

OBSERVATIONS OF HIGH VELOCITY HI CLOUDS IN THE LOCAL GROUP

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High velocity clouds (HVC) of neutral hydrogen in or around our galaxy and the observations of intergalactic HI in the Local group: Magellanic stream (Mathewson et al., 1974, *Astrophys. J.* 190, p. 291), M 31 (Davies, R. D., 1975, *Mon. Not. R. astr. Soc.*, 170, p. 45P), and in the Sculptor group of galaxies (Mathewson et al., 1975, *Astrophys. J.* 195, p. L97) motivated us to search for HVC-phenomena in a number of nearby late-type galaxies with the 100 m Effelsberg radio telescope which has a half power beam width of 8.5' at the wavelength of 21 cm.

HVC-phenomena have been observed in the direction of M 33, Sextans A, WLM, and IC 10. Distances of the HVC's have been assumed to be those of the corresponding galaxies. Observed values of line widths and surface densities are typical for HVC's. Coincidences in position and radial velocity are most convincing for M 33 and IC 10. The HVC in direction of WLM seems to be part of the Magellanic stream.

Galaxy (km s ⁻¹)	Distance (Mpc)	Extent		typical line width (km/s)	column density (10 ¹⁸ cm ⁻²)	HI-mass (M _☉)
		angular	linear			
		(kpc)	(kpc)			
M 33 (-180)	0.7					
(HVC-147)		7'	1.4	12	40 3	10 ⁶
(HVC-155)		6'	1.2	15	20 3	5 x 10 ⁵
(HVC-225)		9'	1.8	25	75 3	5 x 10 ⁶
Sextans A (325) 1						
(HVC+142)		1°	17	25	50 3	10 ⁷
WLM (130)	0.87					
(HVC-200)		>3° x 1.5°	>50	25	60 3	>10 ⁸
IC 10 (-346)	1.26					
(HI-shell)		80'	29	20	~ 50 4	~ 10 ⁸