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Soggetti	Space sciences Geophysics Astrophysics Atoms Physics Plasma (Ionized gases) Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics) Geophysics/Geodesy Astrophysics and Astroparticles Atoms and Molecules in Strong Fields, Laser Matter Interaction Plasma Physics
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Waves and Instabilities in Space Plasmas -- Solar MHD: An Introduction -- An Introduction to Fluid and MHD Turbulence for Astrophysical Flows: Theory, Observational and Numerical Data, and Modeling -- The Solar Atmosphere -- The Solar Flare: A Strongly Turbulent Particle Accelerator -- Diagnostics of the Solar Wind Plasma -- Physical Processes in the Solar Wind -- Physics of Stellar Coronae.
Sommario/riassunto	Over the years, many leading European graduate schools in the field of astrophysical and space plasmas have operated within the framework

of the research network, "Theory, Observations, and Simulations in Turbulence in Space Plasmas." This text is a set of lectures and tutorial reviews culled from the relevant work of all those schools. It emphasizes applications on solar coronae, solar flares, and the solar wind. In bridging the gap between standard textbook material and state-of-the-art research, this text offers a broad flavor to postgraduate and postdoctoral students just coming to the field. And because of its unique mix, it will also be useful to lecturers looking for advanced teaching material for their seminars and courses.
