Aristotelian Infinites

Aristotle is famous in the history of philosophy and science for having maintained that there is not and could not possibly be any such thing as an infinitely extended body (the very idea being inconsistent with basic principles of natural science) or even an infinitely extended space surrounding the material, physical world taken as a whole. The physical universe, on his theory, is a bounded spherical material body with absolutely nothing outside it, not even empty space. What is not well known, and is not even well understood by Aristotelian specialists, even contemporary ones, is that Aristotle does hold that there do exist some physical entities that <u>are</u> infinite, including the unified body of the whole cosmos, according to exactly the same conception of infinity that his predecessors had in mind in their theories which claimed the world is infinitely extended in the way Aristotle firmly denied it was or even could be. They thought that anything infinite is by definition such that starting from anywhere within it, you can keep on going through it in any direction without its ever giving out and coming to an end. Aristotle argues that according to that common and, as he thinks, agreed definition, but in a different way of applying it than his predecessors proposed, there actually <u>are</u> some infinite things, including the physical world as a whole, as well as numbers, time, and even space. In a paper on which this lecture is based, I expound, explain and discuss Aristotle's theory of infinity as he sets it out in *Physics* III 4-8. In the lecture I will focus my discussion on IIII 6, since that is where, having given his objections to the views of his predecessors on this topic, Aristotle advances his own theory and argues for it. Although Aristotle's view as reported in the history of philosophy and science holds that there in no "actually infinite" thing but only "potentially infinite" ones that are "infinite by division," his view in fact, as I will argue in the lecture, allows and insists on the fact that every infinite thing that his view countenances is also "actually infinite," in a way different from the "actual infinities" his theory denies.