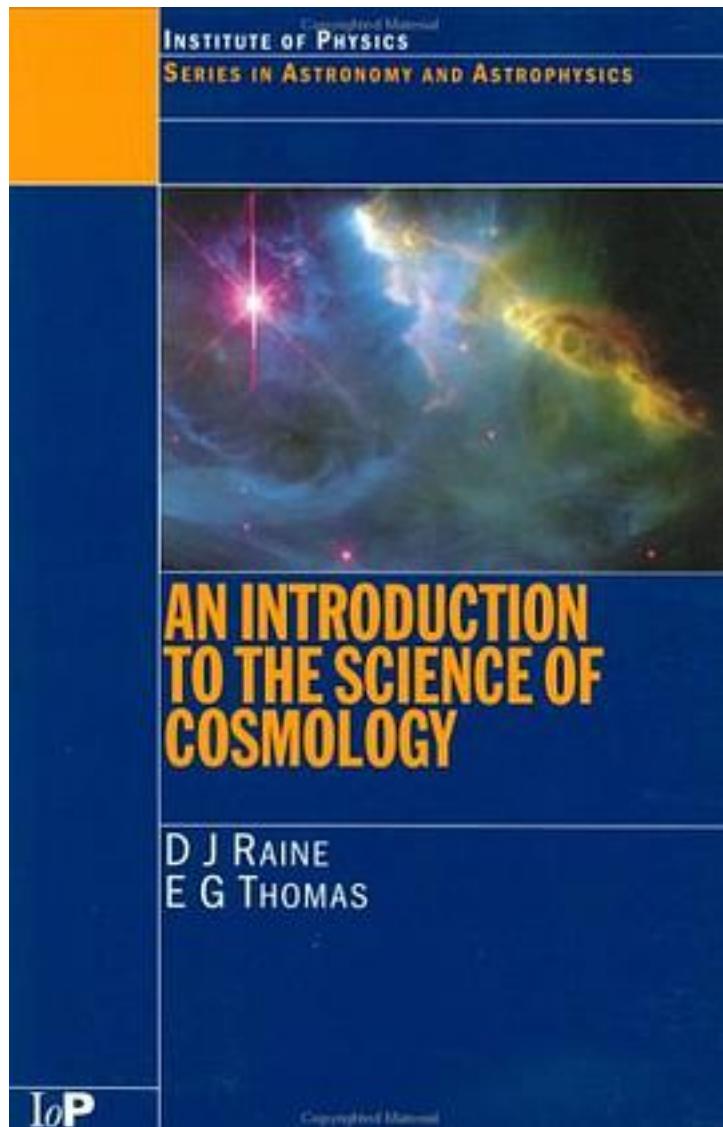


# An Introduction to the Science of Cosmology (Series in Astronomy and Astrophysics)



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A thorough introduction to modern ideas on cosmology and on the physical basis of the general theory of relativity, "An Introduction to the Science of Cosmology" explores various theories and ideas in big bang cosmology, providing an insight into current problems. Assuming no previous knowledge of astronomy or cosmology, this book takes you beyond introductory texts to the point where you are able to read and appreciate the scientific literature, which is broadly referenced in the book. The authors present the standard big bang theory of the universe and provide an introduction to current inflationary cosmology, emphasizing the underlying physics without excessive technical detail. The book treats cosmological models without reliance on prior knowledge of general relativity, the necessary physics being introduced in the text as required. It also covers recent observational evidence pointing to an accelerating expansion of the universe. The first several chapters provide an introduction to the topics discussed later in the book. The next few chapters introduce relativistic cosmology and the classic observational tests. One chapter gives the main results of the hot big bang theory. Next, the book presents the inflationary model and discusses the problem of the origin of structure and the correspondingly more detailed tests of relativistic models. Finally, the book considers some general issues raised by expansion and isotropy. There is a reference section that completes the work by listing essential formulae, symbols, and physical constants. Beyond the level of many elementary books on cosmology, "An Introduction to the Science of Cosmology" encompasses numerous recent developments and ideas in the area. It provides more detailed coverage than many other titles available, and the inclusion of problems at the end of each chapter aids in self study and makes the book suitable for taught courses.

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