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present surface gas density distribution. The predicted σ_{gas} reaches a maximum at 10 kpc due to the faster gas consumption in the inner zones. 3) Within 8 kpc, the computed SFR is lower than observed by no more than $\sim$ 20%. 4) Because the infall is faster in the inner parts the gradient evolution is faster towards the center. 5) Unlike the He/H gradient which steepens with time, the C/H, O/H, and Fe/H gradients flatten out. 6) The differences in the evolution of each abundance gradient are caused by the late contribution of low mass stars and the metallicity sensitivity of the massive stars yields. 7) The gas dilution by the infall is only relevant at the start of the evolution. 8) The predicted present O/H gradient is -0.041 dex/kpc ($r<$ 10 kpc) and -0.107 dex/kpc ($r>$ 10 kpc). 9) The computed present C/H gradient is -0.125 dex/kpc between 6 and 20 kpc, and -0.041 dex/kpc for $r<$ 6 kpc.

A detailed discussion can be found in Carigi (1996).

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THE FUNDAMENTAL CATALOGUE FK5 SYSTEM IN THE SOUTHERN HEMISPHERE

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Observations of 1172 Stars belonging to the Fifth Fundamental Catalogue, FK5 Stars, in the declination zone from +40° to −90° in upper culmination and from −90° to −68° in lower culmination were included in the observing program of Radio Stars with the Repsold Meridian Circle at Cerro Calán ($\lambda = 4^h\ 42^m\ 10.7^s$ W, $\phi = -33°23'50''$).

Series of differential observations along the whole meridian arc, 4–5 hours long were made applying the "quasi-absolute method". The target of the observations of all stars beloging to the FK5 Catalogue south +40° is to improve the System of the FK5 in the Southern Hemisphere, due that systematic errors have being determined specially in our Hemisphere.

The results of the observations made from May 1994 to July 1995 are presented. The mean internal error of the position of one star is ±0.10 arcsec. The observations, reduction and compilation of the results were supported by the Fondo Nacional de Desarrollo Científico y Tecnológico, FONDECYT, Project N°1940560.

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PROGRESS OF THE Hα SURVEY OF THE MAGELLANIC CLOUDS

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This project consists of a two-dimensional survey of both Magellanic Clouds and part of the Southern Milky Way by means of scanning Fabry Pérot interferometry. A particular point of interest is the study of giant and supergiant bubbles in the LMC. The Supergiant Bubble LMC 8 is formed by the H II regions DEM 50, 67, 55, 63, 64, 75, 80, and a system of filaments not identified by DEM (1976). There is an evident continuity in the radial velocity field; the mean radial velocity of the nebulae is 230 km/s ± 7 km/s. There is a generalized Hα emission over the whole superstructure, and morphological continuity, proving that LMC 8 is a single object and not a mere aggregate along the line of sight. At any rate, there is no evidence for systemic expansion: no line splittings were detected in the inner parts of the nebula. Longer exposures for the central parts are needed in order to yield definitive conclusions about the kinematics and origin of the structure. The smaller bubble DEM 50 exhibits three different components in its Hα profiles, with radial velocities of 198 km/s, 228 km/s, and 266 km/s, respectively, and an expansion velocity of 36 km/s. In the giant bubble N103, Ambrocio-Cruz et al. (1995) found that the Hα profiles are single gaussians on the walls of the bubble, while in the central parts the profiles are multiple. The mean radial velocity of the bubble is 250 km/s and the expansion velocity is 57 km/s. In case the bubble were the result of a supernova explosion, the initial release of mechanical energy would have ranged between 10^{50} and 10^{53} erg, depending on the pre-shock density. A supernova explosion in a region where the interstellar medium had been rarefied by the stellar winds of pre-existing OB stars would be a likely scenario for the origin of the structure.

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