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Titolo	The Magnetic Solar System : Solar Eruptions, Solar Winds and Space Weather / / by Ulrich von Kusserow, Eckart Marsch
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Nota di contenuto	Prologue Living with a magnetic star -- Historical notes concerning magnetism in the solar system -- Genesis and development of the solar system -- Scientific research instruments and methods -- The magnetic Sun -- The solar wind and heliospheric interaction processes -- Planetary magnetic fields -- Comets and polar lights -- Investigation of space weather and earth climate -- Life on the magnetic planet Earth -- Epilogue Astrophysical relevance of heliophysical processes -- Glossary -- Index.
Sommario/riassunto	This book describes a great variety of significant space plasma processes and the eminent influence that in particular magnetic processes have on the formation, structure and development of objects in our solar system. Supported by vivid graphics, real shots and links to video sequences, all these processes are, while being didactically prepared, explained thoroughly with few mathematical derivations. The book is written mainly for students, but also for amateurs or scientists

from various fields interested in space science. It appeals to those who may want to gain a comprehensive overview of the far-reaching impacts of magnetic fields, on many things in our solar system, or beyond in extrasolar planetary systems and stars in the distant universe. The topics discussed here, with emphasis on magnetism, comprise the structure and dynamics of the solar system and its objects, the solar interior and atmosphere, the time-variable solar activity, the solar wind, processes in the heliosphere and planetary magnetospheres, as well as space weather. Scientific instruments, experiments and measurement methods are presented, with the help of which solar and plasma physicists, astrophysicists and planetary scientists can today gain their deep and fascinating insights. Theoretical and numerical results are interpreted and recent observations are explained, which were made by modern telescopes on Earth and obtained by satellites in space, through either optical remote-sensing and or in-situ plasma measurements.