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Measures of The New Satellite
of Saturn and No. Polar Seg.

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10.40

Feb 5, 1904

Measures to determine position of Phoebe

(Continued fr B 19, p 114) E.F.L Obs. H.J.S. Rec.

D 10295 = a 2650

	x	y	a	B	C	D	a+c	B+D	c−a	B−D	x×60	y×60	c−a ×237	B−D ×238		
P.	9.4	22.6	6.9	8.4	5.8	4.1	12.7	12.5	−11	+4.3	540	1320	−2.6	+10.2	537.4	1330.2 ✓
12	1.3	33.6	8.4	9.8	4.0	2.7	12.4	12.5	−44	+7.1	60	1980	−10.4	+16.9	49.6	1996.9 ✓
13	1.4	5.5	8.5	6.6	4.4	5.8	12.9	12.4	−4.1	+0.8	60	300	−9.7	+1.9	50.3	301.9 ✓
14	16.2	24.8	10.4	6.5	2.5	2.0	12.5	12.5	−8.3	+8.5	960	1440	−19.7	+20.2	940.3	1460.2 ✓
15	17.6	36.5	5.1	6.9	7.6	5.7	12.7	12.6	+2.5	+1.2	1020	2160	+5.9	+2.9	1025.9	2162.9 ✓
16	22.9	8.5	1.5	6.5	11.1	6.5	12.6	13.0	+9.6	0.0	1320	480	+22.8	0.0	1342.8	480.0 ✓
~~37~~ 7.3	24.1	3.7	10.6	9.0	2.0	3.5	12.6	12.5	−8.6	+5.5	1440	180	−20.4	+13.1	1419.6	193.1 ✓
P.	9.4	22.6	6.9	8.5	5.7	4.1	12.6	12.6	−1.2	+4.4	540	1320	−2.8	+10.5	537.2	1330.5 ✓
J.	27.2	14.2	10.4	2.5	2.1	10.1	12.5	12.6	−8.3	−7.6	1620	840	−19.7	−18.1	1600.3	821.9 ✓
T.	31.0	14.7	12.5	9.0	12.7	4.0	25.2	13.0	+0.2	+5.0	1860	840	+5	+11.9	1830.5	851.9 ✓
18	33.6	37.4	4.5	4.9	8.0	7.7	12.5	12.6	+3.5	−2.8	1980	2220	+8.3	−6.7	1988.3	2213.3 ✓
S	33.5	14.1	Bn.	~~33.5~~	~~14.0~~						1980	840				
H.	36.7	14.8	4.0	9.7	9.0	2.9	13.0	12.8	+5.0	+7.0	2160	840	+11.8	+16.7	2171.8	856.7 ✓
19	37.4	38.4	7.9	5.5	4.8	7.2	12.7	12.7	−3.1	−1.7	2220	2280	−7.3	−4.0	2212.7	2276.0 ✓
20	39.5	32.1	6.1	1.1	6.6	11.3	12.7	12.4	+0.5	−10.2	2340	1920	+1.2	−24.3	2341.2	1895.7 ✓
21	45.9	34.2	2.0	2.6	10.7	10.0	12.7	12.6	+8.7	−7.4	2700	2040	+20.6	−17.6	2720.6	2022.4 ✓
P	9.4	22.6	6.9	8.4	5.8	4.1	12.7	12.5	−11	+4.3	540	1320	−2.6	+10.2	537.4	1330.2 ✓

$\frac{2156}{17} = 126.47$ $\frac{2018}{16} = 126.12$

D 10290 = a 6169

							a+c	B+D	c−a	B−D	x×60	y×60	x×238	x×238		
P	~~36.1~~	~~26.6~~	~~12.6~~	~~8.5~~	~~0.1~~	~~4.1~~	~~12.7~~	~~12.6~~	~~−12.5~~	~~+4.4~~	~~2160~~	~~1560~~	~~−29.8~~	~~+10.5~~	~~2130.2~~	~~1570.5~~
	~~23.2~~	~~21.9~~	~~10.5~~	~~11.5~~	~~2.0~~	~~1.1~~	~~12.5~~	~~12.6~~	~~−8.5~~	~~+10.4~~	~~1380~~	~~1260~~	~~−20.2~~	~~+24.8~~	~~1359.8~~	~~1284.8~~ ✓
28	3.0	11.9	12.5	11.4	12.6	13	25.1	12.7	+0.1	+10.1	180	660	+2	+24.0	150.2	684.0 ✓ ~~204.0~~

$\frac{376}{3}$ $\frac{253}{2}$

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Feb. 5, 1904.

Measures to determine position of Phoebe

*D 10290 Cont.

	x	y	a	b	c	d	a+c	b+d	c−a	b−d	x×60	y×60	x×238	y×238		
x Assumed to be 3.9	3.9										180				209.3	
49	4.4	36.6	0.1	7.5	12.4	5.0	125	125	+123	+25	240	2160	+29.3	+6.0	~~269.3~~	2166.0 ✓
50	5.4	28.4	8.0	4.9	~~4.6~~ 3.5	~~2.7~~ 2.8	126	126	−34	−28	300	1680	−8.1	−6.7	291.9	1673.3 ✓
46	8.8	21.0	2.6	12.5	10.0	0.1	126	126	+74	+124	480	1260	+17.6	+29.5	497.6	1289.5 ✓
9	8.8	23.6	2.1	7.5	~~12.5~~ 6.5	5.4	126	129	+84	+21	480	1380	+20.0	+5.0	500.0	1385.0 ✓
T	10.0	21.0	12.6	12.5	12.6	0.2	252	127	0.0	+123	600	1260	0.0	+29.3	570.0 ~~600.0~~	1289.3 ✓
P	36.0	26.6	12.4	8.4	0.2	4.1	126	125	−122	+43	2160	1560	−29.0	+10.2	2131.0	1570.2
	~~23.2~~	~~21.9~~	10.6	11.3	2.0	1.2	126	125	−86	+101	1380	1260	−20.5	+24.0	1359.5	1284.0 ✓
30	10.3	8.6	9.1	9.0	3.3	3.5	124	125	−58	+55	600	480	−13.8	+13.1	586.2	493.1 ✓
8	8'	11.0	22.0	Two Bright							660	1320				
31	13.3	20.9	9.6	12.0	3.0	0.4	126	124	−66	+116	780	1200	−15.7	+27.6	764.3	1227.6 ✓
60	29.5	33.3	6.1	2.8	6.5	10.0	126	128	+04	−72	1740	1980	+1.0	−17.1	1741.0	1962.9 ✓
62	39.6	32.1	4.5	0.3	8.1	12.2	126	125	+36	−119	2340	1920	+8.6	−28.3	2348.6	1891.7 ✓
64	42.8	29.3	2.3	2.9	10.1	9.5	124	124	+78	−66	2520	1740	+18.6	−15.7	2538.6	1724.3 ✓
36	45.1	1.6	12.0	8.0	0.6	4.8	126	128	−114	+32	2700	60	−27.1	+7.6	2672.9	67.6 ✓
P	36.1	26.6	12.4	8.5	0.1	4.1	125	126	−123	+44	2160	1560	−29.3	+10.5	2130.7	1570.5
	~~23.2~~	~~21.8~~	10.6	11.5	~~2.1~~	1.2	127	127	−85	+103	1380	1260	~~−20.2~~	+24.5	1359.8	1284.5 ✓

1760 / 5 = 125.65 ~~126.24~~ ; 1637 / 5 = 13 07 ~~126.13~~

*Wrong object marked for Phoebe on D 10290. Another object marked and measured on p. 47. Measures transferred in red ink.

*D 10293 = A 6170

							a+c	b+d	c−a	b−d	x×60	y×60	x×237	y×237		
P	36.3	28.2	9.6	1.8	3.2	11.0	128	~~128~~ 127	−64	−92	2160	1680	−15.2	−21.8	2144.8	1658.2
	~~23.4~~	~~23.6~~	4.6	7.0	4.8	5.6	124	126	−28	+14	1380	1380	−6.6	+3.3	~~1373.4~~	1383.3 ✓
28	3.1	13.5	11.0	5.7	1.6	7.0	126	127	−94	−13	180	780	−22.3	−3.1	157.7	776.9 ✓
49	4.2	38.2	10.5	2.0	2.1	10.5	126	125	−84	−85	240	2280	−19.9	−20.1	220.1	2259.9 ✓
50	5.5	29.9	6.0	11.9	6.5	0.7	125	126	+05	+112	300	1740	+1.2	+26.5	301.2	1766.5 ✓
46	8.3	22.8	9.9	10.5	2.9	2.3	128	128	−70	+82	480	1320	−16.6	+19.4	463.4	1339.4 ✓

633/5 ; ~~629/5~~ ; ~~632/5~~ ; 634/5

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Feb. 5, 1904

Measures to determine Position of Phoebe.

*D10293 Cent.

	x	y	A	B	C	D	a+c	B+D	c−a	B−D	x×60	y×60	c−a ×237	B−D ×237		
I	9.6	25.1	4.6	0.4	8.0	11.9	126	123	+34	−115	540	1500	+8.1	−27.3	548.1	1472.7
II	9.4	22.8	9.0	10.5	4.0	2.1	130	126	−50	+84	540	1320	−11.8	+19.9	528.2	1339.9
~~P.~~	~~23.4~~	~~23.5~~	~~7.6~~	~~6.9~~	~~5.0~~	~~5.6~~	~~128~~	~~125~~	~~−28~~	~~+13~~	~~1380~~	~~1380~~	~~−6.6~~	~~+3.1~~	~~1373.4~~	~~1383.1~~
	36.3	28.1	9.4	1.8	3.2	10.9	126	126	−62	−91	2160	1680	−14.7	−21.6	2145.3	1658.4
							1272	1263								
							16	16								
							67	73								
							126.73	126.33								
31	13.4	22.5	4.9	6.5	4.8	6.0	127	125	−31	+05	780	1320	−7.3	+1.2	772.7	1321.2
30	10.4	10.3	4.5	3.5	5.0	9.1	125	126	−25	−56	600	600	−5.9	−13.3	594.1	586.7
60	29.6	34.7	4.1	9.5	8.5	3.5	126	130	+44	+60	1740	2040	+10.4	+14.2	1750.4	2054.2
62	39.8	33.5	2.1	6.5	10.5	6.1	126	126	+84	+04	2340	1980	+19.9	10.9	2359.9	1980.9 ~~2040.9~~
64	42.9	30.8	0.1	9.6	12.3	2.9	124	125	+122	+67	2520	1800	+28.9	+15.9	2548.9	1815.9
12.0036	45.2	3.2	10.6	1.5	2.5	11.6	131	131	−81	−101	2700	180	−19.2	−23.9	2680.8	156.1

Wrong object-marked for Phoebe on D10293 Another object-marked and measured on p 46. Transfered measures in red ink

D10291 = a 6165

							a+c	B+D	c−a	B−D	x×60	y×60	x×237	x×237		
~~P.~~	~~21.7~~	~~23.1~~	~~2.8~~	~~4.0~~	~~9.9~~	~~8.5~~	~~127~~	~~125~~	~~+71~~	~~−45~~	~~1260~~	~~1380~~	~~+16.8~~	~~−10.7~~	~~1276.8~~	~~1369.3~~
	34.7	28.1	2.9	1.0	9.9	11.7	128	127	+70	−107	2040	1680	+16.4	−25.4	2056.6	1654.6
28	1.8	13.2	1.5	1.7	11.1	11.0	126	127	+96	−93	60	780	+22.8	−22.0	82.8	758.0
49	2.8	37.8	1.7	10.5	10.8	2.0	127	125	+89	+85	120	2220	+21.1	+20.1	141.1	2240.1
50	4.3	29.6	9.8	8.0	2.7	4.8	125	128	−71	+32	240	1740	−16.8	+7.6	223.2	1747.6
D	6.6	25.1	4.1	1.0	8.4	11.5	125	125	+43	−105	360	1500	+10.2	−24.9	370.2	1475.1
D	10.0	23.5	Too Bri								600	1380				
difficult to measure T	11.5	22.1	8.0	0.9	4.8	12.0	128	129	−32	−111	660	1320	−7.6	−26.3	652.4	1293.7
	34.7	28.1	2.8	0.9	9.9	11.9	127	128	+74	−110	2040	1680	+16.8	−26.1	2056.8	1653.9
~~P.~~	~~21.7~~	~~23.1~~	~~2.6~~	~~4.0~~	~~10.0~~	~~8.5~~	~~126~~	~~125~~	~~+74~~	~~−45~~	~~1260~~	~~1380~~	~~+17.5~~	~~−10.7~~	~~1277.5~~	~~1369.3~~
7.05; 30	9.1	9.9	10.9	12.0	1.9	0.6	128	126	−90	+114	540	540	−21.3	+27.0	518.7	567.0
							1012 4	1012 5								
							8	8								

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Feb. 5, 1904

1.05 Measures to determine Position of Phoebe

*D10291 Cont.

	x	y	A	B	C	D	a+c	B+D	c−a	B−D	x×60	y×60	x×237	x×237		
31	12.1	22.2	10.8	2.0	1.9	10.7	127	127	−89	−87	720	1320	−21.1	−20.6	698.9	1299.4	✓
60	28.4	~~24.4~~ 3	7.8	5.9	4.9	6.8	127	127	−29	−09	1680	~~1440~~ 20	−6.9	−2.1	1673.1	~~1437.9~~ 2037.9	✓
62	38.5	33.3	6.0	3.1	6.6	9.4	126	125	+06	−63	2280	1980	+1.4	−14.9	2281.4	1965.1	✓
64	41.6	30.5	4.1	6.4	8.5	6.2	126	126	+44	+02	2460	1800	+10.4	+5	2470.4	1805	✓
36	43.9	2.9	1.0	11.0	11.7	1.7	127	127	+107	+93	2580	120	+25.4	+22.0	2605.4	142.0	✓
1.15 Q	~~34.7~~	~~28.1~~	2.9	1.1	9.9	11.6	~~128~~	~~127~~	+70	−105	2040	1680	+16.6	−24.9	2056.6	1655.1	
	~~24.7~~	~~23.4~~	2.9	4.0	9.6	8.7	~~125~~ 126	~~127~~	+67	−47	1260	1380	+15.9	−11.1	1275.9	1368.9	✓
							~~758~~ 761	759								
							6	6								
							79	71								
							126.~~38~~ 48	126.~~46~~ 36								

*Wrong object - marked for Phoebe on D10291 - Another marked - and meas p.47 Trans. in red ink.

11.00 a 3794

D10297 = Feb. 8, 1904

	x	y	A	B	C	D	a+c	B+D	c−a	B−D	x×60	y×60	x×238	x×237		
P	22.5	24.6	6.2	7.9	6.3	4.7	125	126	+01	+32	1320	1440	+2	+7.6	1320.2	1447.6	✓
20	3.5	11.7	6.8	10.0	5.9	2.6	127	126	−09	+74	180	660	−2.1	+17.5	177.9	677.5	✓
24	9.2	35.2	10.9	2.1	1.9	10.5	128	126	−90	−84	540	2100	−21.4	−19.9	518.6	2080.1	✓
25	10.3	24.5	9.1	5.9	3.5	6.8	126	127	−56	−09	600	1440	−13.3	−2.1	586.7	1437.9	✓
26	11.4	1.0	8.9	12.5	3.8	12.7	127	127	252	−51	−02	660	60	−12.1	−5	647.9	~~569.5~~ 29.5	✓
28	21.2	2.8	10.0	10.6	2.6	2.0	126	126	−74	+86	1260	120	−17.6	+20.4	1242.4	140.4	✓
30	22.5	15.1	6.1	1.5	6.5	11.1	126	126	+04	−96	1320	900	+1.0	−22.8	1321.0	877.2	✓
Q	22.5	24.6	6.4	7.9	6.1	4.8	125	127	−03	+31	1320	1440	−7	+7.3	1319.3	1447.3	✓
32	24.3	36.9	9.0	12.1	3.6	0.4	126	125	−54	+117	1440	2160	−12.9	+27.7	1427.1	2187.7	✓
I.	24.9	21.1	1.1	1.0	11.5	11.6	126	126	+104	−106	1440	1260	+24.8	−25.1	1464.8	1234.9	✓
H	25.6	21.8	3.4	10.6	9.2	2.0	126	126	+58	+86	1500	1260	+13.8	+20.4	1513.8	1280.4	✓
F	28.1	21.0	12.0	12.6	0.5	12.7	125	253	−115	−01	1680	1260	−27.4	−2	1652.6	1229.8	✓
S.	29.0	22.1	Bright-								1740	1320					
11.15	34	30.9	20.5	1.6	6.1	11.0	6.6	126	127	+94	−05	1800	1200	+22.4	−1.2	1822.4	1198.8	✓
								1639	1893								
								13	15								

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Feb. 8, 1904

Measures to determine Position of Phoebe

11.15

D 10297 Cont.

	x	y	A.B.C.	D	a+c	B+D	c−a	B−D	x×60	y×60	x×238	x×237	1916.7	
35	32.4	26.4	7.0	3.8	5.6	9.0	126	128	−14	−52	1920	3600	−3.3	−12.3	1916.7	3347.7
37	39.7	35.6	3.1	7.5	9.6	5.1	127	126	+65	+24	2340	2100	+15.5	+5.7	2355.5	2105.7
P.	22.5	24.6	6.4	8.0	6.2	5.0	126	130	−02	+40	1320	1440	−5	+9.5	1319.5	1449.5
							379/3	384/3								
							126.12	126.50								

D 10 2 58/99 = A 4754

image fault	P.	9.4	22.4	7.6	5.2	5.0	7.3	126	125	−26	−21	540	1320	−6.2	−5.0	533.8	1315.0
00	00X	2.9	28.7	0.2	9.6	12.4	3.1	126	127	+122	+65	120	1680	+29.0	+15.4	149.0	1695.4
00a	00 2	2.9	25.2	1.0	1.9	11.5	10.8	125	127	+105	−89	120	1500	+25.0	−21.2	145.0	1478.9
10	10 1	15.4	22.5	8.5	6.9	4.1	5.8	126	127	−44	+11	900	1320	−10.5	+2.6	889.5	1322.6
10a	10 2	15.3	18.9	9.1	11.5	3.6	1.1	127	126	−55	+104	900	1080	−13.1	+24.6	886.9	1104.6
12	12 1	16.1	21.1	12.0	1.0	0.6	11.8	126	128	−114	−108	960	1260	−27.1	−25.6	932.9	1234.4
12a	12 2	16.0	17.4	12.7	5.2	12.6	7.3	253	125	−01	−21	960	1020	−2	−5.0	929.8	1015.0
13	13 1	17.1	30.4	11.7	4.8	0.9	8.0	126	128	−108	−32	1020	1800	−25.7	−7.6	994.3	1792.4
13a	13 2	17.0	26.7	12.1	9.5	0.5	3.2	126	127	−116	+63	1020	1560	−27.6	+14.9	992.4	1574.9
25	25 1	29.8	11.6	2.0	8.5	10.7	4.2	127	127	+87	+43	1740	660	+20.7	+10.2	1760.7	670.2
25a	25 2	29.7	8.1	3.0	0.4	9.6	12.2	126	126	+66	−118	1740	480	+15.7	−28.0	1755.7	452.0
29	29 1	32.6	35.9	4.7	10.9	8.0	1.9	127	128	+33	+90	1920	2100	+7.9	+21.3	1927.9	2121.3
29a	29 2	32.5	32.3	5.6	2.9	7.0	9.7	126	126	+14	−68	1920	1920	+3.3	−16.1	1923.3	1903.9
I	D 1	32.1	22.1	12.3	1.0	0.5	11.6	128	126	−118	−106	1920	1320	−28.1	−25.1	1891.9	1294.9
Ia	D 2	32.0	18.5	12.6	5.8	12.7	7.1	253	127	+01	−15	1920	1080	+2	−3.6	1890.2	1076.4
	P.	9.4	22.4	7.4	5.4	5.2	7.1	126	125	−22	−17	540	1320	−5.2	−4.0	534.8	1316.0
11.45	31 1	33.8	24.5	2.0	6.5	10.6	6.2	126	127	+86	+03	1980	1440	+20.5	+7	2000.5	1440.7
	11 1	15.6	37.5	4.5	5.8	8.3	6.9	128	127	+38	−11	900	2220	+9.0	−2.6	909.0	2217.4
	11 2	15.6	18.2/33.8	5.2	10.5	7.5	2.3	127	128	+23	+82	900	1980	+5.5	+19.4	905.5	1999.4
									2655/21	2407/19						

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11.45

Feb 8, 1904

Measures to determine Position of Phoebe

D10258 Cont.

	x	y	a.	B.	c.	D	a+c	B+D	c−a	B−D	x×60	y×60	(c−a)×238	(B−D)×237
31²	33.7	26.8	3.5	10.9	9.3	5.7	12.8	12.6	+5.8	+9.2	1980	1200	+13.8	+21.8	1993.8	1221.8 ✓
			Comp. of meas.													
31¹			For Bv.													
32¹	38.3	17.3	10.0	3.0	2.8	9.9	12.8	12.9	−7.2	−6.9	2280	1020	−17.1	−16.4	2262.9	1003.6 ✓
D²	37.9	15.7	0.9	10.0	11.8	3.0	12.7	13.0	+10.9	+7.0	2220	900	+25.9	+16.6	2245.9	916.6 ✓
t²	38.1	15.6	11.5	9.5	1.1	3.2	12.6	12.7	−10.4	+6.3	2280	900	−24.8	+14.9	2255.2	914.9 ✓
S²	38.5	16.0	5.0	12.5	7.5	12.7	12.5	25.2	+2.5	−0.2	2280	960	+6.0	−.5	2286.0	929.5 ✓
R.	39.1	15.4	12.0	5.9	0.8	6.7	12.8	12.6	−11.2	−0.8	2340	900	−26.7	−1.9	2313.3	898.1 ✓
44'	42.6	24.7	5.0	9.6	7.7	3.0	12.7	12.6	+2.7	+6.6	2520	1440	+6.4	+15.6	2526.4	1455.6 ✓
44²	42.5	21.2	6.5	2.0	6.1	10.7	12.6	12.7	−0.4	−8.7	2520	1260	−1.0	−20.6	2519.0	1239.4 ✓
45'	43.3	11.6	8.9	7.0	3.7	5.5	12.6	12.5	−5.2	+1.5	2580	660	−12.4	+3.6	2567.6	663.6 ✓
45²	43.2	7.9	10.2	12.0	2.3	0.6	12.5	12.6	−7.9	+11.4	2580	420	−18.8	+27.0	2561.2	447.0 ✓
12.05 P.	9.4	22.4	7.4	5.4	5.2	7.3	12.6	12.7	−2.2	−1.9	540	1320	−5.2	−4.5	5348	1315.5 ✓
							1392	1521								
							11	12								
							126.16	126.71								

12.45 D10296 = A2654

	x	y	a.	B.	c.	D	a+c	B+D	c−a	B−D	x×60	y×60	(c−a)×237	(B−D)×236		
P.	11.6	22.7	5.4	9.9	7.3	2.9	12.7	12.8	+1.9	+7.0	660	1320	+4.5	+16.5	664.5	1336.5 ✓
12	1.4	34.6	7.9	7.1	4.9	5.6	12.8	12.7	−3.0	+1.5	60	2040	−7.1	+3.5	52.9	2043.5 ✓
13	1.5	6.4	6.6	4.0	5.9	8.7	12.5	12.7	−0.7	−4.7	60	360	−1.7	−11.1	58.3	348.9 ✓
14	16.3	25.6	9.0	8.5	3.7	4.1	12.7	12.6	−5.3	+4.4	960	1500	−12.6	+10.4	947.4	1510.4 ✓
15	17.6	37.4	4.5	4.8	8.1	7.9	12.6	12.7	+3.6	−3.1	1020	2220	+8.5	−7.3	1028.5	2212.7 ✓
16	23.1	9.4	12.4	4.0	0.3	8.5	12.7	12.5	−12.1	−4.5	1380	540	−28.7	−10.6	1351.3	529.4 ✓
73	24.3	4.6	9.1	7.0	3.4	5.8	12.5	12.8	−5.7	+1.2	1440	240	−13.5	+2.8	1426.5	242.8 ✓
1.00 P.	11.6	22.7	5.3	9.6	7.3	3.0	12.6	12.6	+2.0	+6.6	660	1320	+4.7	+15.6	664.7	1335.6 ✓
							1011	1014								
							8	8								

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1,100

Feb. 8, 1904.

Measures to determine Position of Phoebe.

D 10296 Cont.

	x	y	A.	B.	C.	D.	a+c	B+D	c-a	B-D	x×60	y×60	×237	×236		
18	33.6	38.3	3.9	3.0	8.8	9.7	127	127	+49	-67	1980	2280	+11.6	-15.8	1991.6	2264.2 ✓
D.	28.8	14.6	1.9	7.0	10.9	5.8	128	128	+90	+12	1680	840	+21.3	+2.8	1691.3	842.8 ✓
T.	33.7	15.2	2.6	2.0	10.1	10.9	127	129	+75	-89	1980	900	+17.8	-21.0	1997.8	879.0 ✓
S.	35.8	14.5	Bright-								2100	840				
H.	39.2	14.6	10.9	7.0	1.8	5.7	127	127	-91	+13	2340	840	-21.6	+3.1	2318.4	843.1 ✓
20	39.6	33.0	5.0	12.7	7.8	12.8	128	255	+28	-01	2340	1980	+6.6	-2	2346.6	1979.8 ✓
Eclipse off	19	37.4	39.3	7.1	3.5	5.6	(9.3)	(127)	-15	-57	2220	2340	-36	-135	2216.4	2326.5 ✓
21	45.9	35.2	1.1	1.0	11.5	11.5	126	125	+104	-105	2700	2100	+24.6	-24.8	2724.6	2075.2 ✓
P.	11.6	22.8	5.5	9.5	7.2	3.1	127	126	+17	+64	660	1320	+4.0	+15.1	664.0	1335.1 ✓

1017 / 8 = 126.75 ; 1017 / 8 = 126.94

D 10392 = A 3824

							a+c	B+D	c-a	B-D	x×60	y×60	c-a ×236	B-D ×236		
wrong image marked.	P.	~~11.4~~	~~25.6~~	~~8.0~~	~~7.1~~	~~4.3~~	~~5.8~~	~~128~~	~~127~~	~~-32~~	~~+27~~	660	1500	-7.6	+6.4	652.4	1506.4 ✓
		4.8	24.7	2.1	9.0	10.4	3.6	125	126			360	1560	+4.0	-2.8	364.0	1557.2
20		2.9	13.3	1.0	3.0	11.8	9.8	128	128	+108	-68	120	780	+25.5	-16.0	145.5	764.0 ✓
D.		7.4	24.1	8.6	1.0	4.0	11.7	126	127	-46	-107	420	1440	-10.9	-25.3	409.1	1414.7 ✓
24		8.6	36.6	3.9	7.5	8.7	5.0	126	125	+48	+25	480	2160	+11.3	+5.9	491.3	2165.9 ✓
25		9.7	25.9	3.0	10.9	9.8	2.0	128	129	+68	+89	540	1500	+16.0	+20.9 (21.0)	556.0	1520.9 (1.0) ✓
26		10.6	2.4	4.0	5.0	8.8	7.8	128	128	+48	-28	600	120	+11.3	-6.6	611.3	113.4 ✓
S.		15.0	23.5	Bright-								900	1380				
H.		17.1	24.5	10.6	6.5	2.0	6.1	126	126	-86	+04	1020	1440	-20.3	+9	999.7	1440.9 ✓
T.		17.3	23.9	9.6	12.0	3.1	0.7	127	127	-65	+113	1020	1380	-15.3	+26.7	1004.7	1406.7 ✓
28		20.6	4.2	5.0	2.1	7.8	10.3	128	124	+28	-82	1200	240	+6.6	-19.4	1206.6	220.6 ✓
Wrong image marked. 1,138	P.	~~11.4~~	~~25.6~~	~~8.1~~	~~7.9~~	~~4.6~~	~~4.8~~	~~127~~	~~127~~	~~-35~~	~~+31~~	~~660~~	~~1500~~	~~-8.3~~	~~+7.3~~	~~651.7~~	~~1507.3~~ ✓
		11.8	24.6	2.5	8.8	10.1	3.9	126	127	+15	-11	360	1560	+3.5	-2.6	363.5	1554.6
		6.5	26.5	5.6	5.9	7.1	7.0	127	129								

1272 / 10 = 1268 / 10 ; 1271 / 10 ✓

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1,30

Feb. 8, 1904

Measures to determine Position of Phoebe.

*D10302

	x	y	a, B, C, D.	a+C	B+D	C-a	B-D	x×60	y×60	C-a ×236	B-D ×236		
30	21.9	16.5	0.5 6.0	12.0	6.8	125	128	+115	-08	1260	960	+27.1	-1.9	1287.1	958.1
	23/8	38.4	2.0 3.9	10.9	8.9	129	128					21.0	1.0		
W.S 32	~~24.5~~	~~37.9~~	~~6.1 11.0~~	~~6.4~~	~~1.7~~	125	127	+89	-50	1380	2280	+~~20.9~~	-11.8	1402	2268.2
34	30.4	21.8	8.0 10.0	4.6	2.5	126	125	-34	+75	1800	1260	-8.0	+17.7	1792.0	1277.7
35	31.8	7.6	1.9 7.7	10.9	5.1	128	128	+90	+26	1860	420	+21.2	+6.1	1881.2	426.1
37	39.3	36.8	9.0 10.9	3.6	1.9	126	128	-54	+90	2340	2160	-12.7	+21.2	2327.3	2181.2
wrong image marked	~~11.4~~	~~25.6~~	~~8.0 8.6~~	~~4.7~~	~~4.6~~	127	126								
P.	~~11.8~~	~~24.7~~	~~2.5 9.0~~	~~10.1~~	~~3.7~~	~~126~~	~~127~~	~~-33~~	~~+34~~	~~660~~	~~1500~~	~~-7.8~~	~~-8.0~~	~~652.2~~	~~1492.0~~
	6.5	26.4	5.5 5.9	7.2	6.9	~~127~~	~~127~~		+17 -10	360	1560	+4.0	-2.4	364.0	1557.6
						761	768								
						6	6								
						~~126.81~~	~~126.94~~								
						7.00	127.25								

10 1271 6 761 16)2032

10 1271 6 765 16)2036

*Three different objects marked on D10302 for Phoebe. For latest measures see p. 45. Trans. in red ink.

D10303 = a 3824

	x	y		
S	15.2	23.2	900	1380

D10298 = a 3794

	x	y		
S	28.9	22.3	1680	1320

D10300 = a 3821

S	16.7	21.8	960	1260

a 3821

Feb 9, 1904

*D10299a, B, b, D

								a+C	B+D	C-a	B-D	x×60	y×60	x×237	x×237		
wrong image marked.	~~10.6~~	~~23.6~~	5.1	~~8.9~~	7.7	3.9	128	128	+26	+50	780	1380	+6.2	+11.8	726.2	1391.8
P.	~~11.5~~	~~24.0~~	5.9	12.7	6.8	12.2	127	253	+126								
	7.7	25.1	2.4	0.9	10.2	11.9	126	128	+78	-110	420	1500	+18.4	-26.1	438.4	1473.9
20	3.3	11.7	10.0	9.1	2.6	3.6	126	127	-74	+55	180	660	-17.5	+13.0	162.5	673.0
24	8.9	35.1	0.2	7.0	12.4	11.7	126	127	+122	-107	480	2100	+28.9	-25.4	508.9	2074.6
								~~378~~									
								~~380~~									
								11									
								3									
								382									
								3									

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Feb. 9, 1904

*D 10299

	x	y	A	B	C	D	a+c	B+D	c-a	B-D	x×60	y×60	×237	×237		
25	10.1	24.4	12.0	4.4	0.6	8.2	126	126	-114	-38	600	1440	-27.0	-9.0	573.0	1431.0 ✓
I	9.1	22.4	12.1	5.1	0.6	7.5	127	126	-115	-24	540	1320	-27.3	-5.7	512.7	1314.3 ✓
26	11.0	0.9	0.1	11.4	12.5	1.4	126	128	+124	+100	660	0	+29.4	+23.7	689.4	23.7
S	17.0	22.0	Bright-								1020	1320 ~~1020~~				
Offset H	17.6	23.4	Cannot meas.								1020	1380 ~~1020~~				
T			Cannot meas.													
28	2.9	2.6	1.5	8.5	11.1	4.2	126	127	+96	+43	1200	120	+22.8	+10.4 (2)	1222.8	130.4 (2) ✓
30	22.3	14.9	9.6	12.0	3.0	0.5	126	125	-66	+115	1320	840	+15.6	+27.8	1335.6	867.3 ✓
Wrong star marked P	~~12.5~~	~~23.6~~	~~5.1~~	~~8.8~~	~~7.8~~	~~4.0~~	~~129~~	~~128~~								
	~~11.5~~	~~24.0~~	~~5.9~~	~~12.8~~	~~6.9~~	~~12.6~~	~~128~~	~~254~~	~~+127~~	~~+48~~	~~720~~	~~1380~~	~~+6.4~~	~~+11.4~~	~~726.4~~	~~1391.4~~
	7.7	25.1	2.3	0.8	10.3	12.0	126	128	+80	-112	420	1500	+19.0	-26.5	439.6	1473.5
32	24.1	36.8	10.9	10.0	1.9	2.6	128	126	-90	+74	1440	2160	-21.3	+17.5	1418.7	2177.5 ✓
34	30.6	20.4	4.1	~~4.9~~ 3.6	8.4	~~9.0~~ 8.9	125	126	+43	-54	1800	1200	+10.2	-12.8	1810.2	1187.2 ✓
35	32.2	6.1	10.7	0.9	2.0	11.8	127	127	-87	-109	1920	360	-20.6	-25.8	1899.4	334.2 ✓
37	39.6	35.4	5.3	4.4	7.3	8.2	126	126	+20	-38	2340	2100	+4.7	-9.0	2344.7	2091.6 ✓
Wrong star marked P	~~12.6~~	~~23.6~~	~~5.2~~	~~8.7~~	~~7.6~~	~~4.1~~	~~128~~	~~128~~					~~5.7~~		~~5.7~~	
	~~11.5~~	~~24.0~~	~~5.9~~	~~12.8~~	~~6.8~~	~~12.7~~	~~127~~	~~252~~	~~+114~~	~~+46~~	~~720~~	~~1380~~	~~+2.2~~	~~+10.9~~	~~728.2~~	~~1390.9~~ ✓
	7.7	25.1	2.5	0.8	10.2	12.0	~~0.1~~	~~13.3~~	+77	-112	420	1500	+18.2	-26.5	438.2	1473.5

~~1394~~ ~~1646~~

~~126.79~~ 11 ~~×311~~ 79

~~126.50~~ ~~126.60~~

*Wrong object - marked for 11 Phoebe 79 on D 10299 Another object - marked and measured on p. 45. Transferred measures in red ink.

D 10269 = A 4380

							A+C	B+D	C-A	B-D	x×60	y×60	×237	×237		
P1	12.6	19.5	5.5	6.0	7.0	6.5	125	125	+15	-05	720	1140	+3.6	-1.2	723.6	1138.8
	~~16.4~~	~~21.3~~	~~7.5~~	~~2.9~~	~~5.1~~	~~9.8~~	126	127	-24	-69	960	1260	~~-5.7~~	~~-16.4~~	~~954.3~~	~~1243.6~~
84'	1.2	22.1	10.9	0.8	1.9	11.8	128	126	-90	-110	60	1320	-21.3	~~-28.0~~ -26.1	38.7	1293.9 ✓
84''	1.1	15.2	12.0	2.0	0.6	10.5	126	125	-114	-85	60	900	-27.0	-20.1	33.0	879.9 ✓
85'	1.3	36.4	9.1	4.1	3.5	8.4	126	125	-56	-43	60	2160	-13.3	-10.4 (2)	46.7	2149.6 ✓
85''	1.2	29.4	10.1	5.9	2.4	6.8	125	127	-77	-09	60	1740	-18.2	-2.1	41.8	1737.9 ✓
9	16.6	39.4	4.1	3.8	~~8.4~~ 5.6	~~6.9~~ 6.7	125	126	+43	-50	960	2340	+10.2	-11.8	970.2	2328.2 ✓
9	16.5	32.4	5.5	4.9	7.2	7.8	127	127	+17	-29	960	1920	+4.0	-6.9	964.0	1913.1 ✓

~~883~~ ~~883~~

~~882~~ 7 7 ~~881~~

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10.45

Feb. 10, 1904

Measures to determine the Position of Phoebe

*D 10269 Cont.

	x	y	A	B	C	D	a+c	B+D	c−a	B−D	x×60	y×60	C−a ×237	B−D ×237		
94'	19.3	8.0	9.7	12.7	3.0	12.6	127	253	−67	+01	1140	480	−15.9	+2	1124.1	450.2
94'2	19.2	1.1	11.0	1.6	1.9	11.1	129	127	−91	−95	1140	60	−21.6	−22.5	1118.4	37.5
82	24.2	13.9	10.0	12.0	2.7	0.8	127	128	−73	+112	1440	780	−17.3	+26.5	1422.7	806.5
82	24.5	14.4	6.0	5.0	6.7	7.5	127	125	107	−25	1440	840	+1.7	−5.9	1441.7	834.1
97'	25.4	38.3	9.0	2.5	3.8	10.1	128	126	−52	−76	1500	2280	−12.3	−18.0	1487.7	2262.0
97'2	25.2	31.3	10.0	3.7	2.6	9.6	126	128	−74	−54	1500	1860	−17.5	−12.8	1482.5	1847.2
98'	16.4	21.3	4.5	2.9	5.8	9.8	127	127	+43	−89	960	1260	+3.1	−1.4	953.6	1243.6
98'2	26.6	33.3	4.1	2.9	8.5	9.9	126	128	+44	−76	1560	1980	+10.4	−16.6	1570.4	1963.4
92	25.7	21.9	2.6	11.0	9.0	1.8	126	128	+54	+92	1500	1260	+12.8	+21.8	1512.8	1281.8
92	25.6	14.9	5.0	12.0	7.6	0.5	126	125	+26	+115	1500	840	+6.2	+27.3	1506.2	867.3
d	26.6	22.3	4.1	3.0	8.7	9.5	128	125	+46	−65	1560	1320	+10.9	−15.4	1570.9	1304.6
00	27.6	19.2	4.5	1.9	8.1	10.8	126	127	+36	−89	1620	1140	+8.5	−21.1	1628.5	1118.9
01'	28.8	26.2	2.1	2.0	10.4	10.8	125	128	+83	−88	1680	1560	+19.7	−20.9	1699.7	1539.1
01'2	28.9	19.1	1.5	1.4	10.9	11.1	124	125	+94	−97	1680	1140	+22.3	−23.0	1702.3	1117.0
04'	33.7	25.1	3.0	1.0	9.8	11.7	128	127	+68	−107	1980	1500	+16.1	−25.4	1996.1	1474.6
04'2	33.8	18.2	2.1	2.6	10.4	10.0	125	126	+83	−74	1980	1080	+19.7	−17.5	1999.7	1062.5
08'	43.5	31.6	5.5	7.5	7.0	5.1	125	126	+15	+24	2580	1860	+3.6	+5.7	2583.6	1865.7
08'2	43.5	24.6	6.6	8.7	6.0	4.0	126	127	−06	+47	2580	1440	−1.4	+11.1	2578.6	1451.1
	12.5	19.5	5.8	6.1	7.0	6.5	128	126	+12	−04	720	1140	+2.8	−.9	722.8	1139.1
P.	16.4	21.3	4.5	2.9	5.0	9.9	126	128	−26	−70	960	1260	−6.2	−16.6	953.8	1243.4

2402 / 19 = 126.38 — 2534 / 20 = 126.37

11.10

19) 2404 (126.38 — 20) 2531 (126.55

19) 2882 (151 — 20) 2881 (144

26) 3286 (126 — 20) 3412 (170

*Wrong object marked for Phoebe on D10269. Another object marked by Prof. W.H.P and measured on page 46. Measures transferred in red ink.

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11.10

Feb. 10, 1904.

Measures to determine Position of Phoebe

D 10284 = a 4495

	x	y	A	B	C	D	a+c	B+D	C-a	B-D	x×60	y×60	C-a ×238	B-D ×237		
P.	10.5	19.4	6.0	5.5	6.7	7.2	12.7	12.7	+07	-17	600	1140	+1.7	-4.0	601.7	1136.0
20¹	8.0	23.5	12.6	5.9	12.7	6.8	25.3	12.7	+01	-09	480	1380	+2	-2.1	450.2	1377.9
20²	8.2	31.4	10.9	4.1	1.8	8.4	12.7	12.5	-91	-43	480	1860	-21.7	-10.2	458.3	1849.8
28'3	12.8	24.8	1.8	11.1	10.9	1.5	12.7	12.6	+91	+96	720	1440	+21.7	+22.8	741.7	1462.8
28²	12.9	32.8	0.4	10.0	12.2	2.7	12.6	12.7	+118	+73	720	1920	+28.2	+17.3	748.1	1937.3
25¹	12.4	3.4	8.5	8.9	4.1	3.8	12.6	12.7	-44	+51	720	180	-10.5	+12.1	709.5	192.1
25²	12.5	11.6	6.3	7.8	6.2	4.9	12.5	12.7	-01	+29	720	660	-2	+6.9	718.8	666.9
35¹	21.3	15.2	9.6	1.6	3.0	11.0	12.6	12.6	-66	-94	1260	900	-15.7	-22.3	1244.3	877.7
35²	21.4	23.1	7.8	0.5	4.9	12.1	12.7	12.6	-29	-116	1260	1380	-6.9	-27.5	1253.1	1352.5
44¹	26.9	26.5	0.6	7.0	12.0	5.8	12.6	12.8	+114	+12	1560	1560	+27.1	+2.8	1587.1	1562.8
44²	27.2	34.4	11.1	5.5	1.3	7.1	12.4	12.6	-98	-16	1620	2040	-23.3	-3.8	1596.7	2036.2
47¹	28.1	14.9	11.9	11.8	0.7	0.9	12.6	12.7	-112	+109	1680	840	-26.7	+25.8	1653.3	865.8
47²,	28.2	22.8	10.1	10.7	2.5	2.0	12.6	12.7	-76	+87	1680	1320	-18.1	+20.6	1661.9	1340.6
P.	10.5	19.4	5.6	5.0	6.9	7.7	12.5	12.7	+13	-27	600	1140	+3.1	-6.4	603.1	1133.6
J¹	30.4	21.3	8.7	2.9	3.9	9.8	12.6	12.7	-48	-69	1800	1260	-11.4	-16.4	1788.6	1243.6
J²	30.3	29.2	8.6	1.9	4.0	10.7	12.6	12.6	-46	-88	1800	1740	-10.9	-20.9	1789.1	1719.1
52¹	30.5	3.4	6.5	4.9	6.1	7.9	12.6	12.8	-04	-30	1800	180	-1.0	-7.1	1799.0	172.9
52²	30.6	11.3	5.0	3.6	7.6	9.0	12.6	12.6	+26	-54	1800	660	+6.2	-12.8	1806.2	647.2
56¹	33.1	11.4	11.1	4.5	1.4	8.1	12.5	12.6	-97	-36	1980	660	-23.1	-8.5	1956.9	651.5
56²	33.3	19.3	9.5	3.4	3.0	9.2	12.5	12.6	-65	-58	1980	1140	-15.5	-13.7	1964.5	1126.3
61¹	36.4	23.4	8.1	4.0	4.5	8.6	12.6	12.6	-36	-46	2160	1380	-8.6	-10.9	2151.4	1369.1
* 61²	36.5	31.2	6.5	2.8	6.1	9.9	12.6	12.7	-04	-71	2160	1860	-1.0	-16.8	2159.0	1843.2
J¹	39.1	18.2	10.0	2.5	2.7	10.0	12.7	12.5	-73	-75	2340	1080	-17.4	-17.8	2322.6	1062.2
J²	39.1	26.3	11.9	3.1	1.0	9.5	12.9	12.6	-109	-64	2340	1560	-25.9	-15.2	2314.1	1544.8

11.45

3153/25 3036/24

* Difficult to measure

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Feb 10, 1904

11.45 · Measures to determine Position of Phoebe

D 10284 Cont.

	x	y	A	B	C	D	a+c B+D	c−a B−D	x×60	y×60	c−a ×238	B−D ×237		
S^2	39.5	27.5	6.1	5.9	6.4	6.8	125	127 +03 −09	2340	1620	+ 7	−2.1	2340.7	1617.9 ✓
D	38.9	27.9	1.1	11.8	11.5	0.7	126	125 +104 +111	2280	1620	+24.8	+26.3	2304.8	1646.3 ✓
64'	39.5	28.4	6.0	4.0	6.7	8.6	127	126 +07 −46	2340	1680	+ 1.7	−10.9	2341.7	1669.1 ✓
64^2	39.6	36.3	4.5	3.0	8.1	9.5	126	125 +36 −65	2340	2160	+8.6	−15.4	2348.6	2144.6 ✓
R.	40.7	27.7	2.9	8.0	9.8	4.7	127	127 +69 +33	2400	1620	+16.4	+7.8	2416.4	1627.8 ✓
H.	42.2	18.6	10.4	8.0	2.3	4.5	127	125 −81 +35	2520	1080	−19.3	+8.3	2500.7	1088.3 ✓
P	10.5	19.4	5.9	5.5	6.8	7.1	127	126 +09 −16	600	1140	+2.1	−3.8	602.1	1136.2 ✓
							885/7	881/7						
							126.19	126.35						

D 10268 = A4293

	x	y	A	B	C	D	a+c B+D	c−a B−D	x×60	y×60	c−a ×237	B−D ×238		
P.[illegible]	34.4	19.9 20.0	7.9	11.3	4.7	1.2	126	125 −32 +101	2040	1140	−7.6	+24.0	2032.4	1164.0 ✓
97'	1.3	35.9	9.5	12.3	3.2	0.3	127	126 −63 +120	60	2100	−14.9	+28.6	45.1	2128.6 ✓
97^2	1.3	26.8	10.0	10.0	2.6	2.5	126	125 −74 +75	60	1560	−17.5	+17.8	42.5	1577.8 ✓
00'	3.7	16.9	3.5	11.2	9.0	1.3	125	125 +55 +99	180	960	+13.0	+23.6	193.0	983.6 ✓
08'	19.6	29.4	5.2	6.0	7.3	6.9	125	129 +21 −09	1140	1740	+5.9	−2.1	1145.0	1737.9 ✓
W.S. meas. 08 2^2	19.8	20.4	5.9 6 2.1	3.9 5.0	6.6 +0.4	8.1 7.6	125	126 +07 −48 +83 −26	1140	1200	1.7 +19.7	11.4 −6.2	41. 1159.7	88.6 1193.8 ✓
D'	22.3	20.2	9.6	1.8	3.0	10.7	126	125 −66 −89	1320	1200	−15.6	−21.2	1304.4	1178.8 ✓
D^2 cont'd 10'	22.2	11.2	10.5	1.8	2.0	10.7	125	125 −85 −89	1320	660	−20.1	−21.2	1299.9	638.8 ✓
			Off Plate,											
10^2	26.3	29.6	9.9	8.0	2.8	4.6	127	126 −71 +34	1560	1740	−16.8	+8.1	1543.2	1748.1 ✓
12	28.1	25.3	11.9	3.7	0.8	9.0	127	127 −111 −53	1680	1500	−26.3	−12.6	1653.7	1487.4 ✓
13	28.3	13.3	9.4	2.5	3.1	10.0	125	125 −63 −75	1680	780	−14.9	−17.8	1665.1	762.2 ✓
P.	34.4	19.9	7.9	11.5	4.9	1.0	128	125 −30 +105	2040	1140	−7.1	+25.0	2032.9	1165.0 ✓
12.00							1512/12	1509/12						

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Feb 10, 1904

12.00 Measures to determine Position of Phoebe

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D 10284 Cont.

	x	y	a	B	C	D	a+c	B+D	c-a	B-D	x×60	y×60	c-a ×237	B-D ×238		
R²	29.1	10.4	11.6	4.6	1.1	8.1	127	127	-105	-35	1740	600	-24.9	-8.3	1715.1	591.7
S²	30.4	10.3	8.9	2.5	3.9	10.2	128	127	-50	-77	1800	600	-11.8	-18.3	1788.2	581.7
D²	30.7	9.8	3.7	10.0	9.1	2.6	128	126	+54	+74	1800	540	+12.8	+17.6	1812.8	557.6
G¹	32.9	18.5	0.7	6.8	11.9	6.1	126	129	+112	+07	1920	1080	+26.5	+1.7	1946.5	1081.7
G²	33.8	9.4	1.4	4.6	11.2	8.1	126	127	+98	-35	1980	540	+23.2	-8.3	2003.2	531.7
17¹	36.6	11.3	5.1	2.6	7.4	10.0	125	126	+23	-74	2160	660	+5.5	-17.6	2165.5	642.4
17²	36.5	2.1	5.9	0.6	6.8	12.2	127	128	+09	-116	2160	120	+2.1	-27.6	2162.1	92.4
19¹	39.6	14.6	5.4	8.3	7.1	4.3	125	126	+17	+40	2340	840	+4.0	+9.5	2344.0	849.5
W.S. suggs. 19²?	39.7	5.6	3.6	7.7	9.1	4.9	127	126	+55	+28	2340	300	+13.0	+6.7	2353.0	306.7
21¹	40.6	33.2	4.0	2.1	8.6	10.5	126	126	+46	-84	2400	1980	+10.9	-20.0	2410.9	1960.0
21²	40.6	24.0	4.9	12.6	7.8	12.5	127	251	+29	+01	2400	1440	+6.9	+2	2406.9	1442.2
25¹	46.6	18.4	3.8	4.0	9.0	8.7	128	127	+52	-47	2760	1080	+12.3	-11.2	2772.3	1068.8
25²	46.6	9.2	4.1	2.0	8.5	10.6	126	126	+44	-86	2760	540	+10.4	-20.5	2770.4	519.5
P.	34.5	19.9	7.5	11.6	5.1	1.0	126	126	-24	+106	2040	1140	-5.7	+25.2	2034.3	1165.2

12.15

1772 / 14 = 126.32

1898 / 15 = 126.19

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Feb. 12, 1904

12.20 Measures to determine Position of Phoebe.

D10309 = A3308

	x	y	a	B	C	D	a+c	B+D	C−a	B−D	x×60	y×60	$\frac{c-a}{\times 298}$	$\frac{B-D}{\times 298}$		
Q	89.1	29.6	9.9	6.7	0.1	3.4	100	101	−98	+33	5340	1740	−29.2	+9.8	5310.8	1749.8
83	2.6	81.4	2.9	4.0	7.1	6.0	100	100	+42	−20	120	4860	+12.5	−6.0	132.5	4854.0
82	2.6	28.3	2.9	2.1	7.1	8.0	100	101	+42	−59	120	1680	+12.5	−17.6	132.5	1662.4
22	1.2	11.6	9.0	7.1	1.0	2.9	100	100	−80	+42	60	660	−23.8	+12.5	36.2	672.5
25	12.6	11.6	4.0	6.8	6.0	3.3	100	101	+20	+35	720	660	+6.0	+10.4	726.0	670.4
28	24.9	18.5	1.1	5.1	9.0	5.0	101	101	+79	+01	1440	1080	+23.5	+3	1463.5	1080.3
31	50.6	24.1	3.0	0.8	7.1	9.2	101	100	+41	−84	3000	1440	+12.2	−25.0	3012.2	1415.0
85	51.6	52.9	3.2	9.7	6.9	0.4	101	101	+37	+93	3060	3120	+11.0	+27.7	3071.0	3147.7
Q.	89.1	29.6	9.9	6.7	0.1	3.5	100	102	−98	+32	5340	1740	−29.2	+9.5	5310.8	1749.5
32	52.7	14.2	2.0	2.0	8.1	8.1	101	101	+61	−61	3120	840	+18.2	−18.2	3138.2	8218
33	61.1	15.8	9.6	8.0	0.5	2.0	101	100	−91	+60	3660	900	−27.1	+17.9	3632.9	917.9
															4110.0	
J	69.0	33.9	10.1	8.0	10.1	2.0	202	100	00	+60	4140	1980	00	+17.9	4140.0	1997.9
76	70.1	34.6	9.2	5.9	0.9	4.1	101	100	−83	+18	4200	2040	−24.7	+5.4	4175.3	2045.4
F	71.8	33.8	1.1	8.0	9.0	2.1	101	101	+79	+59	4260	1980	+23.5	+17.6	4283.5	1997.6
J	73.0	35.0	Bright								4380	2100				
86	97.3	84.7	7.0	6.9	3.0	3.0	100	99	−40	+39	5820	5040	−11.9	+11.6	5808.1	5051.6
Q	89.1	29.6	10.1	6.6	0.1	3.5	102	101	−100	+31	5340	1740	−29.8	+9.2	5310.2	1749.2
12.40							1711/17 = 100.65									

Feb. 13, 1904

11.30	D10325 ♀ = A3230						a+c	B+D	C−a	B−D	x×60	y×60	$\frac{c-a}{\times 299}$	$\frac{B-D}{\times 298}$		
Q	31.2	46.6	7.9	6.0	2.1	4.2	100	102	−58	+18	1860	2760	−17.3	+5.4	1842.7	2765.4
82	2.3	28.6	8.0	7.1	2.1	3.0	101	101	−59	+41	120	1680	−17.6	+12.2	102.4	1692.2
−1959 83	2.0	81.9	10.1	9.9	10.1	0.2	202	101	00	+97	120	4860	00	+28.9	90.0 +120.0	4888.9
11.35							403/4	304/3								

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Feb. 13, 1904

11.35 Measures to determine Position of Phoebe.

D 10325 ? = a 3230

	x	y	a	B	C	D	a+c B+D	c-a B-D	x×60	y×60	×299	×298		
T.	4.6	52.6	3.0	6.8	7.1	3.3	101	101	+41	+35	240	3120	+12.3	+10.4	252.3	3130.4
S	7.5	53.0	Bright-								420	3180				
2	15.1	52.1	9.9	0.5	0.2	9.5	101	100	-97	-90	900	3120	-29.0	-26.8	871.0	3093.2
22	0.6	12.1	3.1	0.9	7.0	9.2	101	101	+39	-83	0	720	+11.7	-24.7	11.7	695.3
25	12.3	12.3	7.9	1.9	2.1	8.2	100	101	-58	-63	720	720	-17.3	-18.8	702.7	701.2
28	24.5	19.1	5.0	0.5	5.0	9.5	100	100	00	-90	1440	1140	00	-26.8	1440.0	1113.2
P.	31.2	46.6	7.9	5.9	2.1	4.1	100	100	-58	+18	1860	2760	-17.3	+5.4	1842.7	2765.4
31	50.3	24.7	7.0	7.9	3.0	2.1	100	100	-40	+58	3000	1440	-12.0	+17.3	2988.0	1457.3
85	51.1	53.6	9.0	6.5	1.0	3.6	100	101	-80	+29	3060	3180	-23.9	+8.6	3036.1	3188.6
32	52.4	14.8	5.1	9.0	4.9	1.1	100	101	-02	+79	3120	840	-6	+23.5	3119.4	863.5
33	60.6	16.5	3.0	5.5	7.1	4.6	101	101	+41	+09	3600	960	+12.3	+2.7	3612.3	962.7
86	96.6	85.6	3.1	6.0	7.0	4.0	101	100	+39	+20	5760	5100	+11.7	+6.0	5771.7	5106.0
P	31.2	46.6	7.9	5.9	2.1	4.2	100	101	-58	+17	1860	2760	-17.3	+5.1	1842.7	2765.1

1205 / 12 = 100.50 1207 / 12 = 100.73

D 10313 = A 3304

	x	y	a	B	C	D	a+c B+D	c-a B-D	x×60	y×60	c-a ×297	B-D ×298		
P.	85.9	32.7	1.0	6.9	9.1	3.1	101	100	+81	+38	5100	1920	+24.1	+11.3	5124.1	1931.3
22	1.3	13.8	7.5	8.0	2.6	2.1	101	101	-49	+59	60	780	-14.6	+17.6	45.4	797.6
82	2.8	30.4	1.6	4.0	8.6	6.0	102	100	+70	-20	120	1800	+20.8	-6.0	140.8	1794.0
83	2.8	83.6	2.1	5.8	8.0	4.3	101	101	+69	+15	120	4980	+17.5	+4.5	137.5	4984.5
25	12.7	13.9	2.6	8.9	7.5	1.2	101	101	+49	+77	720	780	+14.6	+22.9	734.6	802.9
28	25.0	20.7	10.0	7.1	10.1	3.0	202	101	+01	+41	1500	1200	+3	+12.2	1503 1530.3	1212.2
31	50.8	26.3	2.0	3.0	8.1	7.1	101	101	+61	-41	3000	1560	+18.1	-12.3	3018.1	1547.8
12.05 P	85.9	32.7	1.0	6.9	9.1	3.1	101	100	+81	+38	5100	1920	+24.1	+11.3	5124.1	1931.3

910 / 9 = 805 / 8

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12.05

Measures to determine Position of Phoebe — Feb. 13, 1904

D 10318 = A 3304

	x	y	A	B	C	D	a+c	B+D	c−a	B−D	x×60	y×60	c−a ×297	B−D ×298		
85	51.8	55.2	2.1	1.9	8.0	8.1	101	100	+59	−62	3060	3300	+17.5	−18.5	3077.5	3281.5
32	52.9	16.4	0.5	4.5	9.6	5.6	101	101	+91	−11	3120	960	+27.0	−3.3	3147.0	956.7
33	61.2	18.1	8.1	0.5	1.9	9.6	100	101	−62	−91	3660	1080	−18.4	−27.1	3641.6	1052.9
D.	66.2	36.6	8.0	6.3	2.0	3.8	100	101	−60	+25	3960	2160	−17.8	+7.4	3942.2	2167.4
Ho.	67.2	37.2	8.1	2.1	2.1	8.0	102	101	−60	−59	4020	2220	−17.8	−17.6	4002.2	2202.4
appx D.	69.5	37.9	Bright−								4140	2220				
86	97.4	86.9	6.5	9.9	3.6	0.1	101	100	−29	+98	5820	5160	−8.6	+29.2	5811.4	5189.2
P.	85.9	32.7	0.9	6.9	9.1	3.2	100	101	+82	+37	5100	1920	+24.4	+11.0	5124.4	1931.0
							705/7 = 100.94									
								705/7 = 100.67								

D 10312 = A 3304

12.20S	69.9	37.8														

Feb 16,

D 10306 = A 3312

	x	y	A	B	C	D	x×60	y×60	c−a ×298	B−D ×298		
P	93.2	28.1	8.1	0.9	1.9	9.1	100	100	−62	−82	5580	1680	−18.5	−24.4	5561.5	1655.6
y assumed to be 10.9	92	10.9	2.0	+10	10.1	9.9	10.1	9.2	202	101	00	+97	120	6600	00	+28.9	90.0	28.9
82	3.6	27.5	3.5	5.9	6.5	4.2	100	101	+30	+17	180	1620	+8.9	+5.1	188.9	1614.9
83	3.8	80.8	2.1	7.6	7.9	2.4	100	100	+58	+52	180	4800	+17.3	+15.5	197.3	4815.5
25	13.5	11.0	4.9	10.0	5.2	10.1	101	201	+03	−01	780	660	+9	−3	780.9	629.7
28	25.8	17.8	2.0	8.1	8.0	1.9	100	100	+60	+62	1500	1620	+17.9	+18.5	1517.9	1038.5
31	51.6	23.4	3.5	3.5	6.6	6.7	101	102	+31	−32	3060	1380	+9.2	−9.5	3069.2	1370.5
P	93.2	28.1	8.1	0.8	1.9	9.2	100	100	−62	−84	5580	1680	−18.5	−25.0	5561.5	1655.0
							904/9	905/9								

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Feb 16, 1904

Measures of Phoebe -

D 10306 (cont)

	x	y	A	B	C	D	a+c	B+D	c-a	B-D	x×60	y×60	c-a ×298	B-D ×298		
85	52.6	52.2	3.5	2.0	6.6	8.1	101	101	+31	-61	3120	3120	+9.2	-18.2	3129.2	3101.8 ✓
32	53.7	13.4	2.9	4.6	7.1	5.5	100	101	+42	-09	3180	780	+12.5	-2.7	3192.5	777.3 ✓
33	61.9	15.1	0.1	0.5	10.0	9.5	101	100	+99	-90	3660	900	+29.5	-26.8	3689.5	873.2 ✓
I	73.9	32.4	0.1	4.6	9.9	5.4	100	100	+98	-08	4320	1920	+29.2	-2.4	4349.2	1917.6 ✓
H	74.4	33.4	6.1	4.5	4.0	5.5	101	100	-21	-10	4440	1980	-6.3	-3.0	4433.7	1977.0 ✓
T	75.6	32.4	4.0	4.5	6.1	5.6	101	101	+21	-11	4500	1920	+6.3	-3.3	4506.3	1916.7 ✓
S	77.5	33.0	Bright-								4620	1980				
86	78.4	83.9	6.5	9.0	3.5	1.1	100	101	-30	+79	5880	4980	-8.9	+23.5	5871.1	5003.5 ✓
P	93.2	28.1	8.2	0.8	1.9	9.3	101	101	-63	-85	5580	1680	-18.8	-25.3	5561.2	1654.7 ✓

$\frac{8.05}{8}$ $\frac{8.05}{8}$

100.53 100.59

D 10307 = a 3312

S. 77.6 33.1 4620 1980

D 10311 = a 3227

	x	y	a	B	c	D					x×60	y×60	x 298	x 298		
P	30.7	45.5	2.5	4.9	7.6	5.1	101	100	+51	-02	1800	2700	+15.2	-6	1815.2	2699.4 ✓
82	2.2	27.6	8.4	6.0	2.0	4.1	101	101	-61	+19	120	1620	-18.2	+5.7	101.8	1625.7 ✓
22	0.4	11.0	5.6	10.2	4.5	10.1	100	203	-10	+01	0	660	-3.0	+3	-3.0	630.3 ✓
83	2.6	80.7	4.2	7.9	5.9	2.1	101	100	+17	+58	120	4800	+5.1	+17.3	125.1	4817.3 ✓
T	4.8	51.4	1.9	4.0	8.1	6.1	100	101	+62	-21	240	3060	+18.5	-6.3	258.5	3053.7 ✓
S	6.9	52.2	Bright-								360	3120				
H	10.6	52.3	4.3	2.9	5.9	7.2	102	101	+16	-43	600	3120	+4.8	-12.8	604.8	3107.2 ✓
I	14.3	51.4	7.1	3.9	2.9	6.2	100	101	-42	-23	840	3060	-12.5	-6.9	827.5	3053.1 ✓
P	30.8	45.5	2.4	5.0	7.8	5.1	102	101	+54	-01	1800	2700	+16.1	-3	1816.1	2699.7 ✓

$\frac{8.07}{8}$ $\frac{9.08}{9}$

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Measures of Phoebe.

D 10311 cont

	x	y	A	B	C	D	a+c	B+D	c−a	B−D	x×60	y×60	$\frac{c-a}{x298}$	$\frac{B-D}{x298}$		
25	11.9	10.9	0.3	9.9	9.7	0.1	100	100	+94	+98	660	600	+28.0	+29.2	688.0	629.2 ✓
28	24.3	17.7	7.1	7.1	3.0	2.9	101	100	−41	+42	1440	1020	−12.2	+12.5	1427.8	1032.5 ✓
31	~~85~~	50.1	23.1	8.5	1.0	1.6	9.1	101	101	−69	−81	3000	1380	−20.6	−24.1	2979.4 / 1.8	1355.9 ✓
32		52.2	13.2	8.1	2.0	2.0	8.0	101	100	−61	−60	3120	780	−18.2	−17.9	3108.8	762.1 ✓
85		51.4	51.9	6.9	9.5	3.1	0.5	100	100	−38	+90	3060	3060	−11.3	+26.8	3048.7	3086.8 ✓
33		69.4	14.7	5.5	7.6	4.5	2.5	100	101	−10	+51	3690	840	−3.0	+15.2	3597.0	855.2 ✓
Reading of x corrd Apr 15, '04	7															
86	9.2	23.4	8.0	3.9	2.1	6.2	101	101	−59	−23	~~5460~~ 5820	4980	−17.6	−6.9	~~5442.4~~ 5802.	4973.1 ✓
P	30.7	45.5	2.5	4.9	7.6	5.1	101	100	+51	−02	1800	2700	+15.2	−6	1815.2	2699.4 ✓

$\frac{805}{8}$ $\frac{803}{8}$

100.75 100.65

D 10310 = A 3227

δ 6.9 52.1

D 10315 = A 3228

							a+c	B+D	c−a	B−D	x×60	y×60	x299	x298		
P	33.7	44.1	2.9	0.5	7.1	9.6	100	101	+42	−91	1980	2640	+12.6	−27.1	1992.6 / 176.7	2612.9 ✓
22	3.4	9.6	5.6	6.0	4.5	4.0	101	100	−11	+20	180	540	−3.3	+6.0	~~2612.9~~ 2436.0	546.0 ✓
82	5.2	26.2	8.5	1.9	1.7	8.2	102	101	−68	−63	300	1560	−20.3	−18.8	279.7	1541.2 ✓
83	5.5	73.4	4.5	3.6	5.6	6.4	101	100	+11	−28	300	4740	+3.3	−8.3	303.3	4731.7 ✓
T	7.8	50.0	2.1	10.1	7.9	10.1	100	202	+58	00	420	3000	+17.3	00	437.3	2970.0 ✓
δ	9.9	51.0	~~4.0~~	Bright-							540	3060				
H	13.6	50.8	4.0	8.0	6.0	2.1	100	101	+20	+89	780	3000	+6.0	+17.6	786.0	3017.6 ✓
25	14.9	9.6	0.5	5.6	9.6	4.5	101	101	+91	+11	840	540	+27.2	+3.3	867.2	543.3 ✓
P	33.7	44.1	2.8	0.5	7.2	9.5	100	100	+44	−90	1980	2640	+13.2	−26.8	1993.2	2613.2 ✓
31	53.1	21.6	8.9	7.0	1.1	3.0	100	100	−78	+40	3180	1260	−23.3	+11.9	3156.7	1271.9 ✓

$\frac{905}{9}$ $\frac{1006}{10}$

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D 10315 (cont.)

	x	y	A	B	C	D	a+c	B+D	C-a	B-D	x×60	y×60	×299	×298		
28	27.8	16.3	7.5	3.0	2.6	7.1	101	101	-49	-41	1620	960	-14.7	-12.2	1605.3	947.8
32	55.2	11.8	8.2	8.0	1.9	2.1	101	101	-63	+59	3300	660	-18.8	+17.6	3281.2	677.6
33	63.4	13.4	5.9	3.5	4.1	6.5	100	100	-18	-30	3780	780	-5.4	-8.9	3774.6	771.1
85	54.3	59.6	6.9	5.5	3.1	4.5	100	100	-38	+10	3240	3000	-11.4	+3.0	3228.6	3003.0
86	100.1	82.1	8.5	0.5	1.5	9.6	100	101	-70	-91	6000	4920	-20.9	-27.1	5979.1	4892.9
S	17.3	49.9	6.9	9.4	3.1	0.8	100	102	-38	+86	1020	2940	-11.4	+25.6	1008.6	2965.6
P	33.7	44.1	3.0	0.4	7.1	9.7	101	101	+41	-93	1980	2640	+12.3	-27.7	1992.3	2612.3
							703	706								
							7	7								
							100.50	100.71								

D 10314

S 10.0 50.9

Regions D 10319 = a 3233 (which is badly cracked)

			a	B	c	D										
P	33.4	45.8	5.9	8.5	4.2	1.5	101	100	-17	+70	1980	2700	-5.1	+20.9	1974.9	2720.9
[illegible]	22	1.8	12.2	1.8	2.0	8.2	8.0	100	100	+64	-60	60	720	+19.1	-17.9	79.1	702.1
	82	3.6	28.7	3.9	7.5	6.1	2.6	100	101	+22	+49	180	1680	+6.6	+14.7	186.6	1694.7
	83	4.2	81.9	8.0	9.5	2.1	0.6	101	101	-59	+89	240	4860	-17.6	+26.6	2224	4886.6
	J	7.1	52.7	9.1	7.5	1.0	2.5	101	100	-81	+50	420	3120	-24.2	+15.0	395.8	3135.0
	S	10.0	52.0	Bright-								600	3180				
	H	13.3	51.8	7.6	7.9	2.5	2.2	101	101	-51	+57	780	3060	-15.2	+17.0	764.8	3077.0
	S	14.7	51.3	2.5	2.9	7.6	7.2	101	101	+51	-43	840	3060	+15.2	-12.9	855.2	3047.1
	P	33.4	45.8	6.0	8.5	4.1	2.6	101	101	-19	+69	1980	2700	-5.7	+20.6	1974.3	2720.6
"C"	25	13.4	12.1	6.8	1.0	3.3	9.1	101	101	-35	-81	780	720	-10.5	-24.2	769.5	695.8
"B"	28	25.7	18.8	2.6	8.0	7.5	2.1	101	101	+49	+59	"B" 1500	1080	+14.7	+17.6	1514.7	1097.6
"a"	31	51.5	24.1	4.5	1.0	5.5	9.1	100	101	+10	-81	3060	1440	+3.0	-24.2	3063.0	1415.8
							1708	1108								
							11	11								

B also No 25

a also Nos 31, 32 + 33

Plate a+3233+19 is broken. Regions between cracks designated by letters a, B &c

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D 10319 (cont)

	x	y	a	B	C	D								
"a"	32	53.5	14.2	4.5	2.1	5.5	8.0	100	101	+10	-59	3180	840	+3.0	-17.6	3183.0	822.4
	85	52.8	53.0	Cannot be measured (H.G)													
"a"	33	61.8	15.7	1.9	7.1	8.1	3.0	100	101	+62	+41	3660	900	+18.5	+12.3	3678.5	912.3
	86	98.9	84.4	Cannot be measured (H.G)													
P	33.4	45.8	5.9	8.5	4.1	1.5	100	100	-18	+70	1980	2700	-5.4	+20.9	1974.6	2720.9	

$\frac{1108}{300}$ / $14)1408(100.57$ $\quad$ $\frac{1108}{302}$ / $14)1410(100.71$ $\quad$ $\frac{300}{3}$ $\quad$ $\frac{302}{3}$

D 10318 = a 3233

δ 10.0528

D 10327 = a 3230 (5?)

δ 73 530

D 10308 = a 3308

δ 73.0 34.9

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Rectimates of discordant cases of Phoebe.

Apr. 27, 1904

D 10268 = a 4293

	x	y
08'		29.5
		20.4
97'		35.9
		26.8
12'		25.3

D 10221 = a 4379

	x	y
01	29.1	
00	27.9	

D 10269 = a 4380

	x	y
93	16.6	39.4
01	28.8	
~~95~~		

D 10291 = a 6165

	x	y
31	12.1	22.2

D 10290 = a 6169

	x	y
31	13.2	20.9

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Re-estimates (cont)

Apr 27, 1904

D 10293 = a 6170

	x	y
31	13.4	22.5

Dec 1, 1904

D 10302 = 3824

	x	y						a+c	B+D	C-a	B-D	x×60	y×60	C-a ×236	B-D ×236		
P.	6.5	26.4	5.5	5.8	7.2	7.0	127	128	+17	−12	360	1560	+4.0	−2.8	364.0	1557.2	Transferred to page 16-18
P.	6.5	26.5	5.6	5.9	7.1	7.0	127	129	+15	−11	360	1560	+3.5	−2.6	363.5	1557.4	
P.	6.5	26.4	5.5	5.9	7.2	6.9	127	128	+17	−10	360	1560	+4.0	−2.4	364.0	1557.6	

D 10299

	x	y												×237	×237			
P.	7.7	25.1	2.4	0.9	10.2	11.9	126	128	+78	−110	420	1500	+18.4	−26.1	438.4	1473.9	Transferred to page 18, 20
P.	7.7	25.1	2.3	0.8	10.3	12.0	126	128	+80	−112	420	1500	+19.0	−26.5	439.0	1473.5	
P.	7.7	25.1	2.6	0.8	10.2	12.0	127	128	+77	−112	420	1500	+18.2	−26.5	438.2	1473.5	

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Remeasures of Phoebe on plates on which it has been remarked by Prof W.H.P.

Nov 8, 1904 H.J.S. Rec.

D 10221 = a4379

	x	y	A.	B.	b.	D.	a+c	B+D	c-a	B-D	x ×60	y ×60
P.	12.7	16.7	2.1	9.6	10.7	3.4	128	130	+86	+62	7'20	10'80
Nov 9	12.8	18.7	2.1	9.8	10.7	3.1	128	129	+86	+67	7'20	10'80
" 10	12.7	18.7	2.0	9.6	10.8	3.4	128	130	+88	+62	7'20	10'80

These measures transferred to B19a p. 94.96

D 10269 = a4380

	x	y							c-a ×237	B-D ×237			
P	12.6	19.5	5.5	6.0	7.0	7.5	125	125	+15	-05	7'20	11'40	+3.6 -1.2	723.6	1138.8
Nov 9	12.5	19.5	5.7	6.0	7.0	6.6	127	126	+13	-06	7'20	11'40	+3.1 -1.4	723.1	1138.6
" 10	12.5	19.5	5.8	6.1	7.0	6.5	128	126	+12	-04	7'20	11'40	+2.8 -0.9	722.8	1139.1

Transferred 6 p. 20, 21

D 10219 = a4399

	x	y							c-a ×234	B-D ×233			
P.	1.9	17.2	1.1	2.4	11.7	10.4	128	128	+106	-80	6'0	10'20	+24.8 -18.6
Nov 9,	1.8	17.2	1.0	2.2	11.7	10.4	127	126	+107	-82	6'0	10'20	+25.0 -19.1
" 10,	1.9	17.2	1.0	2.4	11.8	10.3	128	127	+108	-79	6'0	10'20	+25.3 -18.4

Transferred 6 B19a page 100, 102

*D 10~~249~~ 302 = a3824

	x	y							c-a ×236	B-D ×236			
P.	7.9	26.4	0.9	4.0	11.8	8.8	127	128	+109	-48	4'20	15'60	+25.7 -11.3
Nov 9	7.9	26.3	0.9	4.0	11.9	8.9	128	129	+110	-49	4'20	15'60	+26.0 -11.6
" 10	7.9	26.4	0.9	3.9	11.9	8.9	128	128	+110	-50	4'20	15'60	+26.0 -11.8

Superseded

	445.2	1548.7
	446.0	1548.4
	446.0	1548.2

D 10293 = a6170

Transferred 6 page 6, 8

	x	y							x237	x237				
P.	36.3	28.2	9.6	1.8	3.2	11.0	128	128	-64	-92	21'60	16'80	-15.2	-21.8	2144.8	1658.2
Nov 9	36.3	28.1	9.6	1.7	3.0	11.1	126	128	-66	-94	21'60	16'80	-15.6	-22.3	2144.4	1657.7
" 10	36.3	28.1	9.4	1.8	3.2	10.9	126	127	-62	-91	21'60	16'80	~~-15.2~~ -14.7	-21.6	~~2144.8~~ 2145.3	1658.4

* For latest meas of Phoebe on this plate - see p. 45

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Remeasures of Phoebe - Cont'd

Nov 8, 1904

D 10290 = a 6169

	x	y	A.	B.	C.	D.	a+C	B+D	c−a	B−D	x×60	y×60	×238	×238		
P.	36.1	26.6	12.6	8.5	0.1	4.1	12.7	12.6	−12.5	+4.4	2160	1560	−29.8	+10.5	2130.2	1570.5
Nm	36.0	26.6	12.4	8.4	0.2	4.1	12.6	12.5	−12.2	+4.3	2160	1560	−29.0	+10.2	2131.0	1570.2
410	36.1	26.6	12.4	8.5	0.1	4.1	12.5	12.6	−12.3	+4.4	2160	1560	−29.3	+10.5	2130.7	1570.5

Transferred to 4+6

D 10291 = a 6165

	x	y											×237	×237		
P.	34.7	28.1	2.9	1.0	9.9	11.7	12.8	12.7	+7.0	−10.7	2040	1680	+16.6	−25.4	2056.6	1654.6
Nm	34.7	28.1	2.8	0.9	9.9	11.9	12.7	12.8	+7.1	−11.0	2040	1680	+16.8	−26.1	2056.8	1653.9
410	34.7	28.1	2.9	1.1	9.9	11.6	12.8	12.7	+7.0	−10.5	2040	1680	+16.6	−24.9	2056.6	1655.1

Transferred to 8, 10

D 10249 = a 4340

12.50

	x	y											×235	×235		
	7.3	19.3	7.3	2.9	5.6	9.8	12.9	12.7	−17	−6.9	420	1140	−4.0	−16.2	416.0	1123.8
	~~7.9~~	~~19.4~~	0.5	3.5	12.3	9.2	12.8	12.7	+11.8	−5.7	420	1140	+27.7	−13.4	447.7	1126.6
9 1*	0.6	37.4	4.9	5.0	—	7.7	—	12.7	—	−2.7	0	2220		−6.3		2213.7
9 2*	0.6	29.9	5.5	12.0	—	10.5	—	12.5	—	+11.5	0	1740		+27.0		
001	3.1	18.4	12.0	4.5	0.8	8.3	12.8	12.8	−11.2	−3.8	180	1080	−26.3	−8.9	153.7	1071.1
002	3.0	10.9	12.7	12.2	12.8	0.5	25.5	12.7	+0.1	+11.7	180	600	+2	+27.5	150.2	627.5
D	15.1	13.5	11.5	5.9	1.3	7.0	12.8	12.9	−10.2	−1.1	900	780	−24.0	−2.6	876.0	777.4
T1	Too Br Cannot measure.															
T2	14.6	12.1	6.0	1.0	6.9	11.7	12.9	12.7	+0.9	−10.7	840	720	+2.1	−25.1	842.1	694.9
D1	14.3	24.8	9.0	9.8	3.8	3.0	12.8	12.8	−5.2	+6.8	840	1440	−12.2	+16.0	827.8	1456.0
S2	15.7	13.3	Too Br								900	780				
R	14.1	13.1	12.0	0.9	0.6	12.0	12.6	12.9	−11.4	−11.1	1020	780	−26.8	−26.1	993.2	753.9
T6*	Cannot measure.															
08	18.9	30.8	1.0	10.8	11.8	2.0	12.8	12.8	+10.8	+8.8	1080	1800	+25.4	+20.7	1105.4	1820.7
10*	25.6	40.0	5.0	12.8	7.8	—	12.8	—	+2.8	—	1500	2400	+6.6	—	1506.6	
10 2	25.5	32.6	6.0	8.0	6.8	4.8	12.8	12.8	+0.8	+3.2	1500	1920	+1.9	+7.5	1501.9	1927.5

1406 / 11 = 1403 / 11

c line is cut off T' burnt out H cannot measure *D line cut off

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Re-measures of Phoebe (cont)

Nov. 8, 1904

D 10249

	x	y	A	B	C	D	a+c	B+D	c−a	C−D	x×60	y×60	C−a	B−D	x×235	x×235	
P	7.4	19.3	7.1	3.0	5.6	9.7	127	127	−15	−67	420	1140	−3.5	−15.7	416.5	1124.3	
	~~7.9~~	~~19.4~~	~~6.5~~	~~3.6~~	~~12.3~~	~~9.2~~	128	128	+118	−56	420	1140	+27.7	−13.2	447.7	1126.8	
12¹	27.4	26.7	7.7	9.0	5.1	8.9	128	129	−26	+51	1620	1560	−6.1	+12.0	1613.9	1572.0	
12²	27.4	19.4	8.0	4.0	4.8	8.7	128	127	−32	−47	1620	1140	−7.5	−11.0	1612.5	1128.0	
13¹	27.6	17.6	5.1	~~7.8~~ 8	7.4	5.0	125	128	+23	+28	1620	1020	+5.4	+6.6	1625.4	1026.6	
13²	27.5	7.3	6.0	4.0	6.8	~~9.8~~ 8	128	128	+08	−48	1620	420	+1.9	−11.3	1621.9	408.7	
17¹	35.9	12.6	1.0	8.0	11.8	4.7	128	127	+108	+33	2100	720	+25.4	+7.8	2125.4	727.8	
17²	33.8	5.3	2.0	2.3	10.8	10.4	128	127	+88	−81	1980	300	+20.7	−19.0	2000.7	281.0	
19¹	38.8	16.1	2.0	1.0	11.0	11.8	130	128	+90	+108	2280	960	+21.2	+25.4	2301.2	9854	
19²	38.7	8.6	2.0	8.1	10.8	4.7	128	128	+88	+34	2280	480	+24.7	+8.0	2300.7	4880	
21¹	40.1	34.6	12.0	7.0	0.6	5.8	126	128	−114	+12	2400	2040	−26.8	+2.8	2373.2	2042.8	
21²	39.9	27.3	0.8	~~5.0~~ 2	12.0	10.8	128	128	+112	−88	2340	1620	+26.3	−20.7	2366.3	1599.3	
25¹	46.1	19.7	12.5	9.0	0.4	3.8	129	128	−121	+52	2760	1140	−28.4	+12.2	2731.6	1152.2	
25²	45.9	12.4	0.3	3.8	12.5	8.9	128	127	+122	−51	2700	720	+28.7	−12.0	2728.7	708.0	
P	7.4	19.3	7.0	3.0	5.6	9.7	126	127	−14	−67	420	1140	−3.3	−15.7	416.7	1124.3	
	~~7.9~~	~~19.4~~	~~6.6~~	~~3.5~~	~~12.3~~	~~9.3~~	129	128	+117	−58	420	1140	+27.5	−13.6	447.5	1126.4	
							87										
1.40							1794	1789									
							14	14									

14 | 140 7 | 179 87 | 4 | 11/25 | 319 7 (127.68 | 76 | 0

25 | 1403 7 | 1789 | 0 | 3192 (127.68

D 10251 x = a 4331

	x	y	A	B	C	D											
P	14.0	20.6	12.8	8.7	12.8	4.1	256	128	0	+46	840	1200	×234	×233	810.0	1240.7	
	~~16.1~~	~~19.9~~	~~12.0~~	~~12.1~~	~~9.9~~	~~8.8~~	129	129	−111	+113	960	1140	−98.0	+126.3	934.0	1166.3	
00¹	2.9	19.3	0.8	3.1	12.0	9.6	128	129	+112	−67	120	1140	+26.2	−15.6	146.2	1124.4	
00²	2.7	11.9	3.0	12.5	9.7	0.4	127	129	+67	+121	120	660	+15.7	+28.2	135.7	688.2	
I¹	16.2	24.2	10.9	1.0	2.0	11.7	129	129	−89	−109	960	1440	−20.8	−25.4	939.2	1414.6	
I²	16.1	16.6	12.0	9.0	0.9	3.8	129	128	−111	+52	960	960	−26.0	+12.1	934.0	972.1	
08	18.8	31.9	2.0	10.0	10.8	2.9	128	129	+88	+71	1080	1860	+20.6	+16.5	1100.6	1876.5	
S²	21.5	14.3	Br.								1260	840					
D	21.9	13.8	1.0	9.8	11.8	3.0	128	128	+108	+68	1260	780	+25.3	+15.8	1285.3	795.8	
R	22.5	13.7	6.2	9.8	6.4	3.0	126	128	+02	+68	1320	780	+5	+15.8	1320.5	795.8	
							1151	1024									
							9	8									

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Measures of Phoebe & Comp. Stars.

Nov 10, 1904

D* 10250 (cont)

	x	y	A. B. C. D	a+c	B+D	c-a	B-D	x×60	y×60	x234	x233		
H	24.9	21.8? 3	Cannot measure Too Br.					1440	1260				
J'	24.3	20.8	Cannot meas.					1440	1200				
P	14.0	20.6	12.7 8.5	12.6	4.2	2.53	127	−1	+43	840	1200	− 2	+10.0	809.8	1210.0
	16.1	19.9	11.9 12.0	0.9	0.9	128	129	−110	+111	960	1140	−25.7	+25.9	934.3	1165.9
J²	24.2	13.6	Too Br.					1440	780						
12	27.4	27.6	8.5 8.0	4.2	4 3.8	127	128	−43	+32	1620	1620	−10.1	+7.5	1609.9	1627.5
13	27.5	15.6	6.1 6.0	6.7	6.9	128	129	+06	−09	1620	900	+1.4	−2.1	1621.4	897.9
13²	27.4	8.2	7.1 1.0	5.7	11.8	128	128	−14	+108	1620	480	−3.3	−25.2	1616.7	454.8
17	35.9	13.5	20. 6.6	10.8	6.3	128	129	+88	+03	2100	780	+20.6	+7	2120.6	780.7
17²	35.8	6.2	1.8 1.9	11.0	11.0	128	129	+92	−91	2100	360	+21.5	−21.2	2121.5	338.8
19'	38.7	17.0	28. 12.6	10.0	0.3	128	129	+72	+123	2280	1020	+16.8	+28.7	2296.8	1048.7
*19²	38.7	9.6	3.1 6.9	9.7	6.0	128	129	+66	+09	2280	540	+15.4	+2.1	2295.4	542.1
21'	39.9	35.6	0.8 6.0	12.0	6.9	128	129	+112	−09	2340	2100	+26.2	−2.1	2366.2	2097.9
21²	39.8	28.3	2.8 1.5	10.4	11.3	129	128	+79	−98	2340	1680	+18.5	−22.8	2358.5	1657.2
25'	45.9	29.6	0.8 8.0	12.0	4.8	128	128	+112	+32	2700	1200	+26.2	+7.5	2726.2	1207.5
25²	45.8	13.3	1.8 2.6	11.0	10.1	128	127	+92	−75	2700	780	+21.5	−17.5	2721.5	762.5
P	14.0	20.5	12.8 8.8	12.7	4.0	255	128	−1	+45	840	1200	−2	+11.2	809.8	1211.2
	16.1	19.9	11.8 12.0	0.9	0.9	127	129	−109	+111	960	1140	−25.5	+25.9	934.5	1165.9

19 16 / 15 — X663 / 13 — 1677 / 13

1151 − 1024 = 127 ; 1663 / 13 = 127.95 ; 2687 − 2691 = 3067 ; 9 8 / 15 13 / 21 21

8 / 13 / 21 ; 1029 − 1671 = 2700 ; 2696 ; 128.57

	x	y
97'	0.5	38.4
97²	0.6	31.1

Recd. d. Dec 7

W. S. L.

Different objects marked for Phoebe on Plates D10249 & D10250. Measured on p. 64 and measures transferred in red ink.

* Very poor plate — also D10249

* Wrong image marked for 19²? Have meas one under it.

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Measures of Phoebe and Comp stars.

H. J. S. Ric.

Nov 18, 1904.

12.25

1 = a 4797

D 10952 = a 6812 Assumed to be 10951 as there are two plates numbered 10950, and no 10951

	x	y	A.	B.	C.	D.	a+c	B+D	C-a	B-D	x ×60	y ×60	C-a ×235	B-D ×235		
P.	16.5	14.6	5.9	8.8	6.9	4.0	128	128	+10	+48	960	840	+2.4	+11.3	962.4	851.3
40'	1.5	35.4	6.1	3.8	6.7	9.0	128	128	+06	−52	60	2100	+1.4	−12.2	61.4	2087.8
40²	1.6	31.4	4.9	4.0	8.0	8.8	129	128	+31	−48	60	1860	+7.3	−11.3	67.3	1848.7
44'	4.6	18.9	6.0	11.0	6.9	1.7	129	127	+09	+93	240	1080	+2.1	+21.9	242.1	1101.9
44²	4.6	14.9	4.1	11.8	8.7	1.0	128	128	+46	+108	240	840	+10.8	+25.4	250.8	865.4
48'	6.5	27.2	6.0	2.0	6.8	10.8	128	128	+08	−88	360	1620	+1.9	−20.7	361.9	1599.3
14'	21.3	19.9	9.5	12.0	2.9	0.7	125 4?	127	−66	+113	1260	1140	−15.5	+26.6	1244.5	1166.6
14²	21.4	16.1	7.9	12.9	4.9	12.9	128	258	−30	~~256~~ 00	1260	960	−7.0	0.0	1253.0	960.0
00'	30.2	29.6	10.5	7.3	2.3	5.4	128	127	−82	+19	1800	1740	−19.3	+4.5	1780.7	1744.5
00²	30.4	25.6	9.0	7.9	3.8	5.0	128	129	−52	+29	1800	1500	−12.2	+6.8	1787.8	1506.8
P	16.5	14.7	6.1	8.9	6.8	4.0	129	129	+07	+49	960	840	+1.6	+11.5	961.6	851.5
24'	38.5	25.8	5.9	10.7	6.9	2.1	128	128	+10	+86	2280	1500	+2.4	+20.2	2282.4	1520.2
24²	38.6	21.8	4.6	11.0	8.1	1.8	127	128	+35	+92	2280	1260	+8.2	+21.6	2288.2	1281.6
26'	38.9	13.2	1.5	2.1	11.2	10.4	127	125	+97	−83	2280	780	+22.8	−19.5	2302.8	760.5
26²	39.0	9.3	12.8	2.9	12.6	9.9	254	128	−02	−70	2340	540	−5	−16.4	2309.5	523.6
30'	39.1	38.2	11.0	2.0	1.7	10.8	127	128	−93	−88	2340	2280	−21.9	−20.7	2318.1	2259.3
30²	39.3	34.3	9.6	2.1	3.0	10.5	126	126	−66	−84	2340	2040	−15.5	−19.7	2324.5	2020.3
T'	41.4	12.7	8.0	9.9	4.9	2.9	129	128	−31	+70	2460	720	−7.3	+16.4	2452.7	736.4
T²	41.5	8.8	5.7	10.5	7.0	2.2	127	127	+13	+83	2460	480	+3.1	+19.5	2463.1	499.5
44'?	43.9	24.2	1.1	2.6	11.6	10.2	127	128	+105	−76	2580	1440	+24.7	−17.9	2604.7	1422.1
44²?	44.1	20.3	12.1	3.0	0.5	9.7	126	127	−116	−67	2640	1200	−27.3	−15.7	2612.7	1184.3
d'	43.5	12.0	Bru.								2580	720				
d²	43.6	8.0	2.8	12.8	10.0	12.7	128	255	+72	+01	2580	480	+16.9	+2	2596.9	450.2
R	43.6	7.5	3.9	6.0	8.8	6.8	127	128	+49	−08	2580	420	+11.5	−1.9	2591.5	418.1
d	44.5	13.6	5.9	8.9	6.9	4.0	128	129	+10	+49	2640	780	+2.4	+11.5	2642.4	791.5
P.	16.5	14.6	6.0	8.8	6.8	3.9	128	127	+08	+49	960	840	+1.9	+11.5	961.9	851.5

3317/26 = 127.54 3449/27 = 127.74

1.00

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Measures of Phoebe + Comp Stars.

Nov. 19, 1904

D 10960 = A 3529

	x	y	A.	B.	b.	D.	a+c	B+D	c-a	B-D	x×60	y×60	C-a ×235	B-D ×235		
P	3.8	22.9	Too ft- for meas.													
96	20.2	7.9	10.1	11.9	2.5	0.9	12.6	12.8	-7.6	+11.0	1200	420	-17.9	+25.8	1182.1	445.8
96²	20.4	15.3	7.9	3.0	4.9	9.8	12.8	12.8	-3.0	-6.8	1200	900	-7.0	-16.0	1193.0	884.0
d'	25.2	17.6	10.8	8.0	2.0	4.8	12.8	12.8	-8.8	+3.2	1500	1020	-20.7	+7.5	1479.3	1027.5
d²	25.3	24.9	9.2	12.2	3.4	0.5	12.6	12.7	-5.8	+11.7	1500	1440	-13.6	+27.5	1486.4	1467.5
97	27.0	36.1	12.8	1.8	12.7	11.0	25.5	12.8	-0.1	-9.2	1620	2160	-2	-21.6	1589.8	2138.4
T	30.1	18.9	12.0	12.0	0.7	0.8	12.7	12.8	-11.3	+11.2	1800	1080	-26.6	+26.3	1773.4	1106.3
T?	30.2	26.3	10.1	3.9	2.5	9.0	12.6	12.9	-7.6	-5.1	1800	1560	-17.9	-12.0	1782.1	1548.0
D?	30.6	25.0	4.1	0.1	8.6	12.6	12.7	12.7	+4.5	-12.5	1800	1500	+10.6	-29.4	1810.6	1470.6
P	~~31.9~~ 3.7	~~18.0~~ 22.9	Too ft.													
S'	31.9	18.0	Bright-								1860	1080				
S²	31.9	25.1	0.8	1.0	12.0	11.8	12.8	12.8	+11.2	-10.8	1860	1500	+26.3	-25.4	1886.3	1474.6
98'	32.4	31.3	7.4	2.9	5.3	10.0	12.7	12.9	-2.1	-7.1	1920	1860	-4.9	-16.7	1915.1	1843.3
98²	32.6	38.5	4.6	6.8	8.2	6.0	12.8	12.8	+3.6	+0.8	1920	2280	+8.5	+1.9	1928.5	2281.9
99	33.6	33.6	5.1	9.6	7.7	3.2	12.8	12.8	+2.6	+6.4	1980	1980	+6.1	+15.0	1986.1	1995.0
00	33.8	1.9	1.6	11.8	11.1	0.9	12.7	12.7	+9.5	+10.9	1980	60	+22.3	+25.6	2002.3	85.6
00²	34.1	9.3	11.8	3.1	1.0	9.6	12.8	12.7	-10.8	-6.5	2040	540	-25.4	-15.3	2014.6	524.7
04'	46.9	2.1	1.1	1.0	11.8	11.8	12.9	12.8	+10.7	-10.8	2760	120	+25.1	-25.4	2785.1	94.6
04²	47.1	9.4	11.1	5.5	1.6	7.7	12.7	12.7	-9.5	-1.7	2820	540	-22.3	-4.0	2797.7	536.0
05'	49.1	12.3	11.7	3.0	1.0	9.8	12.7	12.8	-10.7	-6.8	2940	720	-25.1	-16.0	2914.9	704.0
05²	49.3	19.6	9.3	7.0	3.5	5.8	12.8	12.8	-5.8	+1.2	2940	1140	-13.6	+2.8	2926.4	1142.8
03	45.6	39.4	5.0	4.9	7.9	8.0	12.9	12.9	+2.9	-3.1	2700	2340	+6.8	-7.3	2706.8	2332.7
P	3.8	22.9	Too ft.													

2294 / 18 = 127.44

2430 / 19 = 127.89

Image of Phoebe very ft.

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Measures of Phoebe and Comp. Stars.

10.50

Nov 21 1904

D 10961 = a 6006

	x	y	A. B. C. D	A+C B+D	x	y	x×60	y×60	x235	x235		
P	~~12.6~~ 4.0	~~12.6~~ 9.6	4.0 9.6 8.9 3.2	12.9 12.8	+49	+64	720	720	+11.5	+15.0	731.5	735.0
I	1.3	9.9	8.8 ~~3.8~~ 12.0 4.0 0.8	12.8 12.8	−48	+112	60	540	−11.3	+26.3	48.7	566.3
43	3.9	28.9	0.4 12.1 12.3 0.6	12.7 12.7	+119	+115	180	1680	+28.0	+27.0	208.0	1707.0
H	4.1	7.7	11.5 10.0 1.3 2.8	12.8 12.8	−102	+72	240	420	−24.0	+16.9	216.0	436.9
S	7.5	~~8.8~~ 7.8	Bright-				420	480				
40	8.9	1.9	0.5 11.6 12.1 1.1	12.6 12.7	+116	+105	480	60	+27.3	+24.7	507.3	84.7
45	10.3	39.4	9.4 5.0 3.3 7.8	12.7 12.8	−61	−28	600	2340	−14.3	−6.6	585.7	2333.4
P.	12.6	12.6	4.1 9.5 8.7 3.2	12.8 12.7	+46	+63	720	720	+10.8	+14.8	730.8	734.8
I.	10.4	7.9	8.0 12.7 4.9 0.1	12.9 12.8	−31	+126	600	420	−7.3	+29.6	592.7	449.6
46	12.5	30.6	6.9 8.1 5.9 4.7	12.8 12.8	−10	+34	720	1800	−2.4	+8.0	717.6	1808.0
42	18.4	5.9	7.0 12.0 5.9 0.8	12.9 12.8	−11	+112	1080	300	−2.6	+26.3	1077.4	326.3
47	22.3	31.8	9.8 9.6 3.0 3.2	12.8 12.8	−68	+64	1320	1860	−16.0	+15.0	1304.0	1875.0
48	26.4	25.5	7.6 6.2 5.1 6.5	12.7 12.7	−25	−03	1560	1500	−5.9	−7	1554.1	1499.3
44	45.4	16.6	7.2 7.0 5.4 5.8	12.6 12.8	−18	+12	2700	960	−4.2	+2.8	2695.8	962.8
45?	47.3	1.5	8.9 6.0 3.9 6.9	12.8 12.9	−50	−09	2820	60	−11.8	−2.1	2808.2	57.9
P	12.6	12.6	3.9 9.8 8.9 3.0	12.8 12.8	+50	+68	720	720	+11.8	+16.0	731.8	736.0

11.15

1916/15 = 127.73

1917/15 = 127.80

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Measures of Phoebe + Comp Stars.

Nov 21, 1904

D 10947 = A 3913

R	x	y	A. B. 6. D	a+cB+D	c−aB−D	x×60	y×60	×235	×235		
P.	7.9	20.6	Tooft for meas.			420	1200				
19	6.0	20.4	12.7 50 128 7.7	255	127 +01 −27	360	1200	+2	−6.3	330.2	1193.7
20	4.5	~~10.0~~ 9.9	6.1 12.6 6.8 0.1	128	127 +08 +125	240	~~600~~ 540	+1.9	+29.4	241.9	~~629.4~~ 569.4
24	10.1	33.4	11.5 5.6 1.2 7.2	127	128 −12 −16	600	1980	−2.8	−3.8	597.2	1976.2
H	8.9	18.4	1.1 4.9 11.7 8.0	128	129 +106 −31	480	1080	+24.9	−7.3	504.9	1072.7
25	11.3	22.7	9.0 9.0 3.8 3.9	128	129 −52 +51	660	1320	−12.2	+12.0	647.8	1332.0
S	12.0	17.9	Bright-			720	1020				
P	7.9	20.6	Tooft. for meas.			420	780				
T	13.1	13.7	Capital meas. Bu.			780	~~780~~ 1200				
28	22.3	1.2	8.8 2.0 3.8 10.9	126	129 −50 −89	1320	60	−11.8	−20.9	1308.2	39.1
30	23.6	13.4	5.9 5.6 6.9 7.1	128	127 +10 −15	1380	780	+2.4	−3.5	1382.4	776.5
32	25.3	35.3	9.8 3.9 2.9 8.9	127	128 −69 −50	1500	2100	−16.2	−11.8	1483.8	2088.2
34	31.9	18.9	1.2 10.9 11.7 2.0	129	129 +105 +89	1860	1080	+24.7	+20.9	1884.7	1100.9
35	33.5	4.6	5.9 8.4 6.9 4.2	128	126 +10 +42	1980	240	+2.4	+9.9	1982.4	249.9
37	40.7	33.9	4.0 12.6 8.8 0.2	128	128 +48 +124	2400	1980	+11.3	+29.1	2411.3	2009.1
P	7.9	20.6	Tooft.			420	1200				

$127.67 = \frac{1532}{12} \quad \frac{1407}{11}$

127.91

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Measures of Phoebe + Comp stars.

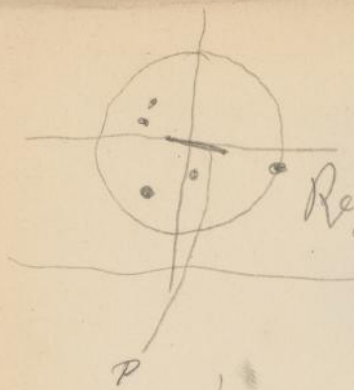
Dec 2, 1904.

D 10972 = a 6167

	x	y	A. B. C. D.	a+c B+D c-a B-D	x×60	y×60	×235	×235	
P	35.6	28.9	Two ft.- for measurement-		2100	1680			
28	2.6	14.5	5.0 6.9 7.9 5.9	129 128+29+10	120	840	+6.8	+2.4	126.8 842.4
49	3.9	39.3	1.0 3.0 11.8 9.7	128 127+108-67	180	2340	+25.4	-15.7	205.4 2324.3
50	5.2	31.0	10.0 12.8 2.6 12.7	126 255-74+01	300	1860	-17.4	+2	282.6 1830.2
I	8.1	26.4	12.1 3.7 0.6 9.0	127 127-115 53	480	1560	-27.0	-12.5	453.0 1547.5
30	9.8	11.3	2.0 3.8 10.8 9.0	128 128+88-52	540	660	+20.7	-12.5 2	560.7 647.5
P	35.6	28.9	Two ft-		2100	1680			
S'	11.0	24.8	Bright-		660	1440			
T	12.3	24.4	9.0 4.9 3.8 8.0	128 129-52-31	720	1440	-12.5	-7.3	707.5 1432.7
31	12.9	23.5	0.6 6.0 12.1 6.8	127 128+115-08	720	1380	+27.0	-1.9	747.0 1378.1
60	29.4	35.5	7.8 6.0 5.0 6.7	128 127-28-07	1740	2100	-6.6	-1.6	1733.4 2098.4
62	39.5	34.2	6.0 2.0 6.9 10.9	129 129+09-89	2340	2040	+2.1	-20.9	2342.1 2019.1
64	42.6	31.4	4.8 4.1 8.0 8.6	128 127+32-45	2520	1860	+7.5	-10.6	2527.5 1849.4
36	44.5	3.6	6.1 8.5 6.7 4.2	128 127+06+43	2640	1802	+1.4	+10.1	2641.4 190.1
P.	35.7	28.9	Two ft.	1406/11 = 127.82 1532/12 = 127.67	2100	1680			

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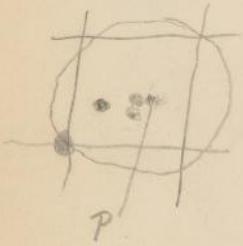
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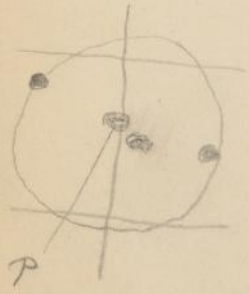
A 3794
D 10297



A 3821
D 10299



A 3824
D 10302



A 3913
D 10947

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Measures of Phoebe & comp. stars.

Dec 12, 1904.

* D 10962 = A 6003

	x	y	A.	B.	C.	D.	a+c B+D	c-a B-D	x	x60	y	x60	x 234	x 234		
P.	15.5	15.1	6.9	0.5	6.0	12.3	129	128	-09	-118	900		900		-2.1	-27.6	897.9	872.4
P.	15.5	15.2	6.1	0.6	6.6	12.2	127	128	+05	-116	900		900		+1.2	-27.1	901.2	872.9
I	3.6	12.7	3.8	9.0	8.9	3.7	127	127	+51	+53	180		720		+11.9	+12.4	191.9	732.4
43	3.5	30.7	5.9	10.0	7.0	2.9	129	129	+11	+71	180		1800		+2.6	+16.6	182.6	1816.6
40	7.4	3.5	8.9	6.0	3.9	6.8	128	128	-50	-08	420		180		-11.7	-1.9	408.3	178.1
S	10.0	11.0?	Bright.								600		660					
46	12.1	32.1	11.8	1.0	0.9	11.9	127	129	-109	-109	720		1920		-25.5	-25.5	694.5	1894.5
T	13.4	10.8	9.0	10.0	3.9	2.9	129	129	-51	+71	780		600		-11.9	+16.6	768.1	616.6
P.	15.4	15.1	7.0	0.9	5.8	11.9	128	128	-12	-110	900		9.000		-2.8	-25.7	897.2	874.3
P.	15.5	15.2	6.0	0.8	6.9	12.0	129	128	+09	-112	900		900		+2.1	-26.2	902.1	873.8
42	16.9	7.2	0.5	2.0	12.2	10.9	127	129	+117	-89	960		420		+27.4 +4.0	-20.8	987.4	399.2
47	21.9	32.7	1.0	9.0	11.8	3.9	128	129	+108	+51	1260		1920		+25.3	+11.9	1985.3	1931.9
48	25.7	26.4	2.9	3.9	10.0	9.0	129	129	+71	-51	1500		1560		+16.6	-11.9	1516.6	1548.1
44	44.4	16.5	8.0	6.0	4.9	6.9	129	129	-31	-09	2640		960		-7.3	-2.1	2632.7	957.9
45	45.6	1.4	5.9	3.9	7.0	9.0	129	129	+11	-51	2700		60		+2.6	-11.9	2702.6	48.1
P.	15.5	15.1	6.9	0.7	5.9	12.1	128	128	-10	-114	900		900		-2.3	-26.7	897.7	873.3
P.	15.5	15.3	6.1	0.5	6.6	12.2	127	127	+05	-117	900		900		+1.2	-27.4	901.2	872.6

23 1665 / 13 = 128.08 ; 54 1678 / 13 = 128.46

* Wrong object - marked for Phoebe. Another marked later and measured on p. 64 Transferred in red ink.

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Measures of Phoebe and Comp. stars

Dec 3, 1904

D 10942 = A 6000

	x	y	a.	B	~~b~~	D	a+c B+D c-a B-D	x×60	y×60	×234	×234		
P	20.6	15.3	4.0	1.9	8.9	11.0	129 129+49 -91	1200	900	+ 11.5	− 21.3	12 11.5	878.7
41	Off Plate ?												
43	4.1	29.4	11.6	3.9	1.2	9.0	128 129 -104 -51	240	1740	− 24.3	− 11.9	215.7	1728.1
S	8.7	12.3	2.9	3.0	9.9	9.8	128 128 +70 -68	480	720	+ 16.4	− 15.9	496.4	704.1
40	9.3	2.3	9.0	3.1	3.7	9.6	127 127 -53 -65	540	120	− 12.4	− 15.2	527.6	104.8
45	10.4	39.8	8.9	10.0	3.9	2.8	128 128 -50 +72	600	2340	− 11.7	+ 16.8	588.3	2356.8
46	12.5	31.0	5.8	12.9	7.0	12.9	128 258 +12 0	720	1860	+ 2.8	0	722.8	1860
P	20.6	15.2	3.9	1.9	9.0	10.9	129 128 +51 -90	1200	900	+ 11.9	− 21.1	1211.9	878.9
S	16.0	11.0?	Bright-					960	660				
42	18.7	6.4	3.1	5.0	9.5	7.9	126 129 +64 -29	1080	360	+ 15.0	− 6.8	1095.0	353.2
T	18.6	11.4	5.1	4.9	7.7	8.0	128 129 +26 -31	1080	660	+ 6.1	− 7.3	1086.1	652.7
47	22.4	32.3	8.8	2.9	4.0	10.0	128 129 -48 -71	1320	1920	− 11.2	− 16.6	1308.8	1903.4
48	26.5	25.9	5.9	12.1	6.9	0.6	128 127 +10 +115	1560	1500	+ 2.3	+ 26.9	1562.3	1526.9
44	45.6	17.2	4.9	2.0	7.9	10.8	128 128 +30 -88	2700	1020	+ 7.0	− 20.6	2707.0	999.4
45	47.6	2.1	5.0	1.1	7.8	11.7	128 128 +28 -106	2820	120	+ 6.6	− 24.8	2826.6	95.2
P	20.6	15.3	4.1	2.0	8.8	10.7	129 127 +47 -87	1200	900	+ 11.0	− 20.4	1211.0	879.6

128.00 1792/14 1924/15

128.27

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Measures of Phoebe on plates remarked by W. H. P.

Dec 31, 1904 H.J.S. Rev.

	x	y	A	B	C	D	a+C	B+D	C-a	B-D	x x 60	y x 60	x 234	x 234	Measures transferred to Fr. 60	
D 10962																
P	15.5	15.1	6.9	0.5	6.0	12.3	129	128	-09	-118	900	900	-2.1	-27.6	897.9	872.4
P	15.4	15.1	7.0	0.9	5.8	11.9	128	128	-12	-110	900	900	-2.8	-25.7	897.2	874.3
P	15.5	15.1	6.9	0.7	5.9	12.1	128	128	-10	-114	900	900	-2.3	-26.7	897.7	873.3
D 10250																
P	14.0	20.6	12.8	8.7	12.8	4.1	256	128	0	+46	840	1200	0.0	+10.7	810.0	1210.7
P	14.0	20.6	12.7	8.5	12.6	4.2	253	127	-1	+43	840	1200	-2	+10.0	809.8	1210.0
P	14.0	20.5	12.8	8.8	12.7	4.0	255	128	-1	+48	840	1200	-2	+11.2	809.8	1211.2
D 10249																
P	7.3	19.3	7.3	2.9	5.6	9.8	129	127	-17	-69	420	1140	-4.0	-16.2	416.0	1123.8
P	7.4	19.3	7.1	3.0	5.6	9.7	127	127	-15	-67	420	1140	-3.5	-15.7	416.5	1124.3
P	7.4	19.3	7.0	3.0	5.6	9.7	126	127	-14	-67	420	1140	-3.3	-15.7	416.7	1124.3

June 13, 1905 — 8.9 2.4 3.9 10.3 W.S

Trans. to Fr. 48, 49

Trans. to Fr. 47, 48

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1904phae.proj.1008L

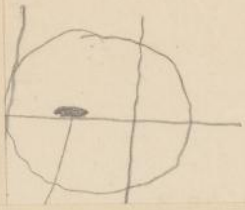
Dec. 28, '04.

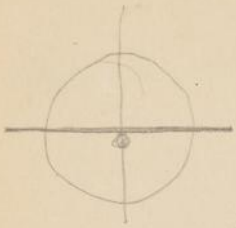


A 4340

P

A 6003
D 10962





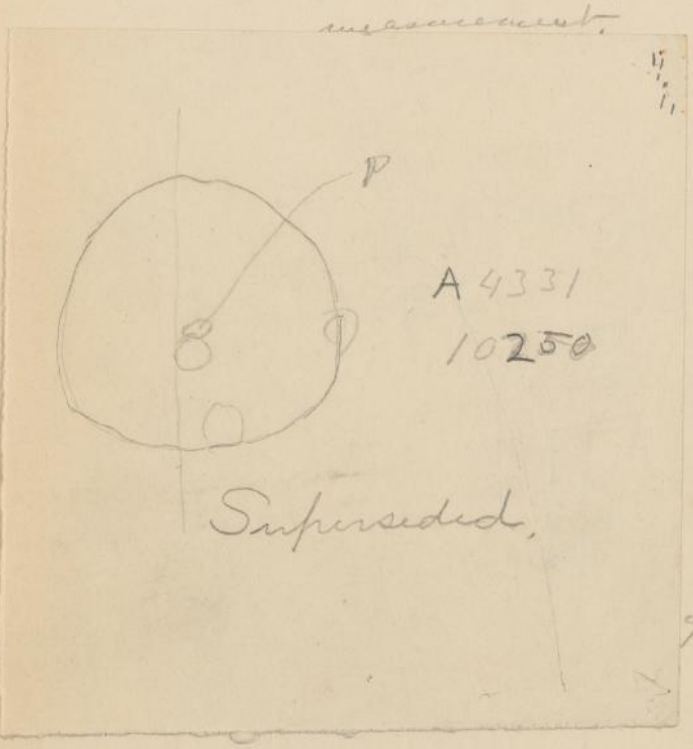
A 3527
D 10959

Not capable of measurement.

A 6000
D 10942



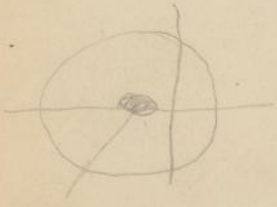
P



P

A 4331
10250

Superseded.



P

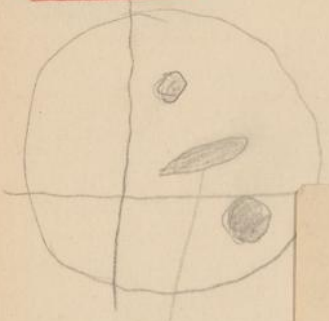
A 6003
D 10962

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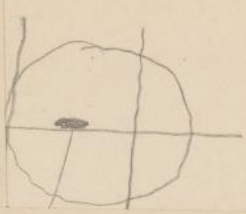
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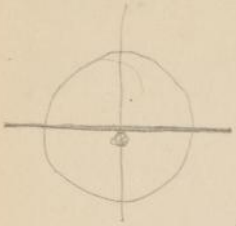
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A 6003
D 10962



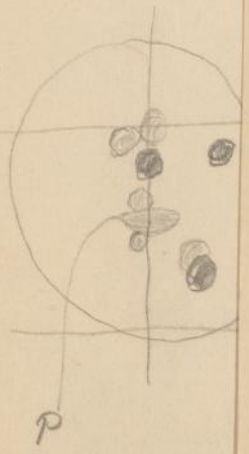
A 4134.0



A 3527
D 10959

Not capable of measurement.

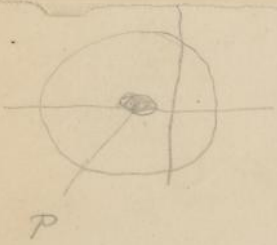
A 6000
D 10942



~~38.6 19.7~~
~~38.6~~
~~9.8~~
~~38.~~
~~39.8 28.3~~
~~11.3~~

0 50 + 22,5

6 10 + 22,5



A 6003
D 10962

Not capable of measurement.

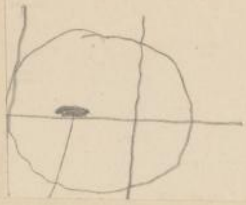
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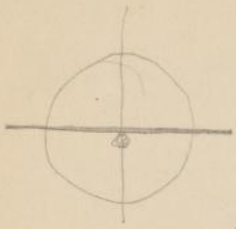
Dec. 28, '04.



A 4340



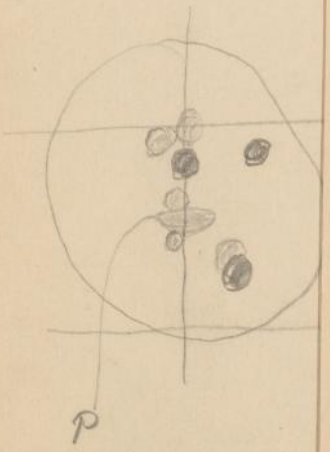
A 6003
D 10962



A 3527
D 10959

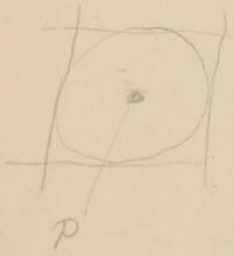
Not capable of measurement.

A 6000
D 10942



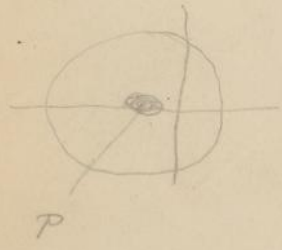


A 3529
D 10960



A 6000
D 10945

Not capable of measurement.



A 6003
D 10962

Not capable of measurement.

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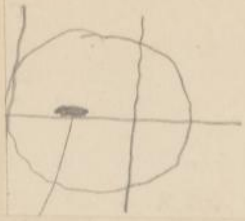
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Dec. 28, '04.



A 4340

P



A 6003

D 10962

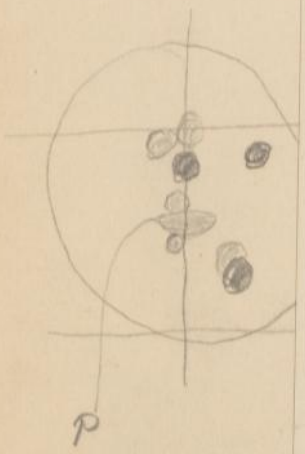
~~2 50 + 7.5 Compr.~~

2 30 + 2.5 Compr.

1 30 + 2.5 "

0 30 + 2.5 "

0 10 + 25 "



P

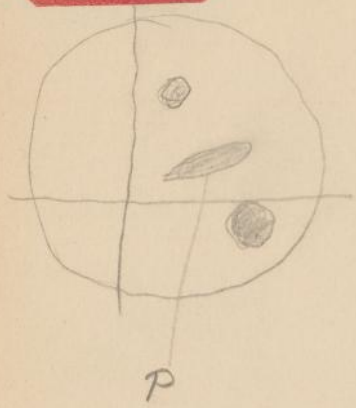
A 6000

D 10942

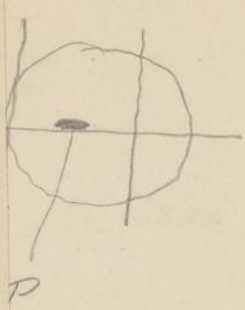
I 33022
33

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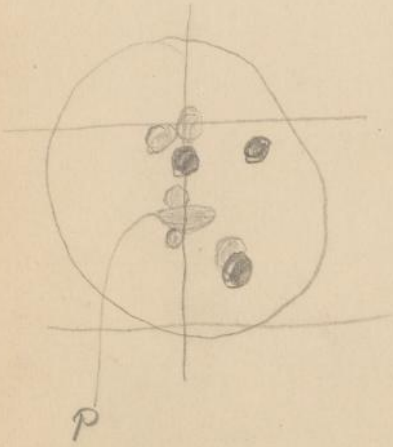
Dec. 28, '04.



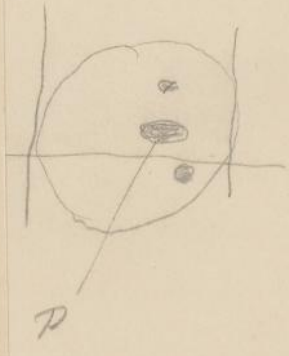
A 4340
D 10249



A 6003
D 10962



A 4331
D 10250



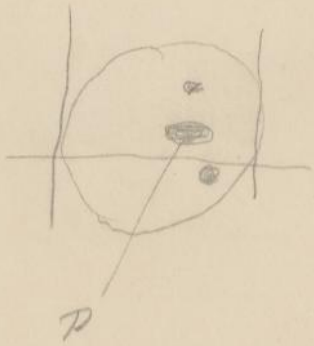
A 6000
D 10942

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A 6003
D 10962



A 6000
D 10942

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Measures of position of stars in vicinity of No. Pole.

April 9, 1910

D 14541 (14×17) Read to left and below-right and above

M. O'Reilly. Rec.

		x	y	A.	B.	C.	D.	a+c	B+D	C−a	B−D
	1a	2.7	35.2	3.0	12.5	12.0	2.6	150	151	+90	+99
	1b	2.4	36.8	9.9	2.0	5.1	13.0	150	150	−48	−110
154 =	2a	3.9	43.6	1.0	5.0	14.0	10.0	150	150	+130	−50
	2b	3.6	45.4	6.0	1.00	9.0	5.0	150	150	+30	+50
152 =	3a	3.7	31.2	3.9	13.0	11.1	2.1	150	151	+72	+109
	3b	3.3	32.8	11.9	3.0	3.1	12.1	150	151	−88	−91
151 =	4a	3.8	25.9	2.5	2.0	12.6	13.0	151	150	+101	−110
	4b	3.3	27.5	12.0	7.1	3.0	8.0	150	151	−90	−09
153 =	5a	4.4	12.6	9.0	6.1	6.0	9.0	150	151	−30	−29
	5b	3.6	14.3	6.0	11.1	9.0	4.0	150	151	+30	+71
	6a	3.8	8.9 ~~10.6~~	1.5	0.5	13.5	14.5	150	150	+120	−140
	6b	3.0	10.6	15.0	6.0	15.1	9.1	301	151	+01	−31
150 =	7a	4.2	4.8	13.0	2.0	2.0	13.0	150	150	−110	−110
	7b	3.3	6.5	12.0	7.5	3.0	7.6	150	151	−90	−01
	8a	5.3	44.6	13.0	7.0	2.1	8.0	151	150	−109	−10
	8b	4.8	46.3	2.5	12.0	12.5	3.1	150	151	+100	+89
164 =	9a	6.1	32.0	~~14.5~~ 14.5	0.5	0.5	14.5	150	150	−140	−140
	9b	5.5	33.6	7.0	6.0	8.1	9.0	151	150	+11	−30
160 =	10a	5.7	22.6	2.5	5.0	12.6	10.0	151	150	+101	−50
	10b	5.2	24.3	13.1	10.5	2.0	4.5	151	150	−111	+65
	11a	7.4	31.3	10.1	12.0	4.9	3.1	150	151	−52	+89
	11b	6.7	32.8	8.0	2.9	12.0	12.1	150	150	+90	−92
169 =	12a	7.4	34.6	8.5	4.9	6.5	10.1	150	150	−20	−52
	12b	6.7	36.4	3.5	11.0	11.5	4.1	150	151	+80	+69
	13a	7.3	7.4	10.9	10.9	4.1	4.0	150	149	−68	+69
	13b	6.4	8.8	9.0	2.0	6.1	13.0	151	150	−29	−110
								4057	3910		
								27 =	26 =		
								150.26	150.38		

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D14541 (cont'd)

	N	ny	A.	B.	b.	D.	a+c	B+D	c-a	B-D.
14a	7.4	6.4	8.1	10.9	7.0	4.1	151	150	−11	+68
14b	~~7.5~~ 6.5	7.9	7.0	1.5	8.0	~~4.5~~ 3.5	150	150	+10	−120
15a	8.5	5.3	6.9	11.5	8.1	3.5	150	150	+12	+80
15b	7.6	6.8	6.0	3.0	9.1	12.0	151	150	+31	−90
17b = 16a	8.3	32.5	12.1	7.5	3.0	7.6	151	151	−91	−01
16b	7.6	34.2	5.0	13.5	10.1	1.5	151	150	+51	+120
18a = 17a	9.4	26.7	8.1	3.0	7.0	12.0	151	150	−11	−90
17b	8.9	28.4	2.0	9.5	13.0	5.6	150	151	+110	+39
18b = 18a	9.9	24.4	1.9	9.9	13.1	5.0	150	149	+112	+49
18b	9.3	25.9	11.5	1.0	3.5	14.0	150	150	−80	−130
41 = 19a	10.6	20.4	5.5	11.0	9.5	4.0	150	150	+40	+70
19b	9.9	21.8	1.0	2.5	14.0	12.6	150	151	+130	−101
29 = 20a	10.6	19.1	4.9	14.5	10.1	0.5	150	150	+52	+140
20b	10.0	20.6	0.1	~~5.0~~ 6.0	14.9	9.0	150	150	+148	−30
21a	9.6	17.9	6.0	1.0	9.1	14.0	151	150	+31	−130
21b	8.9	19.5	1.5	7.5	13.6	7.5	151	150	+121	00
22a	11.1	10.9	14.0	2.0	1.1	13.0	151	150	−129	−110
22b	10.3	12.4	11.5	9.0	3.5	6.0	150	150	−80	+30
23a	11.5	10.4	8.0	9.9	7.0	5.1	150	150	−10	+48
23b	9.6	11.9	6.0	1.5	9.1	13.5	151	150	+31	−120
24a	11.4	4.5	9.5	8.0	5.5	7.0	150	150	−40	+10
24b	10.4	6.0	8.9	14.9	6.1	0.1	150	150	−28	+148
34 = 25a	10.5	27.7	7.5	3.6	7.5	11.4	150	150	00	−78
25b	9.9	29.4	1.1	10.1	13.9	5.0	150	151	+128	+51
188 = 26a	10.4	25.4	9.0	9.9	6.0	5.1	150	150	−30	+48
26b	9.8	26.9	3.0	1.0	12.1	14.0	151	150	+91	−130
							3910/26 = 150.38	3903/26 = 150.12		

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D14541 (cont'd)

			a.	B.	b.	D.	a+c	B+D	C-a	B-D
	α	N								
202 = 27a	12.2	24.1	12.5	14.0	2.6	1.0	151	150	−99	+130
27b	11.5	25.6	6.9	6.0	8.2	9.0	151	150	+13	−30
208 = 28a	12.6	44.5	6.0	8.0	9.0	7.0	150	150	+30	+10
28b	12.3	46.0	11.0	15.0	4.1	15.0	151	300	−69	00
29a	12.8	43.1	3.0	13.1	12.0	2.0	150	151	+90	+111
29b	12.5	44.6	~~7.0~~ 8.0	5.5	7.0	9.5	150	150	−10	−40
30a	12.9	35.2	0.5	13.0	14.6	2.0	151	150	+141	+110
30b	12.5	36.6	8.0	5.0	7.1	10.0	151	150	−09	−50
31a	13.2	~~13.4~~ 30	13.0	11.0	2.1	4.1	151	151	−109	+69
31b	12.6	31.8	6.0	29	9.0	12.1	150	150	+30	−92
32a	14.1	29.4	14.0	9.0	1.0	6.0	150	150	−130	+30
32b	13.5	30.9	7.0	1.5	8.0	~~16~~ 3	150	151	+10	−121
213 = 33a	14.0	21.0	0.1	15.0	14.9	15.0	150	300	+148	00
33b	14.4	22.5	10.9	7.1	4.1	7.9	150	150	−68	−08
40 = 34a	13.7	18.3	3.1	12.0	12.0	3.0	151	150	+89	+89
34b	13.1	19.7	14.0	4.5	1.0	10.6	150	151	−130	−61
35a	13.4	16.4	10.1	9.1	4.9	6.1	150	152	−52	+30
35b	12.5	17.9	7.0	1.5	8.0	13.5	150	150	+10	−120
210 = 36a	13.7	2.9	2.9	1.5	12.1	13.5	150	150	+92	−120
36b	12.8	4.4	2.0	9.0	13.0	6.1	150	151	+110	+29
214 = 37a	14.6	3.8	5.9	1.0	9.1	14.0	150	150	+32	−130
37b	13.6	5.4	5.0	9.0	10.0	6.0	150	150	+50	+30
158 = 38a	5.1	34.5	13.5	6.5	1.5	8.5	150	150	−120	−20
38b	4.6	36.2	6.0	12.1	9.1	3.0	151	151	+31	+91
39a	13.2	45.6	12.5	6.0	2.5	9.0	150	150	−100	−30
39b	12.9	47.1	2.1	13.5	13.0	1.5	151	150	+109	+120
							3909/26	4208/28		
							150.35	150.29		

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D14541 (cont'd)

	t	y	a.	B.	b.	D.	A+C	B+D	C−a	B−D
218 = 40a	14.4	43.8	9.5	3.0	5.5	12.1	150	151	− 40	− 91
40b	14.1	45.4	15.0	10.1	15.1	5.0	301	151	+ 01	+ 51
41a	14.6	42.6	3.1	5.0	11.9	10.0	150	150	+ 88	− 50
41b	14.4	44.2	8.5	12.5	6.5	2.6	150	151	− 20	+ 99
30 = 42a	14.6	34.1	5.1	13.1	9.9	1.9	150	150	+ 48	+ 112
42b	14.1	35.6	12.9	6.0	2.1	9.0	150	150	− 108	− 30
225 = 43a	15.4	35.7	9.9	2.5	5.1	12.5	150	150	− 48	− 100
43b	14.9	37.4	1.5	10.0	12.5	9.0	150	150	+ 120	+ 50
227 = 44a	15.5	36.4	8.0	11.0	7.0	4.0	150	150	− 10	+ 70
44b	15.0	37.7	14.5	4.0	0.5	11.1	150	151	− 140	− 71
229 = 45a	15.9	21.9	0.5	2.1	14.6	13.0	151	151	+ 141	− 109
45b	15.4	23.4	10.1	10.0	4.9	5.0	149	150	− 52	+ 50
224 = 46a	15.6	20.6	4.5	6.0	10.5	9.0	150	150	+ 60	− 30
46b	15.0	22.1	15.0	14.0	15.0	1.0	300	150	00	+ 130
226 47a	15.9	15.6	1.0	5.0	14.1	10.1	151	151	+ 131	− 51
47b	15.2	17.2	12.5	12.5	2.6	2.5	151	150	− 99	+ 100
223 = 48a	15.9	6.3	1.0	11.5	14.0	3.5	150	150	+ 130	+ 80
48b	15.0	7.7	14.9	4.5	0.1	10.6	150	151	− 148	− 61
49a	16.8	26.8	2.0	3.0	13.1	12.0	151	150	+ 111	− 90
49b	16.4	28.4	10.9	~~10.5~~ 11.0	4.1	4.0	150	150	− 68	+ 70
50a	17.2	18.9	12.0	1.0	3.0	14.0	150	150	− 90	− 130
50b	16.5	20.4	8.0	9.5	7.0	5.6	150	150	− 10	+ 39
51a	15.3	38.9	11.0	2.0	4.0	13.0	150	150	− 70	− 110
51b	14.7	40.4	2.1	9.9	12.9	5.1	150	150	+ 108	+ 48
52a	17.5	38.4	8.0	12.0	6.9	3.1	149	151	− 11	+ 89
52b	17.0	39.6	15.0	5.0	15.1	10.0	301	150	+ 01	− 50
							4354	3908		
							29	26		
							150.14	150.31		

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D14541 (cont.)

			A.	B.	b.	D.	a+C	B+D	C−a	B−D
	α	ν								
47 = 53a	17.9	34.4	0.5	9.5	14.5	5.6	150	151	+140	+39
53b	17.4	35.8	8.0	2.0	7.0	13.0	150	150	−10	−110
54a	17.5	33.5	6.1	7.5	9.0	7.5	151	150	+29	00
54b	17.1	34.9	13.9	0.5	1.1	14.5	150	150	−128	−140
55a	18.5	5.5	8.0	7.5	7.0	7.5	150	150	−10	00
55b	17.6	7.0	8.0	0.5	7.0	14.6	150	151	−10	−141
240 = 56a	18.6	4.4	4.1	10.0	11.0	5.0	151	150	+69	+50
56b	17.7	5.7	3.5	3.5	11.6	11.5	151	150	+81	−80
244 = 57a	19.9	10.4	1.9	9.0	13.1	6.0	150	150	+112	+30
57b	19.1	11.7	14.9	3.1	0.1	12.0	150	151	−148	−89
256 = 58a	21.0	11.5	15.0	6.0	15.1	9.0	301	150	+01	−30
58b	20.2	13.0	12.6	15.0	2.5	15.1	151	301	−101	−01
38 = 59a	20.4	33.5	9.9	7.0	5.1	8.0	150	150	−48	−10
59b	19.8	34.9	2.0	1.0	13.0	14.0	150	150	+110	−130
42 = 60a	20.6	31.7	5.5	3.1	9.6	11.9	151	150	+41	−88
60b	20.1	33.3	13.1	12.0	1.9	3.0	150	150	−112	+90
48⁸ = 61a	20.6	30.6	5.0	4.9	7.0	10.1	150	150	+30	−52
61b	20.1	32.1	14.0	13.5	1.0	1.5	150	150	−130	+120
48³ = 62a	20.8	26.9	2.1	2.0	13.0	13.0	151	150	+109	−110
62b	20.4	28.4	11.1	10.9	3.9	4.1	150	150	−72	+68
63a	21.1	27.1	13.0	14.9	2.0	0.2	150	151	−110	+147
63b	20.5	28.4	6.9	9.0	8.1	6.0	150	150	+12	+30
36 = 64a	22.2	23.8	12.0	3.0	3.0	12.1	150	151	−90	−91
64b	21.5	25.2	6.5	12.0	8.5	3.0	150	150	+20	+90
33 = 65a	21.5	41.9	7.9	0.9	7.1	14.1	150	150	−08	−132
65b	21.2	43.4	13.1	10.0	2.0	5.1	151	151	−111	+49
							4058/27	4057/27		
							150.30	150.26		

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D 14541 cont

		x	y	A.	B.	C.	D.	A+C	B+D	C−a	B−D
28 =	66a	23.1	41.1	14.1	14.0	1.0	1.0	151	150	−131	+130
	66b	22.6	42.5	5.0	7.5	10.0	7.6	150	151	+50	−01
277 =	67a	24.2	43.9	120.	2.1	3.1	13.0	151	151	−89	−99
	67b	23.8	45.3	2.0	11.9	13.0	3.1	150	150	+110	+88
46 =	68a	25.1	39.3	13.5	11.4	1.5	3.6	150	150	−120	+78
	68b	24.6	40.6	5.0	6.5	10.0	8.5	150	150	+50	−20
	69a	25.3	32.7	12.5	4.9	2.6	10.1	151	151	−99	−52
	69b	24.6	34.1	5.0	13.5	10.0	1.5	150	150	+50	+120
49 =	70a	24.6	23.1	3.5	14.9	11.5	0.1	150	150	+80	+148
	70b	24.1	24.4	13.9	9.1	1.1	7.0	150	151	−128	+31
50 =	71a	25.4	24.4	10.0	9.9	5.0	5.1	150	150	−50	+48
	71b	24.6	25.8	4.5	3.1	10.5	12.0	150	151	+60	−89
315 =	72a	26.1	36.2	14.0 ~~3.5~~	12.1 ~~13.0~~	1.1 ~~11.6~~	3.0 ~~2.0~~	151	151	−129	+91
	72b	25.6	37.5	5.1 ~~12.1~~	7.6 ~~8.0~~	9.9 ~~2.9~~	7.5 ~~7.0~~	150	151	+48	+01
315 =	73a	25.7	27.2	3.5	13.0	11.6	2.0	151	150	+81	+110
	73b	25.3	28.5	12.1	8.0	2.9	7.0	150	150	−92	+10
	74a	25.8	10.9	2.5	2.0	12.6	13.0	151	150	+101	−110
	74b	24.0	12.3	15.0	12.1	15.0	3.0	300	151	00	+91
	75a	26.4	41.9	8.1	0.9	6.9	14.1	149	150	−12	−132
	75b	26.1	43.3	14.0	11.0	1.0	4.0	150	150	−130	+70
52 =	76a	26.9	30.6	0.5	5.0	14.5	10.1	150	151	+140	−51
	76b	26.4	32.0	8.9	15.0	6.1	15.1	150	301	−28	−01
44 =	77a	26.6	18.8	5.0	2.0	10.0	13.1	150	151	+50	−111
	77b	25.9	20.3	0.9	12.0	14.1	3.0	150	150	+132	+90
	78a	27.2	17.1	12.5	14.0	2.6	1.1	151	151	−99	+129
	78b	26.4	18.5	9.0	9.1	6.0	6.0	150	151	−30	+31
								4056/27	4063/27		
								150.22	150.48		

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D 14541 (cont)

	N	y	a.	B.	b.	D.	a+C	B+D	C-a	B-D
79a	27.6	12.4	6.0	8.0	9.0	7.1	150	151	+30	+09
79b	26.7	13.7	3.0	3.5	12.0	11.5	150	150	+90	−80
80a	27.5	43.5	7.0	8.0	8.1	7.0	151	150	+11	+10
80b	27.3	44.8	12.0	3.0	3.1	12.0	151	150	−89	−90
81a	27.7	34.5	2.6	6.9	12.4	8.1	150	150	+98	−12
81b	27.4	35.9	10.1	2.1	5.0	12.9	151	150	−51	−108
295 = 82a	28.5	43.1	7.5	13.9	7.6	1.1	151	150	+01	+128
82b	28.2	44.4	12.9	9.5	2.1	5.6	150	151	−108	+39
32 = 83a	29.9	40.9	2.0	0.5	13.0	14.5	150	150	+110	−140
83b	29.5	42.3	8.0	11.9	7.0	3.1	150	150	−10	+88
29 = 84a	30.2	33.9	12.9	1.5	2.1	13.5	150	150	−108	−120
84b	29.6	35.2	4.9	12.9	10.1	2.2	150	151	+52	+107
51 = 85a	30.6	29.6	4.5	5.4	10.5	9.6	150	150	+60	−42
85b	30.2	30.9	12.9	1.5	2.1	13.5	150	150	−108	−120
86a	29.9	27.1	0.9	13.0	14.1	2.0	150	150	+132	+110
86b	29.4	28.4	9.9	9.0	5.1	6.1	150	151	−48	+29
87a	30.6	28.6	5.0	5.9	10.0	9.1	150	150	+50	−32
87b	30.1	29.9	13.5	2.0	1.6	13.0	151	150	−119	−110
~~299~~ 301 = 88a	30.4	18.0	8.5	15.0	6.5	15.1	150	301	−20	−01
88b	29.6	19.4	4.5	11.0	10.5	4.1	150	151	+60	+69
299 = 89a	30.1	~~19.6~~ 18.4	14.0	14.5	1.0	0.5	150	150	−130	+140
89b	29.4	19.6	10.0	5.1	5.1	10.0	151	151	−49	−49
304 = 90a	31.4	6.5	10.9	7.5	4.1	7.5	150	150	−68	00
90b	30.4	7.7	9.5	3.9	5.6	11.1	151	150	−39	−72
91a	31.3	34.6	11.9	6.5	3.1	8.5	150	150	−88	−20
91b	30.7	35.8	3.5	2.5	11.6	12.5	151	150	+81	−100
							3908	4057		
							26	27		
							150.31	150.26		

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D 11541 (cont)

	x	y	A.	B.	b.	D.	a+c	B+D	C-a	B-D
92a	31.4	33.9	10.1	0.9	5.0	14.1	151	150	−51	−132
92b	30.8	35.3	2.0	11.9	13.0	3.1	150	150	+110	+88
93a	32.3	15.2	12.0	13.1	3.0	2.0	150	151	−90	+111
93b	32.4	16.4	8.5	9.9	6.6	5.1	151	150	−19	+48
319=94a	32.5	6.5	7.9	7.0	7.1	8.0	150	150	−08	−10
94b	31.6	7.7	6.5	3.1	8.6	12.0	151	151	+21	−89
95a	32.2	44.3	13.0	11.0	2.0	4.0	150	150	−110	+70
95b	31.7	45.5	3.1	7.5	12.0	7.5	151	150	+89	00
96a	33.1	24.4	13.9	10.5	1.1	4.5	150	150	−128	+60
96b	32.5	25.6	8.0	7.0	7.0	8.0	150	150	−10	−10
27=97a	33.4	24.6	10.0	6.5	5.0	8.5	150	150	−50	−20
97b	32.6	25.7	4.5	3.1	10.5	11.9	150	150	+60	−88
323=98a	33.4	14.6	10.5	4.5	4.6	10.5	151	150	−59	−60
98b	32.5	15.9	7.5	1.1	7.5	14.0	150	151	00	−129
99a	33.1	10.5	13.5	7.9	1.5	7.1	150	150	−120	+08
99b	32.4	11.6	11.1	4.4	3.9	10.6	150	150	−72	−62
100a	34.2	46.4	13.0	8.5	2.0	6.5	150	150	−110	+20
100b	33.8	47.6	2.6	5.5	12.4	9.5	150	150	+98	−40
101a	34.2	43.4	13.0	9.8	2.0	5.2	150	150	−110	+46
101b	33.7	44.6	3.0	5.9	12.0	9.1	150	150	+90	−32
334=102a	34.3	38.7	12.1	3.0	2.9	12.0	150	150	−92	−90
102b	33.7	40.0	3.1	15.0	12.0	15.0	151	300	+89	00
329=103a	34.4	5.7	11.0	2.0	4.0	13.0	150	150	−70	−110
103b	33.4	7.1	10.0	14.0	5.1	1.0	151	150	−89	+130
104a	34.9	4.4	1.0	8.5	14.0	6.6	150	151	+130	+19
104b	34.0	5.6	0.1	5.5	14.9	9.6	150	151	+148	−41
							3907/26 = 150.27	4055/27 = 150.19		

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DM+54 1 (cont)

	x	y	a.	B.	b.	D.	a+c	B+D	C−a	B−D
105a	34.5	10.6	8.0	3.9	7.0	11.1	150	150	−10	−72
105b	33.6	11.9	5.5	1.0	~~10.0~~ 9.5	14.1	150	151	+40	−131
106a	34.9	10.4	1.5	10.0	13.6	5.1	151	151	+121	+49
106b	34.0	11.5	14.1	7.0	1.0	8.0	151	150	−131	−10
107a	35.4	9.4	11.0	11.9	4.0	3.1	150	150	−70	+88
107b	34.4	10.4	~~8.0~~ 9.0	9.0	6.0	6.0	150	150	−30	+30
341=108a	36.1	7.9	14.5	0.9	0.5	14.1	150	150	−140	−132
108b	35.2	9.2	13.0	13.1	2.1	1.9	151	150	−109	+112
109a	35.6	11.4	4.0	9.5	11.1	5.6	151	151	+71	+39
109b	34.9	12.5	1.5	6.9	13.5	8.1	150	150	+120	−12
339=110a	35.6	13.4	4.0	11.0	11.0	4.1	150	151	+70	+69
110b	34.9	14.5	1.5	8.0	13.6	7.0	151	150	+121	+10
45=111a	35.1	28.7	13.5	4.5	1.5	10.6	150	151	−120	−61
111b	34.5	29.9	7.1	1.5	8.0	13.5	151	150	+09	−120
343=112a	35.7	41.6	2.9	6.0	12.1	9.0	150	150	+92	−30
112b	35.4	42.7	8.5	3.0	6.5	12.0	150	150	−20	−90
113a	36.4	41.4	11.1	10.5	3.9	4.5	150	150	−72	+60
113b	35.8	42.5	2.0	8.0	13.0	6.9	150	149	+110	+11
114a	37.2	16.3	13.1	11.0	1.9	4.0	150	150	−112	+70
114b	36.4	17.4	9.5	8.9	5.5	6.1	150	150	−40	+28
347=115a	37.5	7.4	8.1	9.5	6.9	5.5	150	150	−12	+40
115b	36.5	8.5	7.0	7.0	8.0	8.1	150	151	+10	+11
116a	37.6	5.7	6.1	3.0	8.9	12.0	150	150	+28	−90
116b	36.6	6.9	5.0	0.9	10.0	14.2	150	151	+50	−133
117a	36.4	6.0	7.9	15.0	7.1	15.0	150	300	−08	00
117b	35.5	7.3	7.0	12.5	8.0	2.5	150	150	+10	+100
							3906/26	4056/27		
							150.23	150.22		

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D14541 (cont)

	x	y	a.	B.	b.	D.	a+C	B+D	C-a	B-D
118a	37.3	41.4	12.0	9.5	3.0	5.6	150	151	−90	+39
118b	36.7	42.5	2.9	7.0	12.1	8.0	150	150	+92	−10
119a	38.4	24.1	9.0	14.5	6.0	0.5	150	150	−30	+140
119b	37.7	25.3	3.5	5.5	11.6	9.5	151	150	+81	−40
120a	38.6	14.3	4.0	12.0	11.1	2.9	151	149	+71	+91
120b	37.9	15.4	0.9	10.0	14.1	5.0	150	150	+132	+50
358 = 121a	39.1	10.4	14.5	10.1	0.5	5.0	150	151	−140	+51
121b	38.4	11.4	12.1	8.0	3.0	7.0	151	150	−91	+10
362 = 122a	39.1	32.4	13.5	10.5	1.5	4.6	150	151	−120	+59
122b	38.6	33.5	6.1	8.0	8.9	7.0	150	150	+28	+10
363 = 123a	39.6	23.2	4.5	12.0	10.5	3.0	150	150	+60	+90
123b	39.1	24.4	14.5	11.0	0.6	4.0	151	150	−139	+70
364 = 124a	39.4	41.1	9.1	13.5	5.9	1.6	150	151	−32	+119
124b	39.0	42.4	15.0	11.5	15.0	3.5	300	150	0	+80
365 = 125a	40.1	26.1	14.0	14.5	1.0	0.6	150	151	−130	+139
125b	39.5	27.2	8.0	12.9	7.0	2.2	150	151	−10	+107
126a	40.4	20.5	10.9	7.5	4.1	7.6	150	151	−68	−01
126b	39.6	21.6	6.9	6.1	8.0	8.9	149	150	+11	−28
127a	39.7	13.7	2.5	3.0	12.5	12.0	150	150	+100	−90
127b	39.0	14.9	14.9	1.1	0.1	14.0	150	151	−148	−129
128a	40.4	8.9	10.0	0.5	5.1	14.5	151	150	−149	−140
128b	39.5	10.1	8.0	14.1	7.0	0.9	150	150	−10	+132
129a	40.4	8.4	11.0	10.9	4.0	4.1	150	150	−70	+68
129b	39.4	9.4	9.0	8.9	6.0	6.1	150	150	−30	+28
130a	40.9	3.1	0.5	13.5	14.5	1.6	150	151	+140	+119
130b	39.9	4.3	15.0	12.0	15.1	3.0	301	150	+01	+90
							4205	3908		
							28	26		
							150.18	150.31		

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D 145 41 (cont)

	x	y	a.	73.	b.	D.	a+C	B+D	C-a	B-D
131a	41.1	6.1	14.5	13.1	0.5	2.0	150	151	-140	+111
131b	40.2	7.3	13.5	11.9	1.5	3.2	150	151	-120	+87
370 = 132a	41.0	13.3	15.0	11.1	15.0	3.9	300	150	0	+72
133b	40.4	14.4	12.4	9.9	2.6	5.1	150	150	-98	+48
134a	40.8	17.2	2.1	12.5	13.0	2.6	151	151	+109	+99
134b	40.1	18.4	13.5	11.0	1.6	4.0	151	150	-119	+70
135a	43.2	37.3	12.9	11.0	2.2	4.1	151	151	-107	+69
135b	42.6	38.4	4.0	10.0	11.0	5.1	150	151	+70	+49
136a	41.9	41.4	1.0	11.0	14.1	4.0	151	150	+131	+70
136b	41.6	42.4	6.5	9.9	8.6	5.1	151	150	+21	+48
137a	42.2	30.0	12.9	0.1	2.1	14.9	150	150	-108	-148
137b	41.6	31.1	5.5	14.0	9.6	1.0	151	150	+41	+130
138a	41.9	16.4	0.5	6.0	14.5	9.0	150	150	+140	-30
138b	41.3	17.6	12.0	4.9	3.0	10.1	150	150	-90	-52
139a	42.4	~~4.4~~ 3.4	10.5	8.0	4.5	7.0	150	150	-60	+10
139b	41.4	4.6	10.5	6.9	4.6	8.1	151	150	-59	-12
140a	42.9	44.6	0.1	5.0	14.9	10.0	150	150	+148	-50
140b	42.6	45.7	5.0	3.6	10.0	11.4	150	150	+50	-78
141a	42.5	31.0	7.5	15.0	7.6	15.0	151	300	+01	0
141b	41.9	32.1	0.5	14.0	14.6	1.0	151	150	+141	+130
142a	42.3	30.0					} Measured twice by mistake.			
142b	41.6	31.1								
378 = 143a	43.0	18.4	15.1	10.0	15.0	5.0	301	150	-01	+50
143b	42.4	19.4	11.0	8.9	4.0	6.1	150	150	-70	+28
144a	43.3	14.2	12.0	12.1	3.0	3.0	150	151	-90	+91
144b	42.5	15.3	9.0	11.1	6.0	3.8	150	149	-30	+72
							3910/26	3755/25		
							150.38	150.20		

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D14541 (cont)

	x	y	a.	B.	b.	D.	a+b	B+D	C-a	B-D
145a	43.4	14.4	10.5	8.5	4.6	6.6	151	151	−59	+19
145b	42.5	15.5	7.5	7.9	7.6	7.1	151	150	+01	+08
385 = 146a	44.4	5.1	11.0	14.0	4.1	1.0	151	150	−69	+130
146b	43.4	6.2	10.0	13.0	5.1	1.9	151	149	−49	+111
147a	43.3	31.4	11.9	8.0	3.1	7.0	150	150	−88	+10
147b	42.6	32.5	4.0	7.0	11.1	8.1	151	151	+71	−11
148a	42.9	22.4	1.0	10.0	14.1	5.0	151	150	+131	+50
148b	42.4	23.4	11.1	8.0	3.9	7.0	150	150	−72	+10
149a	44.1	19.4	14.0	8.0	1.0	7.0	150	150	−130	+10
149b	43.4	20.5	9.5	7.1	5.5	8.0	150	151	−40	−09
150a	44.6	46.4	4.5	10.0	10.5	4.9	150	149	+60	+51
150b	44.4	47.4	9.0	9.5	6.0	5.6	150	151	−30	+39
151a	44.7	46.6	2.9	6.0	12.1	9.0	150	150	+92	−30
151b	44.5	47.6	7.0	5.5	8.0	9.6	150	151	+10	−41
152a	45.1	41.4	14.5	10.5	0.5	4.6	150	151	−140	+59
152b	44.6	42.4	5.0	10.0	10.1	5.1	151	151	+51	+49
153a	44.8	21.5	3.0	7.9	12.0	7.2	150	151	+90	+07
153b	44.1	22.6	13.0	7.0	2.1	8.0	151	150	−109	−10
154a	45.0	26.4	15.0	9.0	15.1	6.0	301	150	+01	+30
154b	44.4	27.5	9.5	8.1	5.6	7.0	151	151	−39	+11
155a	45.4	24.6	10.9	5.0	4.1	10.1	150	150	−68	−50
155b	44.6	25.7	5.0	4.0	10.0	10.9	150	149	+50	−69
156a	44.7	23.1	3.5	13.5	11.5	1.5	150	150	+80	+120
156b	44.1	24.2	13.5	12.9	1.6	2.1	151	150	−119	+108
157a	46.5	33.5	6.1	7.5	8.9	7.5	150	150	+28	0
157b	46.1	34.6	13.5	7.0	1.5	8.0	150	150	−120	−10
							4061/27	3906/26		
							150.41	150.23		

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April 12, 1910.

D 14541 (cont)

	x'	y	a.	B.	b.	D.	a+b	B+D	c-a	B-D
158a	48.3	35.9	11.6	1.0	3.5	14.0	151	150	− 81	− 130
158b	47.7	36.9	3.1	1.0	11.9	14.0	150	150	+ 88	− 130
159a	49.3	36.4	13.0	9.0	2.1	6.0	151	150	− 109	+ 30
159b	48.6	37.4	4.5	9.0	10.5	6.0	150	150	+ 60	+ 30
160a	49.7	34.4	3.0	9.5	12.1	5.5	151	150	+ 91	+ 40
160b	49.4	35.4	10.1	9.9	5.0	5.1	151	150	− 51	+ 48
161a	48.3	28.7	12.0	3.1	3.1	12.0	151	151	− 89	− 89
161b	47.6	29.7	5.1	3.0	9.9	12.0	150	150	+ 48	− 90
386= 162a	~~48.5~~ 49.3	23.4	12.5	10.0	2.5	5.0	150	150	− 100	+ 50
162b	48.5	24.4	7.1	10.5	7.9	4.5	150	150	+ 08	+ 60
163a	49.5	21.5	7.0	6.1	8.0	9.0	150	151	+ 10	− 29
163b	48.8	22.5	2.0	7.0	13.1	8.0	151	150	+ 111	− 10
164a	49.5	20.4	8.0	9.5	7.0	6.0	150	155	− 10	+ 35
164b	48.7	21.4	3.5	9.5	11.6	5.5	151	150	+ 81	+ 40
165a	49.4	15.7	10.9	2.5	4.1	12.5	150	150	− 68	− 100
165b	48.5	16.7	7.5	3.0	7.6	12.0	151	150	+ 01	− 90
166a	50.3	13.1	12.0	13.0	3.0	2.1	150	151	− 90	+ 109
166b	49.4	14.1	9.5	13.1	5.6	1.9	151	150	− 39	+ 112
167a	49.3	42.0	12.5	0.5	2.5	14.6	150	151	− 100	− 141
167b	48.7	42.9	2.9	0.5	12.1	14.6	150	151	+ 92	− 141
~~168a~~										

3009 / 20 = 150.45 3010 / 20 = 150.50

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Measured positions of stars in vicinity of No. Pole

May 6, 1910

D 14584 (14×17)

		x	y	a.	B.	C.	D.
	1	2.1	31.9	13.0	1.0	2.0	14.0
	2	2.5	35.1	7.5	14.0	7.5	1.0
	3	2.5	32.6	6.8	6.0	8.3	9.0
	4	2.1	24.6	14.0	6.9	1.0	8.1
	5	2.3	23.3	10.5	10.5	4.5	4.6
	6	2.7	22.7	4.0	4.5	11.0	10.5
154 =	7	3.6	4~~7~~6 (3)				
152 =	8	3.5	31.1				
151 =	9	3.5	25.8				
	10	3.1	24.1				
	11	3.6	11.5				
	12	3.5	8.9				
150 =	13	3.8	4.7				
	14	4.8	44.5				
	15	4.9	44.7				
158 =	16	4.8	34.5				
153 =	17	4.1	12.5				
164 =	18	5.6	31.9				
160 =	19	5.4	22.6				
159 =	20	5.1	19.1				
	21	5.3	17.1				
	22	7.6	47.4				
	23	7.2	42.9				
	24	7.0	31.2				
176 =	25	7.9	32.4				
169 =	26	7.1	24.6				
	27	7.0	7.2				

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Measures of position (cont'd)

May 6, 1910

D14584

		x	y	
	28	7.1	6.2	
	29	8.3	47.8	
	30	8.6	17.2	
	31	8.8	13.7	
	32	8.2	5.1	
	33	9.6	35.7	
183 =	34	9.1	26.6	
186 =	35	9.6	24.3	
	36	9.3	17.8	
	37	9.3	13.9?	
	38	9.8	4.3	
34 =	39	10.3	27.6	
188 =	40	10.1	25.3	
41 =	41	10.4	20.3	
39 =	42	10.4	18.9	
	43	10.7	10.6	
	44	11.5	47.3	
202 =	45	11.9	23.9	
	46	11.8	18.4	
	47	11.2	10.3	
	48	11.0	4.4	
	49	12.9	45.4	
207 =	50	12.4	44.4	
208 =	51	12.5	43.1	
	52	12.9	35.9	f.c
	53	12.7	35.1	
	54	12.8	34.2	f.c

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Measures of position (cont)

May 6, 1910

D 14584

		x	y
	55	12.9	30.3
	56	12.2	13.6
	57	12.9	9.6
	58?	13.1	32.4
	59	13.8	32.3
	60	13.7	29.4
213 =	61	13.6	24.9
	62	13.5	18.1
	63	13.0	16.4
	64	13.8	14.3
210 =	65	13.5	2.7
218 =	66	14.1	48.7
	67	14.5	42.5
	68	14.9	38.7
30 =	69	14.4	34.1
	70	14.4	31.4
	71	14.8	30.5
	72	14.4	9.6
214 =	73	14.4	3.8
227 =	74	15.1	36.2
225 =	75	15.1	35.7
	76	15.1	29.5
229 =	77	15.6	21.7
224 =	78	15.4	20.5
	79?	15.3	17.9
226 =	80	15.6	15.6
223 =	81	15.6	6.1

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Measures of position (cont)

May 6, 1910

D14584

		x	y
	82	16.2	31.5
	83	16.9	28.5
	84	16.5	26.6
	85	16.2	26.3
	86	16.9	18.8
	87?	16.9	13.1
	88?	16.9	11.1
	89	16.1	9.4
	90	17.3	38.1
47 =	91	17.6	34.4
	92	17.4	33.4
	93	18.1	45.7
	94	18.4	38.5
	95?	18.5	11.6
240 =	96	18.1	5.4
	97	18.4	4.2
	98	19.4	34.1
	99	19.4	26.4
244 =	100	19.6	10.4
38 =	101	20.1	33.5
42 =	102	20.4	31.6
48 =	103	20.4	30.6
	104	20.8	26.9
43 =	105	20.5	26.7
Difft?	106	20.4	24.4
253?	107?	20.6	21.0
256 =	108	20.6	11.5

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Measures of position (cont)

May 6, 1910

D 14584

		x	y
	109	21,2	47.5
33 =	110	21.3	41.9
	111	21.3	36.3
36 =	112	21.9	23.7
28 =	113	22.7	41.1
	114	22.4	37.8
	115	22.6	37.7
	116	22.4	37.2
	117	22.1	34.5
277 =	118	23.9	43.6
	119 ?	23.4	10.4
	120	24.4	46.9
46 =	121	24.8	39.1
	122	24.9	32.6
49 =	123	24.5	22.9
	124	24.1	16.6
	125	24.4	15.5
	126	25.7	39.6
35 =	127	25.8	36.1
31 =	128	25.5	27.0
50 =	129	25.1	24.4
	130	26.5	10.6
	131	26.2	41.8
52 =	132	26.6	30.6
44 =	133	26.4	18.7
	134	26.8	16.9
	135	26.2	16.1

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Measures of position (cont)

May 6, 1910

D 14584

		x	y
	136?	26.5	9.6
	137?	26.3	8.9
	138	27.4	43.4
	139	27.5	34.4
	140	27.4	12.4
295 =	141	28.4	43.0
	142	28.5	38.3
	143	28.3	31.6
	144	28.5	21.4
	145	28.4	14.4
32 =	146	29.5	40.8
29 =	147	29.8	33.8
	148	29.6	27.1
	149	29.6	20.3
	150	29.9	20.2
299 =	151	29.7	18.4
	152	29.7	14.5
	153	29.4	13.0
	154	29.1	8.7
	155	30.6	46.7
	156	30.9	34.5
	157	30.1	30.9
51 =	158	30.5	29.5
	159	30.4	28.5
201 =	160	30.2	17.8
	161	30.1	6.6
304 =	162	30.9	6.4

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Measures of position (cont)

May 6, 1910

D 14584

		x	y
	163	31.8	44.2
	164	31.3	21.1
	165	31.4	16.1
	166	31.9	14.9
	167	31.6	9.8
	168	31.3	5.4
	169	32.7	24.3
	170	32.7	10.4
219 =	171	32.3	6.4
323 =	172	32.9	14.6
	173	33.8	46.4
	174	33.8	43.4
384 =	175	33.9	38.7
37 =	176	33.1	24.5
329 =	177	33.9	5.7
	178	34.4	47.9 pc
45 =	179	34.7	28.5
	180?	34.3	27.3
	181	34.4	25.1
	182	34.4	16.8
	183	34.3	10.6
	184	34.6	10.3
	185	34.9	9.1
	186	34.6	4.6
	187	35.6	47.9
	188	35.7	46.7
343 =	189	35.5	41.5
	190	35.9	41.3

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Measures of position (cont)

May 9, 1910

D 14584

	191	35.9	41.0
	192	35.7	26.4
	193	35.3	17.0
339 =	194	35.4	13.2
	195	35.4	11.4
341 =	196	35.7	7.8
	197	36.5	47.6
	198	36.9	41.3
	199	36.8	16.2
	200	36.5	6.9
	201	36.2	5.8
	202	37.9	40.8
347 =	203	37.2	7.3
	204	37.4	5.6
	205	38.1	45.3
	206	38.3	42.6
	207?	38.6	35.5
362 =	208	38.8	32.2
	209	38.1	28.9
	210	38.5	14.1
358 =	211	38.7	10.3
364 =	212	39.2	40.9
365 =	213	39.7	25.9
363 =	214	39.4	23.0
	215	39.9	20.4
	216	39.6	15.9
	217	39.5	13.6
	218	39.9	8.2

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Measures of position (cont)

May 9, 1910

D 14584

	219	40.3	28.4
	220	40.6	18.4
	221	40.5	17.1
	222	40.0	16.7
370 =	223	40.6	13.2
	224	40.1	8.7
	225	40.6	6.0
	226	41.5	43.0
	227	41.6	41.3
	228	41.6	32.4
	229	41.9	29.8
	230	41.6	16.4
	231	41.3	5.3
	232	41.9	3.4
	233	42.4	46.4
	234	42.6	44.6
	235	42.8	37.2
	236	42.9	31.4
	237	42.3	30.9
	238	42.6	22.4
378 =	239	42.6	18.3
	240	42.4	16.6
	241	42.9	14.4
	242	42.8	14.1
	243	43.4	41.9
	244	43.7	19.4
	245	43.3	7.5
382 =	246	43.9	4.9

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Measures of position (cont)

May 9, 1910

D 14584

247	44.5	46.5
248	44.5	46.8
249	44.9	43.1
250	44.7	41.3
251	44.7	38.1
252	44.6	26.4
253	44.5	22.9
254	44.5	21.4
255	44.5	15.5
256	44.4	5.4
257	44.5	5.3
258	45.0	24.5
259	45.3	20.4
260	45.2	17.9
261	45.7	8.6
262	45.3	8.4
263	46.4	33.4
264	46.1	5.9
265	47.9	35.9
266	47.9	28.6
267	47.9	26.4
268	47.1	20.4
269	47.5	7.9
270	48.9	41.8
271	48.8	36.3
386= 272	48.8	23.3
273	48.6	14.1
274	49.5	34.3

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Measures of position (cont)

May 9, 1910

D 14584

	275?	49.5	32.0
	276	49.3	21.4
392 =	277	49.2	20.3
	278	49.0	15.6
	279	49.9	12.9
	280	50.1	25.4

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Measures of position of stars in vicinity of Polaris No. 1

August 30 1910

Mr Hall D14703 (14×17) (No. in upper right hand corner-glass up)

		x	y	a	B	b	D	a+b	B+D	C-a	B-D	x×30	y×30
	1	2.5	36.6	7.5	10.1	7.6	5.0	151	151	01	+ 51	60	1080
	2	2.3	32.7	11.9	11.8	3.1	3.7	150	150	− 88	+ 86	60	960
	3	2.6	31.9	6.1	14.0	8.9	1.1	150	151	+ 28	+ 129	60	930
	4	2.1	28.9	13.5	13.5	1.5	1.6	150	151	− 120	+ 119	60	840
	5	2.4	24.6	10.5	8.5	4.5	6.5	150	150	− 60	+ 20	60	720
	6	2.5	23.3	7.0	4.0	8.0	11.1	150	151	+ 10	− 71	60	690
	7	2.9	22.6	0.5	10.1	14.5	5.0	150	151	+ 140	+ 51	60	660
	8	3.3	38.5	11.0	7.9	4.0	7.1	150	150	− 70	+ 08	90	1140
	9	3.1	35.1	14.5	1.0	0.5	14.0	150	150	− 140	− 130	90	1050
✗	10	3.1	32.6	15.0	8.9	0.1	6.1	151	150	− 149	+ 28	90	960
152 =	11	3.8	31.1	1.5	0.5	13.5	14.5	150	150	+ 120	− 140	90	930
151 =	12	3.8	25.7	2.5	11.5	12.5	3.6	150	151	+ 100	+ 79	90	750
	13	3.8	16.4	1.5	4.0	13.5	11.1	150	151	+ 120	− 71	90	480
	14	3.6	11.5	6.0	7.0	9.0	8.0	150	150	+ 30	− 10	90	330
	15	3.4	8.7	8.1	13.0	6.9	2.0	150	150	− 12	+ 110	90	240
	16	3.3	5.7	13.0	12.0	2.1	3.0	151	150	− 109	+ 90	90	150
150 =	17	3.6	4.6	6.0	11.0	9.0	4.1	150	151	+ 3.0	+ 69	90	120
	18	4.6	44.4	5.5	4.0	9.5	11.1	150	151	+ 40	− 71	120	1320
154 =	19	4.4	43.5	9.5	8.0	5.6	7.0	151	150	− 39	+ 10	120	1290
	20	4.7	38.6	2.5	9.9	12.5	5.1	150	150	+ 100	+ 48	120	1140
	21	4.9	33.5	0.9	8.0	14.1	7.1	150	151	+ 132	+ 09	120	990
	22	4.6	24.6	6.1	9.0	9.0	6.1	151	151	+ 29	+ 29	120	720
	23	4.9	19.4	0.1	6.9	14.9	8.1	150	150	+ 148	− 12	120	570
	24	4.3	16.3	13.0	2.5	2.1	12.5	151	150	− 109	− 100	120	480
153	25	4.1	12.4	14.5	7.0	0.6	8.0	151	150	− 139	− 10	120	360
	26	5.6	44.6	4.5	9.9	10.5	5.1	150	150	+ 60	+ 48	150	1320
	27	5.6	44.4	6.0	6.1	9.1	9.0	151	151	+ 31	− 29	150	1320

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Measures of position of stars in vicinity of No. Pole

August 30, 1910

D14Y03

		x	y	A	B	C	D	a+c	B+D	C-a	B-D	x×30	y×30
	28	5.6	36.4	5.0	4.0	10.1	11.0	151	150	+51	−70	150	1080
158 =	29	5.4	34.4	10.5	6.0	4.5	9.1	150	151	−60	−31	150	1020
	30	5.6	31.0	3.0	15.0	12.0	15.1	150	301	+90	−01	150	930
	31	5.7	30.6	2.9	10.0	12.1	5.0	150	150	+92	+50	150	900
	32?	5.0	29.0	15.0	15.0	15.0	15.1	300	301	0	−01	150	870
	33	5.4	26.6	10.1	10.9	5.0	4.1	151	150	−51	+68	150	780
160 =	34	5.6	22.5	5.0	7.5	10.0	7.5	150	150	+50	0	150	660
	35	5.6	21.2	5.5	2.5	9.5	12.6	150	151	+40	−101	150	630
	36	5.0	19.5	15.1	6.9	15.0	8.1	301	150	−01	−12	150	570
159 =	37	5.4	19.0	10.2	14.5	4.8	0.5	150	150	−54	+140	150	570
	38	5.4	17.0	9.5	14.9	5.5	15.0	150	299	−40	−01	150	510
	39?	5.3	15.4	12.1	9.0	2.9	6.0	150	150	−92	+30	150	450
	40	5.8	12.5	1.5	6.9	13.5	8.1	150	150	+120	−12	150	360
	41	6.6	4.5	6.1	8.0	8.9	7.1	150	151	+28	+09	180	120
	42	6.1	6.1	14.5	14.8	0.5	0.2	150	150	−140	+146	180	180
	43	6.9	6.2	0.5	13.9	14.5	1.1	150	150	+140	+128	180	180
	44	6.8	7.1	2.1	14.0	12.9	1.0	150	150	+108	+130	180	210
	45	6.6	14.6	3.5	5.0	11.6	10.0	151	150	+81	−50	180	420
	46	6.3	24.4	11.9	8.6	3.1	6.5	150	151	−88	+21	180	720
164 =	47	6.2	31.7	11.8	3.0	3.2	12.0	150	150	−86	−90	180	930
	48	6.2	34.1	13.0	14.5	2.0	0.6	150	151	−110	+139	180	1020
	49	6.2	34.9	13.0	1.0	2.0	14.1	150	151	−110	−131	180	1020
Large hazy obj. Neb. Spiral?	50	6.6	39.9	5.0	0.5	10.0	14.5	150	150	+50	−140	180	1170
Neb. circular	51	6.6	45.4	6.0	10.0	9.0	5.1	150	151	+30	+49	180	1350
" " " Neb. Circular	52	6.9	45.6	1.9	4.0	13.1	11.0	150	150	+112	−70	180	1350
	53	7.8	42.8	2.1	3.0	12.9	12.0	150	150	+108	−90	210	1260
	54	7.8	32.6	2.0	4.0	13.0	11.0	150	150	+110	−70	210	960

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Measures of position of stars in vicinity of No. Pole.

August 30, 1910

D14703

		x	y	a	B	C	D	a+C	B+D	C−a	B−D	x×30	y×30
	55	7.4	31.0	8.0	15.0	7.0	15.0	150	300	−10	0	210	930
Large hazy obj. Neb. 169 ±	56	7.5	27.7	8.0	3.0	7.0	12.0	150	150	−10	−90	210	810
	57	7.4	24.5	9.0	7.9	6.0	7.1	150	150	−30	+08	210	720
	58	7.1	9.2	14.5	13.0	0.5	2.1	150	151	−140	+109	210	270
	59	8.1	4.9	14.5	15.0	0.5	15.0	150	300	−140	0	240	120
	60	8.8	9.2	1.5	13.0	13.6	2.0	151	150	+121	+110	240	270
	61	8.7	13.6	2.9	6.9	12.1	9.1	150	150	+92	−32	240	390
	62	8.6	17.1	4.1	14.6	10.9	0.4	150	150	+68	+142	240	510
	63	8.5	27.6	6.9	4.0	8.1	11.0	150	150	+12	−70	240	810
176 =	64	8.4	32.4	9.9	11.0	5.1	4.1	150	151	−48	+69	240	960
	65	8.4	35.2	8.5	13.0	6.5	2.0	150	150	−20	+110	240	1050
Large hazy obj. Neb. Sickle shape	66	8.7	41.1	2.5	13.9	12.5	1.1	150	150	+100	+128	240	1230
	67	8.9	46.2	0.5	12.9	14.6	2.0	151	149	+141	+109	240	1380
	68	9.1	46.5	14.0	7.0	1.0	8.1	150	151	−130	−11	270	1380
	69	9.4	35.4	10.9	11.0	4.1	4.0	150	150	−68	+70	270	1050
183 =	70	9.5	26.5	8.0	7.0	7.0	8.1	150	151	−10	−11	270	780
186	71	9.8	24.1	2.1	~~14.9~~ 14.0	12.9	~~4.1~~ 1.0	150	150	+108	~~+118~~ +130	270	720
	72	9.4	17.6	8.5	5.0	6.5	10.1	150	151	−20	−51	270	510
	73	9.6	7.9	4.5	1.0	10.5	14.0	150	150	+60	−130	270	210
	74	9.6	4.1	5.0	14.5	10.0	0.6	150	151	+50	+139	270	120
	75	10.8	4.2	2.5	12.5	12.5	2.6	150	151	+100	+99	300	120
	76	10.8	6.1	2.0	14.0	13.1	1.0	151	150	+111	+130	300	180
	77	10.6	10.6	4.1	6.5	10.9	8.5	150	150	+68	−20	300	300
39 =	78	10.5	18.6	7.0	3.8	8.0	11.2	150	150	+10	−74	300	540
28 41 =	79	10.5	20.0	7.9	15.0	7.2	15.0	151	300	−07	0	300	600
188 =	80	10.4	25.1	9.0	14.0	6.0	1.0	150	150	−30	+130	300	750
34 =	81	10.5	27.5	6.5	7.6	8.5	7.4	150	150	+20	+02	300	810
	82	10.9	28.6	1.0	5.0	14.0	10.0	150	150	+130	−50	300	840

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Measures of position of stars in vicinity of No. Pole

Sept 8 1910.

D 14703

		x	y	a	B	C	D	a+B	B+D	c−a	B−D	x×30	y×30
	83	10.2	35.5	13.0	7.0	2.0	8.0	150	150	−110	−10	300	1050
	84	10.4	46.6	9.5	5.5	5.6	9.5	151	150	−39	−40	300	1380
	85	11.5	45.9	7.1	1.5	7.9	13.5	150	150	+08	−120	330	1350
	86	11.6	39.3	6.0	11.5	9.0	3.5	150	150	+30	+80	330	1170
	87	11.9	18.2	0.6	12.5	14.5	2.6	151	151	+139	+99	330	540
	88	11.5	17.6	7.5	4.1	7.5	10.9	150	150	0	−68	330	510
192?	89	11.1	10.1	13.5	14.0	1.6	1.0	151	150	−119	+130	330	300
	90	12.7	9.5	2.9	7.9	12.1	7.1	150	150	+92	+08	360	270
196?	91	12.3	13.4	12.0	9.5	3.0	5.6	150	151	−90	+39	360	390
	92	12.7	16.6	3.0	6.0	12.0	9.0	150	150	+90	−30	360	480
	93	12.2	23.6	12.9	3.9	2.1	11.1	150	150	−108	−72	360	690
	94	12.4	24.1	10.0	14.0	5.0	1.0	150	150	−50	+130	360	720
	95	12.7	33.7	2.9	8.5	12.1	11.5	150	150	+92	−80	360	990
	96	12.6	37.7	4.9	3.0	10.2	12.0	151	150	+53	−90	360	1110
	97	12.4	47.0	10.0	15.0	5.0	15.1	150	301	−50	−01	360	1410
	98	13.6	45.3	4.9	11.9	10.1	3.1	150	150	+52	+88	390	1350
207 =	99	13.1	44.2	14.0	13.0	1.0	2.0	150	150	−130	+110	390	1320
208 =	100	13.3	42.7	11.1	4.0	4.0	11.0	151	150	−71	−70	390	1260
	101	13.3	39.7	11.1	3.9	3.9	11.8	150	150	−72	−72	390	1170
Round hazy obj-Neb?	102	13.6	38.9	6.0	2.0	9.0	13.0	150	150	+30	−110	390	1140
	103	13.3	34.7	11.9	3.5	3.1	11.5	150	150	−88	−80	390	1020
	104	13.5	32.1	7.0	13.5	8.0	1.5	150	150	+10	+120	390	960
	105	13.4	29.9	10.9	1.0	4.1	14.0	150	150	−68	−130	390	870
213 =	106	13.8	20.6	2.0	5.5	13.0	9.6	150	151	+110	−41	390	600
29 40 =	107	13.6	17.8	6.0	2.5	9.1	12.6	151	151	+31	−101	390	510
	108	13.1	16.1	13.9	14.5	1.1	0.5	150	150	−128	+140	390	480
	109	13.9	14.1	1.5	14.9	13.6	0.2	151	151	+121	+147	390	420
214 =	110	14.1	3.5	14.0	7.5	1.0	7.5	150	150	−130	0	420	90

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Measures of position of stars in vicinity of No. Pole.

Sept. 8 1910

D 14703

		x	y	a	B	C	D	a+c	B+D	C-a	B-D	x×30	y×30
	111	14.6	21.3	5.5	12.0	9.5	3.0	150	150	+40	+90	420	630
	112	14.2	29.1	12.5	14.6	2.5	0.5	150	151	−100	+141	420	870
	113	14.7	31.2	3.0	13.0	12.1	2.0	151	150	+91	+110	420	930
30 =	114	14.8	33.6	2.0	4.0	13.0	11.0	150	150	+110	−70	420	990
218 =	115	14.7	43.4	2.9	8.5	12.1	6.5	150	150	+92	+20	420	1290
	116	15.2	43.2	12.0	11.0	3.0	4.0	150	150	−90	+70	450	1290
	117	15.6	38.4	6.2	8.5	8.9	6.5	151	150	+27	+20	450	1140
	118	15.2	37.4	13.2	10.0	1.9	5.0	151	150	−113	+50	450	1110
227 =	119	15.6	35.8	3.9	2.1	11.1	13.0	150	151	+72	−109	450	1050
225 =	120	15.6	35.4	5.9	8.5	9.1	6.5	150	150	+32	+20	450	1050
	121	15.4	29.2	8.5	12.5	6.6	2.5	151	150	−19	+100	450	870
229 =	122	15.8	21.4	2.0	8.5	13.0	6.6	150	151	+110	+19	450	630
224 =	123	15.6	20.2	7.0	12.1	8.1	2.9	151	150	+11	+92	450	600
	124	15.4	17.6	10.0	5.9	5.0	9.1	150	150	−50	−32	450	510
226 =	125	15.6	15.4	4.9	11.0	10.1	4.0	150	150	+52	+70	450	450
	126	15.9	9.3	0.1	12.5	14.9	2.5	150	150	+148	+100	450	270
223 =	127	15.4	5.7	8.1	3.0	6.9	12.0	150	150	−12	−90	450	150
	128	16.9	12.6	0.5	4.0	14.5	11.0	150	150	+140	−70	480	360
	129	16.5	25.5	7.0	8.0	8.0	7.0	150	150	+10	+10	480	750
	130	16.4	25.9	8.0	1.0	7.0	14.0	150	150	−10	−130	480	750
	131	16.8	26.4	1.5	9.9	13.5 8.5	5.1	150	150	+120	+48	480	780
	132	16.1	29.4	14.5	7.9	0.5	7.1	150	150	−140	+08	480	870
	133	17.7	37.7	3.5	3.9	11.5	11.1	150	150	+80	−72	510	1110
	134	18.7	45.4	3.0	10.0	12.0	5.0	150	150	+90	+50	540	1350
	135	18.8	38.1	2.0	13.9	13.1	1.7	151	151	+111	+127	540	1140
17s 47 =	136	18.2	38.9	12.5	1.0	2.5	14.0	150	150	−100	−130	540	990
Hazy obj	137	18.4	11.4	9.1	9.9	5.9	5.1	150	150	−32	+48	540	330
" "	138	18.4	11.3	8.0	11.5	7.0	3.6	150	151	−10	+79	540	330

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Measures of position of stars in vicinity of No. Pole.

Sept 12, 1910

D1470 3

		x	y	a	B	c	D	a+c	B+D	c−a	B−D	x×30	y×30
	139	18.3	3.7	12.0	2.6	3.0	12.5	150	151	−90	−99	540	90
	140	19.4	8.6	10.0	6.0	5.0	9.0	150	150	−50	−30	570	240
~~244~~ 247 →	141	19.5	9.8	7.5	2.0	7.5	13.0	150	150	0	−110	570	270
	142	19.8	11.9	2.0	0.1	13.0	14.9	150	150	+110	−148	570	330
	143	19.4	12.5	10.2	8.0	4.9	7.0	151	150	−53	+10	570	360
	144	19.1	16.7	14.5	2.5	0.5	12.5	150	150	−140	−100	570	480
{Large hazy obj	145	19.5	26.7	8.0	2.9	7.1	12.1	151	150	−09	−92	570	780
circular Neb	146	19.6 (19.7)	32.0	4.5	15.0	10.5	15.1	150	301	+60	−01	570	960
19c	147	19.7 (19.8)	33.6 (33.6)	3.0	5.1	12.1	10.0	151	151	+91	−49	570	990
11c 38 =	148	20.5	33.0	6.9	14.9	8.1	0.2	150	151	+12	+147	600	990
	149	20.4	33.3	10.1	12.0	4.9	3.0	150	150	−52	+90	600	990
42 =	150	20.7	31.4	3.0	11.5	12.0	3.6	150	151	+90	+79	600	930
~~34~~ 48 =	151	20.7	30.2	3.9	13.0	11.1	2.0	150	150	+72	+110	600	900
23s	152	20.6 (20.7)	27.0 (27.0)	4.0	15.0	11.0	15.0	150	300	+70	0	600	810
43 =	153	20.8	26.4	2.0	10.0	13.0	5.0	150	150	+110	+50	600	780
34s	154	20.2	23.9	12.9	1.5	2.2	13.5	151	150	−107	−120	600	690
24s	155	20.0 (20.0)	22.2 (22.3)	15.0	11.6	15.0	3.5	300	151	0	+81	600	660
42	156	20.9	20.5	1.0	7.0	14.0	8.0	150	150	+130	−10	600	600
256 =	157	20.6	11.1	5.0	14.5	10.0	0.5	150	150	+50	+140	600	330
	158	21.7	3.5	2.0	7.1	13.0	8.0	150	151	+110	−09	630	90
	159	21.4	14.4	14.9	11.0	0.2	4.0	151	150	−147	+70	630	420
18s	160	21.3 (21.2)	26.3 (26.4)	12.0	8.0	3.0	7.0	150	150	−90	+10	630	780
Circular hazy object	161	21.2	28.9	12.1	0.5	3.0	14.5	151	150	−91	−140	630	840
33 =	162	21.9	41.4	11	9.0	13.9	6.0	150	150	+128	+30	630	1230
	163	21.9	47.0	0.1	15.0	14.9	15.0	150	300	+148	0	630	1410
	164	22.1	46.3	13.1	12.0	1.9	3.0	150	150	−112	+90	660	1380
	165	22.6	44.4	6.0	11.0	9.0	4.1	150	151	+30	+69	660	1320
	166	22.4	37.7	12.9	3.0	4.1	12.0	150	150	−68	−90	660	1110

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Measures of position of stars in vicinity of N. Pole

Sept 16 1910

D14703

		x	y	a	B	C	D	a+b	B+D	c−a	B−D	x×30	y×30
~~See Note~~	167	22.6	~~389~~ 44.4	6.6	15.0	8.5	15.0	150	150	+30	+68	660	~~990~~ 990
" 36 =	168	22.6	23.3 ~~46.2~~	12.9	11.5	2.1	3.5	151	150	−119	+90	660	~~1380~~ 690
	169	23.7	45.1	3.5	14.0	11.6	1.0	151	150	+81	+130	690	1350
28 =	170	23.5	40.5	8.1	7.0	7.0	8.0	151	150	−11	−10	690	1200
	171	23.8	11.4	2.0	10.5	13.0	4.6	150	151	+90	+59	690	330
	172	24.4	14.9	9.5	1.1	5.5	13.9	150	150	−40	−128	720	420
	173	24.2	16.2	13.1	13.5	1.9	1.5	150	150	−112	+120	720	480
35 49 =	174	24.6	22.4	4.5	9.0	10.6	6.0	151	150	+61	+30	720	660
	175	24.6	32.4	4.5	8.5	10.6	6.6	151	151	+61	+19	720	960
277 =	176	24.6	43.3	4.9	11.9	10.1	3.1	150	150	+52	+88	720	1290
	177	25.2	46.7	12.5	9.0	2.5	6.0	150	150	−100	+30	750	1380
	178	25.4	41.8	10.5	3.1	4.5	12.9	150	150	−60	−108	750	1230
33 46 =	179	25.4	38.6	8.5	6.5	6.5	8.6	150	151	−20	−21		
	180	25.8	38.3	1.9	12.0	13.2	3.0	151	150	+113	+90		
	181	25.4	33.6	9.4	5.5	5.6	9.5	150	150	−38	−40		
	182	25.4	32.1	10.0	13.6	5.0	1.4	150	150	−50	+122		
31 =	183	25.7	26.4	2.6	8.0	12.5	7.1	151	151	+99	+09		
36 50 =	184	25.4	23.7	10.0	3.0	5.0	12.0	150	150	−50	−90		
	185	25.5	10.3	8.0	12.0	7.0	3.0	150	150	−10	+90		
Faint-hazy	186	25.9	9.6	2.1	5.0	12.9	10.0	150	150	+108	−50		
	187	27.2	8.8	12.5	1.9	2.5	13.1	150	150	−100	−112		
	188	27.4	11.6	10.9	3.9	4.1	11.1	150	150	−68	−72		
40	189	27.4 (27.3)	22.9 (23.0)	10.9	0.1	4.1	14.9	150	150	−68	−148		
	190	27.3	23.3	11.1	12.0	3.9	3.0	150	150	−72	+90		
41	191	27.9	25.6 (25.7)	0.9	4.0	14.1	11.0	150	150	+132	−70		
30 s	192	27.8 (27.9)	27.8 (27.7)	2.0	11.0	13.0	4.0	150	150	+110	+70		
38 52 =	193	27.1	29.9	14.0	0.1	1.0	15.0	150	151	−130	−149		
Faint-hazy	194	27.4	40.8	8.1	2.9	7.0	12.1	151	150	−11	−92		

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Measures of position of stars in vicinity of N. Pole.

Sept. 16, 1910

D 14703

		x	y	a	B	C	D	a+C	B+D	C−a	B−D
Round hazy object - fb.	195	28.7	31.6	3.0	5.1	12.0	10.0	150	151	+90	−49
	196	28.6	45.1	5.0	14.5	10.0	0.5	150	150	+50	+140
	197	28.4	44.4	8.1	10.0	7.0	5.0	151	150	−11	+50
	198	28.6	44.3	3.9	11.0	11.1	4.1	150	151	+72	+69
	199	28.7	44.4	2.6	9.1	12.5	5.9	151	150	+99	+32
	200	28.0	42.7	15.1	3.0	15.0	12.0	301	150	−01	−90
	201	28.4	42.4	9.5	9.5	5.6	5.5	151	150	−39	+40
295 =	202	28.9	42.4	0.5	9.9	14.5	5.1	150	150	+140	+48
	203	28.6	35.4	4.9	10.0	10.1	5.0	150	150	+52	+50
	204	28.6	30.9	5.0	0.1	10.0	14.9	150	150	+50	−148
43	205	28.3 (25.3)	27.3 (27.2)	11.0	11.9	4.0	3.1	150	150	−70	+88
44	206	28.1	26.8	14.1	2.0	1.0	13.1	151	151	−131	−111
	207	28.6	20.6	5.0	5.5	10.0	9.5	150	150	+50	−40
	208	28.4	18.3	8.1	11.1	7.0	4.0	151	151	−11	+71
	209	28.6	14.9	6.5	0.1	8.5	14.9	150	150	+20	−148
	210	28.4	11.1	8.5	14.0	6.6	1.0	151	150	−19	+130
	211	28.9	8.3	1.1	12.0	14.0	3.0	151	150	+129	+90
	212	29.4	13.8	4.0	2.0	11.1	13.0	151	150	+71	−110
299	213	29.9	17.6	1.5	6.0	13.5	9.0	150	150	+120	−30
20s	214	29.6 (29.8)	19.5	3.0	7.0	12.0	8.1	150	151	+90	−11
39	215	29.9 (30.2)	26.4 (26.3)	0.1	9.9	14.9	5.1	150	150	+148	+48
45	216	29.1	27.4	13.9	8.0	1.1	7.0	150	150	−128	+10
Defect.	217	29.4	34.6	9.9	5.0	5.1	10.0	150	150	−48	−50
	218	29.8	40.5	1.9	7.9	13.1	7.1	150	150	+112	+08
	219	29.4	43.6	9.0	4.9	6.0	10.1	150	150	−30	−52
32 =	220	30.4	40.3	11.1	12.1	4.0	2.9	151	150	−71	+92
29 =	221	30.4	33.1	9.0	13.0	6.0	2.0	150	150	−30	+111
37	51 = 222	30.7	28.8	3.0	2.5	12.0	12.5	150	150	+90	−100

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Measures of position of stars in vicinity of No. Pole.

Sept 16, 1910

D 14703

		x	y	a	B	C	D	a+b	B+D	C-a	B-D
	223	30.7	27.8	4.0	2.5	11.0	12.6	150	151	+70	−101
295	224	30.3/4	23.9	11.0	1.0	4.0	14.0	150	150	−70	−130
	225	30.1	19.5	13.5	7.5	1.5	7.6	150	151	−120	−01
301 =	226	30.4	17.4	11.1	11.5	4.0	3.5	151	150	−71	+80
	227	30.8	16.7	1.9	3.5	13.1	11.5	150	150	+112	−80
304 =	228	30.7	5.6	2.5	4.1	12.6	10.9	151	150	+101	−68
	229	31.1	4.6	14.5	4.0	0.5	11.0	150	150	−140	−70
	230	31.6	9.2	5.9	12.9	9.1	2.1	150	150	+32	+108
	231	31.1	13.5	14.9	8.0	0.1	7.0	150	150	−148	+10
	232	31.9	14.4	1.0	10.1	14.0	5.0	150	151	+130	+51
	233	31.4	15.4	8.5	9.8	6.5	5.3	150	151	−20	+45
	234	31.4	20.4	9.5	9.8	5.6	5.2	151	150	−39	+46
Fts-hazy obj	235	31.9	30.4	0.5	9.5	14.5	5.5	150	150	+140	+40
	236	31.5	33.2	7.0	13.0	8.0	2.1	150	151	+10	+109
	237	31.4	33.7	8.0	3.1	7.1	12.0	151	151	−09	−89
	238	31.6	45.2	6.6	13.0	8.4	2.1	150	151	+18	+109
	239	32.6	43.4	6.0	8.0	9.0	7.0	150	150	+30	+10
	240	32.6	38.5	4.1	7.0	10.9	8.0	150	150	+68	−10
	241	32.8	35.4	2.5	11.0	12.6	4.0	151	150	+101	+70
	242	32.6	18.6	6.5	5.5	8.5	9.5	150	150	+20	−40
	243	32.6	9.6	4.0	5.5	11.0	9.5	150	150	+70	−40
319 =	244	32.1	5.6	14.6	4.0	0.5	11.0	151	150	−141	−70
	245	33.3	3.5	12.0	8.5	3.0	6.5	150	150	−90	+20
329 =	246	33.6	5.0	3.0	15.0	12.0	15.0	150	300	+90	0
323 =	247	33.1	13.8	14.5	2.0	0.5	13.0	150	150	−140	−110
	248	33.1	23.4	14.1	8.0	0.9	7.0	150	150	−132	+10
37 =	249	33.4	23.6	14.1	4.1	5.0	10.9	151	150	−51	−68
	250	33.6	32.9	4.1	0.9	11.0	14.1	151	150	+69	−132

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Measures of position of stars in vicinity of No. Pole.

Sept 17, 1910

D 14703

		x	y	a	B	c	D	a+b	B+D	c-a	B-D
	251	33.9	35.6	0.9	4.0	14.1	11.0	150	150	+132	−70
	252	34.6	45.5	4.9	6.5	10.1	8.6	150	151	+52	−21
	253	34.6	42.5	6.0	7.0	9.0	8.0	150	150	+30	−10
334 =	254	34.3	39.5	12.0	6.5	3.0	8.5	150	150	−90	−20
334° =	255	34.5	37.9	7.0	1.0	8.0	14.0	150	150	+10	−130
	256	34.6	26.4	6.6	8.9	8.5	6.1	151	150	+19	+28
	257	34.6	24.4	6.9	9.5	8.1	5.5	150	150	+12	+40
	258	34.4	16.1	8.5	14.0	6.5	1.0	150	150	−20	+130
	259	34.1	9.8	13.5	2.0	1.5	13.0	150	150	−120	−110
	260	34.5	9.5	7.5	8.0	7.6	7.0	151	150	+01	+10
	261	34.8	8.4	2.1	10.1	12.9	4.9	150	150	+108	+52
	262	34.4	3.6	9.0	6.5	6.0	8.6	150	151	−30	−21
	263	35.9	5.1	0.9	13.9	14.1	1.1	150	150	+132	+128
341 =	264	35.6	7.1	6.0	14.5	9.0	0.5	150	150	+30	+140
	265	35.4	10.4	9.1	8.0	5.9	7.0	150	150	−32	+10
339 =	266	35.4	12.4	8.5	9.5	6.5	5.5	150	150	−20	+40
	267	35.9	14.4	1.1	16.9	13.9	4.1	150	150	+128	+68
	268	35.4	16.3	10.5	12.0	4.6	2.0	151	150	−59	+90
	269	35.9	16.7	0.5	3.0	14.5	12.0	150	150	+140	−90
	270	35.3	22.8	11.0	2.1	4.0	12.9	150	150	−70	−108
	271	36.8	24.4	2.0	9.0	13.1	6.0	151	150	+111	+30
45 =	272	36.3	27.7	12.5	3.0	2.6	12.0	151	150	−99	−90
	273	36.6	37.1	6.0	14.5	9.0	0.6	150	151	+30	+139
	274	36.4	45.4	9.5	10.0	5.6	5.0	151	150	−39	+50
343 =	275	36.0	40.6	12.0	4.6	3.1	10.4	151	150	−89	−58
	276	36.6	40.3	6.5	13.0	8.6	2.1	151	151	+21	+109
	277	36.6	40.4	5.9	10.0	9.1	5.1	150	151	+32	+49
	278	36.1	25.5	13.9	7.0	1.1	8.0	150	150	−128	−10

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Measures of position of stars in vicinity of N. Pole

Sept 20 1910

D 14703

		x	y	a	B	C	D	a+b	B+D	C-a	B-D
	279	36.0	14.7	15.0	2.9	15.0	12.1	300	150	~~-150~~	-92
	280	36.8	15.4	1.9	10.5	13.1	4.5	150	150	+112	+60
	281	36.4	11.2	11.0	13.0	4.0	2.1	150	151	-70	+109
	282	37.1	4.8	14.0	2.5	1.0	12.6	150	151	-130	-101
347 =	283	37.0	6.4	15.1	8.6	15.0	6.5	301	151	~~-150~~ -01	+21
Fx-hazy dj	284	36.6	8.4	4.5	11.1	10.5	3.9	150	150	+60	+72
Fx hazy	285	37.6	22.4	4.5	11.0	10.5	4.0	150	150	+60	+70
" "	286	37.6	22.5	6.0	6.5	9.0	8.6	150	151	+30	-21
	287	37.1	29.3	14.5	11.9	0.5	3.2	150	151	-140	+87
	288	37.6	30.8	6.0	1.5	9.0	13.5	150	150	+30	-120
	289	37.6	40.4	6.1	9.0	9.0	6.0	151	150	+29	+30
	290	38.8	41.8	2.0	2.5	13.0	12.6	150	151	+110	-101
	291	38.5	40.0	7.0	0.1	8.0	14.9	150	150	+10	-148
	292	38.4	23.1	9.9	14.5	5.1	0.5	150	150	-48	+140
	293	38.2	18.4	12.6	9.0	2.5	6.0	151	150	-101	+30
	294	38.6	15.4	5.5	10.5	9.5	4.6	150	151	+40	+59
	295	38.4	13.3	8.6	12.0	6.5	3.1	151	151	-21	+89
368 =	296	38.6	9.4	5.0	10.0	10.1	5.0	151	150	+51	+50
	297	39.8	7.4	2.5	10.9	12.5	4.1	150	150	+100	+68
	298	39.9	7.9	1.0	1.0	14.0	14.0	150	150	+130	-130
	299	39.5	12.7	7.5	3.0	7.6	12.0	151	150	+01	-90
363 =	300	39.6	22.1	5.5	13.1	9.5	2.0	150	151	+40	+111
	301	39.6	25.1	5.5	13.1	9.6	1.9	151	150	+41	+112
	302	39.3	30.1	12.1	14.5	3.0	0.5	151	150	-91	+140
362 =	303	39.4	31.4	10.5	10.1	4.5	5.0	150	151	-60	+51
	304	39.2	34.6	12.6	5.6	2.5	9.5	151	151	-101	-39
	305	39.1	39.3	14.5	12.0	0.5	3.0	150	150	-140	+90
364 =	306	39.7	40.1	3.1	13.6	12.0	1.5	151	151	+89	+121

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Measures of position of stars in vicinity of N. Pole.

Sept 20, 1910

D 14703

		x	y	a	B	c	D	a+c	B+D	c-a	B-D
	307	39.5	44.6	7.9	3.9	7.1	11.1	150	150	−.08	−.72
	308	47.6	27.4	6.9	8.0	8.1	7.0	150	150	+.12	+.10
365 =	309	49.1	25.1	13.5	14.6	1.5	0.5	150	151	−1.20	+1.41
	310	49.2	29.6	12.9	6.9	2.1	8.1				
	311	49.6	15.5	4.5	7.1	10.6	7.9				
	312	49.1	9.3	13.5	10.9	1.5	4.1				
	313	46.9	13.1	1.5	13.9	13.5	1.2				
378 =	314	41.7	17.7	2.5	11.5	12.5	3.5				
	315	41.8	24.3	2.5	11.0	12.5	4.0				
	316	41.3	28.8	11.0	1.5	4.0	13.5				
	317	44.6	29.9	6.0	1.0	9.0	13.1				
	318	44.3	31.4	12.1	8.0	3.0	7.0				
	319	44.4	40.3	10.0	12.9	5.0	3.1				
	320	46.2	42.1	12.9	18.5	2.1	1.5				
	321	42.5	43.6	8.0	6.5	7.0	8.5				
	322	42.4	36.3	8.0	12.1	7.1	2.9				

See next page

~~for Nos. 310-322~~

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Measures of position of stars in vicinity of No. Pole

Sept 20, 1910

D14403

		x	y	a	B	C	D	a+C	B+D	C-a	B-D
	310	40.2	19.4	13.2	8.0	1.9	7.0	151	150	−11.3	+ 10
	311	40.6	16.2	5.0	13.0	10.0	2.0	150	150	+ 50	+ 110
	312	40.1	15.9	14.5	1.0	0.5	14.0	150	150	− 140	− 130
370 =	313	40.6	12.3	4.5	12.0	10.5	3.0	150	150	+ 6.0	+ 9.0
	314	40.4	10.0	9.0	15.0	6.0	15.0	150	300	− 30	0
	315	40.6	8.6	5.0	6.0	10.0	9.1	150	151	+ 50	− 31
	316	40.6	5.1	6.9	14.0	8.1	1.0	150	150	+ 12	+ 130
	317	41.1	9.4	13.5	10.5	1.5	4.5	150	150	− 120	+ 60
	318	41.6	15.5	4.5	7.0	10.5	8.0	150	150	+ 60	− 10
	319	41.2	19.6	13.0	6.5	2.0	8.5	150	150	− 110	− 20
	320	41.6	45.1	4.5	14.0	10.5	1.0	150	150	+ 60	+ 130
	321	42.2	42.1	13.0	13.0	2.0	2.1	150	151	− 110	+ 109
	322	42.4	40.3	10.0	12.0	5.0	3.0	150	150	− 50	+ 90
	323	42.3	31.4	12.1	8.0	2.9	7.0	150	150	− 92	+ 10
	324?	42.3	30.4	12.0	7.9	3.0	7.2	150	151	− 90	+ 07
	325	42.6	29.9	6.0	1.5	9.0	13.6	150	151	+ 30	− 121
	326	42.3	28.9	11.0	1.5	4.0	13.5	150	150	− 70	− 120
	327	42.8	21.3	2.5	11.0	12.5	4.1	150	151	+ 100	+ 69
378 =	328	42.7	17.3	2.5	11.5	12.6	3.5	151	150	+ 10.1	+ 8.0
	329	42.9	13.1	1.5	13.9	13.5	1.1	150	150	+ 120	+ 128
	330	43.1	8.7	14.0	3.0	1.0	12.9	150	150	− 130	− 90
	331	43.7	3.9	3.5	0.9	11.5	14.1	150	150	+ 80	− 132
	332	43.1	6.6	14.5	7.0	0.5	8.1	150	151	− 140	− 11
	333	43.0	13.4	15.0	10.0	15.0	5.0	300	150	0	+ 50
	334	43.5	17.4	7.0	10.0	8.0	5.0	150	150	+ 10	+ 50
Defect?	335	43.7	17.6	3.0	5.5	12.0	9.6	150	151	+ 90	− 41
	336	43.9	18.4	1.5	10.0	13.5	5.0	150	150	+ 120	+ 50
	337	43.4	30.4	9.0	9.1	6.0	6.0	150	151	− 30	+ 31

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Measures of position of stars in vicinity of No. Pole.

Sept 20, 1910

D 14703

		x	y	a	B	C	D	a+C	B+D	C−a	B−D
	338	43.2	33.4	13.0	10.0	2.0	5.0	150	150	−110	+ 50
	339	43.5	36.2	8.0	12.5	7.0	2.5	150	150	− 10	+100
	340	43.5	43.6	8.0	6.5	7.0	8.5	150	150	− 10	− 20
	341	44.6	47.0	6.5	15.0	8.5	15.0	150	300	+ 20	0
	342	44.0	40.9	15.0	1.0	15.0	14.1	300	151	0	− 131
	343	44.4	39.6	10.1	6.0	4.9	9.0	150	150	−52	− 30
	344	44.4	38.6	11.0	6.0	4.0	9.0	150	150	− 70	− 30
	345	44.4	36.4	11.0	8.0	4.0	7.0	150	150	− 70	+ 10
	346	44.6	21.9	4.9	0.5	19.1	14.6	150	151	+52	− 141
386 =	347	44.6	20.4	4.0	9.6	11.0	5.5	150	151	+70	+ 41
	348	44.6	14.5	6.1	7.0	9.0	8.0	151	150	+29	− 10
	349	44.1	4.4	13.5	9.0	1.5	6.1	150	151	−120	+ 29
	350	45.8	4.9	2.0	1.1	13.0	13.9	150	150	+110	−128
	351	45.3	12.3	12.0	10.5	3.1	4.5	151	150	− 89	+ 60
	352	45.7	12.5	3.5	6.1	11.5	8.9	150	150	+80	− 28
	353	45.3	16.8	11.6	2.0	3.5	13.0	151	150	− 81	− 110
392 =	354	45.4	19.4	9.0	8.5	6.0	6.6	150	151	− 30	+ 19
	355	45.6	19.5	4.5	7.0	10.6	8.0	151	150	+61	− 10
Hazy obj	356	45.6	20.3	5.5	11.9	9.6	2.1	151	150	+41	+ 88
	357	45.4	23.5	11.0	7.0	4.0	8.1	150	151	− 70	− 11
	358	45.0	25.3	15.0	11.0	15.0	4.0	300	150	0	+ 70
	359	45.4	37.1	9.0	13.9	6.0	1.1	150	150	− 30	+ 128
	360	45.4	40.2	8.1	12.9	6.9	2.1	150	150	− 12	+ 108
	361	45.9	40.6	1.6	6.0	13.5	9.0	151	150	+119	− 30
	362	45.7	41.3	5.0	11.0	10.0	4.0	150	150	+50	+ 70
	363	45.6	42.0	4.9	14.5	10.1	0.5	150	150	+52	+ 140
	364	45.3	45.3	11.5	12.0	3.5	3.0	150	150	− 80	+ 90
	365	45.4	45.5	9.1	8.0	6.0	7.0	151	150	− 31	+ 10

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Measures of position of stars in vicinity of No. Pole

Sept 22, 1910

D14403

	x	y	a	B	c	D		
366	46.6	46.9	6.5	1.5	8.5	13.6	150	151
367	46.8	45.4	2.0	9.0	13.0	6.0	150	150
368	46.8	37.9	1.9	1.0	13.1	14.0	150	150
369	46.8	37.4	2.1	9.5	12.9	5.6	150	151
370	46.6	32.4	3.5	10.5	11.5	4.5	150	150
371	46.3	28.1	12.0	14.0	3.0	1.1	150	151
372	46.8	26.4	1.9	10.5	13.2	4.6	151	151
373	46.7	19.4	3.0	9.5	12.0	5.5	150	150
374	46.8	19.9	2.1	1.0	13.0	14.1	151	151
Hazy obj - 375	47.6	18.7	6.0	2.5	9.0	12.6	150	151
376	48.5	34.6	8.0	4.5	7.0	10.6	150	151
377	48.4	27.5	11.0	6.6	4.0	8.5	150	151
378	48.4	25.3	11.0	11.9	4.0	3.1	150	150
379	49.8	11.8	1.5	2.0	13.6	13.0	151	150
380	49.1	14.6	14.0	6.1	1.0	9.0	150	151
381	49.4	19.2	9.5	13.0	5.5	2.1	150	151
382	49.5	20.4	8.5	10.1	6.6	4.9	151	150
383	49.2	22.1	12.9	14.0	2.1	1.0	150	150
384	49.4	35.2	9.0	12.6	6.0	2.5	150	151
385	49.6	40.6	6.5	4.5	8.6	10.6	151	151
386	50.3	46.6	12.5	5.0	2.5	10.0	150	150
387	50.4	45.4	10.1	11.0	4.9	4.0	150	150
388	50.6	38.4	4.1	11.0	10.9	4.0	150	150
389	50.0	33.1	15.0	13.5	15.0	1.5	300	150
390	50.4	24.2	9.9	12.9	5.1	2.1	150	150
391	26.8	41.3	2.0	11.0	13.0	4.0		
392	26.4	39.1	9.1	13.5	6.0	1.5		
35 - 393	26.4	35.5	9.5	7.5	5.5	7.6	150	151 -40 — 0.1

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Sept 22, 1910

D14703

		x	y							
	394	26.4	32.6	8.1	7.2	7.0	8.9			
	395	26.1	25.8	13.5	3.0	1.5	12.0			
44=	396	26.5	18.2	7.9	12.0	7.1	3.0	150	150	−08 + 90
	397	26.9	16.4	1.0	9.5	14.0	5.5			

x″	y″
−402	+90
−319	+149
0	−413
−127	−186
−22	+24
0	−11
+143	−148
+46	−178 −82
+123	−82 ~~+9~~
+53	+9
+68	−63
−122	+76
+78	−107
+73	−94
+100	−111
−27	+59

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July 18, 1911.

Faint Stars in The North Polar Sequence.

Marked in red on D.14703

		X	Y	x 25.4	27+ 25.4	48y	y − 27 23.3	48y	
179	30 28	10.5	20.0	−14.9	−402.3	−403.9	−33	+89.1	+89.8	189
109	29	13.6	17.8	−11.8	−318.6	−319.2	−5.5	+148.5	+149.3	212
179 46	33	25.4	38.6	−0.0	−0.0		+15.3	−413.1		
151	34	20.7	30.2	−4.7	−126.9		+6.9	−186.3		
174 49	35	24.6	22.4	−0.8	−21.6		−0.9	+24.3		
184 50	36	25.4	23.7	−0.0	0.0		+0.4	−10.8		
222	37	30.7	28.8	+5.3	+143.1		+5.5	−148.5		
193 52	38	27.1	29.9	+1.7	+45.9		+6.6	−176.2		
		29.9	26.4	+4.5	+121.5		+3.1	−83.7		
215	39	30.0	26.3	+4.6	124.2		+3.0	−81.0		
		27.3	27.9	+2.0	+54.0		−.4	+10.8		
189	40	27.3	23.0	+1.9	51.3		−.3	+8.1		
		25.6	25.6				+2.3	−62.1		
191	41	27.9	25.7	+2.5	+67.5		+2.4	−64.8		
156	42	20.9	20.5	−4.5	−121.5	−128.1	−2.8	+75.6	~~+81.1~~	269.2
		27.3	27.3				+4.0	−108.0		
205	43	28.3	29.2	+2.9	+78.2		+3.9	−105.3		
206	44	28.1	26.8	+2.7	+72.9		+3.5	−94.5		
216	45	29.1	27.4	+3.7	+99.9		+4.1	−110.7		
	? 46	24.4	21.1	−1.0	−27.0		−2.2	+59.4		

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July 18, 1911

Faint Stars in list 3 Supplementary Stars near North Pole

Plate D 14703

			x	y			x	y	x	y
114										
148	✓ 11	20.5	33.0	-49 -132.3	+9.7	-261.9				
		20.6	33.0	-48 -129.6	+9.7	-261.9	-131	-262	-131	-262
136	✓ 17	~~18.2~~ 21.3	~~33.9~~ 26.5	-72 -194.4 -41 -160.7	+10.6 +3.2	-286.2 -86.4	+11	-286	-194	-286
160	✓ 18	21.2	26.4	-42 -113.4	+3.1	-83.7	+3	-85	-112	-85
147	✓ 19	19.8 ~~19.7~~	33.6 ~~33.9~~	-56 -151.2 -57 -153.9	+10.3	-278.1	+10	-278	-153	-278
214	✓ 20	~~27.6~~ 27.8	19.5	+42 +113.4 +44 +118.8	-3.8	+102.6	-4	+103	+116	+103
146	✓ 21	19.7 ~~19.6~~	32.0 ~~19.0~~	+57 +153.9 +58 +156.6	+8.7	-234.9	+9	-235	+155	-235
223	✓ 22	30.7	27.8	+53 +143.1	+5.5	+148.5	-6	+148	+143	+148
152	✓ 23	20.6 20.7	27.0	-48 -129.6 -47 -126.9	+3.7	-99.9	+4	-100	-128	-100
155	✓ 24	20.0	22.2 22.2	-54 -145.8	-1.0 -1.1	+27.0 +29.7		+28	-146	+28
207 ~~152~~	✓ 25	28.6	20.6	+32 +86.4	-2.7	+72.9			+86	+73
208	✓ 26	28.4 28.5	18.3 18.2	+30 +81.0 +31 +83.7	-5.0 -5.1	+135.0 +137.7			+82	+126
154	27	20.2	23.9	-52 -140.4	+6	-16.2			-140	-16
214B	28	30.1	19.5	+47 +126.9	-3.8	+102.6			+127	+103
224	29	30.3	23.9	+50 +135.0 +49 +132.3	+6	-16.2			+134	-16
192	30	27.9	27.2	+24 +64.8 +25 +67.5	+4.0 +3.9	-108.0 -105.3			+66	-107
	?21s 31	22.3	19.0	-31 -83.7	-4.3	+116.1			-84	+116
	32	26.1	25.8	+07 +18.9	+2.5	-67.5			+19	-66
	33	25.4	24.5	00 0	+1.2	-32.4			0	-32
154	~~34~~	~~20.2~~ 20.4	~~23.9~~ 23.7	-50 -135.0	+0.4	-10.8			-135	-11
174B	35	24.0	28.2	-14 -37.8	-1.1	+29.7			-38	+30
	36	22.5	28.7	-29 -78.3	-2.6	+70.2			-78	+70
	37	28.6	25.0	+32 +86.4	+1.7	-45.9			+86	-46
	38	19.+	23.+							

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Saturday, Dec. 2, 1911.

D 14703

	x	y	x-25.4	27(x-25.4) / y	y-23.3	-27(y-23.3)
38N	19.9	23.8	-5.5	-148.5	+ 0.5	∓13.5

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