

**NGC 2188: A CASE STUDY FOR DISK-HALO INTERACTION****H. DOMGÖRGEN***Sternwarte der Universität Bonn, Germany***M. DAHLEM***Space Telescope Science Institute, USA*

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**Abstract.** A deep H $\alpha$  image of the nearly edge-on ( $i \sim 86^\circ$ ; Tully, 1988) irregular galaxy NGC 2188 shows the presence of spectacular filaments of ionized gas extending from a large star-forming complex several hundred pc into the halo of the galaxy (Dettmar, 1994). The origin and ionization mechanism of such extraplanar diffuse ionized features is not yet clear. One promising idea is that the extraplanar DIG is due to large scale mass circulation, i.e. a galactic “fountain” (Shapiro & Field, 1976) or “chimney” (Norman & Ikeuchi, 1989). H $\alpha$  filaments could then be the photoionized walls of such chimneys or fountains.

Recently obtained VLA HI data also show peculiar HI filaments. East of the center of NGC 2188 a giant superbubble with a radius of 550 pc and energy requirement  $1.6 \times 10^{53}$  erg is found. However, a correlation between HI structures and H $\alpha$  filaments cannot be found.

The HI observations reveal large-scale deviations from symmetry which are present in both, the gas distribution and in the velocity field. These suggest that NGC 2188 is a perturbed system, although it is not obviously an interacting galaxy.

**References**

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