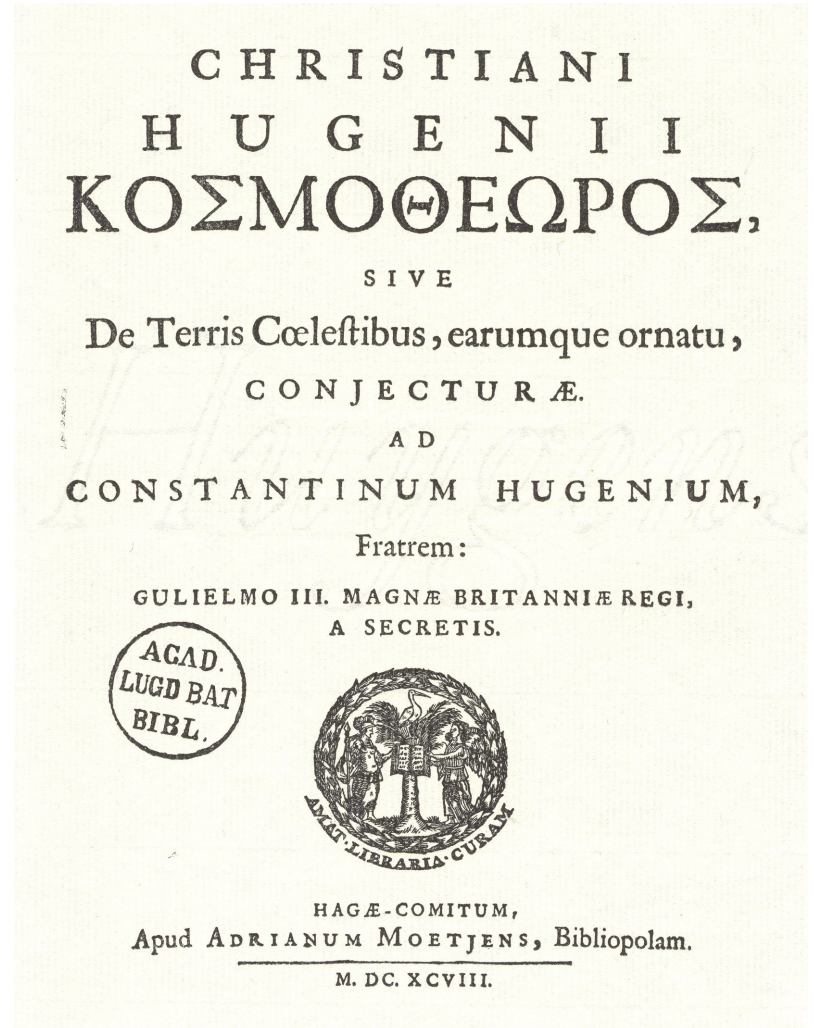
Úr *Principia philosophiae* frá 1644



Úr *Entretiens sur la pluralitet des mondes* eftir Fontenelle frá 1686

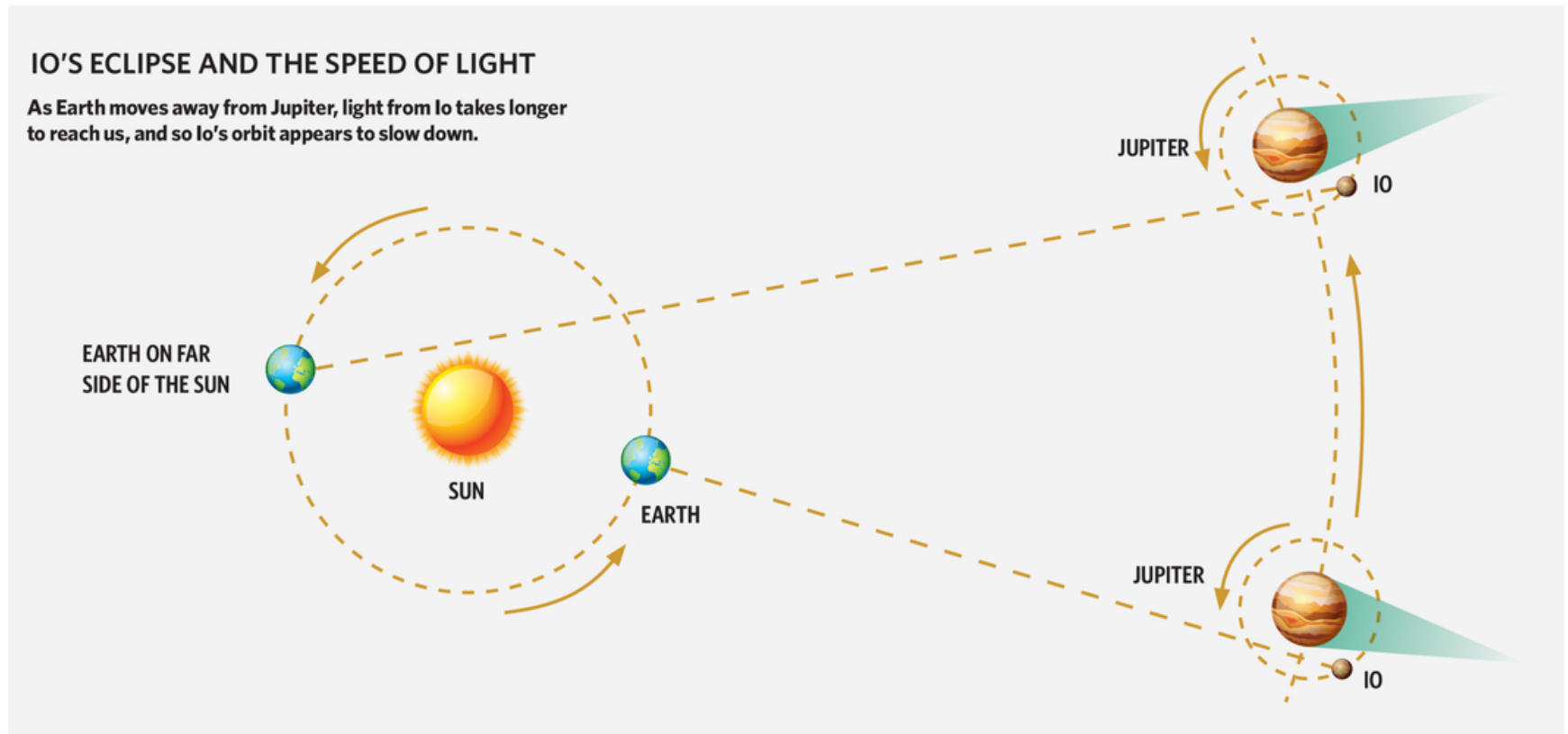


Christian Huygens (1629-1695)



Cosmotheoros (1698)

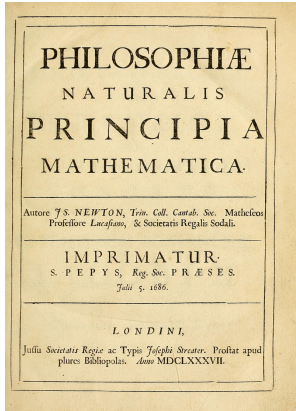
Ole Römer og hraði ljóssins 1676



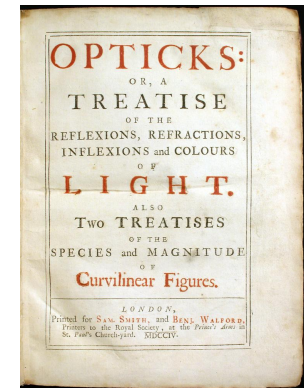
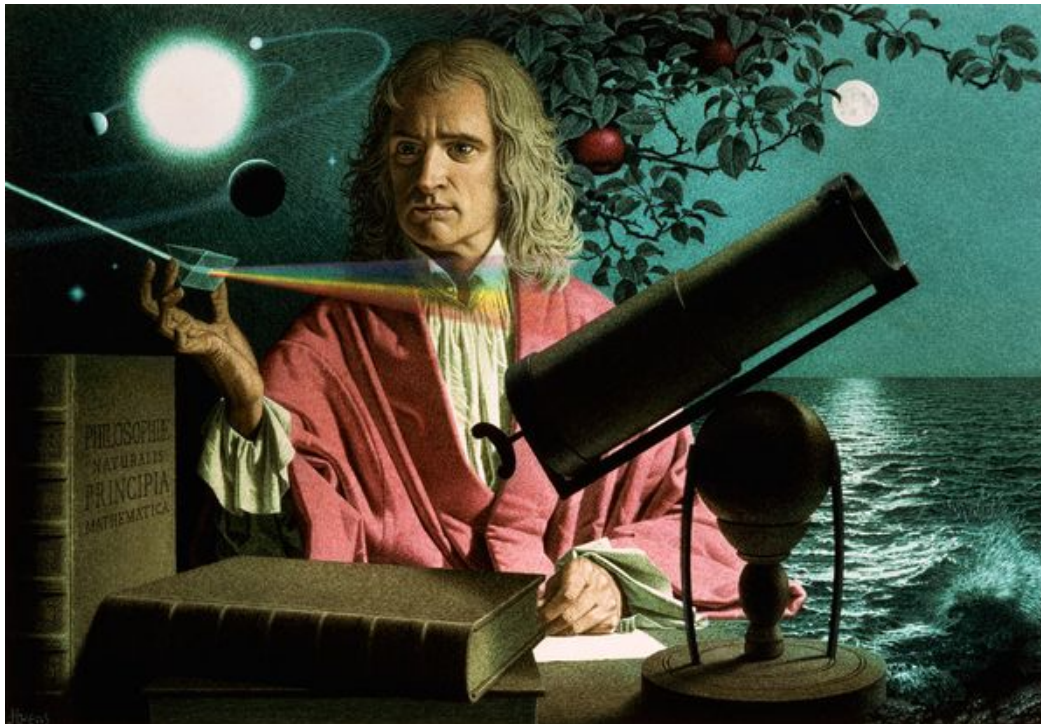
Niðurstaða: Ljóshraðinn er um 220 þúsund km/s (rétt gildi er 300 þúsund km/s)

Ísak Newton
og
Upplýsingin

Isaac Newton (1643-1727)

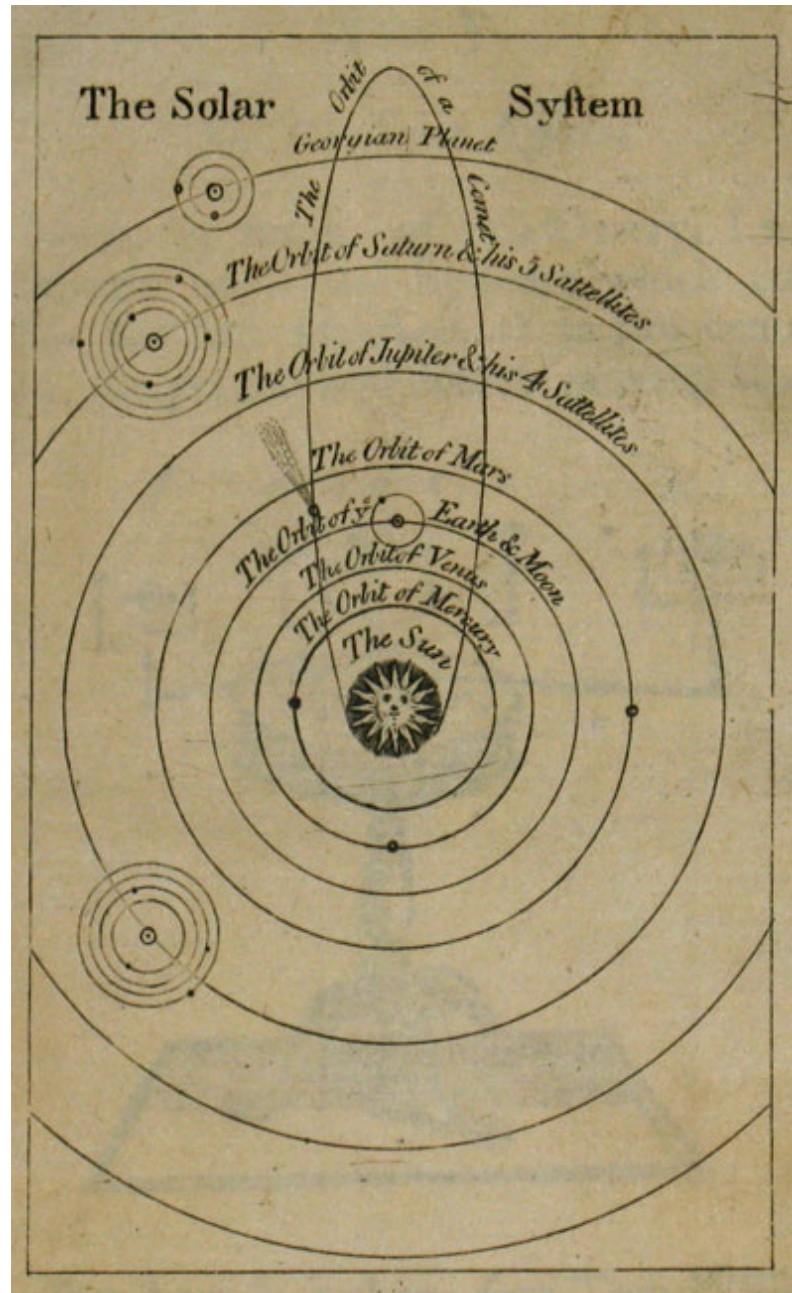


1687



1704

Aflfræði – Þyngdarlögmálið – Heimskerfið – Ljósfræði



Mynd frá 1798

Heimsmynd Newtons

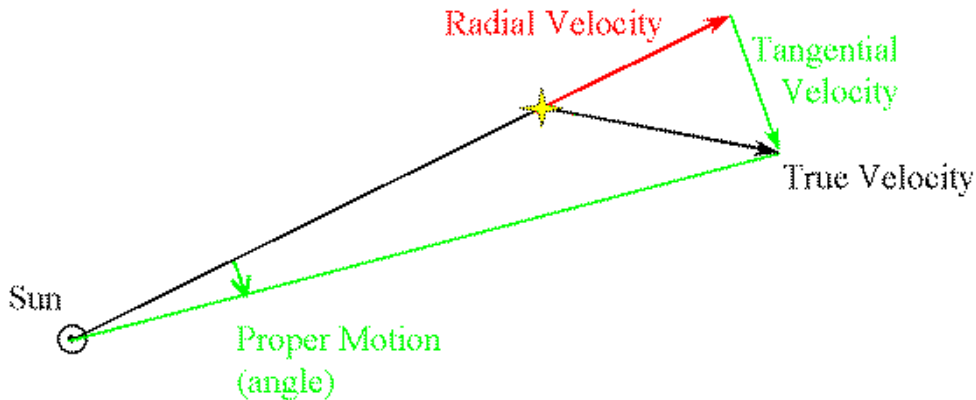
Óendanlegur heimur fullur af stjörnum



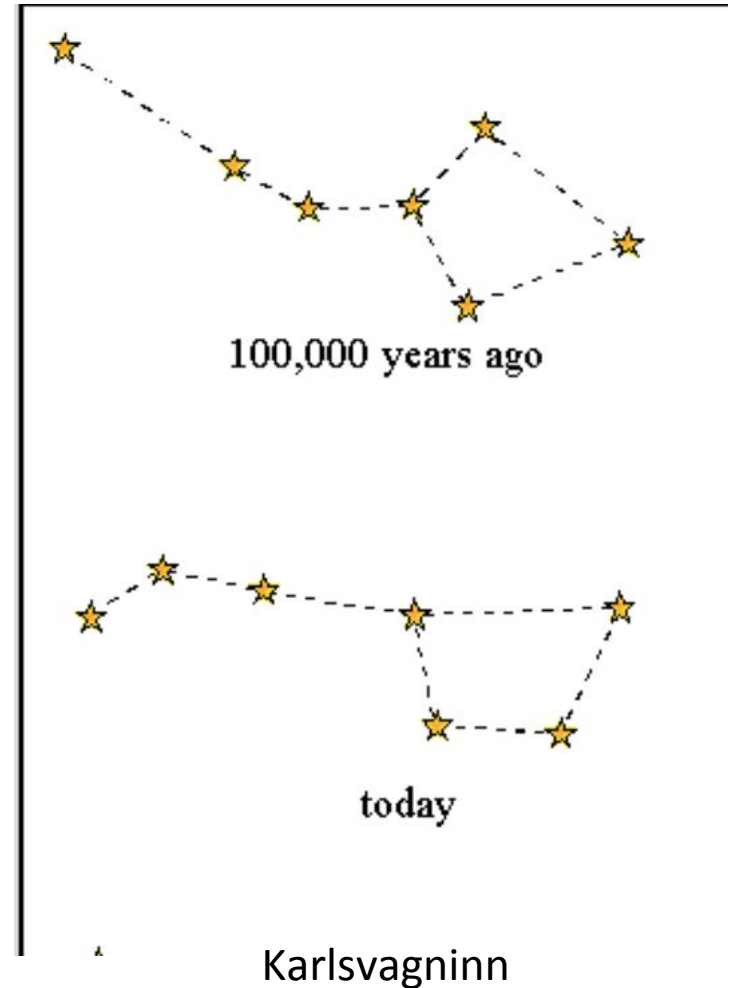
Newton: Algilt rúm og algildur tími – Milli stjarnanna er tóm

Eiginhreyfing (fasta)stjarna

Halley 1718



Eiginhreyfing stjarna á hvelfingunni stafar af þverþætti hraðans (tangential velocity)

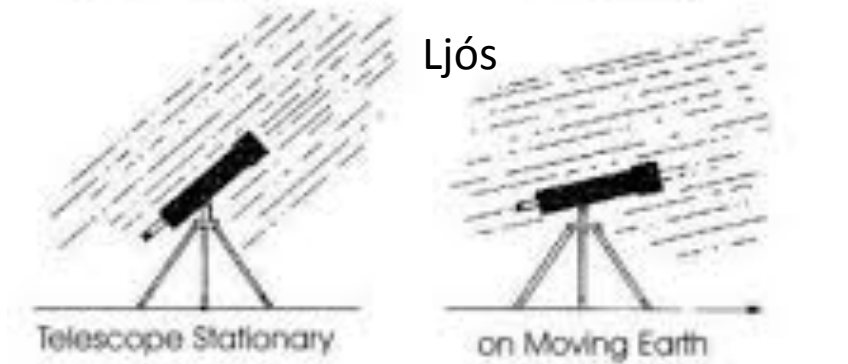


Ljósvilla (aberration of light)



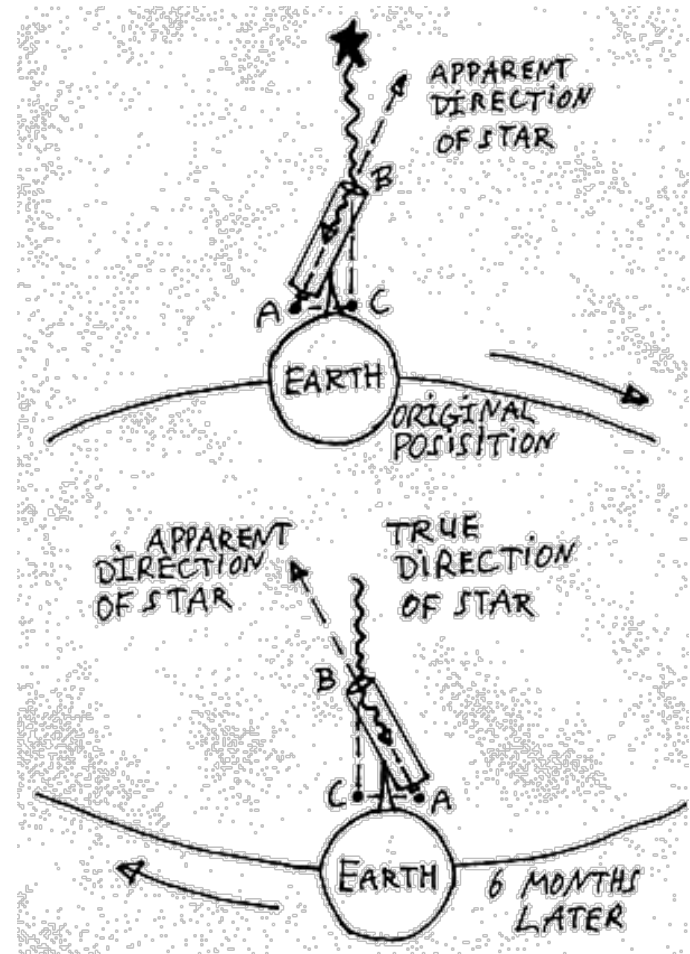
Standing

Moving



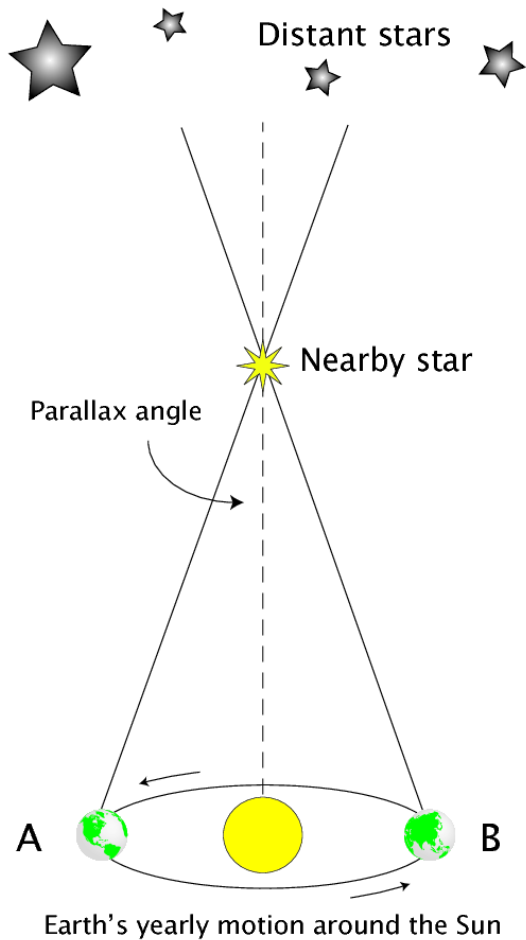
Telescope Stationary

on Moving Earth



Bradley 1728

Árleg hliðrun (parallax) fastastjarna



Bessel 1838

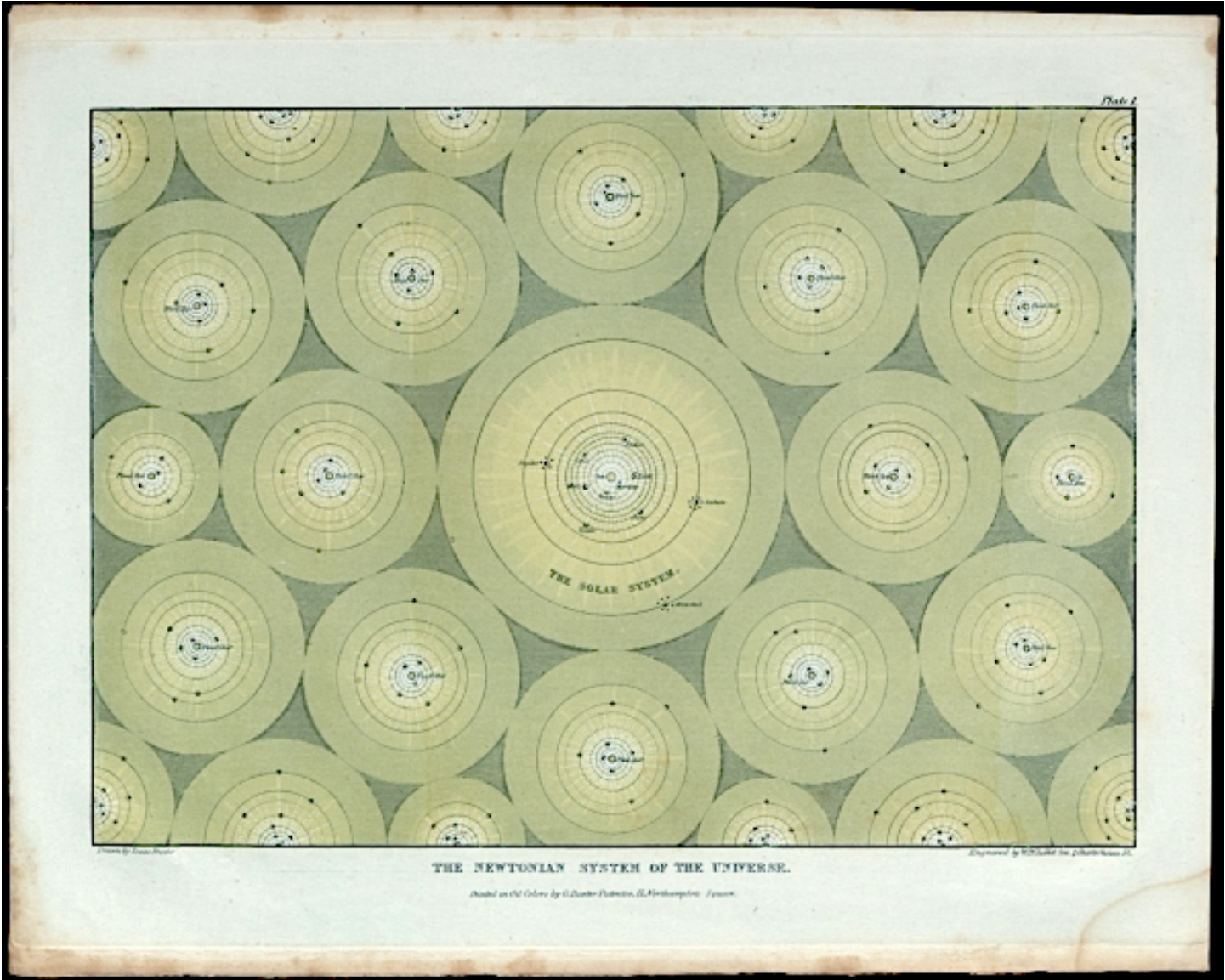
Önnur sólkerfi



Maupertuis
1732



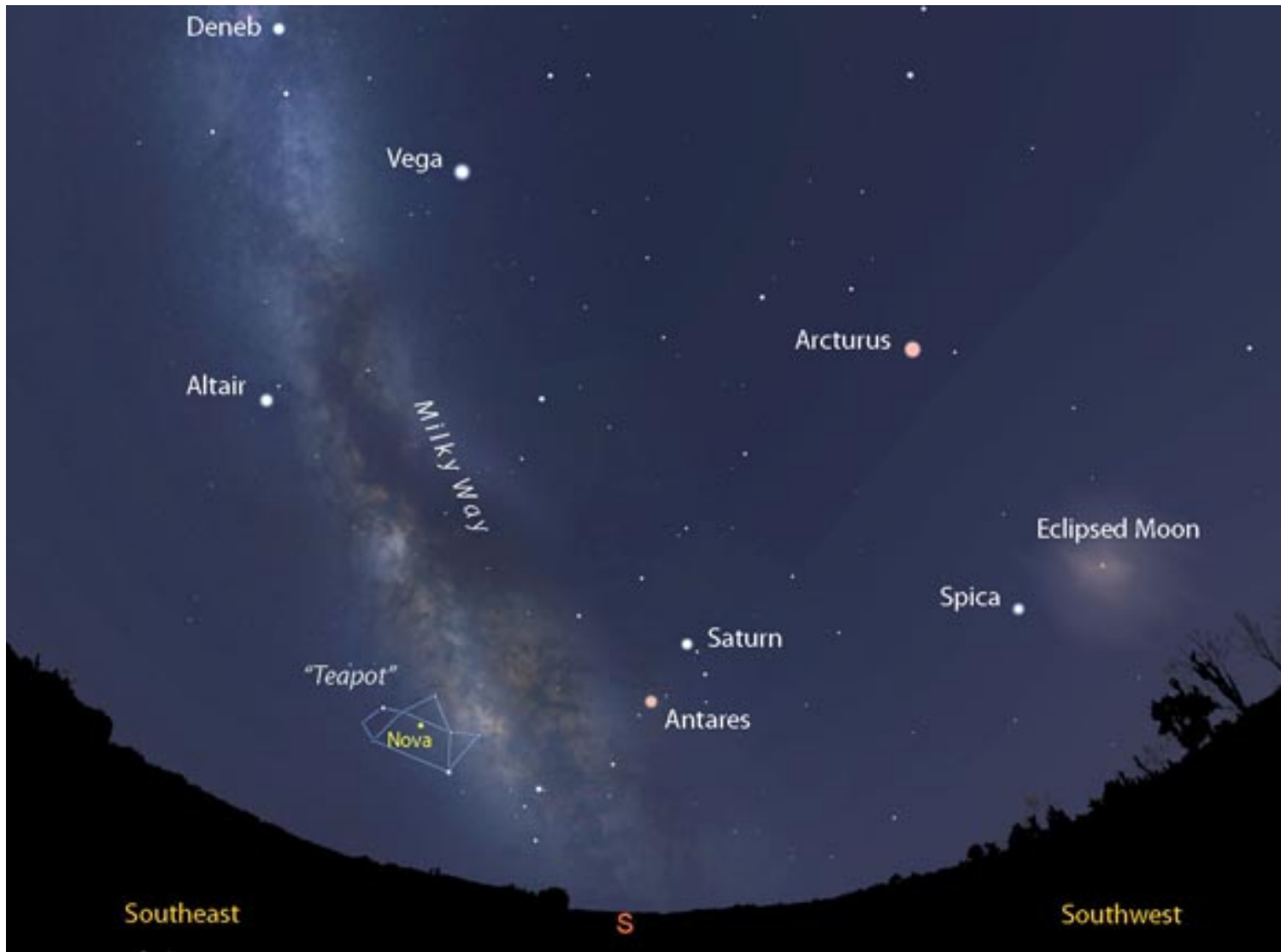
Euler 1744



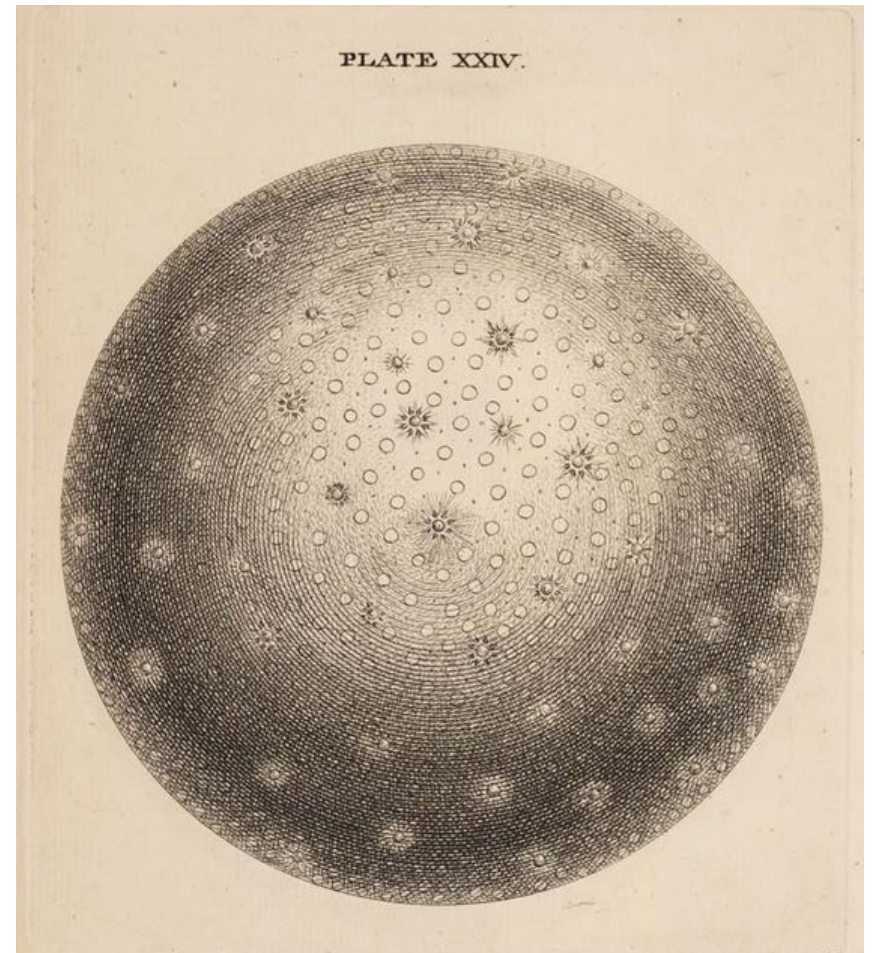
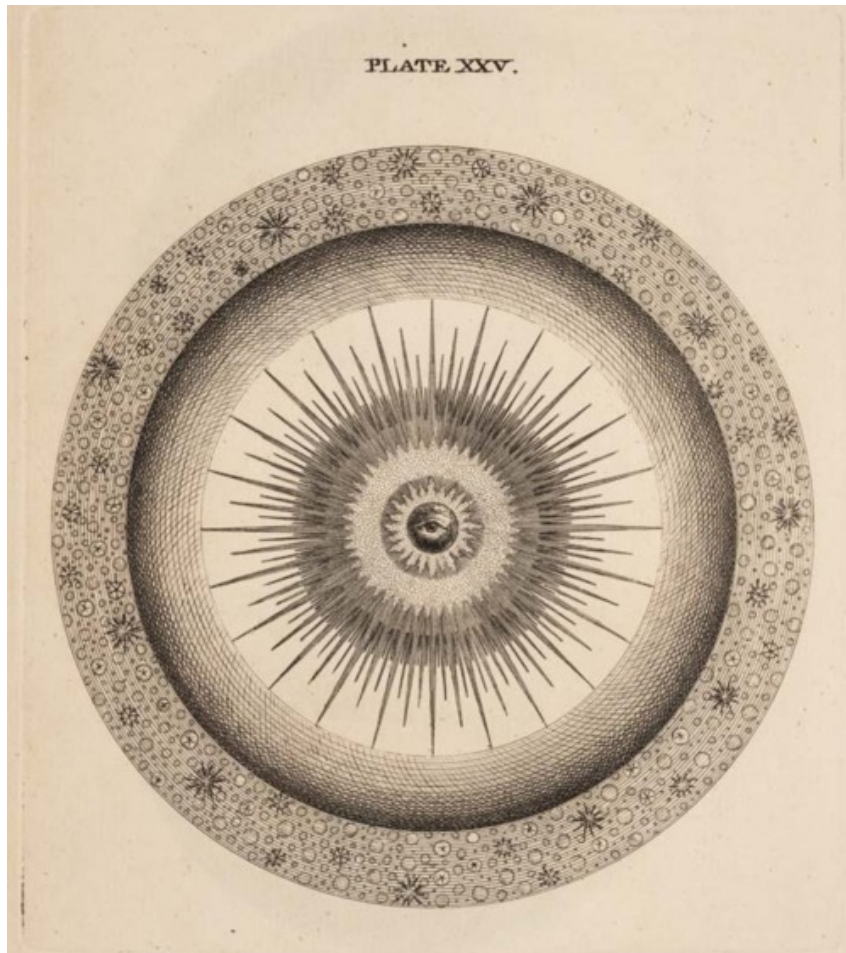
Frost 1846

Vetrarbrautin

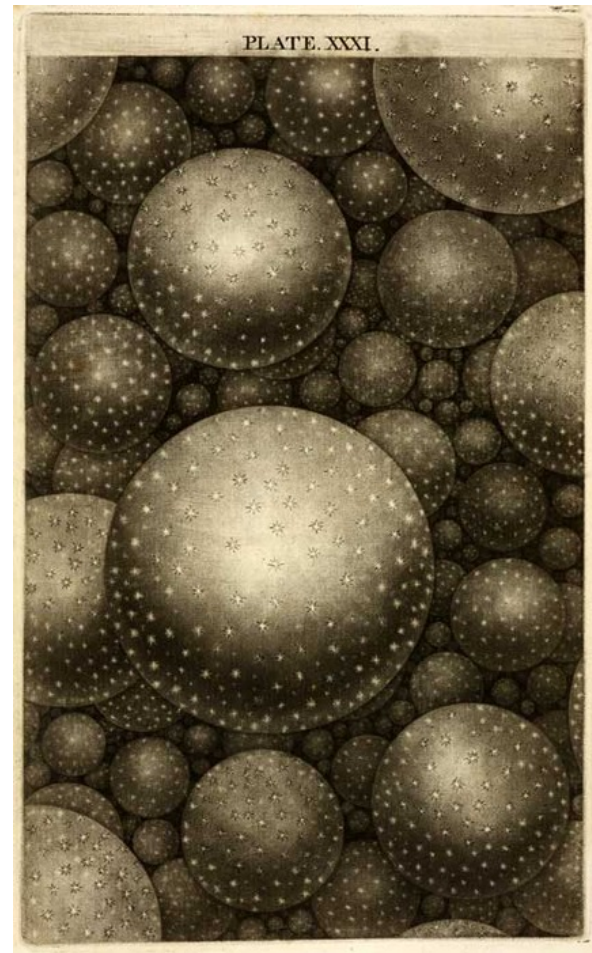
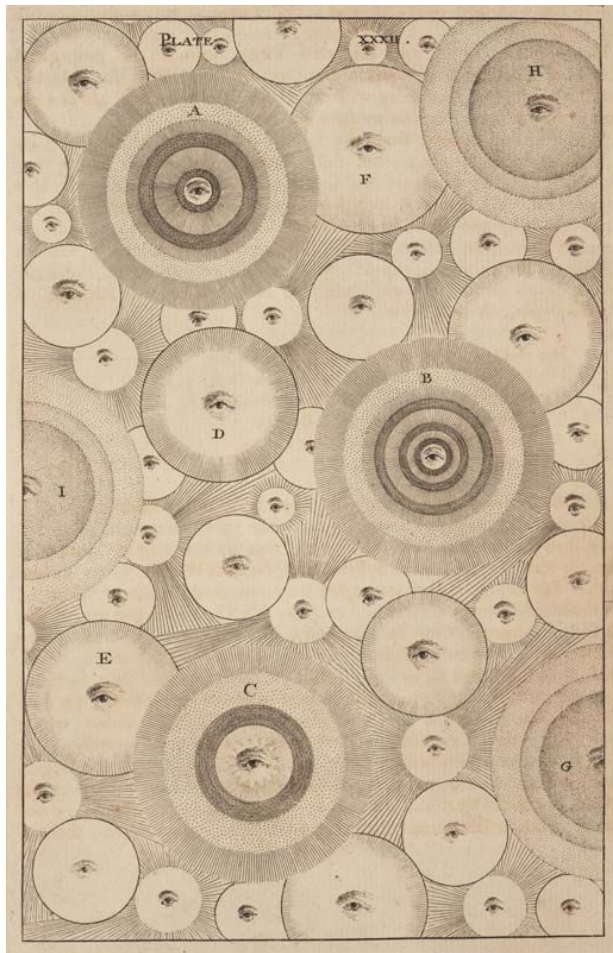
Mynd, tekin við sólmyrkva



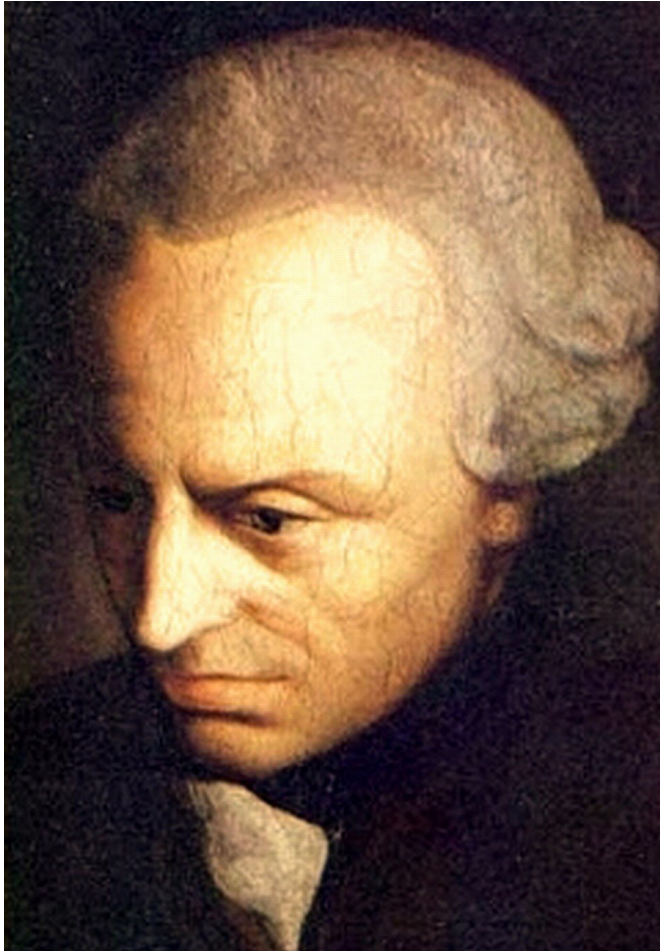
Dulspekileg mynd Wrights af Vetrarbrautinni frá 1750



Aðrar vetrarbrautir skv. Wright

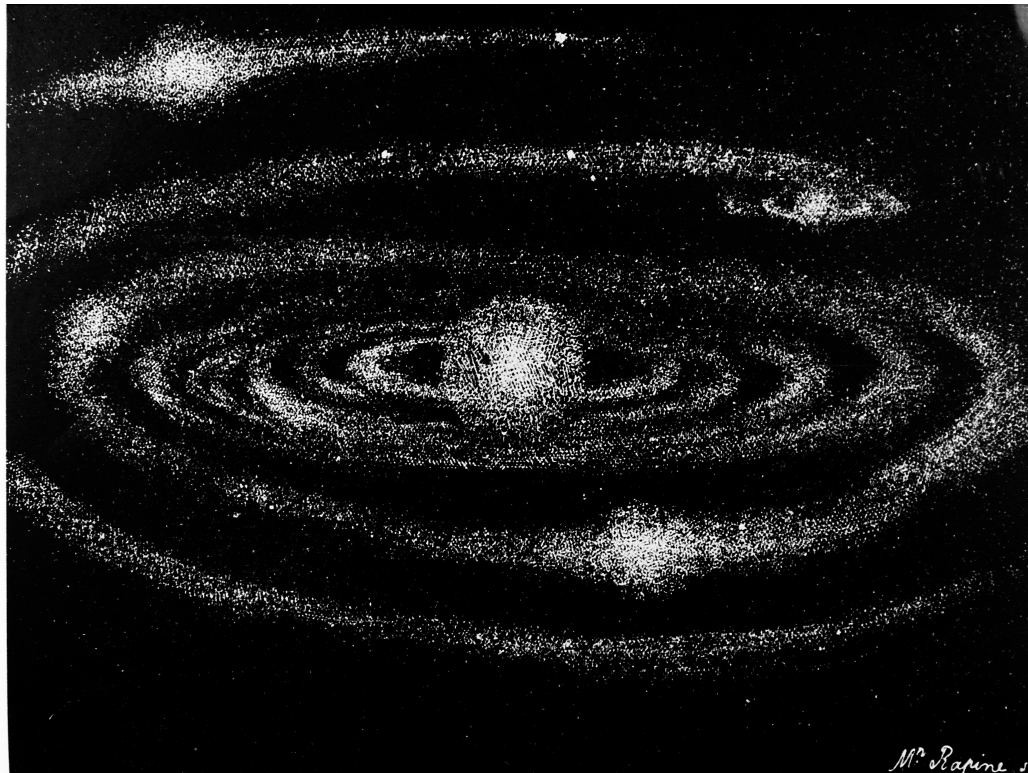


Immanuel Kant (1724-1786)

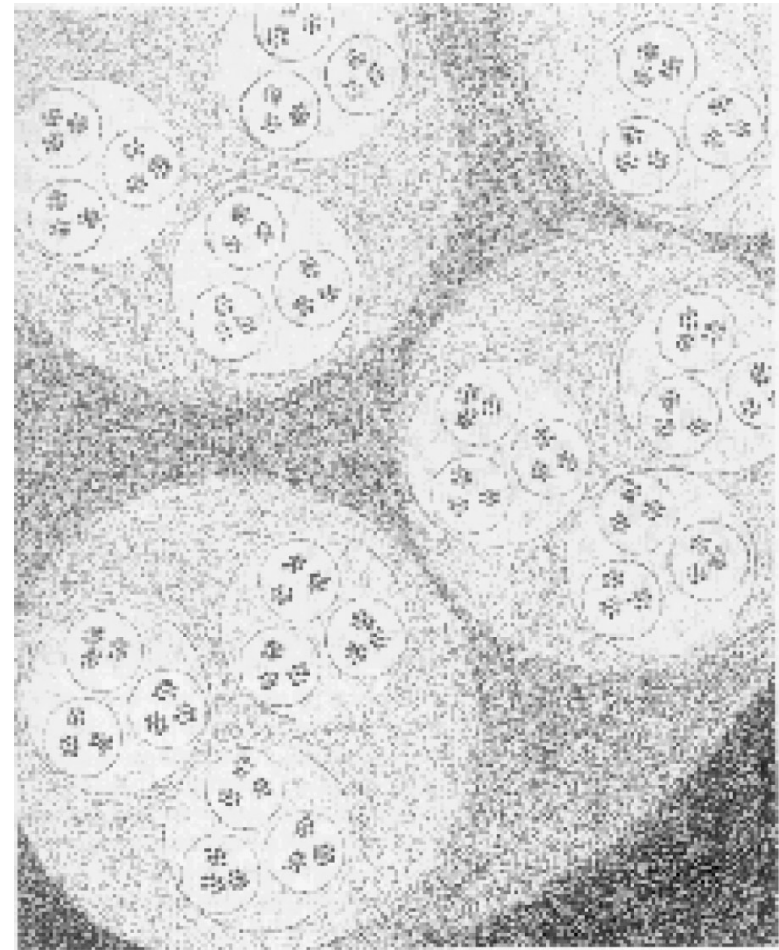


Allgemeine
Naturgeschichte
und
Theorie des Himmels,
oder
Versuch
von der Verfassung und dem mecha-
nischen Ursprunge
des ganzen Weltgebäudes
nach
Newtonischen Grundsätzen
abgehandelt.
von Imm. Kant.
* * * * *
Königsberg und Leipzig,
bey Johann Friederich Petersen, 17.
55

Heimslíkön Kants og Lamberts

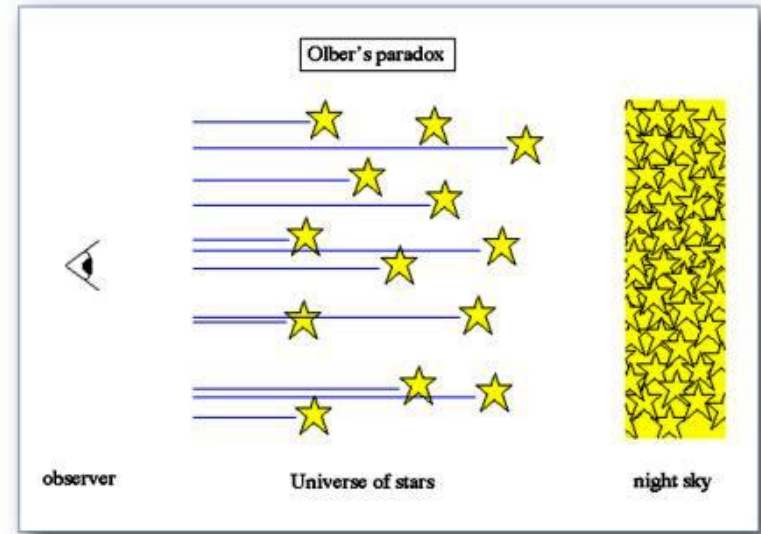
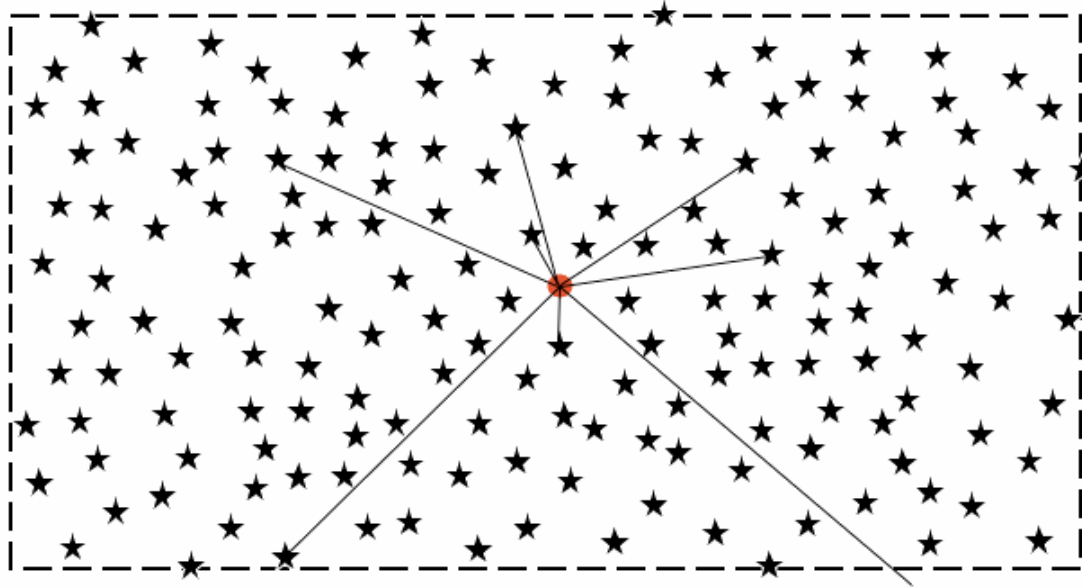


Myndun sólkerfa eða vetrarbrauta



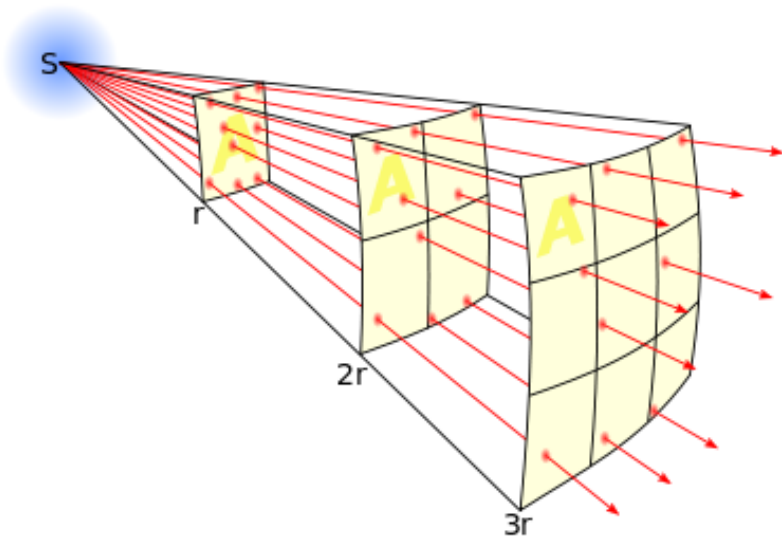
Stigveldisheimur

Þversögn Olbers (Keplers, Halleys)

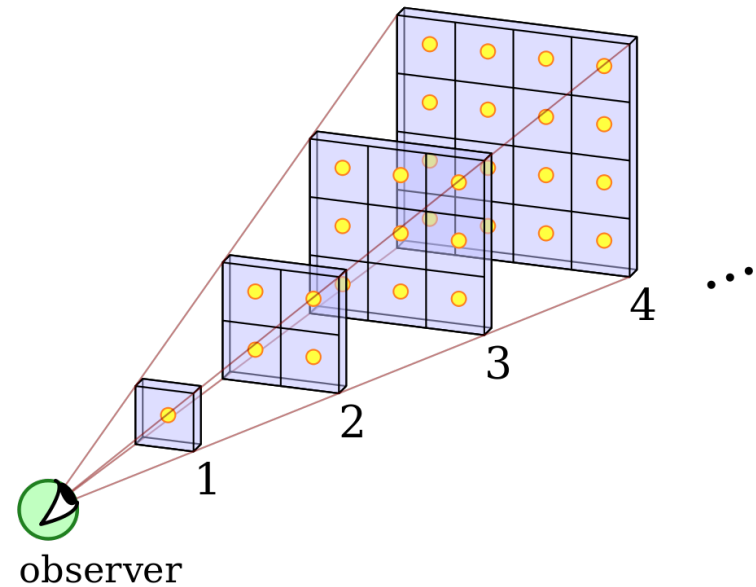


Ef stjörnurnar eru sólar sem dreifast um óendanlegan geim ætti sérhver sjónlína að lenda á stjörnu. Næturhiminn væri því jafn bjartur og sólin. En svo er ekki. Hvers vegna?

Fjöldi stjarna vegur upp á móti deyfingu ljóss í óendanlegri stjörnuveröld



Ljósstyrkur minnkar í öfugu hlutfalli við kvaðrat fjarlægðar

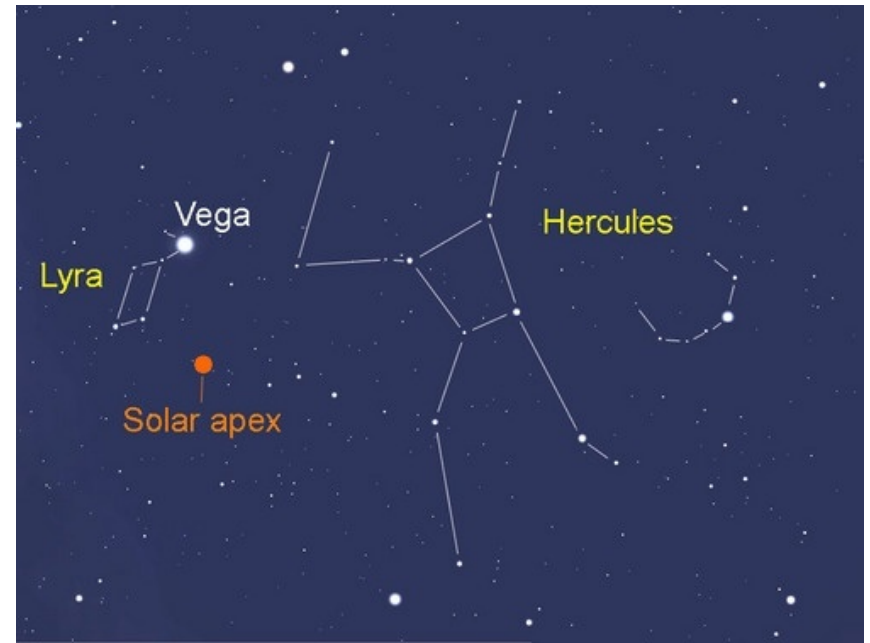
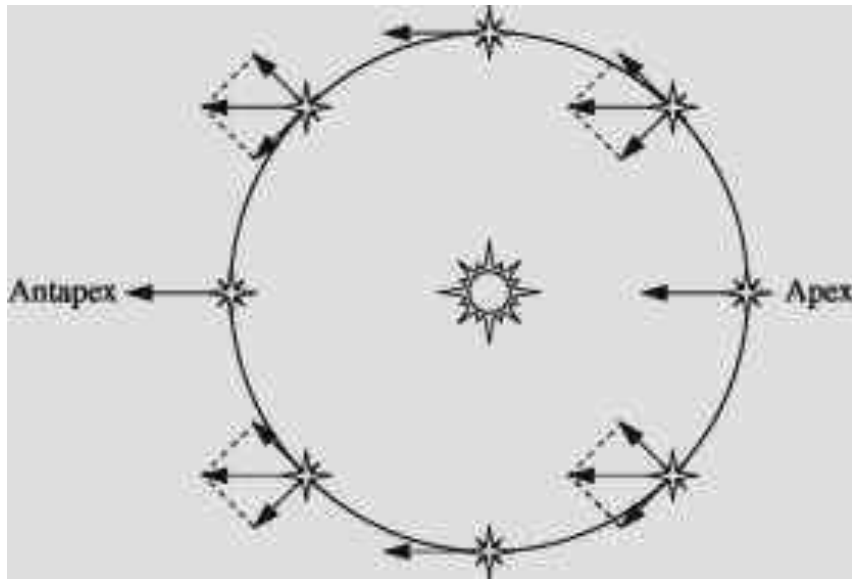


Fjöldi stjarna vex í réttu hlutfalli við kvaðrat fjarlægðar

Systkynin William (1738-1822) og Caroline (1750-1848) Herschel



Hreyfing sólkerfisins

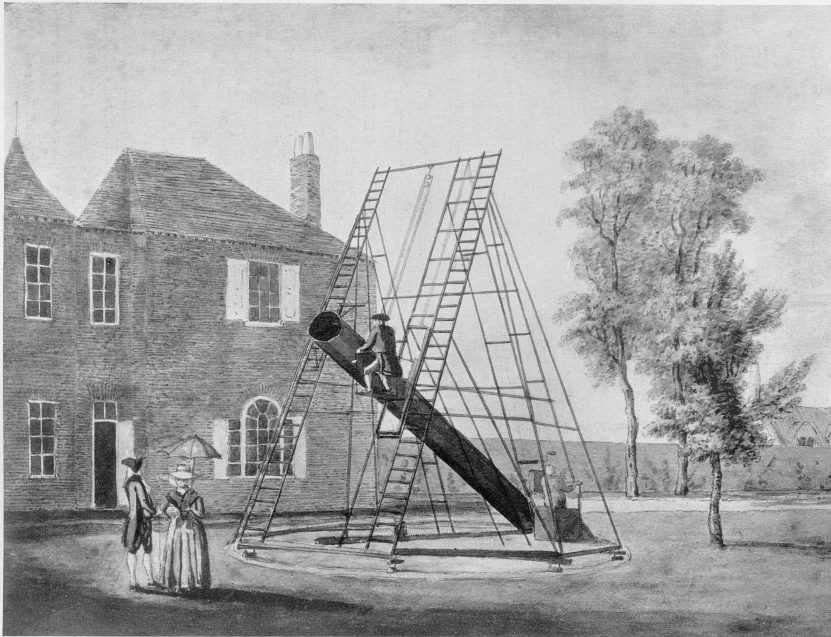


Solar apex = sóknarpunktur sólar

Spegilsjónaukar Herschels

W. HERSHEY, *Collected Papers.*]

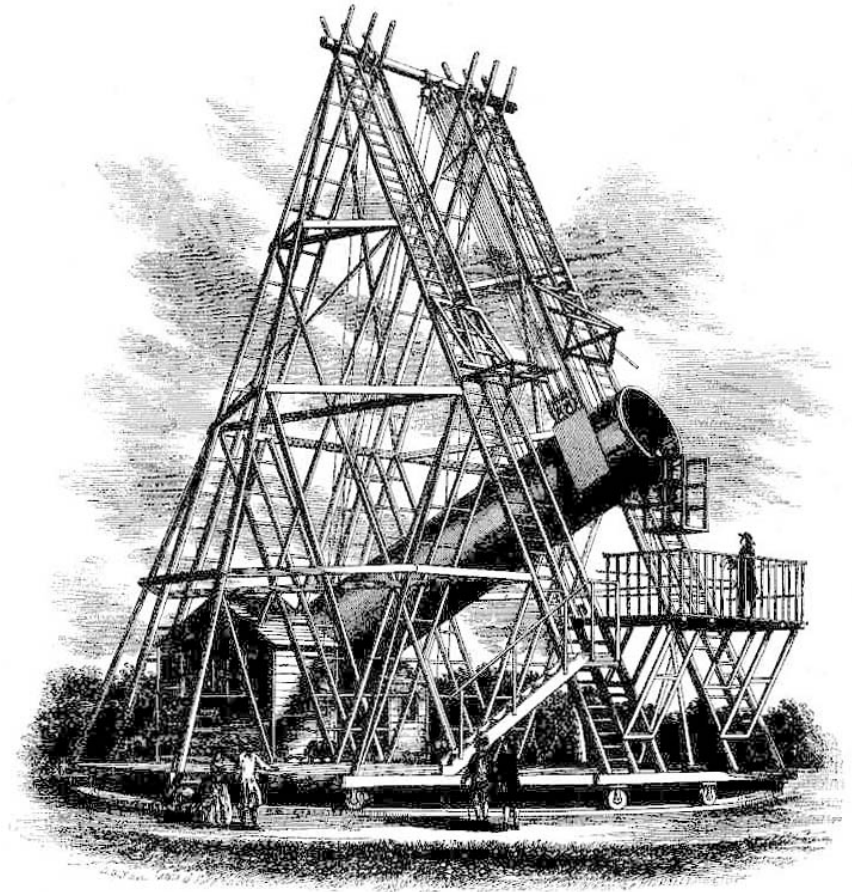
[VOL. I. PLATE B.



THE 20-FOOT TELESCOPE.

From a drawing made either at Datchet or at Clay Hall.

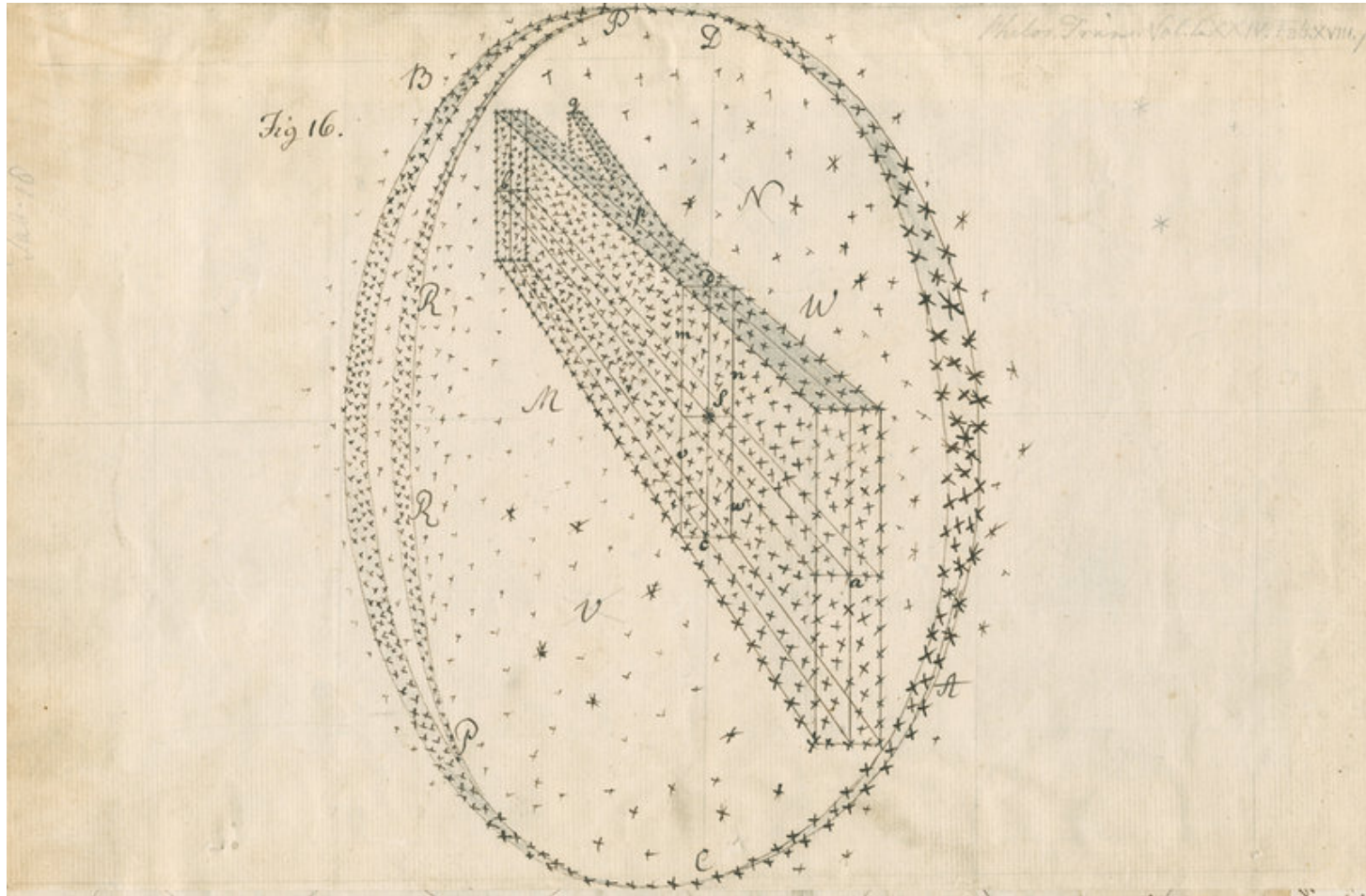
[To face page xxxvii.



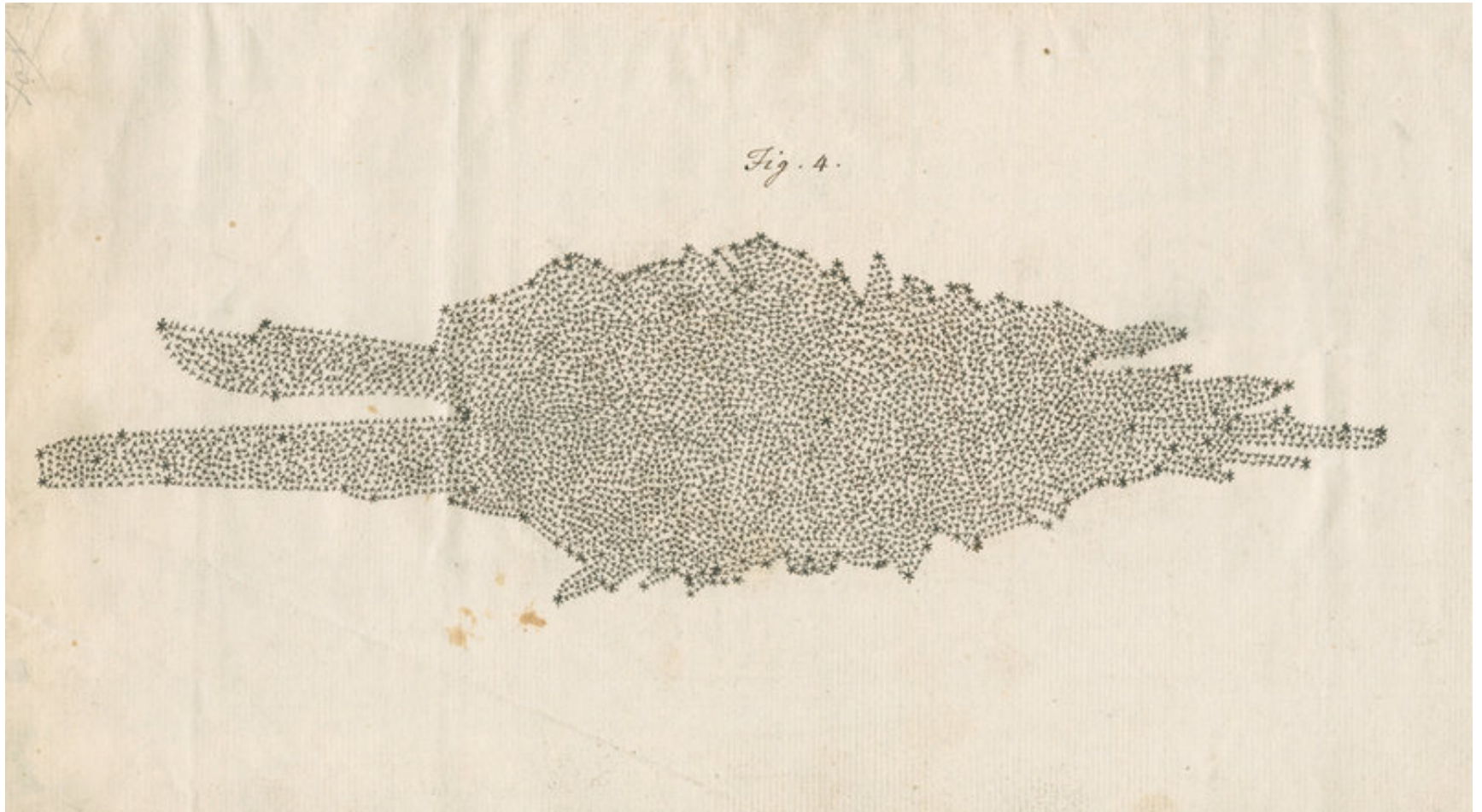
Þvermál spegils: 47 cm
Brennivídd: 6,1 m

Þvermál spegils: 1,26 m
Brennivídd: 12 m

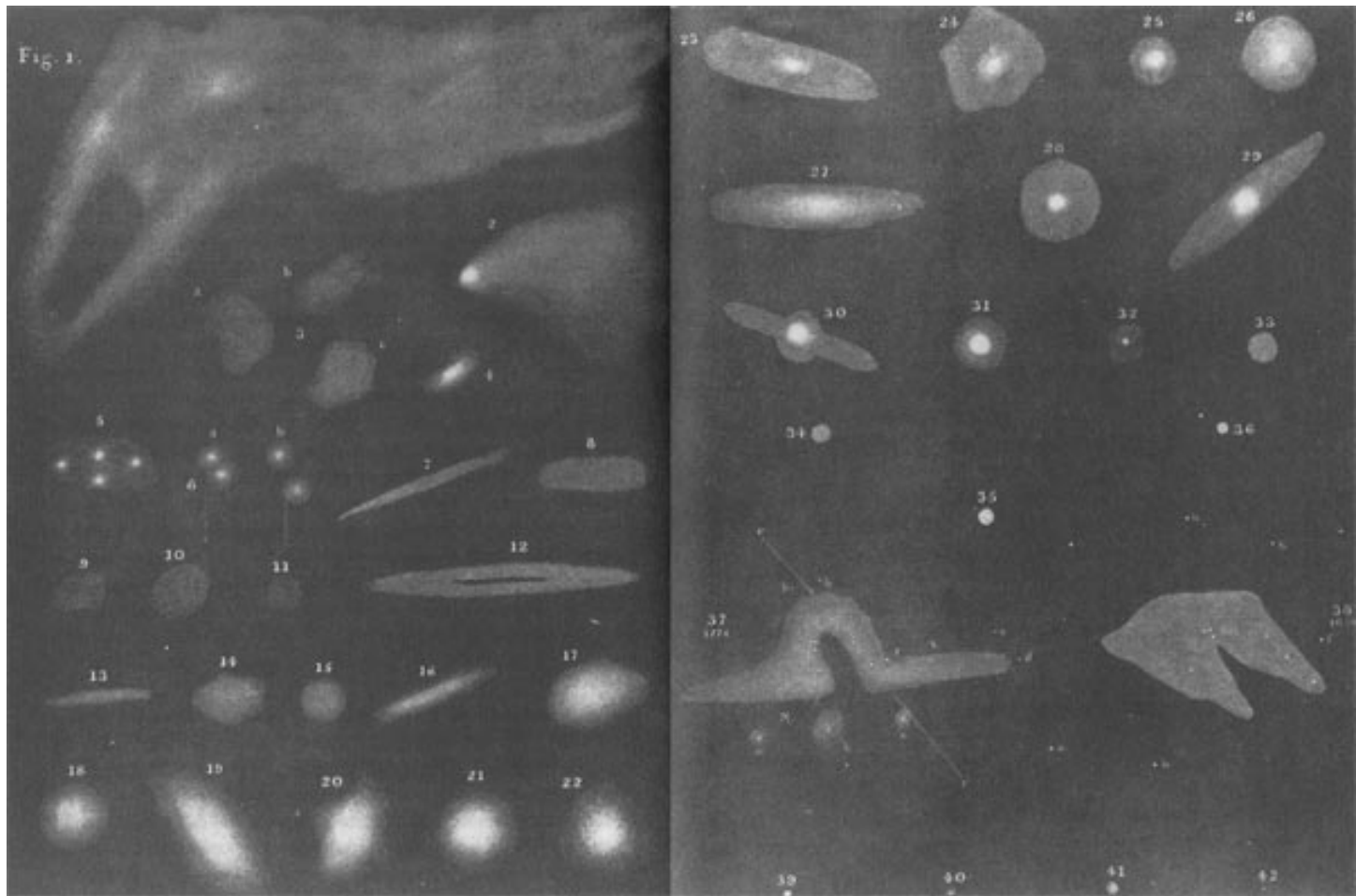
Vetrarbraut Herschels 1784



Herschels 1785: Þversnið í gegnum Vetrarbrautina



Mynd W. Herschels af ýmsum Þokustjörnum (eða stjörnuþokum, nebulae)



Frá 1811