An ephemeris and observation equations calculated by means of Lehman Filhés differential coefficients were computed for applying least squares corrections to e, K, γ and ω. Owing to the smallness of the eccentricity it was considered useless to apply corrections for both ω and T and the latter was considered fixed. The observation equations are given in the following table, where x, y, z, u have the values

$$x = \delta\gamma$$
$$y = \delta K$$
$$z = K\delta e$$
$$u = K\delta\omega$$

TABLE III. OBSERVATION EQUATIONS RS VULPECULAE

1	1·000x	·288y	·001z	1·001u	+0·91 = 0
2	1·000	·366	−·006	−·004	+1·63
3	1·000	−·895	·279	·136	1·83
4	1·000	−·929	−·087	·342	2·27
5	1·000	−·960	·758	·127	1·02
6	1·000	−·772	·978	·623	1·71
7	1·000	−·208	·728	·718	1·73
8	1·000	·566	·570	·798	8·89
9	1·000	·045	−·511	·956	2·17
10	1·000	·511	−·984	·830	5·86
11	1·000	·858	−·658	·38	−·37
12	1·000	·995	·029	·199	0·52
13	1·000	·904	1·010	−·519	0·78
14	1·000	·635	·715	·836	0·25

From these observation equations the following normals were obtained:

$$14{\cdot}000x + 0{\cdot}847y - 1{\cdot}279z - 0{\cdot}606u - 14{\cdot}34 = 0$$
$$7{\cdot}240 - 1{\cdot}234 + 0{\cdot}506 - 9{\cdot}202 = 0$$
$$6{\cdot}670 - 0{\cdot}058 + 0{\cdot}744 = 0$$
$$6{\cdot}624 + 24{\cdot}250 = 0$$

Their solution gave

$x = +0{\cdot}61$	$\delta\gamma = +0{\cdot}61$	$\pm 0{\cdot}56$
$y = +0{\cdot}98$	$\delta K = +0{\cdot}98$	$\pm 0{\cdot}79$
$z = +0{\cdot}157$	$\delta e = +0{\cdot}0029$	$\pm 0{\cdot}0149$
$u = -3{\cdot}530$	$\delta\omega = -3{\cdot}74$	$\pm 0{\cdot}84$

whence the final elements

$$e = 0{\cdot}053 \pm {\cdot}015$$
$$K_b = 54{\cdot}98 \pm 0{\cdot}79 \qquad K_f = 175{\cdot}9$$
$$\gamma = -22{\cdot}04 \pm 0{\cdot}56$$
$$\omega = 236{\cdot}26^\circ \pm 0{\cdot}84$$
$$T = 1{\cdot}903 \text{ days}$$