Tracing molecular gas in the outer parts of XUV disk galaxies

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Results from the UV satellite GALEX have revealed extended UV disks in many nearby galaxies. While the Hα emission drops down at the border of the optical radius (r_{25}), the XUV emission extends out to 3-4 times r_{25} . This provides evidence of outer star formation and of molecular gas up to the limits of HI observations. We present CO(1-0) and CO(2-1) data of the M63 spiral galaxy (NGC5055) which has an extended XUV disk ($3.2R_{25}$). Our observations go beyond this limit, where only upper limits have been presented in the past. In particular we got a 5.5σ CO(1-0) detection in a bright UV region at $r_{gal} = 1.36\ r_{25}$. By using complementary data we compare the SFR surface density (Σ_{SFR}) to the gas surface density (Σ_{HI} & Σ_{H2}). By fitting a power law we got an N index of 1.65 for the radial cut and 2.86 for the UV region. The SFE is lower in the UV region, probably due to gas flaring in the external parts of the disk and low H_2 formation.