

***Second Discussion Paper*** (Due Monday, October 26):

Write a five-page essay on one of the following topics.

1. What were the central features of Aristotle's natural philosophy? Pay special attention to those parts of his philosophy that were most relevant to providing a foundation for the ancient Aristotelian/Ptolemaic view of cosmology, such as Aristotle's theory of matter and his way of explaining free fall. What are some of the more serious problems with Aristotle's natural philosophy, in your opinion?
2. Explain the basic components of Ptolemy's model of the planetary system and then contrast that system with both the Copernican and Tycho's systems. What were the major strengths and weaknesses of each system? Finally, explain how Kepler's model differed from all three.
3. What is the thesis of the underdetermination of theory choice by empirical evidence? What are the major arguments for this thesis? What might be its major problems? Illustrate your answer by reference to the debate among the Ptolemaic, Copernican, and Tycho's systems, and give one additional example from among the several examples that we discussed in class.
4. Briefly survey the major discoveries that Galileo made with the telescope in 1609 and 1610, and then explain how each of these discoveries provided evidence in favor of the Copernican, heliocentric model of the planetary system.
5. Assume that you are living in Florence in 1615, that you are a highly-educated, middle class citizen who has read all of Galileo's new works. Assume that you are also a pious Catholic. What position would you have defended in the debate over the Copernican system?
6. Explain Galileo's view of the proper relationship between science and theology. Do you agree or disagree with that view? Explain your reasoning. If you wish, illustrate your own position with an example drawn from more recent science.