

Excitation Energy of Molecular Shifting by Spontelectric field in Molecular Ice

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Abstract

The photon stimulated desorption (PSD) of molecular ice is a phenomenon that the molecules desorb from the surface of the ice by absorbing the photon. Nitrogen (N₂), Argon (Ar) and Krypton (Kr) whose absorption features do not overlap with carbon monoxide (CO), are used to cover on CO to form the binary ices. By changing the thickness of covered ices, we can illustrate the mechanism of PSD is that the molecules in the ice absorb photons and transfer the energy to the surface, which makes the molecules on surface desorbing. The energy contributes to molecule desorption from the surface of ice is transfer-depth limited in the ice.

Keywords – *VUV spectra, spontelectric fields, interstellar ice.*