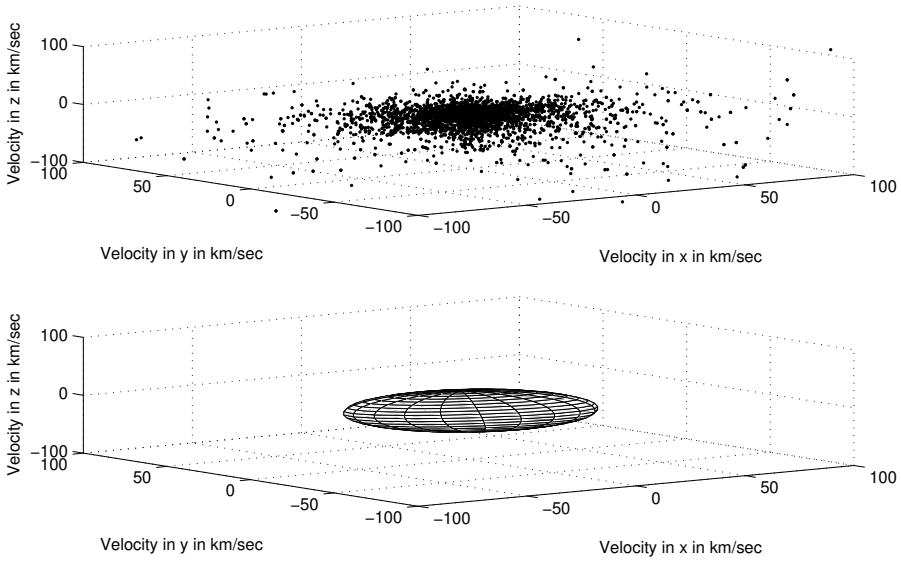

Fig. 5. '.'=rectangular velocity of star (upper); velocity ellipsoid (lower).

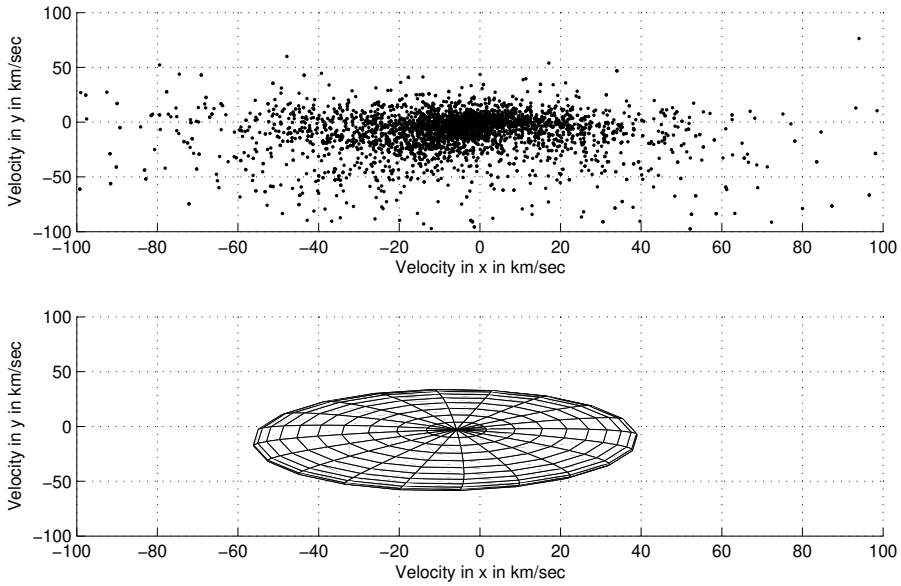

Fig. 6. Ellipsoid in $x - y$ plane.

the equations of condition. An inadequate reduction model, for example one in which some unknowns are strongly correlated, results in a high condition number for the matrix because of small singular values. The condition number of the matrix of the equations of condition for the G giants, however, is low, 22.8. The second check calculates Eichhorn's efficiency (Eichhorn 1990), a parameter that varies from 0 to 1 with 0 indicating redundancy in the parameters and 1 that all parameters are necessary. The efficiency of 0.94 indicates that *all* of the variables in the model are necessary and with little correlation among themselves.

The first solution for the G giants was calculated from all of the equations of condition. These solutions calculated residuals needed to find discordant data. For the G stars the criterion was five times the mean absolute deviation (MAD) of the residuals. This eliminated 168 of the 6,808 equations of condition, a 2.5%