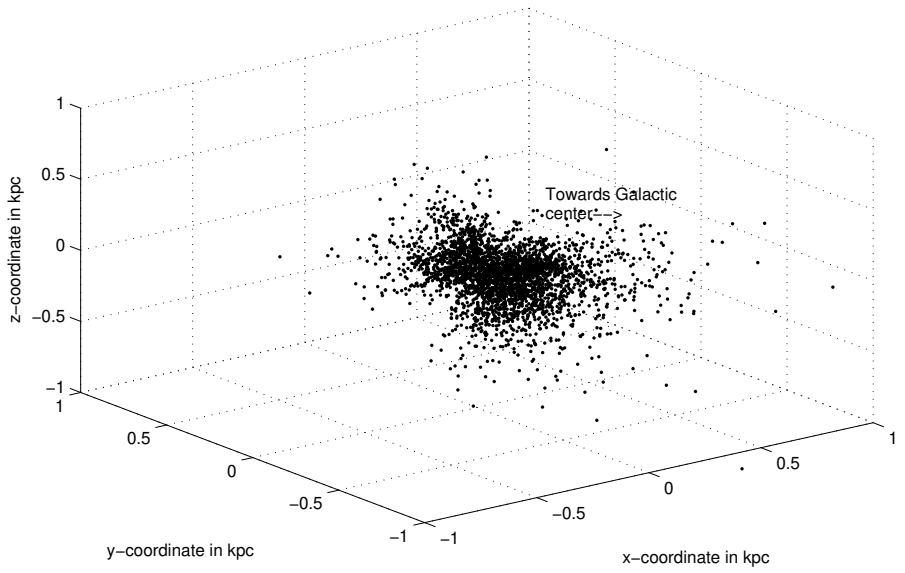

Fig. 1. Space distribution of G giants.

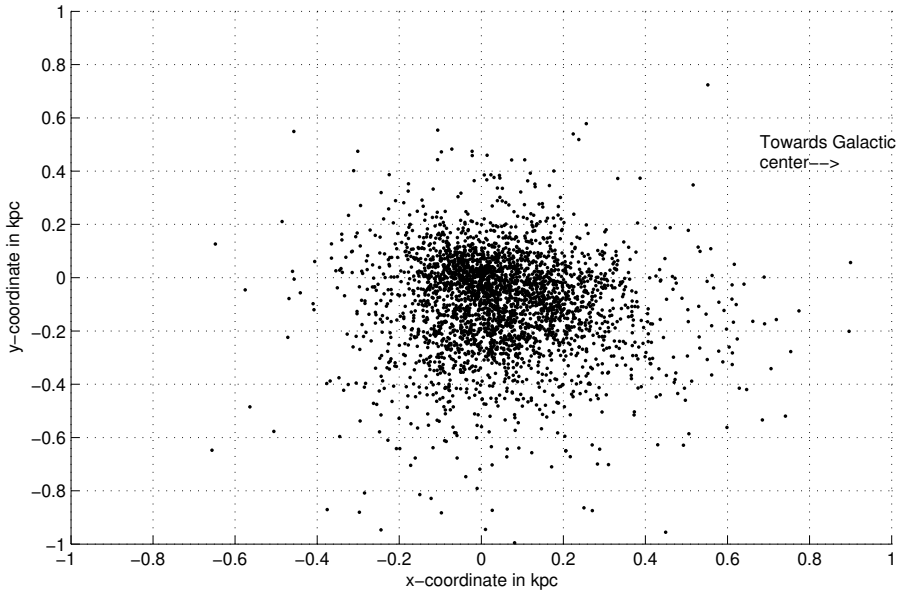

Fig. 2. Distribution in $x - y$ plane.

3. THE SPACE DISTRIBUTIONS

Let x, y, z be rectangular coordinates with origin at the Sun: x points towards the Galactic centre, y is perpendicular to x in the direction if increasing l, and z is positive for positive Galactic latitude. From ϖ, the star's parallax, l, its Galactic longitude, and b, its Galactic latitude, we calculate

$$\begin{pmatrix} x \\ y \\ z \end{pmatrix} = \frac{1}{\varpi} \begin{pmatrix} \cos l \cos b \\ \sin l \cos b \\ \sin b \end{pmatrix}. \quad (1)$$