A Study on the Evolution of small Globules

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We analyzed the data in Sim's catalogue of globules in order to study the evaporation of small globules in HII regions. A relation between globule size and H II region radius is found, and it is estimated that as a result, the half-life of a globule whose initial radius is 0.1 pc is 10^5 yrs. The results are compared with the evaporation theory of globules.

Chemical Evolution of the Solar Neighborhood: Age-metallicity Relation of F-stars

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From the uvby, H_β photometry of F-stars in the catalogues of Twarog (1980-a) and Olsen(1983), we derived age-metallicity relations for the galactic disk using Hejlesen's (1980) isochrones. The derived age-metallicity relations well coincide with the theoretical prediction of Lee and Ann's (1981) unclosed two-zone model. There seems to be little or no extremely metal poor stars in the vicinity of the sun, and it is very likely that the initial rapid enrichment of the metallicities of the galactic disk is due to the fast collapse of the disk at very early epoch.