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Titolo	Atomic and Molecular Data for Space Astronomy [[electronic resource] ] : Needs, Analysis, and Availability / / edited by Peter L. Smith, Wolfgang L. Wiese
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Collana	Lecture Notes in Physics, , 0075-8450 ; ; 407
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Nota di contenuto	Atomic and molecular data for space astronomy: Needs and availability -- The hubble space telescope — Scientific problems and laboratory data needs -- Atomic data needed for far ultraviolet astronomy with HUT and FUSE -- Atomic data needed for analysis of EUV and X-Ray spectra -- Atomic and molecular data for observations of the interstellar medium with the hubble space telescope -- Atomic and molecular data needed for analysis of infrared spectra from ISO and SIRTf -- Atomic data from the opacity project -- Sources of atomic spectroscopic data for astrophysics -- Summary of current molecular databases.
Sommario/riassunto	This is a very useful reference book for working astronomers and astrophysicists. Forming the proceedings of a recent IAU meeting

where the availability and the needs of atomic and molecular data were discussed, the papers published here discuss existing and planned instruments for astronomical spectroscopy from earth-orbiting satellites. In particular, the atomic and molecular parameters that are, or will be, needed for analysis of the data obtained by these instruments are considered. A number of significant shortcomings in the available databases are identified. The needs highlighted will be of interest to laboratory astrophysicists, both experimentalists and theorists, who can produce the data required. A second group of papers provides a current inventory of atomic and molecular data compilations.

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