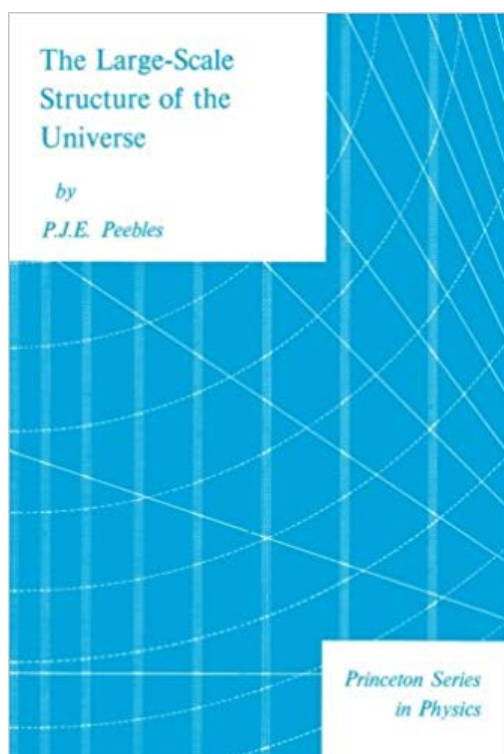


Large-Scale Structure of the Universe *by* Phillip James Edwin Peebles



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Opinions on the large-scale structure of the early universe range widely from primeval chaos to a well-ordered mass distribution. P.J.E. Peebles argues that the evolution proceeded from a nearly uniform initial state to a progressively more irregular and clumpy universe. The discussion centers on the largest known structures, the clusters of galaxies, the empirical evidence of the nature of the clustering, and the theories of how the clustering evolves in an expanding universe.

In Chapter One the author provides an historical introduction to the subject. Chapter Two contains a survey of methods used to deal with the Newtonian approximation to the theory of the evolution of the mass distribution. Recent progress in the use of statistical measures of the clustering is described in Chapter Three. Chapters Four and Five return to techniques for dealing with cosmic evolution, in the statistical measures of clustering and under general relativity theory. Lastly, in Chapter Six Professor Peebles assesses the progress in attempts to link theory and observation to arrive at a well established physical picture of the nature and evolution of the universe.



Reviews of the [Large-Scale Structure of the Universe](#) by Phillip James Edwin Peebles

Zeks Horde

This is a real classic, if somewhat outdated by more recent theories of Inflation, Dark Energy etc. Nevertheless, I love Peebles writing style and approach to explaining physics. As well, I'm intrigued by the history of our understanding of the universe. And Peebles work is insightful enough that it's not so much that you'd point to a paragraph and label it "wrong" as you'd see it as incomplete in light of ongoing developments.

Kerahuginn

I am actually very surprised that this is the first review of Jim Peebles' masterpiece. Modern cosmology is essentially the study of the statistics of density fluctuations, whether probed by photons, or by more massive tracers, such as galaxies -- the central theme of the book. "The Large-Scale Structure of the Universe" written in 1980, although a little dated, remains a marvelous introduction to its central topic and contains a wealth of information. It is very much a classic text book, so a student can work through it step by step without any help. The continuing usefulness of the main material of the book is a testament to the author's prescience, sharp insights, technical mastery, and overall good taste in how the basics are presented. The equation density is about right, the number of illustrative figures and examples could perhaps have been higher, and some of the presentations (such as that of BBGKY) have a slightly old-fashioned feel. But the last two are just minor quibbles. Every cosmologist must own this book.

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