

1. Record Nr.	UNISA996466715603316
Titolo	Energy Conversion and Particle Acceleration in the Solar Corona [[electronic resource] /] / edited by Karl-Ludwig Klein
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2003
ISBN	3-540-36242-8
Edizione	[1st ed. 2003.]
Descrizione fisica	1 online resource (X, 319 p.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 612
Disciplina	523.7/5
Soggetti	Space sciences Observations, Astronomical Astronomy—Observations Astrophysics Atoms Physics Plasma (Ionized gases) Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics) Astronomy, Observations and Techniques Astrophysics and Astroparticles Atoms and Molecules in Strong Fields, Laser Matter Interaction Plasma Physics Sun Corona
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Energy Release and Magnetic Reconnection -- Magnetic Reconnection on the Sun and in the Earth's Magnetosphere -- Magnetic 3-D Configurations of Energy Release in Solar Flares -- Theoretical Models of Magnetic Configurations Relevant to Energy Release -- The Energy Release Process in Solar Flares; Constraints from TRACE Observations -- Radio Diagnostics of Flare Energy Release -- Signature of Energy Release and Particle Acceleration Observed by the Nobeyama Radioheliograph -- How Well Do We Understand Magnetic

Reconnection? -- Energetic Particles at and from the Sun -- What Can Be Learned About Competing Acceleration Models from Multiwavelength Observations? -- Transport of Energy from the Corona to the Chromosphere During Flares -- On the Origin of Solar Energetic Particle Events -- Acceleration and Propagation of Solar Energetic Particles -- Particle Acceleration by Magnetic Reconnection -- Particle Acceleration Processes in Cosmic Plasmas -- Aspects of Current Research -- Recent Progress in Understanding Energy Conversion and Particle Acceleration in the Solar Corona -- Solar Observations at Submillimeter Wavelengths.

---

Sommario/riassunto

The conversion of energy generated in the Sun's interior creates its hot corona and a wealth of dynamical phenomena such as flares and mass ejections. Based on recent significant progress in understanding magnetic reconnection and a wealth of new observations of energetic particle signatures from the sun, the present volume reviews the current theoretical and experimental status in the field. Paying attention to both the details and the broader picture, this book addresses both the experienced researcher as well as non-specialist researchers from related areas and postgraduate students.

---