

KINEMATICS OF NEARBY FV STARS

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The line-of-sight velocity field has been determined for all 80 FV stars within 15 degrees of the North Galactic Pole (NGP) with measured and constant velocities, and measured distances, from the catalogs of Hill et al. (1976, 1982). These data are a subset of the data used in a determination of K_z by Bahcall (1984). Procedures were as described by Goulet and Shuter (1984). The velocity field is depicted in Figure 1, and the magnitude of the velocity residuals is plotted in Figure 2.

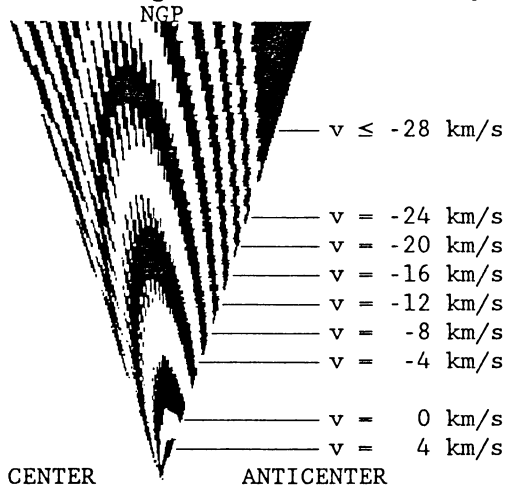


Figure 1. The line-of-sight vertical velocity field for FV stars in the center-anticenter direction referred to its own LSR. The Sun is at the bottom of the cone which has a height of 400 pc.

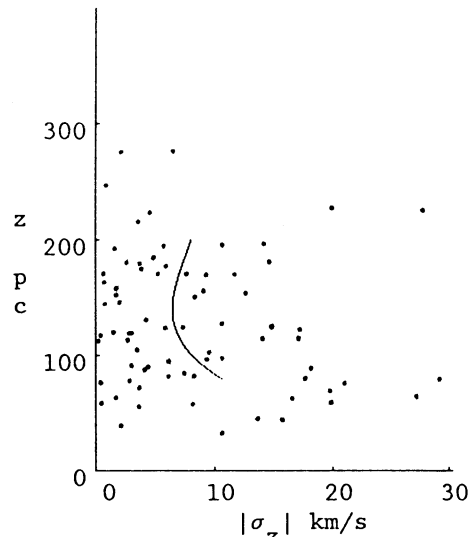


Figure 2. A plot of the magnitude, σ_z , of the velocity residuals versus height, z , above the Sun. The solid line represents a best fit cubic polynomial.

If the FV stars were in statistical equilibrium all velocities plotted in Figure 1 should be zero. Instead, there is a marked kinematic compression. If the velocity residuals plotted in Figure 2 were isothermal, there should be no variation of σ_z with z . No clear trend exists.

REFERENCES

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