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Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15

Extracted on Aug-29-2022 02:57:05

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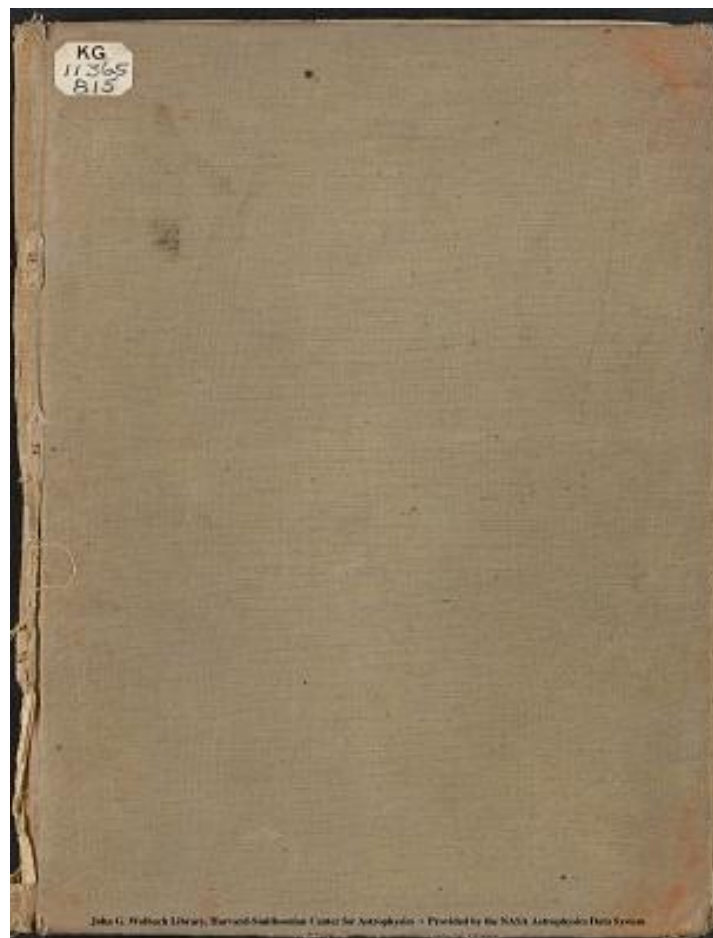
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[[front cover]]

KG
11365
815

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KG11365,815

For Series I Plates (8inch Draper) 163" to a ...
For Series B Plates (8inch Backe) 179" to a
For Series A Plates (24inch Bruce) 60" to a

For Series I Plates multiply the log. recat of Dec. Leg Log 1.03623

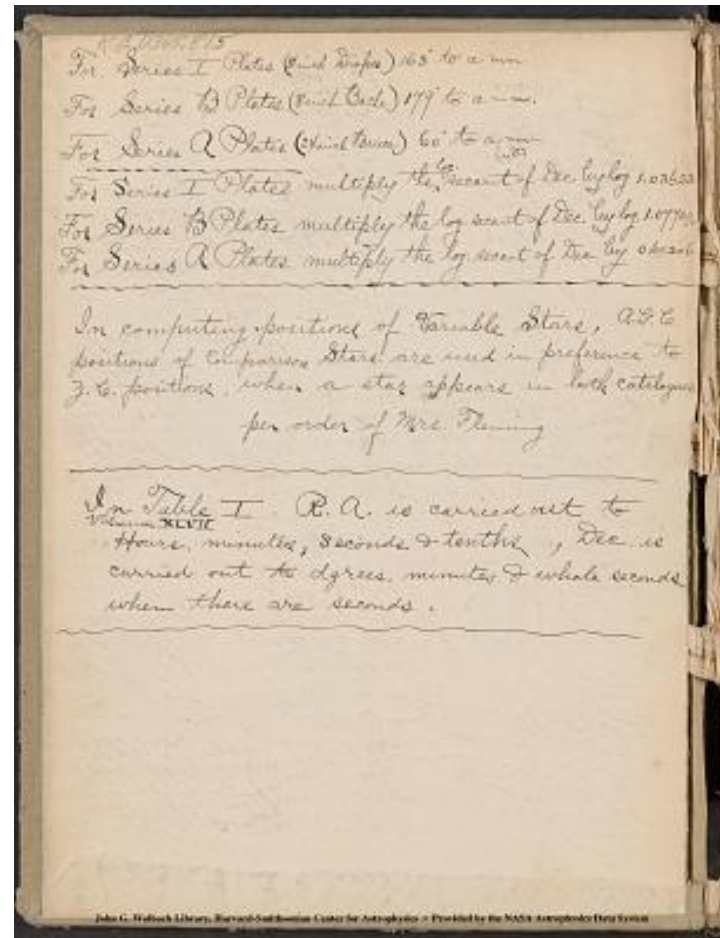
For Series B Plates multiply the log. recat of Dec. Log. 1.07700

For Series A Plates. multiply the log. recat of Dec. Leg 0.60206

A.J. [[L]]

I'm computing positions of variable stars,
Positions of Companion Stars are used in preference to
[[Z. ?]] [[G. ?]] positions, where a star appears in both catalogues. Per
order of Mrs. Fleming.

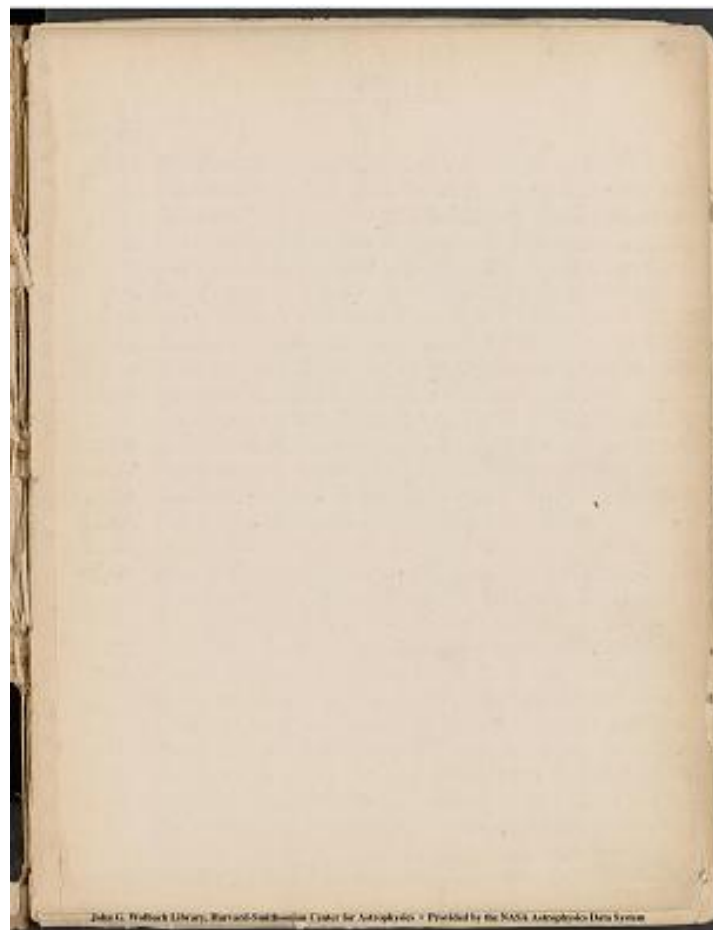
In Table 1, Volume XLVII, R.A. is carried out to hours, minutes, seconds
& tenths, Dec. is carried out to degrees, minutes & whole seconds,
when there are seconds.



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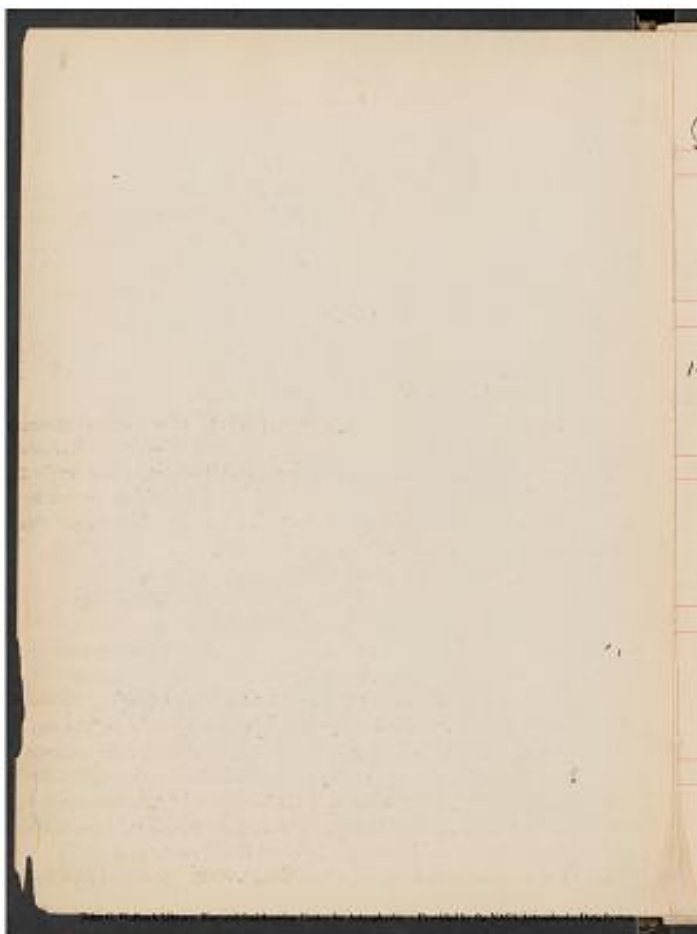
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[[2 column table]]

Page |

- 4 | Meas. to det. Pos. of Var. in Crux (No. 71) 12^h 50.7^m -57° 21' (1900)
- 6 | Meas. to det. Pos. of Var. in Vela (No. 50) 9^h 20.4^m -48° 26' (1900) C.D.M. -48° 4658
- 7 | Meas. to det. Pos. of Comp. Stars for U Antliae (No. 57) 10^h 30.8^m -39° 3' (1900) A.G.C. 14440
- 8 | Meas. to det. Pos. of Comp. Stars for W Centauri (No. 65) 11^h 50.0^m -58° 42' (1900) Z.C. 11^h 3351
- 10 | Meas. to det. Pos. of Comp. Stars for X Virginis (No. 66) 11^h 59.6^m -5° 13' (1900) D.M. -4° 3199.
- 10 | Meas. to det. Pos. of Comp. Stars for RW Virginis (No. 67) 12^h 2.1^m -6° 12' (1900) -5° 3424
- 12 | Meas. of Standards of Sixteenth Magn. Stars. R Geminorum.
- 14 | Meas. to det. Pos. of Comp. Stars for T Lupi (No. 82) 14^h 15.7^m -49° 24'. C.D.M. -49° 8685
- 14-15 | Meas. to det. Pos. of U Centauri (No. 70) 16^h 28.0^m -54° 6' (1900)
- 16 | Meas. to det. Pos. of RS Virginis (No. 84) 14^h 22.3^m +5° 8' (1900)
- 17 | Meas. to det. Pos. of Comp. Stars for zeta Bootis (No. 81) 14^h 1.7^m +13° 59' (1900) D.M. +14° 2700
- 18 | Meas. to det. Pos. of Comp. Stars for Y Centauri (No. 85) 14^h 25.1^m -29° 39' (1900) A.G.C. 19643
- 19 | Meas. to det. Pos. of Comp. Stars for RV Librae (No. 86) 14^h 30.3^m -17° 36' (1900) D.M. -17° 4122
- 20 | Meas. to det. Pos. of Comp. Stars for T Centauri 13^h 36.0^m (1900) C.D.M. -32° 9549
- 21 | Meas. to det. Pos. of Comp. Stars for Thome Leland Var. 9^h 0.7^m -24° 41' 91900) C.D.M. -24° 7693
- 22 | Meas. of Plate A 1283 for faint stars near lambda
- 23 | Meas. of Sixteenth Magnitude Standards on Paper Prints
- 24 | Meas. to det. Pos. of Comp. Stars for Nova Geminorum (Rejected)
- 26 | Meas. to det. Pos. of Comp. Stars for Nova Geminorum on Plate C 14286.
- 28 | Meas. to det. Pos. of Comp. Stars for -Centauri (No. 73) 13^h 6.3^m -56° 28' (1900) A.G.C. 17944
- 28 | Meas. to det. Pos. of Comp. Stars for -Centauri (No. 74) 13^h 7.6' -56° 26' (1900) Z.C. 13^h 363
- 29 | Meas. to det. Pos. of Comp. Stars for -Virginis (No. 75) 13^h 8.9^m -2° 16' (1900) D.M. -2° 3653
- 30 | Meas. to det. Pos. of Comp. Stars for -Lupi (No. 83) 14^h 16.9^m -47° 4' (1900) Z.C. 14^h 970.
- 31 | Meas. to det. Pos. of Comp. Stars for RR Scorpii (No. 105) 16^h 50.2^m -30° 25' (1900) C.D.M -30° 13626.
- 32 | Meas. to det. Pos. of Comp. Stars for T Arae (No. 106) 16^h 54.3^m -54° 55' (1900) A.G.C. 23005
- 33 | Meas. to det. Pos. of Comp. Stars for Z Ophiuchi (No. 109) 17^h 14.5^m +1° 37' (1900) D.M. +1° 3417.
- 34 | Meas. to det. Pos. of Comp. Stars for U Serpentis (No. 98) 16^h 25^m +10° 12' (1900) D.M. +10° 2956
- 35 | Meas. to det. Pos. of Z Centauri (No. 79) 13^h 34.3^m -31° 8' (1900)
- 36 | Meas. to det. Pos. of theta Apodis & Comp. Stars. 13^h 55.6^m -76° 19' (1900) Z.C. 13H 3271.



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2

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July 17 1956

[[2 column table]]

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37 | Meas. to det. Pos. of Comp. Stars for- Chamaelontis (No. 77) 13^h 24.6^m -77° 3' (1900) A.G.C.
 38 | Meas. to det. Pos. of Comp. Stars for Y Centauri (No. 85) 14^h 25.1^m -29° 59' (1900) A.G.C. 19643
 40-41 | Meas. to det. Pos. of delta Lupi (No. 87) 14^h 46.8^m -46° 12' (1900)
 40-41 | Meas. to det. Pos. of -Lupi (No. 88) 14^h 46.8^m -46° 12' (1900)
 42 | Meas. to det. Pos. of Comp. Stars for R Pavonis (No. 124) 18^h 3.3^m -63° 38' (1900) C.D.M.-
 43 | Meas. to det. Pos. of Comp. Stars for RR Lyrae (No.) 19^h 22.3^m +42° 36' (1900) D.M. +
 44 | Meas. to det. Pos. of Comp. Stars for TT Cygni (No.) 19^h 37.1^m +32° 23' 91900) D.M. +
 45 | Meas. to det. Pos. of RT Scorpii (No. 107) 16^h 56.8^m -36° 46' (1900)
 46 | Meas. to det. Pos. of Comp. Stars for W Arae (No. 121) 17^h 49.2^m -49° 47' (1900) -49° 11810
 47 | Meas. to det. Pos. of Comp. Stars for W Cor. Austr. (No. 122) 17^h 58.2^m -39° 20' (1900) C.D.M. -
 48 | Meas. to det. Pos. of Comp. Stars for -Serpentis (No. 126) 18^h 13.6^m -15° 39' (1900) D.M. -15°
 50 | Meas. to det. Pos. of Comp. Stars for S Scuti (No. 134) 18^h 44.9^m -8° 1' (1900) D.M. -8°
 51 | Meas. to det. Pos. of Comp. Stars for T Scuti (No. 135) 18^h 50.0^m -8° 18' (1900) D.M. -8°

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37	Meas. to det. Pos. of Comp. Stars for- Chamaelontis (No. 77)	13 ^h 24.6 ^m -77° 3' (1900) A.G.C.	19643
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43	Meas. to det. Pos. of Comp. Stars for RR Lyrae (No.)	19 ^h 22.3 ^m +42° 36' (1900) D.M. +	
44	Meas. to det. Pos. of Comp. Stars for TT Cygni (No.)	19 ^h 37.1 ^m +32° 23' 91900) D.M. +	
45	Meas. to det. Pos. of RT Scorpii (No. 107)	16 ^h 56.8 ^m -36° 46' (1900)	
46	Meas. to det. Pos. of Comp. Stars for W Arae (No. 121)	17 ^h 49.2 ^m -49° 47' (1900) -49° 11810	
47	Meas. to det. Pos. of Comp. Stars for W Cor. Austr. (No. 122)	17 ^h 58.2 ^m -39° 20' (1900) C.D.M. -	
48	Meas. to det. Pos. of Comp. Stars for -Serpentis (No. 126)	18 ^h 13.6 ^m -15° 39' (1900) D.M. -15°	
49	Meas. to det. Pos. of Comp. Stars for S Scuti (No. 134)	18 ^h 44.9 ^m -8° 1' (1900) D.M. -8°	
50	Meas. to det. Pos. of Comp. Stars for T Scuti (No. 135)	18 ^h 50.0 ^m -8° 18' (1900) D.M. -8°	
51	Meas. to det. Pos. of Comp. Stars for T Scuti (No. 135)	18 ^h 50.0 ^m -8° 18' (1900) D.M. -8°	

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[[??]]

1901 [[image - graph]]

1902 [[image - graph]]

1903 [[image - graph]]

0123456
HBy8E
1111

40 ||| | | ||

42-

-

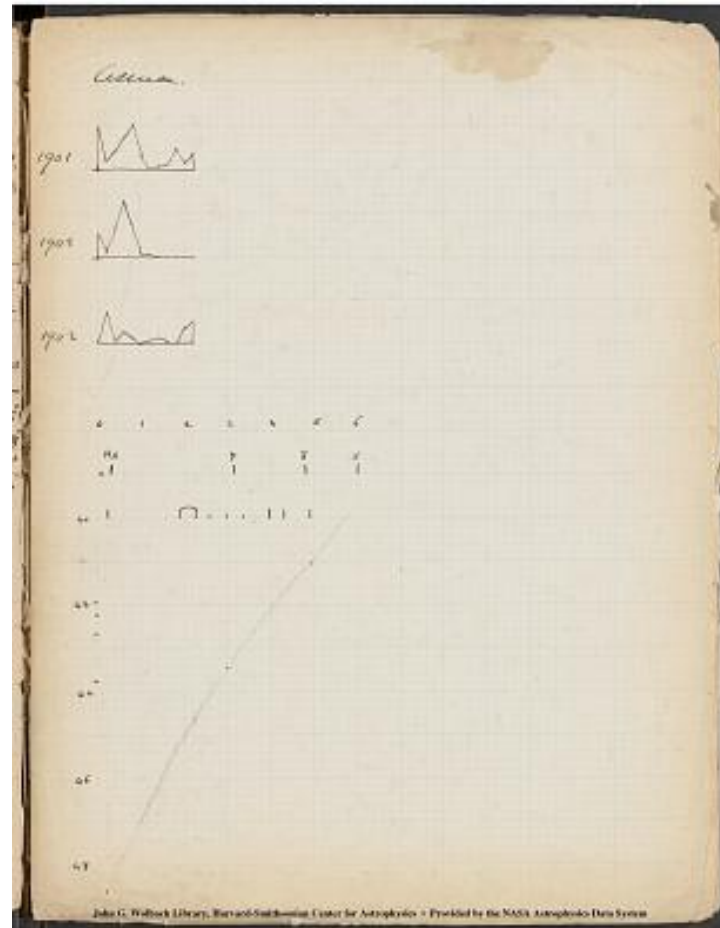
-

46

46

48

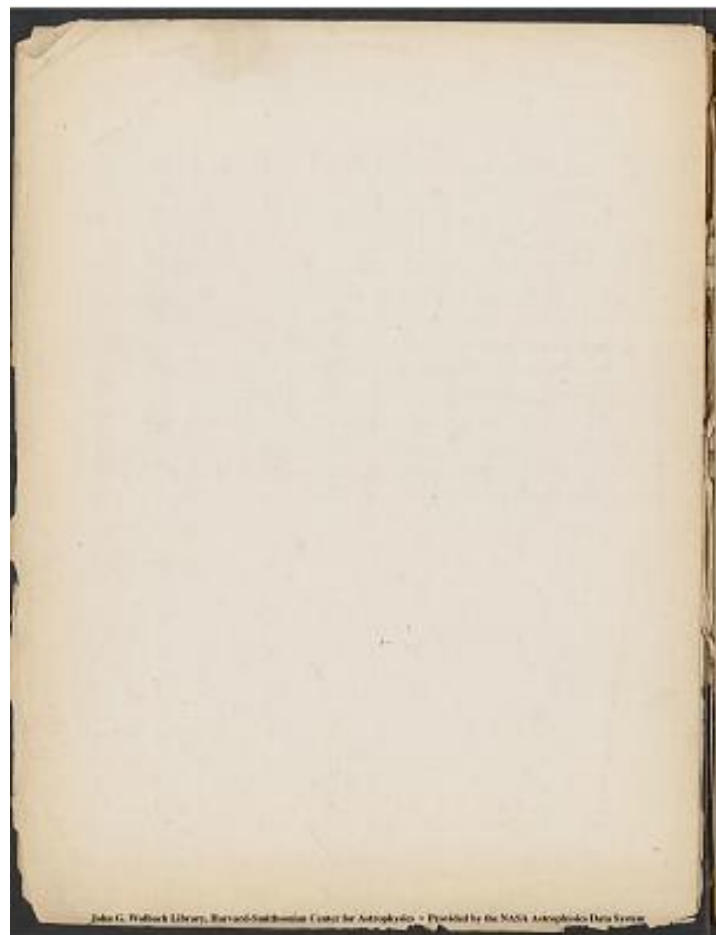
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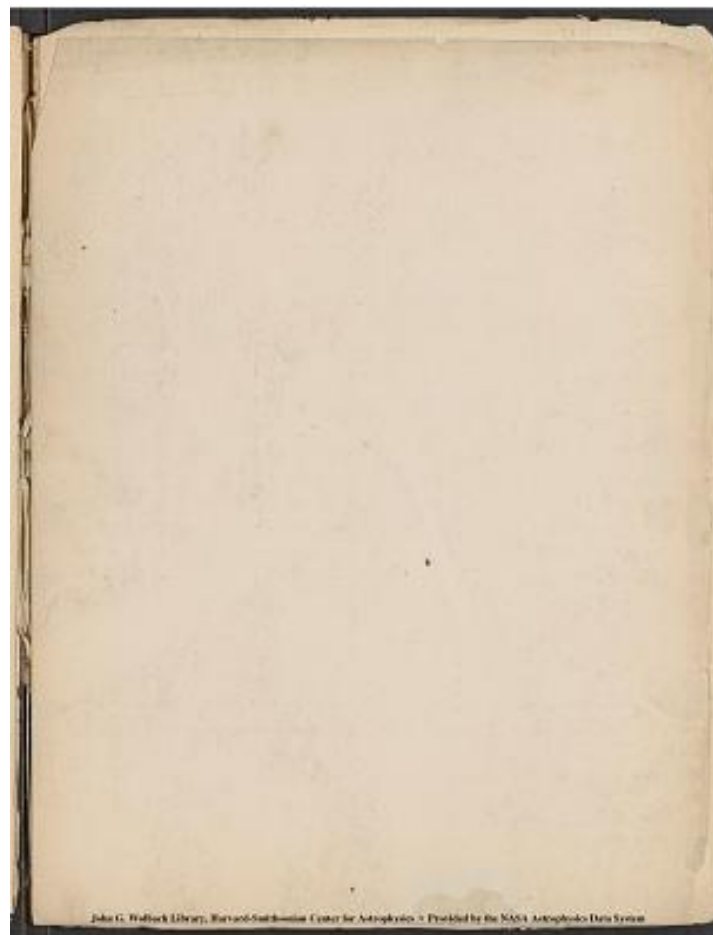
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From Bk. 15

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[[Graph]]

July 28

J.8

J 28

Ju 8

20

30

40

14 13 47.640 681

a+

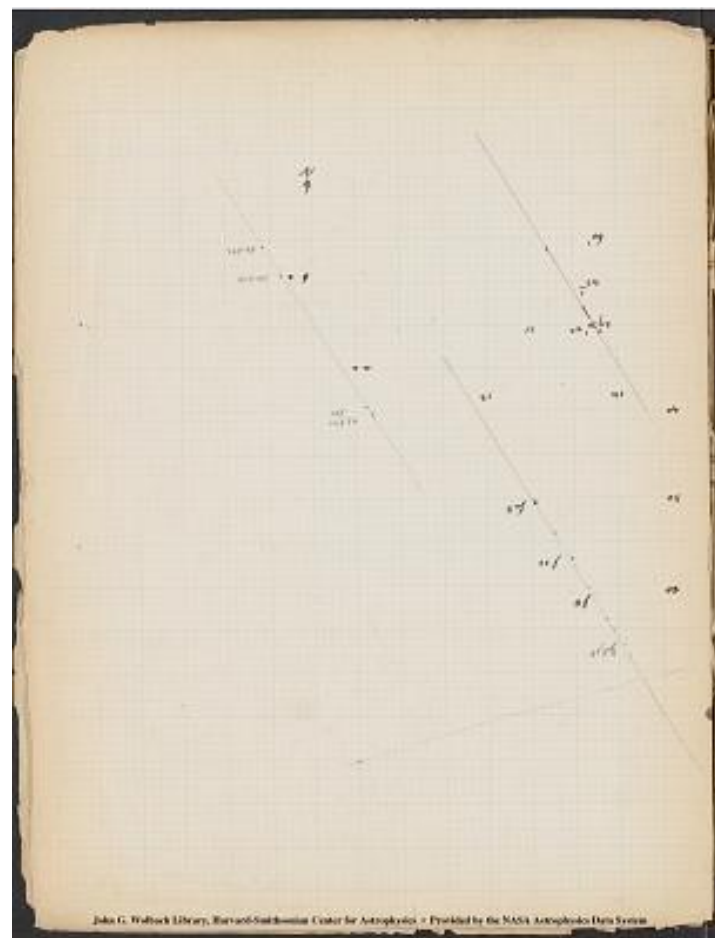
29° 30' 22 21

65' 6+ 50.514

60' 50.682

N

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Elements:

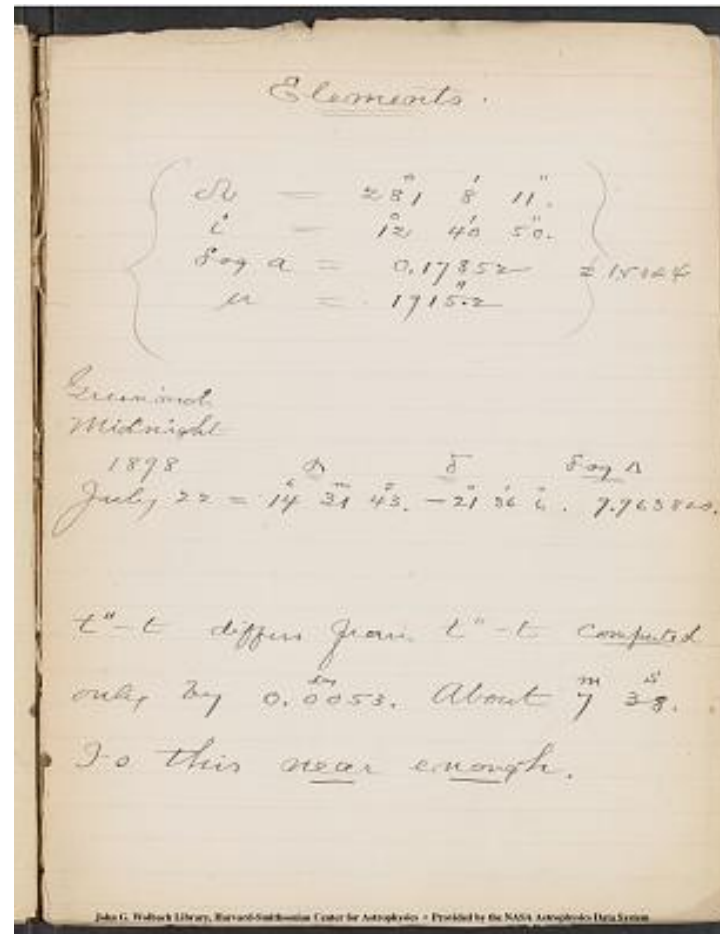
{eta = 281° 8' 11".}
{iota = 12° 40' 50".}
{Log a = 0.17852} = 1.5024
{mu = 1915.2}

Greenwich
Midnight
1898

[[4 columned table]]

|1898|alpha|delta|Log Delta|
|July 22 = |14^h|31^m|43^s| -21° 36' 6".|9.963820.|

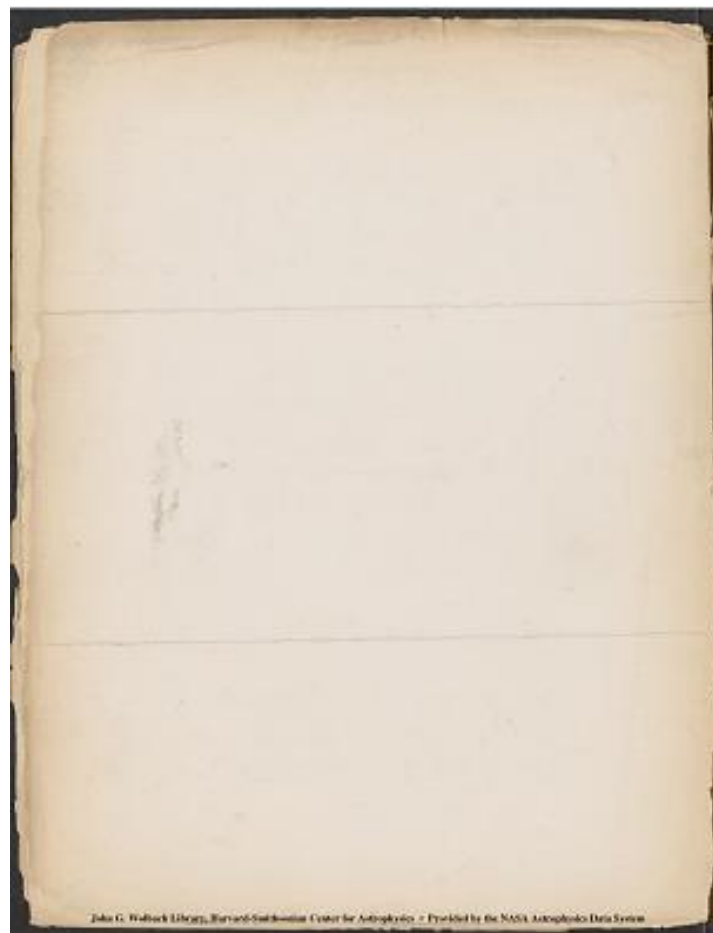
t" - t differs from t" - t computed only by
0.0053. About 7^m 38^s. Is this near
enough.



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3

18352.

63⁴³²³.
42³³³⁸.
32³⁵²².

39¹²¹⁹⁶.
4923.
3055
4726
4764

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3

18352.

63⁴³²³.
42³³³⁸.
32³⁵²².

39¹²¹⁹⁶.
4923.
3055
4726
4764

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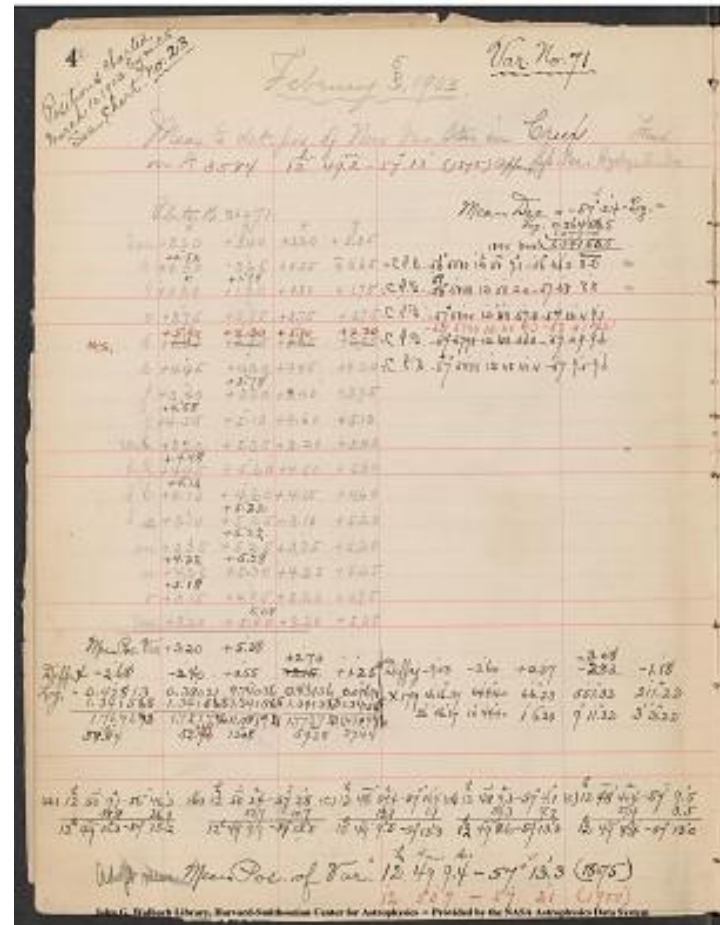
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Positions charted
March 10th, 1903
See chart no. 23

February 5, 1903
Var.No.71
Meas to del-pos of new var. Star in brief

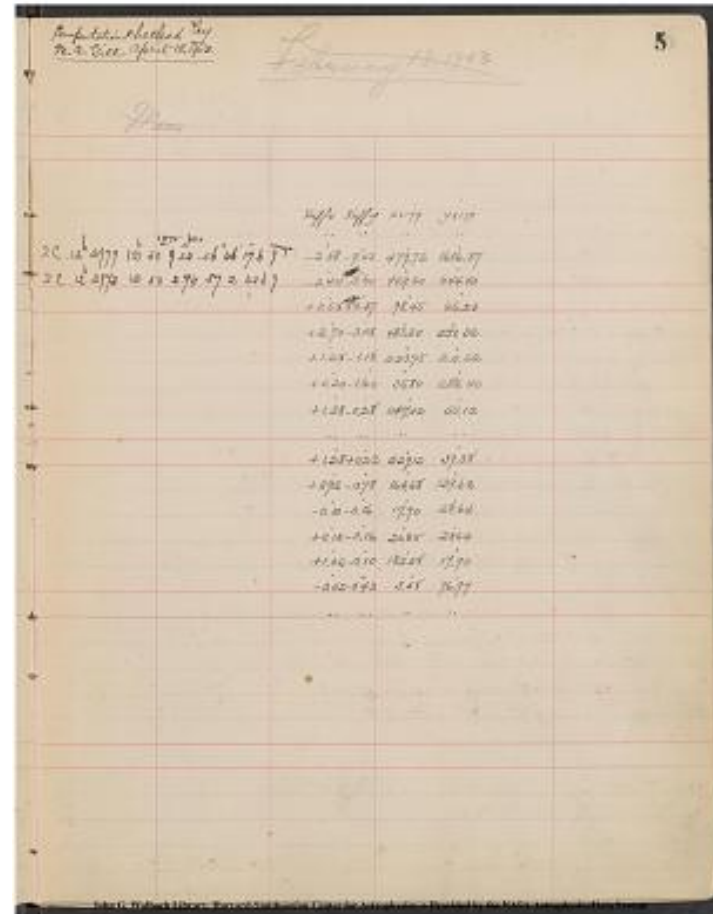
on A 3584 h12 m49.2-o57 13 (1875) [approx] sp. Pec. Hydiya[Limbo?]

Pluto B 30271. Mear Dee=-57o3.4=Log=
Var.+x3.20 +y5.40 x+3.20 y+5.35 Log. [equation]0.264565 + 1.07700 =
1.3415 [crossed out]6/[crossed out]
a ^+0.52^+0.5 -3.65+0.55 [symbol] star with a line above
it[symbol]=C.P.D-5b[symbol] degree [symbol]5510^h x m x s - o x i x
magn^ 12 50 9.1-5b4b.3 8.2
b +0.80 ^+1.78^ +0.80+1.75=C.P.D.-[crossout]50[crossout]575808 12 50
2.4 572.8 8.8=
c +3.75+5.75+3.75+5.75=C.P.D._575804 12 H8 57.H-571H.H9.1
w.5.
d [crossout]+52.5+2.55+5.25+2.55/[crossout]+5.90+2.
30+5.90+3.30=C.P.D [crossout]57[symbol] degree[symbol] 5798 12 H8
213 57 H9 9.6[crossout]-57 5.974 12 409.3 -57 H.1 92
e +44.5+4.20+4.45+4.20=C.P.D_57[symbol] degree [symbol]
5801 12 H8 h1.W
f +3.40 ^+3.78^ +3.80 +3.40 +3.75
g +4.55 +5.10 +4.60 +5.10
Var. k +3.20 +5.35 3.20 +5.40
h k ^4.48^ +4.45 +5.60 +4.50 +5.60



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	0.55 +0.37	98.45	66.23
	2.70 -3.08	483.30	551.32
	1.25 -1.18	223.75	211.22
	0.20 -1.60	35.80	286.40
|||	1.38|-0.28	247.02|	50.12|
		
|||	+1.28|+0.22	229.12|	39.38|
	+0.92 -0.78	164.68	139.62
	-0.10 -0.16	17.90	28.64
	+0.15 -0.16	26.85	28.64
	+1.02 -0.10	182.58	17.90
	-0.02 -0.43	3.58	76.97
		



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Var. No. 50

February 18, 1903

Meas to determine pos. of new var. star in Vela
R.A. $9^{\text{h}} 20.4^{\text{m}}$ Dec. $-48^{\circ} 26'$ (1900?), C.D.M. $48^{\circ} 4658$. Found on
A 5799. Sp.

Plate. B 24965

[9 columned table]

| x|y|x|y|Diff. x|y|x × 179 |y × 179|

|---|---|---|---|---|---|

|var.|+4.85|+5.30|+4.85|+5.25|. .|. .|. .|

|a|+8.60|+12.85|+8.60|+12.85|+3.75|+7.57|671.25|1355.03|

|b|+2.60|+1.35|[1.32]|+2.60|+1.30|-2.25|-3.96|402.75|708.84|

|c|+7.20|+9.55|[9.52]|+7.20|+9.50|+2.35|+4.24|420.65|758.96|

|d|+3.70|[3.72]|0.20|3.75|+0.20|-1.13|-5.08|202.27|909.32|

|e|+7.55|[7.58]|~~5~~|4.75|+7.60|+4.75|+2.73|-0.53|488.67|94.87|

|f|+8.05|+4.65|+8.05|+4.65|+3.20|-0.63|572.80|112.77|

|g|+6.35|+2.80|+6.35|+2.80|+1.50|-2.48|268.50|443.92|

|h|+3.05|[3.08]|+4.35|+3.10|4.35|-1.77|-0.93|316.83|166.47|

|k|+5.25|+5.10|+5.25|+5.10|+0.40|-0.18|71.60|32.22|

|var.|+4.85|+5.25|+4.85|+5.30|. .|. .|. .|

|l|+4.20|+4.~~70~~|65|+4.20|+4.65|-0.65|-0.63|116.35|112.77|

|m|+3.70|+5.45|-1.15|+0.17|205.85|30.43|

|n|+0.40|[0.42]|+6.75|[6.72]|+0.45|+6.70|-4.43|+1.44|792.97|257.76|

|o|+3.80|+7.75|[7.72]|+3.80|+7.70|-1.05|+2.44|187.95|436.76|

|p|+4.05|[4.08]|+7.50|+4.10|+7.50|-0.77|+2.22|137.83|397.38|

|q|+4.05|+5.20|+4.05|+5.20|-0.80|-0.08|143.20|14.32|

|r|+6.75|+4.75|[4.72]|+6.75|+4.70|+1.90|-0.56|340.10|100.24|

|s|+4.80|[4.82]|+6.95|+4.85|+6.95|-0.03|+1.67|5.37|298.93|

|t|+5.25|+3.25|+0.40|-2.03|71.60|363.37|

|var.|+4.85|+5.30|[5.28]|+4.85|+5.30|. .|. .|. .|

6 Var. No. 50 February 18, 1903

Meas to determine pos. of new var. star in Vela
R.A. $9^{\text{h}} 20.4^{\text{m}}$ Dec. $-48^{\circ} 26'$ (1900?), C.D.M. $48^{\circ} 4658$. Found on
A 5799. Sp.

Plate. B 24965

	x	y	x	y	Diff. x	y	x × 179	y × 179		
var.	+4.85	+5.30	+4.85	+5.25	. .	. .	. .	. .
a	+8.60	+12.85	+8.60	+12.85	+3.75	+7.57	671.25	1355.03		
b	+2.60	+1.35	[1.32]	+2.60	+1.30	-2.25	-3.96	402.75	708.84	
c	+7.20	+9.55	[9.52]	+7.20	+9.50	+2.35	+4.24	420.65	758.96	
d	+3.70	[3.72]	0.20	3.75	+0.20	-1.13	-5.08	202.27	909.32	
e	+7.55	[7.58]	5	4.75	+7.60	+4.75	+2.73	-0.53	488.67	94.87
f	+8.05	+4.65	+8.05	+4.65	+3.20	-0.63	572.80	112.77		
g	+6.35	+2.80	+6.35	+2.80	+1.50	-2.48	268.50	443.92		
h	+3.05	[3.08]	+4.35	+3.10	4.35	-1.77	-0.93	316.83	166.47	
k	+5.25	+5.10	+5.25	+5.10	+0.40	-0.18	71.60	32.22		
var.	+4.85	+5.25	+4.85	+5.30	. .	. .	. .	. .
l	+4.20	+4. 70	65	+4.20	+4.65	-0.65	-0.63	116.35	112.77	
m	+3.70	+5.45	-1.15	+0.17	205.85	30.43				
n	+0.40	[0.42]	+6.75	[6.72]	+0.45	+6.70	-4.43	+1.44	792.97	257.76
o	+3.80	+7.75	[7.72]	+3.80	+7.70	-1.05	+2.44	187.95	436.76	
p	+4.05	[4.08]	+7.50	+4.10	+7.50	-0.77	+2.22	137.83	397.38	
q	+4.05	+5.20	+4.05	+5.20	-0.80	-0.08	143.20	14.32		
r	+6.75	+4.75	[4.72]	+6.75	+4.70	+1.90	-0.56	340.10	100.24	
s	+4.80	[4.82]	+6.95	+4.85	+6.95	-0.03	+1.67	5.37	298.93	
t	+5.25	+3.25	+0.40	-2.03	71.60	363.37				
var.	+4.85	+5.30	[5.28]	+4.85	+5.30		

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Var. No. 65

March 8, 1903

Meas to det. pos. of comp. stars for W Centauri

R.A. = $11^{\text{h}} 50.0^{\text{m}}$ Dec. = $-58^{\circ} 42'$ (1900) Z.C. $11^{\text{h}} 33.51'$

Plate B9704.

[right margin]

[2 columned table]

Mean Dec. = $-58^{\circ} 34.6' =$

Log 0.28286

[1.07700]

1.35986

[right margin]

[13 columned table]

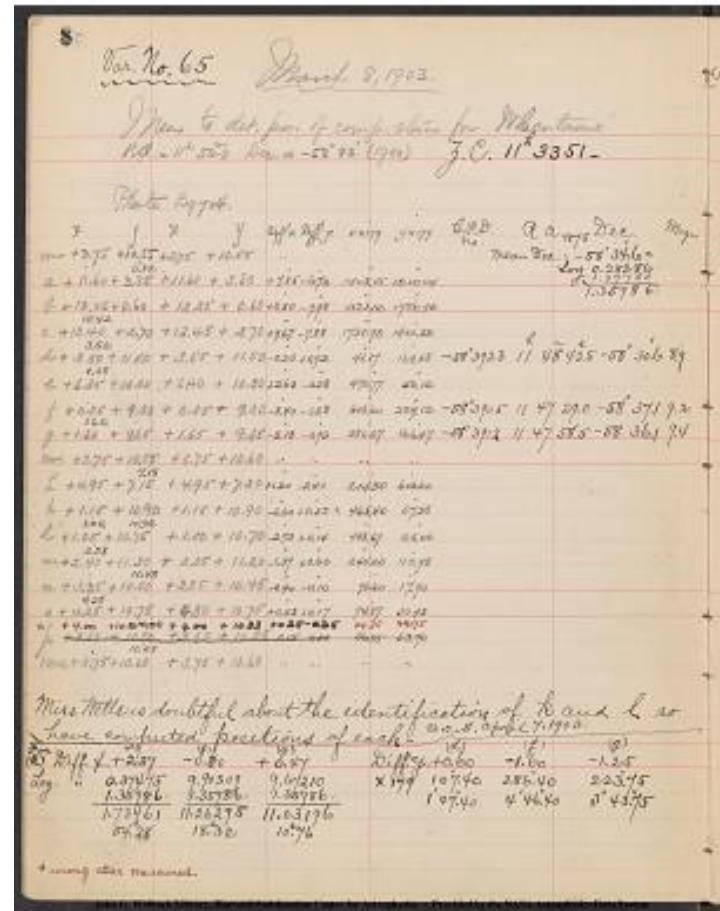
|x|y|x|y|Diff x.|x × 179|y × 179|C.P.D. No.|R.A.

1875|Dec.|Magn.

var.	+3.75	+10.55	+3.75	+10.55								
a	+11.60	+3.85	+11.60	+3.80	+7.85	-676	1405.15	1210.04				
b	+12.25	+0.60	+12.25	+0.60	+8.50	-9.98	1521.50	1786.42				
c	+13.40	+13.42	+2.70	+13.45	+2.70	+9.67	-7.88	1730.93	1410.52			
d	+3.50	+3.52	+11.50	+3.55	+11.50	-0.23	+0.92	41.17	164.68			
e	+58° 39' 23"	+11° 48'	+48° 45'	+58° 30.6'								
f	+6.35	+6.38	+10.30	+6.40	+10.30	+2.68	-0.28	470.77	50.12			
g	+0.35	+9.30	+0.35	+9.30	-3.40	-1.28	608.60	229.12	-58° 39' 05"	11 47 29.0		
h	+1.60	+1.62	+9.65	+1.65	+9.65	-2.13	-0.93	381.27	166.47			
i	+58° 39' 12"	11 47 58.5	-58 36.1	9.4								
j	+3.75	+10.55	+3.75	+10.60								
k	+4.95	+7.15	+4.95	+7.20	+1.20	-3.40	214.80	608.60				
l	+1.15	+10.90	+1.15	+10.90	-2.60	+0.32	465.40	57.28				
m	+1.05	+1.02	+10.75	+1.07	+1.00	+10.70	-2.73	+0.14	488.67	25.06		
n	+2.40	+2.38	+11.20	+2.35	+11.20	-1.37	+0.62	245.23	110.98			
o	+3.35	+10.50	+3.35	+10.45	-0.40	-0.10	71.60	17.90				
p	+4.25	+4.28	+10.75	+4.30	+10.75	+0.53	+0.17	94.87	30.43			
q	+4.00	+10.33										
r	+10.28	+4.00	+10.33	+0.25								
s	+0.25	+44.75										
t	+3.60	+10.30	+3.60	+10.25	+0.15	+0.30	26.85	53.70				
u	+3.75	+10.60	+3.75	+10.60								

Miss Wells is doubtful about the identification of k and l so have computed computed positions of each - M.C.S. April 7, 1903.

For (k)



```

[[8 columned table]]
| |(d)|(f)|(g)| |(d)|(f)|(g)|
|----|----|----|----|----|
|Diff. x.|+2.37|-0.80|+0.47|Diff. y.|+0.60|-1.60|-1.25|
|Log. Diff. x.|037475|9.90309|9.67210|x179|107.40"|286.40"|223.75"|
| |1.35986|1.35986|1.35986|1.35986| |1' 47.40"|4'
46.40"|3' 43.75"
| |1.73461|11.26295|11.03196| | | |
| |54.28^[[s]]|18.32^[[s]]|10.76^[[s]]| | | |

```

*wrong star measured.

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For(k)

[[18' columned table]]

[d] 11°[h] 48°[m] 42.5°[s] -58°30.6' (f) 11°[h] 47°[m] 29.0°[s] -58°37.1' (g) 11°[h] 47°[m] 58.5°[s] -58°36.1' |
[underlined]] | | 54.3 | 1.8 | | 18.3 | 4.8 | | 10.8 |
3.7|[underlined]] |
| 11°[h] 47°[m] 48.2°[s] -58°32.4' | 11°[h] 47°[m] 47.3°[s] -58°32.3' | 11°[h] 47°[m] 47.7°[s] -58°32.4'

Mean Pos. for (k) 11^h 47^m 47.7^s -58° 32.4' (1875)

For (I)

[[8 columned table]]

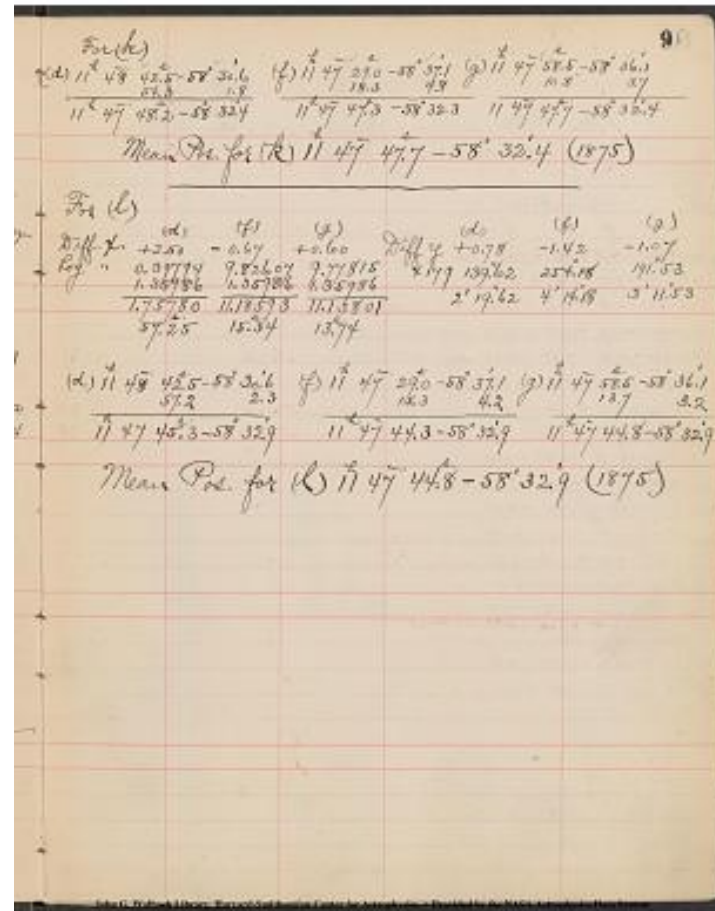
$$\begin{aligned} & \text{Diff. } x, |+2.50|-0.67|+0.60|\text{Diff } y|+0.78|-1.42|-1.07| \\ & \text{Log. } x|0.39794|9.82607|9.77815|x|179|139.62''|254.18''|191.53''| \\ & \quad |[\underline{1.35986}|1.35986|1.35986|[\underline{1.35986}]] \quad |2' \ 19.62''|4' \ 14.18''|3' \ 11.53''| \\ & \quad |1.75780|11.18593|11.13801| \quad | \quad | \quad | \quad | \\ & \quad |57.25^{\wedge}[\text{[s]}]|15.34^{\wedge}[\text{[s]}]|13.74^{\wedge}[\text{[s]}]| \quad | \quad | \quad | \quad | \end{aligned}$$

[[18 columned table]]

$$\begin{aligned} & |(\alpha)|11^\wedge[[h]]48^\wedge[[m]]42.5^\wedge[[s]]- \\ & 58^\circ30'6(f)|11^\wedge[[h]]47^\wedge[[m]]29.0^\wedge[[s]]- \\ & 58^\circ37.1'(g)|11^\wedge[[h]]47^\wedge[[m]]58.5^\wedge[[s]]-58^\circ36.1' \\ & |[[\underline{\text{underlined}}]]|57.2|2.3[[\underline{\text{underlined}}]]|[[\underline{\text{underlined}}]]|15.3| \\ & 4.2[[\underline{\text{underlined}}]]|[[\underline{\text{underlined}}]]|13.7|3.2[[\underline{\text{underlined}}]]| \\ & |11^\wedge[[h]]47|45.3^\wedge[[s]]-58^\circ32.9'|11^\wedge[[h]]47^\wedge[[m]]44.3|-58^\circ32.9' \\ & |11^\wedge[[h]]47^\wedge[[m]]44.8|-58^\circ32.9' \end{aligned}$$

Mean Pos. for (l) $11^{\circ}[[h]]$ $47^{\circ}[[m]]$ $44.8^{\circ}[[s]]$ $-58^{\circ} 32.9'$ (1875)

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10 Var. No. 67 and Var. No. 66
66.

March 10, 1903

Meas. to det pos. of comp. stars for new stars in Virgo

α RW Virginis $v^1 = -5^\circ 34' 24''$ R.A. 11^h

59. 8 Dec. $-5^\circ 57'$, 12 h $2.1^\circ -6^\circ$

12 (1900) 3 199 R.A. 11^h

57. 3 m Des, $-4^\circ 57.7'$ α RW Virginis

11 h $59.6^\circ -5^\circ 13'$ (1900)

$var^1 =$ Var. No. 67 $var^2 =$ Var.

No. 66

Plate B18807

[table, 9 columns]

| | | | | v^1 | v^1 | v^1 | v^1

| | | | | x | y | $Diff$ | x | y | $x179$ | $y179$

$var^1 + 14.40 | -14.70 | +14.40 | -14.70 | -Diff$ | x | $Diff$ | y | $x179$ | $y179$

$var^2 + 1.70 | +4.90 | +1.70 | +4.90 | Diff$ | x | $Diff$ | y | $x179$ | $y179$

| | | | | 10.72

a | -4.20 | +10.70 | -4.20 | +10.75 | -18.59 | +25.44 | 3327.61 | 4553.76

b | +26.75 | +16.30 | +26.75 | +16.30 | +12.36 | +31.02 | 2212.44 | 5552.58

c | -7.20 | -33.60 | -7.20 | -33.60 | -21.59 | -18.88 | 3864.61 | 3379.52

| | | | | 3.58

d | +5.85 | +3.60 | +5.85 | +3.55 | -8.54 | +18.31 | 1528.66 | 3275.70

e | +7.10 | +3.35 | +7.10 | +3.35 | -7.29 | +18.07 | 1304.91 | 3254.53

f | +14.20 | -1.15 | +14.20 | -1.15 | -0.19 | +13.57 | 34.01 | 2429.03

| | | | | 13.52

g | +12.45 | ~~13.50~~ | +12.45 | -13.55 | -

1.94 | +1.20 | 347.26 | 214.80

$var^1 + 7.35 | ~~14.35~~ | -10.35 | ~~14.35~~ | -$

$14.75 | +14.40 | -14.70 | -1.94 | +1.20 | 347.26 | 214.80$

$var^2 + 1.70 | +4.90 | +1.70 | +4.95 | -1.94 | +1.20 | 347.26 | 214.80$

| | | | | 10.38

h | +7.35 | -10.35 | +7.35 | +10.40 | -7.04 | +4.34 | 1260.16 | 776.86

k | +2.35 | -3.60 | +2.35 | -3.60 | -12.04 | +11.12 | 2155.16 | 1990.48

l | +17.20 | -8.90 | +17.20 | -8.90 | +2.81 | +5.82 | 502.99 | 1041.78

| | | | | 13.98

m | +18.5 | -13.95 | +18.15 | -14.00 | +3.76 | +0.74 | 673.04 | 132.46

~~14.39~~ | ~~14.72~~

$var^1 + 14.40 | -14.70 | +14.40 | -14.70 | +3.76 | +0.74 | 673.04 | 132.46$

| | | | | 1.70 | 4.92

$var^2 + 1.70 | +4.95 | +1.70 | +4.90 | +3.76 | +0.74 | 673.04 | 132.46$

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[[4 Column Table]]

v2|v2|v2|v2|

Diff x|Diff y|x × 179|y × 179|

.....

.....

-5.90 | +5.80 | 1056.10 | 1038.20

+25.05 | +11.38 | 4483.95 | 2037.02

-8.90 | -38.52 | 1593.10 | 6895.08

+4.15 | -1.34 | 742.85 | 239.86

+5.40 | -1.57 | 966.60 | 281.03

+12.50 | -6.07 | 2237.50 | 1086.53

+10.75 | -18.44 | 1924.25 | 3300.76

.....

.....

+5.65 | -15.30 | 1011.35 | 2738.70

+0.65 | -8.52 | 116.35 | 1525.08

+15.50 | -13.82 | 2774.50 | 2473.78

+16.45 | -18.90 | 2944.55 | 3383.10

.....

.....

.....

[[/4 Column Table]]

Diff x	Diff y	x × 179	y × 179
.....
.....
-5.90	+5.80	1056.10	1038.20
+25.05	+11.38	4483.95	2037.02
-8.90	-38.52	1593.10	6895.08
+4.15	-1.34	742.85	239.86
+5.40	-1.57	966.60	281.03
+12.50	-6.07	2237.50	1086.53
+10.75	-18.44	1924.25	3300.76
.....
.....
+5.65	-15.30	1011.35	2738.70
+0.65	-8.52	116.35	1525.08
+15.50	-13.82	2774.50	2473.78
+16.45	-18.90	2944.55	3383.10
.....
.....
.....

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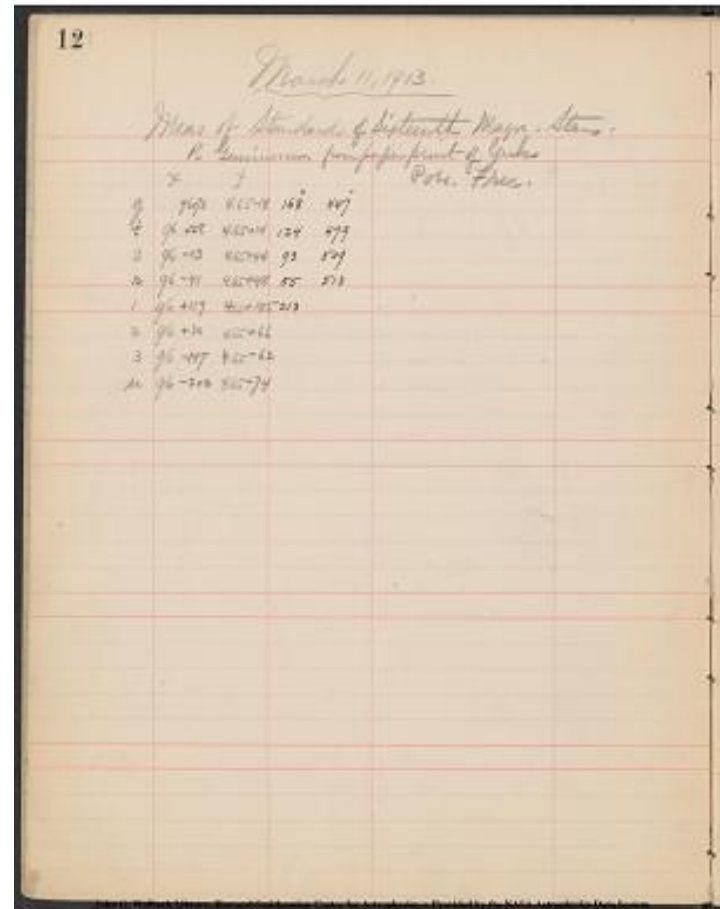
March 11, 1903

Meas of Standards of Sixteenth Magn. Stars
R Gemiumomm [[?]] from paper print of Yerkes
Pobs. Frec.

[[5 Column Table]]

---	x	y	"	"
g	96+72	4.65-18	168	447
t	96+28	4.65+14	124	479
s	96-03	4.65+44	93	509
n	96-41	4.65+48	55	513
1	96+117	4.65+185	213	---
2	96+30	4.65+66	---	---
3	96-147	4.65-62	---	---
u	96-202	4.65-74	---	---

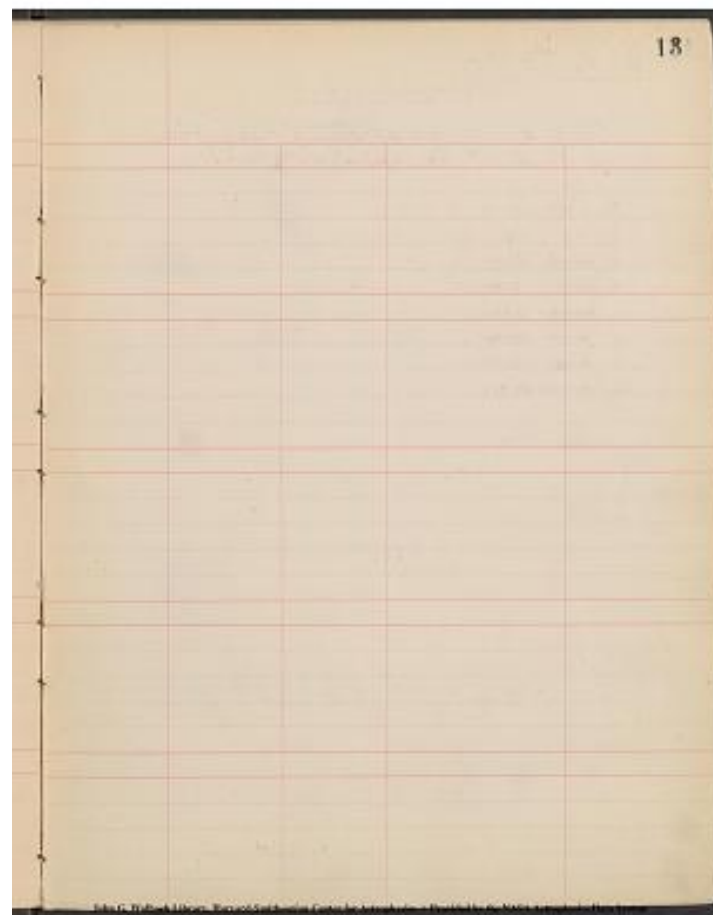
[[/5 Column Table]]



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[[top right margin]]
13
[[/top right margin]]

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Var. No. ~~83~~ 82

March 11, 1903

Meas to det. pos. of comp stars for T Lupi
A.G.C. 19416 R.d. 14h 15.7m Dec.-49° 24' (1900) C.D.M. - 49° 8685.

Plate B6066.

	x	y	x	y	Diffx	Diffy	xx170	yx179
var	+13.55	+6.65	+13.60	+6.65	..	..	..	..
a	+0.40	+5.10	+0.40	+5.10	-13.17	-1.56	2357.43	279.24
b	+15.40	+1.85	+15.35	+1.80	+1.81	-4.84	323.99	866.36
c	+8.75	+9.70	+8.75	+9.70	-4.82	+3.04	862.78	544.16
d	+15.00	+9.30	+14.95	+9.30	+1.41	+2.64	252.39	472.56
var	+13.60	+6.65	+13.55	+6.70	..	..	..	..
e	+8.90	+4.10	+8.90	+4.10	-4.67	-2.56	835.93	458.24
f	+8.30	+7.45	+8.30	+7.45	-5.27	+0.79	943.33	141.41
g	+14.80	+7.55	+14.80	+7.55	+1.23	+0.89	220.17	159.31
h	+15.30	+7.85	+15.30	+7.80	+1.73	+1.16	309.67	207.64
var	+13.55	+6.65	+13.55	+6.65	..	..	..	..

Var.No.70 Continued from page 15.

Diff.X. -0.01 -5.16 -9.54 -4.56 +0.34 Diff.y. +16.32 +13.85 -11.32 -14.15

Log. " 8.00000 0.71265 0.97955 0.65896 9.53148 x179 2921.28

2479.15 2026.28 2532.85 1825.80

1.30798 1.30798 1.30798 1.30798 1.30798

9.30798 2.02063 2.28753 1.96694 10.83946 48 41.28 41 19.15 33

46.28 42 12.85 30 25.80

0.20 104.86 193.88 92.67 6.91

1 44.86 313.88 1 32.67

12 26 44.43 53° 9 34.6 12 24 50.00 53° 16 15.3 12 23 12.86 54° 31 6.0

12 24 53.86 54° 40 2.4

6.20 48 41.3 1 44.86 41 19.2 3 13.88 33 46.3 1 32.67 42 12.8

12 26 44.63-53° 58 15.9 12 26 43.86 -53° 57 34.5 12 26 26.74 -53 57

19.7 12 26 26.53 -53° 57 49.9

12 26 36.66-54° 28 43.8

6.91 30 25.8

12 26 29.75-53° 58 18.0

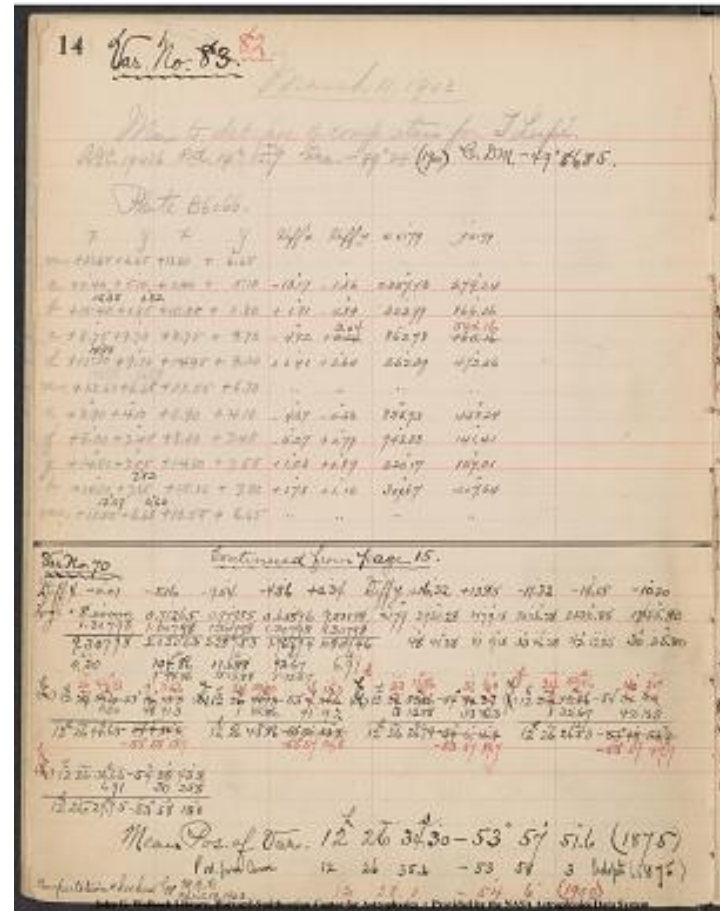
Mean Pos. of Var. 12 26 34.30-53° 57 51.6 (1875)

Pos. from Carve 12 26 35.2 -53 58 3 Adopt (1875)

Computation checked by M.A.G. 12 28.0 -54 6 (1900)

April 13, 1903

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positions charted May 7, 1903.
M.C.S.

Var. No. 70 X

March 11, 1907

Meas. to det. pos. of U. Centauri and comp stars.
R.A. 12h 28.0m Dec. $-54^{\circ} 6'$.

Plate B 9516.

[[9 column table]]

x	y	x	y	Diffx	Diffy	xx179	yx179	
var	+ 8.45	+ 7.90	+ 8.45	+ 7.90		
c	~~[[strikethrough]]~~a	~~[[strikethrough]]~~	+ 1.00	+14.75	+ 1.00	+14.75		
7.46	+6.85	1335.34	1226.15					
d	~~[[strikethrough]]~~b	~~[[strikethrough]]~~	+3.70	3.68	+5.70			
5.68	+3.65	+5.65	-4.78	-2.22	855.62	397.38		
e	~~[[strikethrough]]~~g	~~[[strikethrough]]~~	+8.25	+10.75	+8.25	+10.75		
0.21	+2.85	37.59	510.15					
g	~~[[strikethrough]]~~k	~~[[strikethrough]]~~	+13.60					
13.62	+1.40	+13.65	+1.40	+5.16	-6.50	923.64	1163.50	
l	~~[[strikethrough]]~~e	~~[[strikethrough]]~~	+9.75					
9.78	+4.40	+9.80	+4.40	+1.32	-3.50	236.28	626.50	
m	~~[[strikethrough]]~~f	~~[[strikethrough]]~~	+11.80	+5.80	+11.80	+5.80	+3.34	-
2.10	597.86	375.90						
var	+8.45	+7.90	+8.45	+7.90
n	~~[[strikethrough]]~~g	~~[[strikethrough]]~~	+9.10	+7.40	+9.10	+7.40	+0.64	-
0.50	114.56	89.50						
o								
~~[[strikethrough]]~~h	~~[[strikethrough]]~~	+9.40	+7.90	+9.40	+7.90	+0.94	0.00	16
8.26	0							
p	~~[[strikethrough]]~~k	~~[[strikethrough]]~~	+9.25	+7.50				
7.48	+9.25	+7.45	+0.79	-0.42	144.41	75.18		
q	~~[[strikethrough]]~~l	~~[[strikethrough]]~~	+8.45	+8.60	+8.45	+8.60	-	
0.01	+~~[[strikethrough]]~~l	~~[[strikethrough]]~~	0.70	1.79	125.30			
r	~~[[strikethrough]]~~m	~~[[strikethrough]]~~	+8.75	8.72	+7.85			
7.82	+8.70	+7.80	+0.26	-0.08	46.54	14.32		
var	+8.45	8.46	+7.90	7.90	+8.50	+7.90	..	

DiffX

Mean Dec. = $-54^{\circ} 18.5' = \text{Log Dec. } 0.23098$
1.07700

1.30798

[[19 column table]]

|var|+8.45|+7.90|+8.45|+7.90|..|..|..| | | | | | | | | | | | | | | |
|b=|~~[[strikethrough]]~~a|~~[[strikethrough]]~~|+8.45|+2425
|2422|+8.45|+24.20|

Handwritten astronomical data table from a notebook. The table is titled "Var. No. 70" and "March 11, 1907". It contains several columns of data, including coordinates, differences, and other measurements. The handwriting is in cursive and includes some corrections and annotations.

0.01|+16.32|1.79|2921.28|Z.C.|12|~~h~~|1632
~~1528~~|12h|26m
~~24~~|44.43s
~~59.00~~|-53°|9
~~16~~|34.6
~~15.3~~|9|
 a= ~~b~~=2|+3.30|+21.75|+3.30|+21.75|-
 5.16|+13.85|923.64|2479.15|Z.C.|12h|1528
~~1632~~|12|24
~~26~~|59.00
~~44.43~~|-53°|16
~~9~~|15.3
~~34.6~~|9|
 h= ~~d~~ 4.3|~~1~~-1.05
 1.08|~~3~~-3.40 3.42|-1.10|-3.45|-9.5|-
 11.32|1707.66|2026.28|Z.C.|12h|1426
~~1524~~|12|23
~~24~~|12.86
~~53.86~~|-54|31
~~40~~|6.0
~~27~~|8.2 |~~8~~|
 f= ~~d~~ f 4|+3.90|-6.25|+3.90|-6.25|-4.56|-
 14.15|816.24|2532.85|Z.C.|12h|1524
~~1426~~|12|24
~~23~~|53.86
~~12.86~~|-54|40
~~31~~|2.7
~~6.0~~|8
~~8½~~|
 k= ~~h~~ 5|+8.80|-2.30|+8.80|-2.30|+0.34|-
 10.20|60.86|1825.80|Z.C.| 12h|1629|12|26|36.66|-54|28|43.8|9.5|
 c |~~a~~|+1.00|+14.75|+1.00|+14.75|-
 7.46|+6.85| | | | | | | | | |

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 Spectra #15
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positions charted April 7.1903 M.C.S. See chart no. 25.

Var. no.
~~85.~~ 84.

March 11, 1903

Meas. to det. pos of R. S. Virginie & Comp Stars.
R.A. $14^{\circ} [h]$, $22.3^{\circ} [m]$ Dec. $+5.7^{\circ}$. (1900)

Plate No. 16625

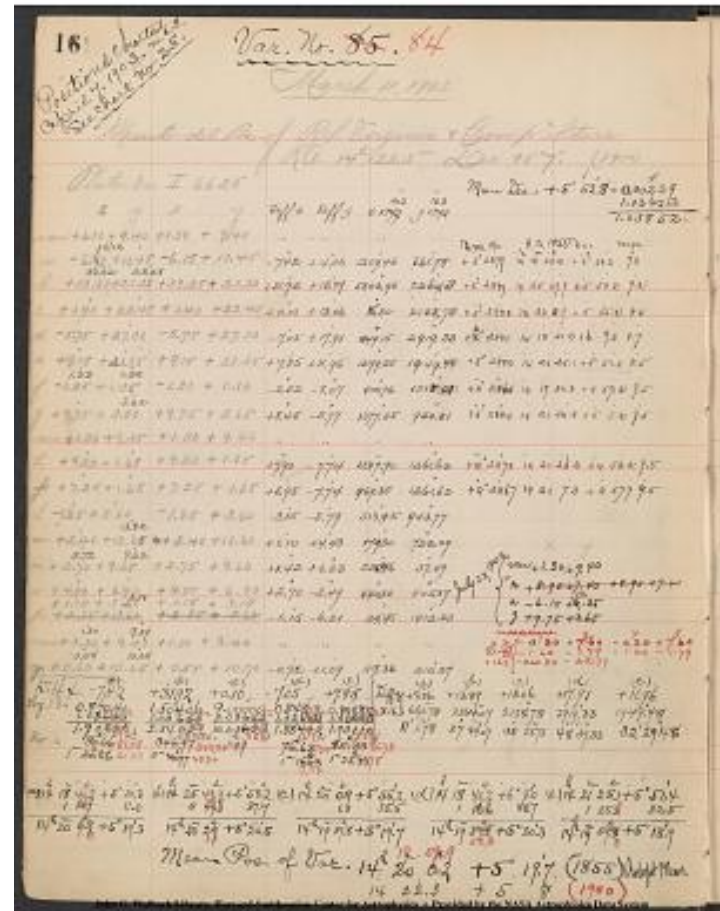
[right margin]

[2 columned table]

Mean Dec. $= +5^{\circ} 52.8' = 0.00229$
| 1.03623 |
| 1.03852 |
[right margin]

[13 columned table]

x	y	x|y	Diff x	Diff y	x × 163	y × 163
var.	+1.30	+9.40	+1.30	+9.40	...	...
D.M. No. | R.A. 1855 | Dec. | Magn. |						
a	-6.	10.46	1209.46	661.78	$+5^{\circ} 28' 79''$	$14^{\circ} 18' 40.2''$
b	$+33.20^{\circ}$	$[33.22]$	$+23.25^{\circ}$	$[23.28]$	$+33.25$	$+23.30$
c	$+1.40$	$+22.45$	$+1.40$	$+22.45$	$+0.10$	$+13.06$
d	-5.75	$+27.30$	-5.75	$+27.30$	...	...
e	$+9.15$	$+21.35$	$+9.15$	$+21.35$	$+7.85$	$+11.96$
f	-1.25°	$[1.22]$	$+1.35^{\circ}$	$[1.32]$	-1.20	$+1.30$
g	$+9.75$	$[3.60]$	$+9.75$	$+3.65$	$+8.45$	-5.77
h	$+9.20$	$+1.65$	$+9.20$	$+1.65$	$+7.90$	-7.74
i	-1.85	$+3.60$	-1.85	$+3.60$	-3.15	-5.79
j	$+2.40$	$+13.85$	$+2.40$	$+13.80$	$+1.10$	$+4.43$
k	$+2.70^{\circ}$	$[2.72]$	$+9.65^{\circ}$	$[9.62]$	$+2.75$	$+9.60$
l	$+4.00$	$+6.90$	$+4.00$	$+6.90$	$+2.70$	-2.49
m	$+8.90$	$+7.40$	$+8.90$	$+7.40$	...	...
n	$+2.35$	$+3.60$	$+2.35$	$+3.60$	$+2.35$	$+3.60$
o	$+3.60$	$[1.22]$	$+1.15$	$+3.20$	$+3.18$	$+1.15$
p	$+6.21$	$[24.45]$	$+10.23$	...	...	...
q	$+6.10$	$[1.22]$	$+1.15$	$+3.20$	$+3.18$	$+1.15$
r	$+1.30$	$[1.30]$	$+9.40$	$[9.39]$	$+1.30$	$+9.40$



+7.60^{[[y]]} -0.30^{[[x]]} +7.60^{[[y]]}
 |q|+0.60^{[[0.58]]}+10.65^{[[10.68]]}+0.55|+10.70|-
 0.72|+1.29|117.36|210.27| x163 { -260.80 -291.77^{[[diff { -1.60 -1.70]]}
 |diff x.-|7.426^{[[a]]}+31.92^{[[b]]}+0.10^{[[c]]}-
 7.05^{[[d]]}+7.85^{[[e]]}|Diff.
 y|+4.06^{[[a]]}+13.89^{[[b]]}+13.06^{[[c]]}+17.91^{[[d]]}+11.96^{[[e]]}||
 Log.
 x|1.03~~623~~852^{[[0.87040]]}1.03~~623~~852^{[[1.50406]]}1.03~~623~~852^{[[9.00000]]}1.03~~623~~852^{[[0.84819]]}1.03~~623~~852^{[[0.8948]]}x 163
 661.78|2264.07|2128.78|2919.33|1949.48|
 |1.90~~663~~892|2.54~~029~~258|10.3~~623~~852|1.88~~442~~671|1.93~~110~~339|111.78|37 44.07|35 28.78|48 39.33|32 29.48|
 |No =
~~80.66~~81.08~~346.97~~348.80~~1.09~~1.09~~6.63~~77.04~~85.33~~85.78
 |1^{[[m]]}~~20.66~~21.08^{[[s]]}5^{[[m]]}~~46.97~~48.80^{[[s]]}1^{[[m]]}~~16.63~~17.04^{[[s]]}1^{[[m]]}25.~~33~~78^{[[s]]}
 |(a) 14^{[[h]]} 18^{[[m]]} 40.2^{[[s]]} +5° 30.3|(b) 14^{[[h]]} 25^{[[m]]} 49.9^{[[s]]} +5°
 58.2|(c) 14^{[[h]]} 20^{[[m]]} 0.9^{[[s]]} +5° 55.2|(d) 14^{[[h]]} 18^{[[m]]} 41.2^{[[s]]}
 +6° 9.0|(e) 14^{[[h]]} 21^{[[m]]} 25.1^{[[s]]} +5° 51.4|
 |1 ~~20.7~~21.1 11.0|5
~~47.0~~48.8 37.7|1.1 35.5|1
~~16.6~~17.9 48.7|1
 25.~~3~~8 32.5|
 |14^{[[h]]} 20^{[[m]]} ~~0.9~~1.3^{[[s]]} +5°
 19.3|14^{[[h]]} 20^{[[m]]} ~~2.9~~1.1^{[[s]]} +5°
 20.5|14^{[[h]]} 19^{[[m]]} 59.8^{[[s]]} +5° 19.7|14^{[[h]]} 19^{[[m]]}
~~57.8~~58.2^{[[s]]} +5° 20.3|14^{[[h]]} 19^{[[m]]}
 50.~~8~~3^{[[s]]} +5° 18.9|
 |Meas Pos. of Var. 14^{[[h]]} ~~20~~19^{[[m]]}
~~0.2~~59.9^{[[s]]} +5° 19.7|(1855) Adopt
 Mean|
 14 22.3 +5 8 (1900)

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Var. No. 86

March 23, 1903.

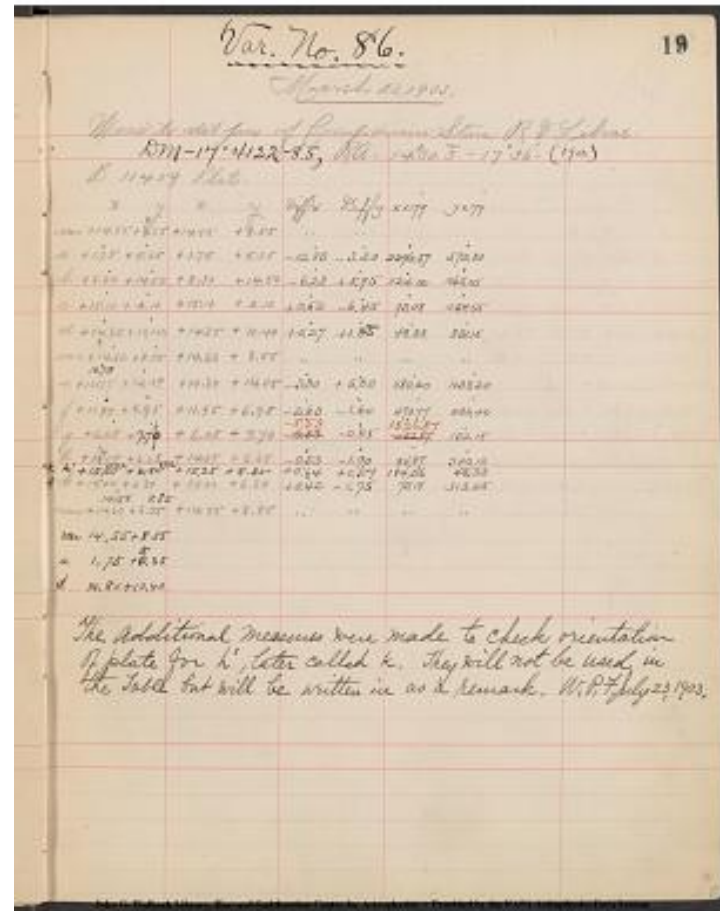
Meas to det pos of Comparison Stars R V Librae.
DM - $17^{\circ} 41'22.85$, 14.30° 3° - $17^{\circ} 36'$. (1900)
B 11459 Plate.

[9 columned table]

| x|y|x|y|Diff x|Diff y|x × 179|y × 179|

var|+14.55|+~~9~~|+14.55|+14.55|+8.55|...| |
a|+1.75|+5.35|+1.75|+5.35|-12.83|-3.20|2296.57|572.80|
b|+8.30|14.50|+8.30|14.50|-6.28|+5.95|1124.12|1065.05|
c|+15.10|+2.10|+15.10|+2.10|+0.52|-6.45|93.08|1154.55|
d|+14.85|+10.40|+14.85|+10.40|+0.27|+1.85|48.33|1.15|
var|+14.69|+8.55|+14.60|+8.55|...|...| |
e|+10.75|+10.78|+14.35|+10.80|+14.35|-3.80|+5.80|680.20|1038.20|
f|+11.95|+6.95|+11.95|+6.95|-2.63|-1.60|470.77|286.40|
g|+6.05|+7.70|+6.05|+7.70|-~~2.53~~|+8.53|-
0.85|~~452.87~~|~~1526.87~~|152.15|
h|+1|~~0~~|+4.05|+6.65|+14.05|+6.65|-0.53|-
1.90|94.87|340.10|
k|h|+15.20|+15.22|+8.80|+8.82|+15.25|+8.85|+0.64|+0.27|114.56|48.
33|
e|k|+15.00|+6.80|+15.00|+6.80|+0.42|-1.75|75.18|313.25|
var|+14.60|+14.58|+8.55|+8.55|+14.55|+8.55|...|...| |
var|14.55|+8.55| | | | | | | |
a|1.75|+~~6~~|+5.35| | | | | | | |
d|14.80|+10.40| | | | | | | |

The additional measures were made to check orientation of plate for h', later called k. They will not be used in the Table but will be written in as a remark. W.P.F. July 23, 1903.



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20

No Haste

March 11, 1903

Markivecke Variable.

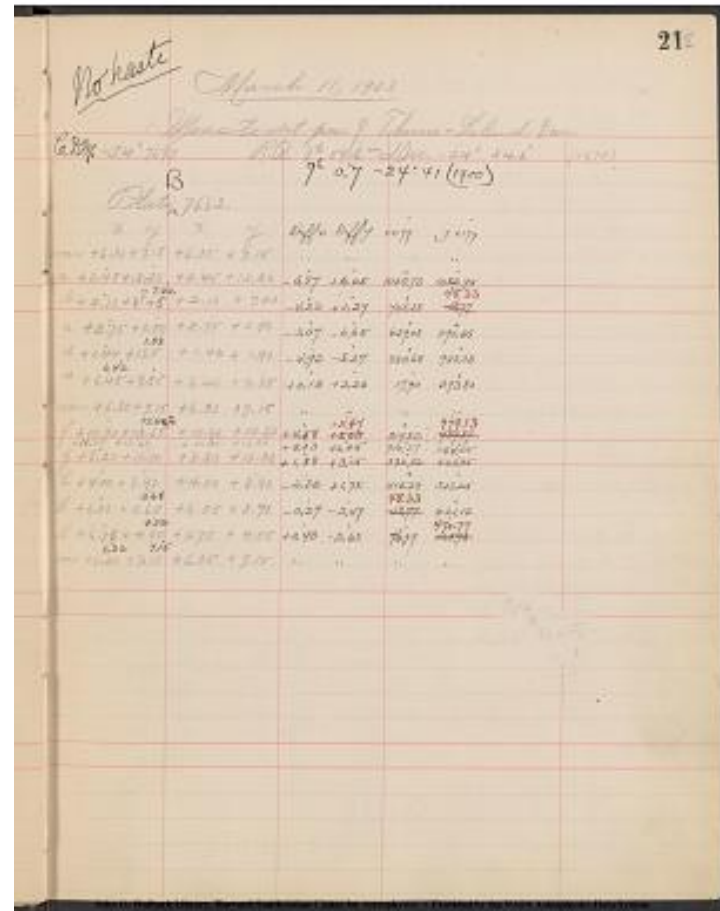
Meas to det. pos. of Comp Stars for T. Centauri
C.D.M. -32°9549 R.A. 13h 36.0m Dec. -33°.6'(1900)
Plate B 9721.

x|y|x|y|Diffx|Diffy|xx179|yx179
var|+17.75|+15.10|+17.75|+15.10|..|..|..|..|
a|+5.55|+24.75|+5.55|+24.75|-12.20|+9.65|2183.80|1727.35|
b|+20.25^|[20.22]]|+7.35^|[7.32]]|+20.20|+7.30|+2.47|-
7.78|~~442.30~~ |442.13 | 1392.62|
c|+14.65^|[14.68]]|-2.25|+14.70|-2.25|-3.07|-17.35|549.53|3105.65|
d|+12.50|-0.25^|[0.22]]|+12.50|-0.20|-5.25|-15.32|939.75|2742.28|
var|+17.75|+15.10|~~17.71~~
~~17.75~~|+15.10|..|..|..|..|
e|+0.70|+0.80|+0.70|+0.80|-17.05|-14.30|3051.95|2559.70|
f|+7.70^|[17.72]]|+11.65|+17.75|+11.65|-0.03|-3.45|5.37|617.55|
g|+15.30^|[15.28]]|+13.85|+15.25|+13.85|-2.47|-1.25|~~442.30~~ |442.13|223.75|
h|+14.25^|[14.22]]|+13.25|+14.20|+13.25|-3.53|-1.85|631.87|331.15|
var|+17.75^|[17.75]]|+15.10^|[15.10]]|+17.75|+15.10|..|..|..|..|

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21
 No haste
 March 11, 1903
 Meas. to det. [[?]]. [[?]] Thone-Lelaud. Var.
 C.DM.-24° 7693 R.A. 8th 59.6 Dec.-24° 34.6 (1875)
 B 9th 0.9 -24° 41 (1900)
 Plate 7682
 x y x y Diffx Diffy xx179 yx179
 var + 6.30 + 7.15 +6.35 + 7.15
 a+0.45+13.20 +0.45 +13.20 5.87+6.05 1050.73 1082.95
 b+2.10+7.45^7.42+2.10+7.40 4.22+0.29 755.38 48.33
 c+2.75+0.50+2.75+0.50 3.57 6.65 639.03 1190.35
 1.88
 d+1.40+ 1.85 + 1.40+1.90 4.92 5.27 880.68 943.33
 6.42
 e+6.45+9.35+6.40+9.35+0.10+2.20 17.90 393.80
 van+6.30+7.15+6.30+7.15
 f+10.90+12.65+10.90+12.60+4.58+5.47 819.82 979.13
 +11.35+13.60+11.35+13.60+5.03+6.45 900.37 1154.55
 g+8.20+10.30+8.20+10.30 + 1.88+3.15 336.52 563.85
 h+4.00+8.90 +4.00+8.90 2.32 +1.75 415.28 313.25
 k+6.05+3.65+6.05+3.70 0.27 -3.47 48.33 621.13
 l+6.75+4.50+6.75+4.55+ 0.43-2.63 76.97 470.77
 6.32 7.15
 var+6.30 +7.15+6.35+6.35+7.15

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March 18, 1903

Meas. of sixteenth Magnitude Standards on Paper Prints.

U Cassiopeia

P. obs. F. rec. $x \ y \div x/101 \ y/60$

S

q +84 -83 +83 +383 -1.4

r -21 -152 -21 +27.9 -25

s +138 -296 +13.7 +43.7 -4.9

t +192 -321 +19.0 +49.0 -5.4

u +143 -378 +14.2 +44.2 -63

R Pegasi $x/148$

q +487 -88 +329 + -1.5

r +441 -217 +29.8 -3.6

s +395 -94 +26.7 -1.6

t +404 -53 +27.3 -0.9

u +226 +68 +15.3 +1.1

R Geminorum $x/138$

q +70 +20 +5.1 +12.1 +0.3 -7.5

r -41 -48 -3.0 +40 -0.8 -8.6

s -5 -45 -0.4 +6.6 -0.8 -8.6

t +28 -13 +20[[1?]] +9.0 -0.2 -8.0

u -200 +75 -14.5 -7.5 +1.2 -6.6

var. -96 +465 -7.0 +7.8

R Persei $x/122 \ 15.8$

q -35 -136 -29 -23 +12.7

r -56 -76 -4.6 -1.3 +13.7

s -179 -131 -14.7 -2.2 +12.8

t -181 -201 -14.8 -3.4 +11.6

u -253 -160 -20.7 -2.7 +12.3

28

March 18, 1903
Meas. of sixteenth Magnitude Standards on Paper Prints.
U Cassiopeia

Obs. Time	x	y	$\frac{x}{101}$	$\frac{y}{60}$
q	+84	-83	+83	-1.4
r	-21	-152	-21	-25
s	+138	-296	+13.7	-4.9
t	+192	-321	+19.0	-5.4
u	+143	-378	+14.2	-6.3

R Pegasi

Obs. Time	x	y	$\frac{x}{148}$	$\frac{y}{148}$
q	+487	-88	+3.29	-0.6
r	+441	-217	+2.98	-1.5
s	+395	-94	+2.67	-0.6
t	+404	-53	+2.73	-0.4
u	+226	+68	+1.53	+0.4

R Geminorum

Obs. Time	x	y	$\frac{x}{138}$	$\frac{y}{138}$
q	+70	+20	+0.51	+0.15
r	-41	-48	-0.30	-0.35
s	-5	-45	-0.04	-0.33
t	+28	-13	+0.20	-0.09
u	-200	+75	-1.45	+0.54
var.	-96	+465	-0.70	+3.37

R Persei

Obs. Time	x	y	$\frac{x}{122}$	$\frac{y}{122}$
q	-35	-136	-0.29	-1.12
r	-56	-76	-0.46	-0.62
s	-179	-131	-1.47	-1.07
t	-181	-201	-1.48	-1.64
u	-253	-160	-2.07	-1.31

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25

1

oriented

Plate C 14286

| x|y|x|y|

w|~~4~~ -3.80|-12.20|-3.80|-12.20|

x|-6.55|-8.85|-6.55|-8.85|

y|-7.70|-12.30|-7.70|-12.30|

z|-6.70|-10.90|-6.70|-10.90|

Nova|-7.25|-10.70|-7.30|-10.70|

Plate C 14286

	x	y	z	
1	-8.90	-14.20	-4.20	-14.20
2	-6.55	-8.85	-6.55	-8.85
3	-7.70	-12.30	-7.70	-12.30
4	-6.70	-10.90	-6.70	-10.90
5	-7.25	-10.70	-7.30	-10.70

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April 1, 1903.

Meas to det. pos of comp stars for Nova Geueicum

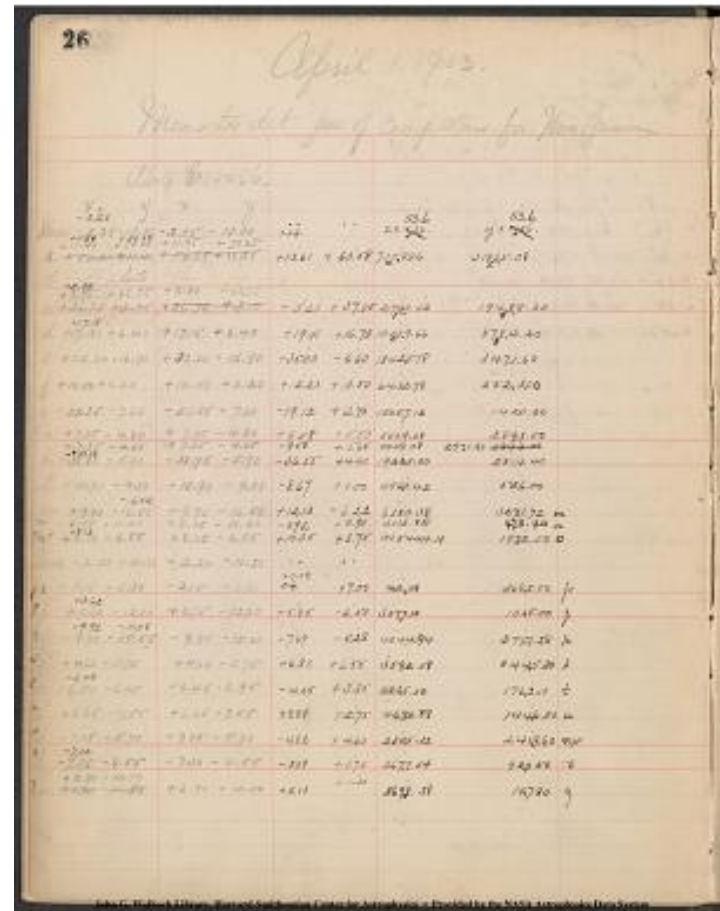
Plate C14286.

[9 column table]

| x|y|x|y|...|...|
|Nova|-2.25^[-2.23]|-10.30|-2.25|-
10.30|[[~~113~~]]|...|xx|[[~~526~~]]|
kethrough]]52.6|yx|[[~~526~~]]|
|a|[[~~50.30~~]]+11.40^[[+11.38]]|
h]]+11.40|[[~~50.30~~]]+50.28|[[~~50.25~~]]|
ethrough]]+11.35|[[~~50.25~~]]+50.25|+13.61|
+60.58|7158.86|31865.08|
|b|off plate|-|
|c|[[~~26.75~~]]+26.75|[[~~2.95~~]]+2.95|[[~~26.75~~]]+2.95|
+26.75|[[~~26.75~~]]+26.75|[[~~26.75~~]]+2.95|
00|[[~~3.00~~]]+3.00|[[~~26.75~~]]+5.21|+37.05|2740.46|1
9488.30|
|d|+17.20^[[17.18]]+6.40|+17.15|+6.40|+19.41|+16.70|10209.66|8784.2
0|
e	+32.80	-16.90	+32.80	-16.90	+35.03	-6.60	18425.78	3471.60
f	+10.00	+0.20	+10.00	+0.20	+12.23	+10.50	6432.98	5523.00
g	-21.35	-7.60	-21.35	-7.60	-19.12	+2.70	10057.12	1420.20
h	+7.35	-4.80	+7.35	-4.80	+9.58	+5.50	5039.08	2893.00
+7.35	-4.65	+7.35	-4.65	+9.58	+5.65	5039.08	2971.90	
[[~~2893.00~~]]								
k	-38.80^[[~~-38.78~~]]-5.90	-38.75	-5.90	-36.55	+4.40	19225.30	2314.40	
l	-10.90	-9.30	-10.90	-9.30	-8.67	+1.00	4560.42	526.00
m	+9.90	-16.55^[[~~-16.52~~]]+9.90	-16.50	+12.13	-			
6.22	6380.38	3271.72	m					
n	-8.15	-11.20	-8.15	-11.20	-5.92	-0.90	3113.92	476.40
o	[[~~8.10~~]]+8.10	+8.12	-6.55	+8.15	-			
6.55	+10.35	+3.75	[[~~5444.10~~]]	1972.50	o			
Nova	-2.20	-10.30	-2.20	-10.30		
p	[[~~3.30~~]]+3.30	[[~~8.00~~]]+8.00	+7.00	42.08	3682.00	p		
q	p	+3.60^[[+3.62]]	-12.80	+3.65	-12.80	+5.85	-2.50	3077.10
r	q	-9.90^[[~~-9.92~~]]-15.55^[[~~-15.58~~]]-9.95	-15.60	-7.69	-			
5.28	4044.94	2777.28	r					
s	q	+4.60	-3.75	+4.60	-3.75	+6.83	+6.55	3592.58
t	r	-6.50^[[~~-6.48~~]]-6.95	-6.45	-6.95	-4.25	+3.35	2235.50	176.2.10
u	r	+6.65	-7.55	+6.65	-7.55	+8.88	+2.75	4670.88
w	s	-7.05	-5.70	-7.05	-5.70	-		
4.82	+4.60	253.5.32	241.9.60	[[~~241.9.60~~]]	w			
x	t	-7.35^[[~~-7.32~~]]-8.55	-7.30	-8.55	-5.09	+1.75	267.7.34	92.0.50
y	u	[[~~1.30~~]]+1.30	[[~~2.90~~]]+2.90	[[~~11.50~~]]+11.50	+5.13	+0.30	2698.38	15.7.80
10.00|+5.13|+0.30|2698.38|15.7.80|y|

[bottom margin]

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[[/bottom margin]]

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$x \ y \mid x \ y \mid$
 $z \ w \mid 1.30 - \text{[[above]]} \ 11.52 \ 11.50 \mid + 1.30 - 11.55 \mid + 3.53 - 1.22$
 $185.6.78 \ 64.1.72 \ z$

$\text{[[?]]}x - 1.65 - 8.45 \mid -1.65 - 8.45 + 0.58 + 1.85 \ 30.5.08 \ 97.3.10 \text{[[?]]}$

$\text{beta } y \text{[[above]]}2.86\text{[[above]]} -2.70 -11.75 \mid -2.65 -11.75 -0.45 -1.45$
 $23.6.70 \ 76.2.70 \ \text{beta}$

$\text{gamma } z -1.65 -10.45 \mid -1.65 -10.45 + 0.58 -0.15 \ 30.5.08 \ 7.8.90$
 gamma

$\text{Nana}\text{[[?]]} - 2.23 = 10.30 \mid -2.25 - 10.30 \text{[[?]]} \text{[[above]]} \dots \text{[[above]]}$

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x	y	z	w	u	v	t
1	$0.100 - 0.13$	-0.20	-0.15	0.00	-0.20	0.0000
2	$-0.05 - 0.05$	-0.10	-0.10	0.10	-0.10	0.0000
3	$0.100 - 0.10$	-0.05	-0.10	-0.05	-0.10	0.0000
4	$0.100 - 0.05$	-0.05	-0.05	0.00	-0.10	0.0000
5	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
6	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
7	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
8	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
9	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
10	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
11	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
12	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
13	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
14	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
15	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
16	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
17	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
18	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
19	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
20	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
21	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
22	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
23	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
24	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
25	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
26	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
27	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
28	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
29	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
30	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
31	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
32	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
33	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
34	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
35	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
36	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
37	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
38	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
39	$0.100 - 0.00$	-0.05	-0.05	0.00	-0.10	0.0000
40	0					

Project PhAEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of
Spectra #15
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Var. No. 75
April 25, 1903.

Meas. to det. pos. of new var. - Virginus 13^h 8.9^m - 2° 16' (1900)
 DM - 2° 3653 Magn 8.2

Plate, I17952

[9 columned table]

x	y	x|y	Diff x	Diff y	x × 163	y × 163
var.	+5.05	+5.07	+6.85	+6.8	824.15	824.15
	+5.05	+6.85	4	4	824.15	824.15
a	+0.35	+12.40	+0.35	+12.40	56.95	2029.60
	+4.72	+5.54	844.88	769.36	991.66	904.65
b	-2.35	+18.75	-2.35	+18.75	-381.25	3065.63
	1328.18	1209.46	1938.07			
c	-12.20	+8.50	+8.52	-12.20	-1986.40	1561.60
d	+4.35	+4.32	+15.25	+4.30	710.25	705.60
e	-6.10	+3.30	+3.28	-6.10	-1000.20	514.56
f	-1.30	+19.75	-1.30	+19.75	-213.50	3209.63
	+6.37	+12.89	1038.31	2307.31	2101.07	
g	+11.65	+11.68	+10.35	+11.70	1908.75	1967.58
	var.	+5.05	+6.90			
	8	+6.88	+5.05	+6.85	1024.00	1138.08
h	-4.60	-4.58	+13.55	-4.55	-754.80	754.80
k	+8.30	+3.25	+3.22	+8.30	1356.90	530.90
l	+4.20	+9.95	+4.20	+9.95	684.60	1629.03
	0.8	3	7	+3.09	130.40	503.67
m	+5.40	+5.38	+1.00	+5.35	886.20	872.25
n	+6.85	+8.25	+6.85	+8.25	1118.75	1353.75
	1	+1.39	290.14	226.57		
o	+5.80	+5.90	+5.80	+5.90	946.40	988.10
	var.	+5.10	+6.85	+5.10	831.30	1124.58

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Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
 Transcribed and Reviewed by Digital Volunteers
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Var. No. ~~84~~83
Apr. 25, 1903

Meas to det pos. of new var. in Lupus.

ZC. $14^{\circ}14'$ 970, C.D.M. - $46^{\circ}9'28''$, $14^{\circ}15'$ - $46^{\circ}57'$ (1875.)

$14^{\circ}14'$ 16.9° $47^{\circ}4'$ (1900)

B25719 Found on B 23024.

[9 columned table]

| x|y|x|y|diff x|diff y|x × 179|y × 179|

-----|-----|-----|-----|

Var. +3.75[^][3.73]|+6.55[^][6.58]|+3.70|+6.55|...|
 a|+7.75|+13.40|+7.75|+13.40|+4.02|+6.82|719.58|1220.78|
 b|+3.10|+8.70[^][8.68]|+3.10|+8.65|-0.63|+2.10|112.77|375.90|
 c|-0.30|+14.40|-0.30|+14.40|-
 4.03|+7.75|+13.40|+7.75|+13.40|+4.02|+6.82|719.58|1220.78|
 d|+17.20|+6.35|+17.20|+6.35|+13.47|-0.23|2411.13|41.17|
 e|+11.65|+12.35[^][+12.32]|+11.65|+12.30|+7.92|+5.74|1417.68|1027.4
 6|
 f|+2.05|+4.80|+2.05|+4.80|-1.68|-1.78|300.72|318.62|
 g|+9.35|+11.40|+9.35|+11.40|+5.62|+4.82|1005.98|862.78|
 var|+3.75|+6.60[^][+6.58]|+3.75|+6.55|...|
 h|+6.25|+4.20|+6.25|+4.20|+2.52|-2.38|451.08|426.02|
 i|+4.35[^][+4.38]|+6.35[^][+6.38]|+4.40|+6.40|+0.65|-0.20|116.35|35.80|
 m|+0.70[^][+0.68]|+7.85[^][+7.82]|+0.65|+7.80|-
 3.05|+1.24|545.95|221.96|
 n|+1.55|+1.95[^][+1.92]|+1.55|+1.92|+8.30|+
 1.90|+8.30|-1.81|+1.72|323.99|307.88|
 p|+2.70|+6.25|+2.70|+6.25|-1.03|-0.33|184.37|59.07|
 var.|+3.75|+6.60|+3.70|+6.60|...|

Mean of var. +3.73 +6.58

|o|+3.05|+8.05[^][8.02]|+3.05|+8.00|-0.68|+1.44|121.72|257.76|

*another star compared by Miss L. & measure made
 for this star.

Var. No. 84 83
 Apr. 25, 1903

Meas to det pos. of new var. in Lupus.
 ZC. $14^{\circ}14'$ 970, C.D.M. - $46^{\circ}9'28''$, $14^{\circ}15'$ - $46^{\circ}57'$ (1875.)
 $14^{\circ}14'$ 16.9° $47^{\circ}4'$ (1900)
 B25719 Found on B 23024.

[9 columned table]

| x|y|x|y|diff x|diff y|x × 179|y × 179|

-----|-----|-----|-----|

Var. +3.75[^][3.73]|+6.55[^][6.58]|+3.70|+6.55|...|

a|+7.75|+13.40|+7.75|+13.40|+4.02|+6.82|719.58|1220.78|

b|+3.10|+8.70[^][8.68]|+3.10|+8.65|-0.63|+2.10|112.77|375.90|

c|-0.30|+14.40|-0.30|+14.40|-

4.03|+7.75|+13.40|+7.75|+13.40|+4.02|+6.82|719.58|1220.78|

d|+17.20|+6.35|+17.20|+6.35|+13.47|-0.23|2411.13|41.17|

e|+11.65|+12.35[^][+12.32]|+11.65|+12.30|+7.92|+5.74|1417.68|1027.4
 6|

f|+2.05|+4.80|+2.05|+4.80|-1.68|-1.78|300.72|318.62|

g|+9.35|+11.40|+9.35|+11.40|+5.62|+4.82|1005.98|862.78|

var|+3.75|+6.60[^][+6.58]|+3.75|+6.55|...|

h|+6.25|+4.20|+6.25|+4.20|+2.52|-2.38|451.08|426.02|

i|+4.35[^][+4.38]|+6.35[^][+6.38]|+4.40|+6.40|+0.65|-0.20|116.35|35.80|

m|+0.70[^][+0.68]|+7.85[^][+7.82]|+0.65|+7.80|-

3.05|+1.24|545.95|221.96|

n|+1.55|+1.95[^][+1.92]|+1.55|+1.92|+8.30|+
 1.90|+8.30|-1.81|+1.72|323.99|307.88|

p|+2.70|+6.25|+2.70|+6.25|-1.03|-0.33|184.37|59.07|

var.|+3.75|+6.60|+3.70|+6.60|...|

Mean of var. +3.73 +6.58

|o|+3.05|+8.05[^][8.02]|+3.05|+8.00|-0.68|+1.44|121.72|257.76|

*another star compared by Miss L. & measure made for this star.

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Var. No. 105

April 25, 1903.

Meas to det. pos. of new var - R.R. Scorpii

CDM - 30° 13626 RA 16^h 48^m 40.3 - 30 23.2 8.0 (1875)

B 5989 16^h 50.2^m - 30° 25' (1900)

[9 column table]

| x | y | x | y | | xx179 | yx179 |

---|---|---|---|---|---|---|---|

Var | +7.30 | +7.32 | +4.30 | +4.32 | +7.35 | +4.35 | .. | .. | |

a | +13.85 | +13.82 | +20.65 | +13.80 | +20.65 | +6.50 | +16.33 | 1163.50 | 2923.07

b | +10.75 | +22.15 | +10.75 | +22.15 | +3.43 | +17.83 | 613.97 | 3191.57

c | +9.25 | +23.15 | +9.25 | +23.15 | +1.93 | +18.83 | 345.47 | 3370.57

d | +13.80 | +17.20 | +17.18 | +13.80 | +17.15 | +6.48 | +12.86 | 1159.92 | 2301.94

e | +11.65 | +5.60 | +5.58 | +11.65 | +5.55 | +4.33 | +1.26 | 775.07 | 225.54

f | +0.10 | +1.40 | +1.38 | +0.10 | +1.35 | -7.22 | -2.9 | ~~8~~

~~4~~ | 1292.38 | 526.26

g | +5.10 | -0.25 | +5.10 | -0.25 | -2.22 | - | ~~4.07~~

~~4.57~~ | 397.38 | 818.03

var | +7.35 | +4.35 | +7.30 | +4.30 | .. | .. | .. | ..

h | +4.15 | +3.70 | +4.15 | +3.70 | -3.17 | -0.62 | 567.43 | 110.98

k | +4.45 | +2.35 | +4.45 | +2.35 | -2.87 | -1.97 | 513.73 | 352.63

l | +6.30 | +2.70 | +6.30 | +2.70 | -1.02 | -1.62 | 182.58 | 289.98

m | +6.70 | -0.65 | +6.70 | -0.65 | -0.62 | - | ~~3.67~~

~~4.97~~ | 110.98 | 889.63

n | +7.00 | +2.90 | +7.00 | +2.90 | -0.32 | -1.42 | 57.28 | 254.18

o | + | ~~2~~ | ~~6.55~~ | +3.80 | +6.55 | +3.80 | -0.77 | -0.52 | 137.83 | 93.08

var | +7.30 | +4.30 | +7.35 | +4.35 | .. | .. | .. |

Mean | +7.32 | +4.32 | | | | |

Var. No. 105

April 25, 1903

Meas to det. pos. of new var - R.R. Scorpii

CDM - 30° 13626 RA 16^h 48^m 40.3 - 30 23.2 8.0 (1875)

B 5989 16^h 50.2^m - 30° 25' (1900)

[9 column table]

| x | y | x | y | | xx179 | yx179 |

---|---|---|---|---|---|---|---|

Var | +7.30 | +7.32 | +4.30 | +4.32 | +7.35 | +4.35 | .. | .. |

a | +13.85 | +13.82 | +20.65 | +13.80 | +20.65 | +6.50 | +16.33 | 1163.50 | 2923.07

b | +10.75 | +22.15 | +10.75 | +22.15 | +3.43 | +17.83 | 613.97 | 3191.57

c | +9.25 | +23.15 | +9.25 | +23.15 | +1.93 | +18.83 | 345.47 | 3370.57

d | +13.80 | +17.20 | +17.18 | +13.80 | +17.15 | +6.48 | +12.86 | 1159.92 | 2301.94

e | +11.65 | +5.60 | +5.58 | +11.65 | +5.55 | +4.33 | +1.26 | 775.07 | 225.54

f | +0.10 | +1.40 | +1.38 | +0.10 | +1.35 | -7.22 | -2.9 | ~~8~~

~~4~~ | 1292.38 | 526.26

g | +5.10 | -0.25 | +5.10 | -0.25 | -2.22 | - | ~~4.07~~

~~4.57~~ | 397.38 | 818.03

var | +7.35 | +4.35 | +7.30 | +4.30 | .. | .. | .. | ..

h | +4.15 | +3.70 | +4.15 | +3.70 | -3.17 | -0.62 | 567.43 | 110.98

k | +4.45 | +2.35 | +4.45 | +2.35 | -2.87 | -1.97 | 513.73 | 352.63

l | +6.30 | +2.70 | +6.30 | +2.70 | -1.02 | -1.62 | 182.58 | 289.98

m | +6.70 | -0.65 | +6.70 | -0.65 | -0.62 | - | ~~3.67~~

~~4.97~~ | 110.98 | 889.63

n | +7.00 | +2.90 | +7.00 | +2.90 | -0.32 | -1.42 | 57.28 | 254.18

o | + | ~~2~~ | ~~6.55~~ | +3.80 | +6.55 | +3.80 | -0.77 | -0.52 | 137.83 | 93.08

var | +7.30 | +4.30 | +7.35 | +4.35 | .. | .. | .. |

Mean | +7.32 | +4.32 | | | | |

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Var. No. 106

April 25, 1903.

Meas to det pos of new var - tau Arae

AGC 23005 RA: 16^h 54.3^m - 54° 9

~~55'~~ (1900)

B17430.

[9 column table]

| x | y | x | y | diff x | diff y | xx179 | yy179

Var | +2. ~~5~~ | 30 | +5.35 | +2.30 | +5.35 | ..

| .. | ~~xx179~~ | .. | ..

a | +4.60 | +1.95 | +4.60 | +1.95 | +2.30 | -3. ~~3~~

~~40~~ | 411.70 | 608.60

b | +2.85 | +8.85 | +8.82 | +2.85 | +8.80 | +0.55 | +3. ~~50~~

~~47~~ | 98.45 | 621.13

c | +5.25 | +10.65 | +5.25 | +10.65 | + ~~3~~

2.95 | +5.30 | 528.05 | 948.70

d | +3.20 | +9.35 | +3.20 | +9.35 | +0.90 | +4.00 | 161.10 | 716.00

e | +3.30 | +4.25 | +3.30 | +4.25 | +1.00 | -1.10 | 179.00 | 196.90

f | +2.45 | +2.48 | +5.45 | +2.50 | +5.45 | +0.1 ~~5~~

~~8~~ | +0.10 | 32.22 | 17.90

var | +2.30 | +5.35 | +2.30 | +5.35 | .. | .. | .. | ..

g | +1.40 | +3.40 | +1.40 | +3.40 | -0.90 | -1.95 | 161.10 | 349.05

h | +3.45 | +5.75 | +3.45 | +5.75 | +1.15 | +0.40 | 205.85 | 71.60

k | +4.80 | +5.40 | +4.80 | +5.40 | +2.50 | +0.05 | 447.50 | 8.95

l | +3.80 | +6.60 | +6.58 | +3.80 | +6.55 | +1.50 | +1.23 | 268.50 | 220.17

Comp "l" | +3.85 | +3.92 | +6.70 | +3.90 | +6.70 | +1.62 | +1.35 | 289.98 | 241.65

m | +2.25 | +5.95 | +2.25 | +5.95 | ~~0.62~~

~~-0.05~~ | +0.60 | ~~2~~ | 8.95 | 107.40

Var. | +2.30 | +5.35 | +2.30 | +5.35 | .. | .. | .. | ..

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Var. No. 109
April 25, 1903.

Meas to det pos. of new var Z. Ophinci
 DM. +1° 34'17" RA. 17^h 14.5^m +1° 37'. (1900)
 B 10216

[9 column table]

| x | y | x | y | diff x | diff y | xx179 | yx179

---|---|---|---|---|---|---|---

var | +3.00 | +5.85 | +3.00 | +5.85 | .. | .. | .. |

a | +11.05 | +4.35 | +4.32 | +11.05 | +4.30 | +8.05 | -1.53 | 1440.95 |

273.87
 b | +11.45 | +6.70 | +6.68 | +11.45 | +6.65 | +8.45 | +0.83 | 1512.55 |

148.57
 c | +22.90 | +5.20 | +22.90 | +5.20 | +19.90 | -0.65 | ~~116.35~~ |

3560.00 ~~3562.10~~ 116.35

d | +17.10 | +4.10 | +17.10 | +4.10 | +14.10 | -1.75 | 2523.90 | 313.25

e | -1.20 | -4.50 | -1.20 | -4.50 | -4.20 | -10.35 | 751.80 | 1852.65

f | -4.05 | +0.35 | -4.05 | +0.35 | -7.05 | -5.50 | 1261.95 | 984.50

var | +3.00 | +5.85 | +3.00 | +5.85 | .. | .. | .. |

g | +6.05 | +6.80 | +6.05 | +6.80 | +3.05 | +0.95 | 545.95 | 170.05

h | +1.50 | +1.48 | +11.60 | +11.62 | +1.45 | +11.65 | -1. ~~1032.83~~ |

k | +1.80 | +6.35 | +1.80 | +6.35 | -1.20 | +0.50 | 214.80 | 89.50

l | +2.20 | +7.40 | +7.38 | +2.20 | +7.35 | -0.80 | +1.53 | 143.20 | 273.87

m | +1.80 | +7.30 | +1.80 | +7.30 | -1.20 | +1.45 | 214.80 | 259.55

n | +3.80 | +5.60 | +3.80 | +5.60 | +0.80 | ~~143.20~~ |

var | +3.00 | +5.85 | +3.00 | +5.85 | .. | .. | .. |

Plate B 10216 Nov. 10, 1906

[9 column table]

| x | y | x | y | | |

---|---|---|---|---|---|---|---

var. | +3.00 | +5.85 | +3.00 | +5.85 | | |

a | +11.05 | +4.35 | +4.32 | +11.05 | +4.30 | +8.05 | -1.53 | 1440.95 | 273.87

k | +1.80 | +6.35 | +1.80 | +6.35 | -1.20 | +0.50 | 214.80 | 89.50

n | +3.80 | +5.60 | +3.80 | +5.60 | +0.80 | -0.25 | 143.20 | 44.75

o | +3.7 ~~143.20~~ 0 ~~44.75~~ 5 3.78 | +4.60 | +3.8

~~143.20~~ 6 ~~44.75~~ 0 | +4.60 | +0.78 | -1.25 | 139.62 |

223.75

var | +3.00 | +5.85 | +3.00 | +5.85 | | |

mean | 3.00 | 5.85 | | | |

Var. No. 109
 April 25, 1903

Meas to det pos. of new var Z. Ophinci
 DM. +1° 34'17" RA. 17^h 14.5^m +1° 37'. (1900)
 B 10216

[9 column table]

| x | y | x | y | diff x | diff y | xx179 | yx179

---|---|---|---|---|---|---|---

var | +3.00 | +5.85 | +3.00 | +5.85 | .. | .. | .. |

a | +11.05 | +4.35 | +4.32 | +11.05 | +4.30 | +8.05 | -1.53 | 1440.95 |

273.87
 b | +11.45 | +6.70 | +6.68 | +11.45 | +6.65 | +8.45 | +0.83 | 1512.55 |

148.57
 c | +22.90 | +5.20 | +22.90 | +5.20 | +19.90 | -0.65 | ~~116.35~~ |

3560.00 ~~3562.10~~ 116.35
 d | +17.10 | +4.10 | +17.10 | +4.10 | +14.10 | -1.75 | 2523.90 | 313.25

e | -1.20 | -4.50 | -1.20 | -4.50 | -4.20 | -10.35 | 751.80 | 1852.65
 f | -4.05 | +0.35 | -4.05 | +0.35 | -7.05 | -5.50 | 1261.95 | 984.50

var | +3.00 | +5.85 | +3.00 | +5.85 | .. | .. | .. |

g | +6.05 | +6.80 | +6.05 | +6.80 | +3.05 | +0.95 | 545.95 | 170.05
 h | +1.50 | +1.48 | +11.60 | +11.62 | +1.45 | +11.65 | -1. ~~1032.83~~ |

k | +1.80 | +6.35 | +1.80 | +6.35 | -1.20 | +0.50 | 214.80 | 89.50
 l | +2.20 | +7.40 | +7.38 | +2.20 | +7.35 | -0.80 | +1.53 | 143.20 | 273.87

m | +1.80 | +7.30 | +1.80 | +7.30 | -1.20 | +1.45 | 214.80 | 259.55
 n | +3.80 | +5.60 | +3.80 | +5.60 | +0.80 | ~~143.20~~ |

var | +3.00 | +5.85 | +3.00 | +5.85 | .. | .. | .. |

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Var. No. 98
April 25, 1903

Meas to det pos of ~~new var~~ comp stars
 for mu Serpentis.

DM. +10° 2956 R.A. 16^h 2.5^m +10° 12'. (1900)

I 6524

[9 column table]

| x | y | x | y | diff x | diff y | xx163 | yx163 |

---|---|---|---|---|---|---|---|

var. | +2.10 | +2.08 | +1.65 | +2.10 | +1.65 | .. | .. |

a | -5.65 | +1.85 | -5.65 | +1.85 | -7.73 | +0.20 | ~~1383.67~~

~~1259.99~~ | 32.60

b | +6.45 | +4.90 | +4.88 | +6.45 | +4.85 | +4.37 | +3.23 | 712.31 | 526.49

c | +20.65 | +3.75 | +3.72 | +20.65 | +3.70 | ~~1181.19~~

~~1181.19~~ | +18.57 | +2.07 | 3026.91 | 337.41

d | ~~1181.19~~ | +11.55 | -4.45 | -4.48 | -11.55 | -4.50

| -13.63 | +6.13 | 2221.69 | 999.19

e | +15.40 | +15.38 | +12.75 | +12.78 | +15.35 | +12.80 | +13.3

~~1181.19~~ | 2 | ~~1181.19~~ | 0 | +11.13 | 2167.90 | 1814.19

f | -6.75 | -6.72 | +2.25 | -6.70 | +2.25 | -8.8 | ~~1181.19~~ | 3

~~1181.19~~ | 0 | +0.60 | 1434.40 | 97.80

var. | +2.05 | +1.65 | +2.10 | +1.65 | .. | .. | .. | ..

g | +7.60 | +7.62 | +16.65 | +7.65 | +16.65 | +5.54 | +15.00 | 903.02 |

2445.00

h | +8.25 | +2.30 | +8.25 | +2.30 | +6.17 | +0.65 | 1005.71 | 105.95

k | +9.05 | +9.02 | +3.25 | +3.22 | +9.00 | +3.20 | +6.94 | +1.57 | 1131.22 |

255.91

l | +5.10 | +2.50 | +2.48 | +5.10 | +2.45 | +3.02 | +0.83 | 492.26 | 135.29

m | +6.30 | +0.95 | +6.30 | +0.95 | + ~~1181.19~~ | 3 | ~~1181.19~~

4.22 | -0.70 | 687.86 | 114.10

n | +2.60 | +3.55 | +2.60 | +3.55 | +0.52 | +1.90 | 84.76 | 309.70

var | +2.10 | +1.65 | +2.05 | +1.65 | .. | .. | .. | ..

Mean Var. | +2.08 | +1.65 | | | | |

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Positions charted June 22, 1903. M.C.S. See Chart No. 28
Var. No. 79 See also Book 4, page 137

May 22, 1903

Meas to det. pos. of Z Centauri & Comp. stars.

R.A. $13^{\text{h}} 34.2^{\text{m}} - 31.8$ (1900)

Plate B 13965 mean Dec. = $-31^{\circ} 22' 29.9''$ = Log sec. $\left[\frac{1}{\cos \delta} \right]$

[9 columned table]

x	y	x|y|Diff. x|Diff. y	x × 179|Diff. y × 179
var|+15.20|+16.75|+16.72|+15.15|+16.70|+13.37|+15.52|+2393.23|2778.08|			
a|+1.80|+1.20|+1.80|+1.20|+13.37|+15.52|+2393.23|2778.08|			
b|+5.45|+2.15|+2.18|+5.45|+2.20|			
c|+5.10|+6.50|+6.52|+5.10|+6.55|+10.07|+10.20|1802.53|1825.80|			
d|+7.70|+4.60|+7.70|+4.60|+7.47|+12.12|1337.13|2169.48|			
e|+25.80|+19.10|+25.80|+19.10|+10.63|+2.38|1902.77|426.02|			
f|+22.35|+15.25|+22.35|+15.25|+0|+0|0|0|			
g|+9.95|+21.55|+9.95|+21.55|			
h|+14.60|+14|+6|+58|+18.15|+14.55|+18.15|			
i|+17.15|+13.75|+17.15|+13.75|+1.98|+3.03|+354.42|531.63|			
j|+14.15|+16.70|+14.15|+16.70|+1.02|+0.02|182.58|3.58|			
k|+13.05|+19.65|+13.05|+19.70|+2.12|+2.96|379.48|529.84|			
l|+15.70|+18.30|+15.70|+18.30|+0.53|+1|+62|+94.87|+289.98|+282.82|			
m|+14.90|+14.92|+17.25|+14.95|+17.25|+0.25|+0.53|44.75|94.87|			
n|+15.65|+15.68|+17.20|+15.70|+17.20|+0.51|+0.48|91.29|85.92|			
o|+13.60|+15.25|+13.60|+15.25|+1.57|+1.47|281.03|263.13|			
p|+15.20|+16.70|+16.72|+15.15|+16.75|			

[right margin]

[8 columned table]

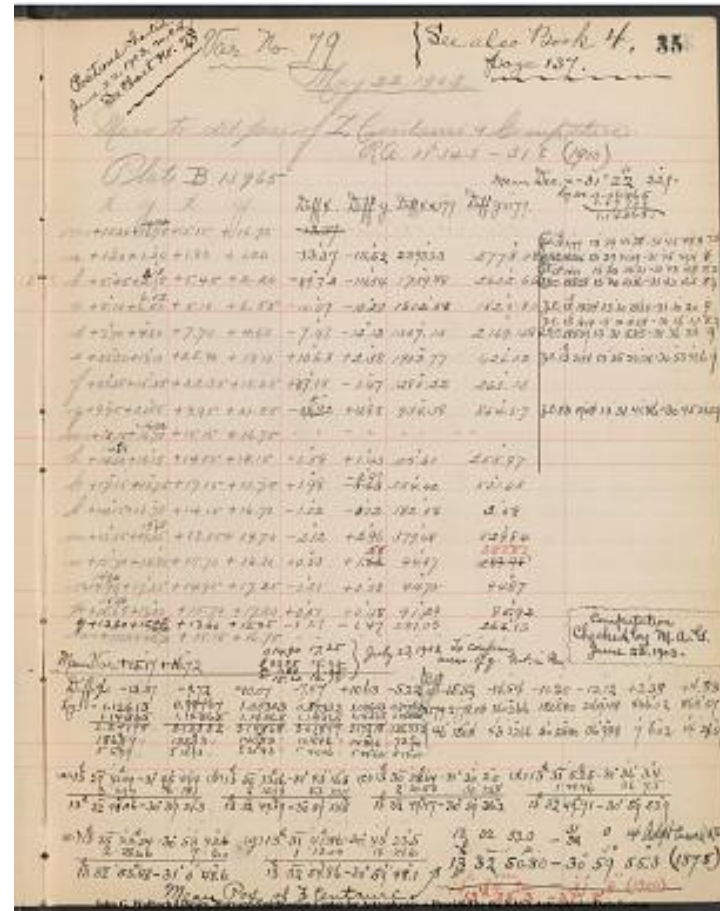
Z.C.13 ^h 13 ^m 17 ^s 1777	13 29|41.28|-31 45|48.4|7.5|
A.G.C.	18504|13 29|41.09|-31 45|49.4|8|
Z.C.13 ^h 13 ^m 18 ^s 1841	13 30|33.21|-31 43|14.8|8.2|
A.G.C.	18528|13 30|33.16|-31 43|16.5|8 ¹ / ₄|
Z.C.13 ^h 13 ^m 18 ^s 1834	13 30|28.64|-31 30|2.0|9|
Z.C.13 ^h 13 ^m 18 ^s 1874	13 31|5.28|-31 36|1.1|8.2|
A.G.C.	18539|13 31|5.25|-31 36|3.4|9|
Z.C.13 ^h 13 ^m 19 ^s 2134	13 35|22.24|-30 53|42.6|9|
Z.C.13|1908	13 31|41.86|-30 45|23.5|9|

[/right margin]

[right margin]

Computation checked by M.A.G. June 23, 1903.

[/right margin]



Mean Var. +15.17 +16.72
 014.90 17.25} July 23, 1903. To confirm meas. of q. Ent. in Rem.
 f 2235 15.25}
 a 1.80 1.25}
 v 15.20 16.75}

[[14 columned table]]
 |Diff. x.|-13.27|-9.72|-10.07|-7.47|+10.63|-5.22|Diff. y.|-15.52|-14.54|-
 10.20|-12.12|+2.38|+4.83|
 |Log.
 x|1.12613|0.98767|1.00303|0.87332|1.02653|0.71767|X179|2778.08"|26
 02.66"|1825.80"|2169.48"|426.02"|864.57"|
 |[[underlined]] |1.14565|1.14565|1.14565|1.14565|1.14565|1.14565| |
 | | | | |[[underlined]]|
 |2.27178|2.13332|2.14868|2.01897|2.17218|1.86332| |46' 18.08"|43'
 22.66"|30' 25.80"|36' 9.48"|7' 6.02"|14.' 24.57"|
 |186.97^[[s.]]|135.93^[[s.]]|140.83^[[s.]]|104.46^[[s.]]|148.66^[[s.]]|73.00^[[s.]]|
 |3^[[m]] 6.97^[[s.]]|2^[[m]] 15.93^[[s.]]|2^[[m]] 20.83^[[s.]]|1^[[m]]
 44.46|2^[[m]] 28.66^[[s.]]|1^[[m]] 13.00^[[s.]]| | | | | |

[[28 columned table]]
 |(a)|13^[[h]]|29^[[m]]|41.09^[[s]]|-
 31°45'49.4"(b)|13^[[h]]|30^[[m]]|33.16^[[s]]|-
 31°43'16.5"(c)|13^[[h]]|30^[[m]]|28.64^[[s]]|-
 31°30'2.0"(d)|13^[[h]]|31^[[m]]|5.25^[[s]]|-31°36'3.4"|
 |[[underlined]] |3|6.97|46|18.1| |2|15.93|43|22.7| |2|20.83|
 30|25.8| |1|44.46|36|9.5|[[/underlined]]|
 |13^[[h]]|32^[[m]]|48.06^[[s]]|-30°59'31.3"|
 13^[[h]]|32^[[m]]|49.09^[[s]]|-30°59'53.8"|
 13^[[h]]|32^[[m]]|49.47^[[s]]|-30°59'36.2"|
 13^[[h]]|32^[[m]]|49.71^[[s]]|-30°59'53.9"|
 |e|13^[[h]]|35^[[m]]|22.24^[[s]]|-
 30°53'42.6"(g)|13^[[h]]|31^[[m]]|41.86^[[s]]|-30°45'23.5"| | | | |
 |[[underlined]] |2|28.66|7|6.0| |1|13.00|14|24.6|[[/underlined]]|
 |13^[[h]]|32^[[m]]|53.58^[[s]]|-31°0'48.6"|
 13^[[h]]|32^[[m]]|54.86^[[s]]|-30°59'48.1"| | | | | | | | | |

13 32 53.0 - ~~30~~ 31 0 14 Adopt curve
 (1875
 Mean Pos. of zeta Centauri 13^[[h]] 32^[[m.]] 50.80^[[s.]] -30° 59'^[[]]
 55.3" (1875)
~~13^[[h]] 34^[[m]] 2 -31° 8' (1900)~~
 13^[[h]] 34 3 -31° 8'

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of
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~~Var. No. 81~~
~~Var. No. 81~~

May 22, 1903.

Meas to det pos. of theta Apodis & Comp Stars
 C.P.D. -76° 799 - Z.C. 13^h 3271 - R.A. 13^h 55.6 -76° 19. (1900)
 Plate B 3788

[9 column table]

| x | y | x | y | Diff x | Diff y | xx179 | yx179

var | +16.35 | +2.90 | +16.40 | +2.90 | -- | -- | -- | --

a | +20.20 | +20.18 | +39.10 | +39.12 | +20.15 | +39.15 | +3.80 | +36.

~~0~~ 22 | 680.20 | 3483.38

b | -0.70 | -29.45 -29.48 | -0.70 | -29.50 | -17.08 | -32.38 | 3057.32 | 5796.02

c | +13.90 | -17.45 | +13.90 | -17.45 | -2.48 | -20.35 | 443.92 | 3642.65

d | +5.85 | -3.90 | +5.85 | -3.90 | -10. | ~~4~~ 1217.20

53 | -6.80 | ~~1866.97~~ 1884.87 | 1217.20

e | -8.60 -8.62 | -2.25 | -8.65 | -2.25 | -25.00 | -5.15 | 4475.00 | 921.85

var | +16.40 | +2.90 | +16.40 | +2.90 | -- | -- | -- | --

f | -1.60 | +1.10 | -1.60 | +1.10 | -17.98 | -1.80 | 3218.42 | 322.20

g | +23.55 | +3.05 | +23.55 | +3.05 | +7.17 | +0.15 | 1283.43 | 26.85

h | +26.80 | +0.60 | +26.80 | +0.60 | +10.42 | -2.30 | 1865.18 | 411.70

k | +24.60 | +3.70 | +24.60 | +3.70 | + ~~6~~ 1471.38 | 143.20

8.22 | +0.80 | ~~1113.38~~ 1471.38 | 143.20

l | +15.30 | +15.28 | +0.10 | +0.08 | +15.25 | +0.05 | -1. | ~~10~~

~~07~~ -2.82 | ~~196.90~~ 191.53 | 504.78

var | +16.35 | +2.90 | +16.40 | +2.90 | -- | -- | -- | --

Mean Var. | +16.38 | +2.90 | | | |

This star not to be included in Harvard List of Photographic Vars.
 July 15, 1903

36

Var. No. 81

Meas to det pos. of theta Apodis & Comp Stars
 C.P.D. -76° 799 - Z.C. 13^h 3271 - R.A. 13^h 55.6 -76° 19. (1900)
 Plate B 3788

[9 column table]

| x | y | x | y | Diff x | Diff y | xx179 | yx179

var | +16.35 | +2.90 | +16.40 | +2.90 | -- | -- | -- | --

a | +20.20 | +20.18 | +39.10 | +39.12 | +20.15 | +39.15 | +3.80 | +36.

~~0~~ 22 | 680.20 | 3483.38

b | -0.70 | -29.45 -29.48 | -0.70 | -29.50 | -17.08 | -32.38 | 3057.32 | 5796.02

c | +13.90 | -17.45 | +13.90 | -17.45 | -2.48 | -20.35 | 443.92 | 3642.65

d | +5.85 | -3.90 | +5.85 | -3.90 | -10. | ~~4~~ 1217.20

53 | -6.80 | ~~1866.97~~ 1884.87 | 1217.20

e | -8.60 -8.62 | -2.25 | -8.65 | -2.25 | -25.00 | -5.15 | 4475.00 | 921.85

var | +16.40 | +2.90 | +16.40 | +2.90 | -- | -- | -- | --

f | -1.60 | +1.10 | -1.60 | +1.10 | -17.98 | -1.80 | 3218.42 | 322.20

g | +23.55 | +3.05 | +23.55 | +3.05 | +7.17 | +0.15 | 1283.43 | 26.85

h | +26.80 | +0.60 | +26.80 | +0.60 | +10.42 | -2.30 | 1865.18 | 411.70

k | +24.60 | +3.70 | +24.60 | +3.70 | + ~~6~~ 1471.38 | 143.20

8.22 | +0.80 | ~~1113.38~~ 1471.38 | 143.20

l | +15.30 | +15.28 | +0.10 | +0.08 | +15.25 | +0.05 | -1. | ~~10~~

~~07~~ -2.82 | ~~196.90~~ 191.53 | 504.78

var | +16.35 | +2.90 | +16.40 | +2.90 | -- | -- | -- | --

Mean Var. | +16.38 | +2.90 | | | |

This star not to be included in
 Harvard List of Photographic Vars.
 July 15, 1903

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Var. No. 77

May 22, 1903

Meas to det pos of - Chamaeleontis of Comp. Stars
C.P.D. - 76° 767 - A.G.C. 18352 R.A. 13^h 24.6 - 77° 3 (1900)

Plate B 3788

[[9 columned table]]

| x|y|x|y|Diff x|Diff y|x×179|y×179|
|var|+3.20|+0.40|+3.20|+0.40|-|-|-|-|
|a|+28.65|+19.25|+28.65|+19.25|+25.45|+18.85|4555.55|3374.15|
|b|+18.10|+26.10 [^] +26.08|+18.10|+26.05|+14.90|+25.68|2667.10|4596.72|
|c|+22.60|+18.75 [^] +18.72|+22.60|+18.70|+19.40|+18.32|3472.60|3279.28|
|d|+6.40|+26.35 [^] +26.38|+6.40|+26.40|+3.20|+25.98|572.80|4650.42|
|var|+3.20|+0.40|+3.20|+0.40|-|-|-|-|
|e|+24.35|-1.05|+24.35|-1.05|+21.15|-1.45|3785.85|259.55|
|f|-5.80|-0.30 [^] +0.32|+5.80|-0.35|-9.00|-0.72|1611.00|128.88|
|g|+14.25 [^] +14.28|+11.20 [^] +14.30|-11.15|+11.08|-11.58|1983.32|2072.82|
|h|+2.45 [^] +2.48|+6.40 [^] +6.42|+2.50|+6.45|-0.72|+2|+6.02|128.88|1077.58|
|k|+3.10|+0.50|+3.10|+0.50|-0.10|+0.10|17.90|17.90|
|var|+3.20|+0.40|+3.20|+0.40|-|-|-|-|

Mean Var. +3.20 +0.40

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics.
Provided by the NASA Astrophysics Data Systems

Var. No. 77
May 22, 1903

Meas to det pos of - Chamaeleontis of Comp. Stars
C.P.D. - 76° 767 - A.G.C. 18352 R.A. 13^h 24.6 - 77° 3 (1900)

| x|y|x|y|Diff x|Diff y|x×179|y×179|
|var|+3.20|+0.40|+3.20|+0.40|-|-|-|-|
|a|+28.65|+19.25|+28.65|+19.25|+25.45|+18.85|4555.55|3374.15|
|b|+18.10|+26.10 [^] +26.08|+18.10|+26.05|+14.90|+25.68|2667.10|4596.72|
|c|+22.60|+18.75 [^] +18.72|+22.60|+18.70|+19.40|+18.32|3472.60|3279.28|
|d|+6.40|+26.35 [^] +26.38|+6.40|+26.40|+3.20|+25.98|572.80|4650.42|
|var|+3.20|+0.40|+3.20|+0.40|-|-|-|-|
|e|+24.35|-1.05|+24.35|-1.05|+21.15|-1.45|3785.85|259.55|
|f|-5.80|-0.30 [^] +0.32|+5.80|-0.35|-9.00|-0.72|1611.00|128.88|
|g|+14.25 [^] +14.28|+11.20 [^] +14.30|-11.15|+11.08|-11.58|1983.32|2072.82|
|h|+2.45 [^] +2.48|+6.40 [^] +6.42|+2.50|+6.45|-0.72|+2|+6.02|128.88|1077.58|
|k|+3.10|+0.50|+3.10|+0.50|-0.10|+0.10|17.90|17.90|
|var|+3.20|+0.40|+3.20|+0.40|-|-|-|-|

Mean Var. +3.20 +0.40

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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[[underline]] Var. No. 85 [[/underline]]

[[underline]] July 1, 1903 [[/underline]]

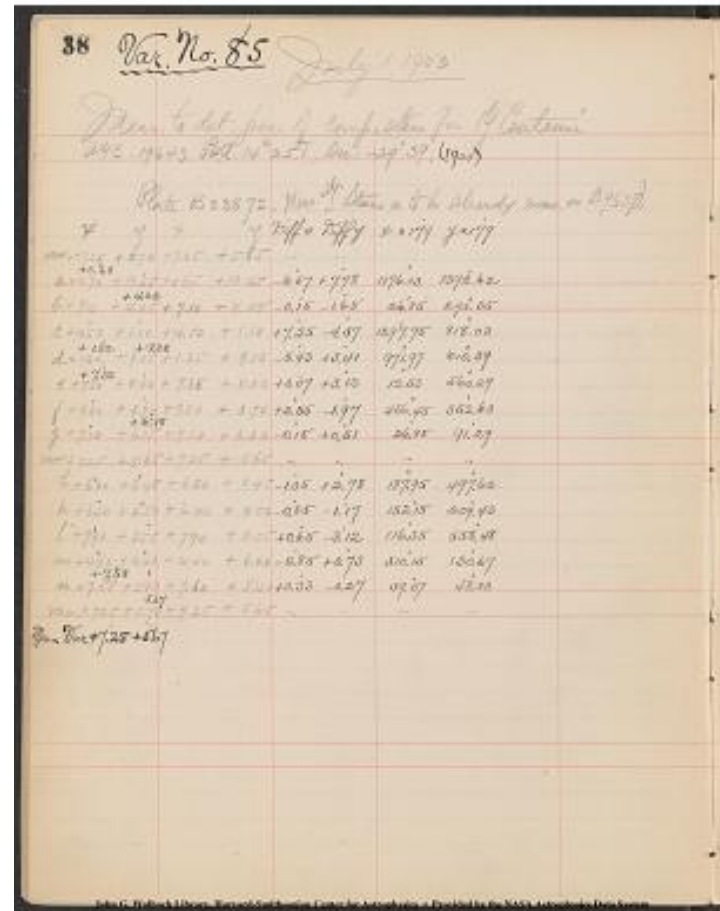
Meas. to det. pos. of Comp. stars for Y Centauri
AGC, 19643. Rvd, 14^h[h] 25.1^m[m] Dec, -29° 39'. (1900)

Plate B23872, Meas. all Stars a to h already meas. on B9537).

[[9 column table]]

|	|x|y|x|y|Diff x|Diff y|xx179|yy179|
var.	|+7.25|+5.70|+7.25|+5.65|...|...|
a|	|0.70 ^h|+0.68|+13.45|+0.65|+13.45|-6.57|+7.78|1176.03|1392.62|
b|	|7.10|+4.05 ^h|+4.02|+7.10|+4.00|-0.15|-1.65|26.85|295.35|
c|	|14.50|+1.10|+14.50|+1.10|+7.25|-4.57|1297.75|818.03|
d|	|1.80 ^h|+1.82|+9.05 ^h|+9.08|+1.85|+9.10|-
	5.43|+3.41|971.97|610.39|
e|	|7.30 ^h|+7.32|+8.80|+7.35|+8.80|+0.07|+3.13|12.53|560.27|
f|	|9.80|+3.70|+9.80|+3.70|+2.55|-1.97|456.45|352.63|
g|	|7.10|+6.15 ^h|+6.18|+7.10|+6.20|-0.15|+0.51|26.85|91.29|
var|	|+7.25|+5.65|+7.25|+5.65|...|...|
h|	|6.20|+8.45|+6.20|+8.45|-1.05|+2.78|187.95|497.62|
k|	|6.40|+4.50|+6.40|+4.50|-0.85|-1.17|152.15|209.43|
l|	|7.90|+2.55|+7.90|+2.55|+0.65|-3.12|116.35|558.48|
m|	|4.40|+6.40|+4.40|+6.40|-2.85|+0.73|510.15|130.67|
n	7.55 ^h +7.58 +5.40 +7.60 +5.40 +0.33 -0.27 59.07 48.33
var.	+7.25 +5.70 ^h +5.67 +7.25 +5.65

Mean Var. +7.25 +5.67



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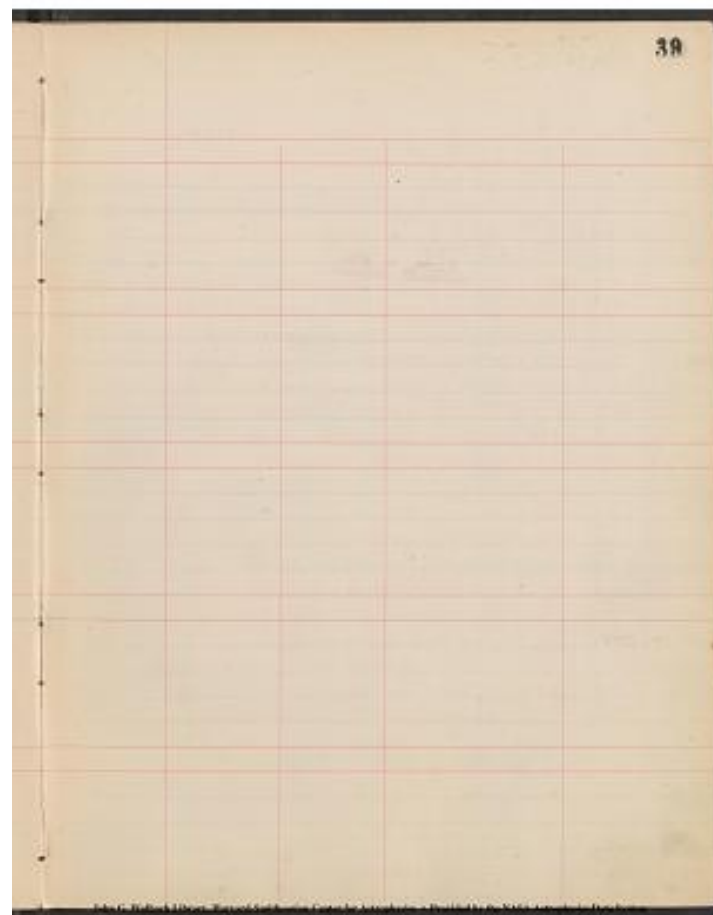
[[Top of Page]]

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[[Bottom of Page]]

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Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of
Spectra #15
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Positions Charted July 30, 1903. See Charts No. 29 & 30
 [[underline]]M.C.S. [[/underline]]
 [[7 column table]]

[[underline]] Var. No. 1 [[/underline]]

(a) $14^{\circ}14'44''$ $44^{\circ}43.89'$ $46^{\circ}6'54.7''$
 [[underline]] | | 21.10 | 55.2 [[/underline]]
 | $14^{\circ}14'45''$ $45^{\circ}4.99'$ $46^{\circ}5'59.5''$
 |---|---|---|

Var. [[underline]]No. 87 [[/underline]]

(b) $14^{\circ}14'45''$ $45^{\circ}36.12'$ $45^{\circ}44'38.8''$
 [[underline]] | | 31.13 |
 | 21|30.0| [[/underline]]
 | $14^{\circ}14'45''$ $45^{\circ}4.99'$ $46^{\circ}6'8.8''$
 |---|---|---|

-S Luki

(c) $14^{\circ}14'43''$ $43^{\circ}6.10'$ $45^{\circ}57'52.2''$
 [[underline]] | | 1|59.81 | 8|4.8| [[/underline]]
 | $14^{\circ}14'45''$ $45^{\circ}5.91'$ $46^{\circ}5'57.0''$
 |---|---|---|

(d) $14^{\circ}14'44''$ $44^{\circ}57.16'$ $46^{\circ}27'26.9''$
 [[underline]] | | 6.80 | 21|36.0| [[/underline]]
 | $14^{\circ}14'45''$ $45^{\circ}3.96'$ $46^{\circ}5'50.9''$
 |---|---|---|

Mean Pos. of [[underline]]Var. No. 1 [[/underline]] Adopt. Mean
 | $14^{\circ}14'45''$ $45^{\circ}4.96'$ $46^{\circ}5'59.0''$ (1875)
 | $14|46.8$ | $46|12$ | $1|1900$

[[underline]]Var. No. 2 [[/underline]]

[[7 column table]]

(a) $14^{\circ}14'44''$ $44^{\circ}43.89'$ $46^{\circ}6'54.7''$
 [[underline]] | | 21.51 |
 | 43.2| [[/underline]]
 | $14^{\circ}14'45''$ $45^{\circ}5.40'$ $46^{\circ}6'11.5''$

Var. [[underline]]No. 88 [[/underline]]

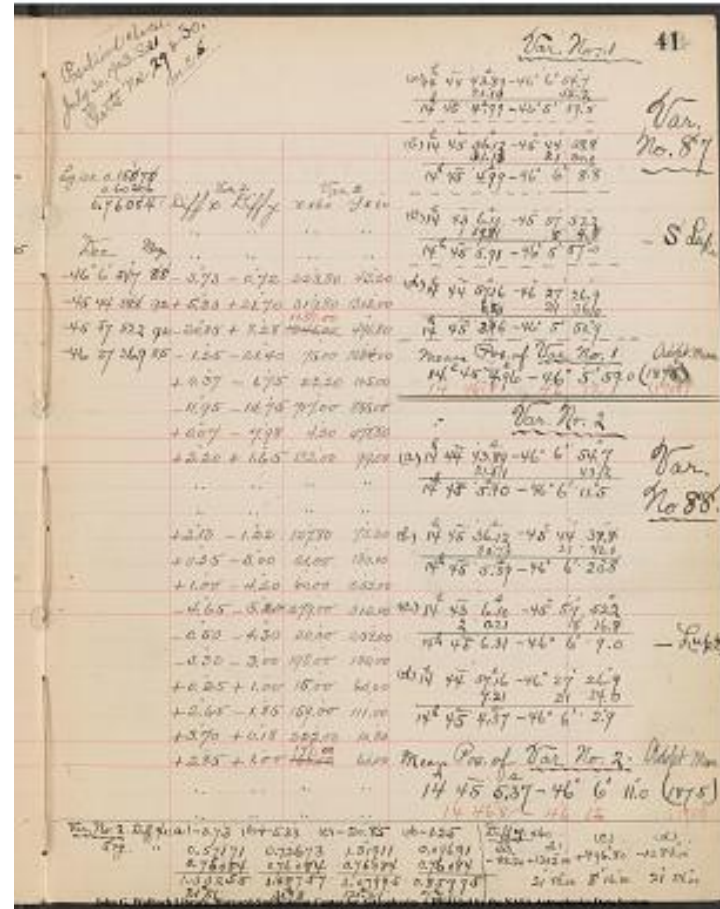
(b) $14^{\circ}14'45''$ $45^{\circ}36.12'$ $45^{\circ}44'38.8''$
 [[underline]] | | 30.73 | 21|42.0| [[/underline]]
 | $14^{\circ}14'45''$ $45^{\circ}3.39'$ $46^{\circ}6'20.8''$

-Luki

(c) $14^{\circ}14'43''$ $43^{\circ}6.10'$ $45^{\circ}57'52.2''$
 [[underline]] | | 2|0.21 | 8|16.8| [[/underline]]
 | $14^{\circ}14'45''$ $45^{\circ}6.31'$ $46^{\circ}6'9.0''$

(d) $14^{\circ}14'44''$ $44^{\circ}57.16'$ $46^{\circ}27'26.9''$
 [[underline]] | | 7.21 | 21|24.0| [[/underline]]
 | $14^{\circ}14'45''$ $45^{\circ}4.37'$ $46^{\circ}6'2.9''$

Mean Pos. of [[underline]]Var. No. 2 [[/underline]] Adopt Mean
 | $14^{\circ}14'45''$ $45^{\circ}5.37'$ $46^{\circ}6'11.0''$ (1875)



| |14|46.8| |46°|12| |(1900)

Log. Sec. 0.15878

0.60206
0.76084

[6 column table]

Dec. | Magn. | Var. 2-Diff x | Var. 2-Diff y | Var. 2-xx60 | Var. 2-yx60 |

				
				
|	-46° 6'	54.7"	|8.8|-3.73|-0.72|	223.80|43.20|	
|	-45 44	38.8|	9.2|+5.33|+21.70|	319.80|1302.00|	
|	-45 57	52.2|	9.2|		
|	20.85|	+8.28|	1245.00	<u>1251.00</u>|	496.80|
|	-46 27	26.9|	8.5|-1.25|-21.40|	75.00|1284.00|	
|			+0.37|-1.75|	22.20|105.00|	
|			-11.95|-14.75|	717.00|885.00|	
|			+0.07|-7.98|	4.20|478.80|	
|			+2.20|+1.65|	132.00|99.00|	
				
				
|			+2.13|-1.22|	127.80|73.20|	
|			+0.35|-3.00|	21.00|180.00|	
|			+1.00|-4.20|	60.00|252.00|	
|			-4.65|-5.20|	279.00|312.00|	
|			-0.50|-4.30|	30.00|258.00|	
|			-3.30|-3.00|	198.00|180.00|	
|			+0.25|+1.00|	15.00|60.00|	
|			+2.65|-1.85|	159.00|111.00|	
|			+3.70|+0.18|	222.00|10.80|	
|			+2.85|+1.00|	165.00	171.00|60.00|
				
				

[5 column table]

Var. No. 2 Diff X|(a)-3.73|(b)+5.33|(c)-20.85|(d)-1.25|

Log. " | 0.57171 | 0.72673 | 1.31911 | 0.09691 |

0.76084 | 0.76084 | 0.76084 | 0.76084 | 0.76084 |

| 1.33255 | 1.48757 | 2.07995 | 0.85775 |

| 21.51^[s] | 30.73^[s] | 120.21^[s] | 7.21^[s] |

Diff y x60

[4 column table]

(a)|(b)|(c)|(d)|

-43.20"|+1302.00"|+496.80"|-1284.00"|

| 21' 42.00"|8' 16.80"|21' 24.00"|

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Var. No. 124

July 31, 1903.

Meas to det. pos. of comp. stars for R Pavonis
 18h 56 R.A. 18h 0m 52s 73 dec. -63° 38' 12", 6 (1875).
 C.D.M. -63° 43' 23 18h 3.3 -63° 38' (1900)
 Plate B29763

[8 column chart]

Psi |y |Psi |y |Diff x |Diff y |xx179 |yx179 |
 vav +4.25 | +9.70 | +4.25 | +9.70 | +3.05 | -1.40 | .. | .. |
 a +7.30 | +~~7.30~~ | +~~7.30~~ | +~~7.30~~ | +7.30 | +8.30 | +3.05 | -1.40 | 545.95 | 250.60 |
 b +2.70 | +2.32 | +2.35 | +2.70 | +2.30 | -1.55 | -7.38 | 277.45 | 1321.02 |
 c +4.20 | +8.35 | +4.20 | +8.35 | -0.05 | -1.35 | 8.95 | 241.65 |
 d +4.30 | +15.25 | +4.30 | +15.25 | +0.05 | +5.55 | 8.95 | 993.45 |
 e +2.90 | +11.65 | +2.90 | +11.65 | -1.35 | +1.95 | 241.65 | 349.05 |
 f +4.30 | +11.15 | +4.30 | +11.15 | +0.05 | +1.45 | 8.95 | 259.55 |
 vav +4.25 | +9.70 | +4.25 | +9.70 | .. | .. | .. | .. |
 g +5.22 | +5.25 | +8.52 | +8.50 | +5.20 | +8.55 | +0.97 | -1.18 | 173.63 | 211.22 |
 h +5.40 | +8.65 | +5.40 | +8.65 | +1.15 | -1.05 | 205.85 | 187.95 |
 k +5.20 | +8.80 | +5.20 | +8.80 | +0.95 | -0.90 | 170.05 | 161.10 |
 l +4.82 | +4.80 | +9.35 | +4.85 | +9.35 | +0.57 | -0.35 | 102.03 | 62.65 |
 m +3.82 | +3.80 | +9.98 | +9.95 | +3.85 | +10.00 | -0.43 | +0.28 | 76.97 | 50.12 |
 n +4.38 | +4.40 | +9.98 | +9.95 | +4.35 | +10.00 | +0.13 | +0.28 | 23.27 | 50.12 |
 o +4. ~~4~~ | ~~4~~ | ~~4~~ | ~~4~~ | +9.78 | +9.80 | +4.00 |
 + ~~4~~ | ~~4~~ | ~~4~~ | ~~4~~ | 9.75 |
 + ~~4~~ | ~~4~~ | ~~4~~ | ~~4~~ | -0.25 | +0.08 |
 + ~~4~~ | ~~4~~ | ~~4~~ | ~~4~~ | 134.25 | 447.5 | 14.32 |
 + ~~4~~ | ~~4~~ | ~~4~~ | ~~4~~ | vav | 4.25 | +4.25 | 9.70 | +9.70 | +4.25 |
 +9.70 | .. | .. | .. |
 + ~~4~~ |
 p
 q
 r
 + ~~4~~

42 Var. No. 124 July 31, 1903.

Mean & date for comp. stars from R. Pavonis
 18h 56 R.A. 18h 0m 52s 73 dec. -63° 38' 12" (1875)
 C.D.M. -63° 43' 23 18h 3.3 -63° 38' (1900)
 Plate B29763

x	y	z	Diff x	Diff y	xx179	yx179
+7.30	+9.70	+4.25	+3.05	-1.40	545.95	250.60
+2.70	+2.32	+2.35	+2.30	-1.55	277.45	1321.02
+4.20	+8.35	+4.20	-0.05	-1.35	8.95	241.65
+4.30	+15.25	+4.30	+0.05	+5.55	8.95	993.45
+2.90	+11.65	+2.90	-1.35	+1.95	241.65	349.05
+4.30	+11.15	+4.30	+0.05	+1.45	8.95	259.55
+4.25	+9.70	+4.25	..	..	..	..
+5.22	+5.25	+8.52	+5.20	+8.55	+0.97	-1.18
+5.40	+8.65	+5.40	+1.15	-1.05	205.85	187.95
+5.20	+8.80	+5.20	+0.95	-0.90	170.05	161.10
+4.82	+4.80	+9.35	+4.85	+9.35	+0.57	-0.35
+3.82	+3.80	+9.98	+9.95	+3.85	+10.00	-0.43
+4.38	+4.40	+9.98	+9.95	+4.35	+10.00	+0.13
+4. 4	4	4	4	+9.78	+9.80	+4.00
+ 4	4	4	4	9.75		
+ 4	4	4	4	-0.25	+0.08	
+ 4	4	4	4	134.25	447.5	14.32
+ 4	4	4	4	vav	4.25	+4.25
+9.70
+ 4						
p						
q						
r						
+ 4						

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48
Variable No. 152. RR Lyrae
July 31, 1901

Meas. to def. roe. of conf. stare for RR Lyrae

dIm + [crossed out] 43° 42° 3338 R.a. 19h20m 50.5 dlec 42° 30.8
(1855)
19h 22.3m +42° 36' (1900)

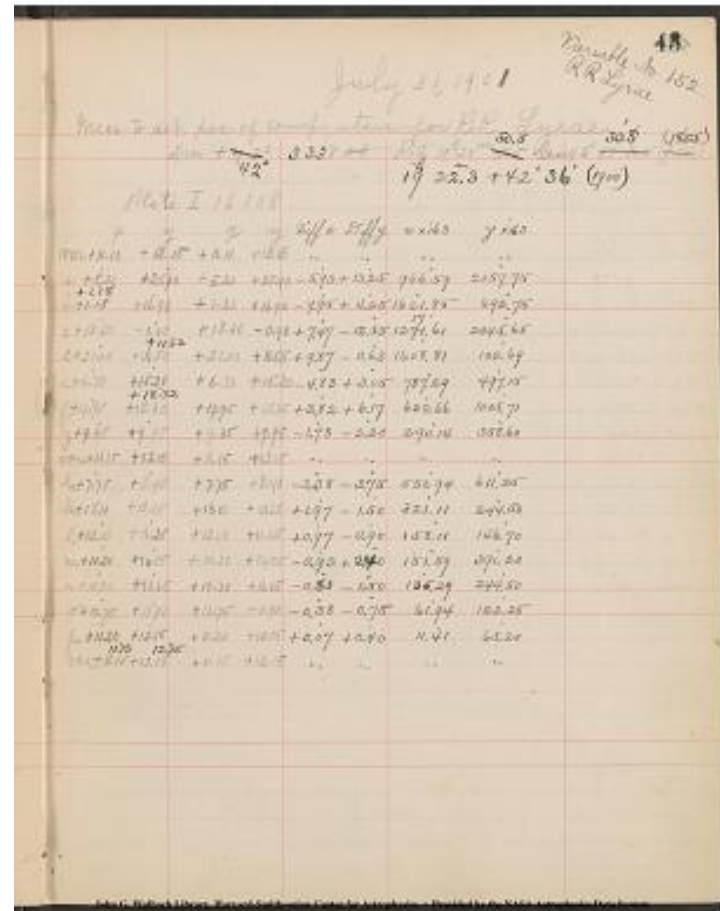
Plate I 16 108

	x	y	x	y
var.	+11.10	+12.15	+11.10	+12.15
a	+5.20	+25.40	+5.20	+25.40
	+1.18			
b	+1.15	+16.40	+1.20	+16.40
c	+18.60	-0.40	+18.60	-0.40
d	+21.00	+11.52	+21.00	+11.55
e	+6.30	+15.20	+6.30	+15.20
	+18.32			
f	+14.95	+18.30	+14.95	+18.35
g	+9.35	+9.95	+9.35	+9.95
var.	+11.15	+12.15	+11.15	+12.15
h	+7.75	+8.40	+7.75	+8.40
k	+13.10	+10.65	+13.10	+10.65
l	+12.10	+11.25	+12.10	+11.25
m	+10.20	+14.55	+10.20	+14.55
n	+10.30	+10.65	+10.30	+10.65
o	+10.75	+11.40	+10.75	+11.40
fr	+11.20	+12.55	+11.20	+12.55
	11.13	12.15		
var.	+11.15	+12.15	+11.15	+12.15

diffx diffy xx163 yx163

..
-5.93	+13.25	966.59	2159.75
-9.95	+4.25	1621.85	692.75
	17		
+7.47	-12.55	1271.61	2045.65
+9.87	-0.63	1608.81	102.69
-4.83	+3.05	787.29	497.15
+3.82	+6.17	622.66	1005.71
-1.78	-2.20	290.14	358.60
..
-3.38	-3.75	550.94	611.25
+1.97	-1.50	321.11	244.50
+0.97	-0.90	158.11	146.70
-0.93	+2.40	151.59	391.20
-0.83	-1.50	135.29	244.50
-0.38	-0.75	61.94	122.25
+0.07	+0.40	11.41	65.20
..

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Var. No. 107

Aug. 1, 1903

Meas. to det. pos. of var. RT Scorpii

R.A. ~~60^h~~ 56.8^m ~~16^s~~
56.8^m Dec. -36° ~~46'~~ 40' (1900)

Mean Dec = -36° 31' 35" =

0.09~~500~~497
1.017700
1.17~~200~~197

Plate B30105

[12 columned table]

x	y	Diff x	Diff y	x ²	y ²	Z.C. No.	R.A. 1875	Dec.
var.	+10.65	+2.80	+10.65	+2.80	...	...	...	...
a	+8.10	+8.12	+3.95	+8.15	+3.95	-		
	2.50	+1.15	447.50	205.85	=16 ^h	3888	16 ^h	54 ^m 29.9 ^s -36° 40' 38"
b	+2.05	+4.20	+4.18	+2.05	+4.15	-8.57	+1.38	1534.03|247.02|=C.DM -36° 1446
c	+13.30	+8.45	+13.30	+8.45	+2.68	+5.65	479.72|1011.35|=16 ^h	
	3987	16 55 50.1	-36 27 45					
d	+12.70	+8.85	+12.70	+8.85	+2.08	+6.05	372.32|1082.95|=16 ^h	
	3974	16 55 42.5	-36 26 21					
e	+2.70	+7.70	+2.70	+7.70	-7.92	+4.90	1417.68|877.10	
f	+1.25	+6.85	+1.25	+6.85	+1.25	+8.50	+3.43	+5.72 613.97|1023.88
g	+14.05	+8.55	+14.05	+8.55	+14.05	+8.50	+3.43	+5.72 613.97|1023.88
h	+10.75	+8.35	+10.75	+8.35	+0.13	+5.55	23.27	993.45
var.	+10.60	+2.80	+10.60	+2.80	...	...	...	...
k	+9.25	+1.35	+9.25	+1.35	-1.37	-1.45	245.23|259.55	
l	+1.50	+7.50	+1.50	+7.50	+1.50	+7.50	+0.88	+4.70 157.52|841.30
m	+9.75	+11.85	+9.75	+11.85	+11.88			
n	+9.75	+1.35	+9.75	+1.35	+1.32			
o	+11.45	+4.40	+11.45	+4.40	+0.83	+1.60	148.57|286.40	
p	+13.20	+5.00	+13.20	+5.00	+2.58	+2.22	461.82|397.38	
q	+11.10	+3.35	+11.10	+3.35	+0.48	+0.52	85.92|93.08	
r	+11.75	+2.65	+11.75	+2.65	+1.13	+0.15	202.27|26.85	
s	+11.20	+2.70	+11.20	+2.70	+0.58	-0.10	103.82|17.90	
var	+10.60	+2.80	+10.60	+2.80	...	...	...	...

[right margin]

[3 columned table]

|Resid x|Resid y

---|---|---

Var. No. 107

Aug. 1, 1903

Mean Dec. = -36° 31' 35"

Plate B30105

Meas. to det. pos. of var. RT Scorpii

R.A. ~~60^h~~ 56.8^m ~~16^s~~
56.8^m Dec. -36° ~~46'~~ 40' (1900)

Mean Dec = -36° 31' 35" =

0.09~~500~~497
1.017700
1.17~~200~~197

Plate B30105

[12 columned table]

| x|y|x|y|Diff x|Diff y|x²|y²|Z.C. No.|R.A. 1875|Dec.

var.|+10.65|+2.80|+10.65|+2.80|...|...|...|...|...|...|

a|+8.10|+8.12|+3.95|+8.15|+3.95|-2.50|+1.15|447.50|205.85|=16^h|3888|16^h|54^m 29.9^s|-36° 40' 38"

b|+2.05|+4.20|+4.18|+2.05|+4.15|-8.57|+1.38|1534.03|247.02|=C.DM -36° 1446

c|+13.30|+8.45|+13.30|+8.45|+2.68|+5.65|479.72|1011.35|=16^h|3987|16 55 50.1|-36 27 45

d|+12.70|+8.85|+12.70|+8.85|+2.08|+6.05|372.32|1082.95|=16^h|3974|16 55 42.5|-36 26 21

e|+2.70|+7.70|+2.70|+7.70|-7.92|+4.90|1417.68|877.10|...|...|...|

f|+1.25|+6.85|+1.25|+6.85|+1.25|+8.50|+3.43|+5.72 613.97|1023.88|...|...|...|

g|+14.05|+8.55|+14.05|+8.55|+14.05|+8.50|+3.43|+5.72 613.97|1023.88|...|...|...|

h|+10.75|+8.35|+10.75|+8.35|+0.13|+5.55|23.27|993.45|...|...|...|

var.|+10.60|+2.80|+10.60|+2.80|...|...|...|...|...|...|

k|+9.25|+1.35|+9.25|+1.35|-1.37|-1.45|245.23|259.55|...|...|...|

l|+1.50|+7.50|+1.50|+7.50|+1.50|+7.50|+0.88|+4.70 157.52|841.30|...|...|...|

m|+9.75|+11.85|+9.75|+11.85|+11.88|...|...|...|...|...|

n|+9.75|+1.35|+9.75|+1.35|+1.32|...|...|...|...|...|

o|+11.45|+4.40|+11.45|+4.40|+0.83|+1.60|148.57|286.40|...|...|...|

p|+13.20|+5.00|+13.20|+5.00|+2.58|+2.22|461.82|397.38|...|...|...|

q|+11.10|+3.35|+11.10|+3.35|+0.48|+0.52|85.92|93.08|...|...|...|

r|+11.75|+2.65|+11.75|+2.65|+1.13|+0.15|202.27|26.85|...|...|...|

s|+11.20|+2.70|+11.20|+2.70|+0.58|-0.10|103.82|17.90|...|...|...|

var|+10.60|+2.80|+10.60|+2.80|...|...|...|...|...|...|

[right margin]

[3 columned table]

|Resid x|Resid y

---|---|---

46
 Var. No 121
 Oct. 24, 1903
 Measures to determine pos. of comp stars for W Arae -49° 11810 17h
 49.2 -49 47(1900)

Plate B11633
 x y x y Diff x Diff y xx179 yx179
 var+6.35 +8.50|+6.35 +8.50|... ..|
 a+7.40 +0.20|+7.40 +0.20|+1.05 -8.29 |187.95 1483.91|
 b-4.25 +3.80|-4.25 +3.80|-10.60 -4.69|1897.40 839.51|
 c-7.55 7.52 +9.75|-7.50 +9.75|-13.87 +1.26|2482.73 225.54|
 d+5.15 +5.20|+5.15 +5.20|-1.20 -3.29|214.80 588.91|
 e+8.80 8.82 +5.60 5.62|+8.85 +5.65|+2.47 -2.87|442.13 513.73|
 f+1.10 +13.25|+1.10 +13.25|-5.25 +4.76|939.75 852.04|
 g+3.90 +11.55 11.52|+3.90 +11.50|-2.45 +3.03|438.55 542.37|
 h+5.35 +9.20|+5.35 +9.20|-1.00 +0.71|179.00 127.09|
 var. +6.35 +8.50|+6.35 +8.50|... ..|
 k+7.40 +10.10|+7.40 +10.10|+1.05 +1.61|187.95 288.19|
 l+4.25 +9.30|+4.25 +9.30|-2.10 +0.81|375.90 144.99
 m+6.25 6.22 +10.15|+6.20 +10.15|-0.13 +1.66|23.27 297.14|
 n+9.80 10.68 10.65|+9.80 +10.70|+3.45 +2.19|617.55 392.01|
 o+6.20 +8.82 8.80|+6.20 +8.85|-0.15 +0.33|26.85 59.07|
 p+5.90 +7.70|+5.90 +7.70|-0.45 -0.79|80.55 141.41|
 g+6.90 +8.95|+6.90 +8.95|+0.55 +0.46|98.45 82.34|
 var +6.35 +8.49 8.50|+6.35 +8.45|... ..|
 Mean Var. +6.35 +8.49|

46 Var. No 121 Oct. 24, 1903

Measures to determine pos. of comp stars for W Arae -49° 11810 17h 49.2 -49 47(1900)

Plate B11633

x	y	x y	Diff x	Diff y	xx179	yx179
var.	+6.35 +8.50	|+6.35 +8.50|	...	...	...	...
a	+7.40 +0.20	|+7.40 +0.20|	+1.05	-8.29	187.95	1483.91
b	-4.25 +3.80	|-4.25 +3.80|	-10.60	-4.69	1897.40	839.51
c	-7.55 7.52	|+9.75|-7.50 +9.75|	-13.87	+1.26	2482.73	225.54
d	+5.15 +5.20	|+5.15 +5.20|	-1.20	-3.29	214.80	588.91
e	+8.80 8.82	|+5.60 5.62|+8.85 +5.65|	+2.47	-2.87	442.13	513.73
f	+1.10 +13.25	|+1.10 +13.25|	-5.25	+4.76	939.75	852.04
g	+3.90 +11.55	11.52|+3.90 +11.50|	-2.45	+3.03	438.55	542.37
h	+5.35 +9.20	|+5.35 +9.20|	-1.00	+0.71	179.00	127.09
var.	+6.35 +8.50	|+6.35 +8.50|	...	...	...	...
k	+7.40 +10.10	|+7.40 +10.10|	+1.05	+1.61	187.95	288.19
l	+4.25 +9.30	|+4.25 +9.30|	-2.10	+0.81	375.90	144.99
m	+6.25 6.22	|+10.15|+6.20 +10.15|	-0.13	+1.66	23.27	297.14
n	+9.80 10.68	10.65|+9.80 +10.70|	+3.45	+2.19	617.55	392.01
o	+6.20 +8.82	8.80|+6.20 +8.85|	-0.15	+0.33	26.85	59.07
p	+5.90 +7.70	+5.90 +7.70	-0.45	-0.79	80.55	141.41
g	+6.90 +8.95	+6.90 +8.95	+0.55	+0.46	98.45	82.34
var	+6.35 +8.49	8.50 +6.35 +8.45
Mean Var.	+6.35 +8.49					

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Var. No. 122 Oct 24, 1903

Measures to det. furs. of comp. stars for W. Cor Asst.
CDM. - 39° 12196b17 58.2 - 39° 20 (1900)

B 30644

x y|x y|Diffx Diffy|xx179 yy179|

v +6.35 +10.30|+6.35 +10.30|... ..|

v? +11.45 +12.10|+11.40 +12.10|... ..|

a +2.85 +9.40|+2.85 +9.40|-3.51 -0.91|628.29 162.89|

b +11.15 11.18 +16.70|+11.20 +16.70|+4.82 +6.39|862.78 1143.81|

c +5.30 +1.40|+5.30 +1.40|-1.06 -8.91|189.74 1594.89|

d +0.40 0.38 +8.80|+0.35 +8.80|-5.98 -1.51|1070.42 270.29|

e +6.20 +16.75|+6.20 +16.75|-0.16 +6.44|28.64 1152.76|

f +4.35 +15.72 15.70|+4.35 +15.75|-2.01 +5.41|359.79 968.39|

g +9.05 +10.05|+9.05 +10.05|2.69 -0.26|481.51 46.54|

v +6.35 +10.30|+6.35 +10.35|... ..|

v? +11.40 +12.10|+11.40 +12.10|... ..|

h +7.65 7.68 +12.25|+7.70 +12.25|+1.32 +1.94|236.28 347.26|

k +5.40 +10.85|+5.40 +10.85|-0.96 +0.54|171.84 96.66|

l +7.35 7.38 +9.60|+7.40 +9.60|+1.02 -0.71|182.58 127.09|

m +9.15 +9.55|+9.15 +9.55|+2.79 -0.76|499.41 136.04|

n +7.05 +9.30|+7.05 +9.30|+0.69 -1.01|123.51 180.79|

o +9.25 +9.25|+9.25 +9.25|+2.89 -1.06|517.31 189.74|

v +6.40 6.36 +10.30 10.31|+6.35 +10.30|... ..|

v? +11.40 11.41 +12.10 12.10|+11.40 +12.10|... ..|

Mean Var +6.36 +10.31

Mean Var?

Var. No. 122 Oct 24, 1903

Measures to det. furs. of comp. stars for W. Cor Asst.

CDM. - 39° 12196b17 58.2 - 39° 20 (1900)

B 30644

x y|x y|Diffx Diffy|xx179 yy179|

v +6.35 +10.30|+6.35 +10.30|... ..|

v? +11.45 +12.10|+11.40 +12.10|... ..|

a +2.85 +9.40|+2.85 +9.40|-3.51 -0.91|628.29 162.89|

b +11.15 11.18 +16.70|+11.20 +16.70|+4.82 +6.39|862.78 1143.81|

c +5.30 +1.40|+5.30 +1.40|-1.06 -8.91|189.74 1594.89|

d +0.40 0.38 +8.80|+0.35 +8.80|-5.98 -1.51|1070.42 270.29|

e +6.20 +16.75|+6.20 +16.75|-0.16 +6.44|28.64 1152.76|

f +4.35 +15.72 15.70|+4.35 +15.75|-2.01 +5.41|359.79 968.39|

g +9.05 +10.05|+9.05 +10.05|2.69 -0.26|481.51 46.54|

v +6.35 +10.30|+6.35 +10.35|... ..|

v? +11.40 +12.10|+11.40 +12.10|... ..|

h +7.65 7.68 +12.25|+7.70 +12.25|+1.32 +1.94|236.28 347.26|

k +5.40 +10.85|+5.40 +10.85|-0.96 +0.54|171.84 96.66|

l +7.35 7.38 +9.60|+7.40 +9.60|+1.02 -0.71|182.58 127.09|

m +9.15 +9.55|+9.15 +9.55|+2.79 -0.76|499.41 136.04|

n +7.05 +9.30|+7.05 +9.30|+0.69 -1.01|123.51 180.79|

o +9.25 +9.25|+9.25 +9.25|+2.89 -1.06|517.31 189.74|

v +6.40 6.36 +10.30 10.31|+6.35 +10.30|... ..|

v? +11.40 11.41 +12.10 12.10|+11.40 +12.10|... ..|

Mean Var +6.36 +10.31

Mean Var?

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Var. No. 126
Oct 24, 1903

Meas to det pos. of comp. stars for -15°49'23

18^h 11.0 - 15° 40' (1855) - Serpentis. 18^h 13.6^m - 15°39' (1900)

~~x y x~~

Plate B 28620

~~9 column table~~

| x | y | x | y | Diff x | Diff y | xx179 | yx179

--- | --- | --- | --- | --- | --- | --- | ---

Var. | +7.05 | +6.80 | +7.10 | +6.80 | .. | .. | .. | ..

a | +2.55 | 2.52 | +10.25 | +2.50 | +10.25 | -4.54 | +3.45 | 812.66 | 617.55

b | +5.30 | 5.28 | +9.60 | 9.62 | +5.25 | +9.65 | -1.78 | +2.82 | 318.62 | 504.78

c | +11.20 | +5.80 | +11.20 | +5.80 | +4.14 | -1.00 | 741.06 | 179.00

d | +8.05 | 7.35 | +8.05 | +7.35 | +0.99 | +0.55 | 177.21 | 98.45

~~e~~ | +7.30 | 7.32 | +6.45 | 6.42 | +7.35 | +6.40 | +0.26 | -0.38 | 46.54 | 68.02

~~f~~ | +5.50 | +3.20 | +5.50 | +3.20 | -1.56 | -3.60 | 279.24 | 644.40

var. | +7.05 | +6.80 | +7.05 | +6.80 | .. | .. | .. | ..

~~g~~ | +6.75 | 6.78 | +6.30 | +6.80 | +6.30 | -0.28 | -0.50 | 50.12 | 89.50

~~h~~ | +6.90 | +5.30 | 5.28 | +6.90 | +5.25 | -0.16 | -1.52 | 28.64 | 272.08

~~k~~ | +9.20 | +5.75 | +9.20 | +5.75 | +2.14 | -1.05 | 383.06 | 170 | 187.95

~~l~~ | +9.15 | +7.05 | +9.15 | +7.05 | +2.09 | +0.25 | 374.11 | 44.75

~~m~~ | +7.80 | +7.45 | 7.42 | +7.80 | +7.40 | +0.74 | +0.62 | 132.46 | 110.98

Var. | +7.05 | 7.06 | +6.80 | 6.80 | +7.05 | +6.80 | .. | .. | .. | ..

Mean Var. | +7.06 | +6.80 | | | | |

48 Var. No. 126 Oct 24, 1903

Meas to det pos. of comp. stars for -15°49'23

18^h 11.0 - 15° 40' (1855) - Serpentis. 18^h 13.6^m - 15°39' (1900)

~~x y x~~

Plate B 28620

~~9 column table~~

| x | y | x | y | Diff x | Diff y | xx179 | yx179

--- | --- | --- | --- | --- | --- | --- | ---

Var. | +7.05 | +6.80 | +7.10 | +6.80 | .. | .. | .. | ..

a | +2.55 | 2.52 | +10.25 | +2.50 | +10.25 | -4.54 | +3.45 | 812.66 | 617.55

b | +5.30 | 5.28 | +9.60 | 9.62 | +5.25 | +9.65 | -1.78 | +2.82 | 318.62 | 504.78

c | +11.20 | +5.80 | +11.20 | +5.80 | +4.14 | -1.00 | 741.06 | 179.00

d | +8.05 | 7.35 | +8.05 | +7.35 | +0.99 | +0.55 | 177.21 | 98.45

~~e~~ | +7.30 | 7.32 | +6.45 | 6.42 | +7.35 | +6.40 | +0.26 | -0.38 | 46.54 | 68.02

~~f~~ | +5.50 | +3.20 | +5.50 | +3.20 | -1.56 | -3.60 | 279.24 | 644.40

var. | +7.05 | +6.80 | +7.05 | +6.80 | .. | .. | .. | ..

~~g~~ | +6.75 | 6.78 | +6.30 | +6.80 | +6.30 | -0.28 | -0.50 | 50.12 | 89.50

~~h~~ | +6.90 | +5.30 | 5.28 | +6.90 | +5.25 | -0.16 | -1.52 | 28.64 | 272.08

~~k~~ | +9.20 | +5.75 | +9.20 | +5.75 | +2.14 | -1.05 | 383.06 | 170 | 187.95

~~l~~ | +9.15 | +7.05 | +9.15 | +7.05 | +2.09 | +0.25 | 374.11 | 44.75

~~m~~ | +7.80 | +7.45 | 7.42 | +7.80 | +7.40 | +0.74 | +0.62 | 132.46 | 110.98

Var. | +7.05 | 7.06 | +6.80 | 6.80 | +7.05 | +6.80 | .. | .. | .. | ..

Mean Var. | +7.06 | +6.80 | | | | |

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Var. No 132.
-Lyrae
Oct. 29, 1903.

Meas to det pos of comp stars for Var. +28° 30 55
 RA. 18^h 37.6^m Dec 28°43'(1900)
 found on I 30846 W.P.F

I ~~30846~~ 25323
 [9 columned table]
x	y	x	y	Diff x	y	x×163	y×163
Var	+9.25	+4.85	+9.30	+4.85
Var?	+12.25	+8.20	+12.30	+8.20
a	+16.40^h	+16.38^m	+1.30^s	+1.32^s	+16.35	+1.35	+7.09
3.50	1155.67	570.50					
b	+4.15	+3.40^h	+3.38^m	+4.15	+3.35	-5.14	-1.44
c	+10.10	+3.20	+10.10	+3.20	+0.81	-1.62	132.03
d	+1.10	+9.05	+1.10	+9.05	-8.19	+4.23	1334.97
e	+9.20^h	+9.18^m	+9.30^s	+9.28^s	+9.15	+9.25	-0.11
f	+9.55^h	+9.58^m	+12.10	+9.60	+12.10	+0.29	+7.28
g	+11.20	+3.30	+11.20	+3.30	+1.91	-1.52	311.33
var.	+9.30	+4.80	+9.30	+4.80
var?	+12.25	+8.20	+12.25	+8.20
h	+13.65	+4.60	+13.65	+4.60	+4.36	-0.22	710.68
k	+10.55	+3.40^h	+3.42^m	+10.55	+3.45	+1.26	-1.40
l	+7.75	+11.60^h	+11.62^m	+7.75	+11.65	-1.54	+6.80
m	+9.50^h	+9.48^m	+9.00	+9.45	+9.00	+0.19	+4.18
n	+10.80^h	+10.82^m	+6.85	+10.85	+6.85	+1.53	+2.03
o	+8.25	+5.15	+8.25	+5.15	~~0.04~~	~~0.04~~	
1.04	+0.33	~~6.52~~	~~169.52~~	53.79			
var	+9.30^h	+9.29^m	+4.80^s	+4.82^s	+9.30	+4.80	...
var?	+12.25	+8.20	var?	+12.25	+8.20
 Mean Var.|+9.29|+4.82| | | | |

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Var. No 132. Oct 29, 1903. -Lyrae 49

Meas to det pos of comp stars for Var. +28 30 55
 RA. 18^h 37.6^m Dec 28 43 (1900)
 found on I 30846 W.P.F

x	y	Diff x	Diff y	x x 163	y x 163
16.40	16.38	1.30	1.32	16.35	1.35
4.15	3.40	3.38	4.15	3.35	-5.14
10.10	3.20	0.81	-1.62	132.03	264.06
1.10	9.05	-8.19	4.23	1334.97	689.49
9.20	9.18	9.30	9.28	9.15	9.25
9.55	9.58	12.10	9.60	12.10	0.29
11.20	3.30	11.20	3.30	1.91	-1.52
9.30	4.80	9.30	4.80		
12.25	8.20	12.25	8.20		
13.65	4.60	13.65	4.60	4.36	-0.22
10.55	3.40	3.42	10.55	3.45	1.26
7.75	11.60	11.62	7.75	11.65	-1.54
9.50	9.48	9.00	9.45	9.00	0.19
10.80	10.82	6.85	10.85	6.85	1.53
8.25	5.15	8.25	5.15		
9.30	9.29	4.80	4.82	9.30	4.80
12.25	8.20	12.25	8.20		
9.29	4.82				

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Var. No. 135
T Seuti
 Oct 29, 1903.
 Meas to det pos of comps stars + Var -8 4764.
 RA 18^h 47^m 33.2^s Dec. -8 21'.6 (1855)
 18^h 50.0^m - 8 18' (1900)

Plate B 29575
 [[9 column table]]

| x|y|x|y|Diff x|Diff y|xx179|yx179|
 Var. +4.60|+4.45|+4.60|+4.45|...|...|
 a|+9.55[^][[9.58]]|+3.40|+9.60|+3.40|+4.95|-1.05|886.05|187.95|
 b|+6.20[^][[6.22]]|+4.10|+6.25|+4.10|+1.59|-0.35|284.61|62.65|
 c|+7.80|+6.45[^][[6.48]]|+7.80|+6.50|+3.17|+2.03|567.43|363.37|
 d|+6.15[^][[6.18]]|+5.15|+6.20|+5.15|+1.55|+0.70|277.45|125.30|
 e|+7.10[^][[7.12]]|+6.75[^][[6.78]]|+7.15|+6.80|+2.49|+2.33|445.71|417.07|
 f|+0.50[^][[0.48]]|+5.30[^][[5.28]]|+0.45|+5.25|-4.15|+0.83|742.85|148.57|
 g|+10.25|+6.65|+10.25|+6.65|+5.62|+2.20|1005.98|393.80|
 h|~~[[6.28]]~~+0.30|+6.25|+0.30|+1.65|-4.15|295.35|742.85|
 Var. +4.65|+4.45|+4.65|+4.45|...|...|
 k|+2.25|+6.00[^][[6.02]]|+2.25|+6.05|-2.38|+1.57|426.02|281.03|
 l|+5.25|+4.65|+5.25|+~~[[5.25]]~~|+4.65|+0.62|+0.20|
 110.98|35.80|
 m|+3.25|+3.40|+3.25|+3.40|-1.38|-1.05|247.02|187.95|
 n|+3.35|+3.80|+3.35|+3.80|-1.28|-0.65|229.12|116.35|
 o|+3.50[^][[3.48]]|+3.60[^][[3.62]]|+3.45|+3.65|-1.15|-0.83|205.85|148.57|
 p|+2.60[^][[2.62]]|+3.75|+2.65|+3.75|-2.01|-0.70|359.79|125.30|
 q|+4.30[^][[4.28]]|+~~[[5.25]]~~|+4.20|+4.25|+4.20|-
 0.35|-0.25|62.65|44.75|
 Var. +4.65[^][[~~5.25~~]]|+4.63[^][[~~5.25~~]]|+4.45[^][[~~5.25~~]]|
[^][[~~5.25~~]]|+4.45[^][[~~5.25~~]]|+4.65|+4.45|...|...|

Mean Var. +4.63 +4.45

Var. No. 135
 Oct 29, 1903
 Meas to det pos of comps stars + Var -8 4764.
 RA 18^h 47^m 33.2^s Dec. -8 21'.6 (1855)
 18^h 50.0^m - 8 18' (1900)

	Diff x	Diff y	xx179	yx179
a	+9.55	+3.40	886.05	187.95
b	+6.20	+4.10	284.61	62.65
c	+7.80	+6.45	567.43	363.37
d	+6.15	+5.15	277.45	125.30
e	+7.10	+6.75	445.71	417.07
f	+0.50	+5.30	742.85	148.57
g	+10.25	+6.65	1005.98	393.80
h	+0.30	+6.25	295.35	742.85
k	+2.25	+6.00	426.02	281.03
l	+5.25	+4.65	110.98	35.80
m	+3.25	+3.40	247.02	187.95
n	+3.35	+3.80	229.12	116.35
o	+3.50	+3.60	205.85	148.57
p	+2.60	+3.75	359.79	125.30
q	+4.30	+4.20	0.35	-0.25

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May 17, 1904.

Exam. of Plates for susp. var. in $+50^\circ 1603$.
R.A. $8^h 53.0^m$ $+50^\circ 39.1'$ (1855). Sp. Type IV? Pec. on I31601

[3 column table]

Plate | Date | Ex.

I 17744	April 1 1897	3 ^{15 m}
I 8332	March 31 1893	12
I 5834	March 7 1892	34
I 20638	April 7 1898	13
I 3353	March 26 1891	11
I 783	March 7 1890	13
I 20467	March 10 1898	18
I 20396	April 3 1898	13
I 26940	May 1 1901	14
I 21887	Dec. 1 1898	11
I 22035	Dec. 24 1898	17
I 24242	Dec. 13 1899	19
I 14022	Dec. 3 1895	18
I 8249	March 18 1893	31 ¹³
I 8211	March 12 1893	11 ¹²
I 5661	Feb. 15 1892	14
I 28365	Jan 27 1902	12
I 28509	Feb. 15 1902	10
I 30081	Feb. 23 1903	10
I 10568	Jan. 25 19 1894	11
I 15110	May 13 1896	14
I 19496	Nov. 6 1897	26
B 1940	Nov. 29 1887	16

An explanation of the above plates fails to show any variation exceeding 0.3 or 0.4 of a magn., and even this change may be due to photographic effect.

Not to be measured or announced. W.P. Fleming.

58

May 17, 1904.

*Summary of Plates for susp. var. in $+50^\circ 1603$.
R.A. $8^h 53.0^m$ $+50^\circ 39.1'$ (1855). Sp. Type IV? Pec. on I31601*

Plate	Date	Ex.
I 17744	April 1 1897	15
I 8332	March 31 1893	12
I 5834	March 7 1892	34
I 20638	April 7 1898	13
I 3353	March 26 1891	11
I 783	March 7 1890	13
I 20467	March 10 1898	18
I 20396	April 3 1898	13
I 26940	May 1 1901	14
I 21887	Dec. 1 1898	11
I 22035	Dec. 24 1898	17
I 24242	Dec. 13 1899	19
I 14022	Dec. 3 1895	18
I 8249	March 18 1893	31
I 8211	March 12 1893	11
I 5661	Feb. 15 1892	14
I 28365	Jan 27 1902	12
I 28509	Feb. 15 1902	10
I 30081	Feb. 23 1903	10
I 10568	Jan. 25 1894	19
I 15110	May 13 1896	14
I 19496	Nov. 6 1897	26
B 1940	Nov. 29 1887	16

An examination of the above plates fails to show any variation exceeding 0.3 or 0.4 of a magn. and even this change may be due to photographic effect.

Not to be measured or announced. W.P. Fleming.

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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May 18, 1904

Exam. of plates for susp. var - $2^{\circ} 3939$
 $14^{\text{h}} 56^{\text{m}} 28.8^{\text{s}}$ - $2^{\circ} 17.1$ (9.6 max) 1855 Sp. Pec on I 31573
 Cir 92 Sp. Pec Type IV. see I 31681 and I 28881
 Cir 145 Dark Bands Type VI

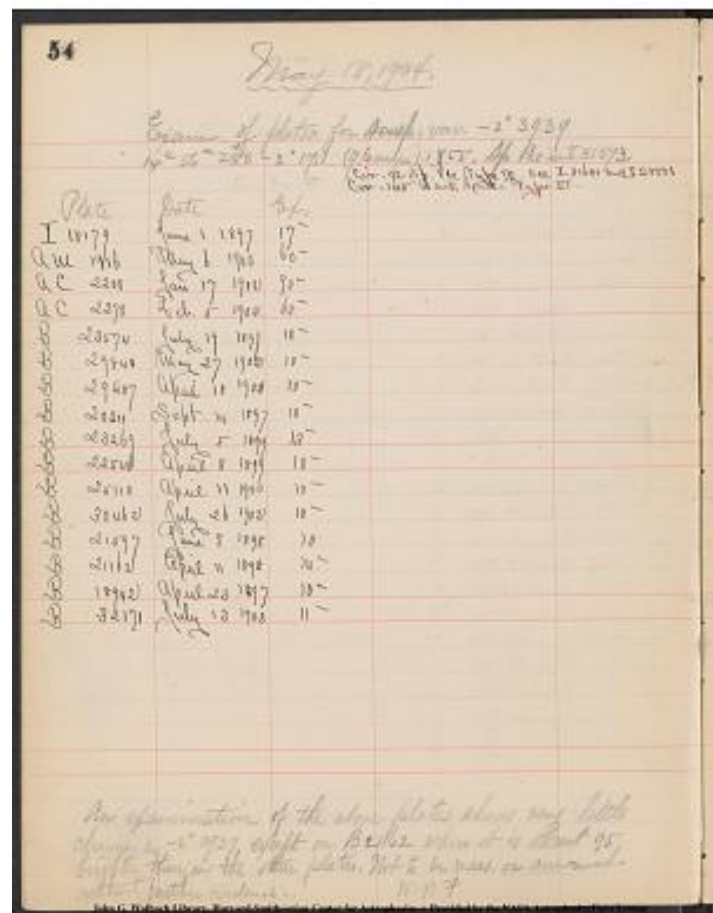
[3 columned table]

[Plate|Date|Ex.]

Plate	Date	Ex.
I 18179	June 1 1897	17
AM 1916	May 6 1903	60
AC 2208	Jan 17 1902	90
AC 2278	Feb 5 1902	60
B 23574	July 19 1899	10
B 29841	May 27 1902	10
B 29407	April 18 1920	10
B 20311	Sept 14 1897	10
B 23269	July 5 1899	13
B 22546	April 8 1899	10
B 25110	April 11 1900	10
B 30462	July 26 1902	10
B 21597	June 8 1898	10
B 21162	April 11 1898	14
B 18942	April 23 1897	10
B 32171	July 13 1903	11

An examination of the above plates shows very little change in $2^{\circ} 3939$, except on B21162 where it is about 0.5 brighter than on the other plates. Not to be meas. of announced without further evidence. W.P.F.

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Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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May 25, 1904 [[Left Margin]]55[[Left Margin]]
Clean for susp. var. formal while lubiy for
hertha vm |31345 and |3350.
appvrt. RA 9h 226 +16 40 (1855).

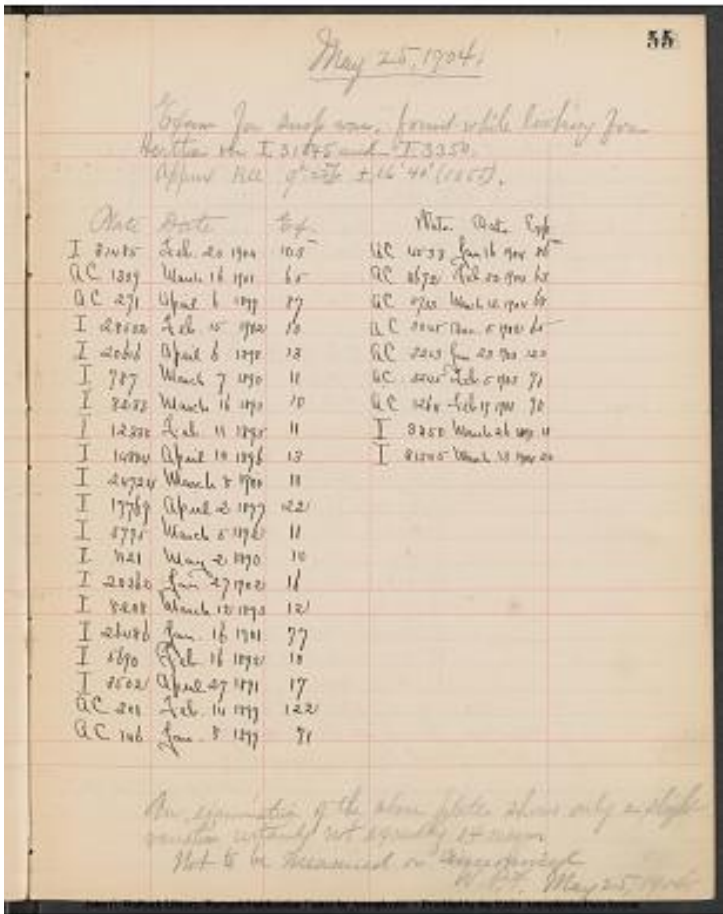
[[3 columned table]]

Plate	Date	Et. [[?]]
I 31485	Feb. 20 1904	103
AC 1339	March 16 1901	65
AC 271	April 6 1899	87
I 28502	Feb. 15 1902	10
I 20616	April 6 1898	13
I 787	March 7 1890	11
I 8233	March 16 1893	10
I 12338	Feb. 11 1895	11
I 14884	April 10 1896	13
I 24724	March 8 1900	11
I 17769	April 2 1897	22
I 5795	March 5 1892	11
I 1121	May 2 1890	10
I 28362	Jan. 27 1902	16
I 8208	March 12 1893	12
I 26486	Jan. 16 1901	77
I 5690	Feb. 16 1892	10
I 3502	April 27 1891	17
AC 201	Feb. 14 1899	122
AC 146	Jan. 8 1899	71

[[table continues in new column]]

Plate	Date	Exp [[?]]
AC 4533	Jan 16 1904	86
AC 4672	Feb. 22 1904	63
AC 4733	March 12 1904	68
AC 3045	Dec. 5 1902	65
AC 3213	Jan. 23 1903	125
AC 3245	Feb. 5 1903	71
AC 1264	Feb. 19 1901	90
I 3250	March 26 1891	10
I 31545	March 13 1904	20

An examination of the above plates shows only a slight variation
certainly [[?]] not exceeding 0.4 magn.
Not to be measured or [[?]]
W.P.F May 25, 1904



Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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July 25, 1904.

Exam. of plates for star suspected of variation by Kreutz from comparison of Charts of sky ~~see~~ No.s 10 and 22. See letter of July 13, 1904 R.A. $0^h 3^m 5^s + 14^\circ 54'$ (1855).

[[3 column table]]

Plate | Date | Ex.

I 26424	Jan. 2 1901	15 ^h [[m]]
I 24336	Dec. 28 1899	90 ^h [[m]]
I 30775	Aug. 26 1903	12 ^h [[m]]
I 24309	Dec. 21 1899	53 ^h [[m]]
I 24011	Nov. 9 1899	13 ^h [[m]]
I 15553	July 30 1896	10 ^h [[m]]
I 15910	Sept. 7 1896	10 ^h [[m]]
I 7479	Nov. 6 1897	14 ^h [[m]]
I 9467	Sept. 12 1893	21 ^h [[m]]
I 10524	Jan. 22 1894	10 ^h [[m]]
I 13518	Sept. 22 1895	10 ^h [[m]]
I 19294	Oct. 17 1897	13 ^h [[m]]
I 4470	Oct. 8 1891	10 ^h [[m]]
I 2725	Jan. 8 1891	10 ^h [[m]]
I 2684	Dec. 31 1890	10 ^h [[m]]
I 5124	Dec. 13 1891	11 ^h [[m]]
I 5276	Dec. 28 1891	4 ^h [[m]]
I 2029	Oct. 21 1890	15 ^h [[m]]
I 21575	Oct. 31 1898	12 ^h [[m]]
I 24345	Dec. 29 1899	60 ^h [[m]]
I 24331	Dec. 27 1899	77 ^h [[m]]

An examination of the above plates fails to show any evidence of variation in either of the pair of faint stars^h (magns. 11 and 12 approx.) near the position given. An examination of A.C. the original plate used for making Chart No 10, shows object to be a defect.

57

July 25, 1904

Examination of plates for suspected variation of star

R.A. $0^h 3^m 5^s + 14^\circ 54'$ (1855)

I 26424	Jan 2 1901	15
I 24336	Dec 28 1899	90
I 30775	Aug 26 1903	12
I 24309	Dec 21 1899	53
I 24011	Nov 9 1899	13
I 15553	July 30 1896	10
I 15910	Sept 7 1896	10
I 7479	Nov 6 1897	14
I 9467	Sept 12 1893	21
I 10524	Jan 22 1894	10
I 13518	Sept 22 1895	10
I 19294	Oct 17 1897	13
I 4470	Oct 8 1891	10
I 2725	Jan 8 1891	10
I 2684	Dec 31 1890	10
I 5124	Dec 13 1891	11
I 5276	Dec 28 1891	4
I 2029	Oct 21 1890	15
I 21575	Oct 31 1898	12
I 24345	Dec 29 1899	60
I 24331	Dec 27 1899	77

No examination of the above plates fails to show any evidence of variation in either of the pair of faint stars^h (magns. 11 and 12 approx.) near the position given. An examination of A.C. the original plate used for making Chart No 10, shows object to be a defect.

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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On Dec. 1903

Mrs. Fleming found D.M. $+15^{\circ} 41' 20''$ 22.5° $+15^{\circ} 47'$ (1855) to be MC on spectrum plate I 31193 & suspected it of var. She examined the following plates

[[3 columned table]]		
I 15731	AC 3908	AM 939
16008	AM 390	AC 2722
31060	AM 1102	AC 4075
31029	AM 1302	AC 1541
30829	AM 1347	AC 1497
30922	AM 1338	AC 79
13468	AM 1375	AC 4058
15931	AM 1634	AC 1080
15900	AC 2897	AC 4046
15899	AM 870	AC 3996
14061	AM 862	AC 78
13606	AC 3931	AC 4225
7065	AC 2784	AC 88
9514	AC 2734	
4179	AC 1724	
13295	AC 1668	
16801	AM 600	

and found "variation of about 0.5 magnitude." "To be measured. Not to be announced until measured."

Pos. measured on Page 108

Variability Measured July 1906 by Miss Breslin.

This star was suspected of variation by Espin

A.U.

145

p. 327

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In Dec 1903
Mrs. Fleming found D.M. $+15^{\circ} 41' 20''$ 22.5° $+15^{\circ} 47'$ (1855) to be MC on spectrum plate I 31193 & suspected it of var. She examined the following plates

I 15731	AC 3908	AM 939
16008	AM 390	AC 2722
31060	AM 1102	AC 4075
31029	AM 1302	AC 1541
30829	AM 1347	AC 1497
30922	AM 1338	AC 79
13468	AM 1375	AC 4058
15931	AM 1634	AC 1080
15900	AC 2897	AC 4046
15899	AM 870	AC 3996
14061	AM 862	AC 78
13606	AC 3931	AC 4225
7065	AC 2784	AC 88
9514	AC 2734	
4179	AC 1724	
13295	AC 1668	
16801	AM 600	

and found variation of about 0.5 magnitude. To be measured. Not to be announced until measured.
Pos. measured on Page 108
Variability Measured July 1906 by Miss Breslin.
This star was suspected of variation by Espin

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October 24, 1904

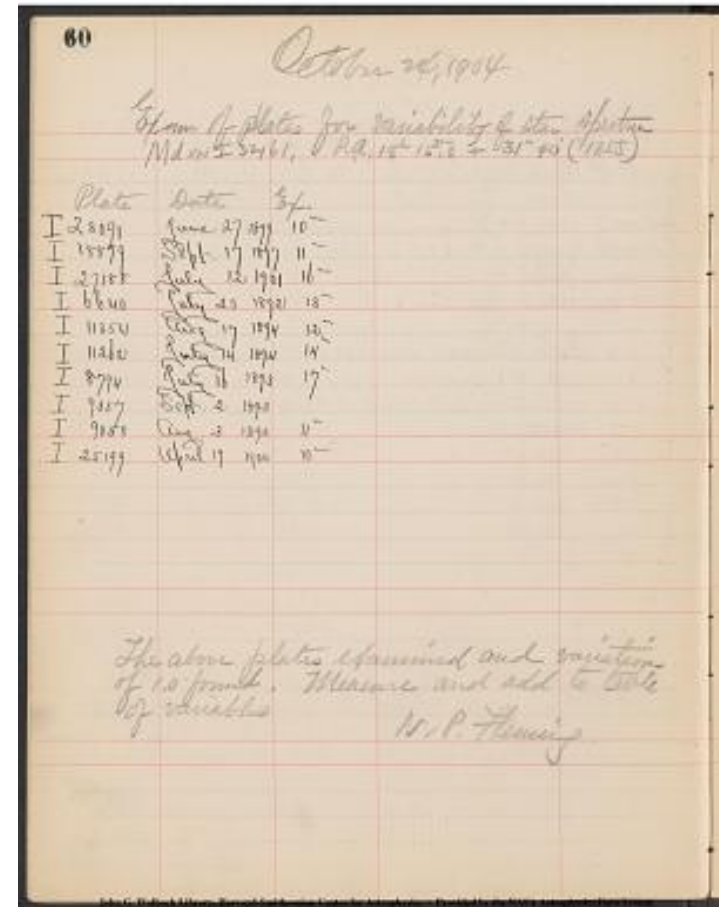
Exam of plates for variability of star spectrum Md on I3461, R.A. $18^h 15^m.0 + 31^{\circ} 40'$ (1855)

[[3 column table]]

Plate	Date	Ex.
I 23091	June 27 1899	10^m
I 18879	Sept. 17 1897	11^m
I 27188	July 12 1901	16^m
I 6640	July 23 1892	13^m
I 11354	Aug 17 1892	12^m
I 11262	July 14 1893	14^m
I 8794	July 16 1893	17^m
I 9357	Sept. 2 1893	
I 9058	Aug 3. 1893	11^m
I 25199	April 19 1900	10^m

The above plates examined and variation of 1.0 format. Measure and add to table of variables.
W.P. Fleming

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January 14, 1905

Meas. to det. pos. of lines in A.G.C. 29232. on Plate A 6934. Another fairly good spectrum on A 4436

A.G.C. Not in A.C.C. or Z.C. = mean C.P.D. $-45^{\circ} 10'13.6''$ R.A. $21^{\text{h}}11^{\text{m}}55.2^{\text{s}}$ Dec. $-45^{\circ} 44'6''$ (8.6) 1875

[5 column table]

H beta|+0.35|+0.35|+0.35|12.37|+1202|
 H gamma|+3.15|+3.15|+3.15|+280|15.17|
 H delta|+4.80|+4.85|+4.82|+167|1684|
 H epsilon|+6.00|+6.00|+6.00|18.02|

A.G.C. 29232^A [[C.P.D. $-45^{\circ} 10'13.5''$ 21 11 54.2 $-45^{\circ} 32.7'$ (7.4) 1875 = 11.9]] 21 h. 13.6^{m} $-45^{\circ} 27'$ (1900) Magn. 6.0

[5 column table]

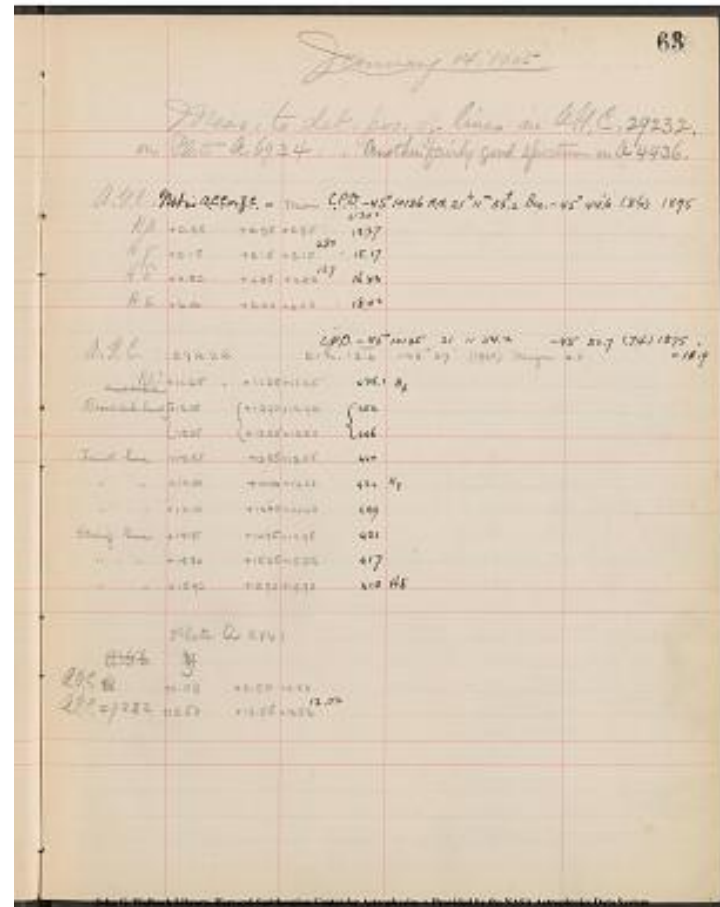
H beta?|~~broad dark~~
 band|+11.25|+11.25|+11.25|486.1 H beta|
 Broad dark band|+12.95|+12.90|+12.92|652|
 Broad dark band|+13.25|+13.25|+13.25|666|
 Faint line|+13.55|+13.55|+13.55|440|
 Faint line|+14.00|+14.00|+14.00|434 H gamma|
 Faint line|+14.40|+14.40|+14.40|429|
 Strong line|+14.95|+14.95|+14.95|421|
 Strong line|+15.30|+15.35|+15.32|417|
 Strong line|+15.90|+15.90|+15.90|410 H delta|

Plate A 2861

~~A.G.C. g~~

[4 column table]

A.G.C. ~~A~~ ~~A~~ +0.50|+0.50|+0.50|
 A.G.C. 29232|+12.50|+12.55|+12.52|+12.02|



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1.56|+0.15|279.24|26.85| | | | |
~~[[~~strikethrough~~]]x w[[~~strikethrough~~]]w~~ |+7.25|-2.60|+7.25|-2.60|-0.71|-
0.30|127.09|53.70| | | | |
~~[[~~strikethrough~~]]w~~ ~~[[~~strikethrough~~]] x~~ |+7.80^[[7.78]]|-
1.60^[[1.62]]|+7.75|-1.65|-0.18|+0.68|32.22|121.72| | | | |
~~[[~~strikethrough~~]]x~~ ~~[[~~strikethrough~~]]~~ |+7.40|-1.25|+7.40|-1.25|-
0.56|+1.05|100.24|187.95| | | | |
~~[[~~strikethrough~~]]~~ ~~[[~~strikethrough~~]]n~~ |+7.95|-2.30|+7.95|-2.30|..|..| | | | |
mean=+7.96 -2.30

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Positions charted Sept. 26. 1905. cry M.C.S.
See Chart No 34

Diffx (f) + 7.72 (g) + 1.84 (h) - 3.06

Log. " 0.88762 0.26482 0.48572
1.08880 1.08880 1.08880

1.97642 1.35362 1.57452
94.72 22.58 37.54
1 34.72

(k)+3.86 (m)-3.21
0.58659 0.50650
1.08880 1.08880

1.67539 1.59530
47.36 39.38

Dec. Magn.

-13 1.7 5.5
-12 46.4 6.9
-12 54.8 7.5
-13 27.7 7.8
-13 31.6 9.0
-13 22.4 8.9
-13 37.1 9.5
-13 11.4 9.0
-13 21.8 9.0
-13 19.7 9.5

Diffy+ - -
x179 f.1596.68 (g)340.10
26' 36" 68 5' 40." 10

(h) 563.85" (k) 17.90"
9' 23.85"

+
(m) 635.45
10' 35.45

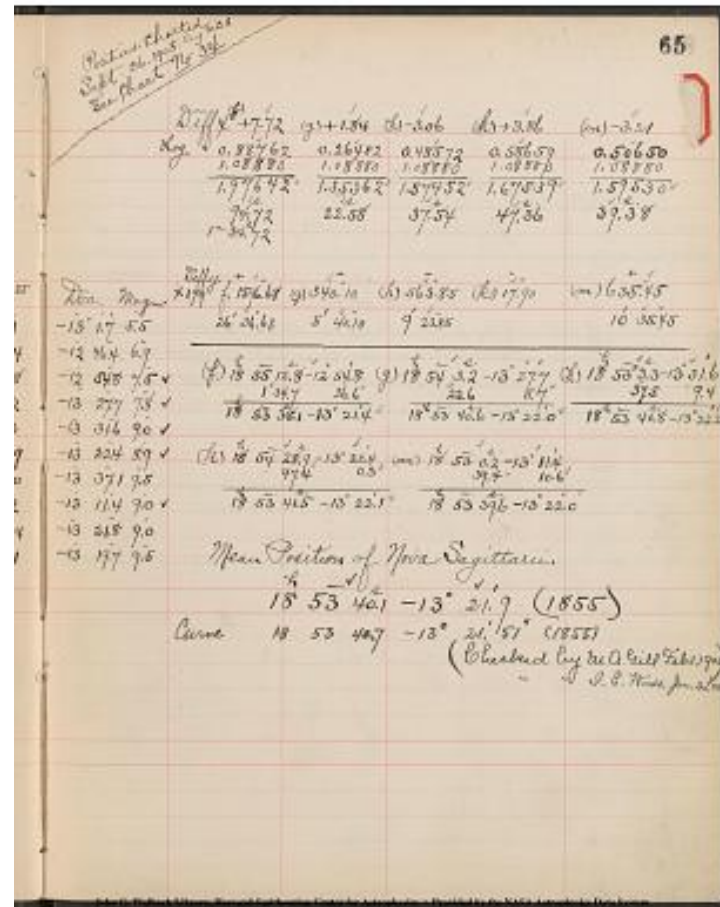
(f) h m s
18 55 12.8-12 54.8
1 34.7 26.6

18 53 38.1 - 13° 21.4

(g) 18 54 3.2 - 13 27.7
22.6 5.7

18 53 40.6 - 13° 22.0

(h) 18 53 3.3 - 13° 31.6
37.5 9.4



18 53 40.8 - 13° 22.2

(k) 18 54 28.9 -13° 22.4
47.4 0.3

18 53 41.5 -13° 22.1

(m) 18 53 0.2 -13° 11.4
39.4 10.6

18 53 39.6 - 13° 22.0

Mean Position of Nova Sagittarii.

h -
18 53 40.1 - 13° 21.9 (1855)
curve 18 53 40.7 -13° 21' 51" (1855)

(Checked by [signature] Feb 1, 1905)
" " J.E. Woods Jan 30, 05

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||+13.80 ^[[13.78]]+8.75|+13.75|+8.75|-0.94|+3.13|168.26|560.27| | |
 |m|+15.10|+5.30|+15.10|+5.30|+0.38|-
 0.32|68.02|57.28|[[strikethrough]]+27[[/strikethrough]]|[[strikethrough]]61
 9[[/strikethrough]]|[[strikethrough]]3[[/strikethrough]]|[[strikethrough]]53[[/
 strikethrough]]|[[strikethrough]]54.6[[/strikethrough]]|[[strikethrough]]+27[[/
 /strikethrough]]|
n	+17.70	+8.80	+17.70	+8.80	+2.98	+3.18	533.42	569.22					
o	+13.35	+6.65	+13.35	+6.65	-1.37	+1.03	245.23	184.37					
p	+15.20	+1.75 ^[[1.72]]	+15.20	+1.70	+0.48	-3.90	85.92	698.10					
q	+17.30	+5.25 ^[[5.28]]	+17.30	+5.30	+2.58	-0.34	461.82	60.86					
r	+13.30	+4.50 ^[[4.52]]	+13.30	+4.55	-1.42	-1.10	254.18	196.90					
var	+14.75	+5.60	+14.70	+5.65						
 var Mean=+14.72 +5.62

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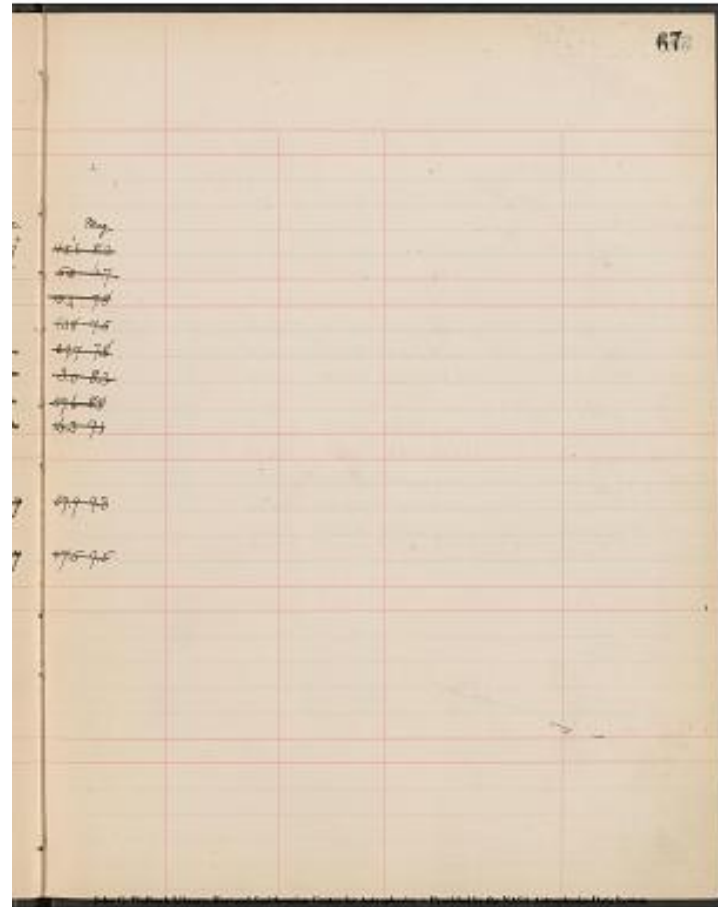
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Magn.
[[strikethrough]]
45.6|8.2
5.3|6.7
12.2|7.8
43.8|7.5
29.7|7.8
3.0|8.3
59.6|8.8
16.3|9.1

59.9|9.3

17.5|9.5

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68 Var. 156
 Sagittarii January 24, 1905.
 Mea. to del. has. of conh. plat for -[[jagiltarii?]]
 CDM- 41 9189 19 38 54 7-41 28 8" (1875)
 Plate Bq217
 [[srikethrough]][[vas]] y x y x Diffx Diffy xx179 yx179
 vas+11.80+11.75+11.10
 a+13.15 +5.90 +13.15 +5.90+1.37-5.20 245.23 930.80
 b+11.15 +11.80+11.15 +11.80-0.63+0.70 112.77 125.30
 0.52
 c+0.50 +12.55+0.55 +12.55-11.26+1.45 2015.54 259.55
 2.28
 d+2.25 +1.90+2.30 +1.90-9.50-9.20 1700.50 1646.80
 e+8.80 +8.85+8.80 +8.85-2.98-2.25 533.42 402.72
 f+10.85 +9.55+10.85 +7.55-0.93-3.55 166.47 635.45
 Jou+11.80+11.10+11.80+11.10
 9.58
 g+11.20 +9.55+11.20 +9.60-0.58-1.52 103.82 272.08
 h+11.90 +6.90+11.90 +6.90+0.12-4.20 21.48 751.80
 k+10.10 +6.10+10.10 +6.10-1.68-5.00 300.72 895.00
 13.18 10.42
 l+13.20 +10.45+13.15 +10.40+1.40-0.68 250.60 121.72.08
 m+11.60 +8.65+11.60 +8.65-0.18-2.45 32.22
 438.55
 n+12.95 9.55+12.95 +9.55+1.17-1.55 209.43 277.45
 mean + 11.78+11.10
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68 Var. 156
 Sagittarii
 January 24, 1905
 Mea. to del. has. of conh. plat for -[[jagiltarii?]]
 CDM- 41 9189 19 38 54 7-41 28 8" (1875)
 Plate Bq217
 [[srikethrough]][[vas]] y x y x Diffx Diffy xx179 yx179
 vas+11.80+11.75+11.10
 a+13.15 +5.90 +13.15 +5.90+1.37-5.20 245.23 930.80
 b+11.15 +11.80+11.15 +11.80-0.63+0.70 112.77 125.30
 0.52
 c+0.50 +12.55+0.55 +12.55-11.26+1.45 2015.54 259.55
 2.28
 d+2.25 +1.90+2.30 +1.90-9.50-9.20 1700.50 1646.80
 e+8.80 +8.85+8.80 +8.85-2.98-2.25 533.42 402.72
 f+10.85 +9.55+10.85 +7.55-0.93-3.55 166.47 635.45
 Jou+11.80+11.10+11.80+11.10
 9.58
 g+11.20 +9.55+11.20 +9.60-0.58-1.52 103.82 272.08
 h+11.90 +6.90+11.90 +6.90+0.12-4.20 21.48 751.80
 k+10.10 +6.10+10.10 +6.10-1.68-5.00 300.72 895.00
 13.18 10.42
 l+13.20 +10.45+13.15 +10.40+1.40-0.68 250.60 121.72.08
 m+11.60 +8.65+11.60 +8.65-0.18-2.45 32.22
 438.55
 n+12.95 9.55+12.95 +9.55+1.17-1.55 209.43 277.45
 mean + 11.78+11.10
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A blank ledger page with a grid of 10 columns and 20 rows. The page is numbered 69 in the top right corner. The grid is formed by red lines on a light beige background. The columns are of varying widths, and the rows are uniform in height. The page is otherwise empty of any text or markings.

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70 Var. No. 153 January 24, 1905
 Sagittarii
 Bua. lu del. hos. l comp. plai for -lagiltarii
 -16°5360 19th 26 0.2 -16° 41 3
 Plate-B17869
 x y x y Diffx Diffy xy179 yx179
 Var.+10.40 +4.45+ 10.35 +4.45
 6.48
 a +8.75 +6.50+8.75 +6.45 -1.63 +2.03 291.77 363.37
 b+5.70 -0.25+5.70 -0.30 -4.68 -4.73 837.72 846.67
 c+1.75 +6.55+1.75 +6.55-8.63+2.10 1544.77 375.90
 d+2.35 +5.60+2.35 +5.60-8.03+1.15 1437.37 205.85
 e+3.25 +13.60+3.25 +13.60-7.13+9.15 1276.27 1637.85
 3.78
 f+3.75 +5.70 +3.80 +5.70-6.60 +1.25 1181.40 223.75
 Var+10.40 +4.45+10.35 +4.45
 12.62 1.42
 g+12.60 +1.45+12.65 +1.40+2.24-3.03 400.96 542.37
 9.52
 h+13.15 +9.50+13.15 +9.55+2.77+5.07 495.83 907.53
 k+9.30 +6.10+9.30 +6.10-1.08+1.65 193.32 295.35
 6.12
 l+6.55 +6.10+6.55 +6.15-3.83+1.67 685.57 298.93
 m+9.35 +4.10+9.35 +4.10-1.03-0.35 184.37 62.65
 n+9.70 +5.40+9.70 +5.40-0.68+0.95 121.72 170.05
 [[?]]+10.40 +4.45+10.40 +4.45
 x y
 mean+10.38+4.45

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[[/top right margin]]

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[[5 columned table]]

DM.[No.][R.A. 1855][Dec.][Magn.]

DM.	No.	R.A. 1855	Dec.	Magn.
+27°	623	3 55 12	+27 45.6	8.2
+28	609	3 52 31.3	+28 5.3	6.7
+27	628	3 56 19.1	+27 12.2	7.8
+27	618	3 53 21.6	+27 43.8	7.5
+27	629	3 56 34.7	+27 29.7	7.8
+28	610	3 54 3.5	+28 3.0	8.3
+27	630	3 56 43.8	+27 59.6	8.8
+27	621	3 54 7.0	+27 16.3	9.1
+27	622	3 54 54.8	+27 59.9	9.3
+27	619	3 53 54.6	+17 47.5	9.5

[[4 columned table]]

h m s. | ° |' |'' [[Diff. x]] | s. |' |'' [[Diff. delta]] |'

h	m	s.	°	|'	|''	[[Diff. x]]	s.	|'	|''	[[Diff. delta]]
3	52	32.5	+28	7.7	1.4	2.4				
56	22.2	+27	15.1	3.1	2.9					
53	22.8	+27	45.1	1.2	1.3					
56	36.9	+27	31.3	2.2	1.6					
54	5.4	+28	5.1	1.9	2.1					
56	44.5	+28	2.1	0.7	2.5					
54	9.7	+27	18.9	2.7	2.6					
54	4.1	+27	54.5							
54	56.9	+28	2.2	2.1	2.3					
53	56.2	+27	40.5							
53	56.4	+17	50.6	1.8	3.1	1.8	3.1			
54	38.1	+27	45.0	1.9	2.3					
54	14.6	+27	35.7							
54	36.0	+27	46.1							
55	0.6	+27	46.3							
55	0.0	+27	47.2							
55	19.0	+27	45.0							
55	3.4	+27	40.6							

x

[[underline]] -12.12^[[mm.]] = Log. [[equation]]

(a) 148.72^[[s]] = 2^[[m]] 28.7^[[s.]] [[/underline]]

[[underline]] +6.60 = Log. [[equation]]

(b) 80.99^[[s]] 1^[[m]] 21.0^[[s.]] [[/underline]]

[[underline]] -8.02 = Log. [[equation]]

(c) 98.41^[[s]] = 1^[[m]] 38.4^[[s.]] [[/underline]]

[[underline]] +7.80 = Log. [[equation]]

(d) 95.71^[[s]] = 1^[[m]] 35.7^[[s.]] [[/underline]]

[[underline]] -4.55 = Log. [[equation]]

(e) 55.83^[[s.]] [[/underline]]

[[underline]] +8.42 = Log. [[equation]]

(f) 103.32^[[s]] = 1^[[m]] 43.3^[[s.]] [[/underline]]

[[underline]] -4.20 = Log. [[equation]]

(g) 51.54^[[s.]] [[/underline]]

[[underline]] -4.65 = Log. [[equation]]

(h) 57.06^[[s]] [[/underline]]

[[underline]] -0.35 = [[equation]]

(k) 4.29^[[s]] = ~~[[?]]~~ [[/underline]]

[[underline]] -5.30 = Log. [[equation]]

(l) 65.04^[[s]] = 1^[[m]] 5.04^[[s.]] [[/underline]]

[[underline]] -5.28 = Log. [[equation]]

73

DM. No. R.A. 1855 Dec. Magn.

+27° 623 3 55 12 +27 45.6 8.2

+28 609 3 52 31.3 +28 5.3 6.7

+27 628 3 56 19.1 +27 12.2 7.8

+27 618 3 53 21.6 +27 43.8 7.5

+27 629 3 56 34.7 +27 29.7 7.8

+28 610 3 54 3.5 +28 3.0 8.3

+27 630 3 56 43.8 +27 59.6 8.8

+27 621 3 54 7.0 +27 16.3 9.1

+27 622 3 54 54.8 +27 59.9 9.3

+27 619 3 53 54.6 +17 47.5 9.5

h m s. | ° |' |'' [[Diff. x]] | s. |' |'' [[Diff. delta]] |'

3 52 32.5 +28 7.7 1.4 2.4

56 22.2 +27 15.1 3.1 2.9

53 22.8 +27 45.1 1.2 1.3

56 36.9 +27 31.3 2.2 1.6

54 5.4 +28 5.1 1.9 2.1

56 44.5 +28 2.1 0.7 2.5

54 9.7 +27 18.9 2.7 2.6

54 4.1 +27 54.5

54 56.9 +28 2.2 2.1 2.3

53 56.2 +27 40.5

53 56.4 +17 50.6 1.8 3.1

54 38.1 +27 45.0 1.9 2.3

54 14.6 +27 35.7

54 36.0 +27 46.1

55 0.6 +27 46.3

55 0.0 +27 47.2

55 19.0 +27 45.0

55 3.4 +27 40.6

x

[[underline]] -12.12^[[mm.]] = Log. [[equation]]

(a) 148.72^[[s]] = 2^[[m]] 28.7^[[s.]] [[/underline]]

[[underline]] +6.60 = Log. [[equation]]

(b) 80.99^[[s]] 1^[[m]] 21.0^[[s.]] [[/underline]]

[[underline]] -8.02 = Log. [[equation]]

(c) 98.41^[[s]] = 1^[[m]] 38.4^[[s.]] [[/underline]]

[[underline]] +7.80 = Log. [[equation]]

(d) 95.71^[[s]] = 1^[[m]] 35.7^[[s.]] [[/underline]]

[[underline]] -4.55 = Log. [[equation]]

(e) 55.83^[[s.]] [[/underline]]

[[underline]] +8.42 = Log. [[equation]]

(f) 103.32^[[s]] = 1^[[m]] 43.3^[[s.]] [[/underline]]

[[underline]] -4.20 = Log. [[equation]]

(g) 51.54^[[s.]] [[/underline]]

[[underline]] -4.65 = Log. [[equation]]

(h) 57.06^[[s]] [[/underline]]

[[underline]] -0.35 = [[equation]]

(k) 4.29^[[s]] = ~~[[?]]~~ [[/underline]]

[[underline]] -5.30 = Log. [[equation]]

(l) 65.04^[[s]] = 1^[[m]] 5.04^[[s.]] [[/underline]]

[[underline]] -5.28 = Log. [[equation]]

(m) $64.79^{\text{[s]}} = 1^{\text{[m]}} 4.8^{\text{[s.]}}$ [[equation]]
[[underline]] -1.88 = Log. [[equation]]
 (n) $23.07^{\text{[s]}}$ [[underline]]
[[underline]] -3.80 = Log. [[equation]]
 (o) $46.63^{\text{[s]}}$ [[underline]]
[[underline]] -2.05 = Log. [[equation]]
 (p) $25.16^{\text{[s]}}$ [[underline]]
[[underline]] -0.05 = Log. [[equation]]
 (q) $0.61^{\text{[s.]}}$ [[underline]]
[[underline]] -0.10 = Log. [[equation]]
 (r) $1.23^{\text{[s]}}$ [[underline]]
[[underline]] +1.45 = Log. [[equation]]
 (s) $17.79^{\text{[s]}}$ [[underline]]
 +0.18 = Log. [[equation]]
 $2.21^{\text{[s]}}$

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74
Oct. 17, 1905.

Meas. to def. has. of x Delph. and adjacent Var.

Plate I 15188 Comp with I 15732, shows var. in both.

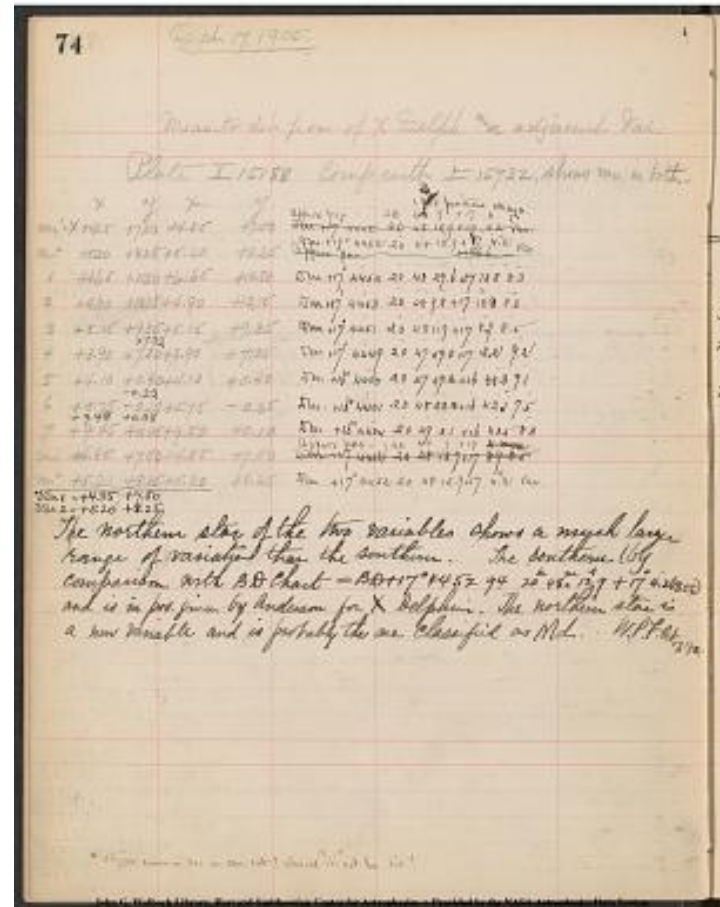
	x	y	x	y
var1=x+4.85	+7.50	+4.85	+7.50	
var2	+5.20	+8.25	+5.20	+8.25
1	+6.65	+10.80	+6.65	+10.80
2	+4.90	+13.15	+4.90	+13.15
3	+5.15	+9.35	+5.15	+9.35
	+7.32			
4	+3.90	+7.30	+3.90	+7.35
5	+4.10	+0.40	+4.10	+0.40
	-0.22			
6	+5.75	-0.20	+5.75	-0.25
	+9.48	+0.08		
7	+9.45	+0.05	+9.50	+0.10
var.	+4.85	+7.50	+4.85	+7.50
var2.	+5.20	+8.25	+5.20	+8.25

var1= +4.85 +7.50
var2= +5.20 +8.25

1820 position magn.

approx pos. 20 48 9 +17 4
~~[[line crossed out]]~~
~~[[line crossed out]]~~
 sm+17° ww5n 20 48 29.6+17 12.8 8.3
 sm+17° ww50 20 48 9.8+17 18.3 8.3
 sm+17° ww51 20 48 11.9+17 8.9 8.5
 sm+17° www9 20 47 59.0+17 3.2 9.2
 sm+16° www0 20 47 59.2+16 44.3 9.1
 sm+16° ww01 20 48 20.2+16 42.1 7.5
 sm+16° ww0w 20 49 3.1+16 43.5 8.3
 approx pos. 20 48 9+17 4 ~~[[crossed out]]~~
~~[[line crossed out]]~~
 sm+17° ww52 20 48 12.9+17 4.2 var.

The northern star of the two variables shows a much larger range of variables than the southern. The southern by comparison with BO chart= BO+17° 4452 94 20h 48m 12s 9+17° 4.2 (1855) and is in pos. given by Anderson for X Delphine. The northern star is a new variable and is probably the one classified as Md. W.P.F. Oct 17, 1905.



Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Variable No 203

[[October 18, 1905.]]

Meas. to det pos. of comp. stars for R J Aguarri

-22° 59'01" R.A. 22^h 17.7^m Dec. -22° 35' (1900).

Plate B5678

[[9 column table]]

	x	y	x	y	Diff x	Diff y	xx179	yx179
var.	+12.15	+7.80	+12.15	+7.85	..	..	..	..
a	+9.85	+5.60	+9.85	+5.60	-2.33	-2.21	417.07	395.59
b	+15.35	+10.75	+15.35	+10.75	+3.17	+2.94	567.43	526.26
c	+15.00	^[[15.02]]	+2.80	+15.05	+2.80	+2.84	-5.01	508.36
d	+19.75	+5.05	^[[5.08]]	+19.75	+5.10	+7.57	-2.73	1355.03
e	+18.15	+1.55	+18.15	+1.55	+5.97	-6.26	1068.63	1120.54
f	+5.80	+10.60	+5.80	+10.60	-6.38	+2.79	1142.02	499.41
g	+14.40	^[[14.38]]	+6.70	+14.35	+6.70	+2.20	-1.11	393.80
h	+15.70	+6.40	+15.70	+6.40	+3.52	-1.41	630.08	252.39
var	+1	[[1]]	1	[[1]]	2.15	+7.80	+12.20	
k	+9.	[[16]]	16	^[[9.62]]	+7.05	+9.65		
l	+8.30	+6.75	+8.30	+6.75	-3.88	-1.06	694.52	189.74
m	+13.80	^[[13.78]]	+7.30	+13.75	+7.30	+1.60	-0.51	286.40
n	+13.20	+9.60	+13.20	+9.60	+1.02	+1.79	182.58	320.41
o	+11.35	+7.55	+11.35	+7.55	-0.83	-0.26	148.57	46.54
p	+13.10	+6.50	^[[6.52]]	+13.10	+6.55	+0.92	-1.29	164.68
q	+13.85	^[[13.88]]	+7.25	+13.90	+7.25	+1.70	-0.56	304.30
var.	+12.20	^[[12.18]]	+7.80	^[[7.81]]	+12.20	+7.80	..	..

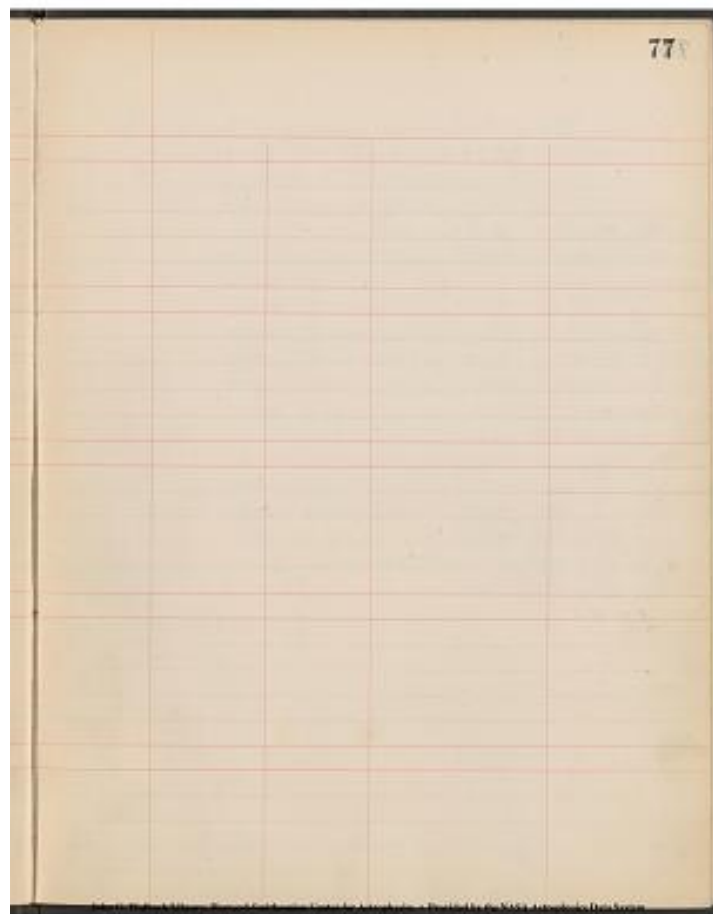
76
Variable No 203 *October 18, 1905*
Meas. to det pos. of comp. stars for R. J. Aguarri
-22° 59' 01" R.A. 22^h 17.7^m Dec. -22° 35' (1900)
Plate B5678

	x	y	x	y	Diff x	Diff y	xx179	yx179
var.	+12.15	+7.80	+12.15	+7.85	..	..	..	..
a	+9.85	+5.60	+9.85	+5.60	-2.33	-2.21	417.07	395.59
b	+15.35	+10.75	+15.35	+10.75	+3.17	+2.94	567.43	526.26
c	+15.00	^[[15.02]]	+2.80	+15.05	+2.80	+2.84	-5.01	508.36
d	+19.75	+5.05	^[[5.08]]	+19.75	+5.10	+7.57	-2.73	1355.03
e	+18.15	+1.55	+18.15	+1.55	+5.97	-6.26	1068.63	1120.54
f	+5.80	+10.60	+5.80	+10.60	-6.38	+2.79	1142.02	499.41
g	+14.40	^[[14.38]]	+6.70	+14.35	+6.70	+2.20	-1.11	393.80
h	+15.70	+6.40	+15.70	+6.40	+3.52	-1.41	630.08	252.39
var	+1	[[1]]	1	[[1]]	2.15	+7.80	+12.20	
k	+9.	[[16]]	16	^[[9.62]]	+7.05	+9.65		
l	+8.30	+6.75	+8.30	+6.75	-3.88	-1.06	694.52	189.74
m	+13.80	^[[13.78]]	+7.30	+13.75	+7.30	+1.60	-0.51	286.40
n	+13.20	+9.60	+13.20	+9.60	+1.02	+1.79	182.58	320.41
o	+11.35	+7.55	+11.35	+7.55	-0.83	-0.26	148.57	46.54
p	+13.10	+6.50	^[[6.52]]	+13.10	+6.55	+0.92	-1.29	164.68
q	+13.85	^[[13.88]]	+7.25	+13.90	+7.25	+1.70	-0.56	304.30
var.	+12.20	^[[12.18]]	+7.80	^[[7.81]]	+12.20	+7.80	..	..

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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Oct 18, 1905.

Meas. to det. the position of Comp. Stars
A.G.C. 27193 F S Pavonis $19^{\circ}46.8'[\text{h}] - 59^{\circ}27' (1900)$
Measured in B16. p 32

Plate B 20291

[9 columned table]

| x|y|x|y|Diff x|Diff y|x × 179|y × 179|

-----|-----|-----|-----|

|Var.|+18.10|+8.55|+18.10|+8.50|.|.|.|.|.|

|a|+27.75|-5.40|+27.75|-5.40|+9.65|-13.91|1727.35|2489.89|

|b|+1.15|+14.20|+1.15|+14.20|-16.95|+5.69|3034.05|1018.51|

|c|+11.50^[[11.52]]|+15.30^[[15.32]]|+11.55|+15.35|-

6.58|+6.81|1177.82|1218.99|

|d|+7.25^[[7.28]]|+1.10|+7.30|+1.10|-10.82|-7.41|1936.78|1326.39|

|e|+7.90|+16.75|+7.90|+16.75|-10.20|+8.24|1825.80|1474.96|

|f|+~~18~~|+17.40|+12.70|+17.40|+12.70|-

0.70|+4.19|125.30|750.01|

|g|+18.35|+~~10~~|+11.70|+18.35|+10.70|+0.2

5|+2.19|44.75| 392.01|

|Var.|+18.10|+8.50|+18.10|+8.50|+0.25|+2.19|44.75|392.01|

|h|+19.85^[[19.82]]|+12.20|+19.80|+12.20|+1.72|+3.69|307.88|660.51|

|k|+13.75^[[13.78]]|+10.35^[[10.32]]|+13.80|+10.30|-

4.32|+1.81|773.28|323.99|

|l|+19.30|+10.90^[[10.92]]|+19.30|+10.95|+1.20|+2.41|214.80|431.39|

|m|+14.90^[[14.88]]|+8.30^[[8.28]]|+14.85|+8.25|-3.22|-

0.23|576.38|41.17|

|n|+14.35|+7.60|+14.35|+7.60|-3.75|-0.91|671.25|162.89|

|Var.|+18.10^[[18.10]]|+8.50^[[8.51]]|18.10|+

8.50|.|.|.|.|.|

|Mean Var.|+18.10|+8.51| | | | |

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Oct 18, 1905

Meas. to det. the position of Comp. Stars

A.G.C. 27193 F S Pavonis $19^{\circ}46.8'[\text{h}] - 59^{\circ}27' (1900)$

Measured in B16. p 32

Plate B 20291

	x	y	Diff x	Diff y	x × 179	y × 179
Var.	+18.10	+8.55	+18.10	+8.50	.|.|.|.|.|
a	+27.75	-5.40	+27.75	-5.40	+9.65	-13.91
b	+1.15	+14.20	+1.15	+14.20	-16.95	+5.69
c	+11.50	+11.52	+15.30	+15.32	+11.55	+15.35
d	+7.25	+7.28	+1.10	+7.30	+1.10	-10.82
e	+7.90	+16.75	+7.90	+16.75	-10.20	+8.24
f	+18	+17.40	+12.70	+17.40	+12.70	+12.70
g	+18.35	+11.70	+18.35	+10.70	+0.25	+2.19
h	+19.85	+12.20	+19.80	+12.20	+1.72	+3.69
i	+13.75	+10.35	+13.80	+10.30	-4.32	+1.81
j	+19.30	+10.90	+19.30	+10.95	+1.20	+2.41
k	+14.90	+8.30	+14.85	+8.25	-3.22	-0.23
l	+14.35	+7.60	+14.35	+7.60	-3.75	-0.91
m	+18.10	+8.50	+18.10	+8.50	+18.10	+8.50
n	+18.10	+8.50	+18.10	+8.50	+18.10	+8.50

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Summary 17:1906

Ident. of stars on D11924 (?) with stars in

Catalogue of Miss Furrer. within 2° of N Pole.

y obs. x

No 1 DM. ~~cat. y~~ x

196 $+89^\circ 1$ ~~cat. y~~ ~~cat. y~~ +100 +800 -2 -1

283 0+3400 +100 +3400 -1 0

300 $+88^\circ 2$ +200 +4100 +300 +4200 -1 -1

329 $+88^\circ 4$ +1200 +5400 +1300 +5500 -1 -1

309 +2500 +4000 +2600 +4100 -1 -1

212 $+89^\circ 3$ +~~cat. y~~ 700 +~~cat. y~~ 800 +900 +1000 -2 -2

201 $+88^\circ 12$ ~~cat. y~~ -3600 +1400 -3400 +1500 -2 -1

79

Summary 17:1906

Ident. of stars on D11924 (?) with stars in
Catalogue of Miss Furrer. within 2° of N Pole.

No	DM.	cat. y	cat. y	cat. y	cat. y	cat. y
196	$+89^\circ 1$	-100	-75	+100	+800	-2 -1
283	0	+3400	+100	+3400	-1	0
300	$+88^\circ 2$	+200	+4100	+300	+4200	-1 -1
329	$+88^\circ 4$	+1200	+5400	+1300	+5500	-1 -1
309	+2500	+4000	+2600	+4100	-1 -1	
212	$+89^\circ 3$	+ cat. y	700	+ cat. y	800 +900 +1000	-2 -2
201	$+88^\circ 12$	cat. y	-3600	+1400	-3400 +1500	-2 -1

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15

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Oct. 19, 1905.

Variable No. 175.

Var. - 16°5558

Meas. to det. pos. of Comp Stars of Var.-

Plate B 20691 20^h 13 3^m -16° 10' (1900)

[9 columned table]

	x	y	x	y	Diff x	Diff y	x×179	y×179
Var.	+9.35	+10.70	+9.35	+10.65	..	..	..	..
a	+25.80	^(25.82)	+11.30	^(11.28)			+25.85	+11.25
	+0.61		2948.13	109.19				
b	+19.25	+19.30	+19.25	+19.30	+9.90	+8.63	1772.10	1544.77
c	+18.70	+18.30	+18.70	+18.30	+9.35	+7.63	1673.85	1365.77
d	+18.00	+6.70	+18.00	+6.70	+8.65	-3.97	1548.35	710.63
e	+9.55	+11.35	+9.55	+11.35	+0.20	+0.68	35.80	121.72
f	+2.00	+8.30	+2.00	+8.30	-7.35	-2.37	1315.65	424.23
g	+4.50	+7.80	+4.50	+7.80	-4.85	-2.87	868.15	513.73
var	+9.35	+10.65	+9.35	+10.65	..	..	..	..
h	+5.25	+12.30	^(12.28)	+5.25	+12.25	-4.10	+1.61	733.90
								288.19
k	+12.40	+15.85	+12.40	+15.85	+3.05	+5.18	545.95	927.22
l	+6.40	+9.95	+6.40	+9.95	-2.95	-0.72	528.05	128.88
m	+8.00	+11.30	^(11.32)	+8.00	+11.35	-1.35	+0.65	241.65
								116.35
n	+9.35	+10.05	+9.35	+10.05	0.00	-0.62	0.00	110.98
o	+9.00	+9.95	^(9.92)	+9.00	+9.90	-0.35	-0.75	62.65
								134.25
p	+8.90	^(8.88)	+10.60	+8.85	+10.60	-0.47	-0.07	84.13
								12.53
Var.	+9.35	+10.65	+9.35	+10.70

Mean Var. +9.35 +10.67

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Variable 175

Oct. 19, 1905

Mean of det. pos. of Comp. Stars of Var. -

Plate B 20691

20^h 13 3^m -16° 10' (1900)

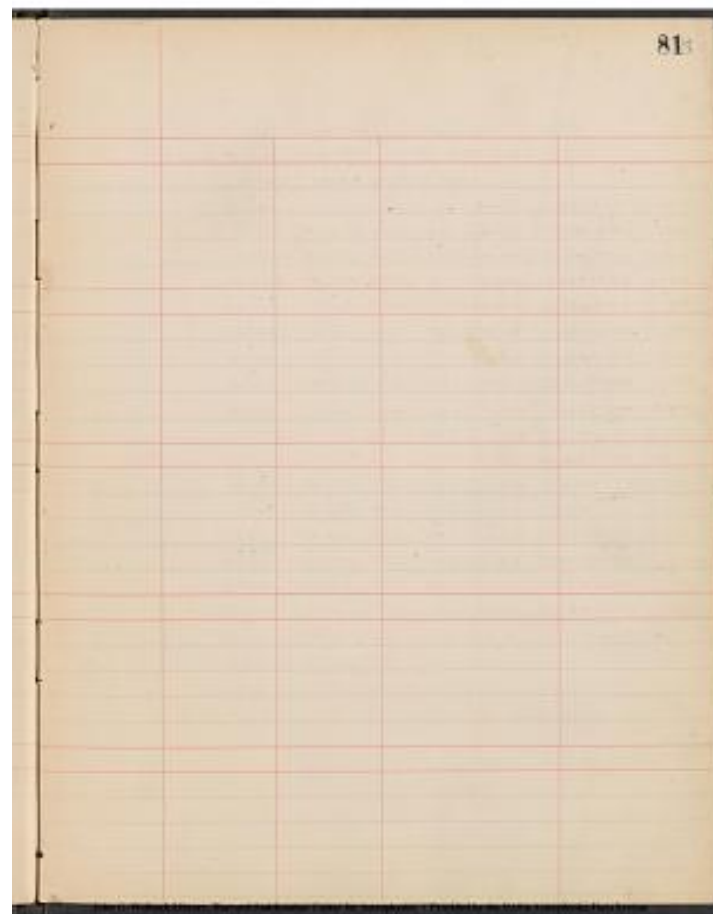
Diff. x Diff. y x×179 y×179

2	3	4	5	6	7	8	9	10
+25.80	+11.30	+11.28	+25.85	+11.25	+16.47	+10.65	+10.67	109.19
+0.61	+19.25	+19.30	+19.25	+19.30	+9.90	+8.63	+8.63	1544.77
+18.70	+18.30	+18.70	+18.30	+9.35	+7.63	1673.85	1365.77	
+18.00	+6.70	+18.00	+6.70	+8.65	-3.97	1548.35	710.63	
+9.55	+11.35	+9.55	+11.35	+0.20	+0.68	35.80	121.72	
+2.00	+8.30	+2.00	+8.30	-7.35	-2.37	1315.65	424.23	
+4.50	+7.80	+4.50	+7.80	-4.85	-2.87	868.15	513.73	
+5.25	+12.30	^(12.28)	+5.25	+12.25	-4.10	+1.61	733.90	288.19
+12.40	+15.85	+12.40	+15.85	+3.05	+5.18	545.95	927.22	
+6.40	+9.95	+6.40	+9.95	-2.95	-0.72	528.05	128.88	
+8.00	+11.30	^(11.32)	+8.00	+11.35	-1.35	+0.65	241.65	116.35
+9.35	+10.05	+9.35	+10.05	0.00	-0.62	0.00	110.98	
+9.00	+9.95	^(9.92)	+9.00	+9.90	-0.35	-0.75	62.65	134.25
+8.90	^(8.88)	+10.60	+8.85	+10.60	-0.47	-0.07	84.13	12.53
+9.35	+10.65	+9.35	+10.70	

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Oct. 19, 1905.

Var No. 220

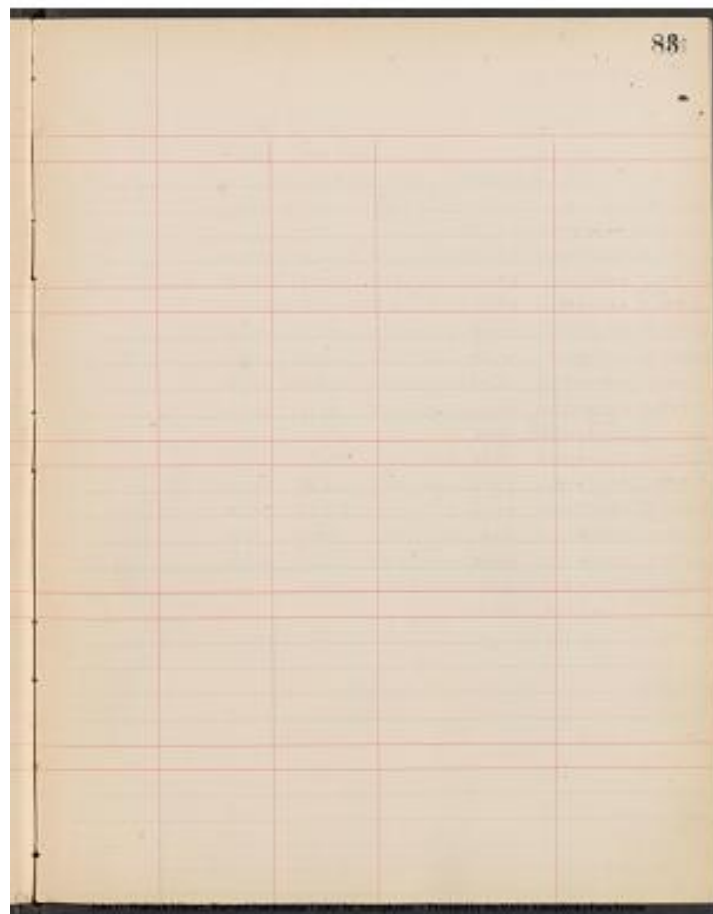
Meas to det. pos. of Comp. Stars for Pegasi
 Pl. I 32169 DM. + 25° 5054 23^h 55.0^m + 25° 21'

[[9 columned table]]

	x	y	x	y	Diff x	Diff y	x×163	y×163
Var	+24.25	+15.20	+24.25	+15.20	..	..	..	..
a	+0.85	+16.90	+0.85	+16.90	-23.40	+1.70	3814.20	277.10
b	+36.10	-1.25	+36.10	-1.25	+11.85	-16.45	1931.55	2681.35
c	+23.05	^[[23.02]]	+0.25	^[[0.28]]	+23.00	+0.30	-1.23	-14.92
	200.49	2431.96						
d	+18.65	^[[18.68]]	+8.40	+18.70	+8.40	-5.57	-6.80	907.91
	1108.40							
e	+18.10	+6.10	+18.10	+6.10	-6.15	-9.10	1002.45	1483.30
f	+23.10	+1	^[[1]]	^[[0.30]]	+23.10			
	+10.30	+1.15	-4.90	187.45	798.70			
g	+32.25	+12.40	+32.25	+12.40	+8.00	-2.80	1304.00	456.40
h	+25.65	+13.05	^[[13.08]]	+25.65	+13.10	+1.40	-2.12	228.20
	345.56							
k	+23.80	+16.90	+23.80	+16.90	-0.45	+1.70	73.35	277.10
	^[[23.80]]	+23.50	+16.30	+23.50	+16.30			
	Var	+24.25	+15.20	+24.25	+15.20	..	..	..
l	+1	^[[20]]	^[[19.20]]	+17.50	^[[17.48]]			
	+19.20	+17.45	-5.05	+2.28	823.15	^[[369.36]]		
	^[[371.64]]							
	^[[m]]	+23.50	+16.30	+23.50	+16.30			
	^[[m]]	^[[20.90]]	+11.20	+20.90	+11.20			
	-3.35	-4.00	546.05	^[[648]]	^[[652.00]]			
n	+23.50	+16.30	+23.50	+16.30	-0.75	+1.10	122.25	179.30
	^[[n]]	^[[o]]	+27.50	+17.60	+27.50	+17.60		
	+3.25	+2.40	529.75	391.20				
	^[[o]]	^[[p]]	+28.45	+14.65	+28.45			
	+14.65	+4.20	-0.55	684.60	89.65			
	^[[p]]	^[[q]]	+22.80	+11.35	+22.80			
	+11.35	-1.45	-3.85	236.35	627.55			
	^[[q]]	^[[r]]	+26.90	+13.30	+26.90	+13.30		
	+2.65	-1.90	431.95	309.70				
	^[[r]]	^[[s]]	+20.15	+16.20	^[[16.22]]			
	+20.15	+16.25	-4.10	+1.02	668.30	166.26		
	^[[s]]	^[[t]]	+23.60	+15.05	+23.60	+15.05		
	-0.65	-0.15	105.95	24.45				
	^[[t]]	^[[u]]	+24.20	+14.60	+24.20	+14.60		
	-0.05	-0.60	8.15	97.80				
	Var.	+24.25	^[[24.25]]	+15.20	^[[15.20]]	+24.25	+15.20	..
	..							
(l) p.c. of bv. star.	+25.25	+12.90	^[[12.88]]	+25.25	+12.85			

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Oct. 19, 1905.

Variable No. 197

+5° 4928 Meas to det. pos of Comp stars for nu Pegasi
 $21^{\circ}[[h]]\ 56^{\circ}[[m]]\ 1\ +5^{\circ}39'$

PI 19379

[[9 columned table]]

| x|y|x|y|Diff x|Diff y|x × 163|y × 163|

-----|-----|-----|-----|

|Var.|+14.60|+12.25|+14.60|+12.30|...|...|

|a|+1.30|+9.75|+1.30|+9.75|-13.31|-2.52|2169.53|410.76|

|b|+12.10|+9.05|+1[[/strikethrough]]1[[/strikethrough]]2.10|+9.05|-2.51|-3.22|409.13|524.86|

|c|+14.75^[[14.72]]|+5.90|+[[/strikethrough]]13[[/strikethrough]]14.70|+5.90|+0.11|-6.37|17.93|1038.31|

|d|+5.10|+0.90|+5.10|+0.90|-9.51|-11.37|1550.13|1853.31|

|e|+10.20|+11.35|+10.20|+11.35|-4.41|-0.92|718.83|149.96|

|f|+16.10|+13.45^[[13.48]]|+16.10|+13.50|+1.49|+1.21|242.87|197.23|

|g|+15.20|+13.75|+15.20|+13.75|+0.59|+1.48|96.17|241.24|

|Var.|[[/strikethrough]]14.62[[/strikethrough]]+14.65[[/strikethrough]]12.28[[

/strikethrough]]+12.30|+14.60|+12.25|...|...|

|h|+10.10^[[10.12]]|+12.15^[[12.18]]|+10.15|+12.20|-4.49|-

0.09|731.87|14.67|

|k|+14.35|+8.85|+14.35|+8.85|-0.26|-3.42|42.38|557.46|

|l|+13.30|+12.05|+13.30|+12.05|-1.31|-0.22|213.53|35.86|

|m|+11.60^[[11.58]]|+11.80|+11.55|+11.80|-3.03|-0.47|493.89|76.61|

|n|+15.30|+11.45|+15.30|+11.45|+0.69|-0.82|112.47|133.66|

|o|+15.70^[[15.68]]|+12.30|+15.65|+12.30|+1.07|+0.03|174.41|4.89|

|Var.|+14.60^[[14.61]]|+12.25^[[12.27]]|+14.60|+12.25|...|...|

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Variable No. 197

Oct. 19, 1905

+5° 4928 Meas to det. pos of Comp stars for nu Pegasi

$21^{\circ}[[h]]\ 56^{\circ}[[m]]\ 1\ +5^{\circ}39'$

PI 19379

[[9 columned table]]

| x|y|x|y|Diff x|Diff y|x × 163|y × 163|

-----|-----|-----|-----|

|Var.|+14.60|+12.25|+14.60|+12.30|...|...|

|a|+1.30|+9.75|+1.30|+9.75|-13.31|-2.52|2169.53|410.76|

|b|+12.10|+9.05|+1[[/strikethrough]]1[[/strikethrough]]2.10|+9.05|-2.51|-3.22|409.13|524.86|

|c|+14.75^[[14.72]]|+5.90|+[[/strikethrough]]13[[/strikethrough]]14.70|+5.90|+0.11|-6.37|17.93|1038.31|

|d|+5.10|+0.90|+5.10|+0.90|-9.51|-11.37|1550.13|1853.31|

|e|+10.20|+11.35|+10.20|+11.35|-4.41|-0.92|718.83|149.96|

|f|+16.10|+13.45^[[13.48]]|+16.10|+13.50|+1.49|+1.21|242.87|197.23|

|g|+15.20|+13.75|+15.20|+13.75|+0.59|+1.48|96.17|241.24|

|Var.|[[/strikethrough]]14.62[[/strikethrough]]+14.65[[/strikethrough]]12.28[[

/strikethrough]]+12.30|+14.60|+12.25|...|...|

|h|+10.10^[[10.12]]|+12.15^[[12.18]]|+10.15|+12.20|-4.49|-

0.09|731.87|14.67|

|k|+14.35|+8.85|+14.35|+8.85|-0.26|-3.42|42.38|557.46|

|l|+13.30|+12.05|+13.30|+12.05|-1.31|-0.22|213.53|35.86|

|m|+11.60^[[11.58]]|+11.80|+11.55|+11.80|-3.03|-0.47|493.89|76.61|

|n|+15.30|+11.45|+15.30|+11.45|+0.69|-0.82|112.47|133.66|

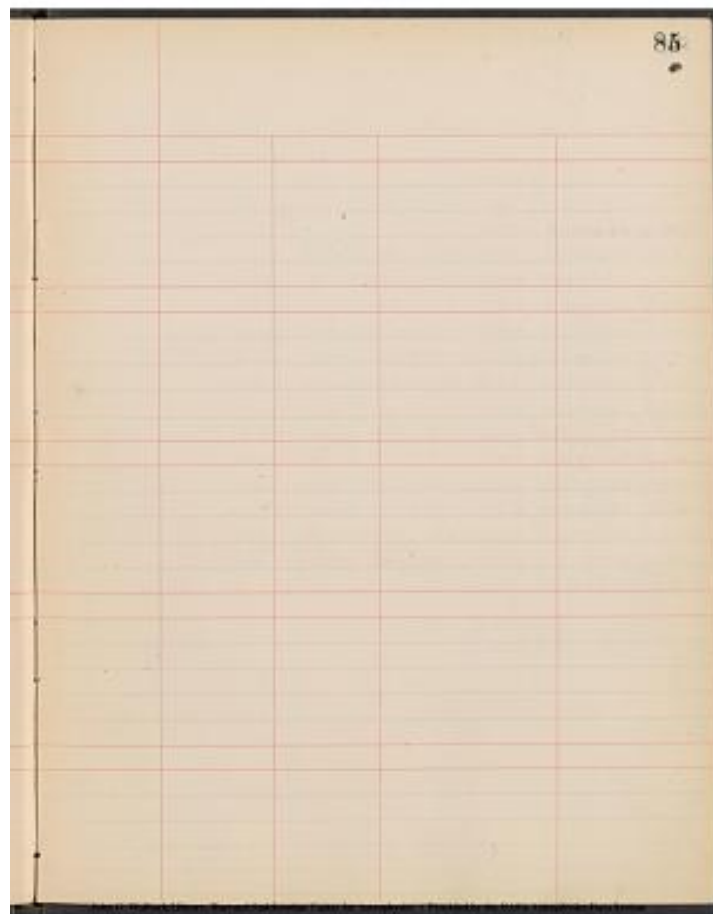
|o|+15.70^[[15.68]]|+12.30|+15.65|+12.30|+1.07|+0.03|174.41|4.89|

|Var.|+14.60^[[14.61]]|+12.25^[[12.27]]|+14.60|+12.25|...|...|

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Oct. 19, 1905.

Variable No. 166.
chi PavonisAGC 27560 Meas to det. pos. of Comp. Stars for chi Pavonis
20 ^h 3.3 ^m - 66° 14'

Pl. B 14501

[[9 column table]]

| x | y | x | y | Diff x | Diff y | x×179 | y×179

--- | --- | --- | --- | --- | --- | --- | ---

Var | +14.40 | +11.20 | +14.40 | +11.20 | .. | .. | .. | ..

a | +1.70 | +3.30 | +1.70 | +3.30 | -12.72 | -7.90 | ~~486.88~~
~~2276.88~~ | 1414.10

b | +4.80 | +3.50 | +4.80 | +3.50 | -9.62 | -7.70 | 1721.98 | 1378.30

c | +16.75 | 16.72 | +4.70 | +16.70 | +4.70 | +2.30 | -6.50 | 411.70 |
1163.50d | +7.25 | 7.22 | +13.85 | 13.88 | +7.20 | +13.90 | -7.20 | +2.68 | 1288.80 |
479.72e | +7.15 | +14.30 | 14.28 | +7.15 | +14.25 | -7.27 | +3.08 | 1301.33 |
551.32

f | +8.80 | 8.82 | +16.20 | +8.85 | +16.20 | -5.60 | +5.00 | 1002.40 | 895.00

Var. | +14.40 | +11.20 | +14.45 | +11.20 | .. | .. | .. | ..

g | +7.85 | +7.10 | 7.12 | +7.85 | +7.15 | -6.57 | -4.08 | 1176.03 | 730.32

h | +15.30 | +12.65 | 12.68 | +15.30 | +12.70 | +0.88 | +1.48 | 157.52 |
264.92

k | +18.60 | +11.50 | +18.60 | +11.50 | +4.18 | +0.30 | 748.22 | 53.70

l | +13.50 | +6.75 | 6.72 | +13.50 | +6.70 | -0.92 | -4.48 | 164.68 | 801.92

m | +12.20 | +10.65 | +12.20 | +10.65 | -2.22 | -0.55 | 397.38 | 98.45

n | + ~~11.70~~ | -0.32 | +0.5 ~~11.70~~ | 5 ~~11.70~~ | 0 +0.52 | 57.28 |
~~98.45~~ 90.50 ~~98.45~~ 93.08

Var. | +14.45 | 14.42 | +11.20 | 11.20 | +14.40 | +11.20 | .. | .. | .. | ..

86 Oct. 19, 1905.
Variable No. 166
chi Pavonis

AGC 27560 Meas to det. pos. of Comp. Stars for chi Pavonis
20 3.3 - 66 14

Pl. B 14501

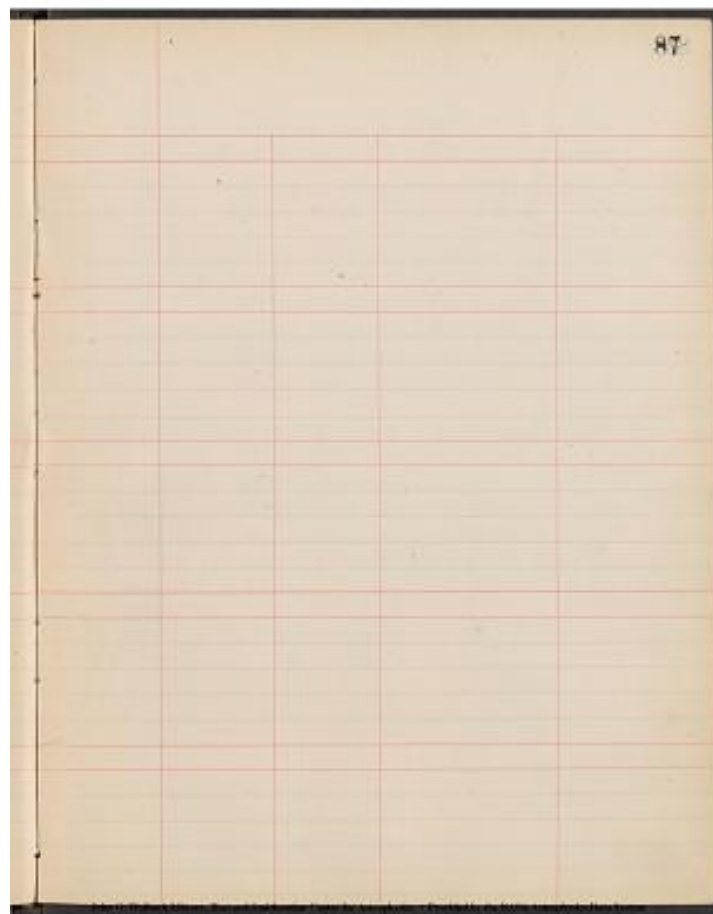
[[9 column table]]

	x	y	x	y	Diff x	Diff y	x×179	y×179
Var	+14.40	+11.20	+14.40	+11.20	..	..	..	..
a	+1.70	+3.30	+1.70	+3.30	-12.72	-7.90	486.88	1414.10
b	+4.80	+3.50	+4.80	+3.50	-9.62	-7.70	1721.98	1378.30
c	+16.75	16.72	+4.70	+16.70	+4.70	+2.30	-6.50	411.70
d	+7.25	7.22	+13.85	13.88	+7.20	+13.90	-7.20	+2.68
e	+7.15	+14.30	14.28	+7.15	+14.25	-7.27	+3.08	1301.33
f	+8.80	8.82	+16.20	+8.85	+16.20	-5.60	+5.00	1002.40
Var.	+14.40	+11.20	+14.45	+11.20	..	..	..	..
g	+7.85	+7.10	7.12	+7.85	+7.15	-6.57	-4.08	1176.03
h	+15.30	+12.65	12.68	+15.30	+12.70	+0.88	+1.48	157.52
k	+18.60	+11.50	+18.60	+11.50	+4.18	+0.30	748.22	53.70
l	+13.50	+6.75	6.72	+13.50	+6.70	-0.92	-4.48	164.68
m	+12.20	+10.65	+12.20	+10.65	-2.22	-0.55	397.38	98.45
n	+ 11.70	-0.32	+0.5 11.70	5 11.70	0	+0.52	57.28	98.45
Var.	+14.45	14.42	+11.20	11.20	+14.40	+11.20

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[[preprinted]] 88

[[underlined]] March 2 ~~4~~ ~~^ 3~~, 1906
[[/underlined]][[preprinted]]

Meas. ~~[[?]]~~ to det. pos. of comp oters ~~[[?]]~~ for new afford van ~~[[?]]~~ +41851
Ashin ~~[[?]]~~ Nach.

Plate I 19304

x y x y xx163 yx163

van +3.50 +10.30 +3.50 +10.30+

a +13.10 +0.20 +13.10 +0.20+9.60 _ 10.10 1564.80 1646.30

b +7.35 +5.45 +7.35 +5.45 +3.85 _ 4.85627.55 790.55
6.72

c +5.85 +6.75 +5.85 +6.40 +2.35 _ 3.58383.05 583.54

d +1.70 +8.30 +1.70 +8.30-1.80 _ 2.00 293.40 326.00
9.78

e +3.40 +9.80 +3.40 +9.45 -0.10 - 0.52 16.30 84.76

f +4.50 +8.60 +4.50 +8.60 +1.00 - 1.70 163.00 277.10
van +3.50 +10.30 +3.50 +10.30
4.32 11.48

g +4.35 +11.50 +4.30 +11.45 +0.82 +1.18 133.66 192.34

h +3.40 +10.45 +3.40 +10.45 -0.10 +0.15 16.30 24.45
7.32

k +6.30 +7.35 +6.30 +7.30 +2.80 - 2.98 456.40 485.74
11.32

l +4.70 +11.30 +4.70 +11.35 +1.20 + 1.02 195.60 166.26

m + ~~[[?]]~~ 1 ~~[[?]]~~ ^ .2 10.65 +2.10 +10.65 - 1.40 +
0.35 228.20 57.05

n +4.55 +11.45 +4.55 +11.45 +1.05 +1.15 171.15 187.45

vm ~~[[?]]~~ +3.50 +10.30 +3.50 +10.30

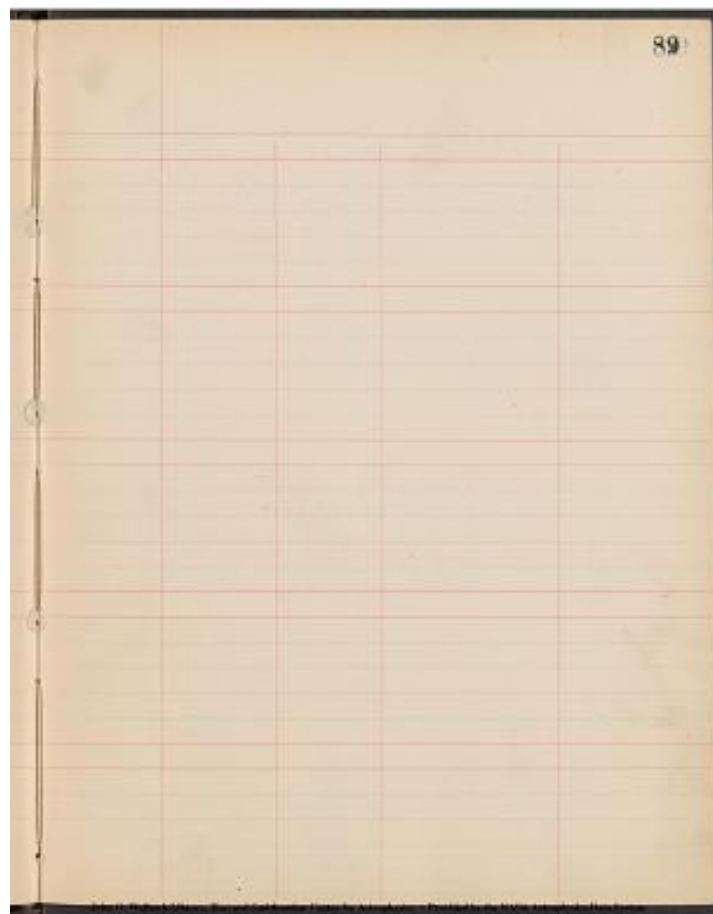
m = +3.50. +10.30

~~[[?]]~~ +2.30 +11.00 ~~[[?]]~~

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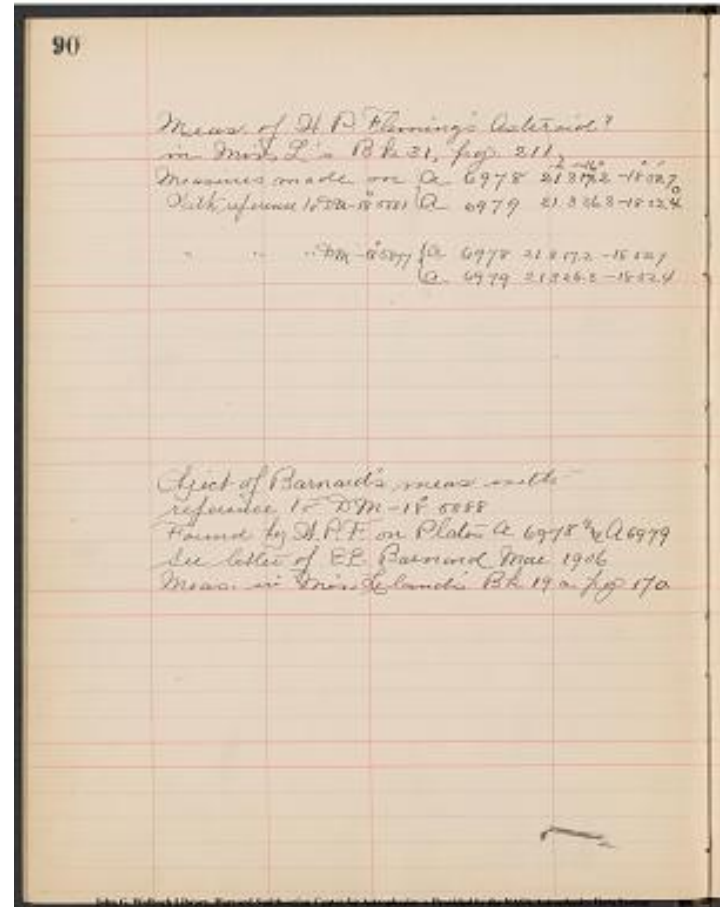
Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of
Spectra #15
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Meas. of W.P. Fleming's Asteroid?
in Miss L's Bk 31, pg. 211.

Measures made on {A 6978 21^h 3^m 17^s 16.2^s - 18° 50.7'
With reference to DM -18° 5881 A 6979 21.326.3 -18
52.4}0

With reference to DM -18° 5877 {A 6978 21 317.2 -18 50.7
{A 6979 21.3 26.3 -18 52.4

Object of Barnard's meas with reference to DM -18° 5888
Found by W.P.F. on Plates A 6978 and A 6979
See letter of E. E. Barnard Mar. 1906
Meas. in Miss Leland's Bk 19a pg 170.

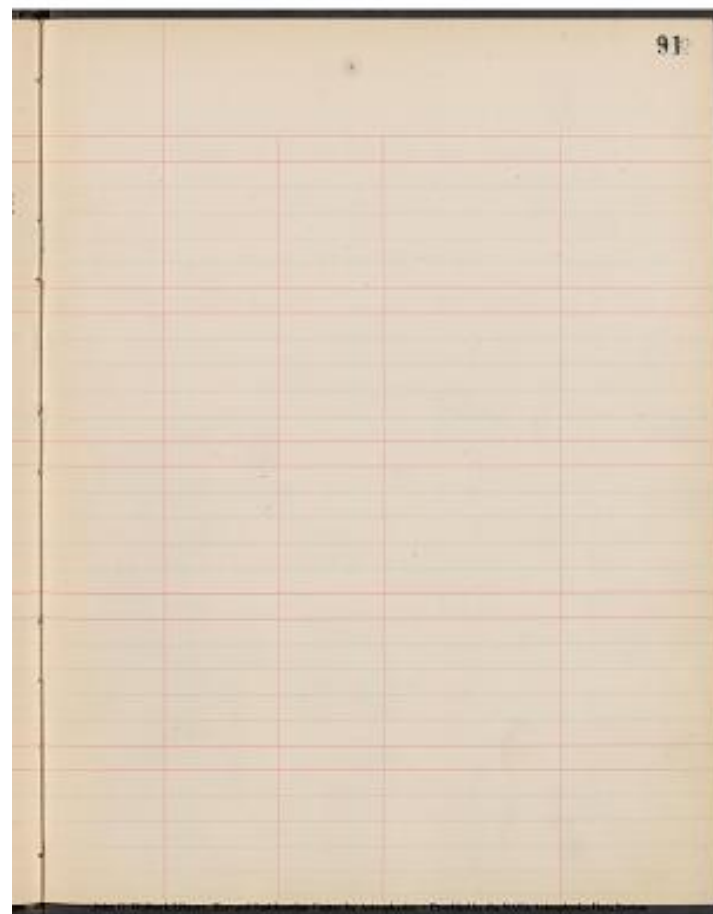


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Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of
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Variable No. 170
RT Sagittarii

May 3, 1906.

Meas. to det. the pos. of comp. stars for var. star RT Sagittarii. CDM -
39° 13' 22" R.A. 20 11.1 Dec. -39° 25'.
For early meas. see B1, p 14.

Plate B16147

[[9 column table]]

| x | y | x | y | Diff x | Diff y | x×179 | y×179

---|---|---|---|---|---|---|---

var. | +10.90 | +21.45 | +10.90 | +21.50 | .. | .. | .. | .. |

a | +10.55 | 0.00 | +10.55 | 0.00 | -0.37 | -21.47 | 66.23 | 3843.13

b | +13.10 | +24.60 | +13.10 | +24.60 | +2.18 | +3.13 | 390.22 | 560.27

c | +0.30 0.32 | +9.65 9.62 | +0.35 | +9.60 | -10.60 | -11.85 | 1897.40 | 2121.15

d | +8.75 | +23.75 | +8.75 | +23.75 | -2.17 | +2.28 | 388.43 | 408.12

e | +25.85 | +20.25 | +25.85 | +20.25 | +14.93 | -1.22 | 2672.47 | 218.38

f | +23.45 | +19.60 | +23.45 | +19.60 | +12.53 | -1.87 | 2242.87 | 334.73

g | +7.85 | +15.70 15.72 | +7.85 | +15.75 | -3.07 | -5.75 | 549.53 | 1029.25

h | +13.80 | +25.10 | +13.80 | +25.10 | +2.88 | +3.63 | 515.52 | 649.77

k | +9.35 9.32 | +24.50 | +9.30 | +24.50 | -1.60 | +3.03 | 286.40 | 542.37

var | +10.90 | +21.45 | +10.95 | +21.45 | .. | .. | .. | .. |

l | +17.55 | +18.30 18.28 | +17.55 | +18.25 | +6.63 | -3.19 | 1186.77 | 571.01

m | +12.60 | +22.20 | +12.60 | +22.20 | +1.68 | +0.73 | 300.72 | 130.67

n | +13.40 | +15.65 15.68 | +13.40 | +15.70 | +2.48 | -5.79 | 443.92 | 1036.41

o | +11.10 | +21.60 | +11.10 | +21.60 | +0.18 | +0.13 | 32.22 | 23.27

p | +11.40 | +20.20 | +11.40 | +20.20 | +0.48 | -1.27 | 85.92 | 227.33

q | +12.25 | +20.50 20.48 | +12.25 | +20.45 | +1.33 | -0.99 | 238.07 | 177.21

r | +9.80 | +21.10 | +9.80 | +21.10 | -1.12 | -0.37 | 200.48 | 66.23

s | +12.40 | +22.45 22.48 | +12.40 | +22.50 | +1.48 | +1.01 | 264.92 | 180.79

t | +11.30 | +23.30 23.32 | +11.30 | +23.35 | +0.38 | +1.85 | 68.02 | 331.15

u | +11.05 11.08 | +22.35 22.32 | +11.10 | +22.30 | +0.16 | +0.85 | 28.64 | 152.15

var. | +10.95 10.92 | +21.45 21.47 | +10.90 | +21.50 | .. | .. | .. | .. |

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May 3, 1906.

Meas. to det. the pos. of comp. stars for var. star RT Sagittarii. CDM - 39° 13' 22" R.A. 20 11.1 Dec. -39° 25'. For early meas. see B1, p 14.

Plate B16147

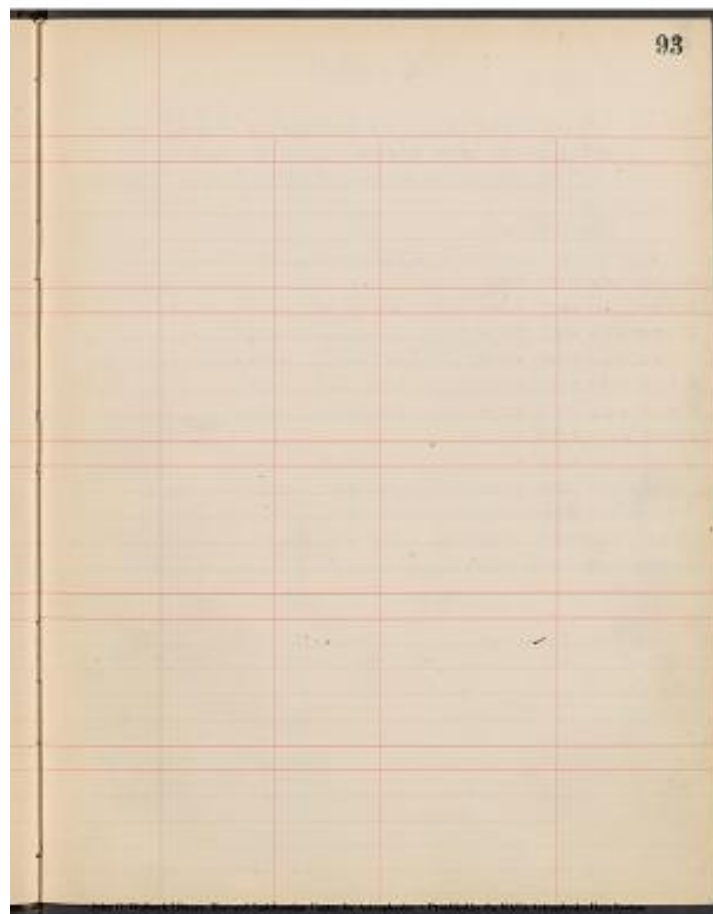
Diff x Diff y x×179 y×179

var.	+10.90	+21.45	+10.90	+21.50	..	..	..	..
a	+10.55	0.00	+10.55	0.00	-0.37	-21.47	66.23	3843.13
b	+13.10	+24.60	+13.10	+24.60	+2.18	+3.13	390.22	560.27
c	+0.30 0.32	+9.65 9.62	+0.35	+9.60	-10.60	-11.85	1897.40	2121.15
d	+8.75	+23.75	+8.75	+23.75	-2.17	+2.28	388.43	408.12
e	+25.85	+20.25	+25.85	+20.25	+14.93	-1.22	2672.47	218.38
f	+23.45	+19.60	+23.45	+19.60	+12.53	-1.87	2242.87	334.73
g	+7.85	+15.70 15.72	+7.85	+15.75	-3.07	-5.75	549.53	1029.25
h	+13.80	+25.10	+13.80	+25.10	+2.88	+3.63	515.52	649.77
k	+9.35 9.32	+24.50	+9.30	+24.50	-1.60	+3.03	286.40	542.37
var	+10.90	+21.45	+10.95	+21.45	..	..	..	..
l	+17.55	+18.30 18.28	+17.55	+18.25	+6.63	-3.19	1186.77	571.01
m	+12.60	+22.20	+12.60	+22.20	+1.68	+0.73	300.72	130.67
n	+13.40	+15.65 15.68	+13.40	+15.70	+2.48	-5.79	443.92	1036.41
o	+11.10	+21.60	+11.10	+21.60	+0.18	+0.13	32.22	23.27
p	+11.40	+20.20	+11.40	+20.20	+0.48	-1.27	85.92	227.33
q	+12.25	+20.50 20.48	+12.25	+20.45	+1.33	-0.99	238.07	177.21
r	+9.80	+21.10	+9.80	+21.10	-1.12	-0.37	200.48	66.23
s	+12.40	+22.45 22.48	+12.40	+22.50	+1.48	+1.01	264.92	180.79
t	+11.30	+23.30 23.32	+11.30	+23.35	+0.38	+1.85	68.02	331.15
u	+11.05 11.08	+22.35 22.32	+11.10	+22.30	+0.16	+0.85	28.64	152.15
var.	+10.95 10.92	+21.45 21.47	+10.90	+21.50

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Variable No. 186

May 3, 1906.

Meas. to det. pos. of comp. stars for S Indi.

ZC 20^h 15^m 39^s R.A. 20^h 15^m 39^s 47^s 7.14^s Dec. -54° 47' 55.1" (1875).

RA 20 49.0 Dec - 54 42 (1900) Sp Md on B 11684, No, 5196.

Plate B 11812

[[9 columned table]]

| x|y|x|y|Diff x|Diff y|x × 179|y × 179|

|-----|-----|-----|-----|

|var.|+5.40|+19.35|+5.40|+19.35|...|...|...|

|a|+4.45|+1.35

|b|+11.35|+4.75|+1.75|+1.35|+0.65|

|c|+18.00|+16.35|+3222.00|

|d|+18.00|+13.40|+13.38|+18.00|+13.35|+12.60|

|e|+5.97|+2255.40|+1068.63|

|f|+11.70|+18.50|+18.48|+11.70|+18.45|+6.30|+0.87|+1127.70|+155.73|

|g|+4.05|+19.10|+4.05|+19.10|+1.35|+0.25|+241.65|+44.75|

|h|+3.25|+16.55|+16.52|+3.25|+16.50|+2.15|+2.83|+384.85|+506.57|

|i|+var.|+5.40|+19.35|+5.40|+19.35|...|...|...|

|j|+3.50|+3.52|+17.80|+3.55|+17.80|+1.88|+1.55|+336.52|+277.45|

|k|+5.75|+20.25|+20.22|+5.75|+20.20|+0.35|+0.87|+62.65|+155.73|

|l|+7.40|+21.40|+7.40|+21.40|+2.00|+2.05|+358.00|+366.95|

|m|+4.75|+4.78|+19.75|+4.80|+19.78|+4.80|+19.80|

|n|+0.62|+0.43|+110.98|+76.97|

|o|+var.|+5.40|+19.35|+19.35|+5.40|+19.35|...|...|...|

94

Variable No. 186 May 3, 1906.

Meas. to det. pos. of comp. stars for S Indi.

ZC 20^h 15^m 39^s R.A. 20^h 15^m 39^s 47^s 7.14^s Dec. -54° 47' 55.1" (1875).

RA 20 49.0 Dec - 54 42 (1900) Sp Md on B 11684, No, 5196.

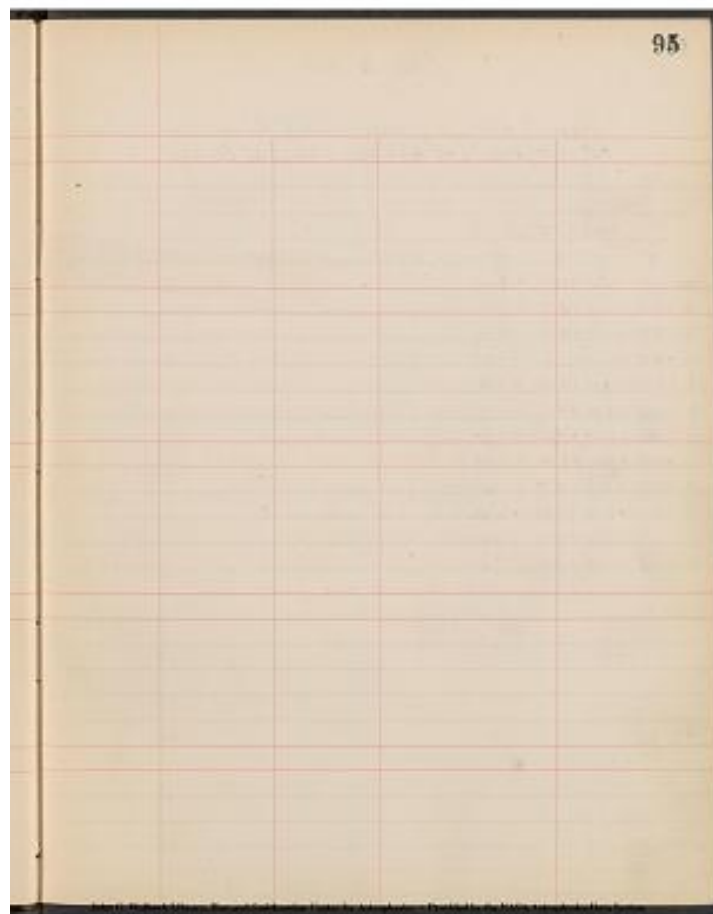
Plate B 11812

x	y	Diff x	Diff y	x × 179	y × 179
var.	5.40	19.35	5.40	19.35	5.40
a	4.45	1.35	4.45	1.35	4.45
b	11.35	4.75	1.75	1.35	0.65
c	18.00	16.35	3222.00	18.00	16.35
d	18.00	13.40	13.38	18.00	13.35
e	5.97	2255.40	1068.63	5.97	2255.40
f	11.70	18.50	18.48	11.70	18.45
g	4.05	19.10	4.05	19.10	1.35
h	3.25	16.55	16.52	3.25	16.50
i	var.	5.40	19.35	5.40	19.35
j	3.50	3.52	17.80	3.55	17.80
k	5.75	20.25	20.22	5.75	20.20
l	7.40	21.40	7.40	21.40	2.00
m	4.75	4.78	19.75	4.80	19.78
n	0.62	0.43	110.98	76.97	0.62
o	var.	5.40	19.35	19.35	5.40

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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[[top right margin]]
95

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[[96]]

[[left margin]]Variable No. 187 [[underscore]] T Octantis[[/underscore]]
[[/left margin]]

[[underscore]]May 4[[/strickethrough]]3[[/strickethrough]],
1906. [[/underscore]]

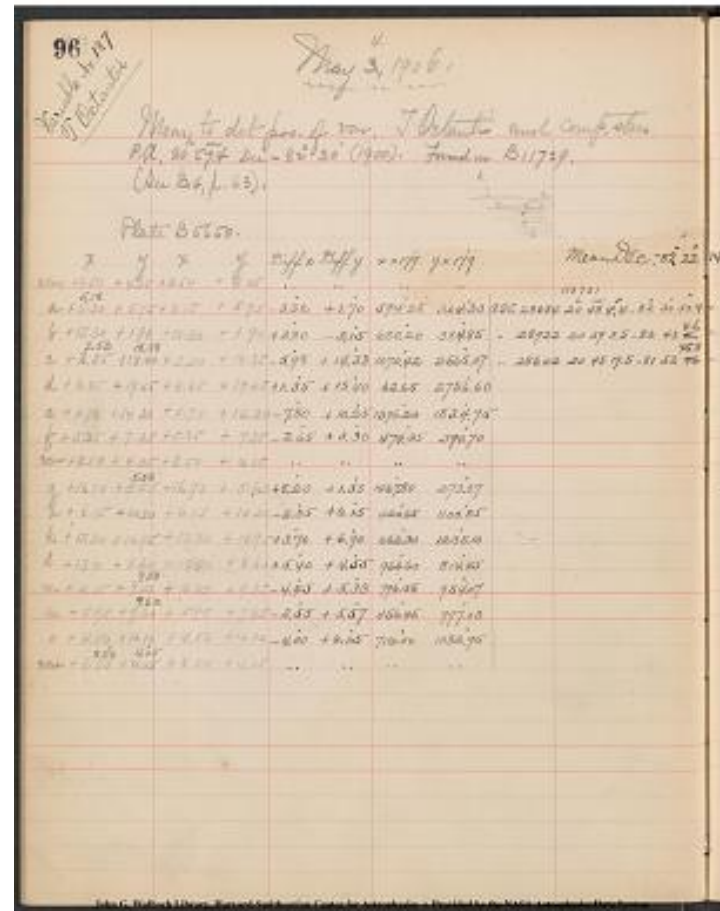
Meas. to det pos. of var. T Octantis and comp. stars.
R.A. 20^h[[h]] 57.4^m[[m]] Dec-82° 30' (1900). Found on B11729. (See B.4,
p.63).

[[star plot]]

Plate B5650.

| x|y|x|y|Diff x|Diff y|x x179|y x179|Mean Dec.-82°22' 14.6"

|var|+8.50|+4.05|+8.50|+4.05|...|...|...|
|a|+5.20 ^[[5.18]]|+5.75|+5.15|+5.75|-3.32|+1.70|
594.28|304.30|AJC 28684 20^h[[h]] 48^m[[m]]
4.4^s[[p]]-82° 30' 53.4"= C.|
|b|+12.30|+1.90|+12.30|+1.90|+3.80|-2.15|680.20|
384.85|AJC 28922 20 59 3.5-82 43
4.6[[/strickethrough]]5[[/strickethrough]]|=|
|c|+2.55 ^[[2.52]]|+18.40 ^[[18.38]]|+2.50|
+18.35|-5.98|+14.33|1070.42|2565.07|AJC 28622
20 45 19.5-81 52
45.8[[/strickethrough]]46[[/strickethrough]] = |
|d|+8.85|+19.45|+8.85|+19.45|+0.35|+15.40|62.65|
2756.60| |
|e|+0.70|+14.30|+0.70|+14.30|-7.80|+10.25|1396.20
1834.75| |
|f|+5.85|+7.35|+5.85|+7.35|-2.65|+3.30|474.35|
590.70| |
|var|+8.50|+4.05|+8.50|+4.05|...|...|...|
|g|+16.70|+5.55 ^[[5.58]]|+16.70|+5.60|+8.20|
+1.53|1467.80|273.87| |
|h|+6.15|+10.20|+6.15|+10.20|-2.35|+6.15|420.65|
1100.85| |
|k|+12.20|+10.95|+12.20|+10.95|+3.70|+6.90|
662.30|1235.10|
|l|+13.90|+8.60|+13.90|+8.60|+5.40|+4.55|966.60|
814.45|
|m|+4.05|+9.40 ^[[9.38]]|+4.05|+9.35|-4.45|+5.33|
796.55|954.07|
|n|+5.95|+9.60 ^[[9.62]]|+5.95|+9.65|-2.55|+5.57
456.45|997.03|
|o|+4.50|+10.10|+4.50|+10.10|-4.00|+6.05|716.00|
1082.95|
|var|+8.50 ^[[8.50]]|+4.05 ^[[4.05]]
|+8.50|+4.05|...|...|...|



Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of
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[[7 columned table]]

a ~~[[/del]] b ~~[[/del]] c(d|e|f|g)~~~~

|---|---|---|---|---|

-3.32|+3.80|-5.98|+0.35|-7.80|-2.65|+8.20|

[[equation]]|[[equation]]|[[equation]]|(9.54407|0.89209|0.42325(-))|

= C.P.D. -82° 843 20^h 48.6 -82° 30.9 Diff y x 179 +304.30^a[[a "]] -
 384.85^b[[b "]] +2565.07^c[[c "]]

= C.P.D. -82° 850 20 59.2 -82° 43.0 5' 4.30^a[[a "]] 6' 24.85^b[[b "]] 42'

45.07^c[[c "]]

= C.P.D. -81° 936 20 4519 -81 52.7

= C.P.D. -81 944 20 5420 -81 50.3

= C.P.D. -82 838 20 4220 -82 4.6

(a) [[equation]] (b) [[equation]] (c) [[equation]]

Mean = 20^a[[a "]] 53^b[[b "]] 34.0^c[[c "]] -82° 36' 2.8" Resid 31.0

51

12.2 370 12.2 370

43.3 319

97

a	b	c	d	e	f	g
-3.32	+3.80	-5.98	+0.35	-7.80	-2.65	+8.20
0.52114	0.57975	0.77670	0.54407	0.89209	0.42325	-
1.95092	1.95092	1.95092	1.95092	1.95092	1.95092	1.95092
2.97506	2.97506	2.97506	2.97506	2.97506	2.97506	2.97506
3.99919	3.99919	3.99919	3.99919	3.99919	3.99919	3.99919
5.02333	5.02333	5.02333	5.02333	5.02333	5.02333	5.02333
6.04746	6.04746	6.04746	6.04746	6.04746	6.04746	6.04746
7.07159	7.07159	7.07159	7.07159	7.07159	7.07159	7.07159
8.09572	8.09572	8.09572	8.09572	8.09572	8.09572	8.09572
9.11985	9.11985	9.11985	9.11985	9.11985	9.11985	9.11985
10.14398	10.14398	10.14398	10.14398	10.14398	10.14398	10.14398
11.16811	11.16811	11.16811	11.16811	11.16811	11.16811	11.16811
12.19224	12.19224	12.19224	12.19224	12.19224	12.19224	12.19224
13.21637	13.21637	13.21637	13.21637	13.21637	13.21637	13.21637
14.24050	14.24050	14.24050	14.24050	14.24050	14.24050	14.24050
15.26463	15.26463	15.26463	15.26463	15.26463	15.26463	15.26463
16.28876	16.28876	16.28876	16.28876	16.28876	16.28876	16.28876
17.31289	17.31289	17.31289	17.31289	17.31289	17.31289	17.31289
18.33702	18.33702	18.33702	18.33702	18.33702	18.33702	18.33702
19.36115	19.36115	19.36115	19.36115	19.36115	19.36115	19.36115
20.38528	20.38528	20.38528	20.38528	20.38528	20.38528	20.38528
21.40941	21.40941	21.40941	21.40941	21.40941	21.40941	21.40941
22.43354	22.43354	22.43354	22.43354	22.43354	22.43354	22.43354
23.45767	23.45767	23.45767	23.45767	23.45767	23.45767	23.45767
24.48180	24.48180	24.48180	24.48180	24.48180	24.48180	24.48180
25.50593	25.50593	25.50593	25.50593	25.50593	25.50593	25.50593
26.53006	26.53006	26.53006	26.53006	26.53006	26.53006	26.53006
27.55419	27.55419	27.55419	27.55419	27.55419	27.55419	27.55419
28.57832	28.57832	28.57832	28.57832	28.57832	28.57832	28.57832
29.60245	29.60245	29.60245	29.60245	29.60245	29.60245	29.60245
30.62658	30.62658	30.62658	30.62658	30.62658	30.62658	30.62658
31.65071	31.65071	31.65071	31.65071	31.65071	31.65071	31.65071
32.67484	32.67484	32.67484	32.67484	32.67484	32.67484	32.67484
33.69897	33.69897	33.69897	33.69897	33.69897	33.69897	33.69897
34.72310	34.72310	34.72310	34.72310	34.72310	34.72310	34.72310
35.74723	35.74723	35.74723	35.74723	35.74723	35.74723	35.74723
36.77136	36.77136	36.77136	36.77136	36.77136	36.77136	36.77136
37.79549	37.79549	37.79549	37.79549	37.79549	37.79549	37.79549
38.81962	38.81962	38.81962	38.81962	38.81962	38.81962	38.81962
39.84375	39.84375	39.84375	39.84375	39.84375	39.84375	39.84375
40.86788	40.86788	40.86788	40.86788	40.86788	40.86788	40.86788
41.89201	41.89201	41.89201	41.89201	41.89201	41.89201	41.89201
42.91614	42.91614	42.91614	42.91614	42.91614	42.91614	42.91614
43.94027	43.94027	43.94027	43.94027	43.94027	43.94027	43.94027
44.96440	44.96440	44.96440	44.96440	44.96440	44.96440	44.96440
45.98853	45.98853	45.98853	45.98853	45.98853	45.98853	45.98853
46.01266	46.01266	46.01266	46.01266	46.01266	46.01266	46.01266
47.03679	47.03679	47.03679	47.03679	47.03679	47.03679	47.03679
48.06092	48.06092	48.06092	48.06092	48.06092	48.06092	48.06092
49.08505	49.08505	49.08505	49.08505	49.08505	49.08505	49.08505
50.10918	50.10918	50.10918	50.10918	50.10918	50.10918	50.10918
51.13331	51.13331	51.13331	51.13331	51.13331	51.13331	51.13331
52.15744	52.15744	52.15744	52.15744	52.15744	52.15744	52.15744
53.18157	53.18157	53.18157	53.18157	53.18157	53.18157	53.18157
54.20570	54.20570	54.20570	54.20570	54.20570	54.20570	54.20570
55.22983	55.22983	55.22983	55.22983	55.22983	55.22983	55.22983
56.25396	56.25396	56.25396	56.25396	56.25396	56.25396	56.25396
57.27809	57.27809	57.27809	57.27809	57.27809	57.27809	57.27809
58.30222	58.30222	58.30222	58.30222	58.30222	58.30222	58.30222
59.32635	59.32635	59.32635	59.32635	59.32635	59.32635	59.32635
60.35048	60.35048	60.35048	60.35048	60.35048	60.35048	60.35048
61.37461	61.37461	61.37461	61.37461	61.37461	61.37461	61.37461
62.39874	62.39874	62.39874	62.39874	62.39874	62.39874	62.39874
63.42287	63.42287	63.42287	63.42287	63.42287	63.42287	63.42287
64.44700	64.44700	64.44700	64.44700	64.44700	64.44700	64.44700
65.47113	65.47113	65.47113	65.47113	65.47113	65.47113	65.47113
66.49526	66.49526	66.49526	66.49526	66.49526	66.49526	66.49526
67.51939	67.51939	67.51939	67.51939	67.51939	67.51939	67.51939
68.54352	68.54352	68.54352	68.54352	68.54352	68.54352	68.54352
69.56765	69.56765	69.56765	69.56765	69.56765	69.56765	69.56765
70.59178	70.59178	70.59178	70.59178	70.59178	70.59178	70.59178
71.61591	71.61591	71.61591	71.61591	71.61591	71.61591	71.61591
72.64004	72.64004	72.64004	72.64004	72.64004	72.64004	72.64004
73.66417	73.66417	73.66417	73.66417	73.66417	73.66417	73.66417
74.68830	74.68830	74.68830	74.68830	74.68830	74.68830	74.68830
75.71243	75.71243	75.71243	75.71243	75.71243	75.71243	75.71243
76.73656	76.73656	76.73656	76.73656	76.73656	76.73656	76.73656
77.76069	77.76069	77.76069	77.76069	77.76069	77.76069	77.76069
78.78482	78.78482	78.78482	78.78482	78.78482	78.78482	78.78482
79.80895	79.80895	79.80895	79.80895	79.80895	79.80895	79.80895
80.83308	80.83308	80.83308	80.83308	80.83308	80.83308	80.83308
81.85721	81.85721	81.85721	81.85721	81.85721	81.85721	81.85721
82.88134	82.88134	82.88134	82.88134	82.88134	82.88134	82.88134
83.90547	83.90547	83.90547	83.90547	83.90547	83.90547	83.90547
84.92960	84.92960	84.92960	84.92960	84.92960	84.92960	84.92960
85.95373	85.95373	85.95373	85.95373	85.95373	85.95373	85.95373
86.97786	86.97786	86.97786	86.97786	86.97786	86.97786	86.97786
87.00199	87.00199	87.00199	87.00199	87.00199	87.00199	87.00199
88.02612	88.02612	88.02612	88.02612	88.02612	88.02612	88.02612
89.05025	89.05025	89.05025	89.05025	89.05025	89.05025	89.05025
90.07438	90.07438	90.07438	90.07438	90.07438	90.07438	90.07438
91.09851	91.09851	91.09851	91.09851	91.09851	91.09851	91.09851
92.12264	92.12264	92.12264	92.12264	92.12264	92.12264	92.12264
93.14677	93.14677	93.14677	93.14677	93.14677	93.14677	93.14677
94.17090	94.17090	94.17090	94.17090	94.17090	94.17090	94.17090
95.19503	95.19503	95.19503	95.19503	95.19503	95.19503	95.19503
96.21916	96.21916	96.21916	96.21916	96.21916	96.21916	96.21916
97.24329	97.24329	97.24329	97.24329	97.24329	97.24329	97.24329
98.26742	98.26742	98.26742	98.26742	98.26742	98.26742	98.26742
99.29155	99.29155	99.29155	99.29155	99.29155	99.29155	99.29155
100.31568	100.31568	100.31568	100.31568	100.31568	100.31568	100.31568

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Var. No. 193.

May 17, 1906.

Meas. to det. pos. of Comp. stars for SS Cygni.
R.A. 21^h[[h]] 38.8 Dec.+43° [[?]] (1900)

Plate I 2778~~[[strickethrough]]~~ 5 ~~[[/strickethrough]]~~ 27783 (Sequence transferred from I9725)
x y x y Diffx Diffy xx163 yx163
var|+14.85|+7.70|+14.85|+7.70|..|..|..D.M.|+42°|4189[^][[a]]|21[^][[h]]|37[^][[m]]|1[^][[s]]|+42°|55'.4 var
a|+4.75[^][[4.72]]|+0.85|+4.70|+0.85|-10.13|-
6.85|1651.19|116.55|D.M.|+42°|4177|21[^][[h]]|34[^][[m]]|29.7[^][[s]]|+42°|37'.2|5.2|
b|+34.65[^][[34.68]]|+17.30|+34.70|+17.30|+19.83|+9.60|3232.29|1564.80
|D.M.|+4~~[[strickethrough]]~~ 3
~~[[/strickethrough]]~~43|4048|21|41|59.1|+43|20.3|7.2|
C|+1.90|+1.05|+1.90|+1.05|-12.95|-
6.65|2110.85|1083.95|D.M.|+42|4172|21|33|47.9|+42|37.4|8.4|
d|+11.15|+16.60|+11.15|+16.60|-
3.70|+8.90|603.10|1450.70|D.M.~~[[strickethrough]]~~
+42|4190|21|37|26.8|+42|55.3|8.3
~~[[/strickethrough]]~~+43|4012|21|36.1|+43|19.7|8.7|
e|+16.65[^][[16.68]]|+7.60[^][[7.62]]|+16.70|+7.~~[[strickethrough]]~~70
~~[[/strickethrough]]~~7.65|+18.3|-0.08|298.29|13.04|D.M.~~[[strickethrough]]~~
+42|4186|21|36|39.1|+42|54.4|9.2
~~[[/strickethrough]]~~+42|4190|21|37.4|+42|55.3|8.3|
f|+13.40|+7.30[^][[7.32]]|+13.40|+7.35|-1.45|-
0.38|236.35|61.94|+42|4186|21|36.7|+42|54.4|9.2|
g|+13.10|+12.30[^][[12.32]]|+13.10|+12.35|-1.75|+4.62|285.25|753.06|
var|+14.85|+7.70|+14.85|+7.70|..|..|..|
h|+13.85|+7.25|+13.85|+7.25|-1.00|-0.46|163.00|73.35|
k|+14.30|+10.50|+14.30|+10.50|-0.55|+2.80|89.65|456.40|
l|+16.20[^][[16.18]]|+10.05|+16.15|+10.05|+1.33|+2.35|216.79|383.05|
m|+14.40|+9.30[^][[9.28]]|+14.40|+9.25|-0.45|+1.58|73.35|257.54|
n|+17.40|+8.95|+17.40|+8.95|+2.55|+1.25|415.65|203.75|
o|+16.00|+7.75|+16.00|+7.75|+1.15|+0.05|187.45|8.15|
p|+14.95[^][[14.98]]|+7.40|+15.00|+7.40|+0.13|-0.30|21.19|48.90|
q|+15.15|+7.40|+15.15|+7.40|+0.30|-0.30|48.90|48.90|
var|+14.85[^][[14.85]]|+7.70[^][[7.70]]|+14.85|+7.70|+..|..|..|

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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100
Variable No. 165

May 18, 1906.
Meas. to det. pos. of comp stars for var. +12° 4228.
R.A. 20^h 2.3^m Dec. +12° 39'.

Plate A 2121

[9 column table]

| x|y|x|y|Diff x|Diff y|xx60|yx60|
var|+4.95|+17.30|+4.95|+17.30|+17.30|
|+16.50|+16.50|+4.95|+17.30|+17.30|
|a|-0.50|+33.30|+33.30|+33.30|+16.50|
0.50|+16.50|-5.45|-0.80|327.00|48.00|
|b|+33.30|+33.30|+20.95|
+20.98|+33.25|+21.00|+28.33|+3.68|1699.80|220.80|
|c|-30.75|+30.72|+21.20|+21.22|+30.70|+21.25|
35.67|+3.92|2140.20|235.20|
|d|-2.90|+1.15|-2.90|+1.15|
e|-17.10|+27.30|-17.10|-27.30|-22.05|+10.00|1323.00|600.00|
|f|-3.75|+13.20|+13.18|-3.75|+13.15|-8.70|-4.12|522.00|247.20|
|g|+2.25|+13.20|+13.18|+5.75|+2.25|+5.75|-2.70|-
11.55|162.00|693.00|
|h|-6.20|+15.90|-6.20|+15.90|-11.15|-1.40|669.00|84.00|
var|+4.95|+17.30|+4.95|+17.30|+17.30|
k	+6.85	+22.25	+22.25	+6.85	+22.20	+1.90	+4.92	114.00	295.20
l	-4.70	+24.65	+24.62	-4.70	+24.60	-9.65	+7.32	579.00	439.20
m	+17.00	+11.10	+11.12	+17.00	+11.15	+12.05	-6.18	723.00	370.80
n	+3.30	+3.32	+12.45	+3.35	+12.45	-1.63	-4.85	97.80	291.00
o	+15.35	+13.20	+15.35	+13.20	+10.40	-4.10	624.00	246.00	
p	+6.30	+14.60	+6.30	+14.60	+1.35	-2.70	81.00	162.00	
q	+9.10	+15.65	+9.10	+15.65	+4.15	-1.65	249.00	99.00	
r	+2.20	+17.10	+2.20	+17.10	-2.75	-0.12	193.80	61.20	
1	+165.00	+189	+12.00						
s	+9.75	+14.15	+9.75	+14.15	+4.80	-3.15	288.00	189.00	
t	+8.20	+16.30	+16.28	+8.15	+16.15	+3.23	-		
1.02	193.80	61.20							
u	+3.15	+18.30	+3.15	+18.30	-1.80	+1.00	108.00	60.00	
var|+4.95|+17.30|+17.30|+4.95|+17.30|+17.30|

diffx diffy xx60 yx60

-5.45 -0.80 327.00 48.00
+28.33 +3.68 1699.80 220.80
-35.67 +3.92 2140.20 235.20
-7.85 -16.15 471.00 969.00
-22.05 +10.00 1323.00 600.00
-8.70 -4.12 522.00 247.20
-2.70 -11.55 162.00 693.00
-11.15 -1.40 669.00 84.00
+1.90 +4.92 114.00 295.20
-9.65 +7.32 579.00 439.20
+12.05 -6.18 723.00 370.80
-1.63 -4.85 97.80 291.00
+10.40 -4.10 624.00 246.00
+1.35 -2.70 81.00 162.00

100
May 18, 1906.
Meas. to det. pos. of comp stars for var. +12° 4228.
R.A. 20^h 2.3^m Dec. +12° 39'.
Plate A 2121

diffx	diffy	xx60	yx60
-5.45	-0.80	327.00	48.00
+28.33	+3.68	1699.80	220.80
-35.67	+3.92	2140.20	235.20
-7.85	-16.15	471.00	969.00
-22.05	+10.00	1323.00	600.00
-8.70	-4.12	522.00	247.20
-2.70	-11.55	162.00	693.00
-11.15	-1.40	669.00	84.00
+1.90	+4.92	114.00	295.20
-9.65	+7.32	579.00	439.20
+12.05	-6.18	723.00	370.80
-1.63	-4.85	97.80	291.00
+10.40	-4.10	624.00	246.00
+1.35	-2.70	81.00	162.00

+4.15	-1.65	249.00	99.00
-2.75	-0.20	165.00	12.00
+4.80	-3.15	288.00	189.00
+3.23	-1.02	193.80	61.20
-1.80	+1.00	108.00	60.00
"	"	"	"

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[[Variable No. 169.]]

May 18, 1906.

Meas. to det. pos. of comp star for var.
 +49° 3225 R.A. 20^h 9.8^m Dec. +49° 9' (1900).

Plate I 22999.

[[9 columned table]]

| x|y|x|y|Diff x|Diff y|x × 163|y × 163|

|---|---|---|---|---|---|---|---|

|var|+5.70|+6.40|+5.65|+6.40|...|...|...|

|a|+13.15|+5.30|+13.15|+5.30|+7.47|-1.11|1217.61|180.93|

|b|+16.30|+5.75[^][[5.78]]|+16.30|+5.80|+10.62|-0.63|1731.06|102.69|

|c|+14.00|+4.10|+14.00|+4.10|+8.32|-2.31|1356.16|376.53|

|d|+14.35[^][[14.32]]|+3.45|+14.30|+3.45|+8.64|-2.96|1408.32|482.48||f|~~[[e]]~~+3.70|+6.35|+3.70|+6.35|-1.98|-0.06|322.74|9.78|

|var|+5.70|+6.40|+5.70|+6.40|...|...|...|

|e|~~[[f]]~~+5.30|+5.70|+5.30|+5.70|-0.38|-0.71|61.94|115.73||g|+7.25[^][[7.22]]|+6.75|+7.20|+6.75|+1.54|+0.34|251.02|55.42|

|h|+3.00|+8.75|+3.00|+8.75|-2.68|+2.34|436.84|381.42|

|k|+1.60|+6.20|+1.60|+6.20|-4.08|-0.21|665.04|34.23|

|l|+4.50|+6.70|+4.50|+6.70|-1.18|+0.29|192.34|47.27|

|var.|+5.65[^][[5.68]]|+6.40[^][[6.41]]|+5.70|+6.45|...|...|...|

102
Variable No. 169
May 18, 1906.
Meas. to det. pos. of comp star for var.
+49° 3225 R.A. 20^h 9.8^m Dec. +49° 9' (1900).

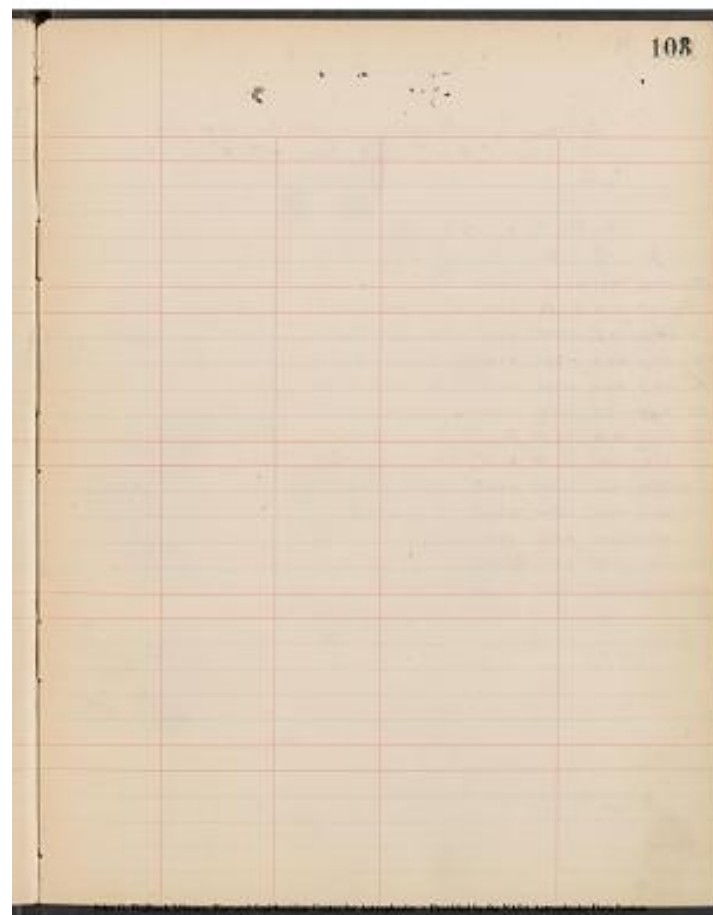
Plate I 22999.

	x	y	Diff x	Diff y	x × 163	y × 163
var.	+5.70	+6.40	+5.65	+6.40		
a	+13.15	+5.30	+13.15	+5.30	+7.47	-1.11
b	+16.30	+5.75 [^] [[5.78]]	+16.30	+5.80	+10.62	-0.63
c	+14.00	+4.10	+14.00	+4.10	+8.32	-2.31
d	+14.35 [^] [[14.32]]	+3.45	+14.30	+3.45	+8.64	-2.96
e	+3.70	+6.35	+3.70	+6.35	-1.98	-0.06
f	+5.30	+5.70	+5.30	+5.70	-0.38	-0.71
g	+7.25 [^] [[7.22]]	+6.75	+7.20	+6.75	+1.54	+0.34
h	+3.00	+8.75	+3.00	+8.75	-2.68	+2.34
k	+1.60	+6.20	+1.60	+6.20	-4.08	-0.21
l	+4.50	+6.70	+4.50	+6.70	-1.18	+0.29
var.	+5.65 [^] [[5.68]]	+6.40 [^] [[6.41]]	+5.70	+6.45		

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[[top right margin]]
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May 19, 1906Variable No. ~~189~~ 173Meas. to det. pos. of Comp. stars for
-50° 12918 R.A. 20^h 12.9^m Dec, -50° 8' sf.IV on B. L.D.W. row.

Plate B 32548

[[9 column table]]

	|x|y|x|y|Diff x|Diff y|x x 179|y x 179|
var	|+6.75|+4.75|+6.75|+4.75|...|...|
a	|+17.50|+5.15|+17.50|+5.15|+10.78|+0.40|1929.62|71.60|
b	|+11.32|+4.75|+11.35|+4.75|+4.60|0.00|823.40|0.00|
c	|+7.90|+4.70|+7.90|+4.70|+1.18|-0.05|211.22|8.95|
d	|+5.70|+6.20|+5.70|+6.20|-1.02|+1.45|182.58|259.55|
e	|+15.90|+5.55|+15.90|+5.60|+9.18|+0.83|1643.22|148.57|
f	|+4.25|+1.10|+4.25|+1.10|-2.47|-3.65|442.13|653.35|
g	|+2.65|+1.35|+2.70|+1.35|-4.04|-3.40|723.16|608.60|
var	|+6.70|+4.75|+6.70|+4.75|...|...|
h	|+6.60|+3.65|+6.60|+3.65|-0.12|-1.10|21.48|196.90|
k	|+8.80|+3.80|+8.80|+3.80|+2.08|-0.95|372.32|170.05|
l	|+5.10|+5.70|+5.10|+5.70|-1.62|+0.95|289.98|170.05|
m	|+6.25|+5.20|+6.25|+5.20|-0.47|+0.45|84.13|80.55|
n	+6.35 +5.65 +6.35 +5.65 -0.37 +0.90 64.44 161.10
o	+5.95 +5.40 +5.95 +5.40 -0.77 +0.65 137.83 116.35
var	+6.70 +4.75 +6.70 +4.75

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May 19, 1906

Meas. to det. pos. of Comp. stars for
-50° 12918 R.A. 20^h 12.9^m Dec, -50° 8' sf.IV on B. L.D.W. row.

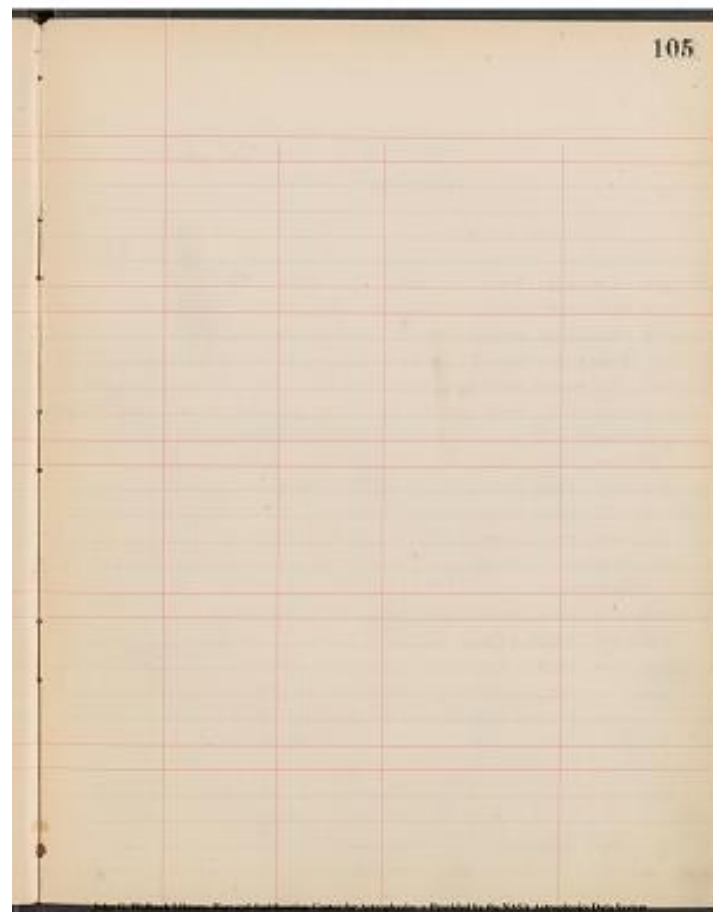
Plate B 32548

	|x|y|x|y|Diff x|Diff y|x x 179|y x 179|
var	|+6.75|+4.75|+6.75|+4.75|...|...|
a	|+17.50|+5.15|+17.50|+5.15|+10.78|+0.40|1929.62|71.60|
b	|+11.32|+4.75|+11.35|+4.75|+4.60|0.00|823.40|0.00|
c	|+7.90|+4.70|+7.90|+4.70|+1.18|-0.05|211.22|8.95|
d	|+5.70|+6.20|+5.70|+6.20|-1.02|+1.45|182.58|259.55|
e	|+15.90|+5.55|+15.90|+5.60|+9.18|+0.83|1643.22|148.57|
f	|+4.25|+1.10|+4.25|+1.10|-2.47|-3.65|442.13|653.35|
g	|+2.65|+1.35|+2.70|+1.35|-4.04|-3.40|723.16|608.60|
var	|+6.70|+4.75|+6.70|+4.75|...|...|
h	|+6.60|+3.65|+6.60|+3.65|-0.12|-1.10|21.48|196.90|
k	|+8.80|+3.80|+8.80|+3.80|+2.08|-0.95|372.32|170.05|
l	|+5.10|+5.70|+5.10|+5.70|-1.62|+0.95|289.98|170.05|
m	|+6.25|+5.20|+6.25|+5.20|-0.47|+0.45|84.13|80.55|
n	+6.35 +5.65 +6.35 +5.65 -0.37 +0.90 64.44 161.10
o	+5.95 +5.40 +5.95 +5.40 -0.77 +0.65 137.83 116.35
var	+6.70 +4.75 +6.70 +4.75

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Variable No. 176

May 19, 1906

Measures to Determine the Position of Comp. Star for New Variables

R.A. $20^{\circ} 14'.7 + 34^{\circ}$ ~~10°~~ ~~$3'$~~
(1900)

Forward on I 33561

Plate A 5384

x y x y Diffx Diffy xx60 yx60 (lic plate I18928)^[[Comparison stars
idem]]

var|+14.00|+16.30|+14.00|+16.30|..|..|..|~~DM~~

~~DM~~

a|+20.70|+3.10^[[3.12]]|+20.70|+3.15|+6.70|-

13.18|402.00|790.80|+33^[[DM]]|3850|20^[[h]]|13^[[m]]|26.1^[[s]]^{[[superscript]]}
(1855) ~~DM~~

b|+18.25|+28.35|+18.25|+28.35|+4.25|+12.05|255.00|723.00|+34.3969|2
0|13|17.0|

c|+0.75^[[0.78]]|+32.60|+0.80|+32.60|-

13.22|+16.30|793.20|978.00|+34.3957|20|11|53.0|

d|+24.25^[[24.28]]|+16.15|+24.30|+16.15|+10.28|-

0.15|616.80|9.00|+33|3856|20|13|46.1|

e|+21.35|+20.20^[[20.22]]|+21.35|+20.25|+7.35|+3.92|441.00|235.20|33|
3851|20|13|31.8|

f|+19.95|+9.65^[[9.68]]|+19.95|+9.70|+5.95|-6.62|357.00|397.20||||||||

+g|+15.05^[[15.08]]|+10.10^[[10.12]]|+15.10|+10.15|+1.08|-

6.18|64.80|370.80||||||||

h|+15.65^[[15.62]]|+12.65^[[12.62]]|+15.60|+12.60|+1.62|-

3.68|97.20|220.80||||||||

k|+12.20|+18.75|+12.20|+18.75|-1.80|+2.45|108.00|147||||||||

l|+8.50^[[8.52]]|+14.40^[[14.38]]|+8.55|+14.35|-5.48|-

1.92|328.80|115.20||||||||

var|+14.00|+16.30|+14.00|+16.30|..|..|..|

m|+20.75|+17.90^[[17.88]]|+20.75|+17.85|+6.75|+1.58|405.00|94.80||||||||

||

n|+10.00^[[10.02]]|+13.90|+10.05|+13.90|-3.98|-

2.40|238.80|144.00||||||||

o|+14.65|+17.60|+14.65|+17.60|+0.65|+1.30|39.00|78.00||||||||

p|+16.10|+16.70|+16.10|+16.70|+2.10|+0.40|126.00|24.00||||||||

q|+15.60|+14.65~~DM~~ 4 ~~DM~~

15.65|+15.60|+15.65|+1.60|-0.65|96.00|39.00||||||||

r|+14.90|14.60~~DM~~ 60

~~DM~~ 14.75|+14.90|+14.75|+0.90|-1.55|54.00|93.00||||||||

s|+13.65|+14.30^[[14.32]]|+13.65|+14.35|-0.35|-1.98|21.00|118.80||||||||

var|+14.00^[[14.00]]|+16.30^[[16.30]]|+14.00|+16.30|..|..|..|

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Spectra #15

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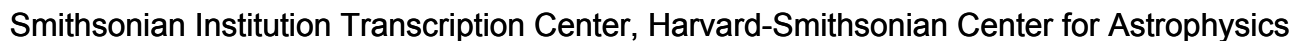
+15° 41' 72" + [[?]] comparison.
var 20h 24.6m +15° 56' (1900)
Found on I 31193

```

x      y      x      y
var1+13.75 +12.25 +13.70 +12.20
var2+13.85 +12.20 +13.80 +12.20
13.22  11.78
a  +13.25 +11.80 +13.20 +11.75
3.92
b  +3.95 +22.10 +3.90 +22.10
7.58
c  +1.10 +7.60 +1.10 +7.55
d  +1.35 +4.30 +1.35 +4.30
14.12
e  +14.15 +19.90 +14.10 +19.90
11.78
f  +11.80 +12.50 +11.75 +12.50
g  +19.35 +8.80 +19.35 +8.80
h  +17.10 +13.60 +17.10 +13.55
11.08
k  +15.25 +11.10 +15.25 +11.05
var1+13.70 +12.25 +13.70 +12.25
var2+13.80 +12.20 +13.80 +12.20
l  +15.40 +13.80 +15.40 +13.80
m  +10.15 +9.15 +10.15 +9.15
n  +17.75 +14.25 +17.75 +14.25
pcovf+12.25 +13.20 +12.25 +13.20
o  +13.45 +11.25 +13.20 +11.25
q  +13.20 +11.25 +13.20 +11.26
13.02
r  +13.05 +12.40 +13.00 +12.40
s  +13.70 +11.45 +13.70 +11.45
t  +14.30 +11.70 +14.30 +11.70
13.71  12.23
var1+13.70 +12.25 +13.70 +12.20
13.81  12.20
var2+13.80 +12.20 +13.80 +12.20

```

var. 1		var. 2	
diffx	diffy	diffx	diffy
"	"	"	"
-0.49	-0.45	-0.59	-0.42
-9.79	+9.87	-9.89	+9.90
-12.61	-4.65	-12.71	-4.62
-12.36	-7.93	-12.46	-7.90
+0.41	+7.67	+0.31	+7.70
-1.93	+0.27	-2.03	+0.30



+5.64	-3.43	+5.54	-3.40
+3.39	+1.35	+3.29	+1.38
+1.54	-1.15	+1.44	-1.12
"	"	"	"
"	"	"	"
+1.69	+1.57	+1.59	+1.60
-3.56	-3.08	-3.66	-3.05
+4.04	+2.02	+3.94	+2.05
-1.46	+0.97	-1.56	+1.00
-0.26	+0.07	-0.36	+0.10
-0.51	-0.98	-0.61	-0.95
-0.69	+0.17	-0.79	+0.20
-0.01	-0.78	-0.11	-0.75
+0.59	-0.53	+0.49	-0.50
"	"	"	"
"	"	+0.10	-0.03

var. 1
xx163 yx163
" "
" "
79.87 73.35
1595.77 1608.81
2055.43 757.95
2014.68 1292.59
66.83 1250.21
314.59 44.01
919.32 559.09
552.57 220.05
251.02 187.45
" "
" "
275.47 255.91
580.28 502.04
658.52 329.26
237.98 158.11
42.38 11.41
83.13 159.74
112.47 27.71
1.63 127.71
96.17 86.39

16.30 4.89

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August 4, 1906

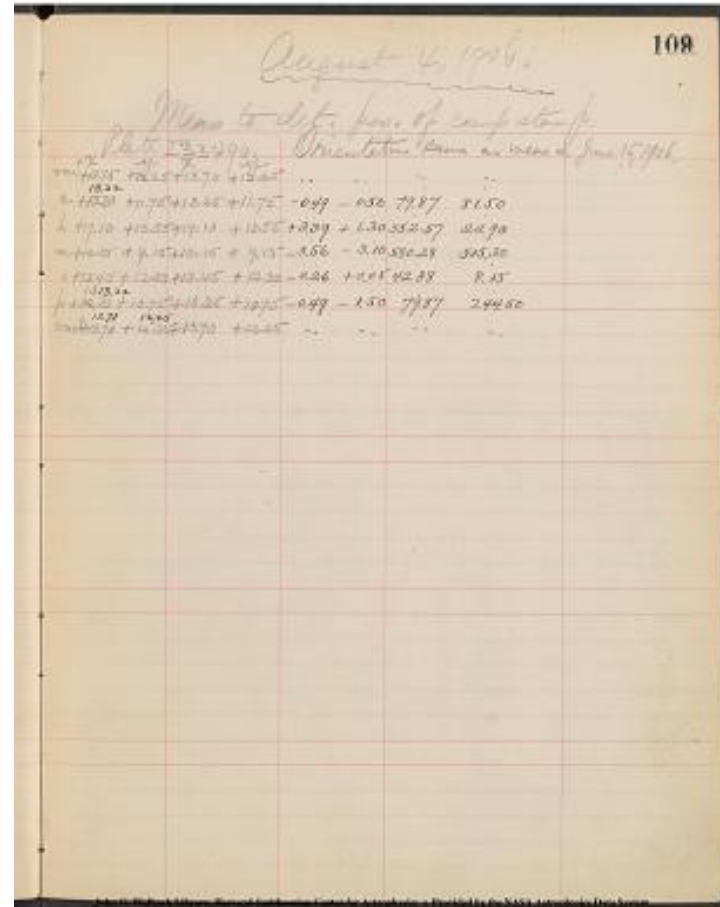
Meas to det. pos. of comp star p.

Plate 133490. Orientation same as meas on June 15, 1906.

[9 column table]

	x	y	x	y				
var.	+13.75	+12.25	+13.70	+12.25	+13.75	+12.25	+13.70	+12.25
a	+13.20	13.22	+11.75	+13.25	+11.75	-0.49		
h	+17.10	+13.55	+17.10	+13.55	+3.39	+1.30	552.57	211.90
m	+10.15	+9.13	+10.15	+9.15	-3.56	-3.10	580.28	505.30
o	+13.45	+12.30	+13.45	+12.30	-0.26	+0.05	42.38	8.15
p	12	20	13	13.22				
	+10.75	+13.25	+10.75	-0.49	-1.50	79.87	244.50	
var.	+13.70	13.71	+12.25	12.25				
	+13.70	+12.25	+13.70	+12.25	+13.70	+12.25		

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Var. No. 184 - Var. No. 184

June 15, 1906

Measure PII16571
Not visible on Pl. I26023.

Measures to Determine the Position of Comp. Stars for V. Delphini
DM + 18 Wb ~~18'a~~ ~~20'a~~ R.A 20 ^h
43. ~~1~~ ~~2~~ ^m +18 58' (1900)

Plate I16571

[9 column table]

| x|y|x|y|Diff x|Diff y|xx163|yy163|
var.|+6.30|+7.30|+6.30|+7.25|...|...|
a|+2.80|+6.40|+2.80|+6.40|-3.51|-0.89|572.13|145.07|
b|+0.40|+5.35|+0.40|+5.30|-5.91|-1.97|963.33|321.11|
d|+2.50|+4.15|+2.50|+4.15|-3.81|-3.14|621.03|511.82|
[[~~d~~]]|[[~~d~~]]|+12.95|+6.65|+12.95|+6.65|+6.64|-
0.64|1082.32|104.32|
c|+20.35|+20.38|+4.65|+4.62|+20.40|+4.60|+14.07|-2.67|2293.41|435.21|
f|+2.85|+5.50|+2.85|+5.45|-3.46|-1.81|563.98|295.03|
g|+3.90|+11.40|+3.90|+11.40|-2.41|+4.11|392.83|669.93|
h|+11.25|+3.75|+11.25|+3.75|+4.94|-3.54|805.22|577.02|
var.|+6.30|+7.30|

[[~~7.28~~]]|[[~~7.28~~]]|+6.30|+7.25|...|...|
k|+3.85|+3.55|+3.85|+3.50|+7.54|-3.77|1229.02|614.51|
l|+13.60|+13.62|+4.15|+13.65|+4.15|+7.31|-3.14|1191.53|511.82|
m|+10.20|+2.65|+2.68|+10.20|+2.70|+3.89|-4.61|634.07|751.43|
n|+6.70|+9.40|+9.42|+6.70|+9.45|+0.39|+2.13|63.57|347.19|
o|+4.60|+7.80|+4.60|+7.80|-1.71|+0.51|278.73|83.13|
p|+5.30|+8.20|+5.30|+8.20|-1.01|+0.91|164.63|148.33|
var.|+6.35|+7.30|+6.30|+7.35|...|...|
Plate I26023
o|+4.65|+7.80|+4.65|+7.80|-1.66|+0.51|270.58|83.13|
p|+5.30|+8.20|+5.30|+8.20|-1.01|+0.91|164.63|148.33|
d|[[~~7.65~~]]|[[~~7.65~~]]|+7.65|+7.65|+4.10|+2.55|+4.10|-3.76|-
3.19|612.88|519.97|
e|+12.95|+6.65|+12.95|+6.65|+6.64|-0.64|1082.32|104.32|
g|+3.90|+11.40|+3.90|+11.35|-2.41|+4.09|392.83|666.67|

Mean x=6.31 y=7.29

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Var. No. 184
June 15, 1906

Measures to Determine the Position of Comp. Stars for V. Delphini
DM + 18 Wb ~~18'a~~ ~~20'a~~ R.A 20 ^h
43. ~~1~~ ~~2~~ ^m +18 58' (1900)

Then I get:

	x	y	xx	yy	xy	xx163	yy163
a	+2.80	+6.40	+7.74	+40.96	+17.92	572.13	145.07
b	+0.40	+5.35	+0.16	+28.62	+2.14	963.33	321.11
d	+2.50	+4.15	+6.25	+17.22	+10.38	621.03	511.82
c	+20.35	+20.38	+414.12	+415.54	+819.70	2293.41	435.21
f	+2.85	+5.50	+8.12	+30.25	+15.68	563.98	295.03
g	+3.90	+11.40	+15.21	+129.96	+44.46	392.83	669.93
h	+11.25	+3.75	+126.56	+14.06	+42.19	805.22	577.02
k	+3.85	+3.55	+14.82	+12.60	+13.67	1229.02	614.51
l	+13.60	+13.62	+184.96	+185.50	+370.46	1191.53	511.82
m	+10.20	+2.65	+104.04	+7.02	+26.53	634.07	751.43
n	+6.70	+9.40	+44.89	+88.36	+63.08	63.57	347.19
o	+4.60	+7.80	+21.16	+60.84	+35.88	278.73	83.13
p	+5.30	+8.20	+28.09	+67.24	+43.56	164.63	148.33
o	+4.65	+7.80	+21.62	+60.84	+35.88	270.58	83.13
p	+5.30	+8.20	+28.09	+67.24	+43.56	164.63	148.33
d	+7.65	+7.65	+58.52	+58.52	+58.52	612.88	519.97
e	+12.95	+6.65	+168.70	+44.22	+85.93	1082.32	104.32
g	+3.90	+11.40	+15.21	+129.96	+44.46	392.83	666.67

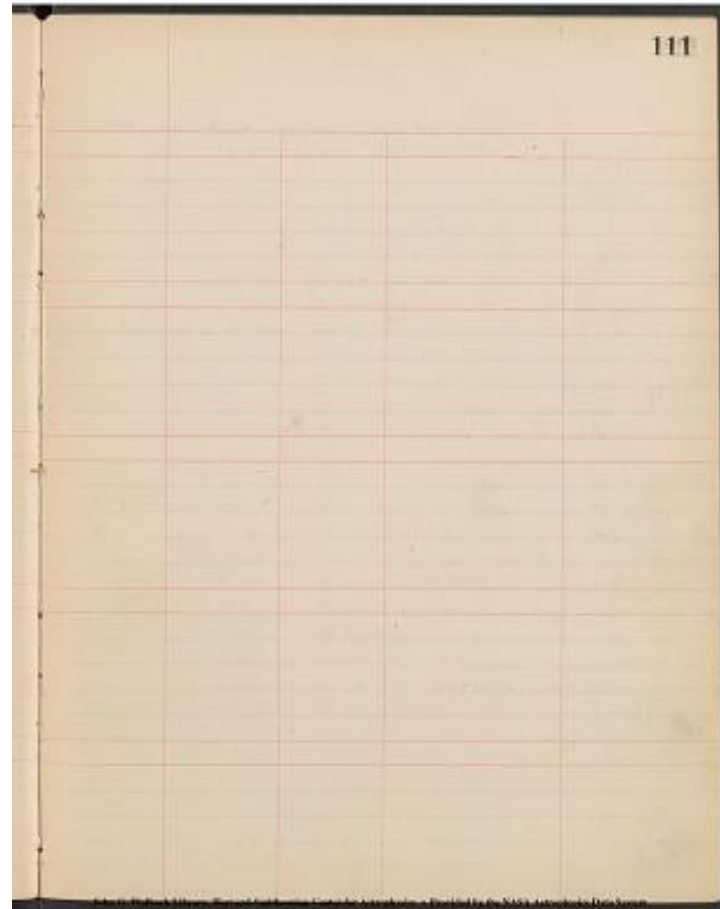
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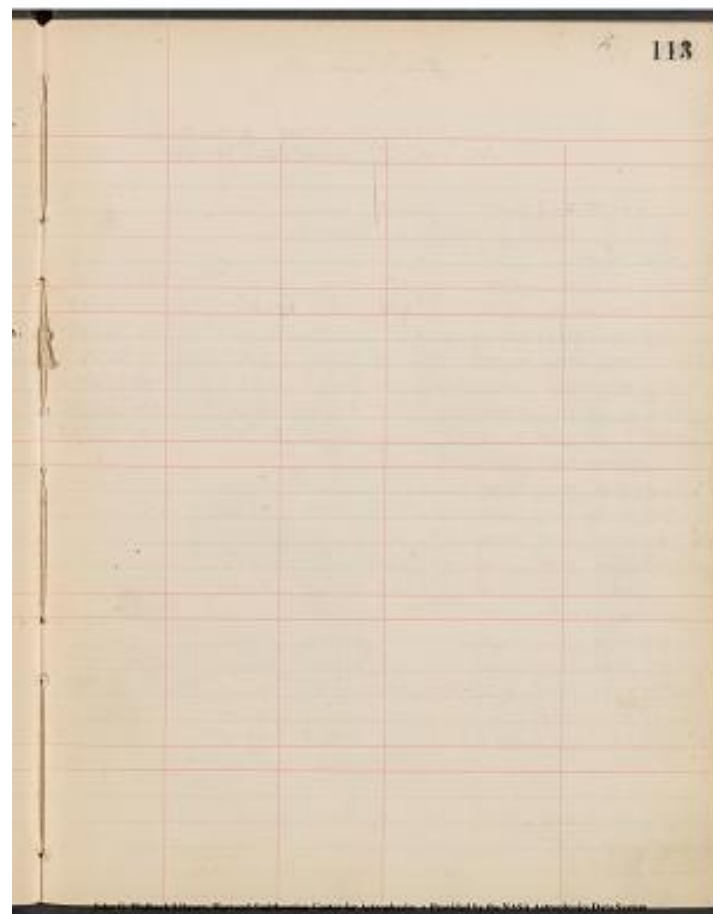
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mean Dec. = $-41^\circ 9.6' = 0.12328$

0.60206

0.72534

Diff x. 4 columned table

(a)+11.86|(b)+2.86|(c)+3.53|(d)+11.06|

Log. 1.07408|0.45637|0.54777|1.04376|

0.72534|0.72534|0.72534|0.72534|0.72534|

1.79942|1.18171|1.27311|1.76910

63.01|15.20[^][[s]]|18.76[^][[s]]|58.76[^][[s]]|

1[^][[m]] 3.01[^][[s]] | | |

(e)-8.32|(f)-14.00|(g)-5.37 |

0.72534|1.14613|0.72997 |

0.72534|0.72534|0.72534|0.72534|0.72534| |

1.64546|1.87147|1.45531 |

44.20[^][[s]]|74.38[^][[s]]|28.53[^][[s]] |

|1m 14.38[^][[s]] | |

2 columned table

21[^][[h]] 16[^][[m]] 53.0[^][[s]]|-41° 15.8' 8.7|

21 16 7.2|-41 0.3 9.3|

21 16 11.0|-41 5.8 9.6|

21 16 48.2|-41 18.8 9.7|

21 15 5.6|-41 5.8 9.9|

21 14 38.0|-41 10.8 9.5|

21 15 21.7|-41 9.8 10|

21 15 50.9|-41 14.0

21 15 50.9|-41 14.0

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21 15 50.9|-41 14.0

21 15 50.9|-41 14.0

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Mean Dec. = $-41^\circ 9.6' = 0.12328$

Diff x.

(a)+11.86	(b)+2.86	(c)+3.53	(d)+11.06
Log. 1.07408	0.45637	0.54777	1.04376
<u>0.72534</u>	<u>0.72534</u>	<u>0.72534</u>	<u>0.72534</u>
1.79942	1.18171	1.27311	1.76910
63.01	15.20 [^] [[s]]	18.76 [^] [[s]]	58.76 [^] [[s]]
1 [^] [[m]]	3.01 [^] [[s]]	|	|
(e)-8.32	(f)-14.00	(g)-5.37	|
0.72534	1.14613	0.72997	|
<u>0.72534</u>	<u>0.72534</u>	<u>0.72534</u>	|
1.64546	1.87147	1.45531	|
44.20 [^] [[s]]	74.38 [^] [[s]]	28.53 [^] [[s]]	|
|1m 14.38 [^] [[s]]	|	|	|

Diff y.

(a)-1.80	(b)+13.82	(c)+7.77	(d)-4.63
X60 108.00	829.20	466.20	277.80
1' 48.00	13' 49.20	7' 46.20	4' 37.80
(e)+7.72	(f)+3.57	(g)+4.24	|
463.20	214.20	254.40	|
7' 43.20	3' 34.20	4' 14.40	|

Mean Pos. of Var. $21^\circ 15' 50.9'' - 41^\circ 14.0''$ (1875) Sept 11

24 columned table

(a)|21[^][[h]]|16[^][[m]]|53.0[^][[s]]|-41° 15.8' 8.7|(b)|21[^][[h]]|16[^][[m]]|7.2[^][[s]]|-

41° 0.3' 0.3|(c)|21[^][[h]]|16[^][[m]]|11.0[^][[s]]|-

41° 5.8' 0.3|(d)|21[^][[h]]|16[^][[m]]|48.2[^][[s]]|-41° 18.8' 0.3|

15.2 | 13.8 | | 18.8 | 7.8 | |

58.8 | 4.6|underlined|

|21[^][[h]]|15[^][[m]]|50.0[^][[s]]|-41° 14.0' |21[^][[h]]|15[^][[m]]|52.0[^][[s]]|-

41° 14.1' |21[^][[h]]|15[^][[m]]|52.2[^][[s]]|-41° 13.6' |

21[^][[h]]|15[^][[m]]|49.4[^][[s]]|-41° 14.2' |

(e)|21[^][[h]]|15[^][[m]]|5.6[^][[s]]|-41° 5.8' |(f)|21[^][[h]]|14[^][[m]]|38.0[^][[s]]|-

41° 10.8' |(g)|21[^][[h]]|15[^][[m]]|21.7[^][[s]]|-41° 9.8' |

44.2 | 7.7 | | 14.4 | 3.6 | | 28.5 |

4.2|underlined|

|21[^][[h]]|15[^][[m]]|49.8[^][[s]]|-41° 13.5' |21[^][[h]]|15[^][[m]]|52.4[^][[s]]|-

41° 14.4' |21[^][[h]]|15[^][[m]]|50.2[^][[s]]|-41° 14.0' |

Mean Pos. of Var. 21^h 15^m 50.9^s -41° 14.0' (1875) Adopt
mean.
21 17 26.9 -41 7.7

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Var. No. 198

Var. No. 199

August 3, 1906.

Meas. to det. pos. of comp. stars. for +32°4335. R.A. 22^h[h] 1.5^m[m]
Dec. +33° 1(1900.
R.A. 22 1.5 Dec. +33 1

Plate I 18856.

[[10 columned table]]

x	y	x	y	Diff x	Diff y	x × 163	y × 163			
-----	-----	-----	-----							
Var.	+5.05	+8.60	+5.10	+8.60				
a	+13.60	+6.55	+13.60	+6.55	+8.52					
2.05	1388.76	334.15	DM.+32°4343							
b	+0.90-6.30+0.90 -6.30-4.18-14.90 681.34 2428.70 DM.+32° 4332									
c	+9.85	+10.20^[[10.22]]	+9.85	+10.25	+4.77	+1.62	777.51	264.06	DM.+32° 4340	
d	+7.10	+10.70^[[10.68]]	+7.10	+10.65	+2.02	+2.08	329.26	339.04	DM.+32° 4337	
e	+0.04	+4.10	+0.40	+4.10	-4.68	-4.50	762.84	733.50	DM.+32° 4331	
f	+4.65^[[4.68]]	+5.45	+4.70	+5.45	-0.40	-3.15	65.20	513.45	DM.+32° 4334	
g	+6.70	+4.55^[[4.52]]	+6.70	+4.50	+1.62	-4.08	264.06	665.04		
h	+5.90	+6.30^[[6.32]]	+5.90	+6.35	+0.82	-2.28	133.66	371.64	DM.+32° 4336	
k	+4.65^[[4.68]]	+7.70	+4.70	+7.70	-0.40	-0.90	65.20	146.70		
var	+5.05	+8.60	+5.05	+8.60				
l	+9.60	+6.95	+9.60	+6.95	+4.52	-1.65	736.76	268.95	DM.+32° 4338	
m	+6.35	+7.00	+6.35	+7.00	+1.27	-1.60	207.01	260.80		
n	+6.10	+8.75	+6.10	+8.75	+1.02	+0.15	166.26	24.45		
o	+4.90^[[4.88]]	+8.55	+4.85	+8.55	-0.20	-0.05	32.60	8.15		
p	+5.80^[[5.82]]	+8.85	+5.85	+8.85	+0.74	+0.25	120.62	40.75		
q	+6.30	+8.20	+6.30	+8.20	+1.22	-0.40	198.86	65.20		
r	+6.50	+9.50	+6.50	+9.50	+1.42	+0.90	231.46	146.70		
s	+7.40	+8.05^[[8.02]]	+7.40	+8.00	+2.32	-0.58	378.16	94.54		
t	+5.15	+8.20	+5.15	+8.20	+0.07	-0.40	11.41	65.20		
u	+5.10	+9.25	+5.10	+9.25	+0.02	+0.65	3.26	105.95		
w	+4.70	+9.15^[[9.12]]	+4.70	+9.10	-0.38	+0.52	61.94	84.76		
var	+5.15	+8.20	+5.15	+8.20	+0.07	-0.40	11.41	65.20		
0	+8.60			

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116
August 3, 1906.
Meas. to det. pos. of comp. stars for +32°4335
+32°4335
22 1.5 Dec. +33 1
Plate I 18856.
Diff. Diff. = 1.43 - 1.43
116
+13.60 +6.55 +13.60 +6.55 +8.52
+0.90 -6.30 +0.90 -6.30 -4.18 -14.90 681.34 2428.70 DM.+32° 4332
+9.85 +10.20^[[10.22]] +9.85 +10.25 +4.77 +1.62 777.51 264.06 DM.+32° 4340
+7.10 +10.70^[[10.68]] +7.10 +10.65 +2.02 +2.08 329.26 339.04 DM.+32° 4337
+0.04 +4.10 +0.40 +4.10 -4.68 -4.50 762.84 733.50 DM.+32° 4331
+4.65^[[4.68]] +5.45 +4.70 +5.45 -0.40 -3.15 65.20 513.45 DM.+32° 4334
+6.70 +4.55^[[4.52]] +6.70 +4.50 +1.62 -4.08 264.06 665.04
+5.90 +6.30^[[6.32]] +5.90 +6.35 +0.82 -2.28 133.66 371.64 DM.+32° 4336
+4.65^[[4.68]] +7.70 +4.70 +7.70 -0.40 -0.90 65.20 146.70
+9.60 +6.95 +9.60 +6.95 +4.52 -1.65 736.76 268.95 DM.+32° 4338
+6.35 +7.00 +6.35 +7.00 +1.27 -1.60 207.01 260.80
+6.10 +8.75 +6.10 +8.75 +1.02 +0.15 166.26 24.45
+4.90^[[4.88]] +8.55 +4.85 +8.55 -0.20 -0.05 32.60 8.15
+5.80^[[5.82]] +8.85 +5.85 +8.85 +0.74 +0.25 120.62 40.75
+6.30 +8.20 +6.30 +8.20 +1.22 -0.40 198.86 65.20
+6.50 +9.50 +6.50 +9.50 +1.42 +0.90 231.46 146.70
+7.40 +8.05^[[8.02]] +7.40 +8.00 +2.32 -0.58 378.16 94.54
+5.15 +8.20 +5.15 +8.20 +0.07 -0.40 11.41 65.20
+5.10 +9.25 +5.10 +9.25 +0.02 +0.65 3.26 105.95
+4.70 +9.15^[[9.12]] +4.70 +9.10 -0.38 +0.52 61.94 84.76
+5.15 +8.20 +5.15 +8.20 +0.07 -0.40 11.41 65.20
+8.60 ...

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To determine position of Comp. Star .
Mean Dec.of a,b,c,d and e= +32°
38.7"=0.0746[~~8~~][~~7~~]
[1][0].3623[1]
1.1109[~~1~~][~~0~~]

[[left margin]]
[[6 columned table]]
[[22^[[h]]][[strikethrough]]0^[[m]][[strikethrough]]1[[strikethrough]]52.0^[[s]][[strikethrough]]23.5[[strikethrough]]+32^[[strikethrough]]+32[[strikethrough]]16.2[[strikethrough]]43.4[[strikethrough]]9.3[[strikethrough]]8.4|21|58|39.2|+32|7.2|8.7|22|0|32.4|+32|52.5|8.8|21|59|55.9|+32|53.8|9.0|21|58|30.8|[[underline]]+32[[underline]]|36.5|[[underline]]9.1[[underline]]|]]
[[21|59|41.6|+32|41.9|9.5|22|0|30.5|+32|43.4|9.5|]]
[[/left margin]]

Diff x.

[[4 columned table]]

|a +8.72|(b)-3.98|(c)+4.97|(d)+2.22|

|0.94052|0.59988|0.69636|0.34635|

[[underline]]1.1109[[strikethrough]]1[[/strikethrough]]0|1.1109[[strikethrough]]1[[/strikethrough]]0|1.1109[[strikethrough]]1[[/strikethrough]]0|1.1109[[strikethrough]]1[[/strikethrough]]0[[/underline]]

|2.0514[[strikethrough]]3[[/strikethrough]]2|1.7107[[strikethrough]]9[[/strikethrough]]8|1.8072[[strikethrough]]7[[/strikethrough]]6|1.4572[[strikethrough]]5[[/strikethrough]]6|1.12.57^[[s]]|51.38^[[s]]|64.16|28.66^[[s]]|

|1^[[m]]|52.57^[[s]]|1^[[m]]|4.16^[[s]]|

(e)-4.48| | | |

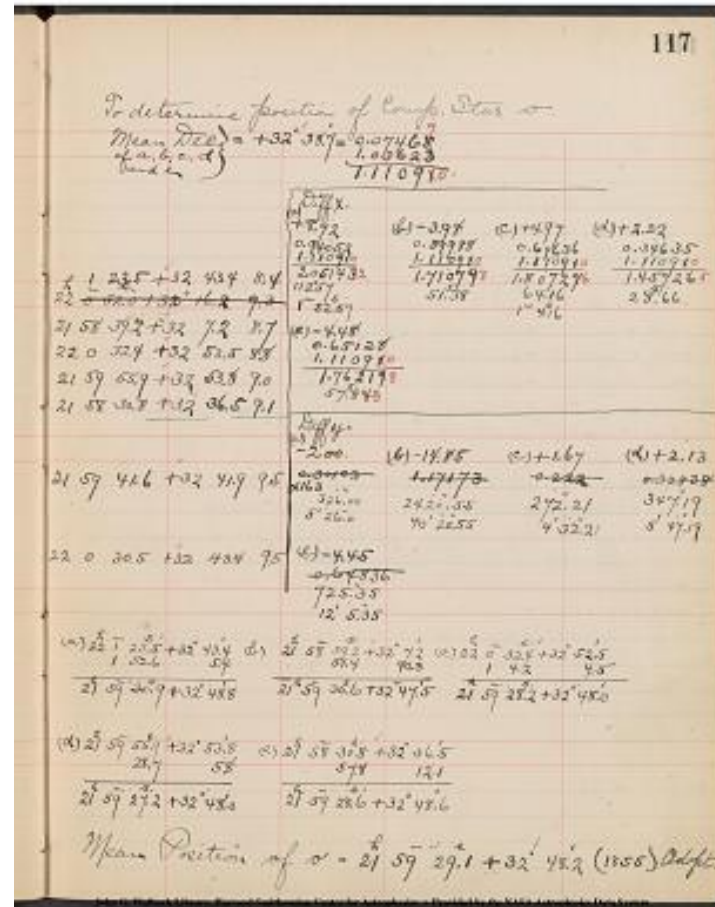
0.65128| | | |

[[underline]]1.1109[[strikethrough]]1[[/strikethrough]]0[[/underline]]| | |

|1.7621[[strikethrough]]9[[/strikethrough]]8| | | |

|57.8|4[[/strikethrough]]3^[[s]]| | | |

Diff y.
[[4 columned table]]
[(a) -2.00|(b) -14.85|(c) +1.67|(d) +2.13|
[[~~0.30~~103|1.17|173|0.222|0.32838|~~0.32838~~]]
x163| | | |
326.00"|2420.55"|272.21"|347.19"|
5' 26.0"|40' 20.55"|4' 32.21"|5' 47.19"|
(e) -4.45| | | |
[[~~0.64836~~]]| | | |
725.35"| | | |
12' 5.35"| | | |

[illegible]

40.3 14.2 4.5
 | 27^h 59^m 30.9^s +32° 48.8'
 21^h 59^m 30.6^s +32° 47.5'
 21^h 59^m 28.2^s +32° 48.0'
 (d) 21^h 59^m 55.9^s +32° 53.8' (e) 21^h 58^m 30.8^s +
 32° 36.5' | | | | |
 | | 28.7 | 5.8 | 57.8 |
 12.1 | | | | |
 | 21^h 59^m 27.2^s +32° 48.0'
 21^h 59^m 28.6^s +32° 48.6' | | | | |

Mean Position of sigma = 21^h 59^m 59.1^s +32° 48.2' (1855)
 Adopt.

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Var. No. ~~199~~200

August 10, 1906

Meas. to det. pos of comp. stars for - Oclantis
~~-85° 53'~~ ~~0~~ ~~5~~ R.A. 22^{h} 5.7^{m} Dec. -
 85° 10' Gillis 15580.
 Plate B24383

[9 columned table]

	x	y	x|y|Diff	x|y|x × 179|y × 179|						
var.	+1.55	+5.25	+1.60	+5.25	..|..|..|				
a	-12.75	+7.55	[[7.52]]	-12.75	+7.50	-14.33	+2.27	2565.07	406.33	
b	-6.30	+4.10	-6.30	[[1]]	[[4.10]]	[[7.88]]	-1.15	1410.52	205.85	
c	-2.65	[[2.68]]	+7.60	[[7.5800]]	-2.70	+7.55	-4.26	+2.33	762.54	417.07
d	+2.80	+7.60	+2.80	+7.60	+1.22	+2.35	218.38	420.65		
e	+5.85	+0.25	+5.80	+0.20	+4.24	-5.05	758.96	900.37		
f	-3.80	+0.50	[[0.48]]	-3.80	+0.45	-5.38	-4.77	963.02	853.83	
g	+8.00	+5.40	[[5.38]]	+8.60	+5.35	+7.02	+0.13	1256.58	23.27	
var.	+1.60	+5.25	+1.60	+5.25	..|..|..|				
h	+0.15	+5.75	+0.15	+5.75	-1.43	+0.50	255.97	89.50		
k	+7.50	[[7.48]]	+4.40	+7.45	+4.40	+5.90	-0.85	1056.10	152.15	
l	-2.25	+4.80	-2.25	+4.80	-3.83	-0.45	685.57	80.55		
m	+3.40	+6.30	+3.40	+6.30	+1.82	+1.05	325.78	187.95		
n	+0.05	+4.35	+0.05	+4.35	-1.53	-0.09	273.87	161.10		
o	+1.75	+4.20	+1.75	+4.25	+0.17	-1.03	30.43	184.37		
p	+1.00	+5.35	+1.00	+5.35	-0.58	+0.10	103.82	17.90		
var.	+1.55	+5.25	+1.55	+5.25					

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Aug 10 1906
200

August 10, 1906

Meas. to det. pos. of comp. stars for - Oclantis
-85° 53' 0" 5.7 Dec. -85° 10' Gillis 15580.

Plate B24383

	x	y	Diff	x|y|Diff	x × 179	y × 179				
var.	+1.55	+5.25	+1.60	+5.25	..	..		
a	-12.75	+7.55	[[7.52]]	-12.75	+7.50	-14.33	+2.27	2565.07	406.33	
b	-6.30	+4.10	-6.30	[[1]]	[[4.10]]	[[7.88]]	-1.15	1410.52	205.85	
c	-2.65	[[2.68]]	+7.60	[[7.5800]]	-2.70	+7.55	-4.26	+2.33	762.54	417.07
d	+2.80	+7.60	+2.80	+7.60	+1.22	+2.35	218.38		420.65	
e	+5.85	+0.25	+5.80	+0.20	+4.24	-5.05	758.96		900.37	
f	-3.80	+0.50	[[0.48]]	-3.80	+0.45	-5.38	-4.77	963.02	853.83	
g	+8.00	+5.40	[[5.38]]	+8.60	+5.35	+7.02	+0.13	1256.58	23.27	
var.	+1.60	+5.25	+1.60	+5.25	..	..	..
h	+0.15	+5.75	+0.15	+5.75	-1.43	+0.50	255.97		89.50	
k	+7.50	[[7.48]]	+4.40	+7.45	+4.40	+5.90	-0.85	1056.10	152.15	
l	-2.25	+4.80	-2.25	+4.80	-3.83	-0.45	685.57		80.55	
m	+3.40	+6.30	+3.40	+6.30	+1.82	+1.05	325.78		187.95	
n	+0.05	+4.35	+0.05	+4.35	-1.53	-0.09	273.87		161.10	
o	+1.75	+4.20	+1.75	+4.25	+0.17	-1.03	30.43		184.37	
p	+1.00	+5.35	+1.00	+5.35	-0.58	+0.10	103.82		17.90	
var.	+1.55	+5.25	+1.55	+5.25			

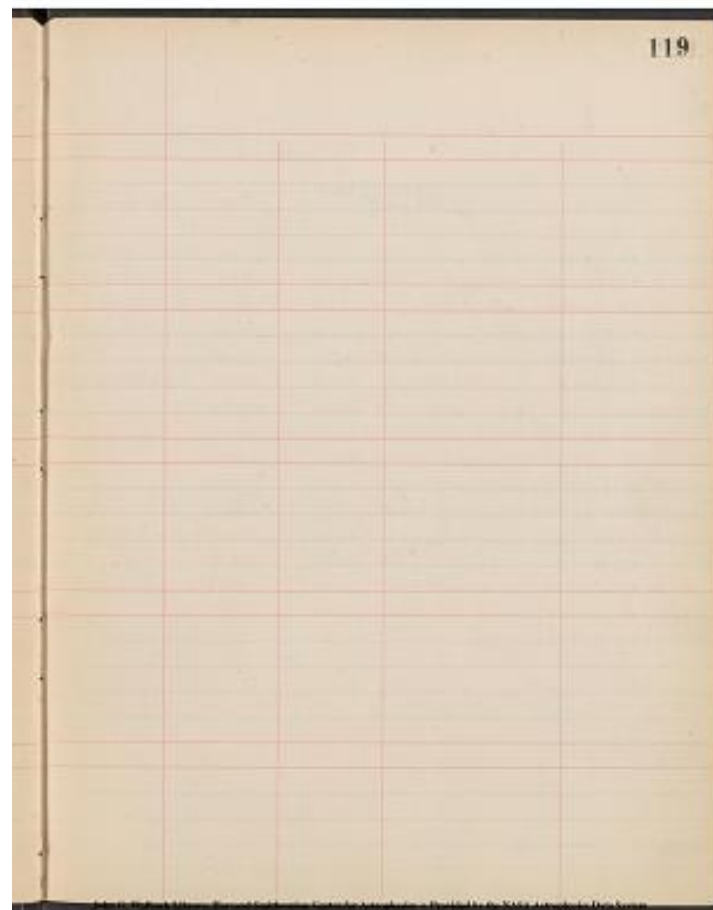
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Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of Spectra #15
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120
 Var. No. 201 Aug. 10, 1906
 Meas. 18 out. hovlton of Var X Aquarii +
 Comp. Slais. 22 13.2-21.25 (1900)
 Plate B 10299
 x y x y Diffx Det. Pos. [[^]] [[Diffy]] ba Var. xx179 yx179 DM.NO. R
 Saut.+3.15+6.15+3.15 +6.15
 2.68
 a+2.65+9.35+2.70 +9.35-0.47+3.17 84.13 567.43 Dm.-21°6197 22 10
 4.12
 b+2.15+4.10+2.15 +4.15-1.00-2.06 179.00 368.74 -21°6193 22 10
 c+2.40+12.75+2.40 +12.75-0.75+6.57 134.25 1176.03 -21 6194 22 10
 d+6.60+8.25+6.60 +8.25+3.45+2.07 617.55 370.53 -21 6200 22 11
 1.42 5.82
 e+1.45+5.85+1.40 +5.80-1.73-0.36 309.67 64.44
 8.42
 f+8.45+7.15+8.40 +7.15+5.27+0.97 943.33 173.63 -21 6203 22 11
 g-0.70+3.30-0.70 +3.30-3.85-2.88 689.15 515.52
 gou.+3.15+6.20+3.15 +6.20
 6.68
 h+6.65+7.40+6.70 +7.40+3.53+1.22 631.87 218.38
 k+0.25+1.55+0.25 +1.55-2.90-4.63 519.10 828.77
 l+3.20+8.60+3.20 +8.60+0.05+2.42 8.95 433.18
 m+3.35+9.20+3.35 +9.20+0.20+3.02 25.80 540.58
 n+2.70+7.20+2.70 +7.20-0.45+1.02 80.55 1.82.58
 o+3.30+7.15+3.30 +7.15+0.15+0.97 26.85 173.63
 p+3.15+6.70+3.15 +6.70 0.00+0.52 0.00 93.08
 3.15 6.18
 vou+3.15+6.20+3.15 +6.20

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120
 Var. No. 201
 Aug. 10, 1906.

Meas. 18 out. hovlton of Var X Aquarii +
 Comp. Slais. 22 13.2-21.25 (1900)

Plate B 10299

x	y	x	y	Diffx	Det. Pos.	ba	Var.	xx179	yx179	DM. No.	R	Q
Saut.+3.15	+6.15	+3.15	+6.15	...	...	...	...	...	...	...	...	...
a+2.65	+9.35	+2.70	+9.35	-0.47	+3.17	84.13	567.43	Dm.-21°6197	22 10	...	...	...
b+2.15	+4.10	+2.15	+4.15	-1.00	-2.06	179.00	368.74	-21°6193	22 10	...	...	...
c+2.40	+12.75	+2.40	+12.75	-0.75	+6.57	134.25	1176.03	-21 6194	22 10	...	...	...
d+6.60	+8.25	+6.60	+8.25	+3.45	+2.07	617.55	370.53	-21 6200	22 11	...	...	...
e+1.45	+5.85	+1.40	+5.80	-1.73	-0.36	309.67	64.44	...	...	...	...	...
f+8.45	+7.15	+8.40	+7.15	+5.27	+0.97	943.33	173.63	-21 6203	22 11	...	...	...
g-0.70	+3.30	-0.70	+3.30	-3.85	-2.88	689.15	515.52	...	...	...	...	...
gou.+3.15	+6.20	+3.15	+6.20	...	...	...	...	...	...	...	...	...
h+6.65	+7.40	+6.70	+7.40	+3.53	+1.22	631.87	218.38	...	...	...	...	...
k+0.25	+1.55	+0.25	+1.55	-2.90	-4.63	519.10	828.77	...	...	...	...	...
l+3.20	+8.60	+3.20	+8.60	+0.05	+2.42	8.95	433.18	...	...	...	...	...
m+3.35	+9.20	+3.35	+9.20	+0.20	+3.02	25.80	540.58	...	...	...	...	...
n+2.70	+7.20	+2.70	+7.20	-0.45	+1.02	80.55	1.82.58	...	...	...	...	...
o+3.30	+7.15	+3.30	+7.15	+0.15	+0.97	26.85	173.63
p+3.15	+6.70	+3.15	+6.70	0.00	+0.52	0.00	93.08
vou+3.15	+6.20	+3.15	+6.20

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Mean Position 22^h[[h]] 10^m[[m.]] 41.8^s[[s.]] -21[°][[°]] 37.
~~22^h[[h]] 13.3^m[[m]] -21[°] 24' (1855)~~ Adopt mean.
 22^h[[h]] 13.3^m[[m]] -21[°] 24' (1900)

Project PHaEDRA - Williamina P. Fleming - Variable Stars; Computations of
Spectra #15
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Aug. 10, 1906

Var. No. 201 ~~202~~

Meas. to det. Comp. Stars of -Aguarii
22^h 16.6^m - 8° 7' DM. - 8° 58'58

Plate B17973

[9 column table]

|	x|y|x|y|Diff x|Diff y|xx179|yx179|
|	Var|+13.55|+12.55|+13.55|+12.55|
|	9.94|2532.85|1779.26| Omit "a"
|	a b|+0.85|+9.65 [^] +9.62|+0.85|+9.60|-12.70|-2.92|2273.30|522.68|
|	b c|+17.50 [^] +17.48|+15.55
	[^] +15.58|+17.45|+15.58|+15.60|+3.93|+3.04|7
|	03.47|544.16|
|	c d|+3.75|+10.95
	[^] +10.98|+3.75|+10.95|+11.00|-9.80|-
|	1.56|1754.20|279.24|
|	d e|+17.80 [^] +17.82|+11.60 [^] +11.62|+17.85|+11.65|+4.27|-
|	0.92|764.33|164.68|
|	e f|+16.30|+15.35|+16.30|+15.35|+2.75|+2.81|492.25|502.99|
|	f g|+11.00 [^] +11.02|+11.25 [^] +11.28|+11.05|+11.30|-2.53|-
|	1.26|452.87|225.54|
|	g h|+15.00 [^] +15.02|+13.60
	[^] +13.62|+15.05|+13.65|+1.47|+1.08|263.13|193.32|
|	Var|+13.55|+12.55|+13.55|+12.55|
|	h k|+18.35|+11.10|+18.35|+11.10|+4.80|-1.44|859.20|257.76|
|	k l|+11.25|+11.60 [^] +11.58|+11.25|+11.55|-2.30|-0.96|411.70|171.84|
|	l m|+15.15|+11.65|+15.15|+11.65|+1.60|-0.89|286.40|159.31|
|	m
|	n|+13.75|+13.20|+13.75|+13.20|+5.55|
|	14.80|+13.20|+14.80|-0.35|+2.26|62.65|404.54|
|	o p|+13.75|+15.55 [^] +15.52|+13.75|+15.50|+0.20|+2.98|35.80|533.42|
|	p q|+16.15 [^] +16.18|+11.75|+16.20|+11.75|+2.63|-0.79|470.77|141.41|
|	q r|+13.15|+15.25 [^] +15.28|+13.15|+15.30|-0.40|+2.74|71.60|490.46|
	r s +17.20 +12.80 +17.20 +12.80 +3.65 +0.26 653.35 46.54
	Var +13.55 [^] +13.55 +12.55 [^] +12.55 +13.55 +12.50

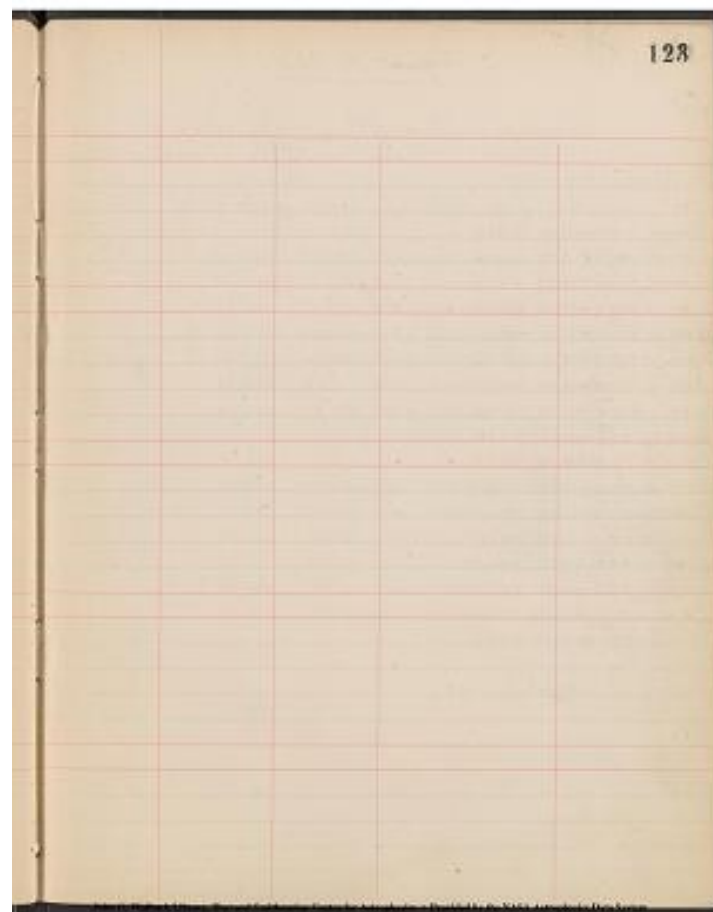
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August 11, 1906.

Var. No. ~~205~~ ~~206~~

Meas. [1st] det. [fros. ?] of Comp. Stars for T Piscis
~~[[strickethrough]]~~ Astr ~~[[/strickethrough]]~~ Austr. $22^{\circ}[[h]]$ $20.5^{\circ}[[m]]$ $-29^{\circ} 35'$
 A.G.C. 30605

Plate B20335

[8 column table]

x | y | x | y | Diff x | Diff y | xx179 | yx179

V +20.50 | +4.60 | +20.50 | +4.60 | .. | .. | .. | ..
 a +0.65 [^][[0.68]] | +10.90 | +0.70 | +10.90 | -19.82 | +6.28 | 3547.78 | 1124.12
 b +34.90 | +11.60 | +34.90 | +11.60 | +14.40 | +6.98 | 2577.60 | 1249.42
 c +19.55 | +11.85 | +19.55 | +11.85 | -0.95 | +7.23 | 170.05 | 1294.17
 d +12.10 | +12.80 | +12.10 | +12.80 | -8.40 | +8.18 | 1503.60 | 1464.22
 e +~~[[strickethrough]]~~ 21 ~~[[/strickethrough]]~~ [^][[31]] .75 | +11.30 | +31.75 |
 +11.30 | +11.25 | +6.68 | 2013.75 | 1195.72
 f +24.05 [^][[24.02]] | +12.85 | +24.00 | +12.85 | +3.52 | +8.23 | 630.08 |
~~[[strickethrough]]~~ 264.92 ~~[[/strickethrough]]~~ [^][[1473.17]]
~~[[strickethrough]]~~ V ~~[[/strickethrough]]~~ g +17.20 | +6.10 | +17.20 | +6.10 | -
 3.30 | +1.48 | 590.70 | 264.92
 Var. +20.50 | +4.60 [^][[~~[[strickethrough]]~~ 4.62 ~~[[/strickethrough]]~~]] | +20.50 |
 +4.65 | .. | .. | .. | ..
 h +19.20 | +7.30 | +19.20 | +7.30 | -1.30 | +2.68 | 232.70 | 479.72
 k +18.60 [^][[18.58]] | +2.70 | +18.55 | +2.70 | -1.92 | -1.92 | 343.68 |
 343.68
 l +24.70 | +0.40 | +24.70 | +0.40 | +4.20 | -4.22 | 751.80 | 755.38
 m +25.35 | +4.75 | +25.35 | +4.75 | +4.85 | +0.13 | 868.15 | 23.27
 n +24.95 | +4.35 [^][[4.32]] | +24.95 | +4.30 | +4.45 | -0.30 | 796.55 | 53.70
 o +~~[[strickethrough]]~~ 7.20 ~~[[/strickethrough]]~~ [^][[20.40]] | +7.20 | +20.40 |
 +7.20 | -0.10 | +2.58 | 17.90 | 461.82
 p +19.25 [^][[19.28]] | +4.95 | +19.30 | +4.95 | -1.22 | +0.33 | 218.38 |
 59.07
 q +20.50 [^][[20.50]] | +4.65 [^][[4.62]] | +20.50 | +4.60 | .. | .. | .. | ..

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 August 11, 1906.
 Plate B20335
 Meas. [1st] det. [fros. ?] of Comp. Stars for T Piscis
~~[[strickethrough]]~~ Astr ~~[[/strickethrough]]~~ Austr. $22^{\circ}[[h]]$ $20.5^{\circ}[[m]]$ $-29^{\circ} 35'$
 A.G.C. 30605

x	y	x	y	Diff x	Diff y	xx179	yx179
V	+20.50	+4.60	+20.50	+4.60	..	..	..
a	+0.65 [^] [[0.68]]	+10.90	+0.70	+10.90	-19.82	+6.28	3547.78 | 1124.12
b	+34.90	+11.60	+34.90	+11.60	+14.40	+6.98	2577.60 | 1249.42
c	+19.55	+11.85	+19.55	+11.85	-0.95	+7.23	170.05 | 1294.17
d	+12.10	+12.80	+12.10	+12.80	-8.40	+8.18	1503.60 | 1464.22
e	+ [[strickethrough]] 21 [[/strickethrough]] [^] [[31]] .75	+11.30	+31.75				
f	+24.05 [^] [[24.02]]	+12.85	+24.00	+12.85	+3.52	+8.23	630.08 |
g	[[strickethrough]] 264.92 [[/strickethrough]] [^] [[1473.17]]						
h	+19.20	+7.30	+19.20	+7.30	-1.30	+2.68	232.70 | 479.72
i	+24.70	+0.40	+24.70	+0.40	+4.20	-4.22	751.80 | 755.38
j	+25.35	+4.75	+25.35	+4.75	+4.85	+0.13	868.15 | 23.27
k	+24.95	+4.35 [^] [[4.32]]	+24.95	+4.30	+4.45	-0.30	796.55 | 53.70
l	+ [[strickethrough]] 7.20 [[/strickethrough]] [^] [[20.40]]	+7.20	+20.40				
m	+7.20	-0.10	+2.58	17.90			461.82
n	+19.25 [^] [[19.28]]	+4.95	+19.30	+4.95	-1.22	+0.33	218.38
o	59.07						
p	+20.50 [^] [[20.50]]	+4.65 [^] [[4.62]]	+20.50	+4.60

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Var. No. 206
~~206~~207

August 11, 1906.

Measures to pos. of [^][Comp. stars off] Lacertae BD + 39° 4851
 22[^][h] 24.7[^][m] + 39° 48' (1900)

Plate I 15388

[9 columned table]
x	y	x	y	Diff x	Diff y	x × 163	y × 163			
var	+11.35	+11.15	+11.40	+11.15			
a	+17.65[^][17.62]	+8.60	+17.60	+8.60	+6.24	-2.55	1017.12	415.65		
b	+2.10	+16.35	+2.10	+16.35	-9.28	+5.20	1512.64	847.60		
c	+9.30[^][9.28]	+1.85	+9.25	+1.85	-2.10	-9.30	342.30	1515.90		
d	+4.70	+14.90	+4.70	+14.90	-6.68	+3.75	1088.84	611.25		
e	+18.95	+6.60[^][6.62]	+18.95	+6.65	+7.57	-4.53	1233.91	738.39		
f	+18.95	+4.35	+18.75	+4.35	+7.37	-6.80	1201.31	1108.40		
g	+8.30	+16.~~18~~	+8.30	+16.~~18~~	+8.30	+16.75	-3.08	+5.63	502.04	917.69
h	+13.65	+11.70	+13.65	+11.70	+2.27	+0.55	370.01	89.65		
k	+7.55	+7.90	+7.55	+7.90	-3.83	-3.25	624.29	529.75		
var	+11.40	+11.15	+11.40	+11.15			
l	+14.05[^][14.08]	+10.05[^][10.02]	+14.10	+10.00	+2.70	-1.13	440.10	184.19		
m	+14.25	+9.10	+14.25	+9.10	+2.87	-2.05	467.81	334.15		
n	+8.15	+9.55[^][9.58]	+8.15	+9.60	-3.23	-1.57	526.49	255.91		
o	+12.90	+10.40	+12.90	+10.40	+1.52	-0.75	247.76	122.25		
p	+10.80	+10.40	+10.80	+10.40	-0.58	-0.75	94.54	122.25		
q	+9.95	+10.50[^][10.48]	+9.95	+10.45	-1.43	-0.67	233.09	109.21		
r	+11.20	+11.80[^][11.78]	+11.20	+11.75	-0.18	+0.63	29.34	102.69		
s	+9.80	+12.00	+9.80	+12.00	-1.58	+0.85	257.54	138.55		
t	+11.30	+11.40	+11.30	+11.40	-0.08	+0.25	13.04	40.75		
u	+11.85	+11.50	+11.85	+11.50	+0.47	+0.35	76.61	57.05		
var	+11.40[^][11.38]	+11.15[^][11.15]	+11.35	+11.15			

[3 columned table]
 |Final Seq.|a|b|c|d|e|f|g|h|k|l|m|n|o|p|q|r|s|t|
 |u|
 |Early|a|b|c|d|e|...|m|n|~~p~~|~~q~~|~~r~~|~~s~~|~~t~~|

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 Var. No. 206
 August 11, 1906.
 22^h 24.7^m + 39° 48' (1900)
 Lacertae BD + 39° 4851
 Plate I 15388

x	y	Diff x	Diff y	x × 163	y × 163
var	+11.35	+11.15	+11.40	+11.15	
a	+17.65	+17.62	+8.60	+17.60	+8.60
b	+2.10	+16.35	+2.10	+16.35	-9.28
c	+9.30	+9.28	+1.85	+9.25	+1.85
d	+4.70	+14.90	+4.70	+14.90	-6.68
e	+18.95	+6.60	+18.95	+6.65	+7.57
f	+18.95	+4.35	+18.75	+4.35	+7.37
g	+8.30	+16.	+8.30	+16.	+8.30
h	+13.65	+11.70	+13.65	+11.70	+2.27
k	+7.55	+7.90	+7.55	+7.90	-3.83
var	+11.40	+11.15	+11.40	+11.15	
l	+14.05	+14.08	+10.05	+10.02	+14.10
m	+14.25	+9.10	+14.25	+9.10	+2.87
n	+8.15	+9.55	+8.15	+9.60	-3.23
o	+12.90	+10.40	+12.90	+10.40	+1.52
p	+10.80	+10.40	+10.80	+10.40	-0.58
q	+9.95	+10.50	+9.95	+10.45	-1.43
r	+11.20	+11.80	+11.20	+11.75	-0.18
s	+9.80	+12.00	+9.80	+12.00	-1.58
t	+11.30	+11.40	+11.30	+11.40	-0.08
u	+11.85	+11.50	+11.85	+11.50	+0.47
var	+11.40	+11.38	+11.15	+11.15	

Final Seq. a b c d e f g h k l m n o p q r s t u
 Early a b c d e . . . m n ~~p~~ ~~q~~ ~~r~~ ~~s~~ ~~t~~

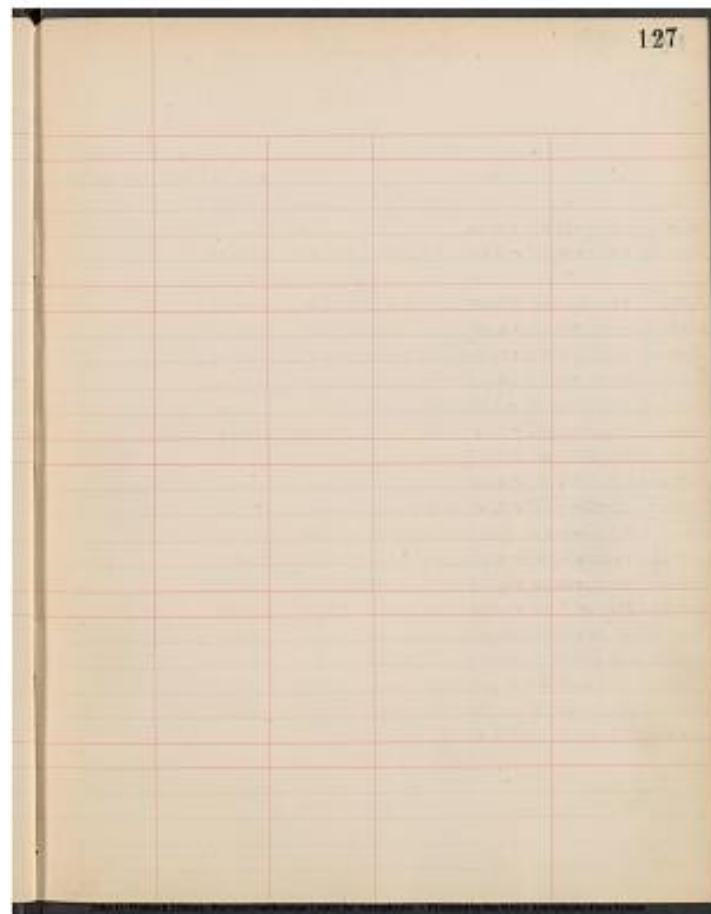
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Var. No. 208

August 11, 1906.

Meas. to det. pos. of Comp. Stars of - +40° 4920
22^h 45.4^m +40° 30' (1900)

Plate I 18630.

[9 columned table]

| x|y|x|y|Diff x|Diff y|x × 163|y × 163|

-----|-----|-----|-----|

|var|+16.10|+16.20|+16.10|+16.20|...|...|

|a|+14.80^h[[14.82]]+4.30^m[[4.32]]|+14.85|+4.35|-1.28|-
11.86|208.64|1933.18|

23.68

|b|+23.70^h[[23.68]]|+[[~~23.68~~]]|22.35|+23.65|+22.
35|+7.58|+6.17|-1235.54|1005.71|

|c|+23.20|+[[~~23.20~~]]|21.70|+23.20|+21.70|+7.1|+
5.52|1157.30|899.76|

|d|+6.90^h[[6.88]]|+16.85^m[[16.82]]|+6.85|+16.80|-
9.22|+0.64|1502.86|104.32|

|e|+3.15|+21.65|+3.15|+21.65|-12.95|+5.47|2110.85|8891.61|
19.12

|f|+19.15^h[[19.12]]|+16.70^m|+19.10|+16.70|+3.02|+0.52|492.26|84.76|

|g|+14.85^h[[14.88]]|+14.40^m[[14.38]]|+14.90|+14.35|-1.22|-
1.80|198.86|293.40|

|h|+16.25|+16.25|+16.25|+16.25|+0.15|+0.07|24.45|11.41|

|var|+16.10|+16.20|+16.10|+16.15|...|...|

|k|+12.30^h[[12.28]]|+14.50^m[[14.48]]|+12.25|+14.45|-3.82|-
1.70|622.66|277.10|

|l|+11.10^h[[11.08]]|+17.30^m|+11.05|+17.30|-5.02|+1.12|818.26|182.56|

|m|+16.20^h[[16.18]]|+14.30^m[[14.28]]|+16.15|+14.25|+0.08|-
1.90|13.04|309.70|

|n|+14.55^h[[14.58]]|+15.20^m|+14.60|+15.20|-1.52|-0.98|247.76|159.74|

|o|+17.25|+16.70|+17.25|+16.70|+1.15|+0.52|187.45|84.76|

|p|+16.45|+15.35^m[[15.38]]|+16.45|+15.40|+0.35|-0.80|57.05|130.40|

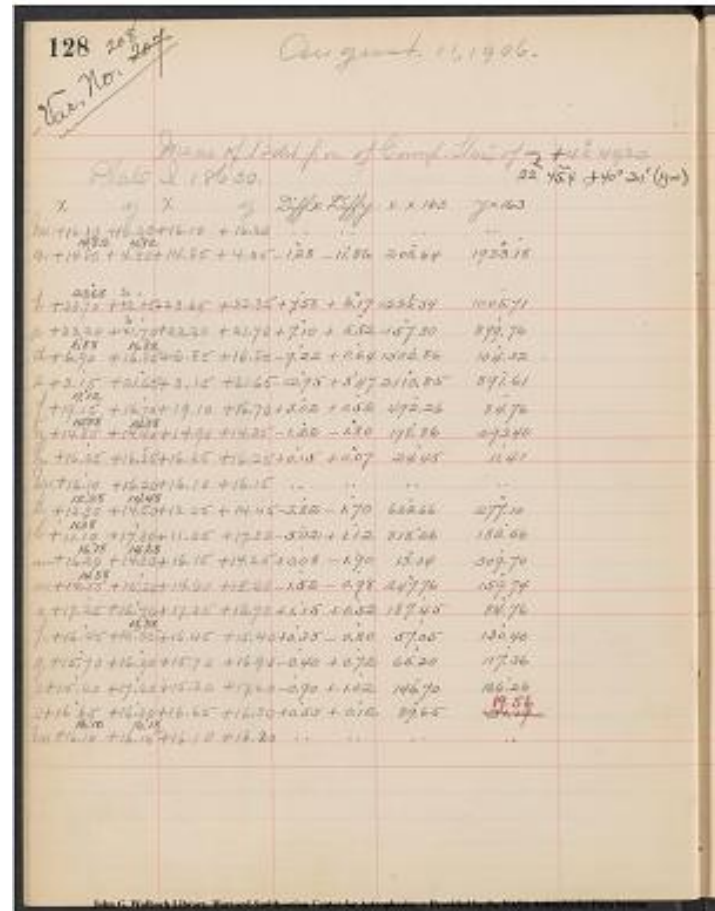
|q|+15.70|+16.90|+15.70|+16.90|-0.40|+0.72|65.20|117.36|

|r|+15.20|+17.20|+15.20|+17.20|-0.90|+1.02|146.70|166.26|

|s|+16.65|+16.30|+16.65|+16.30|+0.55|+0.12|89.65|[[~~89.65~~]]|21.1
9|[[~~19.56~~]]|19.56|

|var|+16.10^h[[16.10]]|+16.15^m[[16.18]]|+16.10|+16.20|...|...|

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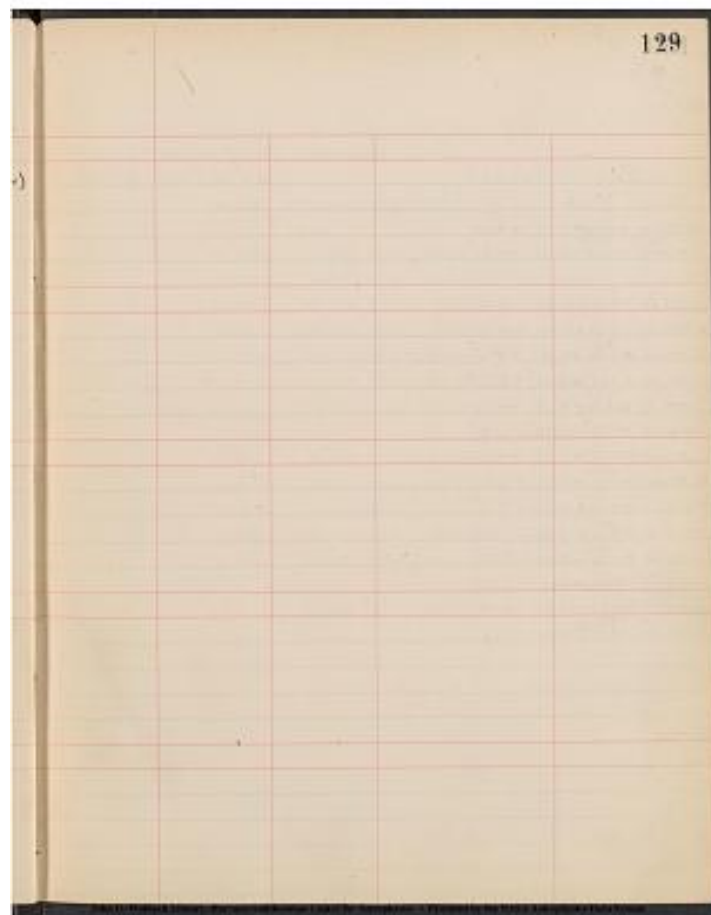
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Spectra #15
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August 11, 1906.

Var. No ~~208~~ 209

Meas. to det. pos. of Comp. Stars for - Piscis Austr. C.D.M. -25° 16142.
Plate B 26066 22^h 46.7^m -25° 49' (1900)

[[9 columned table]]

| x|y|x|y|Diff x|Diff y|x×179|y×179|

-----|-----|-----|-----|

|Var|+15.90|+9.30|+15.90|+9.30|...|...|

|a|+20.30^h[[20.32]]|+12.35^m[[12.38]]|+20.35|+12.40|+4.42|+3.06|791.18|547.74|

|b|+18.80|+5.10|+18.80|+5.10|+2.90|-4.22|519.10|755.38|

|c|+19.20|+11.25|+19.20|+11.25|+3.30|+1.93|590.70|345.47|

|d|+18.20|+13.40|+18.20|+13.40|+2.30|+4.08|411.70|730.32|

|e|+0.75|+12.60^h[[12.62]]|+0.75|+12.65|-15.15|+3.30|2711.85|590.70|

|f|+17.70|+3.65|+17.70|+3.65|+1.80|-5.67|322.20|1014.93|

|g|+16.35|+13.50^h[[13.48]]|+16.35|+13.45|+0.45|+4.16|80.55|744.64|

|Var|+15.90|+9.30|+15.90|+9.35|...|...|

|h|+13.20^h[[13.18]]|+5.25|+13.15|+5.25|-2.72|-4.07|486.88|728.53|

|k|+12.90|+4.75^h[[4.78]]|+12.90|+4.80|-3.00|-4.54|537.00|812.66|

|l|+17.60|+7.90|+17.60|+7.90|+1.70|-1.42|304.30|254.18|

|m|+13.35|+9.10^h[[9.08]]|+13.35|+9.05|-2.55|-0.24|456.45|42.96|

|n|+15.40|+7.75|+15.40|+7.75|-0.50|-1.57|89.50|281.03|

|o|+14.05|+9.35|+14.05|+9.35|-1.85|+0.03|331.15|5.37|

|p|+14.25^h[[14.28]]|+10.40|+14.30|+10.40|-1.62|+1.08|289.98|193.32|

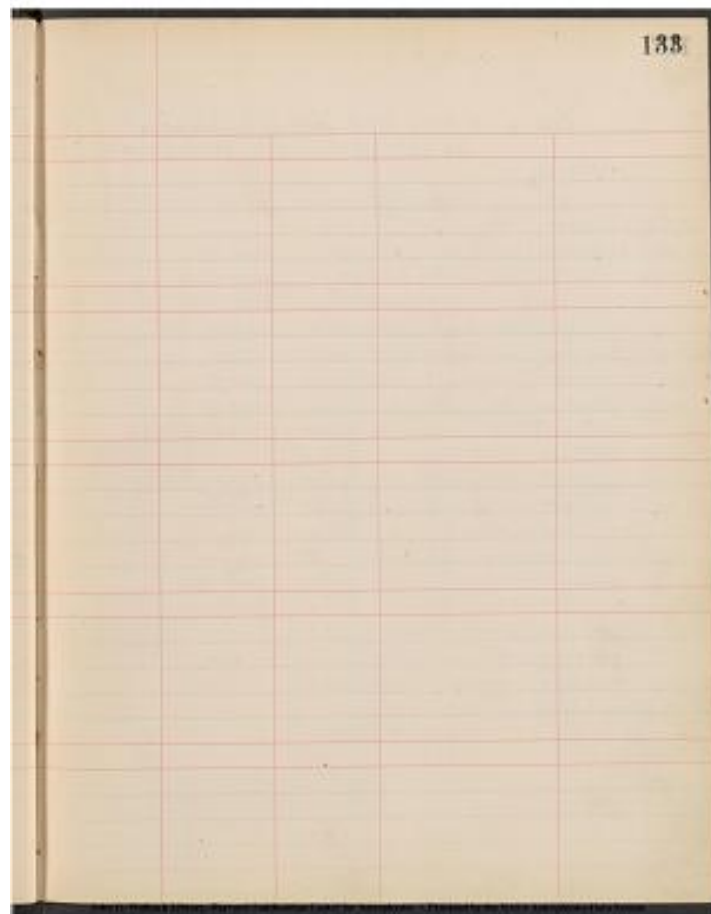
|Var.|+15.90^h[[15.90]]|+9.35^m[[9.32]]|+15.90|+9.35|...|...|

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Sept. 13, 1906

Meas to det. pos. of Comp. Stars of delta Phoenicis

23 ^[[h]] 53.9 ^[[m]] -57° 8 (1900) AGC 32334

Plate B 27601

[[9 column table]]

| x | y | x | y | Diff x | Diff y | x×179 | y×179

---|---|---|---|---|---|---|---

Var. | +16.45 | +15.55 | +16.45 | +15.55 | .. | .. | .. | ..

a | +14.80 | 14.78 | +1.40 | +14.75 | +1.40 | -1.67 | -14.17 | 298.93 |

2536.43

b | +13.90 | +3.15 | +13.90 | +3.15 | -2.55 | -12.42 | 456.45 | 2223.18

c | +9.90 | +4.15 | +9.90 | +4.15 | -6.55 | -11.42 | 472.45 | 2044.18

d | +31.90 | +9.85 | +31.90 | +9.85 | +15.45 | -5.72 | 2765.55 | 1023.88

e | +24.80 | +16.65 | 16.62 | +24.80 | +16.60 | +8.35 | +1.05 | 1494.65 |

187.95

f | +26.40 | 26.38 | +11.30 | +26.35 | +11.30 | +9.93 | -4.27 | 1777.47 |

764.33

g | +15.70 | +7.10 | +15.70 | +7.10 | -0.75 | -8.47 | 134.25 | 1516.13

h | +0.70 | 0.68 | +4.85 | +0.65 | +4.85 | -15.77 | -10.72 | 2822.83 |

1918.88

Var. | +16.45 | +15.55 | +16.45 | +15.55 | .. | .. | .. | ..

k | +25.75 | 25.72 | +8.90 | +25.70 | +8.90 | +9.27 | -6.67 | 1659.33 |

1193.93

l | +16.90 | +15.80 | 15.82 | +16.90 | +15.85 | +0.45 | +0.2 | ~~[[strikethrough]]~~3 ~~[[/strikethrough]]~~ 5 | 80.55 | ~~[[strikethrough]]~~ 41.17 ~~[[/strikethrough]]~~

44.75

m | +21.15 | +14.35 | 14.38 | +21.15 | +14.40 | +4.70 | -1.19 | 841.30 |

213.01

n | +19.90 | +15.10 | 15.12 | +19.90 | +15.15 | +3.45 | -0.45 | 617.55 |

80.55

o | +16.10 | +13.75 | +16.10 | +13.75 | -0.35 | -1.82 | 62.65 | 325.78

p | +17.85 | +14.80 | +17.85 | +14.80 | +1.40 | -0.77 | 250.60 | 137.83

q | +17.15 | +14.00 | +17.15 | +14.00 | +0.70 | -1.57 | 125.30 | 281.03

r | ~~[[strikethrough]]~~ +17.90 ~~[[/strikethrough]]~~ +17.85 | ~~[[strikethrough]]~~+15.60 ~~[[/strikethrough]]~~ +16.05 | ~~[[strikethrough]]~~ +17.90~~[[/strikethrough]]~~ +17.85 | ~~[[strikethrough]]~~ +15.60 ~~[[/strikethrough]]~~

+16.05 | +1.40 | +0.48 | 250.60 | 85.92

s | ~~[[strikethrough]]~~ +19.00 ~~[[/strikethrough]]~~ 18.50 | ~~[[strikethrough]]~~+15.25 ~~[[/strikethrough]]~~ 15.45 15.42 | ~~[[strikethrough]]~~ +19.00~~[[/strikethrough]]~~ +18.50 | ~~[[strikethrough]]~~ +15.25 ~~[[/strikethrough]]~~

+15.40 | +2.05 | -0.15 | 366.95 | 26.85

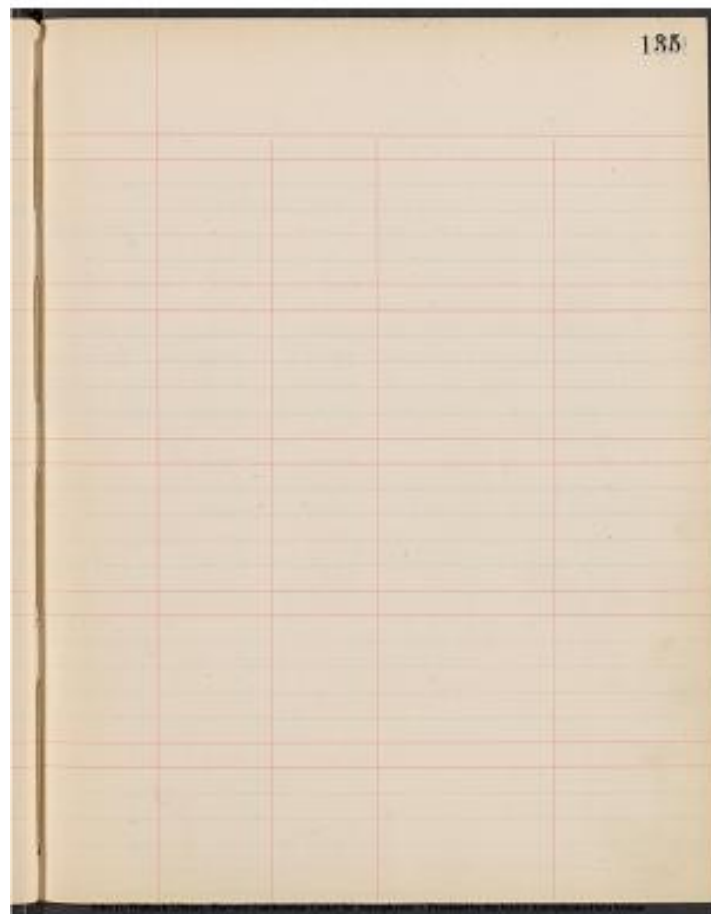
Var | +16.45 | 16.45 | +15.60 | 15.57 | +16.45 | +15.60 | .. | .. | .. | ..

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May 25, 1907.

Meas to det pos. of comp. stars for
-Coronae RA 15 ^h 52.2 ^m Dec. & 29° 32' (1900).

Plate I 32996.

[[11 column table]]

| x | y | x | y | Diff x | Diff y | x×163 | y×163 | DM. | R.A. [[subscript]]

1855 [[subscript]]

--- | --- | --- | --- | --- | --- | --- | --- | --- | ---

var. | +13.20 | +1.70 | +13.20 | +1.75 | .. | .. | .. | .. |

a | +0.40 0.38 | +6.75 | +0.35 | +6.7 ~~0~~ ~~5~~| -12.83 | +5.03 | 2091.29 | 819.89 | +29° 27' 34" | 15 ^h 47 ^m 38.7 ^s

b | +24.30 | +4.65 4.62 | +24.30 | +4.60 | +11.09 | +2.90 | 1807.67 |

472.70 | +29 27' 46" | 15 52 37.0

c | +3.85 3.82 | +5.60 | +3.80 | +5.60 | -9.39 | +3.88 | 1530.57 | 632.44 |

+29 27' 36" | 15 48 20.5

d | +17.35 | +1.95 | +17.35 | +1.95 | +4.14 | +0.23 | 674.82 | 37.49 | +29 27' 42" | 15 51 8.0

e | +11.55 11.58 | +0.70 | +11.60 | +0.70 | -1.63 | -1.02 | 265.69 | 166.26 | +29 27' 40" | 15 49 55.5

f | +12.65 | +5.55 | +12.65 | +5.55 | -0.56 | +3.83 | 91.28 | 624.29 |

var | +13.25 | +1.75 | +13.20 | +1.70 | .. | .. | .. | .. |

g | + ~~11.60~~ ~~10.90~~ | + ~~10.90~~ | + ~~10.90~~ | + ~~10.90~~ | + ~~10.90~~ | + ~~10.90~~ | + ~~10.90~~ | + ~~10.90~~ |

h | +11.30 | +0.65 | +11.30 | +0.65 | -1.91 | -1.07 | 311.33 | 174.41 |

k | +12.30 12.28 | +1.75 | +12.25 | +1.75 | -0.93 | +0.03 | 151.59 | 4.89 |

l | +7.60 | +3.40 3.42 | +7.60 | +3.45 | -5.61 | +1.70 | 914.43 | 277.10 |

m | +15.70 15.72 | +0.65 0.68 | +15.75 | +0.70 | +2.51 | -1.04 | 409.13 | 169.52 |

n | +14.35 | +0.30 0.28 | +14.35 | +0.25 | +1.14 | -1.44 | 185.82 | 234.72 |

var. | +13.20 13.21 | +1.70 1.72 | +13.20 | +1.70 | .. | .. | .. | .. |

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May 25, 1907.

Meas to det pos. of comp. stars for
-Coronae RA 15 ^h 52.2 ^m Dec. & 29° 32' (1900).

Plate I 32996.

x	y	Diff x	Diff y	x×163	y×163	DM.	R.A.
1855							
---	---	---	---	---	---	---	---
var.	+13.20	+1.70	+13.20	+1.75	..	..	..
a	+0.40 0.38	+6.75	+0.35	+6.7	0	5	
	-12.83	+5.03	2091.29	819.89	+29° 27' 34"	15 ^h 47 ^m 38.7 ^s	
b	+24.30	+4.65 4.62	+24.30	+4.60	+11.09	+2.90	1807.67 |
	472.70	+29 27' 46"	15 52 37.0				
c	+3.85 3.82	+5.60	+3.80	+5.60	-9.39	+3.88	1530.57 | 632.44 |
	+29 27' 36"	15 48 20.5					
d	+17.35	+1.95	+17.35	+1.95	+4.14	+0.23	674.82 | 37.49 | +29 27' 42" | 15 51 8.0
e	+11.55 11.58	+0.70	+11.60	+0.70	-1.63	-1.02	265.69 | 166.26 | +29 27' 40" | 15 49 55.5
f	+12.65	+5.55	+12.65	+5.55	-0.56	+3.83	91.28 | 624.29 |
	var	+13.25	+1.75	+13.20	+1.70	..	..
g	+ 11.60	+ 10.90	+ 10.90	+ 10.90	+ 10.90	+ 10.90	+ 10.90
	h	+11.30	+0.65	+11.30	+0.65	-1.91	-1.07
	k	+12.30 12.28	+1.75	+12.25	+1.75	-0.93	+0.03
	l	+7.60	+3.40 3.42	+7.60	+3.45	-5.61	+1.70
	m	+15.70 15.72	+0.65 0.68	+15.75	+0.70	+2.51	-1.04
	n	+14.35	+0.30 0.28	+14.35	+0.25	+1.14	-1.44
	var.	+13.20 13.21	+1.70 1.72	+13.20	+1.70

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|||||||1.03623
|||||||[[equation]]1.09767

```
Dec.|Magn.|
|||||Diff.x
+29°53'.9 8.1|a|b|c|d|e
+29.47.0 9.3|-12.83|+11.09|-9.39|+4.14|
-1.63|
+29.51.5 9.2|1.10823|1.04493|0.97267|
0.61700|0.21219|
+29.40.2 9.5|1.09767|1.09767|1.09767|
1.09767|1.09767|
+29.36.4 9.4|[equation]]2.20590|2.1426|2.07034|1.71467|1.30986|
+29
45.8|Mean|160.66^[[s]]|138.87^[[s]]|117.58^[[s]]|51.841^[[s]]|20.411^[[s]]|
|||||2^[[m]]|40.66^[[s]]|2^[[m]]|18.87^[[s]]|1^[[m]]|57.58^[[s]]|||||
|||||Diff.yx 163
(a)819.89|(b)472.70|(c)632.44|(d)37.49|(e)166.26|
13°39.89'|7°52.70'|10°32.44'|2°46.26'|
(a)15^[[h]]47^[[m]]38.7^[[s]]|+29°53'.9|
||2|40.7|||13.7|
|[equation]]15|50|19.4|29|40.2|
(b)15^[[h]]52^[[m]]37.0^[[s]]|+29°47'.0|
||2|18.9|||7.9|
|[equation]]15|50|18.1|29|39.1|
(c)15^[[h]]48^[[m]]20.5^[[s]]|+29°51'.5|
||1|57.6|||10.5|
|[equation]]15|50|18.1|29|41.0|
(d)15^[[h]]51^[[m]]80^[[s]]|+29°40'.2|
|||||51.8||||0.6|
|[equation]]15|50|16.2|29|39.6|
(e)15^[[h]]49^[[m]]55.5^[[s]]|+29°36'.4|
|||||20.4||||2.8|
|[equation]]15|50|15.9|29|39.2|
Mean=15^[[h]]50^[[m]]17.54^[[s]]|+29°39'.8|(1855)
```

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November 28, 1907.

For Professor A. Searle. required for Restenpart.
 Meas. of positions, with photographic scale in meas. fitted into 2 inch
 eyepiece, to determine relation positions of the stars
 $+51^\circ 983, 984, 985. 4^h$
 Plate A 7489. W.P.F. Obs.

[[9 columned table]]

+51° x|y|x|y|Mean x|Mean y|x|y|

|---|---|---|---|---|---|

983|00|00|+0.50|0.00|0.00|0.00| | |

984|[[[strikethrough]]]130|[[[strikethrough]]]0.25|-1.30|+0.75|-

1.35|+0.25|1.32|[[[subscript]]]6|[[[subscript]]]15|-79|

985|+0.15|+0.55|+0.60|+0.60|+0.12|.58|[[[subscript]]]6

348|[[[subscript]]]7|+35|

Exam. of $51^\circ 2325$ to det. whether single or double

Plate A 5314. E.C.P. obs.

Diam. of image about $10''$. No elongation exceeding $2''$ is perceptible.

[[6 columned table]]

Plate|Date|Exp.|Pl.|Date|Exp.|

B1984|'87, 12, 1| AC 6116|'05, 3, 4|53^[[[m]]]

AC 6712|'05, 9, 22|60^[[[m]]] AC 6153|'05, 3, 11|41|

AC 6719|'05, 9, 23|60| AC 6247|'05, 4, 2|76|

AC 6768|'05, 10, 3|67| AC 5469|'04, 11, 1|64|

AC 6788|'05, 10, 5|23| AC 5526|'04, 11, 14|66|

AC 6792|'05, 10, 6|62| AC 5389|'14, 10, 17|60|

AC 5804|'05, 1, 5|101| | |

AC 5832|'05, 1, 14|68| | |

AC 7151|'06, 1, 7|71| | |

AC 7205|'06, 1, 25|55| | |

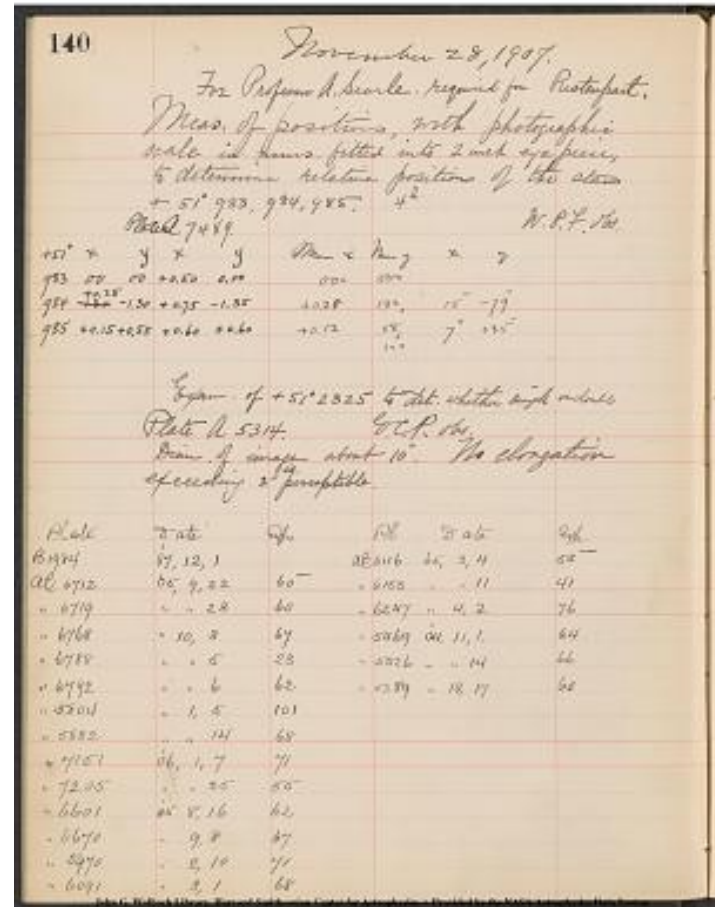
AC 6601|'05, 8, 16|62| | |

AC 6670|'05, 9, 8|67| | |

AC 5970|'05, 2, 10|71| | |

AC 6091|'05, 3, 1|68| | |

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November 30, 1907

[[?]] of present plate for image of [[eros?]]

W.P. [[T?]]

Plate. Date of obj. R.A Dec [[Ejoch?]] Rem.

I 35021 Nov. 25, 1907 [[eros?]] 23^h 38.8 + 29° 56' 1855, [[?]]

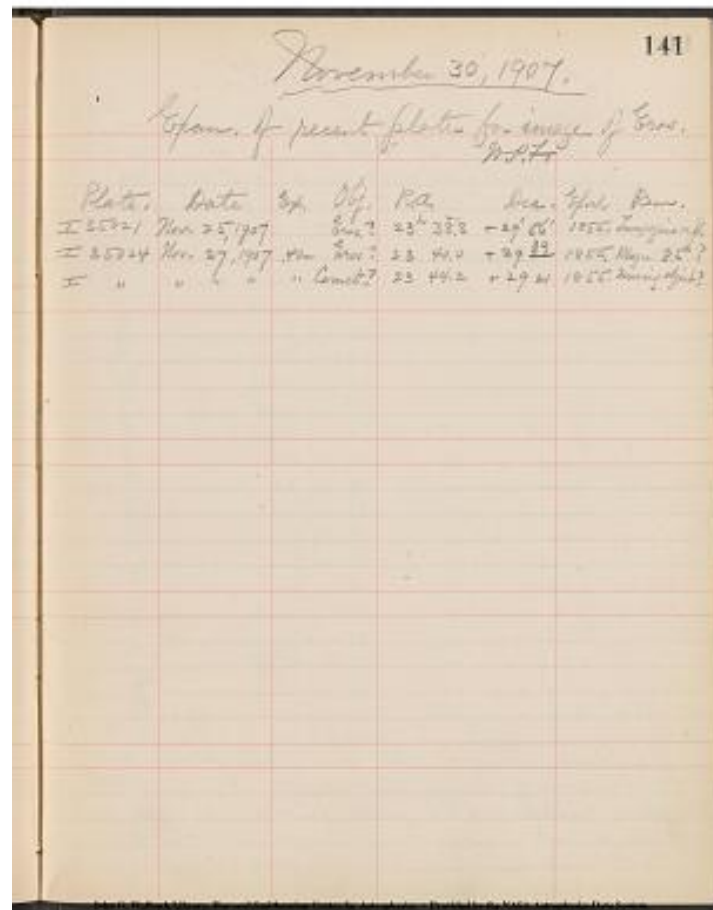
I 35024 Nov. 25, 1907 .40 [[eros?]] 23 40.0 +29 30 1855, [[?]]. 85 ?

I " " " " [[Cement?]] 23 44.2 +29 21 1855. moving object?

[[Bottom of Page]]

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December 17, 1907

Exam. of Plates for BD +27° 4172. CIH
See postal of H. H. Turner Dec. 5, 1907.
Comp. stars a Cl.G? = 26° 4268 8.6 G Cl.F? = 26° 4274 9.0

(Cl.F?, C=27° 4177 9.0 nl e +27° 4174 21 42 54.6
+2~~9~~ 29.4 9.5

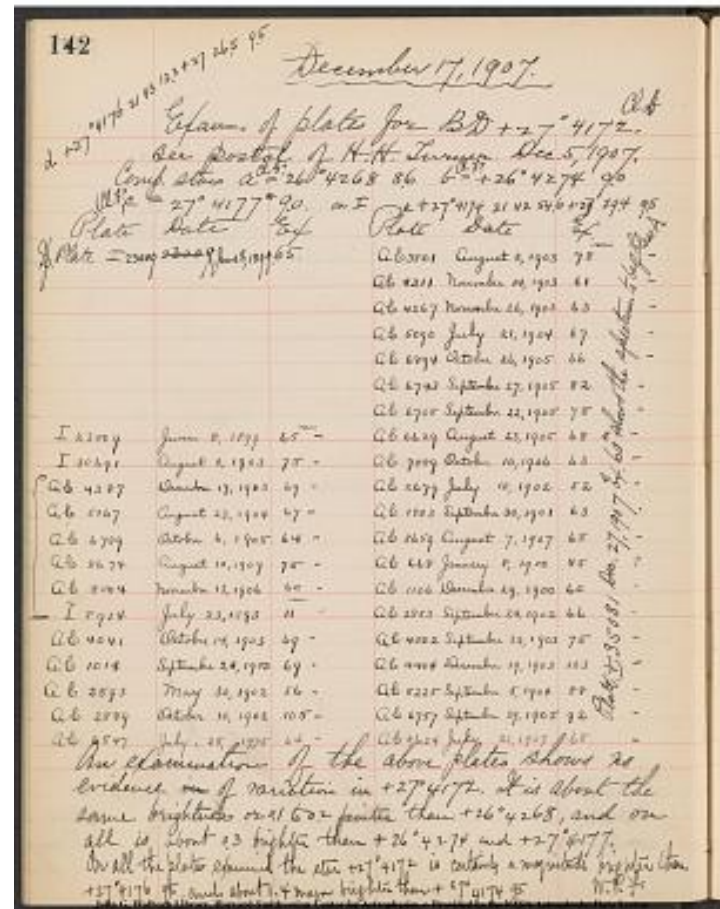
d +27° 4176 21 43 13.3 +27 26.5 9.5

[[7 column table]]

Plate	Date	Ex	Plate	Date	Ex	
Sp. Plate 1	23009	June 8, 1899	23009	June 8, 1899		
	1899	65	AC3801	August 3, 1903	78	
			AC4211	November 14, 1903	61	
			AC4267	November 26, 1903	63	
			AC5090	July 21, 1904	67	
			AC6894	October 26, 1905	66	
			AC6743	September 27, 1905	82	
			AC6708	September 22, 1905	78	
	23009	June 8, 1899	65	AC6629	August 23, 1905	68
	130691	August 1, 1903	75	AC7889	October 10, 1906	63
	18914	July 23, 1893	11	AC2853	September 24, 1902	66
	AC4387	December 17, 1903	69	AC2679	July 10, 1902	52
	AC5167	August 23, 1904	67	AC1803	September 30, 1901	63
	AC6789	October 6, 1905	64	AC8659	August 7, 1907	68
	AC8674	August 10, 1907	75	AC668	January 8, 1900	85
	AC8004	November 13, 1906	60	AC1106	December 29, 1900	60
	AC4041	October 14, 1903	69	AC4002	September 28, 1903	75
	AC1014	September 24, 1900	69	AC4404	December 19, 1903	103
	AC2593	May 30, 1902	56	AC5225	September 29, 1905	88
	AC2889	October 10, 1902	105	AC6757	September 29, 1905	92
	AC6547	July 25, 1905	64	AC8624	July 21, 1907	68

Plate ±35081 Dec. 27, 1907 Ex. 60^h shows the spectrum to be of Class A.

An examination of the above plates shows no evidence of variation in +27° 4172. It is about the same brightness or 0.1 to 0.2 fainter than +26° 4268, and on all is about 0.3 brighter than +26° 4274 and +27° 4177. On all the plates examined the star +27° 4172 is certainly a magnitude brighter than +27° 4176 9.5, and about 1.4 magn. brighter than +27° 4174 95 W.P.F.

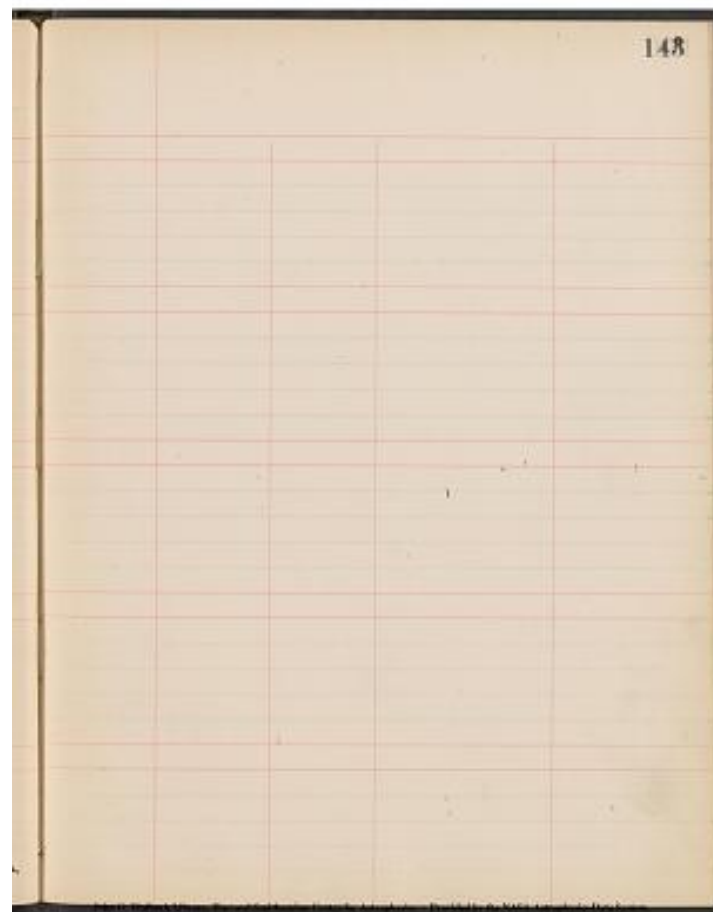


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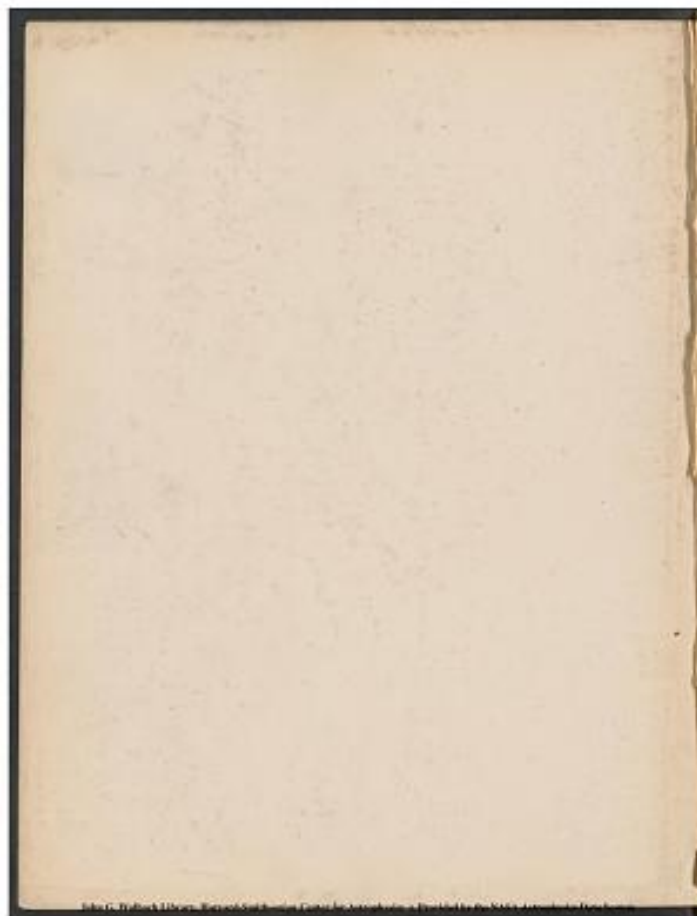
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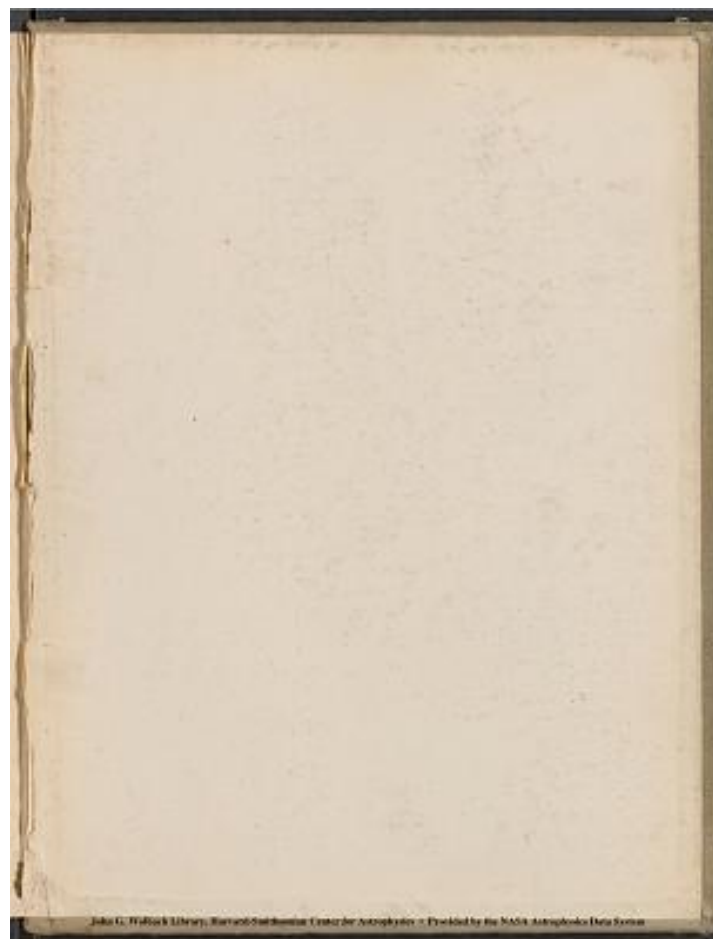
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Smithsonian Institution

Harvard-Smithsonian Center for Astrophysics

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