

THE DARK MASSIVE HALO IN THE ELLIPTICAL GALAXY NGC 5266

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Recent observations with the Australia Telescope reveal that the elliptical galaxy NGC 5266 has a disk like structure of neutral hydrogen extending as far as almost $10 R_e$ which approximatively lies along the galaxy's major axis, at 65° apart from the inner minor-axis dust lane (Varnas *et al* 1987). From the present data is not clear whether the HI structure and the dust lane are two distinct disks or a single warped structure. The regularity of the velocity field of the HI structure allow us to use it as a probe of the potential of NGC 5266. The velocity curve along the major axis is flat till the last measured point ($r_{max} \sim 10'$) at $V_{rot} = 200 km/s$. Assuming that the gas is moving in circular orbits, we can derive the mass of the galaxy inside to this radius. The mass-to-light ratio M/L_B rises from about 3 in the central regions to 12 at $9 R_e$ ($D = 57.6 Mpc$), thus indicating that NGC 5266 is embedded in a dark massive halo. Moreover the representative point (cumulative M/L_B within the last measured point) of NGC 5266 in the diagram $\log(M/L_B) - \log(R_e)$ falls well within the region characteristic of spiral galaxies (Figure 2, Bertola *et al.* 1993), as do ellipticals previously studied in HI, thus reinforcing the suggestion (Bertola *et al.* 1993) of a parallel behaviour of the dark matter in elliptical and spiral galaxies.

References

- Bertola, F., Pizzella, A., Persic, M., Salucci, P., 1993, *ApJ Letters* **416**, L45.
Varnas, S. R., Bertola, F., Galetta, G., Freeman, K. C., Carter, D., 1987, *ApJ* **313**, 69.