

KG
11366
v.642

Chronograph
Record

A. Z

1873
From B. S. May
to
B. S. Jan. 8.

G. W. Sever, University Bookseller, Cambridge.



May, 1873

W. R. R. O. B.

J. F. M. records from 9^h 49^m.

$$2 = 7\sqrt{3}$$

18. 11. 1875

May 4 1873

W.R. ds. P.b. & horn

~~W.R. ds. P.b. & horn~~

J.F.M. ready

W.R. = 754

2 = 755

3 = 756

J.W. & W.R.

ds. Temples Comet

1873 May 5

W. A. R. P. C. Obs.

J. H. M. rec.

wt = 757

• 2000 W. A. R.

wt = 1100

J. W. D. S. Hempel
comet -

1873 May 6

Seeing pretty bad

W.R. Am. P. 6 = 1000

P. M. reads.

W. = 754

I. W. Ls. Tempel

Conit - 100000

May 7 1133
 W. A. R. L. S. P. S.
 J. F. M. u. e. d. s.

$$w_1 = 75^{\circ}$$

$$w_2 = 120^{\circ}$$

$$w_3 = 5$$

May 12 1873

W. H. Dr. A. B. Baker
 W. R. red steel

J. F. M. records from 10^h 32^m

The now is mostly a garden

NY = 760

2 = 761

1873phae.proj.1646R

J. R. Mundy,

no 1-762
2-763

1873 May 19

W.A.R. Obs P.C.

J.F.M. records.

Nov-764

Σ 25 = 5

1873 May 15

W. A. R. Obs. P. B. & Zone.
f. f. M. records.

No. 1 = 765

Boots out - scale - cleaned
adjusted carefully

An apparent change of 4° took place
in the ^{South} clock between May 15.7 and 15.9
The time of Mr. Seales' comparison
Unaccountable.

May 15.9 P. C. = 21.7 part of Prod. hum.
16.25 " 21.9 " " "

May 17, 1873

11^h 47
 of Wrs. May' Ind. gr & outside W
 Obs. J. M.

Gr. 1845 Ind. gr. 11^h 54
 Obs. J. M.

Gr. 1852 11^h 58
 Obs. J. M.

4 H. Draco 12^h 06
 Obs. W. A. R.

M. Argus 12^h 13^m

Obs. W. A. R.

Portia

W 1 - 766
 2 - 767

May 18

W.A.R. Obs. R.C. ~~future~~
J.F.M. records.

P.W. obs. Temple, Conn.
(11 Feb 1881)

W.A. obs. (112)

W.A. obs. (112)

W.A. obs. (112)

1873, May 19.

W.A.R. Obs. P.C.

J. F. M. records

Fleeting clouds

W.A.R. def (112)

J. W. Dr. Kemp's comp.

W1 = 769
2 = 770
3 = 771

May 20 1873

W. R. Dr. Pl.

J. F. M. uods.

W. R. Dr. (12)

J. W. Dr. Tempel comet

Wol = 772
2 = 773
3 = 774

May 21.9 S. b. lost - 10th

between May 20.4 and 21.9

Put on about 1 lb. weight
on the clock (S. b.)

Prod shown at May 22.4 = 14.3 slow
of S. b.

May 23.8; 3451 = 14.6 slow of S. b.
May 23.8; 3451 = 15.0 slow of S. Clock

1873 May 24

J. F. M. Obs.

B. Leonis 11 42 + 15 17

γ Urs. Maj 11 46 + 54 24

α Virginis 11 58 + 9 27

4 Draco 12 6 + 78 19

~~W. Temple~~

W. Temple

Comet

W 775

W 775

May 25, 1873

W. A. R. Des. P. B. & Son

P. R. M. ucds:

W. A. R. Des. (1112)

W. A. R. Des. Lenses Comet

wt - 774

2 - 778

3 - 779

May 26 1873

W.R. des. for
time with C. T. (Chen. 3451)

W.R. des. (112)

Wt = 780

Sheets for time observations
belong to Coast Survey.
Not numbered here.

1873, May 27.

W. A. R. Obs. P. C.

o Virginis. ^h 11 ^m 58 ^{sec} 35 + 9.27

$$w_1 = .751$$

$$3451 = 16.8 \text{ slow } \text{sl.}$$

May 27th

1873, May 28.

W. R. Ds. Pl.

0 Virginia 11 58 35 + 9 27
 12 Can. Ven. 12 49 56 + 39 1

No 1 = 782

W. R. Ds. Timstans

May 28 Morning for Long.

Change with P. Ds. Ds.

1873, May 29.

W.A.R. Obs. P. C

$\circ$ Virginis $11^h 58^m 35^s + 9 27$
 $[9 \text{ md. gr.}]$

12 Can. Ven $12 49 56 + 39 0$ of H. 2nd

W.A.R. Obs. with P.C.
 for long.

W.A.R. Obs. (112)

 $\text{Mag} = 7.83$ $\text{mag} = 7.84$

May 30, 87 }

I W. Obs. Faintly seen

 $\text{Mag} = 7.15$

1873 May 31

+ Bootis 14 21 + 52 27
 H. R. f. h. m.

E Bootis 14 39 f. h. m.

W. R. (112)

W. R. des. Jupiter's

W. R. des. Jupiter's

W. R. = 786

2 = 787

3 = 788

4 = 789

1873 June 1

o Virginis 11 58 35 +9 27

W. R. B. B.

J. R. M. u. d. s.

W. R. B. u. i. R. T.

No 1 = 788

Mr. Dr. J. R. M. u. d. s. Comit

No 2 = 790

Jan 2 1883

W. R. R. D. B.

W. R. R. D. B. 12 46

O. R. R. D. B.

12 Can. Ven. 12 49 +391

W. R. R. D. B. 12 46

W. R. R. D. B. 12 46

W. R. R. D. B. 12 46

W. R. R. D. B. 12 46

1873 June 4

K Draco. ^{h.} 12 ^{m.} 27 ^{sec.} 55 + 70 30W.A.R. Obs. P.C. & zone
7

825 = 100

825 = 5

Good piece

1873 June 5

12 Can Ven. 12 50 + 391

W.A.R. Obs. P. 64 Zone.

J. F. M. records

$m_1 = 793$

$z = 799$

Living wood

Aug 9 1831

Mr R. D. Phelps Home
J. F. Muecks.

No 1 = 495
2 = 796

Leaving tool

June 10 1873

W. R. Roberts, Alex. G. ...
J. R. Macdonald, ...

Aug - 39 1/2 ...

not given

Comparison Tables for 112

1	15 29 14 - 17 18 31	15 28 10 - 16 58
2	28 15 - 16 18 31	28 15 - 17 08
3	28 15 - 17 08 31	29 14 - 17 15
	~~28 18 - 24 19 31~~	~~28 15 - 17 08~~
	~~28 22 - 24 08 31~~	~~28 15 - 17 08~~
4	33 40 - 23 18 (44) 10	4 32.2 40.4
5	34 25 - 23 18 (44) 10	3 19.8 27.9
6	35 25 - 23 18 (44) 10	1 24.8 32.0
7	36 43 - 23 18 (44) 15	4 24.0 32.1
8	38 18 - 24 19 45 35	3 55.8 4.2
9	38 22 - 24 08 45	
10	51 02 - 24 28 (46)	

11 15 16 45 - 22 15

12	15 19 20 - 22 03	cap of J.F.H.	11804
1	55 21 - 22 72 - 9.7074	9.8254	9.92067 .09871
2	59 31 - 23 01 - 9.7052	9.8232	9.98027 .09831
3	59 38 - 23 22 - 9.7037	9.8217	9.98061 .09805
4	66 21 - 35 86 - 9.6033	9.7213	9.96084 .09888
5	66 18 - 35 76 - 9.6042	9.7222	9.96101 .09905
6	66 14 - 35 62 - 9.6053	9.7203	9.96123 .09927
7	66 22 - 35 58 - 9.6030	9.7210	9.96079 .09883
8	66 42 - 36 58 - 9.5972	9.7132	9.95965 .09769
9	66 31 - 36 20 - 9.6004	9.7184	9.96028 .09832
10	66 51 - 36 90 - 9.5946	9.7126	9.95914 .09718
11	64 38 - 32 41 - 9.6318	9.7499	9.96640 .08444
12	64 26 - 32 02 - 9.6350	9.7530	9.96701 .08505

16 21 25 - 19 43
 16 22 18 - 17 19
 16 25 23 - 15 44
 16 28 05 - 16 06
 16 29 42 - 16 56
 16 30 20 - 16 37
 16 37 32 - 13 50

1804.

11 12 10 12 - 5 5 12

Year	Month	Day	Time	Location	Remarks
1890	Jan	1	10:00	...	...
1890	Jan	2	10:00	...	...
1890	Jan	3	10:00	...	...
1890	Jan	4	10:00	...	...
1890	Jan	5	10:00	...	...
1890	Jan	6	10:00	...	...
1890	Jan	7	10:00	...	...
1890	Jan	8	10:00	...	...
1890	Jan	9	10:00	...	...
1890	Jan	10	10:00	...	...
1890	Jan	11	10:00	...	...
1890	Jan	12	10:00	...	...

Jan 11 1873
 No. 100. Pl. & Bone
 J. F. Milled.
 No 1 - 798
 2 - 799

June 12 1873
Wm. F. Sh. O. L.
D. F. M. record
W. F. Sh. O. L.

June 15 1873
 M1 = 607
 Dr. R. L. S. - H.
 P. R. W. S. S.
 2500 1000

June 18 1873
W. S. R. obs. D.C.
And attempt's a run
Clouded up
I. R. M. rec is
not - so

June 17 1873.

W.H. & Son & P. Co.
S. H. M. & Co.

~~W. H. & Son~~ W. H. & Son.

Yempels, Comet:

Obs. of Comet Stars for (112)

11-3 240	10	4 32.8	40.4
8425	10	3 15.8	27.9
35-25	10	1 24.5	82.0
86 43	11-	4 24.0	82.1
3818	35	3 55.8	4.2

$$101 = 803$$

$$2 = 804$$

$$3 = 805$$

General Catalogue were
designed the Arrangement is
as follows: A_+

III IIIII III

In the record, I have sometimes inadvertently called A_+ , A_- , & vice versa. When the θ For some stars the 5 middle threads were des. end.

When the Polar Catalogue was begun, a new set of wires were put in arranged thus:

III IIIIIIIII III

For stars above 60° groups of 9 wires were used.

For time stars A_+ , A_1 , 3, 5, 7, 9 A_-

were used, thus being similar to those used in the General Catalogue

IV The only variation from
this form was in a set-put-
in to observe personal Equation
with arranged this

~~|||||~~ ~~|||||~~ ~~A~~ ~~A+1~~ ~~A+2~~
||||| ||||| ||||| ||||| |||||

$A+2$ and $A+1$ were used by Proj.

Mark was in getting personal
Equation between himself and W.R.
and by W.R. in getting personal
Equation between single and double
lines.

1873 June 24

Time Stars. 7 H. M. etc

+ Bootis 14 21 + 52 27

5 Urs. Min. 14 28 + 76 16

14^h 30^m false observation

ε Bootis 14 39 + 27 37

α 2 Librae 14 44 - 15 30

1873, June 25.

Wright's full 12

<i>h</i>	<i>m</i>	<i>sec</i>						
15	28	46	-	17	16	=	25	3 47.9 55.5
28	18	-	16	58	=			
28	21	-	17.9	=				
33	40	-	23	58	=	15	4	19.1 28.0
34	25	-	23	55	=	10	2	53.9 2.8
35	25	-	23	51	=	10	1	14.5 22.6
36	43	-	23	59	=	15	4	33.9 43.0
38	18	-	24	19	=	35	3	51.8 0.7
38	22	-	24	08	=	45		
51	0	-	24	28	=	45	2	49.1 58.0
						45	1	53.2 1.38 follows

W. R. Dr. Ph. 2 Zone

E. R. M. record 5.

vol = 807

208 = 5

1873 June 26

15 28 10 - 16 58 15 4 33.4 43.5
 (29 14 - 17 15 35.1 42.9 51.1)
 (lost 4 + 5)

15	33	40	-	23	58	15	4	4.3	24.2
	34	25		23	55				
	35	25	-	23	51	10	1	35.1	44.8
	36	43	-	23	59	15	4	33.0	42.2
	38	22	-	24	08	25	4	36.0	45.0
	51	0	-	24	28	45	2	49.0	57.6

M. R. R. R. R.

G. R. M. R. R.

W. R. R. R.

2 = 809

Jan 26 1873

Obs of 112

cond's # = 22

I Obs fine with glass 1000

II Obs fine with glass 1000

III Obs fine and with glass 1000

Order 45 Pls Pls # 2

IV Another series for 1000

Jan 29. 1873
 W & R do. Pbx from
 A. B. Meadows.

201 - 810

W & R do. (112)

202 - 811

Jan 30 1891 31

W. B. D. V. B.

J. R. M. D. S.

W 1 = 1/2

July 25 1873 08
 1873 phae. proj. 1646R
 No 1 = 1873 phae. proj. 1646R

1873 phae. proj. 1646R

July 3 1883
W. R. Dr. P. C.
Wv1 = 814

1873 July 5th Sat.

W.A.R. Attempts to C.
clouds up.

1893 July 6

Wash, D.C. & from
 RR Redstone in 20 min
 J.F. M. Redstone in 20

h m sec
~~15.16 45 - 22.15 = 35.0 25.0 35.0 8 follo~~

no 1 = 815

2 = 816

July 7 1875

B.A.R. Ins. O.B.

I.R. M reads.

Good - good enough seeing for now.

Reduced rate of O.B. at 16^h by

removing shot.

Not - 817

1873 July 9

comp # ft 112

15 16 45 - 22 15 = 35 0 36.0 46.0

W.A. R. Dr. P. B. - some

J F Meads :

deriving bod

not = 8.8

Aug 10 1873
 W. R. S. P. 6

A. F. W. read

air = 89

July 12 #3

WR ds. Ab.

I L M veds.

$W = 820$

WR xaroms (100)

July 13 1883

W. R. L. S. P. L.

J. F. M. u. a. s.

W. R. - 821

W. R. Searches

W. R. L. S. Temples com.

1873, July 15

Companion stars for Temples Comet.

h m sec
16 21 25 - 17 43

16 22 18 - 17 49

16 25 23 - 15 44

16 28 05 - 16 00

16 29 42 - 16 56

16 30 20 - 16 37

comp #6 is AR
count
for Temples
E 8 = 1.11

5 ind. wires.
5 ind. wires.

HARRY PL,
J. F. Meads

Work searches for 112 (81/2/109)
clouded up.

W1-822

July 21 1873
 Vis R. obs. Pl.
 J. P. M. reads
 Vis R. obs. 5 for III (chart)
 Vis R. obs. 81
 Vis R. obs. Poly hymenium Mem. M. &
 Vis R. obs. 109. Error of E. M.
 after 2 years 6 m. $\frac{258}{258} = 3$
 (No 1 = 824)

July 22 1873

Work on P.L.C.

DR M Records

Work on Hunt for (111) not found.

Work on Temples Comet.

Work on (189)

$1891 = 825$

$2 = 826$

$3 = 827$

July 23 1873

W R Obs. Pl.

B R M used

W R. examines the ^{place of the} ~~red~~ ^{supp} ~~Temp's Comet~~ - of June
22. Too hazy. Could
see neither star.

W R Obs. 1109,

$\alpha = 828$

$\epsilon = 829$

$\alpha = 828$

July 24 1893

W. R. D. S. Pl.

L. R. M. reads

W. R. hints on Polychrome

assumed per = $194206 - 32220$
 $25-04$

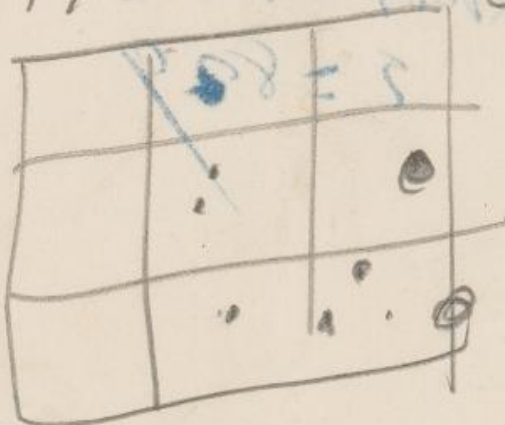
Pl.

Pl.

M. R. finds ex. of J. 1. 1. 1.

$\alpha = 194206$ $\gamma = 2504$

194706 $\gamma = 3220$



Pl. $2504 = 830$

Clouds up.

Places of 40 9

July 24 21 15 36 ~~26 48~~

29 21 13 32 ~~27 07~~

Aug 3 21 8 28 ~~27 23~~

X 8. 21 03 17 ~~27 36~~

13. 21 05 06 ~~27 45~~

July 26 1873
 WSR des. Pl.
 Dr F M uels.

No 1 = 831
 2 = 882

WSR des. Poly hymine

July 30 1873

W. R. L. P. & Son
J. R. M. L. & Son

W. R. L. P. (109)

W. R. L. P. (33)

W. R. L. P. 81

W. R. L. P. 3

2 = P. 34

Aug 4 1873

R.R. Co., F.C.,

J.F. Woods, A.C.

No 1 - 835

Spring 1873

Aug 5-1853
 V. L. D. S. P. B. S. H. S.
 J. H. M. S. S.
 No 1 = 836
 Sing. pr. v.

No 1 = 833

2 = 834

Aug 6 1873
 W. R. Hes. Pl.
 and J. R. Meads.
 no. = 837
 Seeing good, but some clouds.

Aug 9 1873

W.R. Dr. Ph. How

J.F. m recd.

W7 = 838

2 = 839

Aug 10 1873
 W. R. v. P. B.
 J. B. M. v. e. d. s.
 m. t. = 1/2

188 = 1/2

518 = 5

Aug 11/23

Wsk. J. S. Ab. & home

J. F. M. reads.

Wsk. R. O. S. 11/09

No 1 = 841

2 = 842

Aug 12 1893
 W. A. R. Dr. P. 6.
 I. F. M. ucds
 W. A. R. Dr. P. 6.
 pour case (109) and
 stars for inclination
 $m_1 = 143$
 $2 = 144$

1873 Aug. 16

ω Draco, 17.37 + 68 49
 μ Herculis 17 41 + 27 48
 ψ Draco. 17 44 + 72 12

1873 Aug. 19

B Draco. 19 27 + 52 23

10 minutes lost by weight string
slipping off the wheel.

γ Draco. 19 53 + 51 31

α aquilae 19 44 + 8 31

1873 Aug. 24

d Sagitt. 19 ²9 - 19 10

T Draco. 19 17 + 73 6

false #

K Aquilae 19 29 - 7 18

γ Aquilae 19 39 + 10 17

α Aquilae 19 44 + 8 31

ε Draco. 19 48 + 69 55

1873 Aug, 25

false observation

50 Draco. 18 50 + 75 16

γ Aquilae 18 59 + 13 40

δ Draco. 19 12 + 67 25

τ Draco. 19 17 + 73 6

last 6 wires of indgr. on act. of
chronograph running down.

χ Aquilae 19 39 + 10 17

α Aquilae 19 44 + 8 31

ε Draco. 19 48 + 69 55

1873 Aug. 26.

γ Aquilae 19 39 + 10 17

α Aquilae 19 44 + 8 31

Gr. 3241 20 30 + 72 5

Aug 27 1893 3.55 PM 25 miles

NR 10.91

(No. = 845)

5000 M. T. 1

100 = 1.00

20 42 18 27.50 Group 11

20 42 18 27.43 Group 11

20 42 18 27.43 Group 11

20 42 18 27.43 Group 11

20 42 18 27.43 Group 11

20 42 18 27.43 Group 11

20 42 18 27.43 Group 11

20 42 18 27.43 Group 11

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20 42 18 27.43 Group 11

20 42 18 27.43 Group 11

20 42 18 27.43 Group 11

Aug 28 1873
W. H. & S. C. Co.
J. L. Moore, -
No 1 - 866

1873 Sept. 1

W.A.R. Obs. P.C.

y. T. M. records.

No. 1 = 847

20 42 28 - 27 50 / Comp. stars

20 43 17 - 27 43

20 58 02 - 27 45

20 59 41 - 27 53 = +1

20 59 53 - 27 48 = Low - A₁ 1

~~20 59 10 - 27 48~~

20 42 28.49

20 43 57.68 29.19

20 58 24.9 38.84

20 58 41.33

20 58 50.46 9.13

47.97

1873 Sept. 2
 W. A. R. & W. P. C.
 J. H. M. rec.

Columation for Russian Transit
 - .05 for C. East.

$$N_{11}^0 = 848$$

$$2 = 849$$

h m sec
 20 42 28 - 27 50

20 43 57 - 27 43

28 58 02

28 59 53

P.P.S. 94.25 54 05
 20.52 64 05

W7 = 841

2 = 841

P.P.S. 20.5 22 05
 60.14 32 05
 20.52 42 05

Sept. 2
 Wm R. P. (C. I.)

1 baph. 40 40 357 17

3 baph. 347 18

2 baph. 19 47 340 13

1 baph. 9 48 33

149 149
 14 152

1 baph. 21 26

6959
 4223
 2536

33224

W & E.

Indeserting this date
 are unless on account of defect
 in break of S. P.

Sept. 3 1873

J. V. R. L. S. P. L.
J. F. Mucers,

W1 - 852

2 - 857

Between Sept 2 & Sept 3, altered
the break of the P. L. this disturbed
the motion so much that the clock
stopped. Mr. Astor, came out and
fixed it. and put it @ bet - P. L.
about 20th foot

Sept. 4, 1823.

with its future

Get S.B. back 32nd and
back of 2 shot. Note up, and
= 2 ev. after removal.

$$u_1 = f_1 z$$

Q21-101
101-5

3-8-11

[illegible]

B. Cyg 1873 Sept. 6. 11.2
Circle East

B. Cygni 19.25 B.C. 2

E 14.3
15.0
29.3

W. 16.2
15.7
31.9

Sept 6 1873 12.6
12.6

W.R. Dr. Pl.
J. F. M. v. l.

W.R. - 185
2-854

3-855

W.R. Dr. mini R. P. for home
between M. l. and West Point.

1873 Sept. 6
Observations with R. S.
Circle East.

B Cygm 19 25

B.C.D

$$\begin{array}{r} E. 14.3 \\ 15.0 \\ \hline 9.3 \\ 14.65 \end{array}$$

$$\begin{array}{r} 1.30 \\ .65 \end{array}$$

$$\begin{array}{r} W. 16.2 \\ 15.7 \\ \hline 11.9 \\ 15.95 \end{array}$$

r Aquilae 19 40

B.C.D.

$$\begin{array}{r} E. 14.91 \\ 14.4 \\ \hline 29.13 \end{array}$$

$$\begin{array}{r} W. 16.0 \\ 16.8 \\ \hline 32.8 \end{array}$$

$$\begin{array}{r} 3.5 \\ 9.87 \end{array}$$

a Aquilae 19 44

B.C.D

E Draco 19 48

B.C.D

h Aquilae 20 4

B.C.D

$$\begin{array}{r} E 14.3 \\ 14.8 \\ \hline 29.1 \end{array}$$

$$\begin{array}{r} W. 16.9 \\ 16.4 \\ \hline 33.3 \end{array}$$

$$\begin{array}{r} 4.2 \\ 1.04 \end{array}$$

K Cephei 20 13

B

γ Cygni 20 18

B.C.D.

$$\begin{array}{r} E \ 15.1 \\ 14.4 \\ \hline 29.5 \end{array} \quad \begin{array}{r} W \ 16.2 \\ 17.1 \\ \hline 33.3 \end{array}$$

$$\begin{array}{r} 3.8 \\ .95 \end{array}$$

ε Delphini 20 27

B.C.D.

α Cygni 20 18

ε Cygni 20

32 mepc 6

14.6 1879 6 23 45

First-Micheels sent = 21 ^{h 5^m}

Lost - " " sent = 21 11

First-Micheels received =

Lost - " " received =

Faint.

1873 Sept. 9.

Observations with R. J. C. W.

S Leo. Min. ^l 18 ^m 13. A. 2, 3, 4, 5. B. C.

ad. yrae. 18 32 B. C. D.

3 Aquilae. 18 59 B. C. D.

$$\begin{array}{r}
 E = 15.4 \\
 15.1 \\
 \hline
 30.5
 \end{array}
 \quad
 \begin{array}{r}
 W = 14.3 \\
 15.0 \\
 \hline
 29.3
 \end{array}
 \quad
 \begin{array}{r}
 1.2 \\
 - 0.30
 \end{array}$$

$$\begin{array}{r}
 E \quad 15.1 \\
 16.1 \\
 \hline
 31.2
 \end{array}
 \quad
 \begin{array}{r}
 W \quad 15.0 \\
 14.0 \\
 \hline
 29.0
 \end{array}
 \quad
 \begin{array}{r}
 2.2 \\
 - 0.55
 \end{array}$$

d Pagittarii 19 10 B. C. D.

S Draco 19 12 B. C. D.

T Draco. 19 17 A. B. V.

Reversed C. E. D.

T Lac. 19 17 C. 2, 3, 4, 5, E.

$$\begin{array}{r} \Sigma = 14.9 \\ 16.2 \\ \hline 31.1 \end{array}$$

$$\begin{array}{r} M = 15.2 \\ 14.2 \\ \hline 29.4 \end{array}$$

$$\begin{array}{r} 1.7 \\ - 0.42 \\ \hline \end{array}$$

B Cygni 19 25

B, C, D, E.

f Aquilae 19 40

B, C, D.

a Aquilae 19 44

B, C, D.

E Dracon. 19 48

B, C, D.

~~o Aquilae 19 48~~ B, C, D

~~K Cygni 20 10~~ B, C, D

~~x Cygni 20 13~~ C

Σ

16.4

16.0

32.4

Σ

14.5

15.0

29.5

2.9

- 0.72

f Cygni 20 18

B, C, D

π Capricorn 20 20

B, C, D.

$$\begin{array}{r} 16.1 \\ - 16.3 \\ \hline 32.4 \end{array}$$

$$\begin{array}{r} 15.9 \\ - 14.6 \\ \hline 30.5 \end{array}$$

$$\begin{array}{r} 1.9 \\ - 0.47 \\ \hline \end{array}$$

ε Delphini 20 27 B.C.D.

G_r. 3241. 20^h 30^m

B

Reversed

G_r. 3241 20.30

B 345

~~blocks sent~~
~~first minute = 21 02~~

First minute blocks for
 clock round sent
 = 21^h 2^m

Second trial
 First minute blocks = 21^h 15^m
 Last " " = 21 17

24 Linsky B 6 D

B 6 R M B 245 6 2

2 Peg B 6 D

11 Linsky 6

4 Capricorn

2

W

16.0

15.8

15.8

15.9

29 D. 2001 1 12 Linsky

a. Argem 2 159 B 6 D

6 Peg B 6 D

5 Linsky. 101 = 101

Revised

2 Linsky 2

2

W

16.2

(6.1)

15.3

15.3-

7 A. 2001 2 15 B 6 D

3 Lacertue G. SM 9
 2 26 Blau Bl. D.
 3 Regan. lo
 2 Regan. lo
 2 Reg. Bl. D.
 i bph. BB

^{Remm}
 W. R. J. P. in R. D.
 W. R. J. in R. P. for
 long. W. P. & N. G.

$$m_1 = 856$$

$$2 = 857$$

$$3 = 858$$

In the last-mentioned (i bph) the
 instrument was disturbed. Perhaps
 affected instrumental constants.

Sept 9

In the first-Clock comparison, both clocks
ran in the line at the same time. West-Point-
had the Chronograph in the main line were
never felt.

Afterwards another comparison was made
by N.B.O. sending S.C. at $29^h 42^m$ and

West-Point receiving at $29^h 29^m$, West-

Point-running chronograph, & relay and
local circuit:

1873 Sept. 11

M.A.R. obs. with R. L.C.W.

$$E = 13.5 \quad W = 14.9$$

$$\begin{array}{r} 14.2 \\ 27.7 \end{array}$$

$$\begin{array}{r} 14.3 \\ 29.2 \end{array}$$

$$\begin{array}{r} 1.5 \\ .375 \end{array}$$

 α Lyrae 18 32

B.C.D.

$$E = 14.8$$

$$\begin{array}{r} 15.0 \\ 29.8 \end{array}$$

$$W = 14.3$$

$$\begin{array}{r} 14.2 \\ 28.5 \end{array}$$

$$\begin{array}{r} 1.3 \\ .35 \end{array}$$

 β Cygni 19 25

B.C.D.

$$E = 14.6$$

$$\begin{array}{r} 14.9 \\ 29.5 \end{array}$$

$$W = 14.6$$

$$\begin{array}{r} 14.3 \\ 28.9 \end{array}$$

$$0.6$$

$$0.15$$

 γ Aquilae 19 40

B.C.D.

 α Aquilae 19 44

B.C.D.

 ϵ Draco.

B.C.D.

$$E = 15.0$$

$$\begin{array}{r} 15.1 \\ 30.1 \end{array}$$

$$W = 14.7$$

$$\begin{array}{r} 14.5 \\ 29.2 \end{array}$$

$$0.9$$

$$.18$$

Sept. 11

θ Aquilae 20^h 4^m

B. C. D.

K Cephei 20 13

A. B. C.

rej. 1st stroke for C²

(Reversed.) C. C.

K Cephei

2, 3, 4, 5. C.

γ Cygni 20 18

C. D.

π Capricorni 20 20

B. C. D.

$$\begin{array}{r} E = 15.2 \\ 15.1 \\ \hline 30.3 \end{array}$$

$$\begin{array}{r} W = 14.4 \\ 15.1 \\ \hline 29.5 \end{array}$$

$$\begin{array}{r} .8 \\ - .20 \\ \hline \end{array}$$

ϵ Delphini 20 27

B. C. D.

ϵ Cygni 20 37

B. C. D.

ϵ Cygni 20 41

B. C. D.

η Cephei 20 43

D.

Sept. 11.

$$E = 15.5 \quad W = 14.6$$

J. G. B. 1879. 2053

B.C.

(Reversed) C.W.

J. G. B.

D. ~~B~~

3 Cygni 21.7

B.C.D.

a Cephei 21 15

B.C.D.

$$E = 15.7$$

$$\begin{array}{r} 14.6 \\ 30.3 \end{array}$$

$$W = 14.8$$

$$\begin{array}{r} 16.0 \\ 30.8 \end{array}$$

$$5$$

$$+ 12$$

B Cephei 21 26

B.C.D.

Σ Regan 21 37 36 P

a Cygni 21 37 36 P

$$E$$

$$\begin{array}{r} 14.1 \\ 15.7 \\ 29.8 \end{array}$$

$$W$$

$$\begin{array}{r} 16.6 \\ 15.6 \\ 32.2 \end{array}$$

$$26$$

$$+ 55$$

1236

~~5223~~

61 59

u Cap. 2146 Bb,

78 Dec 2151 BbD,

E

u

161

148

141

165

30131616
+40

a Aqu 2157 BbD,

139

164

1619

52453

o Regan 22 03

g Regan 14

Reverend

g Regan 2348 DE,

140

167

165

142

305305

-15

87 80 6

112 80 7

SMT III 1273

E	W
163	142
14.8	15.8
81.1	80.0

$$\begin{array}{r} 11 \\ -1.28 \\ \hline \end{array}$$

x Regasi

148	163
16.1	14.7
30.9	11.2
	3

$$+0.7$$

$$W_1 = 859$$

$$2 = 860$$

$$3 = 861$$

$$4 = 862$$

$$\begin{array}{r} 1430 \\ 4220 \\ 33207 \\ 2753 \end{array}$$

Dem!!

N.B.O 1st min b.k. = 20^h 51^m

Lat - " " 20 56

West-Pl. first-min b.k. = 21 23

Lat - " " 21 28

West-Pl. Clock on Feb-9 = 9^h 40^m Slow.

N.B.O. clock " " = 12^h 17^m fast

Second Exchange.

Dem N.B.O. first-min b.k. 21 58

Lat - " " 22 00

First-rem-

Lat-rem-

22 3

22 5-

W.H. goes on vacation

1873 Sept. 15

K Cephei 20^h 13^m 77 18ε Delphini 20^h 26^m 10 51Gr. 3241 20^h 30^m 72 5

α Cygni 20 36 44 48

12 G. C. 1879 20 53^m 80.3

Nov - 863

L M. 20

Nov - 864

1873 Sept. 22

S Draco. 19^h 12^m + 67 25

T Draco, 19 17 + 73 6

(K Aquilae 19 29 - 7 18)

3 outside wires, + instead of 9 ind. wires
take 5. Middle wire seemingly lost & all the
others covered.

E Draco. 19 48 + 69 55

T Aquilae 19 57 + 6 54

false breaks followed by a short
rattle

K Cephei 20^h 13^m 77 18

$m = 865$

208-10

101-100

101-100

1873 Sept. 24

K Cephei 20^h 13^m +77 18

ε Delphini 20 26 +10 51

Gr. 3241 20 30 + 72 5

α Cygni 20 36 + 44 48

12 G.C. 1879 20 53 + 80 3

61' Cygni 21 0 + 38 6

no. = 866

1873 Sept. 25

K Cephei 20 13 +77 18

ε Delphini 20 26 +10 51

α Cygni 20 36 + 44 48

γ Cygni 20 52 + 40 39 Obs.?

hazy

no. = 867

1873 Sept. 27

T Aquilae 19 57 + 6 54

K Cephei 20 13 + 77 18

E Delphini 20 26 + 10 50

~~G⁴ 3241
α Cygni~~ 20 30 + 72 5

α Cygni 20 36 + 44 48

η Aquarii 20 45 - 9 28

61' Cygni 21 0 + 38. 6

ms = 868

Sept. 29

ms = 870

Sept. 30 1923

Mr. Reuter from his
vacation.

Mr. Dr. Wm. L. T.

C. W.

E	W
14.8	16.1
16.5	14.2
<u>31.3</u>	<u>30.3</u>
	34.3
	<u>1.0</u>
	—, 0.25

γ Aquilae 19 40 11 327 55

B. C. D.

α Aquilae 19 44 33 326 9

B. C. D.

ϵ Draco 19 48

B. C. D.

1873 Sept. 30.

$$\begin{array}{r} E = 16.2 \\ 14.8 \\ \hline 310 \end{array} \quad \begin{array}{r} W = 14.8 \\ 16.2 \\ \hline 31.0 \\ 31.0 \\ \hline 0.00 \end{array}$$

3 Uas. ^{4 P.} May. 20 0

B. C. D

♂ Aquilae 20 4

B. C. D.

♂ Capricorn 20 10

B. C. D

K Cephei 20 13

B_{4,5}. C. D

γ Cygni 20 18

C.

$$\begin{array}{r} E = 14.7 \\ 16.2 \\ \hline 30.9 \end{array} \quad \begin{array}{r} W = 17.1 \\ 15.0 \\ \hline 32.1 \\ 30.9 \\ \hline 1.2 \\ + 0.30 \end{array}$$

$$\begin{array}{r} -2.5 \\ +.50 \\ +.30 \\ +.03 \\ +.15 \\ -20 \\ +.65 \\ -1.52 \\ \hline +.03 \\ +.13 \\ \hline .0049 \end{array}$$

1873 Sept. 30

E. Delphin 20 27 B.C.D.

Gr. 3241. 20 30 C.

a Cygni 20 37 B.C.D.

η Cephei 20 43 B.C.D.

$$\begin{array}{r}
 E = 16.3 \quad W = 15.9 \\
 \underline{16.0} \quad \underline{16.3} \\
 32.3 \quad 32.2 \\
 \underline{32.3} \\
 +.03
 \end{array}$$

J. V. C. 1879 20 53 A.B

Reversed C. C.

J. V. C. 1879

False note after D.

C 2, 3, 4. D, E.

σ₂ Urs. Maj. 20 59 ~~egg~~ C.

Sept 30

$$\begin{array}{r} \epsilon \ 16.6 \\ 15.8 \\ \hline 32.4 \end{array}$$

$$\begin{array}{r} \eta \ 16.0 \\ 17.0 \\ \hline 33.0 \\ 32.4 \\ \hline + .6 \\ + 0.15 \end{array}$$

3 Cygni 21 7

B.C.D

7 Cygni 21 9

B.C.D.

$$\begin{array}{r} \epsilon = 15.9 \\ 17.2 \\ \hline 33.1 \\ 32.3 \\ \hline .8 \\ - .20 \end{array} \quad \begin{array}{r} \eta = 16.9 \\ 15.4 \\ \hline 32.3 \end{array}$$

a Cephei 21 15

B.C.D.

1 Draco 21 18

B.

24 Ues. Maj' 21 23

B.C.D.

B. Cephei 21 26

B.C.D

1873 Sept 30

$$\begin{array}{r}
 E \ 17.7 \\
 \underline{14.0} \\
 31.7
 \end{array}
 \quad
 \begin{array}{r}
 W \ 15.3 \\
 \underline{19.0} \\
 34.3 \\
 \underline{31.7} \\
 2.6 \\
 + 0.65
 \end{array}$$

E Pegasi 21 37 B.C.D.

11 Cephei 21 40 C.

$$\begin{array}{r}
 E \ 17.0 \\
 \underline{17.1} \\
 34.1 \\
 \underline{32.0} \\
 2.1 \\
 - 0.52
 \end{array}
 \quad
 \begin{array}{r}
 W \ 16.0 \\
 \underline{16.0} \\
 32.0
 \end{array}
 \quad
 \begin{array}{r}
 17.1 \\
 \underline{16.0} \\
 1.1 \\
 .55
 \end{array}$$

11 Cephei 21 46 B_{2,3,4,5} C. &

Block Lens

Sept. 30

First min back = 215.3
Low-min. back = 21.18

Clocks rechecked

First-min back = 21^h 51^m
Low-min back = 21^h 56^m

Second Trial.

First Minute back = 22^h 0^m
Low-minute back = 22^h 3^m

9 Draco^{G.P.} 22 24 B.C.D

7 Aquarii 22 28 B.C.D

3 Pegasi 22 35 B.C.D

7 Pegasi 22 37 B.C.D

λ Pegasi 22 40 B.C.D

no 1 = 8 71

2 = 8 72

3 = 8 73

1873, Oct. 1

$$E = \cancel{15.7} \cancel{11} = 15.1$$

W. R. Les. v. m. R. T.
B. W.

9
15.7
15.1

22
15.1
15.6

30.4

30.7
30.8

1
-0.2

3 Urs. Maj. 20 0

B. C. D.

A Aquilae 20 4

B. C. D.

A² Capricorn 20 10

B. C. D.

K Cephei 20 13

B 4, 5. C. D.

γ Cygni 20 18

B. C. D.

π Capricorn 20 20

B. C. D.

Le Oct. 1

$$\begin{array}{r} \epsilon = 15.7 \quad W = 16.1 \\ \underline{10.8} \quad \underline{15.3} \\ 32.5 \quad 31.4 \end{array}$$

$$\begin{array}{r} 32.5 \\ \underline{31.4} \\ 1.1 \\ - .2480 \end{array}$$

ϵ Delphini 20 27

B. C. D.

Gr. 3241 20 30

B. C. D.

α Cygni 20 37

B. C. D.

$$\begin{array}{r} \epsilon = 15.1 \quad W = 16.9 \\ \underline{12.0} \quad \underline{15.1} \\ 32.1 \quad 32.0 \\ \underline{32.1} \\ 1.0 \\ - .02 \end{array}$$

ϵ Cygni, 20 41

B. C. D.

η Cephei 20 43

(B?) C. D.

$$\epsilon = 16.9 \quad W = 15.3$$

J. G. C. 1879, 20 53

B. C.

J. M. C.

Reversed

B. 3, 4, 5, 2, 6

Oct. 1.

$$\begin{array}{r}
 \text{E. } 14.9 \quad \text{W. } 17.2 \\
 \underline{17.2} \quad \underline{15.1} \\
 32.1 \quad 32.3 \\
 \underline{32.1} \\
 0.2 \\
 +.05
 \end{array}$$

3 Cygni 21 ♀ B.C.D.

7 Cygni 21 ♀ B.C.D.

$$\begin{array}{r}
 \text{E} = 17.3 \quad \text{W} = 14.8 \\
 \underline{18.0} \quad \underline{17.3} \\
 32.3 \quad 32.1 \\
 \underline{32.3} \\
 0.2 \\
 -.05
 \end{array}$$

α Cephei 21 15 B.C.D.

1 Draco. 21 18 E.

24 Urs. Maj. 21 23 B.C.D.

β Cephei 21 26 B.C.D.

$$\begin{array}{r}
 \text{E. } 15.4 \quad \text{W. } 16.8 \quad 32.7 \\
 \underline{17.8} \quad \underline{14.9} \quad \underline{31.7} \\
 32.7 \quad 31.7 \quad 1.0 \\
 \underline{1.0} \\
 -.25
 \end{array}$$

Oct. 1

 ϵ Pegasi 21 37

B.C.D.

11 Cephei 21 40

~~B.C.D.~~ μ' Capr: 21 46

B.C.D.

79 Draco. 21 51

C.

very faint.

$$\begin{array}{r}
 \epsilon = \begin{array}{r} 17.4 \\ 15.5 \\ \hline 32.9 \end{array} \quad \begin{array}{r} \eta = 14.9 \\ 16.8 \\ \hline 31.7 \\ 32.9 \\ \hline 12 \\ -30 \end{array}
 \end{array}$$

 α Aquarii 21 59

B.C.D.

 δ Pegasi 22 3

B.C.D.

3 Cephei 22. 6

A.B.

3 Cephei (Reversed)

D 2, 3, 4, 5 6

$$\begin{array}{r}
 \epsilon = \begin{array}{r} 17.5 \\ 15.8 \\ \hline 33.3 \end{array} \quad \begin{array}{r} \eta = 14.8 \\ 16.5 \\ \hline 31.3 \end{array} \quad \begin{array}{r} 33.3 \\ 31.3 \\ \hline 20.0 \\ -5.0 \end{array}
 \end{array}$$

~~Oct. 1~~ Oct 1

χ Aquarii 22 14 B. C. D.
 3 Lacertae 22 18 B. C. D.
 9 Draco 22 24 B. C. D.
 7 Aquarii 22 28 B. C. D.
 226 B Cephei 22 30 C 2, 3, 4, 5, D.

$$\begin{array}{r}
 E = 15.1 \quad W = 17.1 \\
 \begin{array}{r}
 17.1 \\
 322 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 15.0 \\
 321 \\
 \hline
 \end{array}
 \quad
 \begin{array}{r}
 322 \\
 321 \\
 \hline
 1 \\
 - .02
 \end{array}
 \end{array}$$

3 Pegasi 22 35 B. C. D.
 7 Pegasi 22 37 B. C. D.
 1 Pegasi 22 40 B. C. D.
 1 Cephei 22 45 B. C. D.

$$\begin{array}{r}
 E = 16.9 \\
 14.9 \\
 \hline
 31.8
 \end{array}
 \quad
 \begin{array}{r}
 W = 15.9 \\
 17.3 \\
 \hline
 32.2
 \end{array}
 \quad
 \begin{array}{r}
 32.5 \\
 31.8 \\
 \hline
 7 \\
 + .18
 \end{array}$$

Oct-1 1973

no 1 = 874

2 = 875

3 = 876

clock sent

1st m.b. = 22^h 11^m

Last " " = 22 16

clocks received

Dist. minute books = 22^h 8^m

Last " " = 22 13

Rest point - clocks slow $\frac{.8}{4}$

Oct 21/17 (3)
 W. R. Dr. from C. T.

C. W.

8 Aquilae B.C.D.

8 Aquilae B.C.D.

ε Draco. 19 48 B.C.D.

$$\begin{array}{r} \epsilon = 14.6 \\ 15.2 \\ \hline 29.8 \end{array} \quad \begin{array}{r} M = 15.4 \\ 13.9 \\ \hline 29.3 \\ 29.8 \\ \hline 59.1 \\ - .12 \end{array}$$

$$\begin{array}{r} \epsilon = 15.5 \\ 15.3 \\ \hline 30.8 \end{array} \quad \begin{array}{r} M = 14.7 \\ 14.7 \\ \hline 29.4 \\ 30.8 \\ \hline 60.2 \\ - 0.35 \end{array}$$

Oct. 2.

θ Aquilae 20 4

B. C. D.

$$\begin{array}{r} \epsilon = 15.3 \\ \underline{15.8} \\ 31.1 \end{array} \quad \begin{array}{r} \eta = 14.8 \\ \underline{14.4} \\ 29.2 \\ \underline{31.1} \\ 1.9 \\ -.47 \end{array}$$

α^2 Capricorni 20 10

B. C. D.

κ Cephei 20 13

C. D.

γ Cygni 20 18

Ce, 3, 4, 5. D. E.

π Capricorni 20 20

B. C. D.

$$\begin{array}{r} \epsilon = 15.4 \\ \underline{16.2} \\ 31.6 \end{array} \quad \begin{array}{r} \eta = 15.1 \\ \underline{14.3} \\ 29.4 \\ \underline{31.6} \\ 2.2 \\ -.55 \end{array}$$

ϵ Delphini 20 27

B. C. D.

Oct. 2

$$E = 15.8 \quad M = 15.0$$

$$\begin{array}{r} 15.4 \\ \hline 31.2 \end{array} \quad \begin{array}{r} 15.3 \\ \hline 30.3 \\ \hline 31.2 \\ \hline 9 \\ \hline -22 \end{array}$$

α Delphini 20 34 B 3, 4, 5. C. D

α Cygni 20 37 B. C. D.

ϵ Cygni 20 41 B. C. D

η Cephei 20 43 C. 3, 4, 5. D. E

$$\begin{array}{r} E = 15.3 \quad M = 15.6 \\ \hline 15.3 \quad 15.5 \\ \hline 30.6 \quad 31.1 \\ \hline 30.6 \\ \hline 5 \\ \hline +12 \end{array}$$

$$\begin{array}{r} E = 15.3 \quad M = 15.7 \\ \hline 15.0 \quad 16.1 \\ \hline 30.3 \quad 31.8 \\ \hline 30.3 \\ \hline 1.5 \\ \hline +.37 \end{array}$$

J. Y. C. 1879 20 53

A. B.

J. Y. C. 1879 Reversed. C 2, 3, 4, 5. D. E

61' Cygni 20 0

B C. D

$$\begin{array}{r} E = 16.0 \quad M = 15.0 \\ \hline 15.3 \quad 15.5 \\ \hline 31.3 \quad 30.8 \end{array}$$

$$\begin{array}{r} 31.3 \\ \hline 30.8 \\ \hline .5 \\ \hline -22 \end{array}$$

3 Cygni 21 7

B. C. D.

7 Cygni 21 9

B. C. D.

$$\begin{array}{r}
 E = 15.4 \quad W = 15.9 \\
 \underline{16.5} \qquad \underline{14.8} \\
 31.9 \qquad 30.7 \\
 \underline{31.9} \\
 1.2 \\
 -30
 \end{array}$$

A Cephei 21 15

B. C. D.

1 Draco. 21 18

C 1, 2, 3, 4

24 Urs. Maj 21 23

B, 3, 4, 5. C. 1, 2,

B Cephei 21 26

B. C. D.

$$\begin{array}{r}
 E = 16.9 \quad W = 14.3 \\
 \underline{16.2} \qquad \underline{15.4} \\
 33.1 \qquad 29.4 \\
 \underline{33.1} \\
 3.7 \\
 -92
 \end{array}$$

E Pegasi 21 37

B. C. D.

11 Cephei 21 40

B, 3, 4, 5. C. D.

Oct. 2

α Aquarii 21 59 C, 2, 3, 4, 5. D

δ Pegasi 22 3 B.C.D.

ζ Cephei 22.6 B.C.D.

γ Aquarii 22 14 B.C.D.

ζ Lacertae 22 18 B.C.D.

$$\bar{C} = 16.3 \quad \bar{W} = 15.8$$

$$no1 = 877$$

$$2 = 878$$

$$3 = 879$$

Clock sent

First Minute back = 22 h 5^m

Last " " 22 12

Clock received

First Minute back 22 04

Last " " 22 9

First " " 22 11

Last " " 22 14

First Minute Clock sent 19

001-5173

M.R.D. P. 6. x 3. 2

Not needed till 21 5-

001 = 880

2-3 881

Oct. 8 1873

E 9112-02

W.R. Dr. Pl.

J.P.M. vcds,

wt = 882

Oct. 9, 1873

W.A.R. Obs. P.C. & Zone

W.A.R. rec'd till 20^h 9^m

J. F. M. rec'd from 21^h 3^m

avg = 883

2 = 884

Oct 15 1873

Mr. Rogers and E. W.

Have observed for per
formal try path

W.D. Des. Pl. in App.

Oct-13 1873

Wth. Dr. P. B. Snow
 J. P. Merrill
 Henry May had

Nov-885
 2-886

888 = 1000
 888 = 8

Oct-14 1873
 W. R. du. Pl & some
 O. F. M. reads,
 Nov 1-87
~~W. R. du. Pl~~

Oct-15 1873
 W. R. Royce and E. W.
 Boiss observe for per
 found in yachting
 W. R. du. Pl in A.R.

B 6 e p h i n

B.C.D.

E

E	W
15.7	16.1
17.2	15.7
32.9	31.8

$$\begin{array}{r} 32.9 \\ 31.8 \\ \hline 1.1 \\ .27 \end{array}$$

11 A p h e i

B.C.D.

A + E

16 P e g a s i 21 47 B.C.D.

A + E

E	W
17.0	16.3
16.9	16.4
33.9	32.7
32.7	
1.2	
.30	

a A g n a r i 21 59 B.C.D.

A + E

E P e g a s i 22 1 B.C.D.

A4 + 5 E

(False observation for
P e g a s i 22 3 B.C.D.)

P e g a s i 22 3 B.C.D.

A395. E

24 Cephei 22 7 B. C. D

R.
E

E	W
16.3	17.1
17.7	15.6
<u>34.0</u>	<u>32.7</u>
32.7	
<u>1.3</u>	
.32	

γ Aquarii 22 15 B. C. D A. E

3 Lacertae 22 18 B. C. D A E

8 Cephei 22 24 B. C. D A E

31 Apheri 22 32

Reverse

31 Cephei 22 32

R
A + B
R.
C 3, 4, 5 D, E

a Pegasi 22 37 ^R_B B.D.E.

* Pegasi 22 40 A.E. B.C.D

η Pegasi 22 43 B B.D.

ι Cephei 22 45 B D.E

E
17.0
18.1
35.1
32.2
2.9
.72

W
16.8
15.4
32.2

a Pegasi 22 58 A E ⁵B.C.D.

π Cephei 23 3 A.E. B.C.D

γ Piscium 23 10 A 2,3,4,5.E B B D

T Pegase 23 14 ^{Rams} ~~A. E.~~ ^{Baus} B. C. D.

V Pegasi A E B C D.

70 Pegasi A. E. B C D.

72 Pegasi

γ Corphi A. E. B C D

E

W

E

W

190

142

18'2

54

17.3

15.3

27.2

25.6

18.3

15.4

25.6

35.6

3.07

7.6

20.7

1.9

4.8

1.20

no 1884
2-1884

Oct 17 1873

Wk out glass plate and
cleaned it. Readjusted Camera
fully.

J. F. Mohr Jr. in
& Cygnus

Nov. 6, 1879

61 Cygnus

No. 1 = 890

Oct. 18 1893

W. R. begins his on

P. clouds

W. = 891

526 = 100

526 = 8

Oct 21 1873

WSP only P.B. & now

WSP redstail 21.3

J.F.M. records from 21^h 3^m

No 1 = 892

2 = 893

1873 Oct. 22.

W. A. R. Obs. till P. 6

W. A. R. rec. till 21^h 8^m

J. F. M. rec. from 21^h 8^m till

no 1-894
2-895

Oct 23 1873

Wm. des Pl.
in AR,

ny-896

898-1
898-5

1873 Oct. 26

11 Cephei 21 39 + 70 42

α Aquarii 21 59 - 0 57

π Aquarii 22 18 + 0 42

$W1 = 897$

Found that the height of the
atmosphere was not the same
change in the height of the
the same night.

1873 Oct. 28.

W.A.R. obs. P.C. + Zone

W.A.R. records till 21 24

J.F.M. ~~com~~ records from 21. 24

$$m = 898$$

$$2 = 898$$

$$186 = 120$$

Remained a night - returned again

to 96^h per day from cloths.

Oct 29 1873 1.50
 W.P. Dr. Pl. 1.50
 P.F. M. 1.50
 $W_1 = 9W$
 $z = 901$

Found that the weight taken for the
 clock was made twice too large a
 change in the rate. Put back $\frac{1}{2}$
 the same weight.

Nov. 1 1823

W. R. D. D. D. D. P. L.

I. R. M. U. D. S.

Nov. = 802

7 = 803

109 = 5

Print that the weight - when first
 objects were made. Their two large
 change in the shape. But the
 the same way.

Nov 2 1873

W. R. Jones, Ph.D. & Son

J. B. Mirely

No 1 = 904

2 = 905

3 = 906

No 1 = 908

2 = 909

1873 Nov. 4

W.A.R. obs. P. C. + Bone.

W.A.R. rec. till 22^h 7^m

J. F. M. rec. from 22^h 7^m

$m = 908$

$z = 909$

1873 Nov. 5

W.A.R. obs P.B. - none

W.A.R. rec till 21^h 7^m

J.F.M. rec. from 21. 7

W1 = 910 POP = 100

2 = 911 POP = 5

1873 Nov. 6

W.A.R. obs. P. C. & none.

W.A.R. rec. till 22 ^h 15 ^m

J. F. M. rec. from 22. 15 ^m

(207 = 912

2 = 913

wa 9 (273

W. R. Ls. Pl.
J. P. M. v. c.
wi = 914

Nov 10 1873

H. R. Obs. P. 6. 9 wme

P. T. M. v. 6. 5.

w 1 = 515

112-102

1873 Nov 14

0 Cephei ^{h m} 23 13 + 67.23

1 Piscium 23 33 + 4 54

w Piscium 23 52 + 6 8

3 last wires of md gr. + 3
outside wires

J. R. M. Dufour

Gr. 4163 23 45 + 73 40
before w Piscium

Gr 1 = 916

1873 Nov. 15

J. B. M. R.,
for him

o Piscium	1	38	+ 8	29
B Arctis	1	47	+ 20	9
50 Cass.	1	52	+ 71	46

No 2-1977

Nov 18/93

W.R. Jas. Wm. Pl.
J.F. Mearns

no 1 = 918

2 = 919

3 = 920

Nov. 19 1873

W. R. Dr. Ph. Stone
J. F. Mues,

No 1-921

2-922

and as above

Oct - 1873

1873 Nov. 23

o Cephei 23 ^h 13 ^m + 67 23

+ Piscium 23 21 + 5 39

w Piscium 23 52 + 6 8

a Androm 0 1 + 28 21

I L m de fr t m

vol - 523

no. 258

No. R. obs. for min

no 1 = 924

1873 Nov-28

observations of time Δ 's by J. F. M.

a Cass 0 33 28 + 55 51

~~21 Cass 0 37 + 74 19~~~~last 4 w's of m.d.gz. &
3 outside wires.~~n Perseus 1 24 + 14 42
m.d.gz.B Arietis 1 47^m + 20 + 2

50 Cass. 1 52 + 71 49

a Arietis 2 0 + 22 52

3 Ceti 2 6 + 8 15

6 Cass 2 18 + 66 51

Dec 1 1873

~~303 129~~
~~305 140~~
~~307 135~~

W.A.R. obs. P. 6

W.A.R. rec till 23 52

J.F.M. rec from 23 52

$m_1 = 925$

$n = 924$

Dec 3 1873

W. R. R. Pl.

W-92

Dec. 6, 1873

M.A.R. Obs. P.C

M.A.R. rec. till 23 45

J.F.M. rec from 23 45

not - 9.28

2 - 9.29

Dec 7 1873

W. R. Lee, Esq. & Son,

J. F. Mead

Wt = 930

2 = 93,

Dec 9 1873

W. R. L. P. B. & home
I T M vells.

W. = 93.2

93.2 = 5

1873 Dec. 10

W. A. R. obs. P. C. + Zone

W. A. R. rec till 0.28^{h m}

J. F. M. rec. from 0.28

W. A. R. = 933

2 = 934

1873 Dec. 15

W.A.R obs. P. 6 & gone

W.A.R rec till 0.41

f F. M. rec from 0.41

$$w_1 = 935$$

$$2 = 936$$

Revised by the
 records of the
 history of the

Dec 16/1873

W.R. Dr. Zone 2 Plc.

W.R. Redstone 0^h 39^m

4 7/8 M needs from 47

M.R. Needs from 2^h 56^m

no 1 = 987

2 = 938

Disturbed the screen
 leads of microwaves by
 putting on nice plated ones.

Dec 17 1873

W.H. Dr. P.B. & some
J.R. Meads,
$$W = 939$$

$$z = 9/40$$

Dec 18/1873

J. W. R. de Roux Pl.

J. R. Meece,

No 1 = 944

2 = 942

distributed the same
heads of the weapons by
pulling the nice pointed ones.

1873 Dec. 21

W.A.R. obs. P.C.

J.F. Meeks

too bad seeing to attempt

Zone.

$$m = 943$$

$$2 = 944$$

W.A.R. obs. (121)

$$2PP = 5$$

1873 Dec. 22

W. A. R. obs. P. B. & ~~Zone~~
~~to~~ ^m

W. A. R. rec. till 1^h 38^m

J. F. M. rec from 1^h 38^m

seeing too bad for zone.

201 = 945

22 = 946

3 = 947

1873 Dec. 28

W. A. R. obs. P. G. 4

W. A. R. rec. till 1^h 38^m

J. F. M. rec from 1 38

201 = 548

2 = 515

Wind blew out - the gas light -
Could not get home. Feeling
good.

Dec 29 1893

No 1 = 950

W.R. Jus. P.B. & zone

Dec 30 1893

No 1 = 951

N.A.R. attempts P.C.

Leaving too bad to discuss.

Page 30/100

1001 - 1000

W. A. R. Williams, D.D.

Leaving the book to the library.

Jan 8 1873

Put in new mis.

Ati

39.293 477 633

298 473 636

296 471 640

19 231 105

39.296 474 636

178 .162

40.998 41.122 280

996 130 283

980 136 282

274 88 255

40.991 41.129 285

.138 .156

42.640 790

1639

645

42.641 790 966

.135 962

960

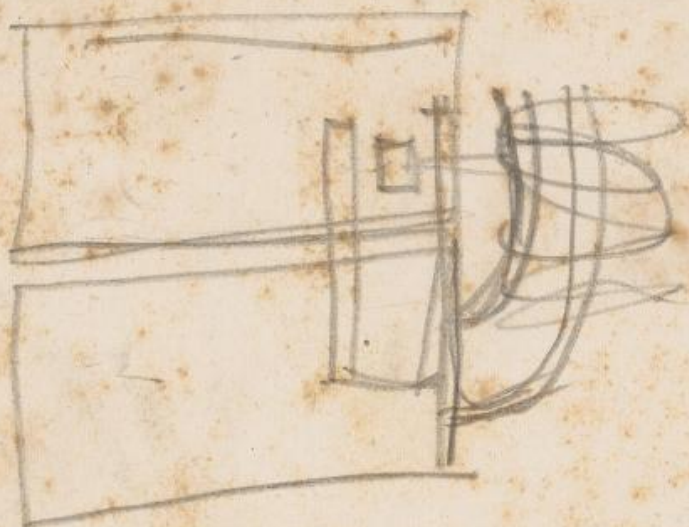
42.641 790 963

145 173

$$\begin{array}{r}
 46.972 \quad 131 \quad 265 \\
 972 \quad 125 \quad 271 \\
 960 \quad 120 \quad 270 \\
 \hline
 204 \quad 76 \quad 206 \\
 46968 \quad .125 \quad 269 \\
 157 \quad 144
 \end{array}$$

$$\begin{array}{r}
 47.640 \quad 772 \quad 937 \\
 642 \quad 775 \quad 950 \\
 630 \quad 786 \quad 952 \\
 \hline
 112 \quad 233 \quad 139 \\
 47.639 \quad .778 \quad 946 \\
 141 \quad 168
 \end{array}$$

$$\begin{array}{r}
 49.262 \quad 440 \quad 613 \\
 270 \quad 430 \quad 616 \\
 266 \quad 420 \quad 620 \\
 \hline
 198 \quad 430 \quad 616 \\
 49.266 \quad 167 \quad .183
 \end{array}$$





3 2044 013 687 553

HD WIDENER



HW LZ2Y C

$$\begin{array}{r} 71 \ 19 \\ 42 \ 23 \\ \hline 28 \ 56 \\ 331 \ 04 \end{array}$$

$$\begin{array}{r} 5-2 \\ 885-5- \\ 4215- \\ \hline 2640 \end{array}$$

$$\begin{array}{r} 6956 \\ 4215 \\ \hline 2741 \end{array}$$

$$\begin{array}{r} 2961 \\ 4223 \\ \hline 34718 \end{array}$$

$$\begin{array}{r} 6202 \\ 4215- \\ \hline 1947 \end{array}$$

$$\begin{array}{r} -12 \\ -35 \\ -47 \\ -55 \\ -22 \\ +12 \\ +37 \\ -12 \\ -30 \\ -92 \end{array}$$

$$\begin{array}{r} 305 \\ 49 \\ \hline 256 \\ 126 \end{array}$$

$$\begin{array}{r} 69 \\ 4223 \\ \hline 4832 \end{array}$$

