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Descrizione fisica	1 online resource (XXIV, 478 p. 262 illus., 121 illus. in color.)
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Soggetti	Paleoclimatology
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Nota di contenuto	1. The climate system: its functioning and history -- 2. The changing face of the Earth throughout the ages -- 3. Introduction to geochronology -- 4. Carbon-14.
Sommario/riassunto	This two-volume book provides a comprehensive, detailed understanding of paleoclimatology beginning by describing the "proxy data" from which quantitative climate parameters are reconstructed and finally by developing a comprehensive Earth system model able to simulate past climates of the Earth. It compiles contributions from specialists in each field who each have an in-depth knowledge of their particular area of expertise. The first volume is devoted to "Finding, dating and interpreting the evidence". It describes the different geochronological technical methods used in paleoclimatology. Different fields of geosciences such as: stratigraphy, magnetism, dendrochronology, sedimentology, are drawn from and proxy reconstructions from ice sheets, terrestrial (speleothems, lakes, and vegetation) and oceanic data, are used to reconstruct the ancient climates of the Earth. The second volume, entitled "Investigation into ancient climates," focuses on building comprehensive models of past climate evolution. The chapters are based on understanding the processes driving the evolution of each component of the Earth system (atmosphere, ocean, ice). This volume provides both an analytical understanding of each component using a hierarchy of models (from conceptual to very sophisticated 3D general circulation models) and a

synthetic approach incorporating all of these components to explore the evolution of the Earth as a global system. As a whole this book provides the reader with a complete view of data reconstruction and modeling of the climate of the Earth from deep time to present day with even an excursion to include impacts on future climate.
