

HVC 131+1-200: ¿COLISION DE UNA NUBE DE ALTA VELOCIDAD CON EL PLANO GALACTICO?

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Se presentan resultados observacionales en la línea de 21-cm del HI, obtenidos con el radiotelescopio de 100 metros de Effelsberg (Bonn), que mostrarían evidencias de interacción de una Nube de Alta Velocidad con el Plano Galáctico.

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HI STRUCTURES IN OB ASSOCIATIONS

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Since early stages of their lives, O and B stars strongly modify the medium in which they are born. Radiation pressure and stellar winds blow a low-density and highly ionized bubble into the ISM. These bubbles are usually surrounded by a cold expanding shell. These two structures are detectable in HI: the bubbles appear as holes in the N_{HI} distribution, and the shell like a ring or a disc, depending of the velocity. This work shows the results of a search of such structures in the direction of two OB associations: Car OB2 and Ara OB1. Due to the general galactic emission, HI maps have serious difficulties to show the expected features, and a numerical method to subtract the background should have been developed. Several observational parameters are shown, and an energy balance between the shells and the stars are presented.

OBSERVATIONAL ANALYSIS OF TWO GLOBULAR FILAMENTS IN LUPUS

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Two dark clouds with filamentary aspect, located in the Lupus region, are analyzed. The observational material consist in: 1) *Polarization of field stars*, located from the clouds at angular distances from several arcmin to few degrees; 2) *Polarization of weak stars*, located close to the border of each filament; and 3) *CO observations*, at 115 GHz. The polarimetry gave us an estimate of the orientation of the magnetic field, and its influence on the cloud's shape.

By means of the CO observations, it was possible to know the velocity field and the distribution of the molecular material.

ON THE NATURE OF THE EXCITATION OF THE HERBIG-HARO OBJECT 2

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We present VLA observations of the $NH_3(1,1)$ and $NH_3(2,2)$ lines toward the HH2 object. We detected several small ($\sim 20''$) clumps located near HH2. These clumps are cold, $T_R(2,2;1,1) \leq 20$ K, and with narrow line widths, $\Delta V \leq 1$ km s⁻¹. We find that these clumps appear a few arcsec downwind with respect to the HH2 optical knots. We propose that these clumps are random ambient high-density clumps on the way of the collimated wind from VLA 1, or alternatively random ambient clumps with the observed ammonia emission enhanced by the radiation field generated at the bow-shock of the VLA 1 jet, as proposed by Wolfire & Königl (1992, preprint) to explain the HCO^+ emission near HH7-11 and HH1-2. We suggest that the observed optical knots in HH2 could be part of the bow-shock of the VLA 1 jet, but now being disrupted and fragmented by the interaction with ambient clumps such as those observed in ammonia.

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PICO DOS DIAS SURVEY: A SEARCH FOR YOUNG STELLAR OBJECTS (YSO) PROGRESS REPORT

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The Pico dos Dias Survey (PDS) is a search for optical counterpart to *IRAS* sources within a young