

SESSION VII

ABSTRACT

Atomic and Molecular Databases for Planetary and Terrestrial Applications,
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Characteristics of solar and planetary atmospheres ranging from chemical composition to climate can be accurately measured through spectroscopic remote sensing. Fundamental principles of physics and chemistry can then be applied to interpret the atmospheric observations (with varying degrees of success). The models of planetary atmospheres to simulate the chemistry, radiation fields, and/or dynamics require knowledge of many molecular properties ranging from photochemical and kinetic information to atomic and molecular transition parameters. Both the experimental and theoretical efforts require detailed databases of spectral parameters for use in computer simulations. The status of current databases for theoretical models and for microwave and infrared observations will be presented along with an overview of the problems associated with maintaining them.

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