

KG

11366

v.1046



13142



ξ_0	η_0	ΔS_1	-5.25	-3η	-3
-14.84	-7.12	-95	+ 77 = - 18	+ 21 = +3	
+13.06	-4.07	+59	- 68 = - 9	+ 12 = +3	
+13.66	+12.30	+112	- 71 = +41	- 37 = +4	
+1.42	-2.79		- 7	+ 8 = -2 = -0.01	
		$\Delta\eta_0$	-7.37	-2.5	-7
		- 48	+52 = +4	+ 3 = +7	
		- 20	+30 = +10	- 3 = +7	
		+100	-90 = +10	- 3 = +7	
		+20		- 0 = +13 = +0.6	

13142

Plate Center & Plate Constants

1

X	Y							
7.5559	11.3663	1	19	55.2	13	28	08.0	
20.3903	21.8223							
32.7571	11.3525	1	34	01.5	13	30	25	
34.1636	13.9795							
39.9088	29.5619							
40.3130	22.7188	2	53	56.7	26	58	33.0	
10.1565	11.3597	1	26	58.3	13	29	16.5	
22	18		+1	1.3		+54	13.9	
+ 1.8735	+ 6.6406	1	27	59.6	+14	23	30.4	
33.3	490" (1941)	1	26	11.8	14	23	32.7	
+ 61.3	+ 3253.9	2	53	71.4	28	36	63.1	
		1	27	05.7	14	18	31.5	

+2.2" 14"

Center { A = 1 27 50
D = 14 23 30

X-Y	-114.77	+3.5X	-65.88
+4088 + 3778 = +7866	-1304	+6562 + 26 = +6588	0
-9011 + 17082 = +8071	-1603	+6468 + 119 = 6587	-1
-9597 + 17954 = +9857	-3391	+6466 + 122 = 6588	0
23.0908 + 11545 =	-1751	+81 = 23.4195	

Y-U	+111.8X	+6Y	-108.87
+7291 + 5283 = +9974	+844	+10818 + 68 = +10886	-1
-7 + 6990 = 6983	+3820	+10803 + 84 = +10887	0
-7977 + 19781 = 6804	+3903	+10710 + 177 = 10887	0
15.2646 + 7632 =	+2582	+91 = 15.2064	

Table a = -1.5 e = -2.5 a-e = +1.0 b+d = +2.0
 Abs -503.5 -506.0 +2.5 +2.9
 -9 -50.20 -50.35 -4.5 +0.9

Cape 232 - 1196.1

1 34 17.02

17.04

16.98

1 34 17.01

+ 5489

1 35 11.90

1 27 5.0

+ 7 21.90

94182

2.69525

998288

1.13537

+ 136575

+ 110

356683

399088

- 7397

+ 15 53 54.8

54.1

54.1

15 53 54.3

+ 15 11.9

+ 15 59 06.2

19 23 30

+ 1 35 36.2

+ 57377

3.75879

1.08989

94571

22707

87812

+ 122994

0.700609 0.1+

30.3598

- 124

Cape No 231 1196.9

1 33 53.83

53.81

53.89

1 33 53.83

54.55

1 34 48.38

1 21 5.0

+ 6 38.38

+ 418.32

2.62151

998715

1.11590

+ 130588

+ 59

350647

391636

- 9041

+ 13 96 91.0

91.0

- 40.4

+ 13 96 90.8

+ 5 11.9

+ 13 51 52.7

19 23 30

- 21 37.3

- 18974

3.27816

0.609314

93924

22318

86776

- 40679

+ 0.0476

- 139802

139795

- 7

13142

Plate Center & Plate Constants

1

X	Y							
7.5559	11.3663	1	19	55.2	73	28	.080	
20.2903	21.8223							
32.7571	11.3525	1	39	01.5	13	30	25	
39.1636	13.9795							
19.088	29.5619							
70.3130	22.7188	2	53	56.7	26	58	330	
20.1563	11.3597	1	26	58.3	15	27	165	
22	18							
+ 1.8935	+6.6406	1	27	59.6	117	23	309	
33.3	490. (K)	1	26	11.8	19	13	32.7	
+ 61.3	+ 525.39	2	53	71.4	28	36	65.1	
		1	27	05.7	14	18	31.5	

Center { A = 1 27 50
D = 19 23 30

X	Y	-114.77	+3.51	-65.88	
4 088 - 3778	+7866	-1364	+6562 + 26	+6588	0
-9011 + 17082	+8071	-1603	-6468 + 119	-6587	-1
-9597 + 17754	+9857	-3391	-6466 + 122	-6588	0
23.0908 + 11545	-1751	+81	23.4195		

7-11	+111.81	+64.	-10387		
+7291 + 3283	+9977 + 847	-70818	+18	+10851	-1
-7 + 6990	-6983 + 3820	-10803	+84	+10887	0
-7979 + 19721	+8072 + 3943	-10710	+117	+10387	0
15.2646 + 7632	+2582	+71	15.2064		

Tables a = e = a-e = b+d =
Abs -3503.5 -358.0 +25 +2.9

Cape 232 - 1196.1

1 34 17.02

17.04

19023

16.98

1 34 17.01

+ 54.89

1 33 11.90^v1 27 50^v+ 7 21.90^v441.82^v2,645.25^v998.288^v1135.37^v+ 1365.75^v+ 110^v356685^v349088^v- 7397^v

+ 15 53 54.8

54.1

54.1

15 53 54.3

+ 5 12.9

+ 15 59 06.2^v14 23 30^v+ 1 35 36.2^v+ 5737.7^v3,758.74^v108989^v945.71^v22707^v87812^v+ 122994^v+ 00607^v30,3598^v29,5624^v

Cape No 231 1196.9

1 33 53.83

53.83

53.83

1 33 53.83

54.55^v1 34 48.38^v1 27 50^v+ 6 58.38^v+ 418.32^v2,6215.1^v9,98715^v1,11590^v+ 1305.88^v+ 59^v350647^v341636^v- 9041^v+ 13 46 41.0^v

41.0

40.7

+ 13 46 40.8^v+ 5 11.9^v+ 13 51 52.7^v14 23 30^v- 31 37.3^v- 1897.4^v3,27816^v0,609314^v9,3924^v2,2318^v8,6776^v- 40674^v+ 00476^v13,9802^v13,9795^v- 7^v

Standard Coordinates											
13142											
Cape No 193 Mag 8.8 Cape No 207 Mag 3.8 Cape No 418 Mag 8.7											
C	1	19	01.17	1	26	07.87	1	31	47.19	(1025)	
L			01.15			7.87			19.93		
B			01.12			7.86	1	33	07.12		
Mean	1	19	01.15	1	26	07.87	1	33	07.12		
Proc			54.07			54.48			54.37		
α	1	19	55.22	1	27	02.35	1	34	01.26		
A	1	27	50	1	27	50	1	27	50		
$\delta-A$	-		754.78	-		47.65		+6	114.6		
$\sin(A-A)$	-		474.68	-		47.65			+371.41		
$\log u$	2	67	640.4	1	67	806.4	2	56	985		
$\log v$	9	98	78.9	9	98	511	9	98	782		
$\log w$	1	17	13.3	0	17	04.1	1	06	49.1		
$\log z$	-		1484.33	-		178.05		+11.6	12.1		
$\log t$			-96			-1			+51		
$\log y$	7	14	73	20	51	94	33	6	172		
$\log x$	7	55	59	20	39	03	32	7	571		
$\log z$	7	40	88	-		129.1	-		860.1		
(11)											
C	+13	22	47.7	+14	49	49.3	+13	17	29.95		
L			47.7			48.9		7	4.11		
B			46.5			48.8	+13	25	11.0		
Mean	+13	22	47.2	+14	49	49.0	+13	25	11.0		
Proc		5	20.5		+5	16.7		+5	13.7		
δ	+13	28	044	14	55	054	+13	30	24.7		
δ	-14	23	30	14	23	30	14	23	30		
$\delta-D$	-	55	223		+31	357	-	53	05.3		
$\tan u$	-	33	22.6		+18	95.8		-31	85.6		
$\log u$	3	52	148	3	27	779	3	50	319		
$\log v$	0	85	263	0	60	894	0	83	434		
$\log w$											
$\log t$	9	37	93	9	42	56	9	38	06		
$\log y$	2	37	31	0	34	08	2	12	98		
$\log z$	8	77	58	6	81	98	8	56	38		
$\log w$											
$\log z$	-	7	1225	+4	0639	-	68	287			
$\log u$	+00	597		+00	007	+00	366				
$\log y$	109	372		220	676	11	2079				
$\log z$	113	663		218	223	11	35-25				
$\log w$	+4	291		-	2423	+1	446				

13192		Standard Coordinates		2	
Cape No 193 May 8.8		Cape No 207 May 3.8		Cape No 448 May 8.7	
C	1 19 01.17	1 26 07.87	1 31 47.19	(102)	
L	01.15	7.87	19.93		
E	01.12	7.86	07.12		
Mean	1 19 01.15	1 26 07.87	1 33 07.12		
Pre	59.07	54.48	52.39		
α	1 19 55.22	1 27 02.35	1 39 01.96		
A	1 27 50	1 27 50	7 27 50		
γ -A	- 759.78	- 97.65	+ 6 11.76		
Sum (A)	- 978.68	- 97.65	+ 371.91		
log ₁₀	2.67690 h	1.67806 h	2.56985		
" log	9.9878.9	9.985.11	9.98782		
" γ	1.17153 h	0.17041 h	1.06991		
γ_0	- 14.8433	- 148.05	+ 11.6121		
γ_1	- 96	- 1	+ 51		
γ_2	71973	205199	336172		
X	75559	203903	327571		
A γ	+ 4088	- 1271	- 8601		
C	+ 13 22 97.7	+ 14 99 99.3	+ 13 17 29.		
L		97.7	98.9		
E		96.5	98.8		
Mean	+ 13 22 97.2	+ 14 99 99.0	+ 13 25 11.1		
Pre	5	20.5	16.7		
α	+ 13 28 07.7	19 55 05.7	+ 13 30 29.		
D	19 23 30	19 23 30	19 23 30		
γ -D	- 55 22.3	+ 31 35.7	- 53 05.		
Sum	- 3322.6	+ 1893.8	- 3185.		
log ₁₀	3.52198 h	3.27779	3.50319 h		
" log	0.85263 h	0.60897	0.83434 h		
log ₁₀ A	9.3793	9.9256	9.3808		
" γ_0	2.3931	0.3408	2.1298		
" γ_1	8.7758	6.8198	8.5638		
γ_0	- 7.1225	+ 4.0639	- 6.8287		
γ_1	+ 0.0597	+ 0.0007	+ 0.0366		
γ_2	10.9372	22.0676	11.2079		
γ	11.3663	21.8223	11.3525		
γ - γ	+ 4.291	- 24.23	+ 14.46		

13142 *Jurmes Etc.*
 plate Aug 7 '17

Exp. to stars 23 05 23 17
 " Moon 23 10 36.0' 23 10 36.3'
 clock slow 0 15.7"

H. Sid Time 23 10 51.85" 8-45-2" 16"
 H. Long 4 77 31.05"
 g. Sid T. 27 55 22.90"
 Sid T. M. Moon 9 01 47.81"
 Interval 18 53 38.09"
 Reduction 3 5.72"
 g. M T. 18 50 32.37"

From Naut Alman. R. A. Dec.
 Moon 18h 1 25 02.91 + 17 21 20.5"
 Motion in 1m +2.2517" + 12.210"
 " " 50.5395 + 1 53.78 + 10 17.1
 Tabular Place 1 26 56.69 + 17 31 37.6"

Moon's Age 20 days

Parallax 58 51.28"
 Semid 16 03.8"
 R 963.8"
 Ang 12.7"
 S.R. (6) - 0.4"
 R 976.1"
 R 2,092.7"
 AR - 1003"
 (1+R) R 1,992.1"
 R2 3,968.5"

a = -503.5"
 + 24
 - 479.5"

A = -2.0

B = +.4

13172 Junes Etc.
Date Aug 7 '17

Exp. to stars	23	05	23	17
" " Moon	23	10	36.0	23 10 36.3
Clock slow		0	15.7	
1st Sid Time	23	10	51.85	8-45-2 16 ^m
H. Long	9	99	31.05	
9 Sid T.	27	55	22.90	
Sid T. M. Noon	9	01	49.81	
Distinal	18	53	38.09	
Reduction		3	5.72	
9 M T.	18	50	32.37	

From Naut Alm.	R. A.	Dec.
Moon 18 ^h	1 25 02.91 + 19	21 20.5
Moon in 1 ^m	+ 2.2519	+ 12.210
" " 5.025395	+ 1 53.78	+ 10 17.1
Tabular Place	1 26 56.69 + 19 + 31	37.6

Moon's Age 20 days

Parallax	58	51.28
Semid	16	03.8
R		963.8
ang		12.7
R (16)		- 0.4
R		976.1
R		2.0924
AR		- 100.3
(1+AR)		1.9921
R2		3.9685

$$a = -503.5$$

$$+ 27$$

$$- 479.5$$

$$A = -2.0$$

$$B = +.4$$

13 142 Morris Center

4

	X	$x-x_0$	Δx	$(x-x_0)^2$	$(x-x_0) + (y-y_0)^2$	$\sigma - c$
1	24,3625	+1,2725	+3	1,6200	3,9453	-232
2	24,6358	+1,5458	+2	2,3901	3,9883	+198
3	25,0661	+1,9761	+0	3,9050	3,9747	+62
4	25,0822	+1,9922	0	3,9689	3,9689	+4
5	24,9431	+1,8531	-1	3,4336	3,9754	+69
6	24,0000	+0,9100	-3	0,8276	3,9665	-20
7	23,0900	0,0000	-4	0,0000	3,9697	+12
8	23,0000	-0,0900	-4	0,0082	3,9699	+14

 $R = 3,9685$

	y	$y-y_0$	Δy	$(y-y_0)^2$	σ
1	13,7293	-1,5247	-2	2,3253	140
2	14,0000	-1,2640	-2	1,5982	129
3	15,0000	-0,2640	0	0,0697	98
4	15,2640	0,0000	0	0,0000	90
5	16,0000	+0,7360	+1	0,5418	68
6	17,0355	+1,7715	+2	3,1389	27
7	17,2562	+1,9922	+2	3,9697	0
8	17,2547	+1,9904	+2	3,9617	358

1420

Approx. Center

x_0 23,0901
 x_{max} 25,0822
 R 1,9921
 y_{max} 17,2562
 y_0 15,2641

Center $\{x_0$ 23,0900
 $\{y_0$ 15,2640

13142 Morris Center

4

	x	$x - x_0$	Δx	$(x - x_0)^2$	$(x - x_0) + (y - y_0)$	$O - C$
1	24,3625	+1,2725	+3	1,6200	3,9453	-232
2	24,6358	+1,5458	+2	2,3901	3,9883	+198
3	25,0661	+1,9761	+0	3,9050	3,9747	+62
4	25,0822	+1,9922	0	3,9689	3,9689	+4
5	24,9931	+1,8531	-1	3,4336	3,9754	+69
6	24,0000	+0,9100	-3	0,8216	3,9665	-20
7	23,0900	0,0000	-4	0,0000	3,9697	+12
8	23,0000	-0,0900	-9	0,0082	3,9699	+14

$$K = 3,9685$$

	y	$y - y_0$	Δy	$(y - y_0)^2$	L
1	13,7273	-1,5247	-2	2,3253	190
2	17,0000	-1,2640	-2	1,5982	129
3	15,0000	-0,2640	0	0,0697	98
4	15,2640	0,0000	0	0,0000	90
5	16,0000	+0,7360	+1	0,5418	68
6	17,0355	+1,7715	+2	3,1389	27
7	17,2562	+1,9922	+2	3,9697	0
8	17,2599	+1,9904	+2	3,9617	358

1920

Approx. Center

x_0	23,0901
x_{max}	25,0822
R	1,9921
y_{max}	17,2562
y_0	15,2691

Center $\left\{ \begin{array}{l} x_0 \\ y_0 \end{array} \right. \begin{array}{l} 23,0900 \\ 15,2670 \end{array}$

13142

Star Measures

206

5

	d	r	d	r	d	r	d	r
1	19229		19906		19907		19198	
7.6	13660		15459		16232		12858	
11.4	6868		61		3031		5657	
	20		02		895		91	
	<u>7.5560</u>		<u>7.5558</u>		<u>11.3662</u>		<u>11.3664</u>	
2	20168		20160		20456		18119	
20.4	16171		14162		12228		16340	
21.8	6970		6865		3029		3839	
	62		52		54		26	
	<u>20.3996</u>		<u>20.4010</u>		<u>21.8226</u>		<u>21.8220</u>	
3	20216		20838		20606		20010	
32.7	12638		18402		17069		13526	
11.4	4039		0805		69		26	
	12		29		00		10	
	<u>32.7574</u>		<u>32.7568</u>		<u>11.3535</u>		<u>11.3516</u>	
4	15730				19878		18325	
34.2	17100		15250		10090		18122	
13.9	00		250		8286		1820	
			13608		82		22	
	<u>34.1630</u>		<u>34.1642</u>		<u>13.9795</u>		<u>13.9795</u>	

Moon Measures

1	19799		19072		20628		19832	
24.0	16171		12692		13230		17210	
13.7	72		9493		2023		1412	
20	806		72		36		42	
	<u>14.3630</u>		<u>24.3621</u>		<u>13.7409</u>		<u>13.7377</u>	
2	19167		18684					
24.6	12803		15022					
14	0102		3227					
	80		84					
	<u>24.6373</u>		<u>24.6343</u>					

13142

Star Measures

Err 6

5

	d	1	2	d	7	2	5
1	19229	19906	19907	19198			
7.6	1366067	15959	16232	12858			
11.4	6867	61	3031	5657			
	20	02	895	91			
	<u>7.5560</u>	<u>7.5558</u>	<u>11.3662</u>	<u>11.3664</u>			
2	20168	20160	20456	18119			
20.4	16171	19162	12228	16340			
41.8	6970	6865	3029	3839			
	62	52	59	26			
	<u>20.3996</u>	<u>20.9010</u>	<u>21.8226</u>	<u>21.8220</u>			
3	20216	20838	20606	20010			
32.7	12638	18902	17069	13526			
11.9	9039	0805	69	26			
	12	29	00	10			
	<u>32.7574</u>	<u>32.7568</u>	<u>11.3535</u>	<u>11.3516</u>			
4	15730		19878	18325			
39.6	19100	15250	10090	18122			
13.9	00	250	8286	1820			
		13608	82	22			
	<u>39.1680</u>	<u>39.1642</u>	<u>13.9795</u>	<u>13.9795</u>			

Moon Measures

1	19799	19072	20628	19832
24.5	16171	12692	13230	17210
13.7	72	9493	2025	1712
	806	72	36	92
	<u>14.3630</u>	<u>24.3621</u>	<u>13.7409</u>	<u>13.7377</u>
3	19167	18684		
29.6	12803	15022		
19	0104	3227		
	80	84		
	<u>24.6373</u>	<u>24.6343</u>		

13172		
3	15070	14571
25.1	14400	15226
15	1439899	1822

<u>250671</u>	<u>250651</u>
---------------	---------------

7	15067	14570
25.1	14242	1538988
15.1	3237	8788

+X

<u>250827</u>	<u>250818</u>
---------------	---------------

5	19317	19411
24.9	9881	1884237
16	71	32
	17	20
<u>24.9436</u>	<u>24.9426</u>	

6		15768	13960
24.0		15378	1427881
17.1		8079	284

*Very thin
Point*

<u>24.0389</u>	<u>24.0321</u>
----------------	----------------

7		19437	11652
23.1		1687274	14216
17.3		76	1013
+7		46	

Very thin plate

<u>17.2563</u>	<u>17.2561</u>
----------------	----------------

8		16797	12679
23.0		1407950	1522624
17.1		52	22

<u>17.2544</u>	<u>17.2545</u>
----------------	----------------

5th star	19941	14588	19540	19930
34.9	10858	1368183	13906	15538
24.6	60	85	08	38
	40		29	12
<u>34.9081</u>	<u>34.9095</u>	<u>29.5627</u>	<u>29.5611</u>	

$$\begin{array}{r}
 3192 \\
 3 \quad 15070 \quad 19571 \\
 25.1 \quad 14940 \quad 15226 \\
 15 \quad 1439899 \quad 1822 \\
 \hline
 250671 \quad 250651
 \end{array}$$

$$\begin{array}{r}
 9 \quad 12064 \quad 14570 \\
 25.1 \quad 1429237 \quad 1538988 \\
 15.1 \quad 3237 \quad 87 \\
 +X \\
 \hline
 250827 \quad 250818
 \end{array}$$

$$\begin{array}{r}
 5 \quad 19317 \quad 19911 \\
 29.9 \quad 9881 \quad 1884237 \\
 16 \quad 81 \quad 32 \\
 \quad 17 \quad 20 \\
 \hline
 29.9436 \quad 29.9426
 \end{array}$$

$$\begin{array}{r}
 6 \quad 15768 \quad 13960 \\
 29.0 \quad 1537874 \quad 172781 \\
 17.1 \quad 8074 \quad 284 \\
 \hline
 17.0389 \quad 17.0321
 \end{array}$$

$$\begin{array}{r}
 19439 \quad 11652 \\
 1687274 \quad 17216 \\
 76 \quad 1013 \\
 96 \\
 17.2563 \quad 17.2561
 \end{array}$$

$$\begin{array}{r}
 16299 \quad 12679 \\
 1909950 \quad 1522629 \\
 52 \quad 22 \\
 \hline
 17.2344 \quad 17.2343
 \end{array}$$

$$\begin{array}{r}
 \text{the Star} \\
 9.9 \quad 19991 \quad 18588 \quad 19590 \quad 19930 \\
 9.6 \quad 10858 \quad 1368143 \quad 13906 \quad 15538 \\
 \quad 60 \quad 85 \quad 08 \quad 38 \\
 \quad 40 \quad 29 \quad 22 \\
 \hline
 34.9081 \quad 34.9095 \quad 29.5627 \quad 29.5611
 \end{array}$$

Formation of Normals

1	- 193	- 294.5	+ 353.0
2	- 195	+ 307.0	- 250.0
3	- 0.51	+ 123.0	- 16.1
4	0.00	+ 0.0	8.0
5	+ 128	+ 137.0	+ 31.1
6	+ 161	- 18.2	- 35.4
7	0.00	0.0	+ 23.9
8	- 0.18	- 1.2	+ 27.8
	+ 2.89	+ 567.0	+ 455.8
	- 4.57	- 313.9	- 309.5
	- 1.68	+ 253.1	+ 176.3

	a	b	c	Cor o - c
	- 31	+ 17	+ 26	- 200
a	- 24	+ 37	+ 17	+ 193
	- 47	+ 3	- 4	+ 28
b	- 11	- 47	- 7	- 36
	- 44	- 8	- 12	+ 18
c	+ 40	- 22	- 1	- 56
	- 0	- 22	+ 18	+ 8
	+ 2	- 22	+ 20	+ 14

13192

Conditional Equations

7

0-C

1	+	1.27	-	1.52	=	-232	+	21	-	17	=	+4	-226
2	+	1.55	-	1.26	=	+198	+	26	-	14	=	+12	+176
3	+	1.98	-	0.26	=	+62	+	33	-	3	=	+30	+32
4	+	1.99		0.00	=	+4	+	33		0	=	+33	-29
5	+	1.83	+	0.74	=	+69	+	31	+	8	=	+39	+30
6	+	0.91	+	1.77	=	-20	+	15	+	10	=	+35	-55
7		0.00	+	1.99	=	+12		0	+	22	=	+22	-10
8	-	0.09	+	1.99	=	+14	-	2	+	22	=	+20	-6

$$+16.15 - 1.68 = +253.1 \quad +9.46 \quad +238$$

$$-1.68 + 15.60 = +146.3 \quad +3.45$$

$$+ [] - 0.17 = +26.4 \quad +0.95 \quad +0.28$$

$$+15.43 = +172.7 \quad b = +11.2$$

$$+16.15 = +253.1 + 18.8 = +271.9 \quad a = +16.8$$

$$+0.61$$

Avg 142

$$\frac{P}{n} = .11$$

$$\frac{\Sigma K}{n} = -11$$

$$-11 = -100$$

$$\Delta R = -1.2$$

$$\text{Corr } 6 = -0.5$$

$$\Delta R = -0.7$$

$$R = 1.99$$

$$-2Rc = +1.99$$

$$\Delta A = +0.56 \quad \Delta S = +0.3$$

$$\Delta a = +1.21 \quad \Delta x = +0.04$$

13192 Conditional Equations

7

0-C

1	+	1.27	-	1.52	=	-232	+	21	-	17	=	+9	-226
2	+	1.55	-	1.26	=	+198	+	26	-	19	=	+12	+176
3	+	1.98	-	0.26	=	+62	+	33	-	3	=	+30	+32
4	+	1.99	-	0.00	=	+9	+	33	-	0	=	+33	-29
5	+	1.85	+	0.79	=	+69	+	31	+	8	=	+39	+30
6	+	0.91	+	1.17	=	-20	+	10	+	20	=	+30	-55
7	-	0.00	+	1.99	=	+12	-	0	+	22	=	+22	-10
8	-	0.09	+	1.99	=	+17	-	2	+	22	=	+20	-6

$$+16.12 - 1.68 = +253.1 + 9.46 \quad +238$$

$$-1.68 + 15.60 = +19.63 + 3.43 = \underline{-326}$$

$$+6.1 - 0.17 = +26.9 + 0.95 = +0.28$$

$$+15.43 = +172.7 \quad b = +11.2$$

$$+16.12 = +253.1 + 18.8 = +271.9 \quad a = +16.8$$

$$+0.61$$

Arc 142

$$\frac{P}{\gamma} = -11^\circ$$

$$\frac{\Sigma v}{\gamma} = -11^\circ$$

$$\frac{-11}{+11} = -100^\circ$$

$$\Delta R = -1.2$$

$$\text{conc} = -0.5$$

$$\Delta R = -0.7$$

$$R = -1.99$$

$$-2Rc = +1.99$$

$$\Delta A = +0.56 \quad \Delta S = +0.3$$

$$\Delta a = +1.21 \quad \Delta x = +0.0 +$$

13172 Moon's Mean Position

8

$$\begin{aligned} x_0 & 23.0900'' \\ & + 8'' \\ & 23.0908'' \end{aligned}$$

$$\begin{aligned} y_0 & 15.2670'' \\ & + 6'' \\ & 15.2676'' \end{aligned}$$

From Plate Constants

$$x \quad 23.4195''$$

$$y \quad 15.2065''$$

$$z \quad +1.4195''$$

$$n \quad -2.7935''$$

$$\log z \quad 0.15213''$$

$$\log \tan \delta \quad 9.3973''$$

19.01

$$+ \log 998685''$$

$$z'' \quad 0.3043''$$

$$8.50727''$$

$$7.0539''$$

$$1.65809''$$

$$6.7650''$$

$$\alpha - A \quad +45.50''$$

$$n_1 \quad +0.0006''$$

$$n_0 \quad 2.7941''$$

$$A \quad 1 \quad 27 \quad 50.00''$$

$$\log h_0 \quad 0.44627''$$

$$q_0 \quad 1 \quad 28 \quad 35.50''$$

$$7.33115''$$

$$3.11509'' - 1303.4''$$

$$\text{Red} \quad +3.53''$$

$$\delta - D \quad -21 \quad 43.7''$$

$$q' \quad 1 \quad 28 \quad 39.03''$$

$$D \quad +17 \quad 23 \quad 30.0''$$

$$\delta_0 \quad 14 \quad 01 \quad 46.6''$$

$$\text{Red} \quad +19.6''$$

$$\delta' \quad 14 \quad 01 \quad 06.2''$$

13172 Micron's Mean Position

8

$$\begin{array}{r} x_0 \quad 23.0900 \\ \quad \quad + 8 \\ \hline 23.0908 \end{array}$$

$$\begin{array}{r} y_0 \quad 15.2670 \\ \quad \quad + 6 \\ \hline 15.2676 \end{array}$$

from Plate Constants

$$x \quad 23.7195$$

$$y \quad 15.2065$$

$$z \quad +1.4195$$

$$u \quad -2.7935$$

$$\log \xi \quad 0.15213$$

$$\log \lambda_{\text{and}} \quad 9.3973$$

$$\text{" } \log \eta \quad 9.98685$$

$$\xi \quad 0.3043$$

$$8.50727$$

$$7.0537$$

$$1.65809$$

$$6.7550$$

$$1-A \quad +95.50$$

$$h_1 \quad +0.0006$$

$$h_0 \quad 2.7941$$

$$A \quad 1 \quad 27 \quad 50.00$$

$$\log h_0 \quad 0.94627$$

$$f_0 \quad 1 \quad 28 \quad 35.50$$

$$7.33115$$

$$3.11509 - 1303.4$$

$$\text{Red} \quad +3.53$$

$$D \quad -21 \quad 93.7$$

$$f' \quad 1 \quad 28 \quad 39.03$$

$$D \quad +17 \quad 23 \quad 30.0$$

$$D_0 \quad 17 \quad 01 \quad 46.6$$

$$\text{Red} \quad +19.6$$

$$D' \quad 17 \quad 02 \quad 06.2$$

13142

Lunar Parallax

9

α'	1	28	39.03 ^v	Π	58	51.28 ^v
δ	23	10	51.85 ^v			
$\delta - \alpha'$	22	17	47.18 ^v		9.86913 ^v	
$\epsilon - \alpha'$	26		47.70 ^v		8.23348 ^v	
$\delta(\delta - \alpha')$	-12		43.23 ^v		9.75257 ^v	
$\delta - \alpha'$	14		04.47 ^v		0.01411 ^v	
					7.86926 ^v	

9.95727^v
 0.00000^v
 0.08263^v
 0.03990^v

$\delta - \alpha'$ - 25 26.46^v
 ϵ - 1 41.76^v

$\delta + 47$ 37 41.5^v

$\delta + 14$ 02 06.2^v

$\delta - \delta' + 33$ 35 35.3^v

9.82640^v
 8.23348^v
 9.74295^v
 0.13149^v
 7.93432^v

$\delta - \delta'$ + 29 33.2^v

$\delta + 14$ 31 39.4^v

α 1 26 57.27^v

Ephd + 14 31 37.6^v

Ephd 1 26 56.69^v

$\delta - \epsilon$ + 1.8^v

$\delta - \epsilon$ + 0.58^v

2nd Clrd Ref 0.0

Curv. - 0.01

Curv. + 0.5

$\alpha - 1$ 26 57.26

δ 14 31 39.9

$\delta - \epsilon$ + 0.57

$\delta - \epsilon$ + 2.3

13142

Lunar Parallax

9

$\delta' \quad 1 \quad 28 \quad 37.03''$
 $\delta \quad 23 \quad 10 \quad 51.85''$
 $\delta - \delta' \quad 17 \quad 47.18''$
 $= -39 \quad 26 \quad 47.70''$
 $\delta (1.41) \quad -12 \quad 43.23''$
 $\delta - \delta' \quad 14 \quad 04.47''$

$\Pi \quad 58 \quad 51.28''$
 $9.86913''$
 $7.23398''$
 $9.75259''$
 $0.01911''$
 $7.86926''$

$9.95727''$
 $0.00000''$
 $0.08263''$
 $0.03990''$

$\delta - \delta' \quad -25 \quad 26.46''$
 $= \quad -1 \quad 41.76''$

$\delta \quad +47 \quad 37 \quad 41.5''$
 $\delta \quad +19 \quad 02 \quad 06.2''$
 $\delta - \delta' \quad +33 \quad 35 \quad 35.3''$

$9.82640''$
 $8.23398''$
 $9.74295''$
 $0.13199''$
 $7.92432''$

$\delta - \delta' \quad +29 \quad 33.2''$

$\delta \quad +19 \quad 31 \quad 39.4'' \quad \alpha \quad 1 \quad 26 \quad 57.27''$

$\text{Ephed} \quad +19 \quad 31 \quad 37.6'' \quad \text{Ephed} \quad 1 \quad 26 \quad 56.69''$

$\delta - \delta' \quad +1.8'' \quad \delta - \delta' \quad +0.58''$

$2^{\text{nd}} \text{ Alt Ref} \quad 0 \quad 0$

$\text{Lunar} \quad -0.01''$

$\text{Lunar} \quad +0.5''$

$\alpha - 1 \quad 26 \quad 57.26''$

$\delta \quad 14 \quad 31 \quad 39.9''$

$\delta - \delta' \quad +0.57''$

$\delta - \delta' \quad +2.3''$

