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Titolo	Elements of string cosmology / / Maurizio Gasperini [[electronic resource]]
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Descrizione fisica	1 online resource (xv, 552 pages) : digital, PDF file(s)
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Lingua di pubblicazione	Inglese
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Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A short review of standard and inflationary cosmology -- The basic string cosmology equations -- Conformal invariance and string effective actions -- Duality symmetries and cosmological solutions -- Inflationary kinematics -- The string phase -- The cosmic background of relic gravitational waves -- Scalar perturbations and the anisotropy of the CMB radiation -- Dilaton phenomenology -- Elements of brane cosmology.
Sommario/riassunto	The standard cosmological picture of our Universe emerging from a 'big bang' leaves open many fundamental questions which string theory, a unified theory of all forces of nature, should be able to answer. This 2007 text was the first dedicated to string cosmology, and contains a pedagogical introduction to the basic notions of the subject. It describes the possible scenarios suggested by string theory for the

primordial evolution of our Universe. It discusses the main phenomenological consequences of these scenarios, stresses their differences from each other, and compares them to the more conventional models of inflation. The book summarises over 15 years of research in this field and introduces advances. It is self-contained, so it can be read by astrophysicists with no knowledge of string theory, and high-energy physicists with little understanding of cosmology. Detailed and explicit derivations of all the results presented provide a deeper appreciation of the subject.
