A plot of the observations showed the period to be approximately 2 days. Using the four early observations in conjunction with our own, the period was found to be 1·96408 days. The plates were grouped according to phase into 20 normal places, the first 11 representing component I and the last 9 component II.

NORMAL PLACES

	Mean Phase	Mean Velocity	Weight	O-C Preliminary	O-C Final	Eq.-Eph.
1	·001	+ 91·9	·33	− 1·4	− 0·1	+ ·1
2	·063	+ 74·9	·73	− 5·9	− 2·5	+ ·1
3	·237	+ 12·1	·89	− 2·1	− 2·2	+ ·2
4	·463	− 70·9	·47	− 4·4	− 7·0	− ·1
5	·590	− 90·1	·89	+ 5·0	+ 2·4	·0
6	·815	− 98·5	·58	+ 3·4	+ 1·6	− ·1
7	·977	− 71·1	·81	+ 1·0	− 0·2	− ·1
8	1·231	+ 10·9	1·14	− 1·8	− 2·1	·0
9	1·495	+101·6	·31	− 1·3	+ 1·2	·0
10	1·627	+128·5	·35	− 0·9	+ 3·5	+ ·1
11	1·761	+130·0	·72	− 5·0	+ 0·5	+ ·1
12	·001	− 73·3	·26	+ 0·7	− 2·1	− ·1
13	·063	− 55·9	·66	− 0·6	− 2·5	− ·1
14	·463	+ 84·5	·36	− 9·2	− 5·4	·0
15	·599	+123·1	·68	− 0·9	+ 2·7	− ·1
16	·814	+129·7	·56	+ 0·3	+ 3·0	− ·1
17	·979	+ 98·5	·58	− 0·3	+ 1·9	− ·1
18	1·495	− 71·1	·18	+ 6·6	+ 5·6	·0
19	1·672	−110·7	·24	− 2·0	− 5·0	+ ·2
20	1·758	− 98·1	·55	+12·3	+ 8·4	− ·1

The preliminary values of the elements used were,

$$P = 1{\cdot}96408 \text{ days}$$
$$e = {\cdot}02$$
$$\omega_1 = 45^\circ$$
$$\omega_2 = 225^\circ$$
$$\gamma = +13{\cdot}10 \text{ km.}$$
$$K_1 = 121 \text{ km.}$$
$$K_2 = 122{\cdot}42 \text{ km.}$$
$$T = \text{J. D. } 2{,}419{,}970{\cdot}035$$

Using these values and making the substitutions,

$$x = \delta\gamma$$
$$y_1 = \delta K_1$$
$$y_2 = \delta K_2$$
$$z = 100 \cdot \delta e$$
$$u = 100 \cdot \delta\omega$$
$$v = [2{\cdot}50528]\ \delta T$$

observation equations connecting the elements were built up in the usual way and a least-squares solution effected. It was later found necessary to consider T fixed, owing to the small value of e which made the coefficients of ω and T practically the same.