

## Quantum Big Bang Cosmology

*Elementary Cosmology* *Cosmology: A Very Short Introduction* [Big Bang](#) *The Big Bang Never Happened* *The Universe Before the Big Bang* *Cosmic Horizons* *The Big Bang Never Happened* *Theism, Atheism, and Big Bang Cosmology* *Elementary Cosmology* *The Cosmic Revolutionary's Handbook* *The Music of the Big Bang* *Calibrating the Cosmos* *Cosmology and Controversy* *The Cult of the Big Bang* *The Falsifiers of the Universe* *Introduction To The Theory Of The Early Universe: Hot Big Bang Theory (Second Edition)* *The Big Bang Theory Until the End of Time* *About Time A Different Approach to Cosmology* *Flashes of Creation* *The Little Book of the Big Bang* *Endless Universe* *Dismantling the Big Bang* *What Is the Big Bang Theory and Why Does It Matter?* - *Scientific Kid's Encyclopedia of Space - Cosmology for Kids - Children's Cosmology Books* [Cosmological Clues](#) *Cosmological Clues At the Edge of Time* *In Search of the Big Bang* *Foundations of Big Bang Cosmology* *The Big Bang Genesis and the Big Bang Theory* *Big-Bang Nucleosynthesis* *The End of Big Bang Cosmology* *Astronomy on Trial* *Cosmology and Controversy* *Learning the Physics of Einstein with Georges Lemaître* [Dismantling the Big Bang](#) *An Introduction to the Science of Cosmology Before the Big Bang*

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*Cosmology and Controversy* Oct 28 2019 For over three millennia, most people could understand the universe only in terms of myth, religion, and philosophy. Between 1920 and 1970, cosmology transformed into a branch of physics. With this remarkably rapid change came a theory that would finally lend empirical support to many long-held beliefs about the origins and development of the entire universe: the theory of the big bang. In this book, Helge Kragh presents the development of scientific cosmology for the first time as a historical event, one that embroiled many famous scientists in a controversy over the very notion of an evolving universe with a beginning in time. In rich detail he examines how the big-bang theory drew inspiration from and eventually triumphed over rival views, mainly the steady-state theory and its concept of a stationary universe of infinite age. In the 1920s, Alexander Friedmann and Georges Lemaître showed that Einstein's general relativity equations possessed solutions for a universe expanding in time. Kragh follows the story from here, showing how the big-bang theory evolved, from Edwin Hubble's observation that most galaxies are receding from us, to the discovery of the cosmic microwave background radiation. Sir Fred Hoyle proposed instead the steady-state theory, a model of dynamic equilibrium involving the continuous creation of matter throughout the universe. Although today it is generally accepted that the universe started some ten billion years ago in a big bang, many readers may not fully realize that this standard view owed much of its formation to the steady-state theory. By exploring the similarities and tensions between the theories, Kragh provides the reader with indispensable background for understanding much of today's commentary about our universe.

*Cosmic Horizons* May 28 2022 Leading scientists offer a collection of essays that furnish illuminating explanations of recent discoveries in modern astrophysics--from the Big Bang to black holes--the possibility of life on other worlds, and the emerging technologies that make such research possible, accompanied by incisive profiles of such key figures as Carl Sagan and Georges Lemaître. Original.

*Big Bang* Aug 31 2022 A half century ago, a shocking Washington Post headline claimed that the world began in five cataclysmic minutes rather than having existed for all time; a skeptical scientist dubbed the maverick theory the Big Bang. In this amazingly comprehensible history of the universe, Simon Singh decodes the mystery behind the Big Bang theory, lading us through the development of one of the most extraordinary, important, and awe-inspiring theories in science.

*A Different Approach to Cosmology* Mar 14 2021 This is a different kind of book about cosmology, a field of major interest to professional astronomers, physicists, and the general public. All research in cosmology adopts one model of the universe, the hot big bang model. But Fred Hoyle, Geoffrey Burbidge and Jayant Narlikar take a different approach. Starting with the beginnings of modern cosmology, they then conduct a wide ranging and deep review of the observations made from 1945 to the present day. Here they challenge many conventional interpretations. The latter part of the book presents the authors' own account of the present status of observations and how they should be explained. The controversial theme is that the dependency on the hot big bang model has led to an unwarranted rejection of alternative cosmological models. Writing from the heart, with passion and punch, these three cosmologists make a powerful case for viewing the universe in a different light.

*Learning the Physics of Einstein with Georges Lemaître* Sep 27 2019 This book presents the first English translation of the original French treatise "La Physique d'Einstein" written by the young Georges Lemaître in 1922, only six years after the publication of Albert Einstein's theory of General Relativity. It includes an historical introduction and a critical edition of the original treatise in French supplemented by the author's own later additions and corrections. Monsignor Georges Lemaître can be considered the founder of the "Big Bang Theory" and a visionary architect of modern Cosmology. The scientific community is only beginning to grasp the full extent of the legacy of this towering figure of 20th century physics. Against the best advice of the greatest names of his time, the young Lemaître was convinced, solely through the study of Einstein's theory of General Relativity, that space and time must have had a beginning with a tremendous "Big Bang" from a "quantum primeval atom" resulting in an ever-expanding Universe with a positive cosmological constant. But how did the young Lemaître, essentially on his own, come to grips with the physics of Einstein? A year before his ordination as a diocesan priest, he submitted the audacious treatise, published in this book, that was to earn him Fellowships to study at Cambridge, MIT and Harvard, and launched him on a scientific path of ground-breaking discoveries. Almost a century after Lemaître's seminal publications of 1927 and 1931, this highly pedagogical treatise is still of timely interest to young minds and remains of great value from a history of science perspective.

*Cosmology and Controversy* Oct 21 2021 Between 1920 and 1970, cosmology became a branch of physics. This text examines how the big bang theory drew inspiration from, and eventually triumphed over, rival views, mainly the steady-state theory and its concept of a stationary universe.

*Theism, Atheism, and Big Bang Cosmology* Mar 26 2022 Two philosophers take opposing viewpoints to debate the fundamental question of whether the Big Bang was created by God or whether it occurred according to scientific theory.

*Cosmological Clues* Aug 07 2020 The evolution -- The reasoning -- The clues -- The theories -- The problems -- The testing -- The future.

*Until the End of Time* May 16 2021 NEW YORK TIMES BESTSELLER • A captivating exploration of deep time and humanity's search for purpose, from the world-renowned physicist and best-selling author of *The Elegant Universe*. "Few humans share Greene's mastery of both the latest cosmological science and English prose." —The New York Times *Until the End of Time* is Brian Greene's breathtaking new exploration of the cosmos and our quest to find meaning in the face of this vast expanse. Greene takes us on a journey from the big bang to the end of time, exploring how lasting structures formed, how life and mind emerged, and how we grapple with our existence through narrative, myth, religion, creative expression, science, the quest for truth, and a deep longing for the eternal. From particles to planets, consciousness to creativity, matter to meaning—Brian Greene allows us all to grasp and appreciate our fleeting but utterly exquisite moment in the cosmos.

*At the Edge of Time* Jul 06 2020 At the edge of time -- A world of time and space -- A world without a beginning? -- Glimpses of the big bang -- The universe and the accelerator -- The origins of everything -- Hearts of darkness -- A beacon in the dark? -- Radically rethinking dark matter -- A flash in time -- Endless worlds most beautiful -- Touching the edge of time.

*The Big Bang Never Happened* Jul 30 2022 A mesmerizing challenge to orthodox cosmology with powerful implications not only for cosmology itself

but also for our notions of time, God, and human nature -- with a new Preface addressing the latest developments in the field. Far-ranging and provocative, *The Big Bang Never Happened* is more than a critique of one of the primary theories of astronomy -- that the universe appeared out of nothingness in a single cataclysmic explosion ten to twenty billion years ago. Drawing on new discoveries in particle physics and thermodynamics as well as on readings in history and philosophy, Eric J. Lerner confronts the values behind the Big Bang theory: the belief that mathematical formulae are superior to empirical observation; that the universe is finite and decaying; and that it could only come into being through some outside force. With inspiring boldness and scientific rigor, he offers a brilliantly orchestrated argument that generates explosive intellectual debate.

*The Falsifiers of the Universe* Aug 19 2021 A detailed investigation of the experiments and the discoveries that led to the acceptance of Big Bang cosmology as the correct scientific history of the Universe. It is shown that none of the discoveries stands up to expert scientific scrutiny.

*The Music of the Big Bang* Dec 23 2021 Ever since its infancy, humankind has been seeking answers to some very basic and profound questions. Did the Universe begin? If it did, how old is it, and where did it come from? What is its shape? What is it made of? Fascinating myths and brilliant inquiries attempting to solve such enigmas can be found all through the history of human thought. Every culture has its own legends, its own world creation tales, its philosophical speculations, its religious beliefs. Modern science, however, cannot content itself with fanciful explanations, no matter how suggestive they are. No days, our theories about the Universe, built upon rational deduction, have to survive the hard test of experiment and observation. Cosmology, the science which studies the origin and evolution of the Universe, had to overcome enormous difficulties before it could achieve the same level of dignity as other physical disciplines. At first, it had no serious physical model and mathematical tools that could be used to address the complexity of the problems it had to face. Then, it suffered from a chronic lack of experimental data, which made it almost impossible to test the theoretical speculations. Given this situation, answering rigorously the many questions on the nature of the Universe seemed nothing more than a delusion. Today, however, things have changed. We live in the golden age of cosmology: an exciting moment, when, for the first time, we are able to scientifically understand our Universe.

*The Big Bang Never Happened* Apr 26 2022 A mesmerizing challenge to orthodox cosmology with powerful implications not only for cosmology itself but also for our notions of time, God, and human nature -- with a new Preface addressing the latest developments in the field. Far-ranging and provocative, *The Big Bang Never Happened* is more than a critique of one of the primary theories of astronomy -- that the universe appeared out of nothingness in a single cataclysmic explosion ten to twenty billion years ago. Drawing on new discoveries in particle physics and thermodynamics as well as on readings in history and philosophy, Eric J. Lerner confronts the values behind the Big Bang theory: the belief that mathematical formulae are superior to empirical observation; that the universe is finite and decaying; and that it could only come into being through some outside force. With inspiring boldness and scientific rigor, he offers a brilliantly orchestrated argument that generates explosive intellectual debate.

*About Time* Apr 14 2021 Offers an explanation for the origin of the universe with new theories from cosmology, including time with no beginning, parallel universes, and eternal inflation.

*Dismantling the Big Bang* Nov 09 2020 Why did Ptolemy's theory cause problems for the church? What is the big secret concerning the "Age" of the earth? Why do many scientists reject the use of design in explaining origins? The seemingly absurd idea that all matter, energy, space, and time once exploded from a point of extreme density has captured the imagination of scientists and laypersons for decades. The big bang has provided a central teaching for the eons of time of "cosmic evolution", undermining the history and cosmology of the Bible. It is a theory that fails, even violating the very physical laws on which it is purportedly based. In this easy-to-read format, authors Alex Williams and John Hartnett explode this naturalistic explanation for the universe, and show that the biblical model provides a far better explanation of our origins. This fully indexed, illustrated analysis of the big bang theory is an invaluable help in understanding and countering a world view that is as chaotic and destructive as its name implies.

*The Universe Before the Big Bang* Jun 28 2022 Terms such as "expanding Universe", "big bang", and "initial singularity", are nowadays part of our common language. The idea that the Universe we observe today originated from an enormous explosion (big bang) is now well known and widely accepted, at all levels, in modern popular culture. But what happens to the Universe before the big bang? And would it make any sense at all to ask such a question? In fact, recent progress in theoretical physics, and in particular in String Theory, suggests answers to the above questions, providing us with mathematical tools able in principle to reconstruct the history of the Universe even for times before the big bang. In the emerging cosmological scenario the Universe, at the epoch of the big bang, instead of being a "new born baby" was actually a rather "aged" creature in the middle of its possibly infinitely enduring evolution. The aim of this book is to convey this picture in non-technical language accessible also to non-specialists. The author, himself a leading cosmologist, draws attention to ongoing and future observations that might reveal relics of an era before the big bang.

*The End of Big Bang Cosmology* Dec 31 2019 Big Bang Cosmology has no scientific basis. It is a religious theory that needs "Creator-God". It is against the first law of thermodynamics and is based on the wrong interpretation of astronomical observations. Cosmic microwave background radiation is the radiation of existent universal space, it is not some relic radiation from remote physical past that does not exist. Redshift is not proving the expansion of the universe. It has origin in gravitational redshift. Light when pulling out of the strong gravity of distant galaxies is losing some energy, the result is redshift. The cosmological principle is time-invariant because time has only the mathematical existence. The universe does not evolve in time, it evolves only in space. In space, there is no physical past and no physical future. Past and future exist only in your brain. All in the universe is entangled via timeless universal space. This is "The Third Revolution of Physics" that English physicist Julian Barbour is talking about. Black holes are rejuvenating systems of the universe. In black holes old matter is transforming back into the fresh energy in the form of elementary particles. This transformation of energy is continuous, it has no beginning and will not have an end. The universe is a non-created system in a permanent dynamic equilibrium and has a constant entropy. There is no God behind the universe. The universe itself is God.

*Cosmology: A Very Short Introduction* Oct 01 2022 This book is a simple, non-technical introduction to cosmology, explaining what it is and what cosmologists do. Peter Coles discusses the history of the subject, the development of the Big Bang theory, and more speculative modern issues like quantum cosmology, superstrings, and dark matter. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

*Elementary Cosmology* Feb 22 2022 Cosmology is the study of the origin, size, and evolution of the entire universe. Every culture has developed a cosmology, whether it be based on religious, philosophical, or scientific principles. In this book, the evolution of the scientific understanding of the Universe in Western tradition is traced from the early Greek philosophers to the most modern 21st century view. After a brief introduction to the concept of the scientific method, the first part of the book describes the way in which detailed observations of the Universe, first with the naked eye and later with increasingly complex modern instruments, ultimately led to the development of the "Big Bang" theory. The second part of the book traces the evolution of the Big Bang including the very recent observation that the expansion of the Universe is itself accelerating with time.

*Elementary Cosmology* Nov 02 2022 Cosmology is the study of the origin, size, and evolution of the entire universe. Every culture has developed a cosmology, whether it be based on religious, philosophical, or scientific principles. In this book, the evolution of the scientific understanding of the Universe in Western tradition is traced from the early Greek philosophers to the most modern 21st century view. After a brief introduction to the concept of the scientific method, the first part of the book describes the way in which detailed observations of the Universe, first with the naked eye and later with increasingly complex modern instruments, ultimately led to the development of the "Big Bang" theory. The second part of the book traces the evolution of the Big Bang including the very recent observation that the expansion of the Universe is itself accelerating with time.

*Before the Big Bang* Jun 24 2019 According to a recent survey, the most popular question about science from the general public was: what came before the Big Bang? We all know on some level what the Big Bang is, but we don't know how it became the accepted theory, or how we might know what came before. In *Before the Big Bang*, Brian Clegg (the critically acclaimed author of *Upgrade Me* and *The God Effect*) explores the history of this remarkable concept. From the earliest creation myths, through Hershel's realization that the Milky Way was one of many galaxies, to on-going debates about Black Holes, this is an incredible look at the origins of the universe and the many theories that led to the acceptance of the Big Bang. But in classic scientist fashion Clegg challenges the notion of the "Big Bang" itself, and raises the deep philosophical question of why we might want to rethink the origin of the universe. This is popular science at its best, exploratory, controversial, and utterly engrossing.

*Genesis and the Big Bang Theory* Mar 02 2020 A ground-breaking book that takes on skeptics from both sides of the cosmological debate, arguing that science and the Bible are not at odds concerning the origin of the universe. The culmination of a physicist's thirty-five-year journey from MIT to

**Jerusalem, Genesis and the Big Bang** presents a compelling argument that the events of the billions of years that cosmologists say followed the Big Bang and those of the first six days described in Genesis are, in fact, one and the same—identical realities described in vastly different terms. In engaging, accessible language, Dr. Schroeder reconciles the observable facts of science with the very essence of Western religion: the biblical account of Creation. Carefully reviewing and interpreting accepted scientific principles, analogous passages of Scripture, and biblical scholarship, Dr. Schroeder arrives at a conclusion so lucid that one wonders why it has taken this long in coming. The result for the reader—whether believer or skeptic, Jewish or Christian—is a totally fresh understanding of the key events in the life of the universe.

**Cosmological Clues** Sep 07 2020 Did the Universe have a beginning? Will it have an end? Or has it always been the same, never changing? This is the subject of cosmology; the study of the Universe, and this book provides a perfect introduction to the subject for anyone that is interested in the wonders of our Universe. This book provides an accessible overview of the Standard Model of Cosmology, which is explained in six Cosmological Clues, including evidence for the Big Bang and dark matter and dark energy - the keystones of modern cosmology. It takes readers through some of the most exciting questions in cosmology, such as what evidence do we have that the Universe started from the Big Bang? Has dark matter been observed? Will we ever know what dark energy is? Are the multiverses real? And could the Universe be a hologram? This book is an ideal guide for anyone interested in finding out more about our Universe. It will be of interest to those studying cosmology for the first time, including readers without a scientific background, who have an interest in looking up at the stars and wondering where they all came from! Key features: Contains the latest evidence for the Big Bang, dark matter, and dark energy and explores exciting scientific ideas, such as inflation and multiverses. Provides a clear explanation of the main theories of how the Universe evolved based on key observations - the Cosmological Clues. Gives the reader a concise introduction to the scientific process, using cosmology as the example, and explores why it has been so successful in creating the technologies we have today.

**Endless Universe** Dec 11 2020 Two world-renowned scientists present an audacious new vision of the cosmos that “steals the thunder from the Big Bang theory.” —Wall Street Journal The Big Bang theory—widely regarded as the leading explanation for the origin of the universe—posits that space and time sprang into being about 14 billion years ago in a hot, expanding fireball of nearly infinite density. Over the last three decades the theory has been repeatedly revised to address such issues as how galaxies and stars first formed and why the expansion of the universe is speeding up today. Furthermore, an explanation has yet to be found for what caused the Big Bang in the first place. In *Endless Universe*, Paul J. Steinhardt and Neil Turok, both distinguished theoretical physicists, present a bold new cosmology. Steinhardt and Turok “contend that what we think of as the moment of creation was simply part of an infinite cycle of titanic collisions between our universe and a parallel world” (Discover). They recount the remarkable developments in astronomy, particle physics, and superstring theory that form the basis for their groundbreaking “Cyclic Universe” theory. According to this theory, the Big Bang was not the beginning of time but the bridge to a past filled with endlessly repeating cycles of evolution, each accompanied by the creation of new matter and the formation of new galaxies, stars, and planets. *Endless Universe* provides answers to longstanding problems with the Big Bang model, while offering a provocative new view of both the past and the future of the cosmos. It is a “theory that could solve the cosmic mystery” (USA Today).

**Big-Bang Nucleosynthesis** Jan 30 2020 The book reviews theories of nucleosynthesis in big-bang cosmology. It introduces the standard model of cosmology, astronuclear reactions, numerical techniques for nucleosynthesis, and describes in detail the theories that go beyond the standard models, enabling readers to grasp the physics of big-bang nucleosynthesis on the basis of cosmology, general relativity and nuclear physics. In addition, the authors provide insights into the theoretical constraints required by observations. As a consequence, readers find out that big-bang nucleosynthesis still has windows opened to another cosmology. Although the book focuses on highly advanced topics, it is concisely written and mathematical derivations are explained step-by-step, making it accessible to graduate readers. Thus it is a short monograph appealing to a variety of readers interested in nucleosynthesis of big-bang cosmology.

**What Is the Big Bang Theory and Why Does It Matter?** - Scientific Kid's Encyclopedia of Space - Cosmology for Kids - Children's Cosmology Books Oct 09 2020 It's time to learn about outer space. Open the pages of this educational book so that your child can see, experience and learn from the wonders and mysteries of the cosmos. Detailed in the following pages are important information on how the universe came to be. Are you interested to know how it all began? If so, then begin reading today!

**The Cult of the Big Bang** Sep 19 2021 BIG BANG THEORY IN TROUBLE. The big bang that is accepted as all but proven fact by the majority of cosmologists & other scientists, may be in serious trouble. Virtually every media article that relates to COSMOLOGY refers to a big bang that happened 10 to 15 billion years ago. Those articles occasionally mention technical difficulties concerning the BIG BANG, but invariably hasten to explain that those will soon be cleared up. Occasional articles appear that point out one or more of those flaws, but authors of those are invariably dismissed as misguided “big bang bashers.” This book marks the first significant attempt to gather & carefully examine BIG BANG PROBLEMS in a single document. Initial chapters introduce relativity, particle physics & quantum theory as related to current big bang COSMOLOGY. Standard theory, its many flaws, & serious questions regarding the “proofs” of big bang theory are then presented. The newer “inflationary” version of big bang theory is also discussed. All of which is done in a manner that is readily understandable by those having a general background in modern science. COSMIC SENSE BOOKS, P.O. Box 3472, Carson, NV 89702. Tel. (702) 884-3161.

**Astronomy on Trial** Nov 29 2019 Quite a few people disagree with the Big Bang model—some of them (unlike Martin) are even scientists. Still, he presents a quite thorough review of articles from the *Bangor Daily News*, *Discover*, *Time*, *Insight*, *Science News*, *Newsweek*, *Nature*, *Scientific American* and other popular sources, as well as books such as *Cold Fusion*; the scientific fiasco of the century and Guth and Steinhardt's *The Inflationary Universe*. Annotation copyrighted by Book News, Inc., Portland, OR.

**Calibrating the Cosmos** Nov 21 2021 This book explains in clear, non-mathematical language the measurements and the interpretation of the resulting data that have led to the current understanding of the origin, evolution and properties of our expanding Big Bang universe. Theoretical concepts are emphasized, but no other book for the layman explains how model universes are generated, and how they function as the templates against which ours is compared and analyzed. Background material is provided in the first four chapters; the current picture and how it was attained are discussed in the next four chapters; and some unsolved problems and conjectured solutions are explored in the final chapter.

**The Big Bang** Apr 02 2020 Our universe was born billions of years ago in a hot, violent explosion of elementary particles and radiation -- the big bang. What do we know about this ultimate moment of creation, and how do we know it? Drawing upon the latest theories and technology, *The Big Bang*, 3/e, is a sweeping, lucid account of the event that set the universe in motion. Award-winning astronomer and physicist Joseph Silk begins his story with the first microseconds of the big bang, on through the evolution of planets, stars, and galaxies, and into the distant future of our universe. He also explores the fascinating evidence for the big bang model and recounts the history of cosmological speculation. Revised and updated, the new edition features all the most recent astronomical advances, including: -- Photos and measurements from the Hubble Space Telescope, Cosmic Background Explorer Satellite, and Infrared Space Observatory-- Modern estimates of the age of the universe-- New ideas in string theory and superstring theory-- Recent experiments on neutrino detection-- New theories about the presence of dark matter in galaxies-- New devel

**Introduction To The Theory Of The Early Universe: Hot Big Bang Theory (Second Edition)** Jul 18 2021 This book is written from the viewpoint that a deep connection exists between cosmology and particle physics. It presents the results and ideas on both the homogeneous and isotropic Universe at the hot stage of its evolution and in later stages. The main chapters describe in a systematic and pedagogical way established facts and concepts on the early and the present Universe. The comprehensive treatment, hence, serves as a modern introduction to this rapidly developing field of science. To help in reading the chapters without having to constantly consult other texts, essential materials from *General Relativity* and the theory of elementary particles are collected in the appendices. Various hypotheses dealing with unsolved problems of cosmology, and often alternative to each other, are discussed at a more advanced level. These concern dark matter, dark energy, matter-antimatter asymmetry, etc. Particle physics and cosmology underwent rapid development between the first and the second editions of this book. In the second edition, many chapters and sections have been revised, and numerical values of particle physics and cosmological parameters have been updated.

**Flashes of Creation** Feb 10 2021 A respected physics professor and author breaks down the great debate over the Big Bang and the continuing quest to understand the fate of the universe. Today, the Big Bang is so entrenched in our understanding of the cosmos that to doubt it would seem crazy. But as Paul Halpern shows in *Flashes of Creation*, just decades ago its mere mention caused sparks to fly. At the center of the debate were Russian

American physicist George Gamow and British astrophysicist Fred Hoyle. Gamow insisted that a fiery explosion explained how the elements of the universe were created. Attacking the idea as half-baked, Hoyle countered that the universe was engaged in a never-ending process of creation. The battle was fierce. In the end, Gamow turned out to be right -- mostly -- and Hoyle, along with his many achievements, is remembered for giving the theory the silliest possible name: "The Big Bang." Halpern captures the brilliance of both thinkers and reminds us that even those proved wrong have much to teach us about boldness, imagination, and the universe itself.

**An Introduction to the Science of Cosmology** Jul 26 2019 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 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. A reference section 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.

**Dismantling the Big Bang** Aug 26 2019 Why did Ptolemy's theory cause problems for the church? What is the big secret concerning the "Age" of the earth? Why do many scientists reject the use of design in explaining origins? The seemingly absurd idea that all matter, energy, space, and time once exploded from a point of extreme density has captured the imagination of scientists and laypersons for decades. The big bang has provided a central teaching for the eons of time of "cosmic evolution", undermining the history and cosmology of the Bible. It is a theory that fails, even violating the very physical laws on which it is purportedly based. In this easy-to-read format, authors Alex Williams and John Hartnett explode this naturalistic explanation for the universe, and show that the biblical model provides a far better explanation of our origins. This fully indexed, illustrated analysis of the big bang theory is an invaluable help in understanding and countering a world view that is as chaotic and destructive as its name implies.

**Foundations of Big Bang Cosmology** May 04 2020

*The Little Book of the Big Bang* Jan 12 2021 "Hogan compresses the fifteen-billion-year history of the Universe into a pleasurable evening. In a very direct way, he answers the questions everyone asks." -MARGARET GELLER, HARVARD-SMITHSONIAN CENTER FOR ASTROPHYSICS "This delightful little primer brings you right up to the cutting edge of modern cosmology." -GEORGE SMOOT, PRINCIPAL INVESTIGATOR, COBE AND AUTHOR OF WRINKLES IN TIME "An excellent bridge by which the layperson can enter the domain of the Cosmos with understanding." -ROBERT WILLIAMS, DIRECTOR, SPACE TELESCOPE SCIENCE INSTITUTE

**The Big Bang Theory** Jun 16 2021 A lively, accessible look at the Big Bang theory This compelling book describes how the Big Bang theory arose, how it has evolved, and why it is the best theory so far to explain the current state of the universe. In addition to understanding the birth of the cosmos, readers will learn how the theory stands up to challenges and what it fails to explain. Karen Fox provides clear answers to some of the hardest questions including: Why was the Big Bang theory accepted to begin with? Will the Big Bang theory last into the next century or even the next decade? Is the theory at odds with new scientific findings? One of the most well-known theories in modern science, the Big Bang is the most accurate model yet devised in humanity's tireless search for the ultimate moment of creation. *The Big Bang Theory* is the first title in a planned series on the major theories of modern science.

**In Search of the Big Bang** Jun 04 2020

*The Cosmic Revolutionary's Handbook* Jan 24 2022 Presents the observations that helped establish our theories of the cosmos, from a unique and engaging perspective.