CONCERNING THE FIGURE AND THE DIMENSIONS OF THE UNIVERSE OF SPACE

There is something a little incongruous in attempting to consider the subject of this address in a theater or lecture hall whose roof and walls shut out from view the wide expanses of the world and the azure deeps. For how can we, amid the familiar finite scenes of a closed and blinded room, command a fitting mood for contemplating the infinite scenes without and beyond? A subject that has sheer vastness for its central or major theme demands for its appropriate contemplation the still expanse of some vast and open solitude, such as the peak of a lone and lofty mountain would afford, where the gaze meets no wall save the far horizon and no roof but the starry sky. Perhaps you will be good enough for the time to transport yourselves, in imagination, into the stillness of such a solitude, so that in the musing spirit of the place the questions to be propounded for consideration here may arise naturally and give us a due sense of their significance and impressiveness. What are the dimensions and what is the figure of our universe of space? How big is it and what is its shape? What is the figure of it and what is its size?

I do not mind owning that these questions have haunted me a good deal from the days of my youth. It happened in

1 An address delivered under the auspices of the local chapters of the Society of Sigma Xi at the state universities of Minnesota, Nebraska and Iowa, April 24, 28 and 30, respectively, and at a joint meeting of the chapters of Sigma Xi and Phi Beta Kappa of Columbia University, May 8.