

KG
11366
v.426

Polaris
Circle Readings
from Mar 7, 1884 to June 26 '84

Mar 3 1884

C = 25-17.2

UC

	PP	PP	PP	PP	PP
20 4	56.8	53.7	27.8	22.4	16.8
	39.5	37.4	10.1	6.0	0.3
	41.8	39.0	12.2	8.3	1.8
	32.2	29.0	3.0	58.8	51.7
	<u>17.0</u>	<u>17.0</u>	<u>13.28</u>	<u>8.88</u>	<u>2.65</u>
	42.58	39.78			

	PP	PP	RP	RP	RP	RP	RP
20 3	56.8	48.7	380	361	309	284	264
	39.4	32.1	22.2	200	163	110	99
	41.5	33.9	238	208	151	125	108
	32.0	23.9	111	111	6.9	3.5	1.8
	1697	1386	992	880	722	554	1389
23	4242	3465	2480	2200	1805	1385	3472

P observes A_{12} 20 21 41 51 to 61 80 81 82 Honey

Mar 4 1884

$$C = 17.2$$

WC

	PP	PP	PP	PP	PP
20 4	30.9	27.8	21.9	11.3	0.9
	15.0	9.9	4.1	56.2	44.1
	16.4	12.8	6.5	56.7	46.5
	6.1	2.2	56.9	47.0	36.7
	684	527	294	2312	1882
24	17.10	13.18	7.35	57.80	47.05

	PP	PP
20 3	50.1	43.8
	33.8	28.3
	36.1	29.9
	25.8	19.8
	1458	1218
23	36.45	30.45

P observes A_{-12} first 2 strokes of A_{-13} + A_{-15}
clouds,

Mar 5-1884

C = 25 20.0

RC.

		PP	PP	RD	RP	RP	RP	RP	RD
20	4	32.2	27.9	18.1	15.4	13.4	12.1	6.6	1.9
		15.9	12.5	20	58.3	58.5	56.9	51.1	46.1
		17.1	13.3	24	59.5	57.0	52.0	51.2	41.2
		9.2	5.0	53.8	51.0	48.9	48.0	42.5	38.9
		74.4	58.7	163	2351	2388	2330	2114	1921
24		18.60	14.68	4.08	58.78	59.70	58.25	52.85	48.02

P observes A_{10} to 3, R A_{32} to 90

Mar. 10 1884 C = 25 26.0

W.C.

PP PP PP PP PP
 204 ~~56.3~~ ~~53.0~~ ~~54.3~~ ~~52.9~~ 204 ~~50.8~~
~~41.4~~ ~~47.6~~ ~~40.0~~ ~~38.1~~
~~44.3~~ ~~43.8~~ ~~42.5~~ ~~41.1~~
~~35.2~~ ~~34.1~~ ~~32.9~~ ~~31.8~~
 ch.f.

RP RP RP RP RP RP RP RP RP RP
 20 4 250 251 262 198 172 130 110 98 79 34
 141 100 100 55 28 590 571 565 531 499
 164 130 114 72 55 0.8 524 574 551 516
 6.0 38 3.0 80 554 518 492 460 456 425
 16.08 12.98 12.65 10.12 5.22 1.15 58.92 57.92 55.42

P observes A_{30} R A_{30} to 9_0

May 16 1HB
 RB

		RR	RR	RR	RR	RR	RR	RR	RR	RR
20	4	52.4	56.4	56.4	55.6	55.6	56.0	53.5	51.5	49.2
		46.3	45.6	45.6	46.4	45.9	45.6	44.0	42.3	42.4
		50.6	50.2	49.4	49.3	49.0	49.2	47.3	44.2	43.0
		41.6	41.0	41.8	40.6	40.0	39.2	37.5	35.0	33.6
		<u>48.72</u>	<u>48.30</u>	<u>48.30</u>	<u>47.98</u>	<u>47.48</u>	<u>47.50</u>	<u>45.58</u>	<u>43.25</u>	<u>41.30</u>

After 21.5

A. 12345
 +1

March 18 1884 C=25 35.0

MC

	~~RR~~	~~R^P~~	~~RR~~	~~RR~~	~~RR~~	~~RR~~	~~RR~~	~~RR~~	~~R^P~~
20	4	579	525	516	520	502	502	498	48.9
		930	420	414	412	39.5	389	394	38.2
		484	474	469	469	451	448	450	43.1
		378	369	359	362	342	341	343	33.0
		<u>4552</u>	<u>4470</u>	<u>4395</u>	<u>4408</u>	<u>4225</u>	<u>4200</u>	<u>4212</u>	<u>40.80</u>

A₁₀ to 70

March 22 1884 C--25 35.0
u.c.

PP PP

20	4	58.2	56.8	56.3	56.5	54.8	54.4	53.0	52.2	27.9	22.7
		47.1	46.2	45.6	45.5	43.9	43.3	42.2	41.1	12.2	11.0
		51.8	50.2	49.5	49.5	47.9	47.3	46.0	44.8	20.9	15.0
		40.6	39.4	39.2	39.6	37.2	37.1	36.0	35.1	10.7	5.0
		1977	1926	1906	1911	1838	1821	1772	1732	717	537
24		49.42	48.15	47.65	47.78	45.95	45.52	44.30	43.30	17.92	13.42

PP PP PP PP

20	4	18.1	14.2	10.8	5.0
		6.1	3.2	57.4	54.1
		10.3	6.8	4.4	57.8
		0.4	57.3	53.9	48.0
		349	215	85	2249
24		8.72	5.38	2.12	2556.22

P observes A_{10} to 90

March 25-1884 C = 25 350

M.C.

	RR	RP	RP	RP	RP	RP	RP	RP	RP
20 4	23.9	220	207	177	121	107	71	4.9	83
	165	13.8	11.0	91	40	12	582	56.4	54.8
	25.1	229	212	188	121	106	171	5.1	2.5
	12.4	102	88	52	0.2	580	550	528	50.7
	13.80	17.22	15.42	12.80	7.10	5.12	2.85	59.80	57.82

New new for sheet

A 1_2 to $6_0 + 7_0$ to 9_0

Mar 28 1884 $\odot = 30.0$

U.C.

	RP	RP	RP	RP
20 4	30	58.1	54.1	528
	52.5	47.1	45.1	437
	09	55.9	52.9	507
	50.1	45.8	42.4	409
	2268	2069	1945	1876
23	56.70	51.72	48.62	46.90

A_{-1.5}

12

~~Mar 31~~Mar 31 $c = 30.0$

W.C.

RP RP RP RP RP

25	35	12	17	0.0	20	4	57.0
	52.0	45.9	44.9	44.1			42.9
	53.2	52.0	51.9	49.2			48.3
	43.7	42.0	41.8	39.4			37.2
	2174	2011	2103	1927			1848
25	54.35	50.28	52.58	48.18			46.20

~~RP~~ RP RP RP RP RP

~~25~~	~~22~~	20	4	35.1	33.1	31.8	28.0	2.71
~~25~~	~~7~~			22.8	18.1	17.9	13.1	12.8
~~11~~				25.7	23.2	21.4	18.7	17.4
				15.2	12.8	11.1	8.1	7.0
				982	872	922	679	643
				24	24.55	21.80	23.05	16.98

A₁₁ 45 4.05

90.

Open newton hut

April 1882

$$Q = 30.0$$

U.C.

RP	RP	RP	RP	RP
25-0	25	25	34	34
494	512	518	512	510
565	568	571	564	550
459	464	472	459	451
24	53.58	54.22	54.90	54.22
				53.48

New sheet -

RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP
250	0124588	571	565	5510	326	325	301	271	261	
471	451	442	441	43.4	198	202	179	152	137	
528	515	503	504	49.1	252	261	234	206	184	
476	409	354	389	38.1	138	144	120	98	175	
2016	1963	1910	1898	1856	2288	2330	2085	1818	1638	
25	5040	24	4908	4775	4745	4640				

April 12 1884
 M.C. C = 30.0

	PP		- PP	PP	PP
20 4	10.1	20 3	57.2	52.4	48.1
	0.6		46.7	40.8	47.2
	8.7		54.2	48.0	45.3
	55.6		41.8	36.1	32.8
	150		1999	1781	1734
24	3.75	23	49.98	44.52	43.35

P observes $A_{1/2}$ to A_{80} except A_7
 Star very faint.

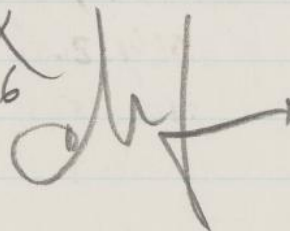
Au 13

 $C = 30.0$

u c

~~RR RR RR RR RR~~

250	19	10	18	24
526	530	581	520	
08	598	594	584	
45.4	46.0	46.5	47.6	



		~~RR RR RR RR RR~~				
20	4	240	240	417	354	31
		209	161	338	264	228
		273	254	425	364	314
		166	118	301	238	196
		928	751	1481	1218	1049
24		23.20	18.78	37.02	30.65	26.22

A 123
-1

April 13-14-84 C--30.0
W.C.

PP PP RP RP RP RP RP

25-0 4.1 3.3 1.8 3.1 0.4 3.1 1.4
56.1 54.8 57.9 53.0 50.7 53.4 57.3
3.0 2.2 0.4 1.7 59.4 1.7 00
50.0 49.7 47.8 49.1 46.9 49.9 47.7
23.32 23.00 22.19 22.69 21.74 22.81 21.94
24, 58.30 57.50 55.48 56.72 54.35 57.02 54.85

RP RP RP RP RP RP RP

W4 33.0 26.8 25.8 22.9 21.9 17.4 16.0
23.8 16.4 16.0 12.5 11.1 6.5 5.3
31.2 25.8 24.8 21.9 20.1 15.9 14.4
20.6 12.3 12.1 8.8 8.4 3.5 1.8
1086 813 787 661 615 433 375
24, 27.15 20.32 19.68 16.52 15.38 10.82 9.38

any
Lingood

Mu.16

 $C = 25 - 50.0$

u.c.

$$\begin{matrix} \nearrow \\ 10 \end{matrix} \quad 1.1 \quad 1.2 \quad 20$$

Aug 21 1884

$$C = 50.0$$

U.b.

	RP	RP	RP	RP	RP	RP	RP	RP
25 0	52	48	30	44	28	10	12	08
	522	527	518	532	510	499	497	498
	29	13	07	11	00	585	591	580
	506	501	492	501	488	469	471	470
	2307	2292	2247	2288	2226	2163	2171	2156
25	57.68	57.30	56.18	57.20	55.65	54.08	54.28	53.90

RP RP RP RP RP

20	4	372	332	318	289	267
		252	222	208	198	157
		359	319	297	277	252
		241	201	173	152	128
		1224	1074	996	896	804
24		3060	2685	2490	2240	2010

Am 22 1174

C=500

26.

	RP	RP	RP	RP	RP	RP	RP	RP
21-0	32	32	30	21	04	02	00	24 508
	539	539	530	502	498	495	487	470
	28	19	14	599	591	584	581	560
	571	505	502	488	477	471	469	444
	2310	2286	2276	2210	2170	2155	2137	2052
24	5775	5715	5690	5525	5425	5388	5342	5130

RP	RP	RP	RP	RP
35.4	201	218	212	19.4
461	350	119	104	8.2
850	23	211	205	18.1
230	90	84	76.0	0.6
1195	638	605	517	301
29.88	1595	15.12	1292	7.52

Wb - $C = 50.0$

	RP	RP	RP	RP	RP	RP	RP	RP
20 4	56.2	57.4	56.4	33.0	28.6	27.6	25.3	22.2
	47.1	48.7	46.7	22.8	19.5	17.4	14.9	10.9
	59.4	0.5	58.5	35.8	31.1	29.5	27.1	23.8
	45.1	46.2	44.9	22.4	18.2	16.1	13.6	10.8
24	<u>51.95</u>	<u>53.20</u>	<u>51.62</u>	<u>28.50</u>	<u>24.60</u>	<u>22.65</u>	<u>20.22</u>	

A, 20

Apr 29 / 184

C = 5.00

	RP	RP	RP	RP	RP	RP
21-0	3.0	4.3	3.6	0.9	0.3	5.88
	5.34	5.41	5.38	5.24	4.99	4.92
	3.5	4.2	3.4	1.2	0.8	0.0
	5.20	5.21	4.99	4.13	4.80	4.67
	23.22	23.47	23.07	22.08	21.90	21.47
24	58.05	58.68	57.68	55.20	54.75	53.68

	RP	RP	RP	RP	RP	RP
20 4	3.59	2.94	2.72	2.63	2.38	2.20
	2.13	1.88	5.9	5.4	13.2	10.9
	3.40	3.00	2.73	2.62	2.41	2.22
	3.36	1.50	14.2	13.8	1.10	8.7
		9.52	7.46	7.17	7.21	6.32
Chp	24	2.380	18.65	17.92	18.02	15.80

Apr 30 $c = 50.0$

	NC	RD	RD	RD	RD	RD	RD	RD	RD
20	4	577	570	57	321	319	278	258	245
		482	479	467	231	226	188	170	156
		38	22	11	370	355	325	304	291
		48.7	483	47.0	234	221	184	167	157
		2184	2154	2105	1156	1121	975	899	849
24		5460	5385	5262	2890	2802	2438	2248	2122

Being my best

May 2 1884
C = 50.0
M. C.

	PP	PP	PP	PP		PP	PP	PP	PP	PP
25-0	4.4	1.9	0.8	0.7	20 4	57.0	28.2	16.2	11.9	7.9
	54.9	53.2	51.0	51.1		48.2	19.9	7.8	3.2	58.8
	8.2	6.2	4.9	4.9		2.7	34.7	21.9	17.4	13.2
	51.7	50.0	49.0	48.8		45.2	17.4	4.7	1.1	56.1
	23.92	23.13	22.57	22.55		21.31	10.02	5.06	3.36	1.60
24	59.80	57.82	56.42	56.38	24	53.28	25.05	12.65	8.40	4.00

PP
20.4 2.5
54.1
8.0
51.2
23.58
23 58.95

Star steady, but very faint.

May 24 1874

Lb. 8 20 m. TT

	RP	RP	RP	RP	RP	RP
45 2	20	99	37	12	65	92
	589	579	69	26	33	61
	190	180	212	220	235	218
	559	546	578	593	02	34
	<u>3.95</u>	<u>2.85</u>	<u>5.90</u>	<u>7.18</u>	<u>8.38</u>	<u>11.12</u>
				avg.		

$\Delta_{-1} 21$
 $\Delta_{967-580}$

May 26
RLC

J L 20

45	2	9.1	8.9	6.9	5.2	5.8	6.0
		<u>22.7</u>	<u>22.7</u>	<u>20.0</u>	<u>18.6</u>	<u>20.1</u>	<u>20.0</u>
		318	316	272	248	259	260
47	7.95	7.90	6.80	6.20	6.45	6.50	

10.0	11.9	12.2	13.7	13.9	14.8	15.0
<u>23.7</u>	<u>25.3</u>	<u>25.9</u>	<u>27.1</u>	<u>27.1</u>	<u>27.9</u>	<u>28.1</u>
337	372	381	408	410	427	431
8.42	9.30	9.52	10.20	10.25	10.68	10.78

 $A_{-1}^2, A_{90}^2, 8, 6.5, 5, 5.4_2$

May 31 1884 C-2550.0

LC

45	2	111.1	114	132	12.5	145	136	NA
		<u>26.3</u>	26.5	28.1	27.3	290	286	302
		<u>374</u>	379	413	398	435	424	460
47		9.35	9.48	10.32	9.95	10.88	10.60	11.50

A_{-1}^{21} A_{90}^{1080} 60 ± 5

Im 2
LE

$$C = 50.0$$

452	60	80	7.0	9.5	81	9.5	91
	<u>221</u>	<u>231</u>	229	244	235	248	242
	<u>281</u>	318	305	339	316	346	333
47	7.02	7.95	7.62	8.48	7.90	8.65	8.32

90 to 50

28

dmu 3 $d = 50.0$
 L. C. 8 o'clock P.M. Civil Tm.

RP

45	2	~~19.7~~	4.0	4.1	4.0	4.8	5.5	4.9	5.8
		~~19.7~~	19.7	20.0	20.0	20.5	21.2	20.0	21.4
		23.7	~~24.1~~	~~24.0~~		253	267	249	~~272~~
47		11.85	12.05	12.00		12.65	13.35	12.45	13.60

90 to 50

June 4 1883 $C = 50.0$
 R.P. L.C.

45-2	⁴² ~~24.8~~	44.1	47.3	49.1	52.8
	<u>58.2</u>	<u>0.8</u>	<u>3.2</u>	~~5.4~~ 54	<u>8.0</u>
	1010	1049	1105	1145	08
47	50.50	52.45	55.25	57.25	0.04

$A_{+1} \quad 3 \quad 2$

30

Emu-1884

$$C = 50.0$$

Vls, 7^h 30 - 2m

45	2	6.3	6.5	7.2	8.1	8.1	9.8	11.0
		<u>204</u>	<u>205</u>	<u>204</u>	<u>215</u>	<u>220</u>	<u>233</u>	<u>249</u>
47		<u>13.35</u>	270	<u>214</u>	<u>14.80</u>	<u>15.05</u>	<u>16.55</u>	<u>17.95</u>
			1350	286				
				14.30				

A, 3 2 1 Perhaps only one stroke for 9₀
 - 1 9₀ to 6₀

June 9 1884

LL

C = 50.0

452 46.5 48.2 50.5 54.8

<u>58</u>	<u>68</u>	<u>74</u>	<u>121</u>
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1143	1160	1179	69
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47	5715	5800	5895	48345
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Observers A₉₀ to H₀

L + 1 2 1

June 14 1884 C = 50.0
 LC

	PP	PP	RP	RP	RP
452	36.8	43.4	51.0	56.7	59.5
	<u>49.8</u>	<u>56.4</u>	<u>3.8</u>	<u>9.7</u>	<u>2.9</u>
	866	998	1148	64	24
47	43,30	49,90	57,40	3,20	1,20

Pobs. A_{32} to i_0 Seeing very bad

June 16
L.C.

C = 50.0

33

45-2	<u>37.2</u>	<u>39.3</u>	<u>40.1</u>	<u>43.4</u>	<u>44.5</u>	<u>45.8</u>	<u>47.4</u>	<u>51.3</u>
	<u>50.3</u>	<u>53.3</u>	<u>53.7</u>	<u>56.0</u>	<u>57.6</u>	<u>58.8</u>	<u>0.5</u>	<u>3.6</u>
	875	926	938	994	1021	1046	1079	1149
47	4375	4630	4690	4970	5105	5230	5395	57.45

A_{4,54321}

June 17 1884
Sb.

C = 50.0

45	2	309	329	339	362	369	397	399
		<u>420</u>	<u>488</u>	<u>445</u>	<u>491</u>	<u>476</u>	<u>491</u>	<u>499</u>
		729	767	784	833	845	868	898
47		36.45	38.35	39.20	41.65	42.25	43.40	44.90

 $A_{40} \approx 1.0$

June 18 1884 C = 50.0

L. C 7-30 P.m.

		PP			PP			PP
45	2	29.4	37.8	39.6	43.2	45.2	47.5	50.4
		41.4	49.9	57.4	55.4	57.4	59.8	2.5
		708	877	910	986	1026	1073	1129
47		3540	4385	4550	4930	5130	5365	56.45

E. obs. 6. to 10

June 23 1884

$\uparrow$
 $\downarrow$
 45 2 2.2 81 3.2 38 4.0 4.0 6.7
 — — — — — — — —
 11.9 13.2 13.2 13.7 14.1 13.5 14.6
 — — — — — — —
 7.05 8.15
 164 175 181 175
 8.20 8.75 9.05 8.75

 $A_{90} \text{ to } 60$

June 26
C = 50.0

	PP						PP	
45	2	33.1	38.1	40.9	44.6	47.3	49.4	52.3
		<u>45.4</u>	<u>49.8</u>	<u>52.0</u>	<u>56.2</u>	<u>58.8</u>	<u>0.9</u>	<u>4.1</u>
		785	879	929	1008	1061	1103	1164
47		39.25	43.95	46.45	50.40	53.05	55.15	58.20

A_{32} to $1/0$ P observed

1884phase, pr of, 4438P