considered only a rough approximation. In a personal communication to the writer Professor Frost gives the velocities from the different lines used. These agree among themselves very closely and he suggests that the plate should be given considerable weight and no doubt its result is close to the actual velocity. The period that suits all observations best is that given, viz.: 131·26 days, though possibly the first decimal place is as close as this can be relied on.

With this period the plates were grouped according to phase into fourteen normal places. The weights given to each group was approximately the sum of the individual plates comprising the group.

NORMAL PLACES

	Mean Phase	Mean Velocity	Weight	O − C	Equation-Ephemeris
1	2·77	+ 69·23	5·	− ·28	·05
2	5·93	55·25	3·	+ ·50	+ ·10
3	11·75	31·69	4·5	− 3·22	+ ·12
4	18·99	26·21	5·	+ 3·47	+ ·05
5	41·55	11·18	7·	+ ·56	− ·04
6	56·46	7·99	4·5	·05	− ·04
7	71·13	7·59	4·5	− 1·07	− ·06
8	84·52	8·38	5·	1·83	·05
9	93·65	15·46	4·5	+ ·68	·03
10	109·27	21·98	5·5	+ ·82	− ·03
11	116·05	30·66	4·5	− ·63	+ ·01
12	121·63	44·27	6·	+ 1·73	+ ·18
13	126·82	61·19	5·	2·06	+ ·40
14	130·10	+ 78·79	2·5	+ 3·19	+ ·17

Preliminary elements were obtained by the graphical method of Dr. King* as follows:

$$P = 131{\cdot}26 \text{ days}$$
$$e = {\cdot}575$$
$$\omega = 0{\cdot}^{\circ}$$
$$K = 33 \text{ km.}$$
$$\gamma = + 21{\cdot}53 \text{ km.}$$
$$T = \text{J. D. } 2{,}417{,}974{\cdot}69.$$

With these elements it was decided to make a least squares solution. Using the differential form† of Lehmann-Filhés,

* *A. J.*, Vol. XXVII, No. 2, 1908, p. 27.

† *A. N.*, 3242.