

NORMAL PLACES

	Mean Epoch Julian Date	Phase from Final T	Velocity	No. of Observations	Wt.	O - C Prelim.	O - C Final.	pr^2 Prelim.	pr^2 Final.
1	2,421,791.968	1.114	- 39.9	1	$\frac{1}{2}$	- 1.4	- 6.0	1	18
2	1,805.950	1.717	+ 25.5	1	$\frac{1}{2}$	- 6.6	- 5.1	22	13
3	1,842.898	1.986	+ 19.2	1	$\frac{1}{2}$	- 1.7	+ 2.0	2	2
4	1,918.611	0.976	- 57.9	1	$\frac{1}{2}$	- 3.4	- 6.4	5	20
5	1,951.567	0.527	-128.6	1	$\frac{1}{2}$	-22.1	-21.2	125	116
6	2,191.888	0.570	- 91.9	3	$1\frac{1}{2}$	+ 9.3	+ 8.5	131	107
7	2,178.957	0.987	- 49.5	2	1	+ 2.0	+ 0.1	1	0
8	2,185.975	1.331	- 8.0	2	1	+ 1.0	+ 0.9	1	1
9	2,192.902	1.584	+ 31.3	1	$\frac{1}{2}$	+12.5	+11.6	39	53
10	2,159.962	2.016	+ 48.7	2	1	- 5.3	- 0.2	28	0
11	2,193.999	2.681	+ 51.9	3	$1\frac{1}{2}$	+ 6.2	+ 4.6	57	31
12	2,190.957	2.976	+ 7.2	3	$1\frac{1}{2}$	+ 8.0	- 1.9	84	6
13	2,177.957	3.325	- 85.6	1	$\frac{1}{2}$	- 2.5	-10.1	3	51
14	2,520.951	2.590	+ 49.0	1	$\frac{1}{2}$	- 6.3	- 6.1	20	18
15	2,531.916	0.203	-114.8	2	1	- 1.7	- 4.6	3	22
16	2,534.960	3.234	- 47.4	2	$\frac{1}{2}$	+23.9	+ 5.9	429	28

 Σ 954 516

The following preliminary elements were selected as a basis for the least squares solution

$$\begin{aligned}
 P &= 3.337 \text{ days} \\
 e &= 0.20 \\
 \omega &= 120^\circ \\
 T &= \text{J.D. } 2,422,151.200 \\
 K &= 90 \text{ km.} \\
 \gamma &= -16.2 \text{ km.}
 \end{aligned}$$

The residuals left in the normal places from these elements are given in the table under the heading, O-C preliminary. Observation equations were next formed and the solution gone through in the usual way. The changes in the elements are rather larger than usual and the residuals computed from the ephemeris differed in some cases from that computed from the observation equations. The solution resulted in a lowering of Σpr^2 from 954 to 516 so that a second solution would probably improve the residuals still further. As will be seen from the probable errors of the elements the changes of the present solution are of the same order as these and as the next solution would probably result in much smaller changes, they may be taken as negligible. The several steps in the solution are recorded.

00925710