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The distribution of CH in the Galaxy has been investigated via its main-line transition in the ${}^2\Pi_{1/2}$, $J=1/2$ ground-state Λ -doublet at 3335 MHz. The galactic plane was observed with a spacing between adjacent points of 2.5 in the longitude ranges 10° - 60° and 310° - 350° . The northern data (Johansson, 1979) were obtained with the 25.6-m telescope of the Onsala Space Observatory and the southern data with the Parkes 64-m

antenna; the corresponding beamwidths are $15'$ and $6'6$, respectively.

The longitude-velocity plot of the CH emission (Fig.1) shows the same basic characteristics as found for CO: (i) the kinematics of the CH gas is almost completely governed by the general rotation of the Galaxy, and (ii) the lack of CH emission close to the terminal velocities within 15° - 20° from the galactic centre. Fig.1 also indicates extended gaps in the CH emission that could be interpreted as interarm regions. The presence of large-scale structures is further emphasized in Fig.2,

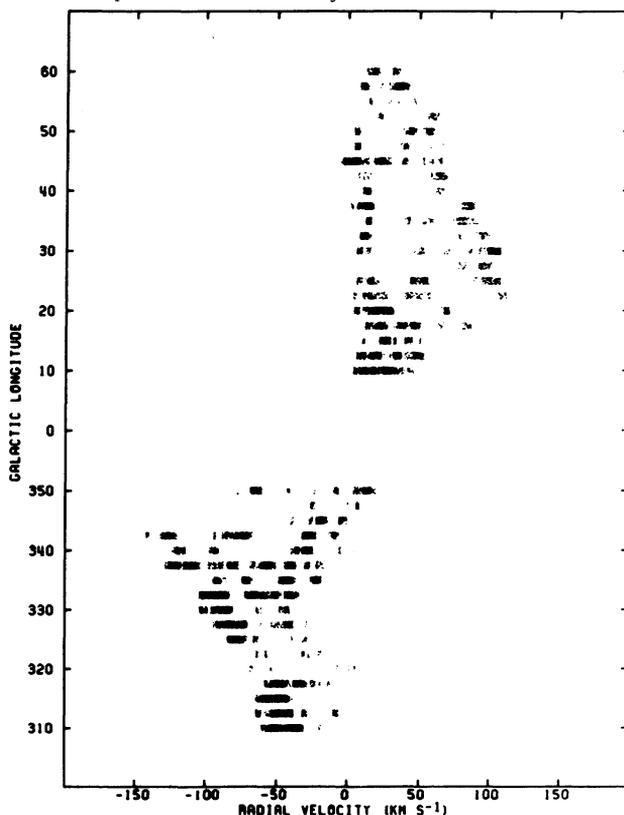


Figure 1. Longitude-velocity plot of CH emission in grey-scale representation.

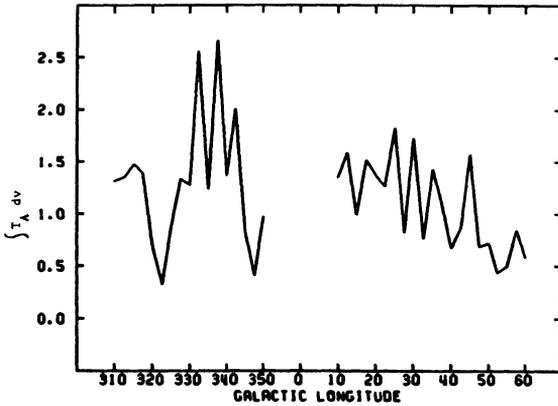


Figure 2. Integrated antenna temperature as a function of galactic longitude.

which is a plot of integrated antenna temperature (proportional to the column density) against longitude. The large variations, notably in the southern data, may originate from arm-interarm regions seen tangentially.

The radial distribution of CH in the Galaxy derived separately from the northern and southern data is shown in Fig.3. These distributions

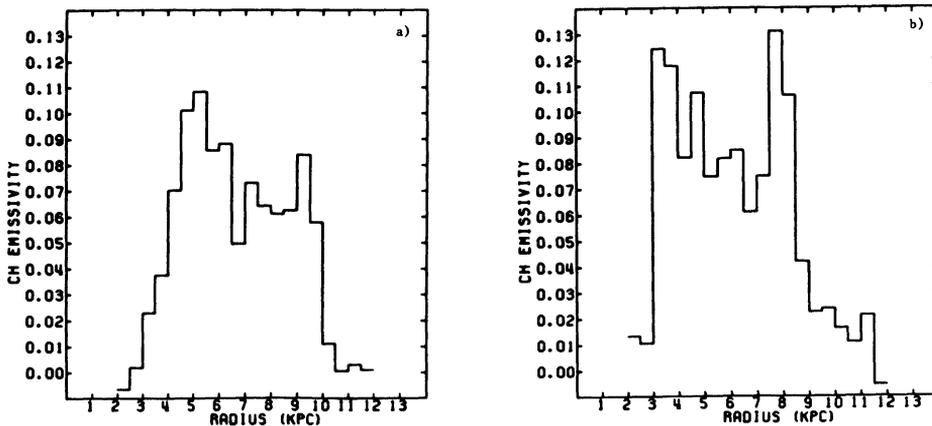


Figure 3. Radial distributions of CH emissivity as derived from the northern (a) and southern (b) data sets.

resemble those of CO: the pronounced maximum at about 5 kpc in the northern distribution and the two peaks at 3.5 and 8 kpc in the southern one. In deriving the radial distributions, the Burton and Gordon (1978) rotation curve was used.

REFERENCES

- Burton, W.B., Gordon, M.A.: 1978, *Astron.Astrophys.* 63, pp. 7-27
 Johansson, L.E.B.: 1979, Research Report No. 136, Res. Lab. of Electronics and Onsala Space Observatory