Effect of Photosputtering on Snow Line of the Surface of Protoplanetary disks

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We investigate effects of photosputtering, which is a desorption process of H_2O molecules from ice by ultra-violet radiation, on the ice condensation front, so-called snow line, of the surface of a protoplanetary disk around Herbig Ae/Be stars. We find that the photosputtering process significantly pushes the snow line away when the effective temperature of a star exceeds a critical value.

Keywords: icy dust; photosputtering; protoplanetary disks