

Reading Assignment 3: The Two-Sphere Universe in Aristotelian Thought

ASSIGNED READING T. S. Kuhn. *The Copernican revolution: Planetary astronomy in the development of Western thought*. Harvard University Press, 1957, Chapter 3.

DUE DATE Please bring a typed, hardcopy of your answers to class on Thursday, January 11th, 2017.

TECHNICAL REQUIREMENTS Answer questions one, two, and five below. Together, your answers should not be longer than a single typed page. Remember to provide page numbers indicating which passages you are paraphrasing. For the remaining optional questions, please write down the page numbers on which Kuhn addresses the question.

QUESTIONS

1. In Aristotle's cosmology, what is made of aether? What elements composed objects in the sublunary region? Using your answers to the first two questions, explain how and why the "majesty" of the heavens differs from the sublunary realm, according to Aristotle. Note: To answer this last question, you may need to read ten or so more pages beyond where first two questions are answered.
2. In no more than a paragraph, explain what Kuhn means when he writes, "The attempt to find a mechanical explanation of the epicyclic motions was often neglected after the fourth century B.C."
3. What was Al Fargani's major contribution to astronomy?
4. According to Aristotle, if they were left undisturbed, how would the elements of the sublunary be distributed? Why aren't elements distributed in that way? Explain how your answer to the previous question is relevant to the following claim: Aristotelian cosmology provided a foundation for astrology, in that it provided a "plausible basis for the belief that an ability to predict the future configuration of the heavens would enable men to foretell the future of men and nations." Note: To answer this last question, you may need to read ten or so more pages beyond where first two questions are answered.
5. In your own words, summarize Ptolemy's argument that the Earth must be stationary. According to Aristotelian physics, if the Earth were rotating and you were to throw a stone up in the air, where would the stone land?
6. According to Kuhn, why could an infinite universe "scarcely remain an Aristotelian universe?"
7. According to Kuhn, what might explain why the Copernican revolution was "so long delayed [and] strenuously resisted?"
8. According to Kuhn, why was Aristotle's worldview "immensely influential?"

REFERENCES

- [1] T. S. Kuhn. *The Copernican revolution: Planetary astronomy in the development of Western thought*. Harvard University Press, 1957.