

1. Record Nr.	UNINA9910770253803321
Autore	Cummings Warren David
Titolo	Scientific Debates in Space Science [[electronic resource]] : Discoveries in the Early Space Era // by Warren David Cummings, Louis J. Lanzerotti
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2023
ISBN	3-031-41598-1
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (277 pages)
Collana	Astronomy and Planetary Sciences, , 2366-0090
Altri autori (Persone)	LanzerottiLouis J
Disciplina	520.9
Soggetti	Physics - History Solar system Sun Astrophysics Plasma astrophysics Outer space - Exploration Astronautics History of Physics and Astronomy Space Physics Solar Physics Astrophysical Plasma Space Exploration and Astronautics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1 Introduction -- Chapter 2 Solar Wind or Solar Breeze? -- Chapter 3 Open versus Closed Magnetosphere -- Chapter 4 Influx of Small Comets into Earth's Atmosphere -- Chapter 5 Origin of the Moon -- Chapter 6 Lunar Dust -- Chapter 7 Did the Chicxulub Impact Cause the Cretaceous Extinctions? -- Chapter 8 Size of the Solar System -- Chapter 9 Sources of Gamma-Ray Bursts -- Chapter 10 Reflections on Space Science Research -- Name Index -- Subject Index.
Sommario/riassunto	This book features several of the significant scientific debates and controversies that helped develop space science in the early space era. The debates led to significant new understandings of the constituents

and processes occurring beyond Earth's atmosphere, and often opened new research directions. Scientific speculations with their resultant debates have played an important role in the development and furthering of research in general. The book thus has broad intellectual importance in illustrating how science advances. The book includes debates in the subject areas of heliophysics (physics in the cosmic region that covers particles and magnetic fields flowing from the Sun), Earth's moon, solar system asteroids and comets, and the origin of cosmic gamma-ray bursts. A final chapter describes two important and surprising early scientific discoveries that involved no debates. The target audience for this book includes (a) active and retired space scientists, (b) space enthusiasts, and (c) students as supplemental (or even prime) reading in an introductory astronomy and/or space science course. The topics of the debates and controversies, their resolutions, and their pointing to further research and understanding of nature are of both historical and contemporary interest, appeal, and value.
