

The preliminary elements obtained from these by Dr. King's graphic method were as follows:—

$$P = 5.969 \text{ days}$$

$$e = .02$$

$$\omega = 190^\circ$$

$$K = 49.5 \text{ km.}$$

$$\gamma = -17.5 \text{ km.}$$

$$T = 2,419,362.52 \text{ J. D.}$$

A closer approximation to the curve was attempted by applying a least-squares solution. The period of oscillation was taken as fixed, being obtained by using both Lick and Ottawa observations, which being far apart, cover a great many cycles. On account of e being very small, T was also taken as fixed and e , ω , K , and γ used in the solution.

Observation equations were formed as in Table V.

TABLE V.
OBSERVATION EQUATIONS.

x	y	z	u	$-n$	Weight.
1	-.778	-.313	+.666	-2.7	.3
1	-.395	+.595	+.930	-0.9	1.5
1	+.140	+.991	+.991	-1.1	2.0
1	+.630	+.317	+.763	-1.7	1.5
1	+.959	-.832	+.210	+0.3	1.5
1	+.980	-.995	-.032	-0.1	2.0
1	+.647	-.073	-.741	+1.4	2.5
1	+.152	+.863	-.982	+1.4	2.0
1	-.309	+.917	-.953	-0.7	2.0
1	-.728	+.176	-.702	+0.8	1.0
1	-.980	-.734	-.277	-1.0	2.0
1	-1.013	-.851	+.122	+0.3	2.0

$$\text{when } x = \delta\gamma$$

$$y = \delta K$$

$$z = K\delta e$$

$$u = K\delta\omega$$