

## THE H $\alpha$ RADIAL-VELOCITY FIELD OF THE SMALL MAGELLANIC CLOUD

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Observaciones interferenciales en H $\alpha$  de la Nube Menor de Magallanes que cubren un área de 6 grados cuadrados muestran la existencia de fenómenos cinemáticos complejos, en particular un gradiente en la dirección NE-SW. Al sudoeste se detecta una componente de baja velocidad centrada aproximadamente en  $\alpha = 0^h 54^m$ ,  $\delta = -73^{\circ} 04'$  (1950.0) con velocidad radial del orden de 50 km/s menor que la de la componente predominante de alta velocidad en la zona (VR 160 km/s). Esto es coherente con observaciones de muy distinto origen que parecen señalar la existencia de una componente de baja velocidad radial situada delante de la otra, aunque su extensión es en nuestro caso inferior al propuesto en esas fuentes.

Interferometric observations covering an area of 6 sq. deg. in the SMC have allowed us to obtain a general picture of its kinematical structure in H $\alpha$ , which has turned out to be similar in many aspects to the one derived by other techniques.

Our observations show a radial velocity (RV) gradient of about 13 km/s/deg in the NE-SW direction, with lower velocities towards the southwest.

The frequency distribution of RV appears to have two or three separated peaks, as was also found by other authors for neutral hydrogen, emission nebulae, supergiant stars, planetary nebulae and interstellar Ca II lines.

The median-velocity rotation curve derived from our data is in excellent agreement with other curves published for H I.

We have detected a low-velocity feature at the SW end of the bar ( $\alpha = 0^{\text{h}}54^{\text{m}}$ ,  $\delta = -73^{\circ}04'$ , 1950.0) with a mean radial velocity 50 or 60 km/s lower than that of the main body in this area ( $\sim 160$  km/s, heliocentric). The preceding border seems to be a particularly complex region, showing several overlapping and intermixing RV components.