

## SIZE AND KINEMATIC ASPECTS OF THE SMC ACCORDING TO THE CATALOGUE OF BISCHOFF-FLORSCH-MARCOUT

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The catalogue is a cross-identification catalogue containing 11800 galactic and SMC member stars. It gives individual results of various authors before 1988, but no mean values. The best is to make statistics inside individual systems, comparing them afterwards. Fig.1 concerns the radial velocities obtained for BAF stars in 1963 by FLORSCH using an objective-prism. Since the largest gradient lies in a direction near the north (FLORSCH 1972), we reported velocities to the declinations of the stars. It appears that the velocities belong to three groups separated by two empty strips showing each a gradient of about 30 km/s/deg falling down from north to south. The same structure appears for other homogeneous populations, like K type stars (fig.2). This gradient agrees with HINDMAN's HI measurements and was recently confirmed by the results obtained by Le COAR et al for HII, as shown by the crosses on figure 1 which represent mean values of HII velocities calculated by using Le COAR's values. In order to find out the structure by using the Cepheids and eventually confirm the great depth we announced in 1972, 73 and 81, we corrected their mean magnitudes by the formula  $m_1 = m + 2.03 \log P$  to calculate the fictive magnitudes they would have if their common period was one day. Fig.3 gives the result for the Bar of the Cloud. Out of an important thickness, it appears that the northern end is nearer than the southern by a mean value of about 20 kpc. If one consider the whole Cloud, out of the Wing, fig.4, one can see that the extreme northern Arm is folded and slightly extended.

### References

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