Aristotle's Conclusions in *On the Heavens*

- **The celestial realm is filled with aetherial matter that is different in its nature from the four elements of the sublunary realm**

- **While the natural motion of the four elements is toward the center of the Earth, the natural motion of celestial aetherial matter is circular**

- **Celestial circular motion is uniform, and hence self-sustaining and eternal**

- **The Earth is at the exact center of the celestial realm, where it remains entirely motionless**

- **The Earth is spherical and quite small compared with the sphere of the fixed stars**

"Of many such problems one of the strangest is the problem why we find the greatest number of movements in the intermediate bodies, and not, rather, in each successive body a variety of movement proportionate to its distance from the primary motion….

A second difficulty which may with equal justice be raised is this. Why is it that the primary motion includes such a multitude of stars that their whole array seems to defy counting, while of the other stars each one is separated off, and in no case do we find two or more attached to the same motion."

***De Caelo*, 12, 291b-292a**

Eudoxus of Cnidus (408-355 B.C.)

Aristotle (of Macedonia) (384-322 B.C.)

Euclid (in Alexandria during the period 323-283 B.C.)

Archimedes (of Syracuse) (287-212 B.C.)

Apollonius of Perga (ca. 262-ca. 190 B. C.)

Hipparchus of Nicea (ca. 190-120 B.C.)

Claudius Ptolemy (in Alexandria around 150 A.D.)