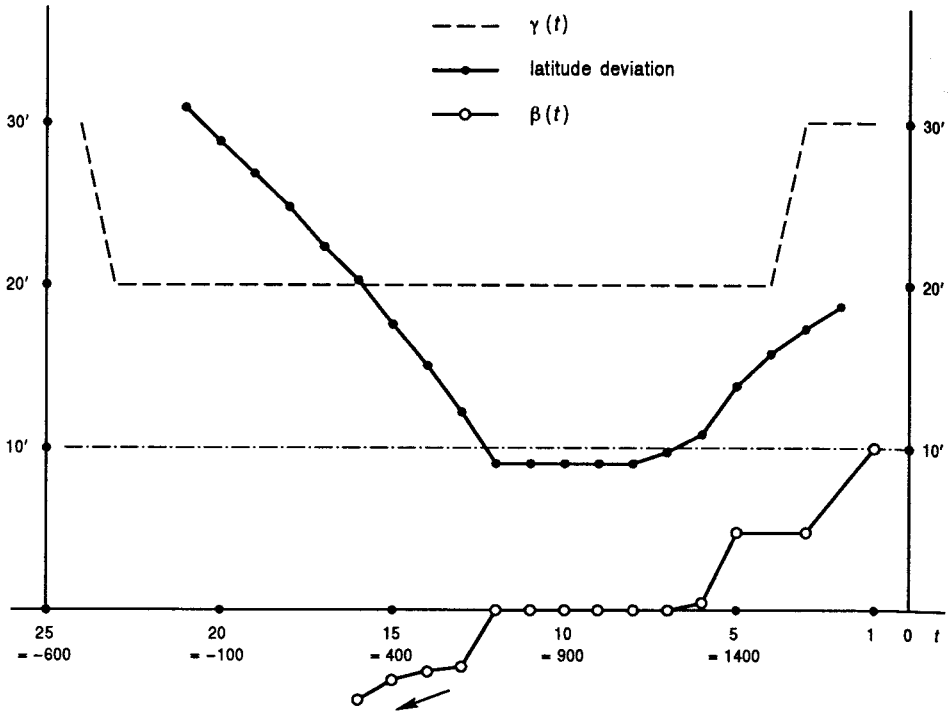

Figure 120(2). The graph of maximal latitudinal deviation for eight well-measured bright stars in the Almagest

particular stars have been chosen because most of them are also named stars in the Almagest. It is very interesting to compare the results of our calculations for the two catalogues.

In Fig. 122 we show the graphs of latitudinal deviations for the named stars listed above. These graphs were calculated for the optimal values $\gamma = 0$ and $\beta = 0$, as determined for the catalogue of Tycho Brahe, using the statistical dating procedure. The same values $\gamma = 0$ and $\beta = 0$ were determined using the geometrical dating procedure. Tycho Brahe did not make any significant systematic error in his determination of the position of the ecliptic pole. This is not surprising for an astronomer working in the 16th century. On the other hand, the $1'$ accuracy claimed by Tycho Brahe for his catalogue is not achieved even for the well-known named bright stars. In fact, his accuracy is about $3'$ for the set of named stars listed above. Thus our result confirms the opinion of other experts that the actual accuracy of Tycho Brahe's catalogue is about $2'$ or $3'$, but not as little as $1'$.

Taking the "claimed accuracy" $\Delta = 3'$, we obtain two solutions for the date of the catalogue with respect to the total a priori time interval $0 \leqslant t \leqslant 6$; namely, between 1400 A.D. and 1500 A.D., and between 1500 A.D. and 1620 A.D. The first solution