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Sommario/riassunto	"Since the advent of the electrical telegraph about 170 years ago, human technologies have greatly expanded in type and in purpose for civilian, commercial, and national security uses. These include electrical grids, pipelines, radar, wireless signaling, navigation, flying spacecraft, and telephony - technologies that cross continents, oceans, and now space. Regardless of specific application, successful operational use of these technologies has determined that compelling needs exist to take into account Sun and Earth space phenomena and processes in both design and implementation. Increasingly sophisticated technical systems require increasingly detailed understanding of solar and terrestrial space phenomena. Achieving this detailed understanding has been aided by the access to space provided by reliable launch vehicles, and by ever more sophisticated instrumentation deployed to measure Earth's space environment. The data acquired can be incorporated into ever better models to describe and even forecast the environment and its changes. This volume contains nine chapters, written by experts, describing current day technologies and how solar and terrestrial space

processes can affect them. Without these technologies, contemporary life in civil, commercial, and national security realms would be very different, and arguably impossible. Another chapter in this volume outlines a number of issues related to human survival in the space radiation environment inside and outside Earth's magnetosphere. An Epilogue closes by looking to the future in this broad area of applied geophysics. As the historical record demonstrates, despite specific qualities such as form and function, there is a high likelihood that some electrical technologies yet to be implemented or invented will always require design features whose goals are to ensure successful operations under all levels of solar and terrestrial conditions. The study of these environmental conditions in both basic and applied form will thus remain essential for the future."--
