Record Nr. UNINA9910788291803321 Autore Haigh Joanna D. Titolo The sun's influence on climate / / Joanna D. Haigh and Peter Cargill Pubbl/distr/stampa Princeton:,: Princeton University Press,, [2015] ©2015 **ISBN** 0-691-15384-1 Edizione [Course Book] Descrizione fisica 1 online resource (216 p.) Collana Princeton primers in climate Classificazione SCI019000SCI004000 Disciplina 551.5/271 Solar-terrestrial physics Soggetti Climatic changes - Effect of solar activity on Weather - Effect of solar activity on Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Introduction -- The Earth's climate system -- The Sun -- Solar radiation at the Earth -- Solar Variability -- Solar signals in surface climate --- Solar influence through the atmosphere -- Space weather -- Summary -- Appendix: Detection of solar signals in climate and weather records. Sommario/riassunto "The Earth's climate system depends entirely on the Sun for its energy. Solar radiation warms the atmosphere and is fundamental to atmospheric composition, while the distribution of solar heating across the planet produces global wind patterns and contributes to the formation of clouds, storms, and rainfall. The Sun's Influence on Climate provides an unparalleled introduction to this vitally important relationship. This accessible primer covers the basic properties of the Earth's climate system, the structure and behavior of the Sun, and the absorption of solar radiation in the atmosphere. It explains how solar activity varies and how these variations affect the Earth's environment, from long-term paleoclimate effects to century timescales in the context of human-induced climate change, and from signals of the 11year sunspot cycle to the impacts of solar emissions on space weather in our planet's upper atmosphere. Written by two of the leading

authorities on the subject. The Sun's Influence on Climate is an

essential primer for students and nonspecialists alike"--