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Ghostly Halos in Dwarf Galaxies: a probe of star formation in the Early Universe HOYOUNG KANG, MASSIMO RICOTTI¹, Univ of Maryland-College Park — We carry out numerical simulations to characterize the size, stellar mass, and stellar mass surface density of extended stellar halos in dwarf galaxies as a function of dark matter halo mass. We expect that for galaxies smaller than a critical value, these ghostly halos will not exist because the smaller galactic subunits that build it up, do not form any stars. The detection of ghostly halos around isolated dwarf galaxies is a sensitive test of the efficiency of star formation in the first galaxies and of whether ultra-faint dwarf satellites of the Milky Way are fossils of the first galaxies.

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