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KG
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v.1013

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10737 r Star Measures. 215

1	d	r	d	r
1	20668	20368	19358	18850
13.9	11972	19068	14732	13752
7.31	78	62	32	58
14.6	62	68	28	878
	13.8688	13.8696	14.4901	14.4907
2	19939	19752	19725	20290
18.6	13730	15958	14610	15908
6.6	30	52	04	08
	35	58	12	90
	18.6206	18.6200	6.5112	6.5118
3	20032	19730	20076	19660
29.1	18850	10910	12358	17370
18.8	42	12	62	64
	32	30	70	68
	29.1186	29.1182	14.7714	14.7804
4	20276	20094	20102	20778
31.9	10532	19860	18058	12502
23.2	28	68	58	00
	80	98	26	72
	31.9742	31.9766	25.2051	25.2027

Moon Measures.

1		
31	18770	20070
20.3	15358	13478
13	54	70
	70	78
	20.3384	20.3398

2		
20.0	20568	19628
13.3	17698	12522
	76	26
	72	20
	13.2900	13.2902

Poor image

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1917 R

Star Measures

	d		d	
1	20668	20368	19358	18850
13.9	11972	19068	19732	13752
2.1	78	62	32	58
17.6	62	68	28	498
	13.8688	13.8696	19901	19907
2	19939	19752	19725	20290
15.6	13730	15958	19618	15708
6.6	30	52	09	08
	35	88	12	90
	18.6206	18.6200	6.5112	6.5118
3	20032	19730	20076	19660
29.1	13850	10910	12357	17370
17.8	92	12	62	67
	32	30	70	68
	29.1186	29.1182	19.7719	19.7807
7	20276	20097	20102	20778
31.9	10532	17860	18058	12502
23.2	28	68	58	00
	80	98	26	72
	31.9742	31.9766	25.2051	25.2027

Moon Measures.

12	18740	20070
20.3	13358	13978
13.1	59	70
	90	78
	20.3387	20.3398

2	20568	19628
20.0	17698	12522
13.3	76	26
	72	20
	13.2900	13.2902

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10737 x

Moon Measures

	d		d
3	19658	20590	
19.6	13910	16356	
14	08	48	
	52	90	
	19.5786	19.5762	
4	19700	19550	
19.5	14876	14368	
14.5	70	72	
	698	44	
	19.4826	19.4827	
5	18718	19527	
19.6	13422	19848	
13	26	02	
	28	24	
	19.5294	19.5290	

6	20152	19778
20.0	11282	18556
15.9	80	57
	58	20
	15.8876	15.8838
7	18862	20170
21.0	14782	19536
16.4	72	38
	70	78
	16.4388	16.4362
8	18868	19230
21.4	14122	13990
16.5	20	87
	78	37
	16.4752	16.4757

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10737 × Moon Measures.

	d		d	
3	19658		20590	
19.6	13710		16356	
19	08		78	
	52		90	
	19.5796		19.5762	

4	19700		19550	
19.5	19876		19368	
19.5	70		72	
	698		74	
	19.9326		19.4829	

5	18718		19527	
19.6	13722		19808	
15	26		02	
	28		24	
	19.5297		19.5290	

6			20152	19738
20.0			11282	18054
15.9			80	59
			58	20
			15.8876	15.8838

7			18852	20170
21.6			19482	19536
14.7			72	38
			70	78
			16.9388	16.9362

8			18888	19230
21.9			19122	19990
16.5			20	89
			78	34
			16.9752	16.9757

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10737 Venus Etc.

May 11'16

Eph. to Star	12	57		13	09		
" " Moon	13	02	38.9	13	02	39.1	
Clock fast		5	48.8				
M. Sid Time	12	56	50.2	θ − α = +2h 13m			
M. Long	4	44	31.05				
G. Sid T.	17	41	21.25				
Sid T. M. Noon	9	15	47.92				
Interval	17	25	36.33				
Reduction		2	21.81				
G. M. T.	14	23	14.52				

From Nautical Alm.			R. a.			Dec.
Moon	14h	10	43 12.36	+4	41	40.6
Motion in m			23.272			13.860
" 23.2420			49.03		−5	22.1
Tabular Place		10	43 56 39	+4	36	18.5

Moon's Age 9.3

Parallax	53	58.2
Semid.	15	16.6
R		9166
Dup		10.0
Par	53	−.8
R		9258
R		19845
a R		−976
(1+a) R		18899
R		35717

934 = 10.4+

a = −500.6
+27
−476.6

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1916phae.proj...

10737 James Etc.

May 11'16

Eqs. to Stars	12	5	7	13	09	"
" " Moon	13	02	38.9	13	02	39.1
Clocks fast		5	78.8			
M. Sid Time	12	56	50.2			
M. Long	9	44	31.05			
G. Sid T.	17	41	21 25			
Sid T. M. Moon	3	15	49.92			
Interval	19	25	36.33			
Reduction		2	21.81			
G. M. T.	19	23	14.52			

			R. a.		Dec.
Moon Mt. Hamilton Alm.					
Moon	19h	10	43 12.36	+9	41 40.6
Motion in 1m			23.292		13.860
" " 23.2920			49.03	-5	22.1
Nebular Plate	10	43	56 39	+9	36 18.5

Moon's Age

Parallax	53 58.2
Semid.	15 16.6
R	9166
Aug	10.0
	-.8
R	9258
R	19878
dR	-996
(1+a)R	18849
R²	357117

734 = 10.4

a = -500.6
+ 27
-476.6

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10737 Plate Center 8

	x	y	α			δ		
	13.8692	14.7907	10	38	17.3	+8	01	20.7
	18.6203	6.5115	10	40	49.8	2	55	48.9
	31.9755	25.2039	10	48	19.8	5	26	59.3
3)	64.4649	46.2058	30	126	81.9	11	82	128.6
	21.4883	15.4019	10	42	27.3	+8	8	2.9
	22	18			+13.9		+20	12.9
	+0.5117	+2.5981	10	42	432	+8	28	15.8
	31.5	46.6.5						
	15.9	1212.9	Center		A.	10	42	40.
					δ	+8	28	16.

x − x + 500x +1275y +.6x −11762

+2972 + 6935 = +9907 + 1897 = +11795 + 8 = +11762 0
+1612 + 9310 = 10922 + 830 = 52 + 11 = 63 +1
−7958 + 15988 = 8530 + 3213 = 43 + 19 = 62 0
21.3723 + 10.686 + 1860 + 13 21.7520

y − y +500y −123.9x −15y −7985

−520 + 7285 = +6725 − 1718 = +5007 − 22 = +7985 0
+4096 + 3256 = 7302 − 2307 = 4995 − 10 = 85 0
−3618 + 12602 = 8987 − 3962 = 5022 − 38 = 84 −1
18.8550 + 7292 − 2688 −22 14.5787

Table a = −.3 e = −2.0 a − e = +1.7 b + d = −3.5
Obs. = −500.6 = −7985 = −2.1 = −3.6

b − c −500.3 −796.5 −0.1

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10737 Slate Center 9

x	y					
13.4692	14.7907	10	38	17.3	+ 4 01	20.9
18.6203	6.5110	10	90	99.8	2 55	48.9
31.9775	25.2039	10	98	19.8	3 26	59.3
64.7649	46.2058	30	126	81.9	11	82 126.6
21.7883	15.7019	10	92	27.3	+ 7 8	2.9
22	18.			+15.9	+20	12.9
+0.5117	+2.5981	10	92	93.2	+7 28	15.8
31.3	166.5					
15.9	1212.9	Center	A	10	92	80.
			D	7	28	16.

x - 3 +500x +123.5y +.6x -1176.2

+2972 + 6935 = +9907 + 1897 = +11729 + 8 = +11762 0
+1612 + 7310 = 10922. + 830 : 52 + 11 = 63 +1
-7958 + 10988 = 8330 + 3213 : 93 + 19 = 62 0
21.3723 + 10.686 + 1860 +13 21.7520

y - 4 +500y -123.9x -1.5y -9985

-520 + 7295 = + 6725 - 1715 = +5007 - 22 = +9985 0
+9096 + 3256 = 7302 - 2307 : 9993 - 10 = 85 0
-3618 + 12602 : 8984 - 3962 : 5022 - 38 = 84 -1
18.358.20 + 7292 - 2648 -22 19.5987

Tables. a = -.3 e = -2.0 a - e = +1.7 b + d = -3.5
Obs. = -302.6 = -9985 = -2.1 = -3.6

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ξ	η	$\Delta\xi$	$-2.5^{-}\xi$	-1η	-7
-8.83	-3.96	-18	$+21$	$+3+3$	$+6$
$-3.5^{-}8$	-11.89	-18	$+9$	$-5^{-}+12$	$+7$
$+10.72$	$+7.55^{-}$	$+82$	-27	$+15^{-}-8$	$+7$

$M = -0.55^{-} + 2 \qquad +3 \qquad = -2 = -0.01$

$\Delta\eta$	$= 8\,14$	$+33$	-8
-8	$+18$	$= +6-2$	$=+4$
-88	$+89$	$= +5-1$	$=+4$
$+31$	-31	$= +0+3$	$=+3$

$M = -3.85^{-} + 14 \qquad -2$

$+10 \qquad +0.5$

$+8 \qquad +0.4$

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10737 Standard Coordinates

	Cape Nov 1862 - Mg 6.6	Cape Ng 1864 - Mg 6.6	Cape Ho 1880 - Mg 8.1
c	10 37 27.68	10 40 0.31	10 47 25.39
l	27.69	0.32	25.37
e	27.67	0.32	25.28
Mean	10 37 27.67	10 40 0.32	10 47 25.33
Prec	+79.61"	79.76"	+79.51"
α	10 38 17.28	10 40 79.78	10 48 18.84
Δ	10 42 20	10 42 20	10 42 20
α-A	-4 22.72	-1 50.22	+5 37.84
Sec(δ-A)	-2 62.70	-1 10.22	+3 34.81
log "	2.419746 n	2.042264 n	2.532480
" Cos δ	9.999893	9.999973	9.999803
" ξ₀	0.925639 n	0.574893 n	1.030007
ξ₀	-84262	-3 53 95	+107170
ξ'	-18	-18	+72
ξ	13 57 20	18 45 91	31 72 12
X	13 8692	18 6203	31 97 57
X-ξ	+29 72	+1671	-7458
c	+4 06 20.1	+3 0 50.7	+5 32 7.7
l	20.5	50.7	5.8
e	20.50	50.0	7.7
Mean	4 06 20.8	3 0 50.8	5 32 7.9
Prec	-5 0.0	-5 1.5	-5 5.6
δ	+4 01 20.8	+2 55 48.9	+5 26 59.3
D	4 28 16.0	4 28 16	4 28 16
δ-D	-26 55.6	-1 32 27.1	+0 58 43.3
tan(δ-D)	-16 15.6	-5 57 8.7	+3 5 23.6
log "	3.208333 n	3.774717 n	3.546991
η₀	0.539478 n	1.075532 n	0.878147
Log tan δ	8.84771	8.70922	8.99796
ξ'	185113	109779	20681
η'	7.75518	6.86055	8.09311
η₀	-34632	-11.89938	+75 53 33
η₁	+0 0056	+0.0004	+0.0124
η	17 54 24	+6 1069	25 55 65 7
Y	18 49 07	6 51 13	25 20 39
Y-η	52 6	+4	54 18

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10737 Standard Coordinates.

	Cape Nov 1962 - Mg 6.6	Cape Mg 1967 - Mg 6.6	Cape Nov 1980 - Mg 8.1
C	10 37 27.68	10 90 0.31	10 97 25.39
L	27.69	0.32	25.37
E	27.67	0.32	25.28
Mean	10 37 27.67	10 90 0.32	10 97 25.33
Prec	+99.61"	99.96"	+99.51"
α	10 38 17.28	10 90 99.78	10 98 17.89
A	10 92 90	10 92 90	10 92 90
α-A	-7 22.72	-1 50.22	+5 39.89
sin(α-A)	-262.70	-110.22"	+339.81"
log.	2.719916 n	2.042264 n	2.529780
" cos δ	9.999893	9.999993	9.999803
" ξ₀	0.925638 n	0.579893 n	1.030007
ξ₀	-84262	-3.5395	+10.7170
ξ₁	-18	-19	+72
ξ	13.5720	18.5591	32.7212
x	13.8692	18.6203	31.9755
x-ξ	+.2972	+.1672	-.7457
C	+9 06 20.1	+3 0 50.7	+5 32 7.7
L	20.5	50.7	5.7
E	20.50	50.0	9.7
Mean	9 06 20.9	3 0 50.9	5 32 9.9
Prec	-5 0.0"	-5 1.5"	-5 5.8"
δ	+9 01 20.9"	+2 55 48.9"	+5 26 59.3"
D	9 28 16.0	9 28 16	9 28 16
δ-D	-26 55.6"	-1 32 27.1"	+0 58 43.3"
tan(δ-D)	-16 15.6"	-55 48.9"	+3 5 23.6"
log.	3.205833 n	3.194917 n	3.536999
Ho	0.539488 n	1.075332 n	0.878814
Eyland's	5.89771	8.70992	8.97996
ξ"	185.13	1.0979	2.0601
ξ°	7.7518"	6.8605"	8.0931
Ho	-3.4632"	-11.8938"	+7.5533"
h.	+0.0056"	+0.0007"	+0.0129"
h	17.5824	+6.1069	25.5657
H	17.9907	6.5113	25.2039
H-H			

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10737 Moons Center

	x	x-x0	Δx	(x-x0)²	(x-x0)²+(y-y0)²	O-C
1	20.3391	-1.0269	-5	1.0555	3.5810	+93
2	20.0000	-1.3660	-4	1.8671	3.5548	-129
3	19.5754	-1.7906	-2	3.2070	3.5540	-177
4	-19.4825	-1.8835	0	3.5476	3.5476	-271
5	19.5292	-1.8368	+1	3.3735	3.5425	-292
6	20.0000	-1.3660	+4	1.8679	3.5468	-279
7	21.0000	-0.3660	+6	0.1335	3.5516	-201
8	21.3660	0.0000	+6	0.0000	3.5593	-127
					3.5717	

	y	y-y0	Δy	(y-y0)²		
1	13.0000	-1.5890	-2	2.5255	214	213
2	13.2901	-1.2989	-2	1.6877	226	
3	17.0000	+0.5890	-1	0.3470	232	
4	17.5890	0.0000	0	0.0000	270	
5	15.0000	+0.4110	+1	0.1690	283	
6	15.8857	+1.2967	+2	1.6819	317	
7	16.4345	+1.8455	+3	3.4181	349	
8	+16.4753	+1.8863	+3	3.5593	360	-146

x = 20 y = 13.2901
15.8857
29.1758
y0 17.5879
y max 16.4753
R 1.8877 1.8779
x min 19.4825
x0 21.3660

{y0 17.5890
{x0 21.3660

A = +3.1
B = +1.5

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10737 Moons Center.

	x	x-x0	Δx	(x-x0)²	(x-x0)²+(y-y0)²	v-c
1	20.3391	-0.9269	-5	1.0555	3.5810	+73
2	20.0000	-1.3660	-9	1.8671	3.5598	-129
3	19.5759	-1.7906	-2	3.2070	3.5590	-171
4	-19.9825	-1.8833	0	3.5476	3.5476	-291
5	19.5292	-1.8368	+1	3.3735	3.5425	-292
6	20.0000	-1.3660	+9	1.8679	3.5968	-279
7	21.0000	-0.3660	+6	0.1333	3.5516	-201
8	21.3660	0.0000	+6	0.0000	3.5593	-127
					3.5717	

	y	y-y0	Δy	(y-y0)²	
1	13.0000	-1.5890	-2	2.5255	219
2	13.2901	-1.2989	-2	1.6877	216
3	14.0000	-0.5890	-1	0.3470	232
4	14.5890	0.0000	0	0.0000	210
5	15.0000	+0.4110	+1	0.1690	243
6	15.8857	+1.2967	+2	1.6819	314
7	16.7375	+1.8983	+3	3.6181	399
8	+16.9753	+1.8863	+3	3.5593	360

x = 20 y = 13.2901
15.8857
29.1758
y0 14.5879
y max 16.9753
R 1.8877 1.4779
x min 19.9825
x0 21.3660

{ y0 14.5890
{ x0 21.3660

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Formation of Normals

1	+ 1.69	− 960	− 148.0
2	+ 1.78	+ 1770	+ 168.0
3	+ 1.06	+ 3160	+ 107.0
4	0.00	+ 4535	00
5	− 0.75	+ 5385	− 119.5
6	− 1.78	+ 3710	− 323.5
7	− 6.68	+ 745	− 371.5
8	0.00	00	− 234.0
	+ 8.78	+ 19005	+ 272.0
	− 3.21	− 960	− 1196.5
	+ 1.27	+ 18045	− 924.5

		a	b	c	new c	
		+ 26	− 10	−22	+74	+92
a	− 25	+ 34	− 8	−12	−73	
b	+ 6	+ 45	− 4	+ 3	+4	
c	− 38	+ 47	0	+ 9	−6	+b
		+ 46	+ 2	+10	−16	
		+ 34	+ 8	+ 4	+33	
		+ 9	+ 11	−18	−22	
		+ 0	+ 11	−27	+ 2	

.0859

+1.27 + 13.39 = + 1.29 Δ

+ [ ] + .11 = − 0.81 Δ

+13.28 = + 2.10 Δ

+15.05 = − 9.65 Δ − 0.20 Δ = − 9.85 Δ

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10737 Conditional Equations 7

								O-C
1	-1,03	-1,39	= +93	-130	+129	= -1		+92
2	-1,37	-1,30	= -129	-173	+105	= -68		-61
3	-1,79	-0,59	= -177	-226	+98	= -178		+1
4	-1,88	0,00	= -241	-238	0	= -238		-3
5	-1,88	+0,81	= -292	-233	-33	= -266		-26
6	-1,37	+1,30	= -249	-173	-105	= -278		+29
7	-0,37	+1,85	= -201	-47	-150	= -197		-4
8	0,00	+1,89	= -124	0	-153	= -153		+29

+153 - 94

Average = 31

15.05 + 1.27 = +1807.5 -9.65 Δ

+1.27 + 13.39 = -924.5 +1.97 Δ

+1 13 + .11 = +152.2

+ 0.16 Δ

13.28 = -1076.7 b = - 81.0

15.05 = 1804.5 + 103 = 1907.5 a = +126.7

- 0.65 Δ

Arc Measured 146°

$\frac{P}{n}$ = .13 $\frac{\Sigma v}{n}$ = +7.4

Σrr = 5 R 1.89

-2Rc = -1.89

$\frac{7.4}{.13}$ = 57 ΔR = +0.7

Corr = +0.5

ΔR = +0.2

Δb = - 0."30 Δd = - 0."1

Δa = + 1.s23 Δq = +0.s09

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10737 Conditional Equations 7

1	-1.03	-1.39	= +93	-130	+129	= -1	+97
2	-1.37	-1.30	= -129	-173	+105	= +28	-61
3	-1.79	-0.59	= -177	-226	+98	= -175	+1
4	-1.88	0.00	= -291	-238	0	= -235	-3
5	-1.87	+0.71	= -292	-233	-33	= -264	-26
6	-1.37	+1.30	= -299	-173	-165	= -275	+29
7	-0.37	+1.35	= -201	-47	-150	= -197	-9
8	0.00	+1.89	= -129	0	-153	= -153	+29
					+132	= -99	
							31

$-13.05 + 1.27 = +1809.0$

$+1.27 + 13.39 = -929.5$

$+1.\ 3 + .11 = +1352.2$

$13.28 = -1076.7 \qquad t = -81.0$

$12.03 = 1509.5 + 103 = 11607.5 \qquad a = +126.7$

Arc Measured 146°

$\frac{P}{h} = .13 \qquad \frac{\Sigma u}{h} = +7.9$

$\frac{7.9}{13} = 57 \qquad \Delta K = +07$

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10737 Moon's Mean position 8

α_0 21.3660
+ 63
21 37 23

γ_0 17.5890
− 70
17 33° 8 50

From Plate Constants.

α 21.7520

ζ −0.3780

γ 17.5787

η −3.7513

log ζ 9.738787 n
cos δ 9.998933
8.507270
1.232611. n

log sin δ 8.85536
ζ = 9.47775
7.05387
5.38745

η. 0

log η 0.537988
7.331135
2.206833 n − 1610.0

α − A − 17.08

A 10 42 40

α_0 10 42 22.92

δ − D −26 50.0

Red +2.39

α' 10 42 25.25

D + 4 28 16.0

δ_0 + 4 01 26.0

Red −13.9

δ' + 4 01 12.1

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10737 Mrs. Mean position 5

α 21.36 60 ~
+ 63 ~
21 37 23 ~

δ 19 38 90 ~
- 90 ~
19 38 00 ~

From plate constants.

x 21.7520 ~

y -0.5780 ~

log 9.73878 n
log 9.99893 ~
8.30727
1.23261.3 ~

x-A -17.08 ~

A 10 92 90 ~

T_0 10 92 22.72 ~

Red +2.34

T' 10 92 25.26

y 19.5787 ~

b -3.8513 ~

log tan 8.85536
z 9.4775 ~
7.05539
5.38875
n. 0

log b 0.58798 n
7.33115
2.20683.3 ~ -1610.0

δ-D -26 50.0 ~

D +19 28 16.0 ~

δ 19 01 26.0 ~

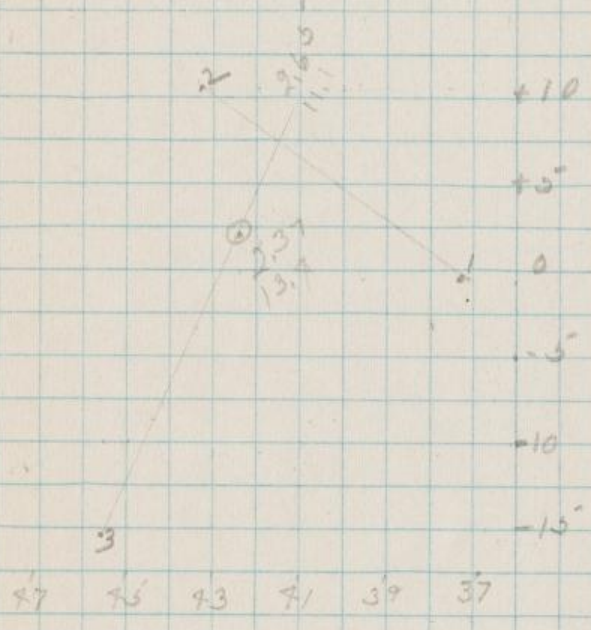
Red -13.9

δ' 19 01 12.1 ~

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10	37	11.09	-1	17	73.83	
		7.78			57.93	
		3.26			-15.50	
10	49	53.06	+10	58	72.00	
		50.63		59	23.67	
		2.43			-9.67	
10	45°	30.90	-15°	45°	33.06	
		28.73		45°	12.88	
		+2.17			-20.18	



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10737 Reduction to Apparent Place 9

	= 1	08.6			
H+k	25	08.6	= 17° 9,0	δ	+7 01.7
H	17	26.2			
α	10	42.4		log cosδ	9.9989
G	22	32.6		k	+0.7078
G+d	33	15.0		(k)	0.7067 n
	9	15.0	= 138° 45,0		

log cos(G+α)	9.8761 n		log sin δ	8.8757
g	1.1283		cos(H+α)	9.9802
sin "	9.8191		k	1.2971
Var δ	8.8475		Sin(H+α)	9.4696
	8.8239		Seed	0.0011
				8.8239

log g'	1.0044 n		log k'	0.1227
g	8.6178		k	9.5917

f	+1.9112
g	+0.0471
k	+0.3911
	+2.3494

g'	-10.10
k'	+1.326
α'	-50.90
	-13.864

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10737 Reduction to Apparent Place 9

		1	08.6		
H + α	23	08.6	= 17°	9.0	δ +7 01 9
H	19	26.2			
α	10	42.4			log cos δ 9.99892
Cα	22	32.6			α -0.7078
C+α	33	15.0			(α) 0.7067 n
	9	15.0	= 135°	45.0	

log cos(C+α) 9.8761 n
g 1.1283
Sum " 9.8191
Sum δ 8.8885
8.8239

log sin δ 8.8923
log (H+α) 9.9802
h 1.2971
Sum (H+α) 9.9696
Sec δ 0.0011
8.8239

log g' 1.0044 n
g 8.6178

log h' 0.1227
h 9.5917

f + 1.912
g + 0.091
h + 0.391
+ 2.394

g' - 10.10
h' + 1.326
α' - 5.090
- 13.867

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10737 Lunar Parallax 10

α'	10	42	25.26
δ	12	56	56.2
$\alpha - \alpha'$	+2	17	25.0
	33	36	15.0
$\frac{1}{2}(\alpha - \alpha')$		11	29.7
	33	25	45.3

	9.955727
	0.000000
	0.007846
	0.03573

γ 47 21 + 14.7

δ +9 01 12.1

$\gamma - \delta$ 43 20 02.3

	9.826790
	8.211677
	9.836478
	0.133388
	8.007923

$\delta - \delta'$ 35' 00.7

δ 9 36 12.8

Eph δ +9 36 18.5'

O-C - 5.7

Curv. Corr +0.4

2nd Order Ref 0.0

Irr Corr -0.1

δ = +9 36 12.7

O-C - 5.8

π 5'5' 58.2"

	9.869133
	8.201677
	9.774308
	0.001740
	7.825528

$\alpha - \alpha'$ 22 59.75'

~~2 8.0~~

1 31.96

α 10 43 57.26

Eph α 10 43 56.39'

O-C +0.83

-0.01

+0.07

α 10 43 57.26

+0.87

Pourtuage

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10737 Lunar Parallax 10

α' 10 42 23.26"
δ 12 56 50.2"
(0-α') +2 17 23.0"
33 36 13.0"
ƒ(1-ν) 11 29.7"
33 27 43.3"

7.995127
0.000000"
0078716"
0.035713"

δ 47 21 19.75"

δ +9 01 12.1"

δ-δ' 38 20 02.3"

7.826790
8.211677"
7.836478"
0.133388"
8.007933"

δ-δ' 35' 00.7"

δ 9 36 12.8"

Cyl δ 9 36 13.5"

0-C -37
Curv. Corr +04
2nd Order Corr 00

π 53' 38.2"

9.469913
8.211677"
9.179308"
0.001700"
7.852528"

59.75"
α-α' 22 2 50
1 31.96"

x 10 43 37.22"

Cyl x 10 43 36.39"

0-C +0.83"
-001

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10738 Star Measures.

Images almost double

	d	x	r	d	y	r
1	19840	20448		20320		20285
13.2	17538	12742		18574		12008
15.2	86	40		64		04
	32	42		18		84
	13.2296	13.22 99		15.1750		15.1722
2	20192			20240		19934
19.9	10582			18372		11780
7.3	84	9746		66		88
		x 9360		28		38
	17.9609	60		7.1869		7.1846
		17.9614				

3/
28.6
15.5

4	19362	20568		19958		19908
31.4	15730	19200		11580		17758
25.8	24	00		74		54
	62	68		48		10
	31.3635	31.3632		25.8372		25.8348

Moon

1	20184	19812		20371		10197
20.5	17714	12282		17648		12926
13.2	16	82		90		24
	80	16		82		88
	20.2468	20.2468		13.2730		13.2736
2/				20386		19162
20				17703		13880
13.4				00		76
				98		68
				13.9688		7680

Fairly good image

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10738 Star Measures. Images glimpses double

	d	x	d	y	z
1	19890	20498	20322		20285
13.2	17538	17992	18579		12008
15.2	96	90	69		09
	32	92	28		89
	13.2296	13.2299	15.1730		15.7722
2	20172		20290		19939
18.9	10582	98	18372		11780
7.3	89	9796	66		88
		x 9360	28		38
	17.9609	60	7.1869		7.1896
		17.9619			
3					
28.6					
15.5					
4	19362	20588	19958		19908
31.4	15730	19200	11580		17758
25.8	29	00	79		59
	62	68	48		10
	31.3635	31.3632	25.8372		25.8398

Moon

1	20189	19812	20371	10197
20.5	17719	12282	17698	12926
13.2	16	82	90	29
∞	80	16	82	88
	20.2468	20.2468	13.2730	13.2736
2			20386	19162
20			15703	13870
13.4			00	96
			92	68
			13.9688	9680

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10738 Moon Measures 12

	d	x	d	y
3	19640	20502		
19.6	13612	16540		
19	18	37		
	40	498		
	19.6025	19.6037		
4	19706	19837		
19.7	15721	18418		
19.7	13	22		
+K	08	37		
	19.3990	19.3986		
5	18776	19362		
19.7	10840	17292		
16	78	88		
	68	68		
	19.7916	19.7926		
6			19382	19926
20.0			16950	11790
16.2			52	80
			40	26
			16.2392	16.2359
7			20987	19508
21.0			13318	16672
16.			22	64
			84	20
			16.7167	16.7156
8			19798	18524
21.3			12090	15950
16.7			84	62
+4			02	28
			16.7417	16.7830

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10138 Moon Measures 12

	d	λ	d	γ
3	19690	20502		
19.6	13612	16590		
19	18	34		
	40	998		
	19.6025	19.6037		
4	19706	19939		
19.7	15721	13418		
19.7	13	22		
+λ	98	39		
	19.3990	19.3986		
5	18776	19368		
19.7	10840	17292		
16	98	88		
	68	68		
	19.7916	19.7926		
6			19392	19926
20.0			16950	11790
16.2			58	80
			90	26
			16.2392	16.2359
7			20988	19508
21.0			13318	16672
16.			22	69
			89	20
			16.7169	16.7156
8			19998	19528
21.3			12090	15950
16.7			89	62
+γ			02	28
			16.7919	16.7930

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10738 Times etc.

May 11'16

Eqp. two Stars	13	10		13	22	
" " Moon	13	16	23.8	13	16	23.6
Clock fast		5	48.8			
M. Sid Time	13	10	34.7	$\delta - \alpha = +2^h\ 26^m$		
M. Long	7	44	31.05			
G. Sid T.	17	55	05.75			
Sid T. M. Moon	3	15	47.92			
Interval	14	39	20.83			
Reduction		2	27.06			
G. M. T.	14	36	56.77			

From Naut. Alm. R. A. Dec.

Moon 14^h	10	43	12.36	+8 11	40.6
Motion in 1m			1.8947		13.864
" " 36.9462		1	10.00	- 8	32.2 or
Tabular Place	10	44	22.36	+7 33	08.7 8.3

Moon's age 9.8

Parallax	55	58.62
Semidiameter	15	16.8
R.		916.8
Aug		9.7
Dr (4)		-0.6
R		925.9
R		1.9888
aR		-946
(1+a)R		1.8902
R^2		3.5729

934 = 10.1

a = -500.4
+ 29
4764

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10738 Times Etc. 13

May 11'16

Eqp. to Stars	13	10		13	22	
" Moon	13	16	23.9"	13	16	23.6"
Clock fast		5"	18.8"			
M. Sid Time	13	10	39.1"	t-α = +2h 26m		
M. Long	4	44	31.05"			
G. Sid T.	17	55	05.75"			
Sid T. M. Moon	3	15	44.92"			
Interval	14	39	20.83"			
Reduction		2	24.06"			
G M.T.	14	36	56.77"			

From Naut. Alm.	R. A.		Dec.		
Moon 19h	10	43	12.36"	+9 41	40.6"
Motion in 1m			1.7417"		13.869
" " 36.9962		1	10.0"	- 8	32.2"
Tabular Place	10	44	22.36"	+9 33	08.4"

Moon's age 9.8

Parallax	55"	58.62"
Semidiameter	15"	16.8"
R.		916.8"
Aug		9.7"
Err (1)		-0.6
R		9259"
R		1.9878
ak		-996"
(1+a)R		1.8902"
R²		3.7 29

934 = 10.1

a = -320.9
+ 29
9164

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10738 Plate Constants. 17

x	13.2297	17.9611	31.3633
ξ	13.5720	18.4391	32.7212
x-ξ	-.3423	-.4980	-1.3579

y	15.1736	7.1857	25.8360
η	17.5927	6.1069	25.5657
y-η	+.6312	+1.0788	.2703

x-ξ +570x +161.5y +.7x -.4737

-.3423 + 661.5 = +.3192 + 15.80 = +.4732 + .5 = +.4737 0
-.4980 + 899.1 = .9001 + .730 = .4731 + .7 = .38 +1
-1.3579 + 1.5682 = .2103 + .2622 = .4725 + .12 = .370
21.2895 + 10.675 + 1.507 + .8 22.031 .8

y-η +500y -96.7x +3y -.12665

.6312 + .7587 = 1.3899 - .1279 = .1262 + .03 = +.12660 0
+1.0788 + .3593 = 1.4381 - .1737 = .1264 + .21 = .12665 0
+.2703 + .1298 = 1.5621 - .3024 = .1259 + .177 = .12667 -1
17.8532 + 7.825 - 2.059 + .85 14.1277
.074 .50

Tables a = -.6 e = -1.4 a-e = +.8 f+d = -.4
Obs. = -500.4 = -503.0 = +2.6 = -4.8

u-c -499.8 -501.6 -0.8

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10738 Plate Constants. 17

x	13.2297	17.9611	31.3633
ξ	13.5720	18.4591	32.7212
x-ξ	-.3423	-.4980	-1.3579

y	13.1736	7.1857	25.8360
η	19.2927	6.1069	25.3657
y-η	+.6312	+1.0788	.2703

x-ξ +.3422 +101.57 +.9x -.9737

-.3423 + .6613 = +.3194 + 1.380 = +.9732 + .5 = +.9737 0
-.4980 + .8981 = .1001 + .730 = .9731 + .7 = .38 +1
-1.3579 + 1.3682 = .2103 + .2622 = .9725 + .12 = .370
2.1.2890 +1.0697 + .1508 + .8 2.2.0313
8

y-η +.3204 -96.7x +.37 -.1266.5

.6312 + .7587 = 1.3899 - .1277 = 1.2620 + .45 = +1.2665 0
+1.0788 + .1573 = 1.2361 - .1737 = 1.2624 + .21 = 1.2665 0
+.2703 + 1.2918 = 1.5621 - .3029 = 1.2592 + .177 = 1.2669 -1
1.8530 +.7926 - .2059 + .95 1.4.1277
50

Tables a = -.6 e = -1.9 a-e = +.8 b+d = -.4
Obs. = -500.9 = -503.0 = +2.6 = -.9.8

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10738 Moore's Center 15

	x	x-x0	Δx	(x-x0)²	(x-x0)²+(y-y0)²	6-e
1	20,27468	-1,0722	-6	1,0879	3,5835	+106
2	20,00000	-1,2890	+5	1,6628	3,5805	+76
3	19,6031	-1,6859	-3	2,8433	3,5711	-18
4	19,39988	-1,8902	0	3,5725	3,5725	-4
5	19,79921	-1,4969	+4	2,2395	3,5553	-176
6	20,00000	-1,2890	+5	1,6602	3,5776	+47
7	21,00000	-0,2890	+7	0,0831	3,5546	-183
8	21,2890	0,00000	+7	0,0000	3,5698	-31

$R^2 = 3,5729$

	y	y-y0	Δy	(y-y0)²	∠	
1	13,27333	-1,5797	-2	2,4961	218	213
2	13,46884	-1,3846	-2	1,9177	223	
3	14,00000	-0,8530	-1	0,7278	243	
4	14,85530	0,00000	0	0,0000	270	
5	16,00000	+1,1470	+1	1,3155	307	
6	16,23705	+1,3842	+2	1,9174	317	
7	16,7160	+1,8630	+4	3,4715	351	
8	16,77422	+1,8892	+2	3,5698	360	146

$x = 20$ $y = 13,4687$

16,2375

29,7059

y_0 14,8530

y_{max} 16,7422

R 1,8892 18902

x_{min} 19,3988

x_0 21,2890

Center x_0 21,2890

y_0 14,8530

A +7.

B +63

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10738 Wyoming Center 15

	x	Δx	Δx²	(x-x₀)²	(y-y₀)²	0.C
1	20.2768	-10922	-6	1.0579	3.5835	+106
2	20.0000	-12870	-3	1.6628	3.5802	+76
3	19.6031	-16857	-3	2.8933	3.5711	-18
4	19.3988	-18902	0	3.5720	3.5723	-8
5	19.1921	-20969	+9	2.2395	3.5553	-176
6	20.0000	-12870	+3	1.6602	3.5776	+97
7	21.0000	-02870	+7	0.0831	3.5576	-183
x	21.2890	0.00000	+7	0.0000	3.5798	-31

R = 3.5729

	y	Δy	Δy²	(y-y₀)²	
1	13.2733	-15797	-2	2.4961	219
2	13.4689	-13846	-2	1.9177	223
3	17.0000	-08530	-1	0.7278	293
y	17.8530	0.00000	0	0.0000	290
5	16.0000	+11470	+1	1.3155	307
6	16.2375	+13845	+2	1.9177	317
7	16.7160	+18630	+4	3.4715	351
x	16.7722	+18892	+2	3.5698	360 196

x = 20 y = 13.4689

13.4689
17.8530
16.7722
1.8892 1770
17.3778
21.2890

(c) 21.2890
y 17.3778

A 19.
B 1.3.

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Formation of Normals.

1	+ 1.64	- 1100	- 1675
2	+ 1.78	- 980	- 1050
3	+ 1.84	+ 320	+ 153
4	00	+ 75	00
5	- 1.73	+ 2690	- 2025
6	- 1.78	- 605	+ 650
7	- 0.47	+ 530	- 3805
8	00	00	- 585
	+ 4.86	+ 3565	+ 803
	- 3.98	- 2685	- 8740
	+ 0.88	+ 880	- 7937

	a	b	c	neg b-c
	+ 12	- 5	- 8	+26 ✓
	+ 13	- 4	- 6	+8
a - 11	+ 18	- 3	0	-45
b + 3	+ 20	0	+5	+20
c - 15	+ 16	+ 3	+4	-97
	+ 13	+ 4	+ 2	+134
	+ 3	+ 6	- 6	-89
	+ 0	+ 6	- 9	+59 ✓

+ . 067

+0.88 +15.41 = +2.47 △

+ Σ 7 + 0.06 = - 0.60 △

+15.35 = +3.07 △

+13.15 = - 8.99 △ - .17 △

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10738 Conditional Equations 16

							b-c
1	-1.08	-1.58	= +.106	-10	+82	= +72	+34
2	-1.29	-1.38	= +76	-13	+72	= +62	+14
3	-1.69	-0.85	= -18	-17	+49	= +27	-85
4	-1.89	0.00	= -4	-19	0	= -19	+15
5	-1.50	+1.15	= -176	-15	-60	= -75	-101
6	-1.29	+1.38	= +47	-13	-72	= -85	+132
7	-0.29	+1.86	= -183	-3	-97	= -100	-83
8	0.00	+1.89	= -31	0	-99	= -99	+68

+263 -229

Average 61

+13.15 +0.88 = +88.0 - 8.99 Δ

+0.88 +14.91 = -793.7 + 2.47 Δ

+[ ] + .06 = + 5.9

+0.20 Δ

+15.35 = -799.6 b = -52.2

+13.15 = +46 +88.0 = +134 a = +10.2

-.70 Δ

Arc Measured 146°

$\frac{p}{n}$ .14 $\frac{\Sigma v}{n}$ = +4.2

Int R 1.89

-2RC = -0.76 $\frac{+4.2}{.14}$ = +30 ΔR = +0.4

corr +0.2

ΔR = +0.2

Δb = -0".15 Δδ = -0".1

Δa = +0ˢ.53 Δγ = +0°.02

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10738 Conditional Equations 16

								O-C
1	-1.09	-1.58	= +106	-10	+82	= +72	+34	
2	-1.29	-1.38	= +76	-13	+72	= +62	+14	
3	-1.69	+0.85	= -18	-17	+99	= +27	-45	
4	-1.89	0.00	= +4	-19	0	= -19	+13	
5	-1.10	+1.13	= -176	-13	-60	= -73	-101	
6	-1.29	+1.38	= +97	-13	-72	= -85	+132	
7	-0.29	+1.86	= -183	-3	-97	= -100	-83	
8	0.00	+1.89	= -31	0	-99	= -99	+68	

+268 -229

Average 61

+1.315 +0.88 = +88.0 - 8.99 Δ

+0.88 +13.91 = -793.7 + 2.97 Δ

+[illegible] +.06 = + 3.9

+0.20 Δ

+13.33 = -799.6 b = -52.2

+13.13 = +96 +88.0 = +134 a = +10.2

-.70 Δ

Arc Measured 196°

$\frac{p}{h}$ .14 $\frac{\Sigma v}{h}$ = +4.2

I 4 R 1.89

-2RC = -0.76 $\frac{+4.2}{.14}$ = +30.01 ΔR = +0.4

+0.4

ΔR = +0.2

Δb = -0.13 Δa = -0.1

Δq = +0.33 Δi = +0.02

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10738 Moon's Mean Position 17

x_0 21, 28 90 ⌐
+5 ⌐
21 28 95 ⌐

y_0 17, 85 30 ⌐
−26 ⌐
17, 85 04 ⌐

x 22, 03 18 ⌐

ξ +0, 03 18 ⌐

y 17, 12 50 ⌐

η −3, 87 50 ⌐

log ξ 8, 50 243
Cos δ 9, 99 896 ⌐
8, 50 139
9, 99 823 ⌐

log tan δ 8, 85 18
ξ^2 6, 99 11
7, 05 37
2, 89 63

$\alpha - A$ +0.99 ⌐

η. 0

A 10 42 40 ⌐

log η_0 0, 58 827 η ⌐
7, 33 115
3, 25 712 η −1807.7

α_0 10 42 40.99 ⌐

Red +2.34 ⌐

$\delta - D$ −30 7.7

α' 10 42 43.33 ⌐

D +4 28 16.0 ⌐

δ_0 +3 58 8.3 ⌐

Red −13.9 ⌐

δ' +3 57 54.4 ⌐

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10738 Thorns Mean Position 17

x_0 21.2890
+5
21.2895

y_0 17.85.30
-26
17.8504

x 22.0318

y 17.1250

ξ +0.0318

η -3.8750

log ξ 8.5024 7
Cos δ 9.9998 76
8.5072 24
9.9962 3

log Tan δ 8.85 18
ξ 6.9911
7.0537
2.8963

x-A +0.97

n. 0

A 10 12 40

y_0 10 12 40.97

log n_0 0.58827 n
7.3311.5
3.2598 12 n -1807.9

Red +2.37

δ-D -30 7.7

y' 10 12 43.33

D +7 28 16.0

$δ_0$ +3 58 8.3

Red -13.9

δ' +3 57 54.9

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10738 Reduction to Apparent Place

H+α	23	08.9	= 17°	13.5″	δ 3 5″ 8 9.6
H	17	26.2			
α	10	42.7			log sin δ 9.9989
G	22	32.6			n −0.7092
G+α	09	15.3	= 138	49.5′	n 0.7081 n

log cos (G+α) 9.8766 n
g 1.1283
sin (G+α) 9.8185
tan δ 8.8947
8.8239
8.1

log sin δ 8.8302
cos (H+α) 9.9801
h 1.2971
sin (H+α) 9.4715
sec δ 0.0011
8.8239

log g′ 8.0029 n
g 8.6120

log h′ 0.1074
h 9.5936

f +1.9112
g +0.0811
h +0.3932
+2.3745″

g′ −10.1115″
h′ +1.2800
d −5106
−13.9771″

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10738 Reduction To Apparent Place 15

1.

H + α 23 08.7 = 17° 13.5′ δ 3 38 9.6
H 17 26.2
α 10 42.7
G 22 32.6
G + α 09 15.3 - 138 14.5′

log cos δ 9.99779
α - 0.7092
α 07081 n

log cos (G + α) 9.7766 n
g 112.3
Sin (G + α) 9 31 45″
Tan δ 8 8 9 13
8.8239
4 1

log sin δ 8.8302 n
Cos (H + α) 9.7301
h 1.2971
Sin (H + α) 9.7715
Sin δ 0.0011
8.8239

log q' 1.0049 n
q 2.6120

log h' 0.1077
h 7 59 36

f + 1.712
q + 0.091
h + 0.392
+ 2.395″

q' - 10.115″
h' + 1.280
α - 3.106
- 13.971″

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10738 Lunar Parallax 19

λ'	10	42	43.33
$\odot$	13	10	34.7
$\odot - \lambda' + 2$	27	51.4	
$= 36$	57	51.0	
$\frac{1}{2}(\pi - \lambda')$	12	29.4	
36	45	21.6	

π	57 58.62
	9.869113
	8.211172
	9.779107
	0.001377
	7.861322

	9.957727		
	0.000000		
	0.096226		
	0.053953		
$\alpha - \lambda'$	24	58.83	
$=$	1	39.92	

α	48	31	19.2
γ	3	57	57.4
$\gamma - \delta$	44	33	21.8

	9.826740
	8.211172
	9.847610
	0.125740
	8.009262

$\delta - \delta'$		35	08.9
δ	44	33	03.3
Eph δ +	44	33	08.4
O-C			-5.1
Curv. corr			+0.4
2nd Order reg.			0.0
In Corr			-0.1
δ	+44	33	03.2
O-C			-5.2

α	10	44	23.25
Eph α	10	44	22.36
O-C			+0.89
			-0.01
			+0.02
α	10	44	23.27
			+0.91

fair plate

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10738. Lunar Parallax 19

λ'	10	12	13.33
$\leftarrow$	13.	10	37.7
$\leftarrow -\lambda' + 2$		27	51.7
$= \lambda$	36	37	51.0
$\frac{1}{2}(\lambda - \lambda')$		12	27.7
$\frac{1}{2}\lambda$	36	75	21.4

T. 55 58.62

	1.567113
$\times$	21172
	9.779105
	0.001317
	7.861322

	1.957727		
	0.000000		
	0.096226		
	0.053953		

$\lambda - \lambda'$ 27 38.43

$= 1$ 37.72

λ	78	31	19.2
$\times$	3	37	37.9
$\lambda - \lambda$	77	33	29.8

	1.826790		
	2.21172		
	1.987610		
	01.53720		
	8.009652		

$\beta - \beta'$ 35 08.7

β	7	33	03.3
Eph β	7	33	08.7
O-C			-5.4
Curv. corr			+0.4
2nd Order ref.			0.0

ζ	10	11	23.25
Eph ζ	10	11	22.36
O-C			+0.89
			-0.01

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Star Measures Star Images double 21

	x		d	
1	20318	19998	20560	18386
19.2	18272	12092	14908	13512
17.6	67	49	14	08
	10	92	58	84
	14.2048	14.2050	17.5198	17.5126
2	20386	19558	20336	19342
18.7	13968	16980	10752	18932
7.9	68	80	44	28
	82	54	30	42
	18.6916	18.6924	7.9582	7.9588
3	19816	20058	20790	19602
32.8	11992	17876	16996	12788
18.7	90	80	90	96
	16	52	90	06
	32.7825	32.7821	18.3197	18.3185

checked

Moon Measures.

1	19952	19992	18662	19052
21.5	17676	15280	16932	10792 96
13.1	76	82	36	860
	58	88	72	58
	21.5279	21.5291	13.1728	13.1739
2			18921	19304
21.0			12238	15950
13.7			84	78
			12	288
			13.6675	13.6656
3	20122	19210		
20.8	12062	17270		
14	68	62		
	20	04		
	20.8058	20.8058		

Poor plate

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Star Measures

	x		y		x		y
1	20318		19978		20360		18386
19.2	18272		12092		19908		13512
17.6	69		99		19		08
	10		92		58		89
	19.2098		19.2050		17.6198		17.6126
2	20386		19538		20336		14392
18.7	13988		16980		10752		18932
7.9	68		80		99		28
	82		59		30		92
	18.6916		18.6929		7.9582		7.9588
3	19816		20058		20190		19602
32.8	11972		17876		16996		12788
18.9	90		80		90		96
	16		52		90		06
	32.7825		32.7821		15.3197		18.3185

Moon Measures

1	19952	19992	18062	19054
4.8	18676	13289	16932	10792 96
13.1	76	82	36	800
.46	58	88	72	58
	21.5279	21.5291	13.1728	13.1738
2			18924	19308
21.0			12038	15950
13.1			98	78
			12	288
			23.6673	13.6656
3	20122	19210		
20.8	12062	17270		
19	68	82		
	20	09		
	20.8058	20.8058		

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(1)

	M			
142	29689	20018	20450	20130
17.6	15540	13128	18402	12166
	42	29	06	60
	80	00	48	18
	17.5191	17.5117	18.2076	18.7958

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10783 Moon Measures. 22

1	20178	19150		
20.7	13970	15362		
19.7	66	62		
-x	82	48		
	206212	20.6218		
5			20289	20050
20.0			10628	19658
15.9			30	50
			88	58
			15.9679	15.9603
6		20326	19928	20382
22.5		13702	13288	16967
16.7		02	68	69
		38	22	86
		16,6632	16.6657	16.8581
7			19926	19932
22.5			12502	16870
16.8			490	870
+4			22	30
			16.7427	16.7709
8			19900	19960
23			12556	16318
16.7			82	24
			397	67
			16.6857	16.6860

4th star.

30.8	20546	20082	15184	19099
~~15.4~~	12580	18086	14910	99
24.4	30	82	10	
	40	64		13847
	308012	30.8006	24.0278	24.0255

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10783 Moon Measures 22

1	20178		19150		
20.7	13970		12362		
17.7	66		62		
-1	82		48		
	206212		206219		
5			20289		20050
20.0			10628		19658
12.4			30		50
			88		58
			159699		159603
6	20326		17929		20382
22.0	13702		13[illegible]87		16969
16.7	02		8		69
	38		24		76
	16.6632		16.6537		16.6581
7			19926		19932
22.3			12502		16890
16.8			990		890
+1			22		30
			167927		167709
8			19900		19960
23			12506		16318
16.1			22		29
			394		67
			16.6354		16.6860
4th star					
30.8	20346		20082		15184
[illegible]	12580		17086		19410
21.4	30		82		10
	40		64		13847
	308012		300006		290279
					290255

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10743 Times etc. 5 23

May 12

Eph. to Stars	12	31		12	43	
" " Moon	12	37	11.1	12	37	11.7
Clock fast		5	49.4			
M. Sid Time	12	31	21.85	$\Phi - \chi = +1^h\ 03^m$		
M. Long	4	44	31.05			
G. Sid T.	17	15	52.90			
Sid T. M. Noon	3	19	41.48			
Interval	13	56	11.42			
Reduction		2	16.99			
G. M. T.	13	53	54.43			

From Naut. Alm.		R. A.		Dec.	
Moon 13h	11	27	11.10	- 0	44 37.4
Motion m			1.9381		- 14.45.0
" 53.9072		1	44.9.7	- 12	59.0
Tabular Place	11	28	55.07	- 0	57 36.4

937 11.0

Moon's age 1 day

Pallas	56	75.25
Semidi.	15	29.5
R		929.5
aug		10.9
R	5	-0.8
R		939.6
R		2.01471
dR		-961
(1+q)R		1.91809
R²		3.67847

$$a = -501.4$$
$$+ 24$$
$$-477.4$$

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10743 Sirius Etc. 5 23

May 12

Opp. to Sun	12	31		12	93	
" Moon	12	37	11.1"	12	37	11.7"
Clock fast		5	19.7"			
H. Sid Time	12	31	21.85"	$\Phi - \alpha = +1^h\ 03^m$		
H Long	4	49	31.05"			
G. Sid T.	17	15	52.90"			
Sid T Moon	3	19	41.98"			
Interval	13	56	11.92"			
Reduction		2	16.99"			
G M. T.	13	53	59.73"			

From Naut Alm			R. A.	Dec.	
Moon 13h	11	27	11.10"	- 0 99	37.7"
Motion in m			19.31"		+ 17.95 0"
" " 53.9072		1	49.97"	12	5 90"
Tabular Place	11	28	55.37"	- 0 57	36.7"

Moons age Ndays

Parallax	56	95.25"
Semid.	15"	29.5"
R		927.5"
Aug		10.9"
Nr		-0.8"
R		937.6"
R		2.0174
M		- 961"
(1+q) L		1.9180
R'		3.0787"

937 14.0

$$\begin{array}{r} a = -501.1 \\ +\ 24 \\ \hline -477.1 \end{array}$$

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10773 Plate center

x	y	α		δ		
14.2079	17.5137	11	23 36.2	−1	17	17.9
18.6920	7.9585	11	26 01.7	−2	32	23.7
32.7823	18.3191	11	33 43.2	−1	07	16.1
55.6792	43.8913		82 80.6	−4	53	57.7
21.8730	14.6304	11	27 46.7	−1	37	38.2
22	18	+	23.5	+	26	12.1
0.1070	+3.3696	11	27 50.0	−1	11	26.1
31	46.5					
30.8009	29.0265	Plate Center	A =	11	27 50	
			D =	−1	11	26

x−y	+50x	+9y	+1.4x	−115.23	
+3683	+ 7102	= +10785 + 718	= 11503 + 20	= 11523	0
+1826	+ 9376	= 11172 + 326	= 11498 + 26	= 11524	+1
−5665	+ 16391	= 10726 + 795	= 11877 + 96	= 11523	0
−4899	+ 15700	= 10806 + 985	= 11790 + 33	= 11524	+1
22.5394	+ 11270	+ 608	+ 32	22.5781	

a−b	+50y	−39.8x	+2.7y	−7005	
−1220	+ 8757	= +7537 − 565	= +6972 + 39	= +7011	+6
+3748	+ 3979	= 7727 − 788	= 6939 + 17	= 00	−5
− 885	+ 9160	= 8275 − 1305	= 6970 + 46	= 16	+5
−3890	+ 12013	= 8173 − 1226	= 6977 + 53	= 00	−5
17.8208	+ 7410	− 897	+ 33	14.7749	

Table a = +.7 e = −2 a−e = +2.7 b+d = −1.5
b = −501.9 = −502.2 = +0.8 = −1.2
0−e −502.1 −500.2 +0.3

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Capella 89 Mg 8.2
11 32 57.07

Rec 77.11
VM (HC) -.33
11 33 72.85
11 28 11.
+ 5 31.85
= 331.82
2.57091
1.77172
1.07807

+10.66 77
32
+32.67111
32.77823
+ 7 1 1 2

-102 57.5

M (vis) +1.9
Rec + 5 18.6
-1.08 172
-1 11 26
+ 3 118
+ 191.8
2.28285
9.64700

8.2978
2.0561
7.4073

10.1111
-0.0025
15.1 6
15.3111
- .843

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1073 Plate Center 29

	x	y	a		δ		
	14.2079	17.5137	11 23	36.2	-1	17	19.9
	18.6920	7.9585	11 26	01.9	-2	32	23.7
	32.7823	12.3171	11 23	43.2	-1	07	16.1
	45.6712	9.3613	82	80.6	-4	53	39.7
	21.8939	19.6307	11 27	10.7	-1	37	36.4
22		18	+	23.1	+	26	12.1
	+0.1070	+3.3676	11 27	50.0	-1	11	26.1
	31s	966.3					
	30.8009	29.0263					

Plate Center { A = 11 27 50
D = -1 11 26

x-y +sin x +91 y +1.91 -113

+2683 + 7162 = +10725 + 718 = 11503 + 20 = 11523
+1526 + 9791 = 11172 + 326 = 11498 + 26 = 11529
-3669 + 16391 = 10726 + 795 = 11977 + 96 = 11523
-4899 + 16706 = 10506 + 950 = 11990 + 33 = 11529 +
22.3399 + 11270 + 608 + 32 22.378

y-4 + sin y -398 +227 - 7005

-1220 + 737 = +2537 - 565 = +6972 + 39 = +7011 +6
+3795 + 3919 = 7127 - 789 = 6785 + 17 = 00 -3
- 885 + 7166 = 6281 - 1305 = 4976 + 90 = 16 +3
-3890 + 13013 = 9173 - 1226 = 4977 + 33 = 12 -3
19.4208 + 7910 - 891 + 33 19.7799

Jakka a = +.7 e = -2 a-e = +27 bod = -1.3
Ida = -621.7 = -502.2 = +0.8 = -1.2

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Cape No 15-89- Mag 8.2
11 32 57.07

Prec 49.11
P.M (α δ c) -.32
11 33 42.85
11 28 11.
+ 5 31.85
+ 331.82
2.52091
9.99992
1.02807

+10.6677
.38
+32.6711
32.7823
+ 1.112

-.102 57.5

Parallax +1.6
Prec + 5 18.6 X
-1 08 17.2
-1 11 .26 ✓
+ 3 11.8
+ 19.8 ✓
2.28285 ✓
9.61400 ✓

8.2978 4
2.0561
7.4073 4

+0.4111 ✓
-0.0025
18.4086
18.3191
- .895

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1916phae.proj.

10743 Standard Coordinates 25

Cape No 15357 - mg 6.3 Cape No 15369 - mg 5.1 PM Cape No 15389 - mg 8.2

C	11	22	47.09	11	25	12.30	11	32	57.07
L			47.11			12.35			
E			47.08			12.27			
Means	11	22	47.09	11	25	12.31	11	32	57.07
Prec			49.09			49.05			49.11
α	11	23	36.18	11	26	01.36	11	33	43.18
A	11	28	11.	11	28	11.	11	28	11
T-A		-4	34.82			-2 09.64		+5	32.18
Sin(T-A)			-279.80			-129.64			+332.15
Log Sin		2.443902n			2.112777n			2.521133	
Log b		9.999990			9.999958			9.999992	
log ρ0		0.946116n			0.619556n			1.028849	
ρ0		-8.8370			-4.1675			+10.6780	
ρ1		-17			-13			+32	
ρ		13.1643			17.8342			32.6812	
f		17.2079			18.6920			32.7823	
X-ξ		+1.0406			+8578			+1011	

C	-1	08	58.2	-2	27	06.3	-1	02	57.5
L			58.2			6.8			
C			58.4			6.4			
Mean	-1	08	58.3	-2	27	06.5	-1	02	57.5
Prec		-5	16.6		5	17.2		-3	15.6
δ	-1	19	17.9	-2	32	23.7	-1	08	16.1
D	-1	11	26.	-1	11	26.	-1	11	26.
δ-D	-	2	48.9	-1	20	57.7	+	03	09.9
Cos(δ-D)		+1	68.9		-78	58.5			+189.9
Log		2.227633n			3.686950n			2.278552	
H0		9.558788n			1.017653n			9.609677	
Standard		8.33743n			8.64769n			8.29880n	
ξ		1.89223			1.23991			2.09370	
η		7.28800n			6.93994n			7.40884	
H0		+0.3621			-10.4148			+0.9071	
ν		-0.0019			-0.0009			-0.0025	
η		17.6360			7.5873			18.4046	
η		17.6137			7.9585			18.3191	
η-η		+.0223			+.3742			-.8855	

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With new plate center on R.A.

Cape No 1537 Cape No 1565 Cape No 1589

Obs 1916 22 47.08 0 11 25" 12.31

	19.00	19.06	19.19
α	11 23 36.08"	11 26 01.37"	11 28 42.86"
A	11 27 50	11 27 50	11 27 50
α-A	- 9 13.92"	- 1 48.63"	+ 5" 52.86"
Sun 1-A	- 253.91"	- 108.63"	+ 352.90"
log.	2.409568	2.035947	2.547763
cos δ	9.999900	9.999958	9.999992
ξ₀	0.911625	0.592777	1.054987
ξ₀	- 8.167.2"	- 3.489.5"	+ 11.395.1"
η'	-71.0"	-11.0"	+39.7"
ξ	13.8866"	18.5099"	33.3988"
η	19.2049"	18.6920"	32.7823"
X-ξ	+ .3683"	+ 1826"	- .5665"

Obs. -1 08 58.5 Δ 2 27 06.8

Recomputed to find error

	1	- 2	27	06.5	1	02	51.5
δ :	- 5' 16.7		δ - 5' 17.2"			5' 17.0	
δ	- 1	14	18.2	- 2 32 29.7"	- 1	08	19.2
D	- 1	11	26	- 1 11 26	- 1	11	26
δ-D	-	2	49.2"	- 1 20 58.7"	+	03	11.8"
Tan "	-		169.2"	4 85 58.9"	+	191.8"	
log "	2.228.80			3.686588"	2.282837"		
"	9.539785"			1.817688"	9.617722		
log(ρ)	8.33495"			8.64770"	8.29978"		
·ξ"	1.8236"			1.0896"	2.1096"		
η	7.21135"			6.78117"	7.96087"		
η₀	- 0.3624"			- 10.9157"	+ 0.4105"		
η₁	- 0.0016			- 0.0006"	- 0.0027"		
η	17.6357			7.5889"	18.4076"		
η	17.6137			7.7585"	18.3191"		
η-η	+ .1220"			+ .3798"	- .0885"		

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1916phae.proj...

10773 Standard Coordinates 23

	Capella No 1337 - mg 6.3	Capella No 1363 - mg 5.1	Capella No 1389 - mg 8.2
C	11 22 37.09	11 25 12.30	11 32 37.07
L	37.11	12.35	
C	37.08	12.27	
Mean	11 22 37.01	11 25 12.31	11 32 37.07
Prec	39.09	49.05	39.11
L	11 23 36.18	11 26 50.36	11 32 39.18
+	11 25 11.	11 25 11.	11 25 11.
2-A	- 9 38.2	-2 09.9	+ 5 32.18
Sph. Ab	- 19.80	- 129.69	+ 332.15
Sph. Sum	2.739024	2.112779	2.532133
Log	7.999990	9.999158	7.999492
ξ_0	0.976164	0.619364	1.028819
η_0	- 8.8390	- 41693	+ 106780
ξ_1	-17	-13	+32
η_1	13.16743	17.83972	32.68122
Δ	17.20775	14.69220	32.78223
$\Delta - 3$	+1.07086	+ 85788	+ 10111

C	-1 08 38.2	-2 21 06.3	-1 02 37.5
L	38.2	6.8	
C	38.1	6.7	
Mean	-1 08 38.3	-2 27 06.3	-1 02 37.5
Prec	- 5 16.6	5 17.2	- 3 15.6
λ	-1 19 17.9	-2 32 23.7	-1 08 14.1
D	-1 11 26.	-1 11 26.	-1 11 26.
D	- 2 48.9	-1 20 57.7	+ 03 01.1
(1-D)	+ 1689	- 48583	+ 1899
ξ_2	2.227633	3.686501	2.278624
η_2	9.338778	.101763	9.609967
Stand	8.3372	2.6469	2.2980
ξ_2	1.8923	1.2391	2.0370
η_2	7.2800	6.9394	7.4289
η_0	+0.36211	-10.41978	+0.42711
η_1	- 0.00019	- 0.0009	- .0023
η_1	17.63600	7.58443	18.42826
η_2	17.63637	7.58534	18.31911
$\eta_1 - \eta_2$	+ .0223	+ .3792	- 2185

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With new plate centers on R.A.

	Cape No 1557	Cape No 1563-5.1	Cape No 1584
Obs	22 27.08	11 25 12.31	11 32 54.07

(19)

	49.00	49.06	4879
α	11 23 36.08	11 26 01.37	11 33 42.86
A	11 27 50	11 27 50	11 27 50
α-A	- 4 13.92	- 1 48.63	+ 5 52.86
Sin(α-A)	- 253.91	- 108.63	+ 352.90
Log	2.407688	2.035795	2.547655
Cosδ	9.999900	9.999958	9.999992
ξ₀	0.918182	0.542777	1.054781
ξ₀	- 8.1624	- 3.4895	+ 11.3451
ξ₁	- 10	- 11	+ 37
ξ	13.8366	18.5094	33.3788
η	14.2079	18.6920	32.7820
X·ξ	+ 3683	+ 1826	- 5665

Obs. -1 08 58.5 Bad 2 27 06.7 -1 02 57.5

Recomputed to find [illegible]

			1 02 57.5
(B =	- 5 16.7)	B - 5 17.7	5 17.0
δ	-1 14 15.2	-2 32 24.1	-1 08 19.5
D	-1 11 26	-1 11 26	-1 11 26
δ-D	- 249.2	-1 20 58.1	+ 03 11.5
Tan	- 169.2	4858.9	+ 191.5
Log	2.228840	3.686578	2.282147
Cosδ	9.539755	1.001769	9.613332
Log(ω)	8.33345	8.64770	8.29774
·ξ²	1.82336	1.08443	2.10946
η	7.21115	6.78447	7.46074
η₀	-0.3627	-1.04157	+0.47105
η₁	-0.00016	-0.00006	-0.00029
η	17.63557	7.58337	18.40776
η	17.51137	7.95185	18.31191
η-η	-1220	+ 3748	+ 885

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1916phae.proj...

Capa 15 79 B-30-8

Curve Corr.

Boss	11	31	49.72"							
C										
E										
Mean										
Rac B			49.15"							
x	11	32	38.87"							
A	11	27	50							
x-(A)	+	4	48.87"							
Sin"		+	288.85"							
Log Sin"	2.460067"									
" Cos δ	9.999999"									
" ξ0	0.96790"									
ξ0	+ 9.2875"									
ξ1	+ 28"									
ξ	31.2903"									
X	30.8009"									
X-ξ	- .4894"									
C Boss	-0	16	18.10"							
L										
E										
Mean										
Rac B			-5"	17.27"						
δ		-0	21	35.37"						
D		-1	11	26.						
δ-D		+	49	50.63"						
Sin(δ-D)				2990.8"						
Log			3.475778"							
η1			0.806994"							
Tang J			7.7980"							
η0²			.1938"							
η1			6.78724"							
η0		+	6.97111"							
η1		-	.00006"							
η			24.4105"							
ξ			29.0265"							
ξ-η			- 3840"							

	ξ	Δξ	-2.43	-	-.4η	- 6				
	-8.16	-10	+ 20	=	+10	+0	=	+10		
	-3.49	-11	+ 8	=	-3	+6	=	+3		
	+11.35"	+37	- 27	=	+10	-0	=	+10		
	+9.29	+28	- 22	=	+6	-9	=	+2		
	M+0.6	0	-1			+2		-X=	-0.02	

	η	Δη	-.3η			-.17		0		
	-0.36	-1	+ 1	=	0	+1	=	+1		
	-10.42	-32	+ 31	=	-1	+0	=	-1		
	+0.71	+ 2	- 1	=	+1	-1	=	0		
	+6.71	+20	- 19	=	+1	-1	=	0		
	-3.2	0	+1			0	=	00		

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Capa 15 78 15-30.8

Boss	11	31	99.72	
L				
C				
Mean				
Dec	D		99.15	
x	11	32.	38.87	
A	11	27	50	
x-A	+	9	48.87	
Seq.		+	2 88.85	
log Δ x A	2.96067			
log s	9.999999			
log ρ	0.96790			
ξ₀	+ 9.28735			
ξ₁	+	25.		
ξ'	31.29003			
x	30.80099			
λ-ℓ	- .49899			

Curve Corr.

ξ	Δξ	-2.97	-	-.44	- 6
+8.16	+10	+ 2	+10	+0	+10
-3.99	-11	+ 8	-3	+6	+3
111.35	+37	- 27	+10	-0	+10
+7.29	+28	- 24	+6	-9	+ 2
M 10.6	0	- 1	0	-7	- 5

η	Δη	-.31		-11	0	
-0.36	- 1	+ 1	-	0	+1	+1
-10.72	-32	+ 31	-	1	+0	-1
+0.91	+ 2	- 1		+1	-1	0
+6.71	+20	- 19		+1	-1	0
- 3.2	0	+ 1		0		00

C Boss	- 0	16	15.10
L			
C			
Mean			
Dec	D	- 5	17.27
d	- 0	21	35.37
D	- 1	11	26.
d-D	+	99	50.63
rem(+D)			2990.8
log	3.47578		
l_1	0.80679		

Lund	77980
ξ_0''	1.9358
η_1	6.78724
h_0	+6.91711
h_1	- .00006
h	29.9105
h	29.0265
h-h	- 3.884

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A = +4.6
B +2.3

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10743 Moon's center 27

	y	x - x0	Δx	(x-x0)²	(x-x0)²+(y-y0)²	O - C
1	21.52855	-1.01355	-3	1.02708	3.73773	
3	21.00000	-1.54220	-2	2.37884	3.71142	+355
5	20.80558	-1.73662	-1	3.01447	3.69007	+120
4	-20.62213	-1.92007	0	3.68891	3.68891	+114
5	21.00000	-1.54220	+2	2.37772	3.67889	+ 2
6	22.00000	-0.54220	+3	0.29355	3.67559	- 33
7	22.54220	0.00000	+3	0.00000	3.68556	+ 69
8	23.00000	+0.45780	+1	0.20999	3.68448	+ 61

$k^2 = 3.6787$

	y	y - y0	Δy	(y-y0)²	L	
1	13.17333	-1.64887	-4	2.71985	212 -	
2	13.66665	-1.15555	-3	1.33538	232	233
3	14.00000	-0.82220	-2	0.67600	245 -	
4	14.82220	0.00000	0	0.00000	270 -	
5	15.96226	+1.14006	+3	1.30017	308	306
6	16.66606	+1.83386	+4	3.36819	344 -	
7	+16.74118	+1.91198	+4	3.65556	360 -	
8	16.68557	+1.85637	+4	3.44749	19 -	162°

Approx. Center

x = 21 y = 13.66665

15.96226

2.96291

y0 14.81185

ymax 16.7418

1.9273 1.9180

xmin 20.6213

x0 22.54213

Center { x0 22.54220
y0 14.82220

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10773 Mycenis Center 27

	x	x-x0	Δx	(x-x0)²	(x-x0)²+(y-y0)²	O-C
1	21.52893	-1.01350	-3	1.02708	2.73773	
2	21.00000	-1.54220	-2	2.37788	3.71492	+3'3"
3	20.80538	-1.73662	-1	3.01747	3.69007	+120
4	-20.62613	-1.92607	0	3.68791	3.68791	+119
5	21.00000	-1.54220	+2	2.37722	3.67887	+12
6	22.00000	-0.54220	+3	0.29355	3.67859	-33
7	22.54220	0.00000	+3	0.00000	3.68356	+67
8	23.00000	+0.45780	+1	0.20997	3.68498	+61

R = 3.6787

	y	y-y0	Δy	(y-y0)²		
1	13.17321	-1.69587	-4	2.87895	212	
2	13.66665	-1.16243	-3	1.33358	232	
3	14.00000	-0.82920	-2	0.67760	275	
4	14.82920	0.00000	0	0.00000	270	
5	15.96626	+1.13706	+3	1.30117	308	
6	16.66606	+1.83686	+4	3.37819	348	
7	+16.79118	+1.96198	+4	3.85156	360	
8	16.68537	+1.85617	+4	3.44779	14	162°

Approx. Center

x = 21 y = 13.66665

15.96626

29.62991

y0 14.81495

ymax 16.11718

1.29723 1.11x0

ymin 20.62213

y0 22.29113

Center { x0 22.54220
y0 14.80220

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Formation of Normals.

1	+		
2	+ 0.89	− 273.0	− 2060
3	+ 1.93	− 290.0	− 984
4	0.0	− 219.0	0.0
5	− 1.76	− 3.1	+ 25
6	− 1.78	+ 99.5	− 605
7	− 0.0	− 0.0	− 1325
8	+ 0.85	+ 280	+ 1137
	+ 3.17	+ 127.5	+ 1159
	− 3.54	− 785.1	− 4974
	− .37	− 657.6	− 3815

	a	b	c	new c − c
a	− 23	+ 35	− 8	− 1 (−11) + 247 (+287)
b	+ 7	+ 40	− 6	−4 " + 8
c	− 38	+ 47	0	+ 6 " + 10 (+22)
		+ 35	+ 8	+ 5 " −48 "
		+ 12	+ 13	−13 " −29 "
		+ 0	+ 13	−25 " +90 "
		− 11	+ 13	−36 " +97 "

−.0.37 + 16.57 = + 3.13

+ [ ] − .01 = − 0.22

− 0° 57′

+16.56 = + 2.91 △

+12.99 = − 7.83 + .06 = − 7.77 △

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10749 Conditional Equations 28

						O-C
~~1~~	~~-1.01~~	~~-1.65~~	~~=~~	~~+52~~	~~+90 = +92~~	
2	-1.57	-1.16	= +350	1/4 wt. + 79	+ 28 = +107	+24.8
3	-1.79	-0.82	= +120	+ 88	+ 20 = +108	+ 1.2
4	-1.92	0.00	= +114	+ 98	0 = +98	+1.6
5	-1.57	+1.14	= + 2	+ 79	- 28 = +51	-4.9
6	-0.57	+1.84	= -33	+ 28	- 45 = -17	-1.6
7	-0.00	+1.92	= +69	+ 0	- 46 = -46	+11.5
8	+0.46	+1.86	= +61	- 24	- 45 = -69	+13.0
					+397	-6.5

12.99 - 0.37 = -657.6 - 7.83

-0.37 +16.57 = -381.5 + 3.13

(+287) +[ ] - .01 = - 18.7

+0.18Δ

(+22) +16.56 = -400.2 b = - 24.2

12.99 = -657.6 - 8.9 = -666.5 a = - 51.4

-.60Δ

Are Measured 142°

$\frac{\rho}{h}$ = .27 $\frac{\Sigma v}{h}$ = +47.4

In 5 R 1.92

-2RC = -1.92 $\frac{+47.4}{.27}$ = +176. ΔR = +2.2

Corr = +0.5

Δb = -0.35 Δδ = -0".2 ΔR = +1.7

Δa = +1.15 Δγ = +0.09

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10783 Reduction to Apparent Place

H 1 h 1 30.6 = 27 37.0 J −1 36.5″
4 19 22.5″
α 11 28 1
δ 22 33 0″
G+α 10 0 11 = 150° 16.5′

log cos δ 9.99998
a −.00003
(a) −.00002

log cos G+α 9.93887n
β 1 12 58″
Sin(G+α) 9.69857
tan J 8.76030n
5.72239

log sin J 8.76032n
Cos(H+α) 9.99883
h 1 27 16″
Sin(H+α) 9.68706
Cos δ 0.00002
8.82239

log g' 1.06735n
g 8.89963n

h' 9.69931n
h 9.78852

f +1.821″
β −0.042
h' +0.619
+2.523

J −11.682
h' −0.893
a −3.018
−15.593

37.64
37.07
+.257

+3 1 35 29.0
19 8.15
−1 35 8

11 28 39.93
32.06
+2.37

−21 23 39.29
37.10
− 23.17

11 32 41.98
38.87
+2.61

− 0 21 52.92
35.77
− 16.95″

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1077 Conditional Equations 25

				O-C
1	-1.01	-1.65	=	
2	-1.57	-1.16	= +33.3	
3	-1.79	-0.82	= +12.0	
4	-1.92	0.00	= +11.4	
5	-1.57	+1.14	= +.2	
6	-0.57	+1.84	= -33	
7	-0.00	+1.92	= +6.9	
8	+0.96	+1.86	= +6.1	

	+52	+90	+72	
1/4	+79	+28	+107	+27.8
	+88	+20	+108	+12
	+98	0	+98	+1.6
	+79	-28	+51	-7.9
	+28	-9.3	-17	-1.6
	+0	-7.6	-7.6	+11.5
	-29	-9.3	-6.9	+13.0
			+397	-6.2

12.99 - 0.37 = -657.6

-0.37 +16.57 = -3.81.0

+2] - .01 = - 15.7

+16.56 = -700.2 = - 29.2

1299 = -657.6 - 8.9 = -666.5 a = - 51.9

Arc Measures of 172

1/4 : 27 2/4 = +97.9

+974 = +136 Δ11 = +2.2

27

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10773 Reduction to Apparent Place

H+α	1	50.6 =	27	39.0 δ	−1 36.5″
#	19	22.5″			
α	11	28.1		log cos δ	9.99998
a	22	33.0″		μ	−0.7003″
G+α	10	01.1″ =	150°	16.5′	(μ) −0.7001

log cos G+α	9.99387	n	log sin δ	8.78828	n
g	1.1288″		cos (H+α)	99773	
Sin (G+α)	9.69553		h	1.2976″	
tan δ	8.78887	n	Sin (H+α)	9.66666	
	8.82339		Sec δ	0.00002	
				8.82339	

log g′	1.06755	n	h′	9.69931	n
g	8.09647	n	h	97883	

f	+1.921		g	−11.688	
g	−0.042		h′	−0.493	
h	+0.614		i	−5.013	
	+2.523			−17.194	

11	23	39.61		+3	18	52.90	
		37.07			19	8.78	
		+2.54				−15.58	
11	28	54.93		−21	23	39.27	
		52.06				37.10	
		+2.37				−25.19	
11	32	41.98		−0	21	52.82	
		38.87				35.77	
		+2.61				−16.95	

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10743 Moore Mean Position.

May 12 12h 3m

x_0	22,5420	y_0	14,8220
	−26		−12
	22,5394		14,8208

From Plate Constants

x	22.5781	y	14,7749
ξ	+0.5781	η	−3223.1
log ξ	9.761200	log tan δ	8.94787
cos δ	9.999983	ζ	7.0537
	8.507278	ζ	→ 9,3240
	12.5493		5.0258

$\gamma - A$ +17.99 η_0 0

A	11	27	50.00	log η_0	0.508549
					7.331 10
γ_0	11	28	07.99		3.177389 −1504.6
red			+2.52	$\delta - D$	−25 04.5
γ'	11	28	10.51	D	−1 11 26.0
				δ_0	−1 36 30.5
				red	−17.2
				δ'	−1 36 47.7

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10793 Moon's Mean Position. 29

X_0 22 59 20"
− 26"
22 59 34"

Y_0 19 8 20"
− 12"
19 8 08"

From Plate Constants

X 22.5781"
y +0.5781"

Σ 19 7 49"
η −32 23.1"

log y 9.76200"
cos δ 9.99983
8.07229
12 59 43"

log Tan δ 8.99887 n
2 − 1.05397
1 → 9.52490
5.02558

R-A +17.99"

h, 0

α A 11 27 50.00"
t_0 11 28 07.99"

log h_0 0.50859 n
7.33110
3.17739 n −1509.

Prec +2.53

δ −D −25 07.2"

t_1 11 28 10.51

D −1 11 26.0"

δ_0 −1 36 30.2

Prec −17.2

δ' −1 36 47.7

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10743 Lunar Parallax 30

α' 11 28 10.54 ✓ π 56 45.25 ✓
α 12 31 21.85 ✓
α-α' +1 3 11.31 ✓
= +15 47 50.10 ✓
½(α-α') 5 42.9 ✓
15 42 07.2 ✓

9.869913
8.21770 ✓
9.439993 ✓
0.000006
7.52183 ✓

9.995727
0.000000 -
0.016512 ✓
9.973378 ✓

δ-δ' 11 25.89
= 0 45.72 ✓

δ 43 16 16.8 ✓

δ -1 36 47.7 ✓

δ-δ 44 53 04.5

9.826790
8.21770 ✓
9.849861 ✓
0.16902 ✓
8.05673 ✓

δ-δ' 39 10.5 ✓

δ -0 57 37.2 α 11 28 56.23 ✓

Eph δ -0 57 36.7 ✓ Eph α 11 28 56.57 ✓

O-C -0.8 O-C +0.66 ✓
Diurn. Corr -0.0 -0.02
2nd Order Ref 0.0

Irr Corr -0.2 +0.04
δ = -0 57 37.7 α 11 28 56.27
O-C -1.0 +0.70

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10743 Lunar Parallax 30

α'	11	28	10.57
α	12	31	21.85
$\alpha - \alpha'$	+1	3	11.28
δ'	+15	47	50.10
δ (1914)		5	42.9
δ	15	42	07.2

π 56 40.25

9.96913
8.21770
9.93988
0.00006
7.52187

$\alpha - \alpha'$	11	25	49
	= 0	49.72	

9.995727
0.000000
0.001651
9.997378

α	43	16	16.8
δ	-1	36	47.7
$\alpha - \delta$	44	52	04.5

9.826790
8.21770
9.898861
0.16902
8.05673

$\delta - \delta'$ 39 10.5

δ -0 57 37.2

α 11 25 56.23

Eph. δ -0 57 26.7

Eph. α 11 28 53.37

O-C	-0.7	+0.66
Corr. Corr	-0.0	-0.02
2nd Order Ref	0.0	

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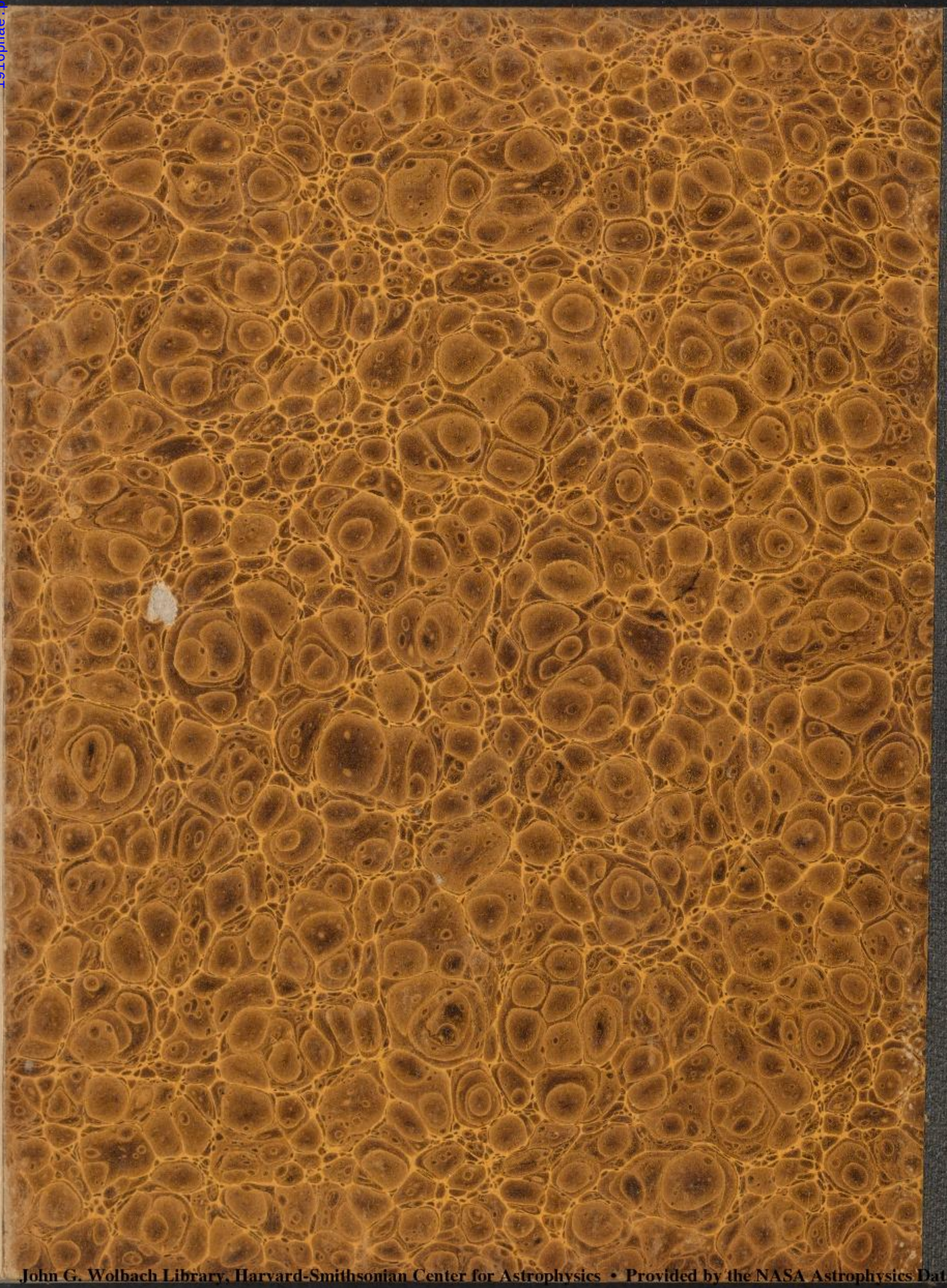
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