

Abstract Submitted
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Castles in the Air: The Einstein-De Sitter Debate, 1916-1918

CHARLES MIDWINTER, MICHEL JANSSEN, University of Minnesota — The Einstein De Sitter debate marked the birth of modern cosmology and the infamous cosmological constant. For Einstein, the controversy was essentially a philosophical one. Einstein's insistence on a static Universe and Mach's Principle guided him in the construction of his own cosmological model, and compelled him to criticize De Sitter's. For De Sitter, the debate began as idle conjecture. Before long, however, he began to wonder if the "spacious castles" he and Einstein had constructed might actually represent physical reality. We plan to write a volume that reproduces the documents relevant to the debate. Our commentary will retrace and explain the arguments of the historical players, complete with calculations. For the first time readers will be able to follow the arguments of Einstein and De Sitter in a detailed exploration of the first two relativistic cosmological models. Readers will see how Einstein's flawed criticisms of De Sitter were supported by Herman Weyl, and finally how Felix Klein settled the whole matter with a coordinate transformation.

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