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# Clouds Toward the Virgo Cluster Periphery: Gas-rich Optically Inert Galaxies

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Aperture synthesis observations of two HI cloud complexes located in the periphery of the Virgo galaxy cluster are presented. These low HI-mass clouds ( $M_{\text{HI}} < 10^{9} M_{\odot}$ ) are seen projected on the M region of the western Virgo cluster, where the galaxy population is thought to lie behind the main A cluster surrounding M87. The kinematic measurements of both unresolved Arecibo and resolved VLA-C observations are in good agreement. The HI detections cannot be identified with any optical, IR, or UV emission from available archival imaging. They are inert at these wavelengths. The HI masses of the individual VLA detections range from  $7.28 \leq \log(M_{\text{HI}}) \leq 7.85$ . The total dynamical mass estimates are several times their HI content, ranging from  $7.00 \leq \log(M_{\text{dyn}}) \leq 9.07$ , with the assumption that the clouds are self-gravitating and in dynamical equilibrium. We report the observed parameters derived from the VLA observations. One of these HI clouds appears to be the most isolated optically inert detection observed in the outer reaches of Virgo.

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