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Title: VLA+WSRT HI Imaging of Two "Almost Dark" Galaxies

Authors: Ball, Catie; Singer, Quinton; Cannon, John M.; Leisman, Luke; Haynes, Martha P.; Adams, Elizabeth A.;

Bernal Neira, David; Giovanelli, Riccardo; Hallenbeck, Gregory L.; Janesh, William; Janowiecki, Steven;

Jozsa, Gyula; Rhode, Katherine L.; Salzer, John Joseph

Affiliation: AA(Macalester College), AB(Macalester College), AC(Macalester College), AD(Cornell University), AE(Cornell University),

AF(ASTRON), AG(Universidad de los Andes), AH(Cornell University), AI(Union College), AJ(Indiana University), AK(ICRAR),

AL(SKA), AM(Indiana University), AN(Indiana University)

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Abstract

We present sensitive HI imaging of the "Almost Dark" galaxies AGC229385 and AGC229101. Selected from the ALFALFA survey, "Almost Dark" galaxies have significant HI reservoirs but lack an obvious stellar counterpart in survey-depth ground-based optical imaging. Deeper groundand space-based imaging reveals very low surface brightness optical counterparts in both systems. The resulting M_HI/L_B ratios are among the highest ever measured for individual galaxies. Here we combine VLA and WSRT imaging of these two systems, allowing us to preserve surface brightness sensitivity while working at high angular resolution. The resulting maps of HI mass surface density, velocity field, and velocity dispersion are compared to deep optical and ultraviolet imaging. In both systems the highest column density HI gas is clumpy and resolved into multiple components. In the case of AGC229385, the kinematics are inconsistent with a simple rotating disk and may be the result of either an infall episode or an interaction between two HI-rich disks. Support for this work was provided by NSF grant 1211683 to JMC at Macalester College.

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