

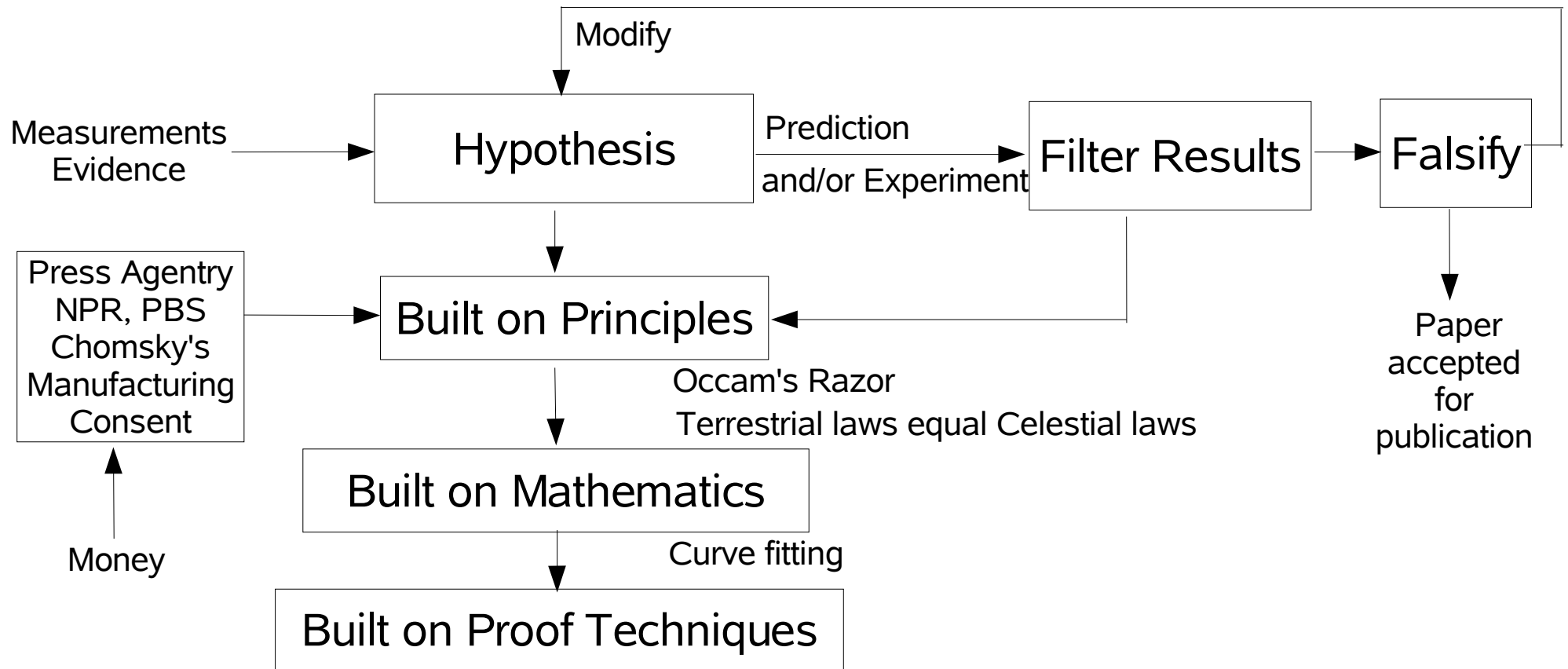
Copernicus' Proof of the Earth's motion



3rd International Conference on Absolutes
Houston, Texas, July 16-18, 2007

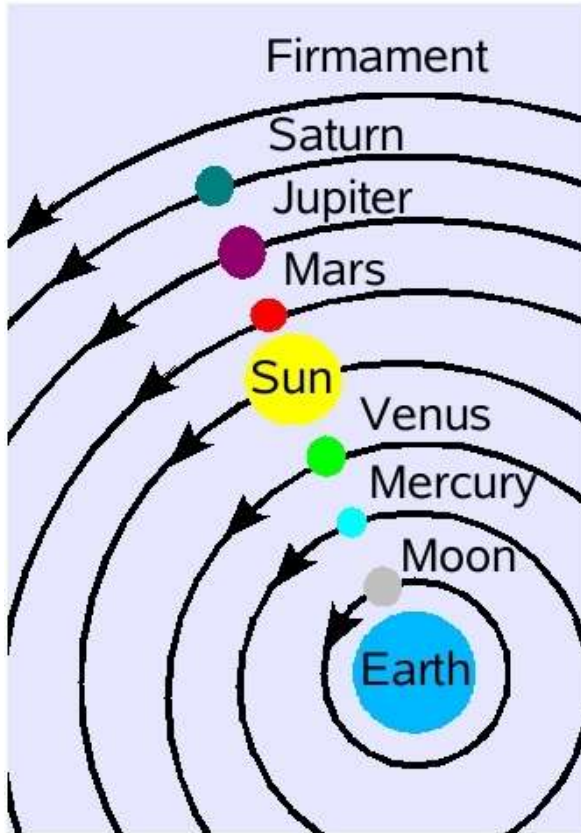
Actual Scientific Research Model

The following shows the actual scientific investigation model including the publication of scientific papers is also controlled by this model.

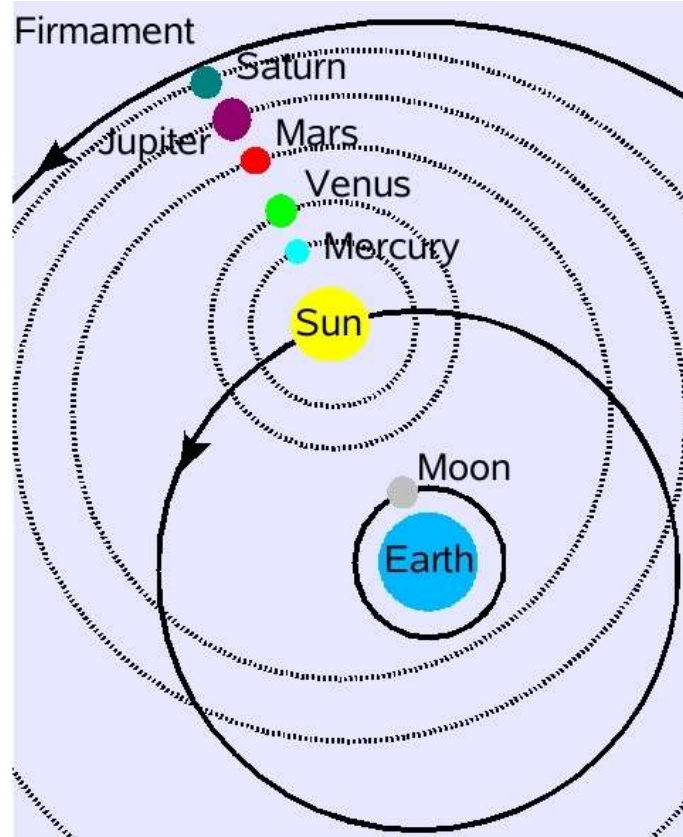


This scope of this talk will now focus on the Geocentric and Heliocentric proofs.

How do the Heavens Go?

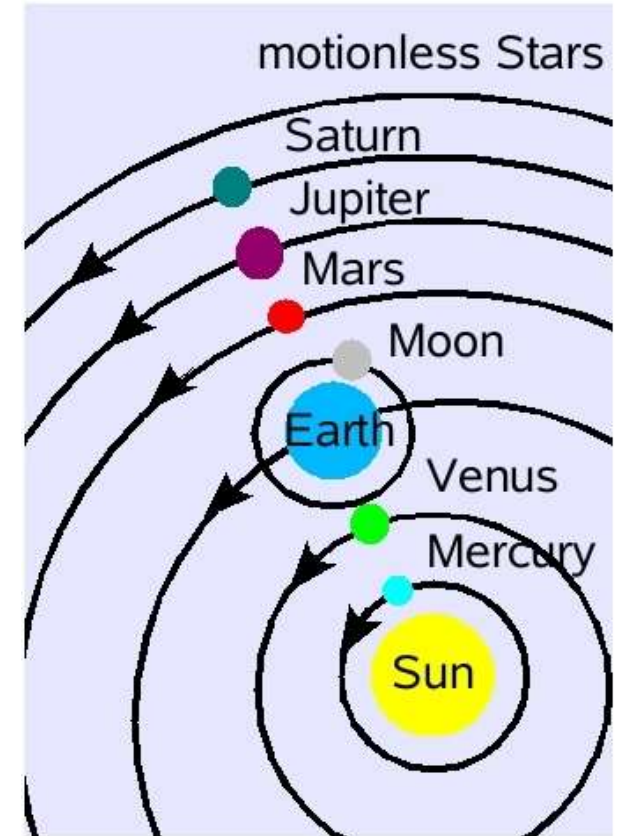


322BC Aristotle,
150AD Ptolemy



1601AD Tycho Brahe

1471BC Moses
1204AD Maimonides
Geocentric: Earth Center



230BC Aristarchus,
1543AD Copernicus

Heliocentric: Sun Center

Ptolemaic versus Copernican

Today, we cannot say that the Copernican theory is “right” and the Ptolemaic theory “wrong” in any meaningful physical sense. The two theories,
when improved by adding terms involving the square of higher powers of the eccentricities of the planetary orbits,
are physically equivalent to one another.”

Sir Fred Hoyle, page 88, “*Nicolaus Copernicus*,” Harper & Row, Publishers, 1973.
The late Sir Fred Hoyle (1915-2001), a world-renowned astronomer, is acknowledged to have been one of the most creative scientists of the 20th century.

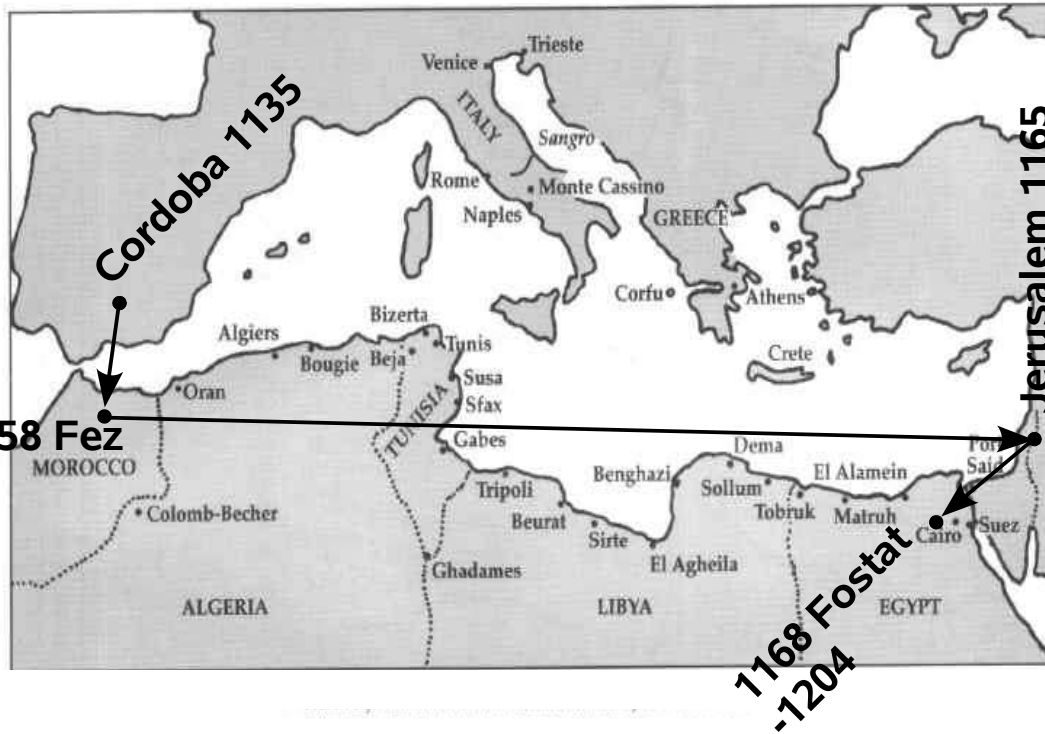
So, there you have this amazing statement. After 400 hundred years of promoting Heliocentric education (including parallax), the astronomers cannot honestly prove it.

By the way, Fred Hoyle was no friend of the Bible,

“The passionate frenzy with which the Big Bang cosmology is clutched to the corporate scientific bosom evidently from a deep-rooted attachment to the first page of Genesis, religious fundamentalism at its strongest.”,

page 439, Big Bang by Simon Singh.

Moses Maimonides



Moses Maimonides (1135-1204), Jewish Scholar and Geocentrist.

A popular Jewish expression declares: “From Moses [of the Torah] to Moses [Maimonides] there was none like Moses.”

His book, *The Guide for the Perplexed*, created a philosophical synthesis of works and teachings of the Jews and Aristotle. Aquinas would imitate him in 1273.

“According to what Aristotle explains in Natural Science, there must be something fixed round which motion takes place; this is why the earth remains stationery.” p196

“How can we reconcile, without assuming the existence of epicycles, the apparent retrogression of a star with its other motions? How can rotation or motion take place round a point which is not fixed? These are real difficulties.”, p198.

“For this reason we adopt, in reference to the circuit of the sun, the theory of excentricity, and reject the epicycle revolution assumed by Ptolemy.” p167.

Lubavitcher

“Are you telling me that every law and practice mentioned in the Torah, written thousands of years ago, must be accepted at face value today?”

“Certainly,” replied Rabbi R. “The torah is eternal, and is equally pertinent to every day and age.”

“The Torah states that the sun revolves around the earth,” countered Mr. P., “Do you believe that as well?”

“Yes, I do,” replied Rabbi R.

“Well, you might believe that,” said Mr. P., “but no rational self-respecting inhabitant of the 20th century does...”

The Biblical Astronomer, Winter 2007, Vol 17, no. 119, pp 12-15,
www.geocentricity.com

“Our Sages have, in this astronomical question, abandoned their own theory in favour of the theory of others. Thus, it is distinctly stated, *'The wise men of the other nations have defeated the wise men of Israel.'*” p163, Moses Maimonides.



Earth: What the Bible Actually Claims

- Earth is in the center of the Universe:

“In the beginning God created the heaven and the earth”
Genesis 1:1

- Stars, Sun and Moon created on the fourth day:

“And God said, “Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years:” Genesis 1:14

“And God made two great lights; the greater light to rule the day, and the lesser light to rule the night: he made the stars also. ... And the evening and the morning were the fourth day.” Genesis 1:14-19

428BC-348BC

Plato, “This, then, being the plan and intent of God for the birth of time, that time might be generated, the sun, the moon, and the five other stars which are called *planets were made for defining and preserving the numbers of time.*”

[Platos' Timaeus, Heath page 52]

If the Earth was created first before the Sun.

So, around what was the earth orbiting?

Earth: What the Bible Actually Claims

- The earth does not rotate:
“...the world also is stablished, that it cannot be moved,” Psalm 93:1
- The earth hangs on nothing:
“He stretcheth out of the north over the empty place, and hangeth the earth upon nothing.” Job 26:7
- The earth is a sphere:
“It is he that sitteth upon the circle of the earth, and the inhabitants are as grasshoppers;” Isaiah 40:22
- Universe is finite
“He determines the number of the stars and calls them each by name” Psalm 147:4

Fixed

322BC Aristotle

Rotates

312BC Heraclides

230BC Aristarchus

1543 Copernicus

Sphere

480BC Pythagorus

322BC Aristotle

Flat

428BC Anaxagoras

Finite

322BC Aristotle

Infinite

270BC Epicurus

230BC Aristarchus

1543 Copernicus

Sun: What the Bible Actually Claims

The moon reflects light of the sun:

“Behold even to the moon, and it shineth not;” Job 25:5

“I will cover the sun with a cloud, and the moon shall not give her light.” Ezekiel 32:7

The sun and moon moves

“Which commandeth the sun, it riseth not;” Job 9:7

“And the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies.” Joshua 10:12-13

Sun motion is a analogous to the wind flow

“The sun also ariseth, and the sun goeth down, and hasteth to his place where he arose.” Ecclesiastes 1:5

“The wind goeth toward the south, and turneth about unto the north; it whirleth about continually, and the wind returneth again according to his circuits.” Ecclesiastes 1:6

500-428BC

“The fact which he (Anaxagoras) recently asserted namely that the ***moon has its light from the sun.*** [Plato's *Cratylus*, 409A, Heath, page 27]

Heliocentric belief

310BC-230BC

Aristarchus of Samos, “His hypotheses are that the fixed stars and ***the sun remain motionless***, that the earth revolves about the sun...”

[Heath, page 105]

What the Bible Does Not Claim

- What the Bible does not claim, what Aristotle claimed:

That the planets in the heaven are perfect spheres.

That moons can only orbit the earth.

Heavier things fall faster, the speed being proportional to the weight.

There are only four elements, and that these are earth, air, fire, and water.

That women have fewer teeth than men.

- Since, the Roman Catholic Church, due to Thomas Aquinas in 1265, merged Aristotle's dogma with the Bible, so:

Professors love to confuse the theories of Aristotle with the Bible.

Professors confuse the Roman Catholic Church with the Aristotle.

- Prior to Aquinas, the Roman Catholic Church did ban many of Aristotle's works at the University of Paris. Aquinas made it acceptable.
- Copernicus mainly attacked Ptolemy & Aristotle and danced around the Bible.
- Geocentricity is not about defending Aristotle or Ptolemy, but that the Earth is at the center of the Universe.

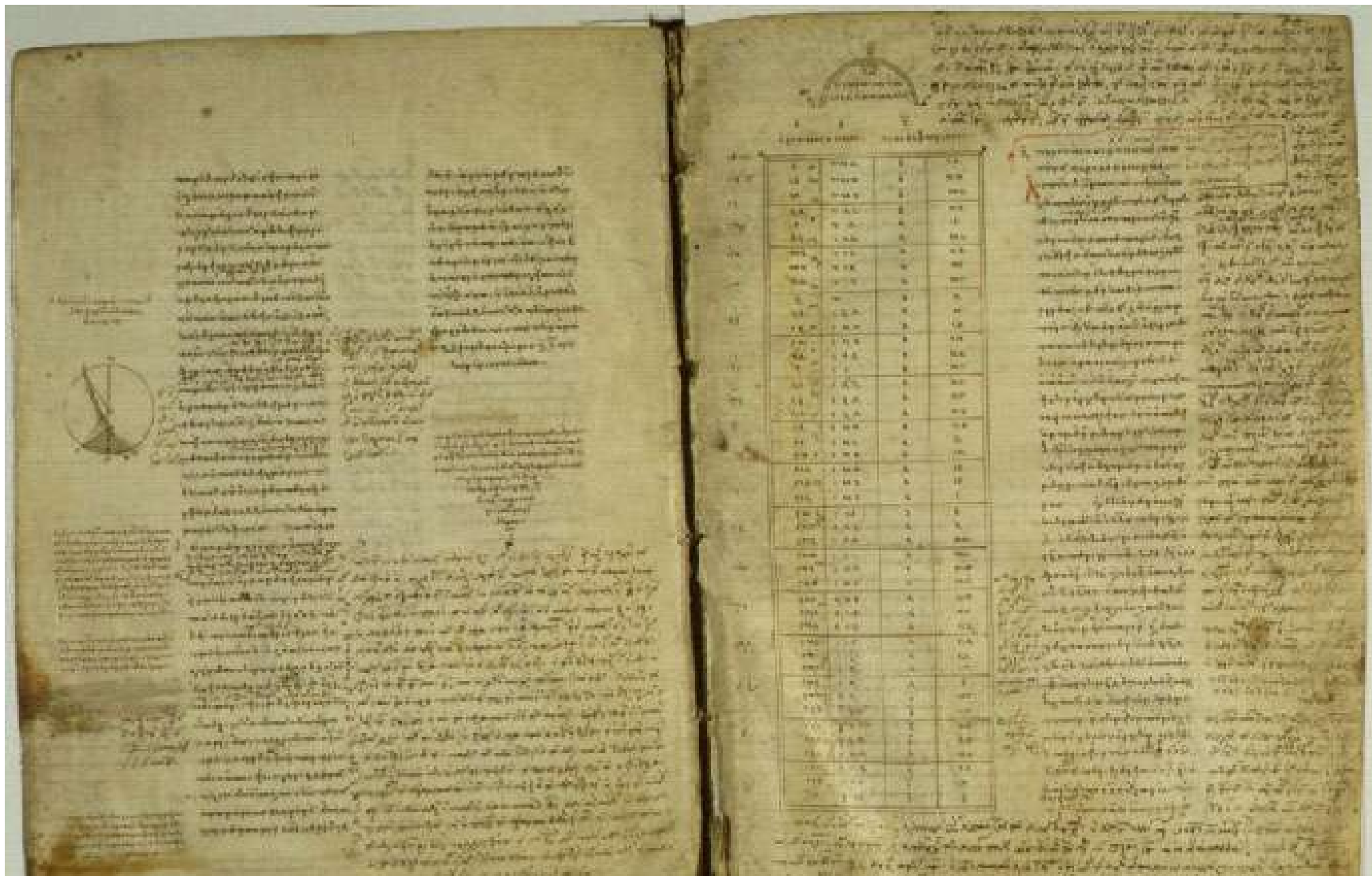
Solar System Theories

	<u>Born</u>	<u>Center</u>	<u>Shape</u>	
Moses	1571-1451BC	Earth	sphere	Hebrew Calendar, 19-year cycle.
Anaximander	611-546BC	Earth	disk	Rotating crystalline spheres.
Pythagoras	572-490BC	Earth	sphere	Concentric crystalline spheres.
Anaxagoras	500-428BC	***	flat	Sun is not God but lights earth & moon.
Eudoxus	408-347BC	Earth	27 spheres,	Learned Egyptian astronomy.
Callippus	370-300BC	Earth	34 spheres,	correction for seasons.
Aristotle	384-322BC	Earth	55 crystalline spheres within spheres	(descriptive).
Heraclides	387-312BC	Earth	Earth rotates,	not the Stars
Aristarchus	310-230BC	Sun	Stars far way,	Infinite Universe, thus no parallax.
Apollonius	240-190BC	***	Epicycles,	explain retrograde motion.
Seleucia	190-150BC	Sun	Tides,	born in the Tigris in Babylonia.
Hipparchus	190-120BC	Earth	Mathematical model of Sun only:	using deferent and epicycles (no equants). Cannot model planet's motions.

Note: Until Hipparchus, the Greeks only had descriptive astronomy.

Solar System Theories

	<u>Born</u>	<u>Center</u>	
Ptolemy	90-168AD	Earth	Fully predictive mathematical model, The equant models the non-uniform motion of all planets.
<i>Mohammad</i>	<i>570-632</i>	<i>Earth</i>	<i>Quran Sura 13:2, 21:33, 31:29, 36:40, ...</i>
Ibn al-Haytham	1000	Sun	Muslim astronomer (note: prior all geocentric)
<i>Maimonides</i>	<i>1135-1204</i>	<i>Earth</i>	<i>Guide for the Perplexed, Jewish, Spain & Egypt</i>
Isaac ibn Sid	12xx	Earth	1252, <i>Alfonsine Tables</i> , Jewish, Toledo, Spain
Copernicus	1473-1543	Sun	1514, <i>Commentariolus</i> 1543, Fully predictive mathematical model
Tycho Brahe	1546-1601	Earth	Tychonic system
Kepler	1571-1639	Sun	1609, <i>Astronomia nova</i> , elliptical orbits
Gallileo	1564-1642	Sun	1610, <i>Starry Messenger</i> , Jupiter's moons
<i>King James</i>	<i>1566-1625</i>	<i>Earth</i>	<i>1611, KJV Bible, Joshua 10:12-13</i>



- Ptolemy (90-168AD) lived in Alexandria, Egypt and wrote several books, *Mathematike Syntaxis* (*Almagest*), *Geographia*, *Tetrabiblos* (astrology), *Harmonics* (music), and *Optics*.
- The *Almagest* covers the geocentric theory of planets using epicycles, and equants. Shown here is a 9th-century Greek manuscript of the *Almagest* (Book IV chapter 2) in the Vatican.

Algamest: Ptolemy's Proof of Geocentric Earth.

- ***Parallax Argument (orbit)***: “Moreover, the earth has, to the senses, the ratio of a point to the distance of the sphere of the so-called fixed stars. A strong indication of this is the fact that the sizes and distances of the stars, at any given time, appear equal and the same from all parts of the earth everywhere, as observations of the same [celestial] objects from different latitudes are found to have not the least discrepancy from each other.”

- ***Heavy/Light Argument (center)***: “Hence I think it is idle to seek for causes for the motion of objects toward the center, once it has been so clearly established from actual phenomena that the earth occupies the middle place in the universe, and all heavy objects are carried towards the earth.”

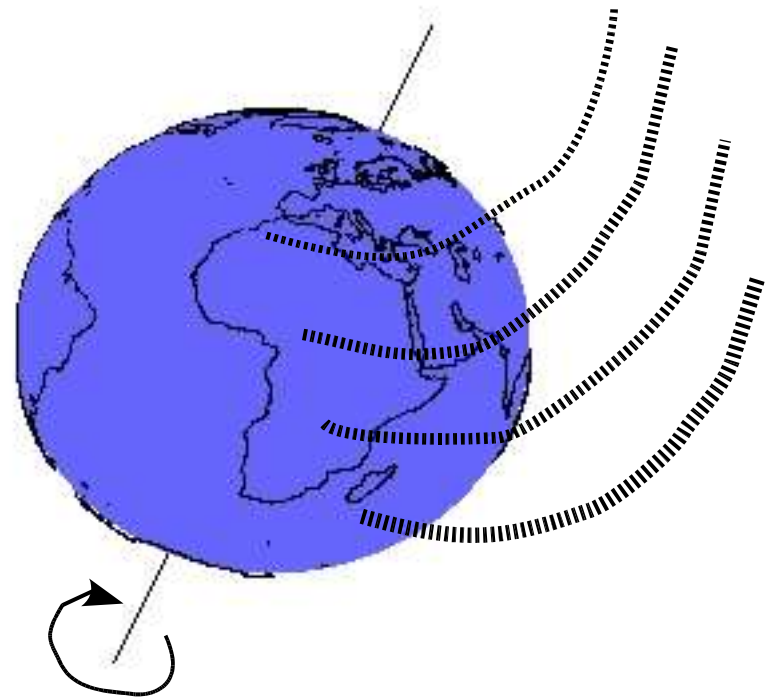


Algamest: Ptolemy's Proof of Geocentric Earth.

Scattering Argument (rotation):

“Nevertheless, they would have to admit that the *revolving motion* of the earth must be the *most violent of all motions* associated with it, seeing that it makes one revolution in such a short time; the result would be that all objects not actually standing on the earth would appear to have the same motion, opposite to that of the earth:

neither *clouds* nor *other flying* or thrown objects would ever be seen moving towards the east, since the earth's motion towards the east would always outrun and overtake them, so that all motion towards the east would always outrun and overtake them, so that all other objects would seem to move in the direction of the west and the rear.”



Who is Nicolaus Copernicus? Birth

- 1473, Niklas Koppernigk was born in Torun, Poland.
- His father and grandfather were both merchants and bankers.
- 1489, His uncle Lucas was appointed Roman Catholic Bishop of Warmia.
- 1491, University of Cracow, studied astronomy using the *Alfonsine Tables*.
- 1496, University of Bologna, Italy, to study law.



Who is Nicolaus Copernicus? Life

- 1503, Awarded Doctor of Canon Law degree (Roman Catholic Church law).
- 1512, Nicolaus takes his post as Roman Catholic Canon at Frauenburg.
- 1523, Administrator General of all Roman Catholic Diocese in Warmia.



- 1523, Administrator of the Roman Catholic Diocese in Warmia.
- 1543, He dies at age 70 after seeing a copy of his book.
- *Modern secular science* does not want to publicly state that one of their “*heros*”: Copernicus was a high ranking influential *Roman Catholic official*.

Who is Nicolaus Copernicus? Influence

- 1514, *Commentariolus*, a short handwritten text about his heliocentric hypothesis.
- 1514, The 5th Roman Catholic Lateran Council invites him for calendar reform.
- 1533, Gives a lecture on the Copernican system to Pope Clement VII.
- 1540, *Narratio Prima* is published introducing Copernicus' ideas by Rheticus.
- 1543, *De revolutionibus* is published with mathematical Heliocentric description.
- 1616, *De revolutionibus* was placed on the Catholic Index of Forbidden Books.
- 1620, Corrections were spelt by the Roman Catholic Church out in 1620
- 1758, Removed from the list.



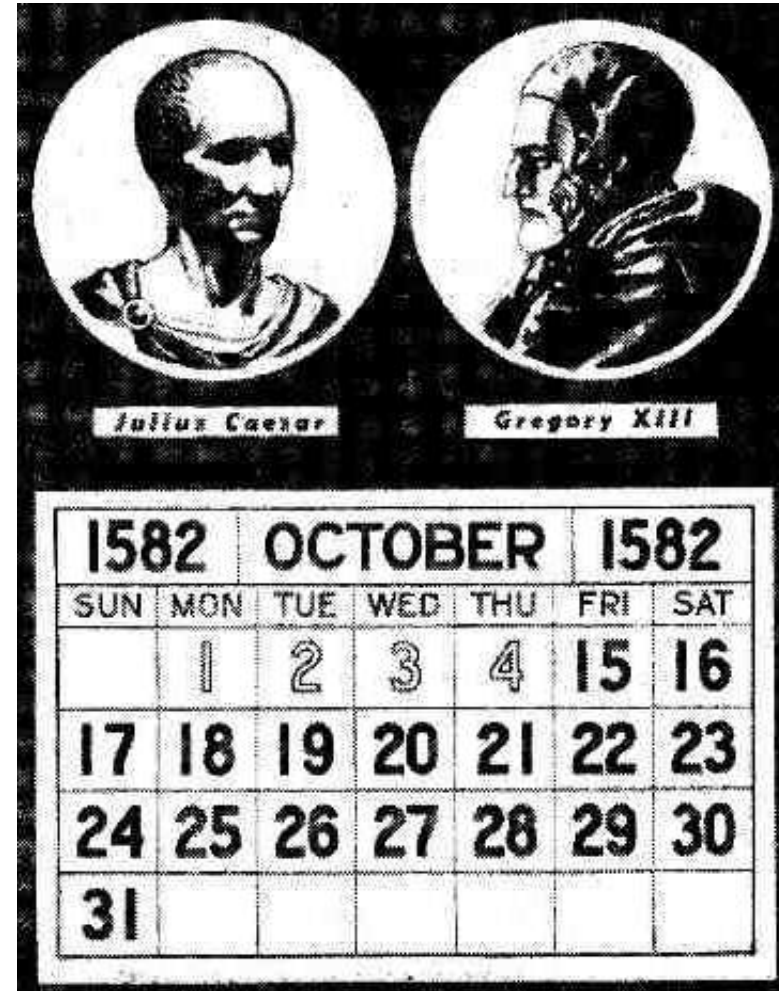
The old Roman calendar was very complicated and required a group of men, known as the pontiffs, to decide when days should be added or removed to keep the calendar in track with the seasons.

325^{AD} at the First Council of Nicaea, the rules are:

Easter Sunday must follow the 14th day of the new moon following on or after the spring equinox, March 21.

Galileo's description of Copernicus

- Galileo wrote the following in *Letter to the Grand Duchess Christina*, 1615,
- “They pretend not to know that its author, or rather its restorer and confirmer, was Nicholas Copernicus; and that he was not only a Catholic, but a *priest* and a *canon*.”
- “He was in fact so *esteemed* by the church that when the Lateran Council under Leo X took up the correction of the church calendar, Copernicus was called to Rome from the most remote parts of Germany to undertake its reform.”
- “At that time the calendar was defective because the true measures of the year and the lunar month were not exactly known.”



Thursday, October 4th, was followed by Friday, October 15th.

De revolutionibus' chapters

- The following is the basic structure of *De revolutionibus*, Book One,
- Introduction: Preface and Dedication.
- Book 1. Arguments for Heliocentric.
- Book 2. Position of Stars.
- Book 3. Position of the Sun.
- Book 4. Position of the Moon.
- Book 5. Position of the Planets.
- Book 6. Latitude Digression of Planets.
- There are no scriptural references used even though many ancient Greek authors are references.



Copernicus Book One, Chapter 5

Book I.5 Does the earth have a circular movement? And of its place.

“Although there are so many authorities for saying that the Earth rests in the center of the world, that people think the contrary supposition inopinable and even ridiculous; if however we consider the thing attentively, *we will see the question has not yet been decided* and according is by no means to be scorned.”

Copernicus came up with only three authorities against:
Herakleides, Ekphantus, Hicetas, Philolaus

Interestingly, Copernicus avoids stating the main authorities for geocentricity:
Torah, Aristotle, Hipparchus, Ptolemy, Koran, Maimonides

Of course, Copernicus' logic is *that the majority may not be right*.

Copernicus argues by counterexample, if someone disagrees, then it might be wrong.

Copernicus, as a Roman Catholic canon, shouldn't he be on the side of Bible?

Copernicus Book One, Chapter 5

Book I.5 Does the earth have a circular movement? And of its place.

Relativity argument: “I mean relatively to the thing seen and the spectator”

“It is not yet clear whether the Earth draws near to them [planets, retrograde] and moves away or they draw near to the Earth and move away.”

Parallax refutation: There is no parallax due to the “immensity of the heavens”

So far Copernicus is willing to refute other Ancient Greeks, namely Aristotle and Ptolemy.

Copernicus avoids refuting actual scripture verses, as almost the bible is not worth the scientific argument.

Copernicus Book One, Chapter 6

Book I.6 On the immensity of the Heavens in Relation to the Magnitude of the Earth.

Mass intuitive argument: “And we should be even more surprised if such a vast world should wheel completely around during the space of twenty-four hours rather than that its least part, the Earth should.”

In order to defend this, he breaks Aristotles model, that the Terrestrial Laws applied in the Celestial and vis versa. Aristotle stated that Celestial objects have a natural circular motion and since they are not corrupt, can move forever without loss force.

Copernicus Book One

Book I.7 Why the ancients thought that the earth remained at rest in the middle of the universe as its center.

Heavy/Light Argument (center): “Accordingly, the ancient philosophers sought to establish that the earth remains at rest in the middle of the universe by certain other arguments. As their main reason, however, they adduce heaviness and lightness.”

Scattering Argument (rotation): “Therefore, remarks Ptolemy of Alexandria [Syntaxis, 1, 7], if the earth were to move, merely in a daily rotation, the opposite of what was said above would have to occur, since a motion would have to be exceedingly violent and its speed unsurpassable to carry the entire circumference of the earth around in twenty-four hours.”

References

Recommended Popular Reading Books

Owen Gingerich, "The Book Nobody Read," 2004, Penguin Books.

Fred Hoyle, "Nicolaus Copernicus," 1973, Harper & Row Publishers.

Gerardus D. Bouw, "Geocentricity," 1992, Cleveland, Ohio.

Additional Popular Reading

Owen Gingerich, "The Eye of Heaven Ptolemy, Copernicus, Kepler," 1993, American Institute of Physics, New York.

Arthur Koestler, "The Sleepwalkers," 1959, Arkana Penguin Books, reprint 1989. (Slide 1, Aristarchus).

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Marie Boas Hall, "The Scientific Renaissance 1450-1630," 1962, 1994, Dover Publications.

Angus Armitage, "Copernicus and Modern Astronomy," 1957, 2004, Dover.

William T. Vollmann, "Uncentering the Earth," 2006, W.W. Norton & Co., New York.

A. Pannekoek, "A History of Astronomy," 1961, reprinted in 1989, Dover Publications, Inc., New York. { useful for Arabian Astronomy }

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{p438, Fred Hoyle quote.}

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Thomas S. Kuhn, “The Copernican Revolution, 1957, Harvard University Press, Cambridge, Mass.

Peter Duffett-Smith, “Practical Astronomy with your Calculator,” 1981, Cambridge University Press. {page 79, Calculating the position of the Sun}

() Edward Rosen, “Three Copernican Treatises,” 1959, 2004, Dover Publications.

Other References

(Slide) The Authorized English translation of the Quran, by Dr. Rashad Khalifa, <http://www.submission.org/quran/koran-index.html>

(Slide) Quote on Sheikh Bin Baz, Judith Miller, God has Ninety-Nine Names, p. 114, <http://thriceholy.net/flaearth.html>

(Slide) Aristotle, “On the Heavens”, “Physics”, <http://classics.mit.edu/Aristotle/>

(Slide) Sir Thomas L. Heath, “Greek Astronomy,” 1932, 1991, Dover Publications.

(Slide 2) Moses Maimonides, “The Guide for the Perplexed,” Translated by M. Friedlander, Dover Publications, Inc., New York, 1881, 1904, 1956.

(Slide) Galileo, “Letter to the Grand Duchess Christina of 1615,” <http://www.galilean-library.org/christina.html>

(Slide) Galileo, “Starry Messenger,” 1610, <http://www.historyguide.org/earlymod/starry.html>

Appendix: Additional Slides

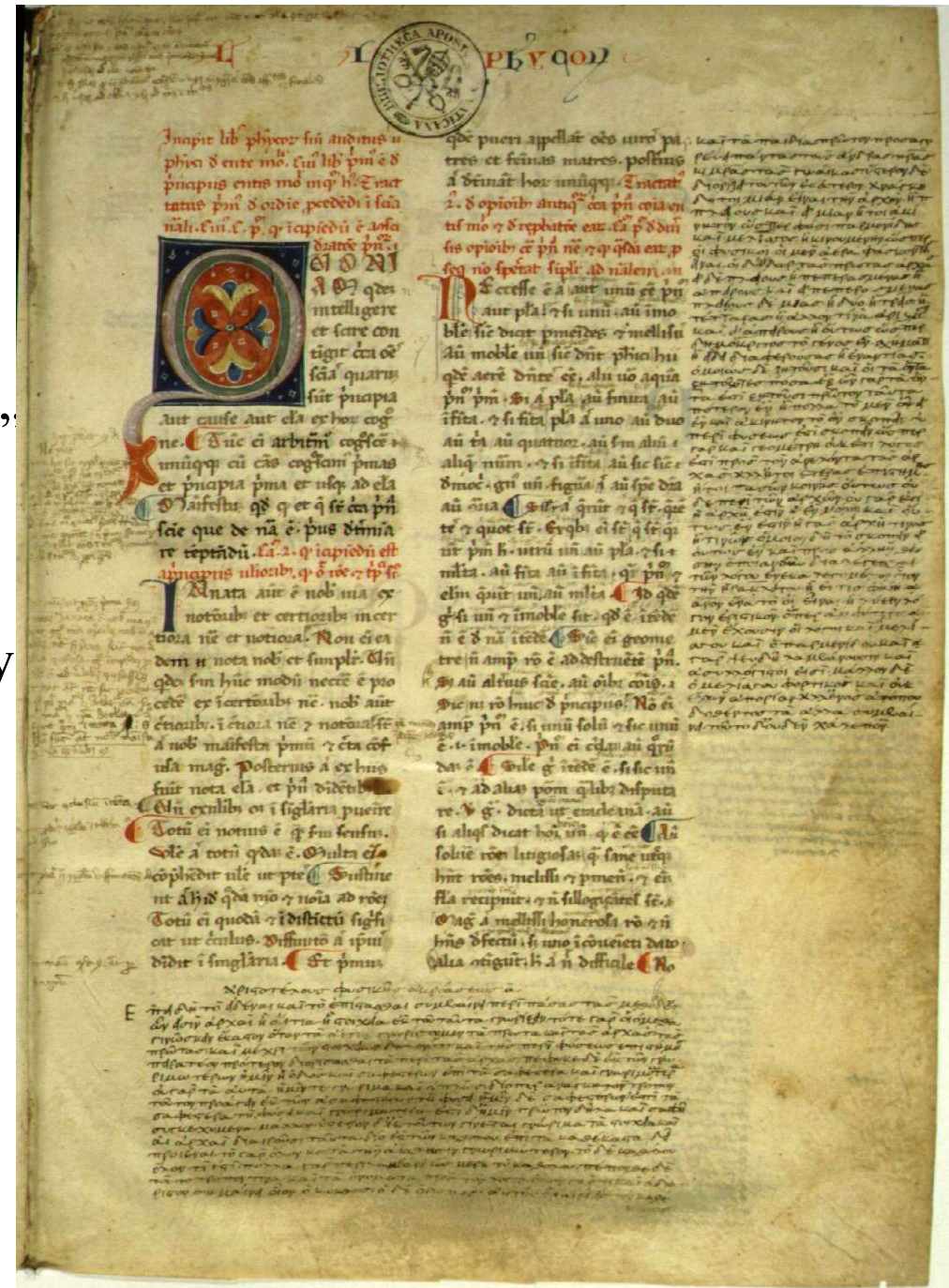
Aristotle's Gravity Axioms

“Everything that is in motion must be moved by something.” (Physics, Book VII)

“The motion of everything that is in process of locomotion is either *circular* or *rectilinear* or a compound of the two.” (Physics, Book VIII)

“The term, *heavy*, to that which naturally moves towards the center, and *light* to that which moves naturally away from the center.” (Physics, Book VIII)

“We must show not only that the heaven is one, but ... exempt from *decay* and generation, the heaven is eternal.” (De Caelo, On the Heavens, Book I)



Summary of Aristotle's Axioms

- Natural Place, Natural Motion, and Violent Motion.
- Heavy bodies fall faster than light bodies.
- *Horror vacui*, Nature abhors a vacuum.
- *Terrestrial* laws are different than *Celestial* laws
- Four *Terrestrial* Elements
 - Rectilinear motion,
 - Finite, decayed motion,
 - Upward: Air, Fire,
 - Downward: Earth, Water
- Fifth *Celestial* Element
 - Circular motion,
 - Uniform,
 - Infinite,
 - Ether



Footnote: Is Aristotle that far off? modern jargon, earth(solid phase), water(liquid phase), air(gaseous phase).

Aristotle's Proof of Geocentric Earth.

“As to the position of the earth, then, this is the view which some advance, and the views advanced concerning its rest or motion are similar.”

“For here too there is no general agreement. All who deny that the earth lies at the center think that it revolves about the center, and not the earth only but, as we said before, the counter-earth as well.” (On the Heavens, Book II)

Parallax Argument (orbit): “The earth, then, also, whether it move about the center or as stationary at it, must necessarily move with two motions. But if this were so, there would have to be *passings and turnings of the fixed stars*. Yet no such thing is observed. The same stars always rise and set in the same parts of the earth.”

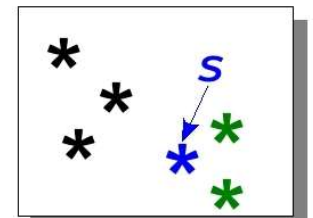
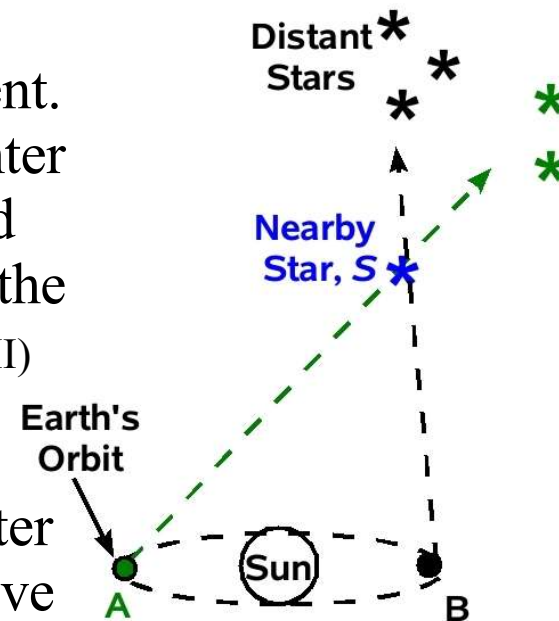


Photo taken from position A

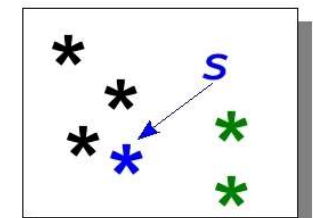


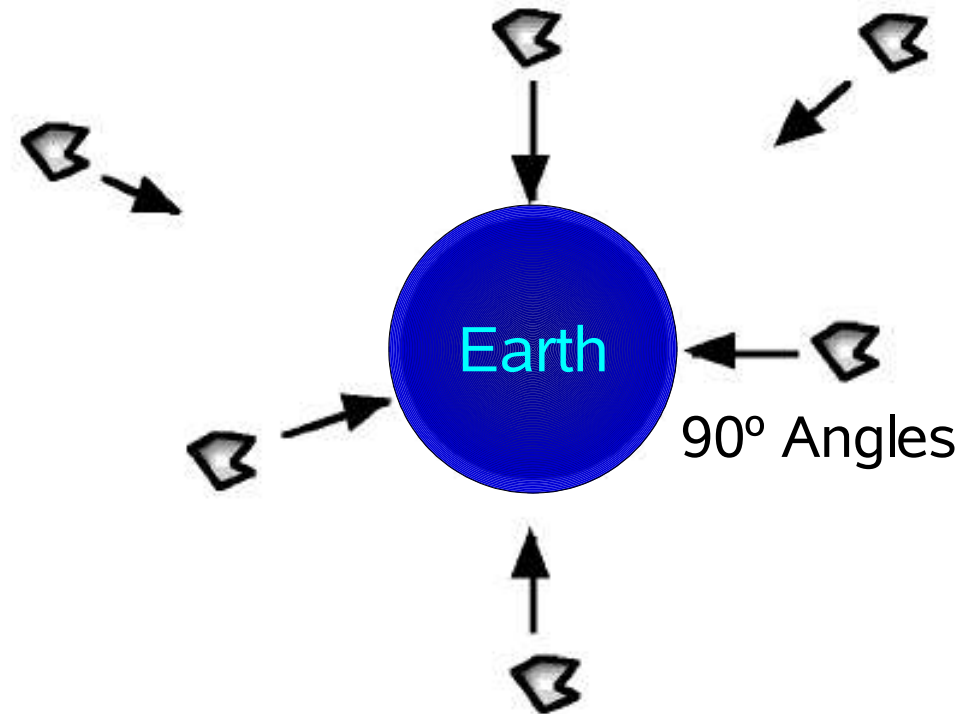
Photo taken from position B

Aristotle's Proof of Geocentric Earth.

Heavy/Light Argument (center):

“Heavy bodies moving towards the earth do not parallel but so as to make *equal angles*, and thus to a single center, that of the earth.

It is clear, then, that the earth must be at the center and immovable, not only for the reasons already given, but also because *heavy bodies* forcibly thrown quite straight upward return to the point from which they started, even if they are thrown to an infinite distance.”



Who is Galileo?

- 1564, Galileo Galilei was born in Pisa, part of the Grand Duchy of Tuscany. Cosimo II's father, Ferdinando I, had hired Galileo to tutor his children part of the year.
- March 1610, *Sidereus Nuncius*, or Starry Messenger, is published showing telescopic observations of the craters of the Earth's moon, and the four moons of Jupiter.
- Is dedicated to Cosimo II de Medici, Grand Duke of Tuscany, in honor of the house of his prospective patron: the moons of Jupiter are named Medicean Stars.
- Is then appointed for life as "*Chief Mathematician of the University of Pisa and Philosopher and Mathematician to the Grand Duke*" of Tuscany.
- 1613, *Letters on Sunspots*, showed that the Sun has sunspots and rotates.
- 1615, *Letter to the Grand Duchess of Tuscany*, Book of Nature vs. Book of Heaven.
- *Edict of 1616*, that all writing about Copernicus be limited to the hypothetical.



Who is Galileo?

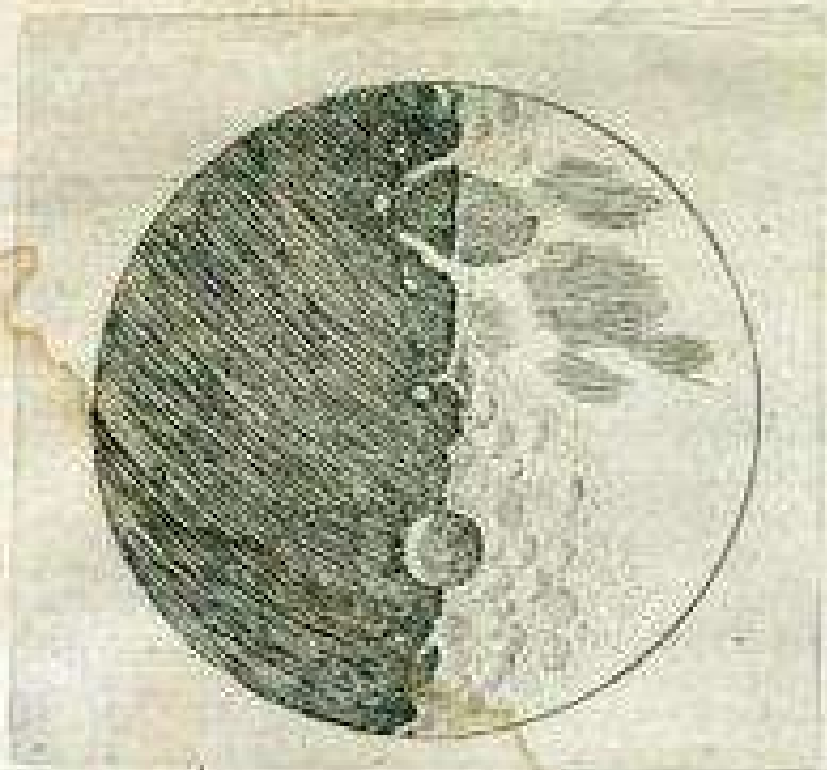
- 1632, *Dialogue Concerning the Two Chief World Systems*, proof by tides.
- Galileo was summoned to Rome by the Inquisition on 23 September 1632, following publication of his *Dialogue*



- 1633, was condemned to life imprisonment, for having disobeyed a 1616 injunction by Cardinal Bellarmino "*...not to defend or teach the Copernican doctrine...*".
- As a special favor to Grand Duke Ferdinand II de' Medici, the Pope allows Galileo to stay at the residence of the Tuscan ambassador and is forbidden social contacts.
- Cosimo II's father, Ferdinando, had hired Galileo to tutor his children part of the year, so he was known to Cosimo II.
- 1642 buried, 1737 was reburied on Roman Catholic sacred ground, 1741 was formally rehabilitated.

OBSERVAT. SIDEREAE

Ann. daturam. Depressiores insuper in Luna cernuntur magna maculae, quam clariores plage; in illa enim tam crescente, quam decrecente semper in lucis tenebrarumque confinio, prominente hinc inde circa ipsas magnas maculas contermini partis lucidioris; veluti in describendis figuris observantur; neque depressiores tantummodo sunt dictarum macularum termini, sed aequabiliores, nec rugis, aut asperitatibus interrupti. Lucidior vero pars maxime prope maculas eminet; adeo ut, & ante quadraturam primam, & in ipsa ferme secunda circa maculam quandam, superiorem, borealem nempe Lunae plagam occupantem valde extollantur tam supra illam, quam infra ingentes quaedam eminentiae, veluti apposite praefecerunt delineationes.



Hæc

Galileo's Sidereus Nuncius

- In March 1610, Galileo wrote a small book, called Starry Messenger.
- By pointing his 20x telescope to the heavens, he discovered mountains and craters on the moon, four moons of Jupiter, and countless stars never before seen.
- Moon's craters: contradicts the Aristotelean claim which argued that since the heavens were more perfect than the earth, the heavenly bodies must be perfectly smooth spheres.
- Four moons of Jupiter: contradicts the Aristotelean claim which argued against the motion of the earth about the sun on the basis that the moon would be left behind.

Galileo's Sidereus Nuncius: 1610 Proof

- Galileo concludes by saying,: “Here *we have a fine and elegant argument for quieting the doubts* of those who, while accepting with tranquil mind the revolutions of the planets about the sun in the Copernican system, are mightily disturbed to have the moon alone revolve about the earth and accompany it in annual rotation about the sun.”
- “Some have believed that this structure of the universe should be rejected as impossible.”
- “But now we have not just one planet rotating about another while both run through a greater orbit around the sun; our eyes show us four stars which wander about Jupiter as does the moon around the earth, while all together trace out a grand revolution about the sun in the space of twelve years.”
- Galileo's chain of logic is that if Aristotelean Cosmology is wrong, then Ptolemy is also wrong, thus Copernicus is right.
- Say what? What does the physical proof of the moon crater's and Jupiter's moons, have say about the earth moving!



Aristotelian Logic

- Aristotle's Logic is a formal method of argumentation,
- which consists of definitions, *axioms*, *rules*, and *deductions*.
- *Axioms* - Self evident truths, sources of law, canon, admissible evidence.
- *Rules, Exegesis* - Set of rules stating what counts as a valid deduction or proof.
- *Theorem, hypothesis, inference* - Any sentence that can be proved in the system.
- Aristotle's basic rule (i.e. exegesis) is the syllogism (chain of reasoning or logic):

All men are mortal	Major premise: All M are P
<u>All Greeks are men</u>	<u>Minor premise: All S are M</u>
All Greeks are mortal	Conclusion: All S are P

Consistency - none of the conclusions of the system contradict one another.
Soundness - rules of proof will never allow a false inference from a true premise.

Logical Deduction and Euclid's Elements

	Sadducees	Pharisees	Catholic	Euclid's Elements 300BC, 13 books
Definitions	Words are context free.	Words are context sensitive.	Words are context sensitive.	1. A point is that which has no part. 2. A line is breadthless length. ...
Axioms <i>or</i> <i>principles</i>	Torah	Torah Prophets Writings Talmud	Tanakh Apocrypha Gospels Canon Law Aquinas	1. Two points form a straight line, 2. Line segment is contain in a line, 3. Point & line form a circle, 4. Right angles all equal, 5. Line & point form a Parallel line.
Rules <i>or exegesis</i>	Priests, Literal.	Rabbi, Debates.	Pope, Councils.	Straight edge, compass, pencil.
Deduction	Passover, No afterlife.	Passover, Afterlife.	Easter, Afterlife.	Pythagorean's theorem.

