## THE ORBIT OF CORIONIS

	Preliminary	Corrected
ĸ	112.0	109 92
е	0.75	0.7552
ω	1100	113°31
T	1.94 days	1.991 days
γ	+20.7 km	+21.34 km
Period	29.136 days	29.136 days
a sin i	29,680,000 km	28,867,000 km

A comparison of the residuals obtained from an ephemeris and from substitution in the observation equations showed some differences of over a kilometer and a second solution was necessary. For preliminary elements those obtained in the first solution, except T, which was increased to 2.01 days, were used. The change in Twas due to a better agreement thereby produced in the residuals. Using the same substitutions for homogeneity there result the normal equations

Their solution gives for final elements the following:

 $\begin{array}{lll} K & 109.90 \pm 1.100 \text{ km} \\ e & 0.7543 \pm 1.0046 \\ \omega & 113^{\circ}28 \pm 1^{\circ}083 \\ T & 1.003 \pm 1.022 \text{ days} = \text{Julian Day 2.417.587.993} \\ \gamma & \pm 21.34 \pm 0.856 \text{ km} \\ \text{Period} & 29.136 \text{ days} \\ a \sin i & 28.907.000 \text{ km} \end{array}$ 

An ephemeris computed from these elements shows that  $\Sigma pre$ has been reduced from 2004 to 2181, the probable error of an observation of unit weight becoming  $\pm 6.88$  km, while the probable errors of the elements become those given above. The changes from the first solution are very small but the agreement between the residuals is now satisfactory. The velocity-curve corresponding to the final elements is given in the accompanying figure, with the positions of the normal places as small circles. A comparison of