

A more complete account of this work will appear elsewhere.

REFERENCES

- Davies, R.D., and Wright, A.E., 1977. *Mon. Not. R. astr. Soc.*, 180, 71.
 Lin, D.N.C., and Lynden-Bell, D., 1977. Preprint.
 Kunkel, W.E., and Demers, S., 1976. *R.O.B.*, no.182.

DISCUSSION

de Vaucouleurs: May I remind you that the mass of the LMC is about $1.5 - 2.0 \times 10^{10} M_{\odot}$?

Kunkel: Such a high mass would satisfy interest in a more massive Galaxy. I had used the lower classical value (of 6×10^9 based on McGee and Milton 1966) merely to show that no serious conflict exists for even the older mass estimates.

FINE STRUCTURE IN THE MAGELLANIC STREAM

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Dr Erkes and I, of Dudley Observatory, and Dr Ken Turner, of the Carnegie Institution of Washington, used the 300 foot radio telescope at the National Radio Astronomical Observatory, Greenbank, West Virginia in March of 1977 to measure neutral hydrogen at 21 cm in three 2° strips across positions indicated by Mathewson, Cleary, and Murray (1974, *Astrophys. J.*, 190, 291) as being part of the Magellanic Stream. In region "A" (centred at $\alpha = 22^{\text{h}}44^{\text{m}}$, $\delta = +24.5^{\circ}$) no hydrogen was found above the background (3×10^{19} H atoms cm^{-2}). In a revised map Mathewson and Schwarz (1976, *Mon. Not. R. astr. Soc.*, 176, 47P) show that this region is not occupied by the stream. In regions "B" and "C" (centred at $\alpha = 23^{\text{h}}10^{\text{m}}$, $\delta = +11^{\circ}$ and $\alpha = 0^{\text{h}}00^{\text{m}}$, $\delta = -17^{\circ}$) hydrogen was detected at the velocities found by Mathewson and Schwarz. Maps of the structure found in these regions are shown in Figure 1.

The contour intervals are 10 K km s^{-1} . The maps cover 2° in declination and about 30 minutes in right ascension. The location of major features of the stream agree with a less detailed map of Mathewson, Murray and Schwarz (1977, preprint). Fine structure can be seen in each map; the stream is broken up into two main components running approximately parallel to each other. The half-power beam width was 10 arcmin.

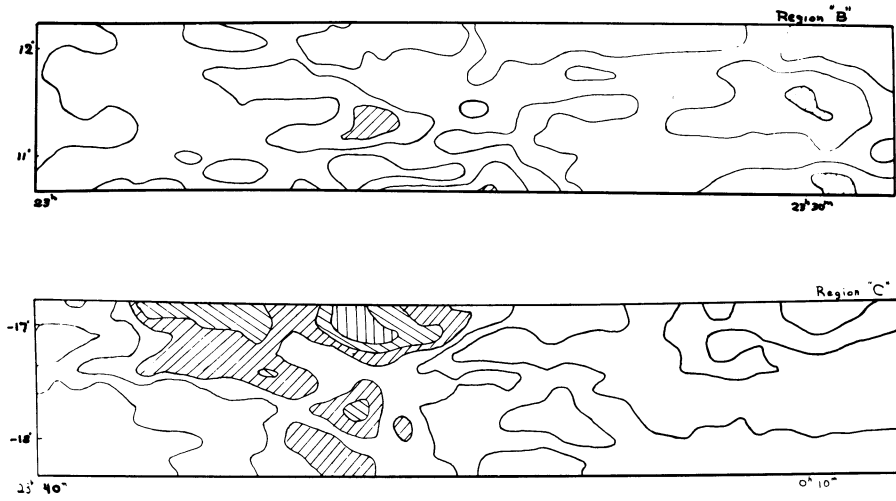


Figure 1. Hydrogen maps of regions "B" and "C" in the Magellanic Stream.