THE INTERMEDIATE VELOCITY CLOUD IVC86+38.5-45, RELATED TO HIGH VELOCITY CLOUDS?

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Examining the high velocity cloud complex C and its possible interaction with gas of the galactic disk we became aware of a dust cloud located at galactic longitude $l = 86°$ and latitude $b = 38.^{\circ}5$ seen in the $100\mu m$ image of the IRAS. This cloud consists of a cucumber shaped core surounded by a horseshoe shaped halo opening towards larger galactic coordinates. At very low $100\mu m$ intensities dust lanes starting at the core or the ends of the horseshoe can be traced for about 5° towards high galactic latitude and longitude.

HI observations with the 100m telescope in Effelsberg reveal that these lanes run parallel to an HI spur at velocities of about $-120\ km\ s^{-1}$. This high velocity cloud has its tip at the end of the dust core which shows up in the HI spectra at velocities of about $-45\ km\ s^{-1}$. The spatial anticoincidences mentioned, the similarity in direction, and the horseshoe shaped structure of the intermediate velocity cloud are evidence for an interaction between high velocity clouds and the surrounding material. The rather high ratios of the IRAS $60\mu m$ to $100\mu m$ emission and between the $100\mu m$ intensities and HI column densities respectively suggest that the dust is probably heated up by this collision.

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