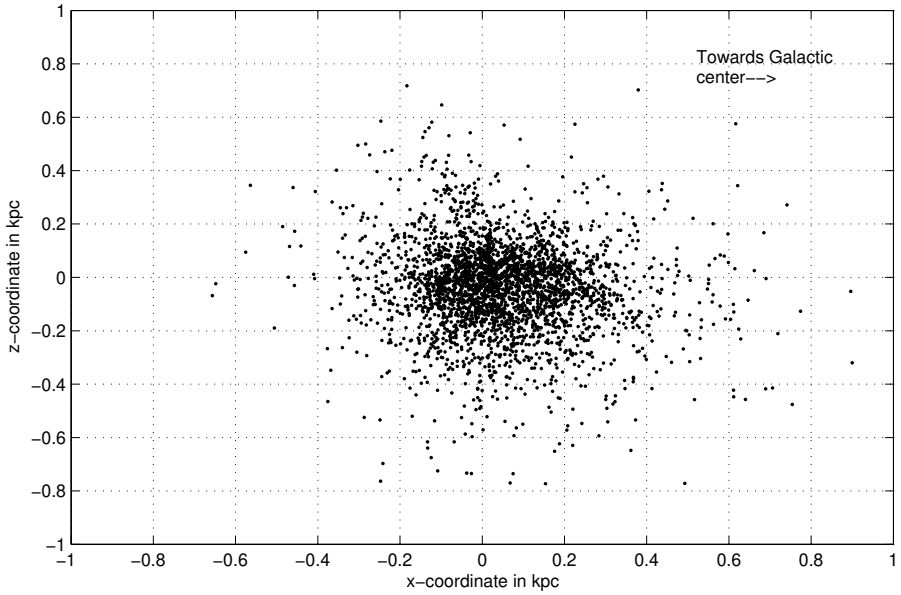

Fig. 3. Distribution in $x - z$ plane.

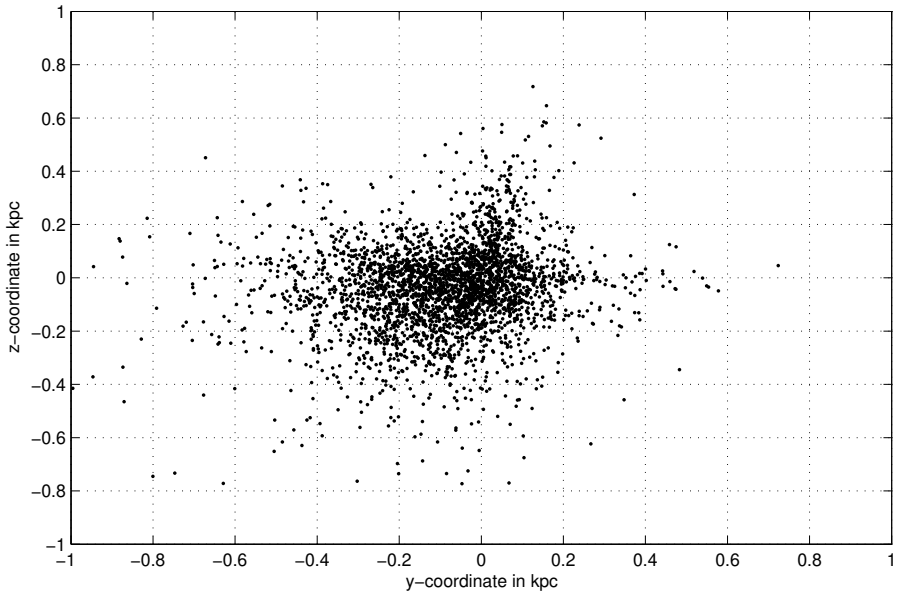

Fig. 4. Distribution in $y - z$ plane.

Figure 1 shows the distribution of the G giants in space, Figures 2, 3, and 4 the distributions in the $x - y$, $x - z$, and $y - z$ planes. Define a moment matrix, referred to the centroid of the distances, $\bar{x}, \bar{y}, \bar{z}$, from the x, y, z:

$$\begin{pmatrix} \sum_i (x_i - \bar{x})^2 & \sum_i (x_i - \bar{x})(y_i - \bar{y}) & \sum_i (x_i - \bar{x})(z_i - \bar{z}) \\ \sum_i (y_i - \bar{y})(x_i - \bar{x}) & \sum_i (y_i - \bar{y})^2 & \sum_i (y_i - \bar{y})(z_i - \bar{z}) \\ \sum_i (z_i - \bar{z})(x_i - \bar{x}) & \sum_i (z_i - \bar{z})(y_i - \bar{y}) & \sum_i (z_i - \bar{z})^2 \end{pmatrix}. \tag{2}$$

Before use of the moment matrix outliers should be eliminated from the distances. The criterion selected for the cutoff was five times the median of the distances to the stars. This cutoff results in only a sparse trim