Copernicus and the Bible: Lessons for Today

Prof. Colin Russell

Christians in Science conference,
Leeds, 19th March 2005

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Nicolas Copernicus, 1473 - 1543

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Walls of Frauenburg Cathedral estate

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Armillary sphere, 1543 (pre-Copernican)

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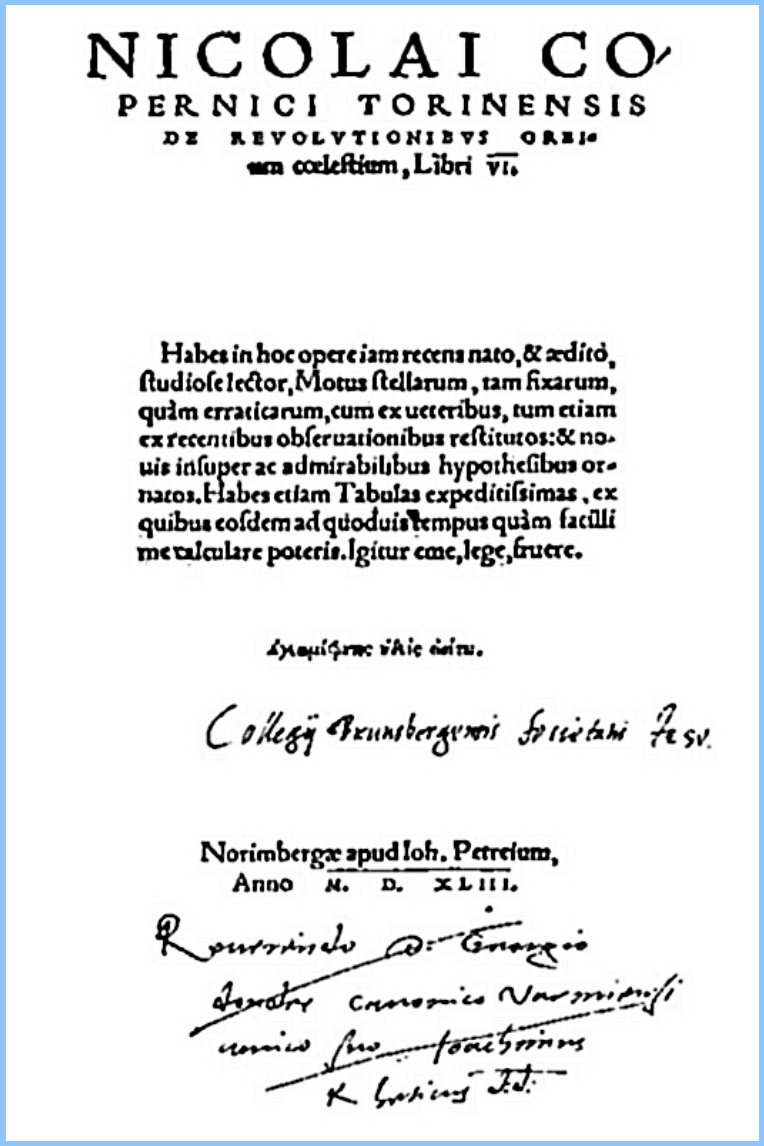

NICOLAI CO-
PERNICI TORINENSIS
DE REVOLVTIONIBVS ORBI-
um coeleſtium, Libri VI.

Habes in hoc opere iam recens nato, & æditò, ſtudioſe lector, Motus ſtellarum, tam fixarum, quàm erraticarum, cum ex ueteribus, tum etiam ex recentibus obſeruationibus reſtitutos: & nouis inſuper ac admirabilibus hypotheſibus ornatos. Habes etiam Tabulas expeditiſsimas, ex quibus eoſdem ad quoduis tempus quàm facilli me calculare poteris. Igitur eme, lege, fruere.

Ἐκμείξατε νῦν εἰς εἶτα.

Collegij Norimbergensis Societatis Iesv.

Norimbergæ apud Ioh. Petreium,
Anno M. D. XLIII.

De Revolutionibus title page

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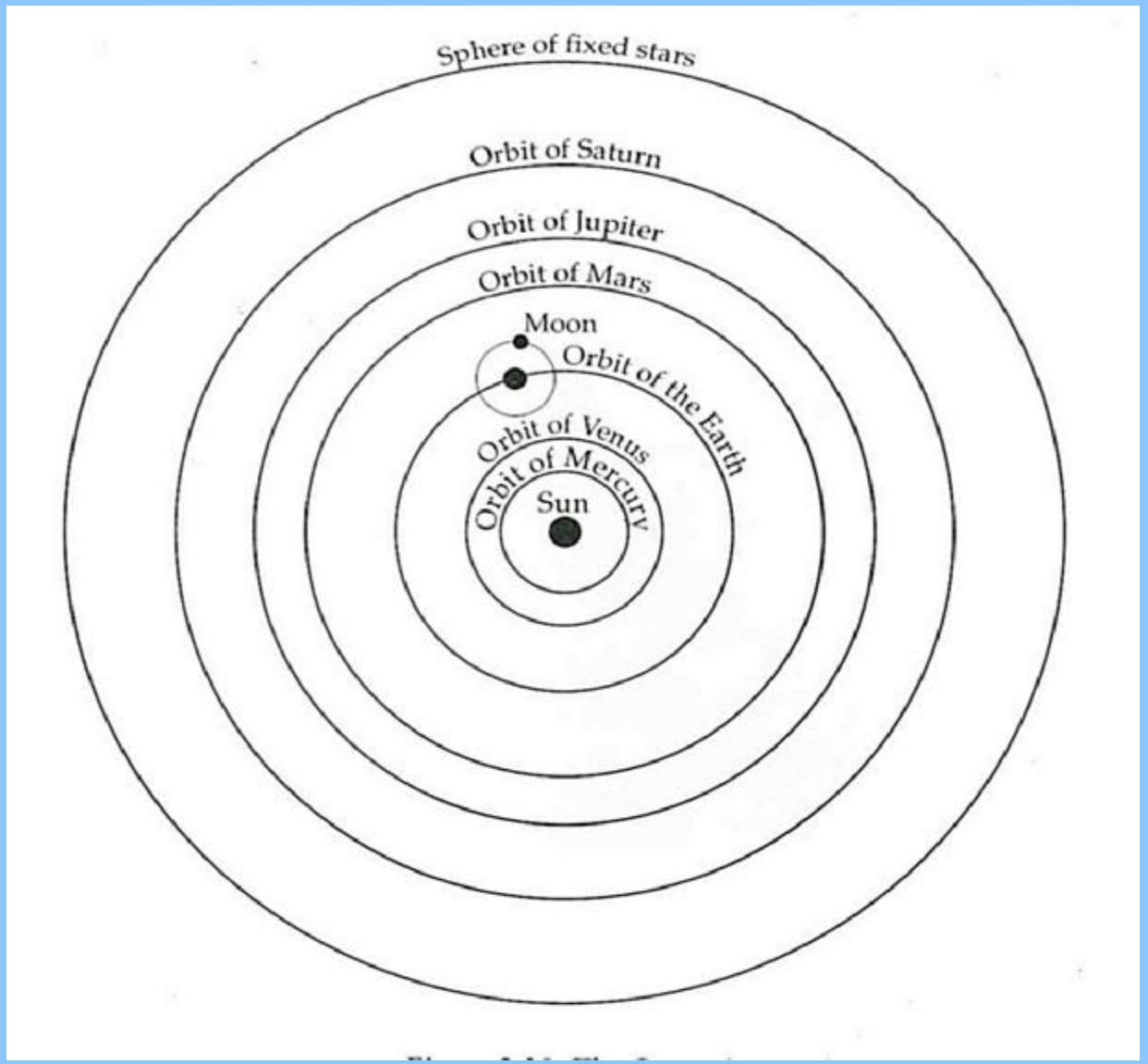

Copernicus' new system

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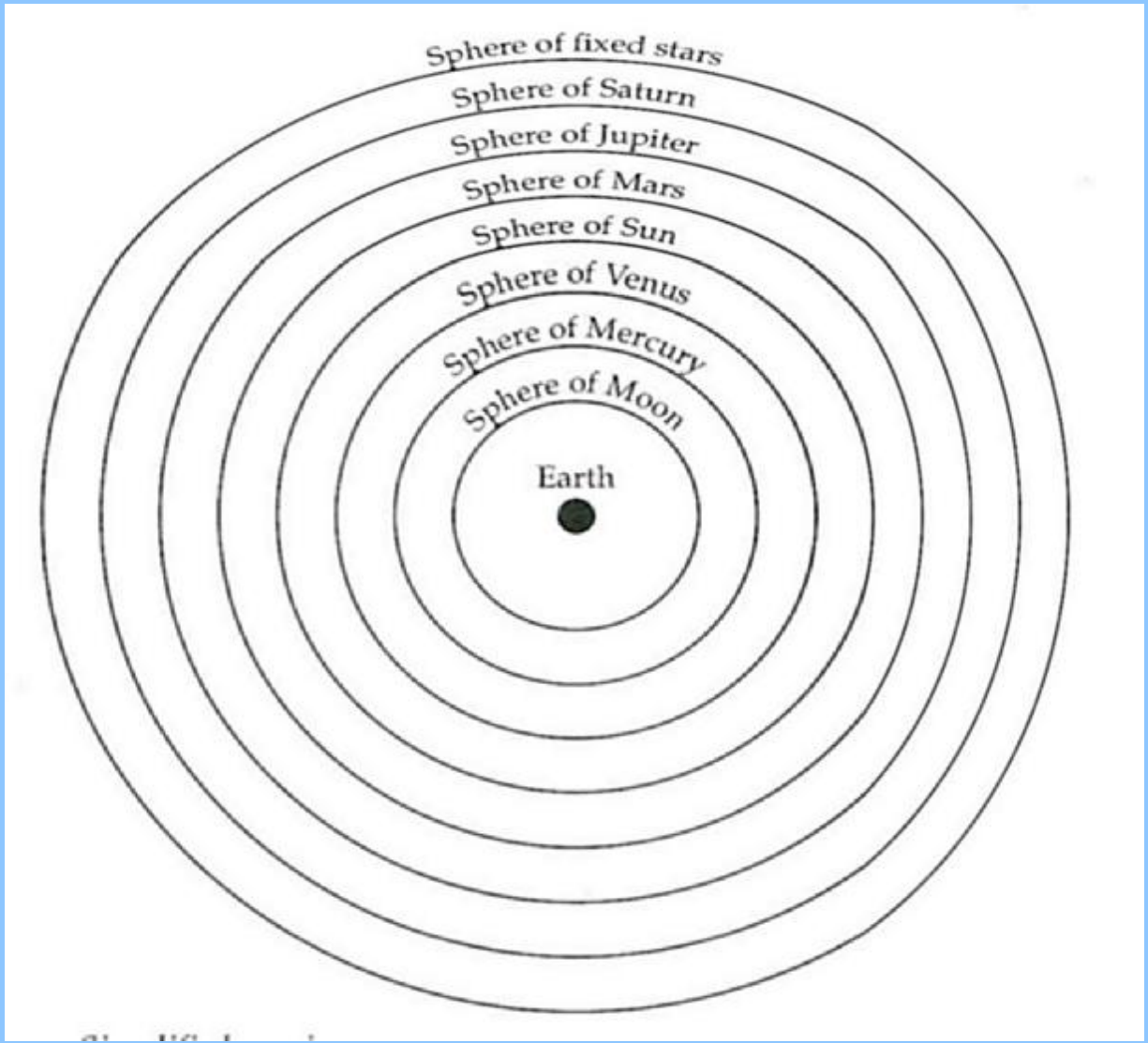

Ptolemy's old system

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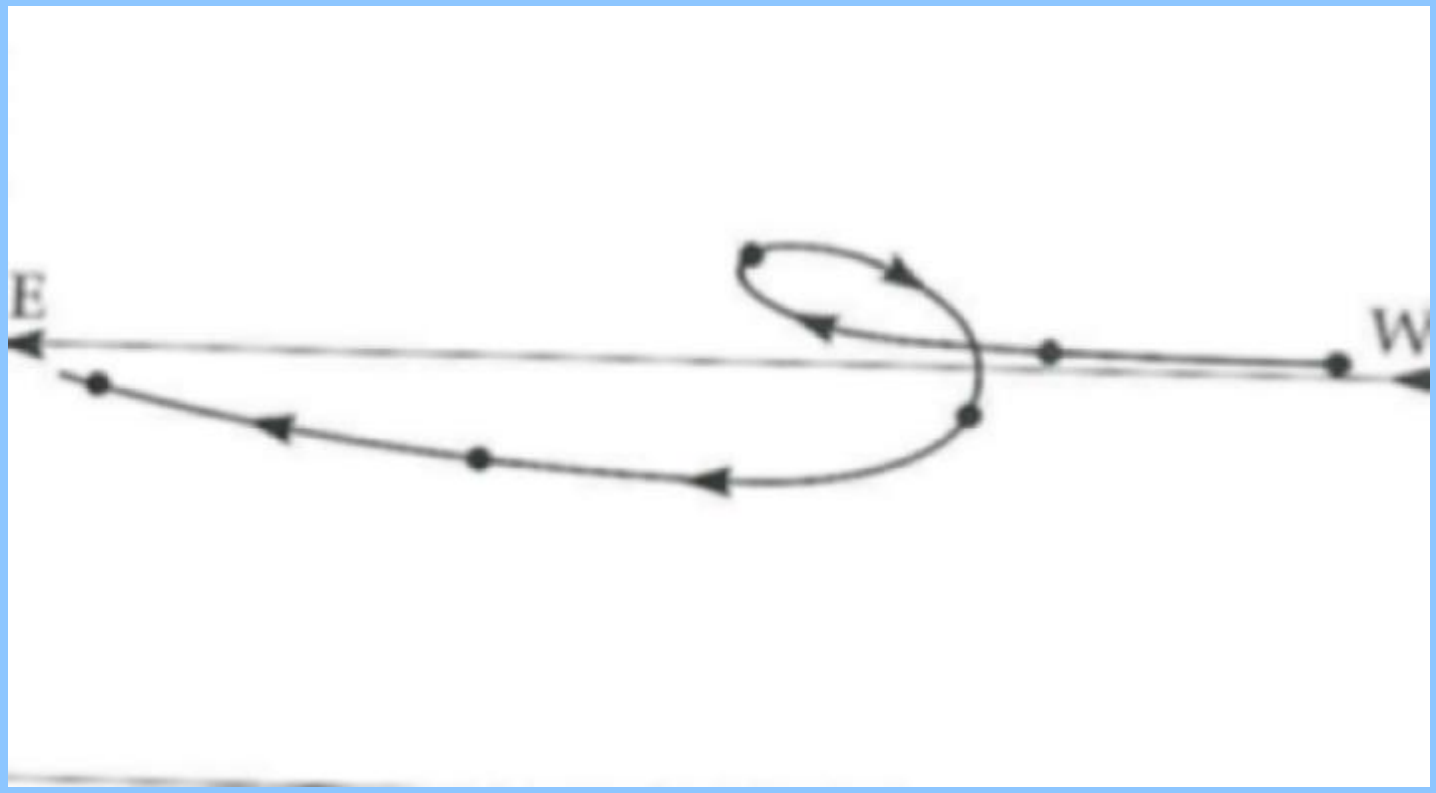

Planetary loop of retrogression

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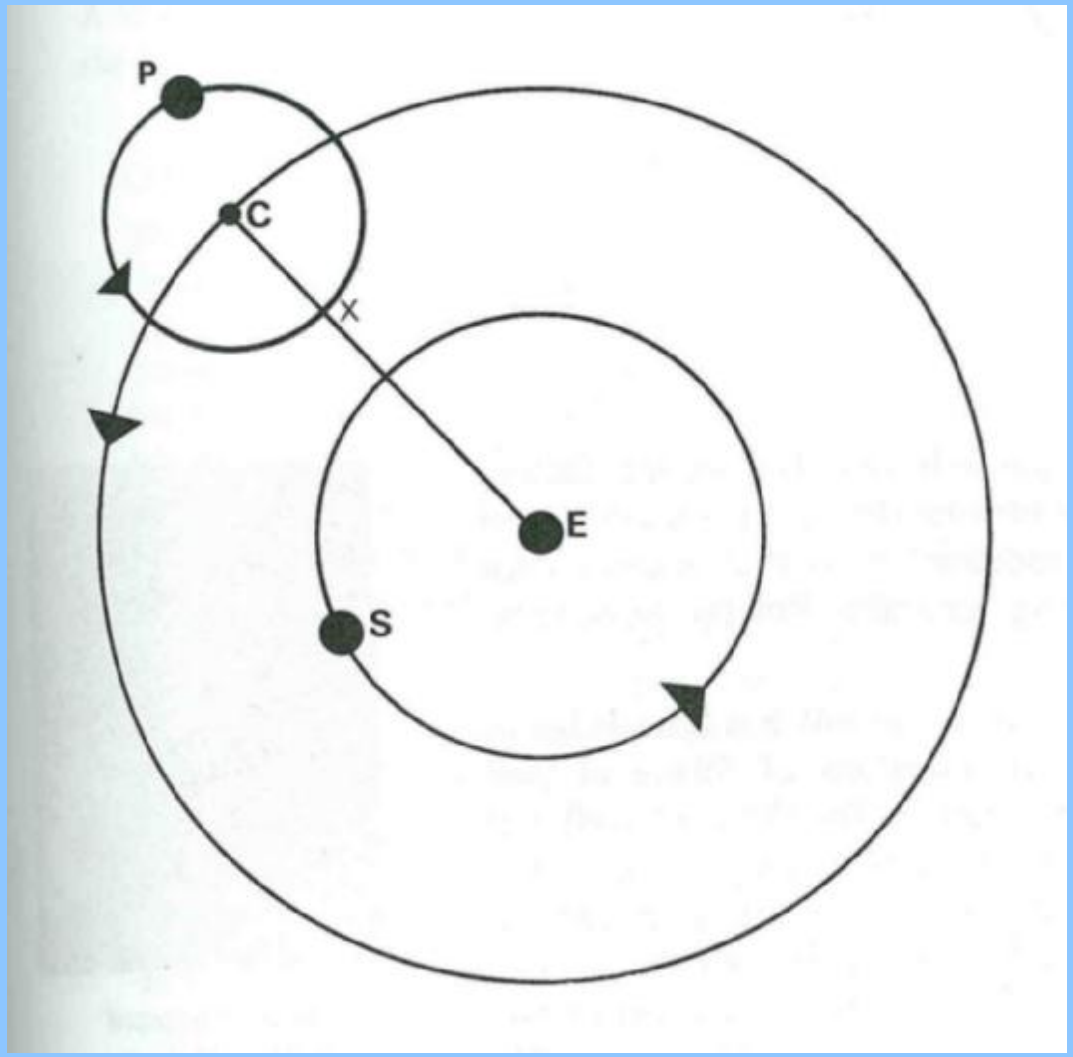
Epicyle: Ptolemaic invention



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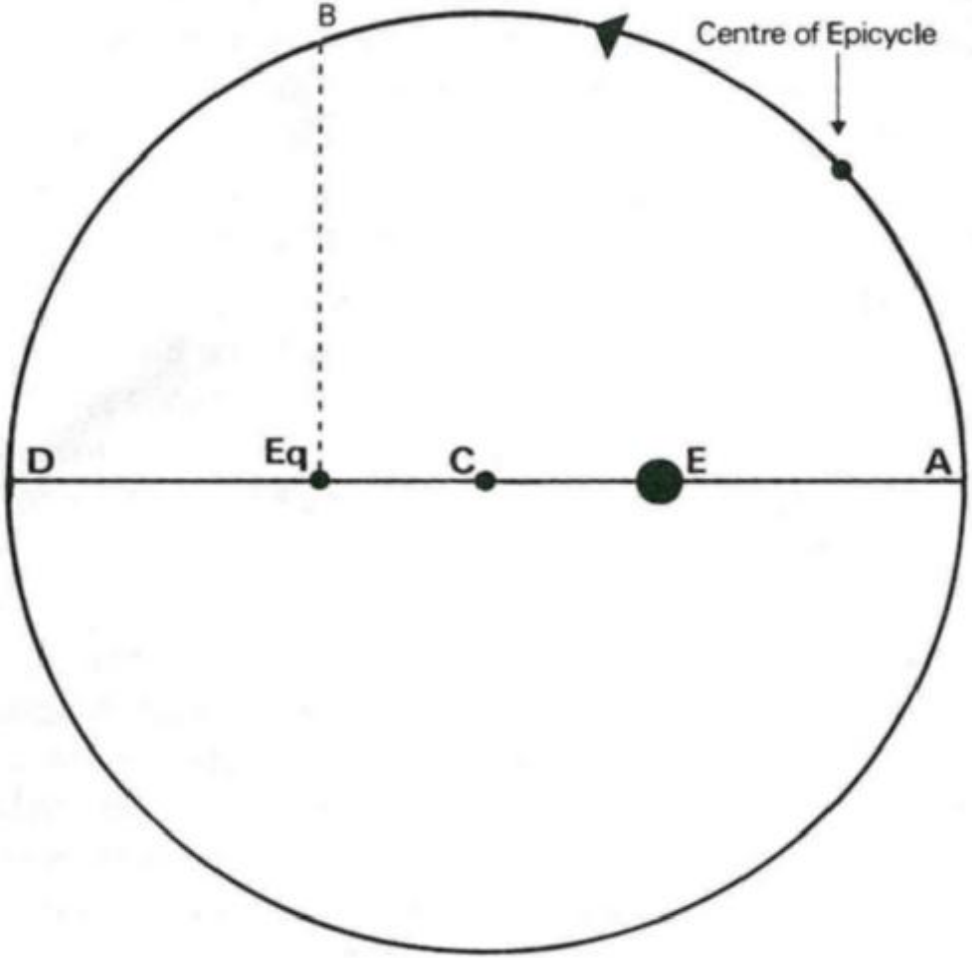
Equant: Ptolemaic invention



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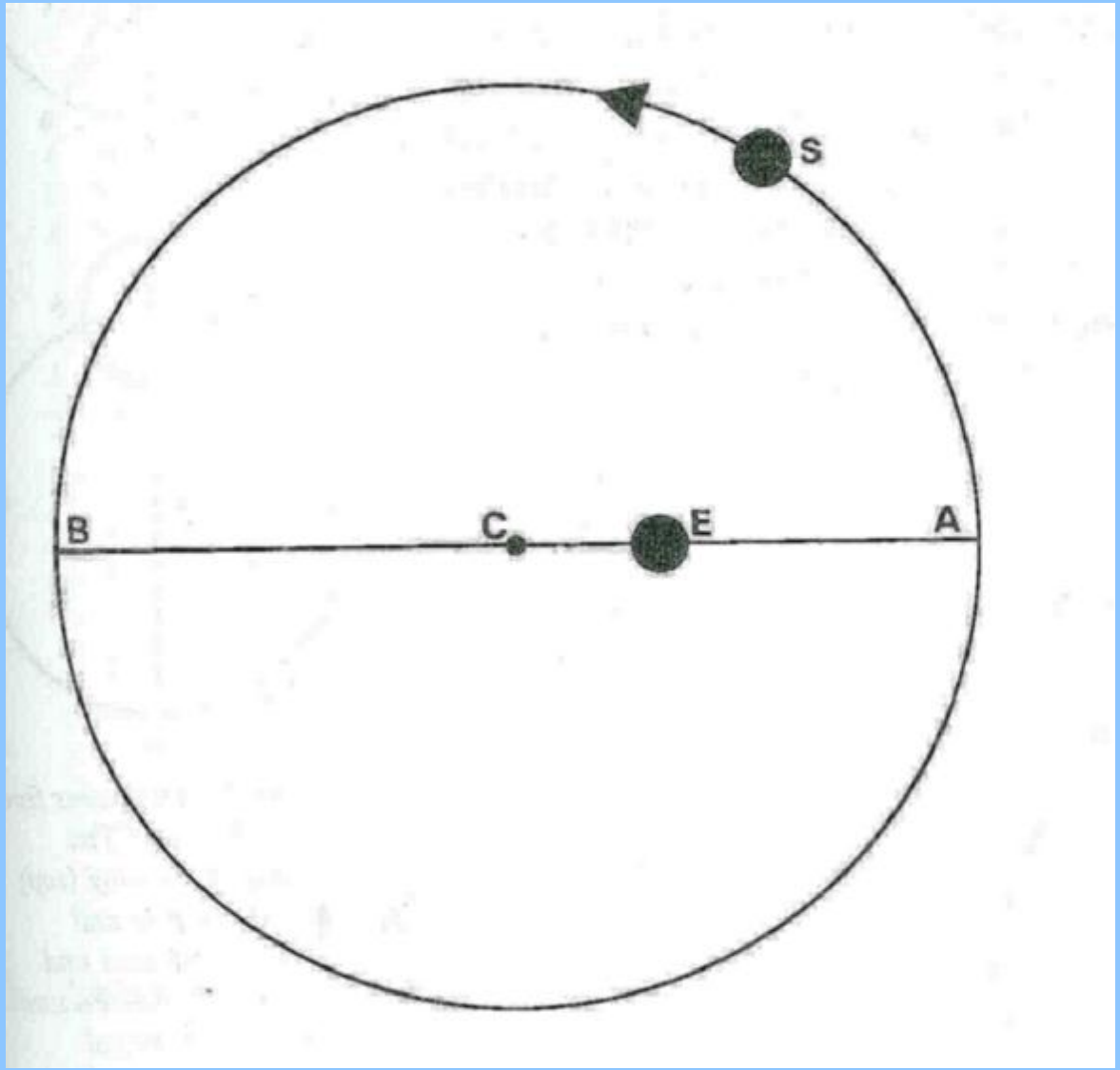
Excentric: Ptolemaic invention



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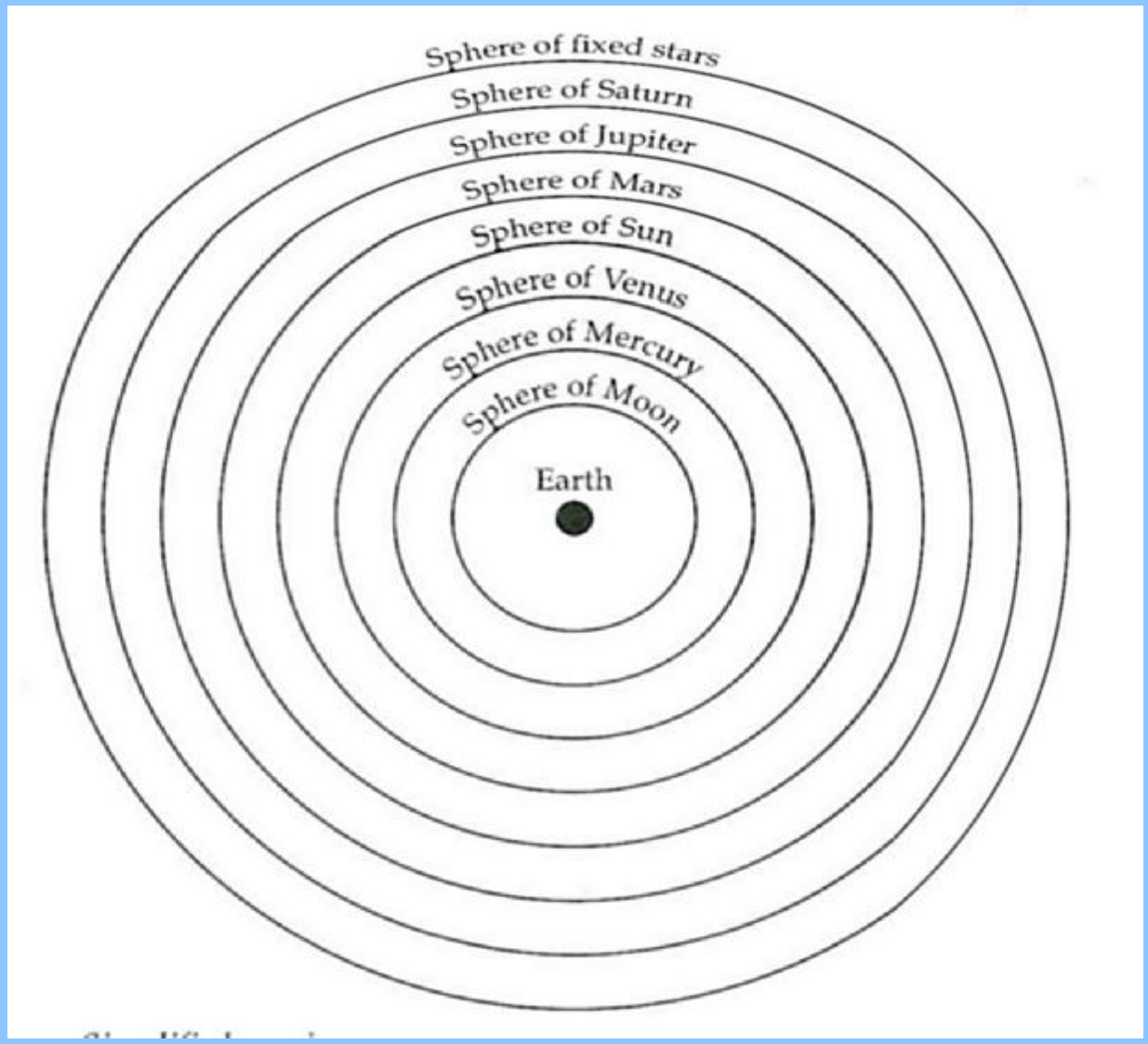
Copernicus' system



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1. The origins of scientific theories

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1. The origins of scientific theories

- Experiment?

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1. The origins of scientific theories

- Experiment?
- Observation?

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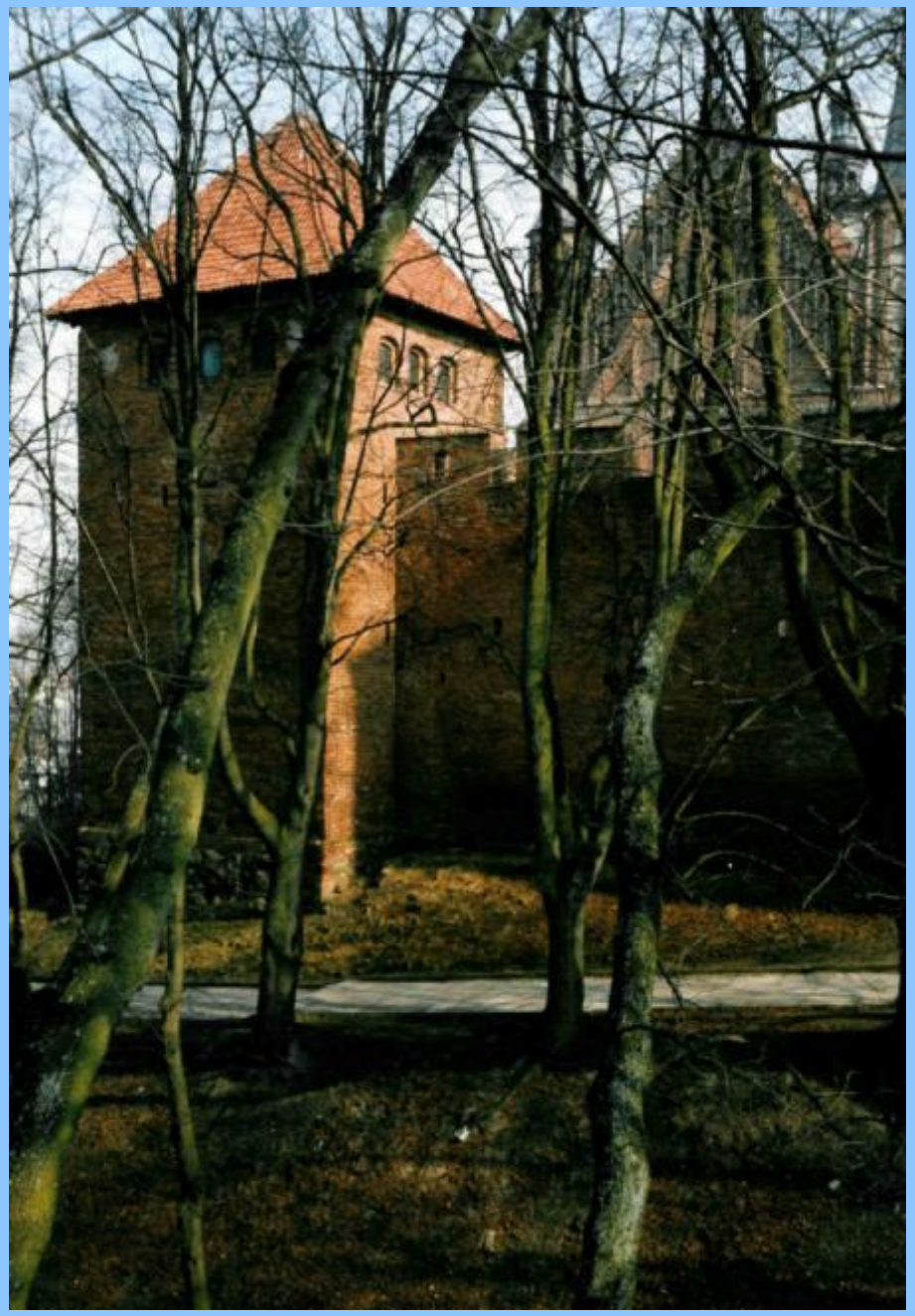

Copernicus' tower, Frauenburg

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1. The origins of scientific theories

- Experiment?
- Observation?
- Hunches?

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1. The origins of scientific theories
2. The importance of a world-view

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Philosopher and astronomer discussing old world system/picture

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1. The origins of scientific theories
2. The importance of a world-view
3. The influence of the organised church

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Frauenburg Cathedral

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Tiedemann Giese, Bishop of Kulm and friend and encourager of Copernicus

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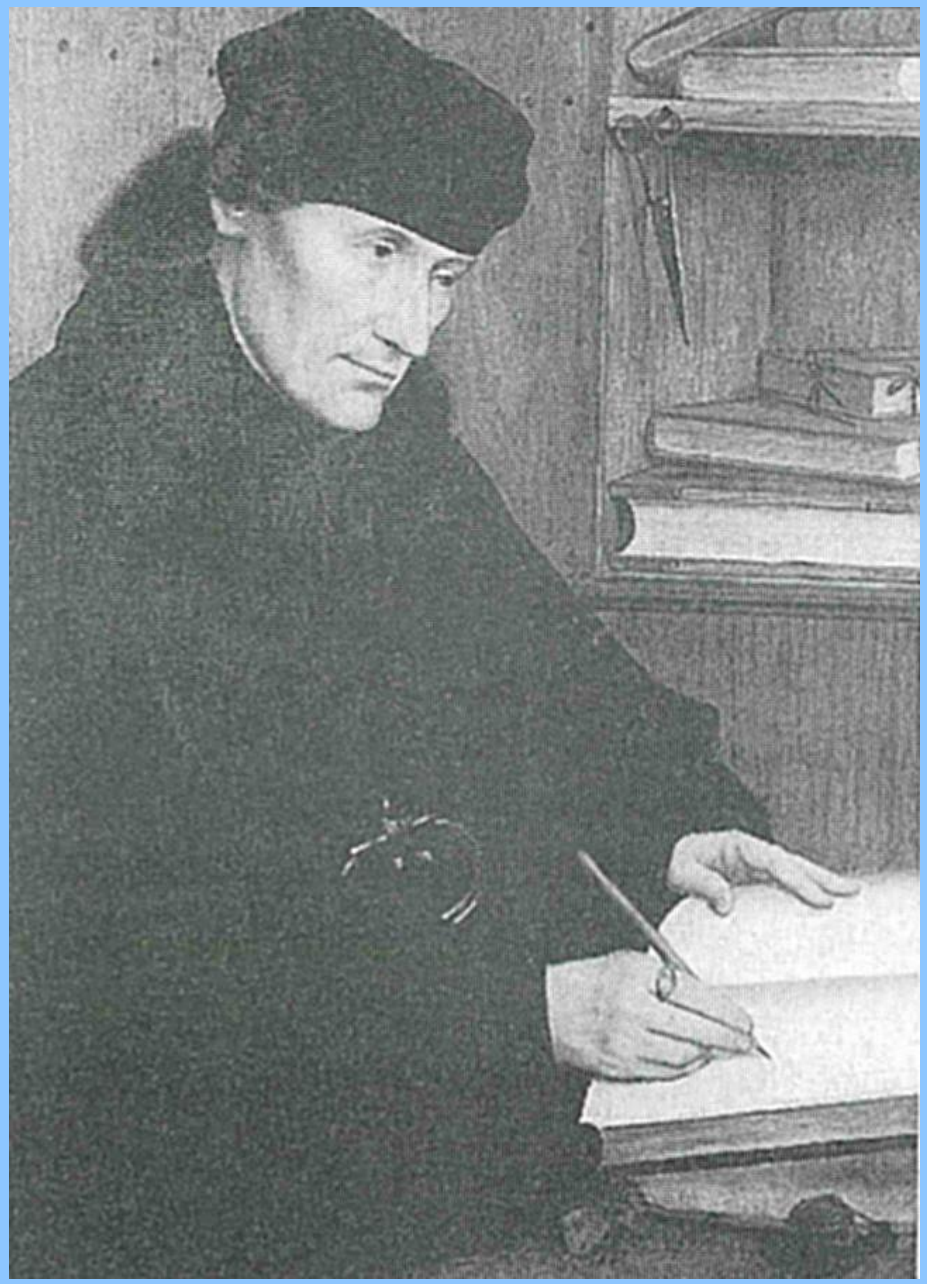

Erasmus: reformer within the Roman Catholic church

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1. The origins of scientific theories
2. The importance of a world-view
3. The influence of the organised church
4. The relevance of the Bible

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R. Hooykaas, historian of science and discoverer (1973) of Rheticus' lost book

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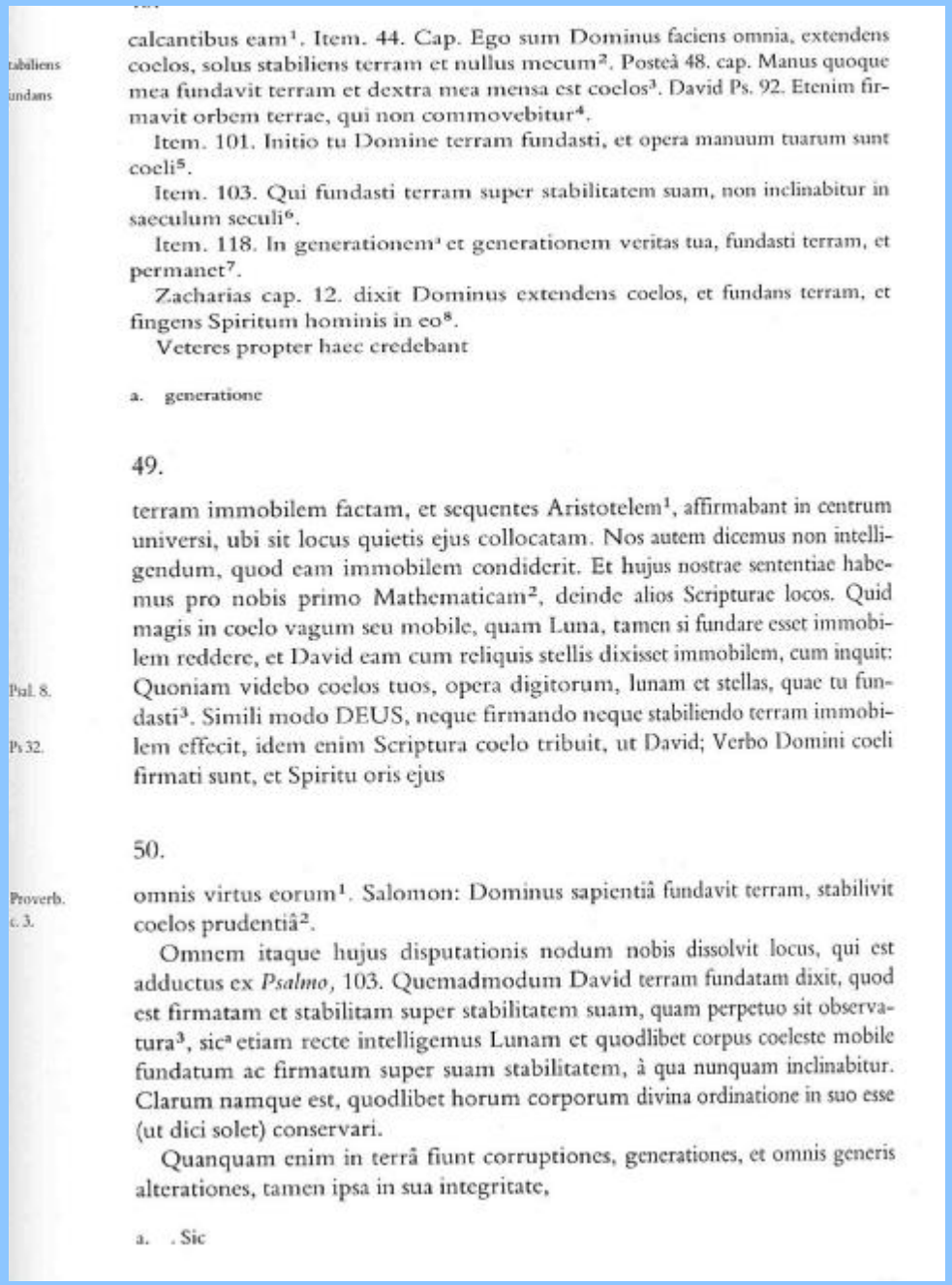

calcantibus eam[1]. Item. 44. Cap. Ego sum Dominus faciens omnia, extendens
tabiliens coelos, solus stabiliens terram et nullus mecum[2]. Posteà 48. cap. Manus quoque
undans mea fundavit terram et dextra mea mensa est coelos[3]. David Ps. 92. Etenim firmavit orbem terrae, qui non commovebitur[4].

Item. 101. Initio tu Domine terram fundasti, et opera manuum tuarum sunt coeli[5].

Item. 103. Qui fundasti terram super stabilitatem suam, non inclinabitur in saeculum seculi[6].

Item. 118. In generationem[a] et generationem veritas tua, fundasti terram, et permanet[7].

Zacharias cap. 12. dixit Dominus extendens coelos, et fundans terram, et fingens Spiritum hominis in eo[8].

Veteres propter haec credebant

a. generatione

49.

terram immobilem factam, et sequentes Aristotelem[1], affirmabant in centrum universi, ubi sit locus quietis ejus collocatam. Nos autem dicemus non intelligendum, quod eam immobilem condiderit. Et hujus nostrae sententiae habemus pro nobis primo Mathematicam[2], deinde alios Scripturae locos. Quid magis in coelo vagum seu mobile, quam Luna, tamen si fundare esset immobilem reddere, et David eam cum reliquis stellis dixisset immobilem, cum inquit:
Psal. 8. Quoniam videbo coelos tuos, opera digitorum, lunam et stellas, quae tu fundasti[3]. Simili modo DEUS, neque firmando neque stabiliendo terram immobi-
Ps 32. lem effecit, idem enim Scriptura coelo tribuit, ut David; Verbo Domini coeli firmati sunt, et Spiritu oris ejus

50.

Proverb. c. 3. omnis virtus eorum[1]. Salomon: Dominus sapientiâ fundavit terram, stabilivit coelos prudentiâ[2].

Omnem itaque hujus disputationis nodum nobis dissolvit locus, qui est adductus ex *Psalmo*, 103. Quemadmodum David terram fundatam dixit, quod est firmatam et stabilitam super stabilitatem suam, quam perpetuo sit observatura[3], sic[a] etiam recte intelligemus Lunam et quodlibet corpus coeleste mobile fundatum ac firmatum super suam stabilitatem, à qua nunquam inclinabitur. Clarum namque est, quodlibet horum corporum divina ordinatione in suo esse (ut dici solet) conservari.

Quanquam enim in terrâ fiunt corruptiones, generationes, et omnis generis alterationes, tamen ipsa in sua integritate,

a. . Sic

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