

[초IM-01] Observations of the diffuse far-ultraviolet radiation

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We describe what have been learned on the interstellar medium (ISM) from the observations of the Far-ultraviolet (FUV) observations. Diffuse FUV radiation is concentrated where both hot stars and scattering dust coexist, e.g. in the Galactic plane, young stellar associations, and the Magellanic clouds. Observations of the diffuse FUV emissions provide unique insight upon phases of the Galactic interstellar medium ranging from cold molecular gas and dust, to cool photo-ionized gas, to highly ionized thermal plasma. The FUV continuum discriminates among models of dust distribution in the Galaxy. Turbulence of the ISM also has been found with the FUV continuum background. The destruction of molecular hydrogen is directly traced by its FUV fluorescence emission. Low ionization gas in a cool interstellar phase is traced in discovered Si II* and Al II emission. The dominant radiative cooling from thin, highly ionized medium (HIM) and warm ionized medium (WIM) are traced in C III, C IV, O VI, and other ion-emission lines.

[중IM-02] The Far-ultraviolet Observation of the Draco cloud region with FIMS/SPEAR

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We present the result of FIMS/SPEAR far-ultraviolet (FUV) observation study made for the Draco cloud region. The spectrum shows important ionic lines such as C IV, Si II*, and Al II that indicate the existence of hot and warm interstellar medium (ISM) towards this region, in addition to the molecular hydrogen fluorescent lines. The spectral maps made for C IV and Si II* lines show that these hot and warm plasma gases arise from the interaction of the cloud with the high velocity clouds as well as the H I of the Galactic disk. The spectral map for the molecular hydrogen fluorescence line shows a good correlation with the distribution of the molecular cloud.