



Smithsonian Institution

Harvard-Smithsonian Center for Astrophysics

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20

Extracted on Aug-29-2022 02:37:24

The Smithsonian Institution thanks all digital volunteers that transcribed and reviewed this material. Your work enriches Smithsonian collections, making them available to anyone with an interest in using them.

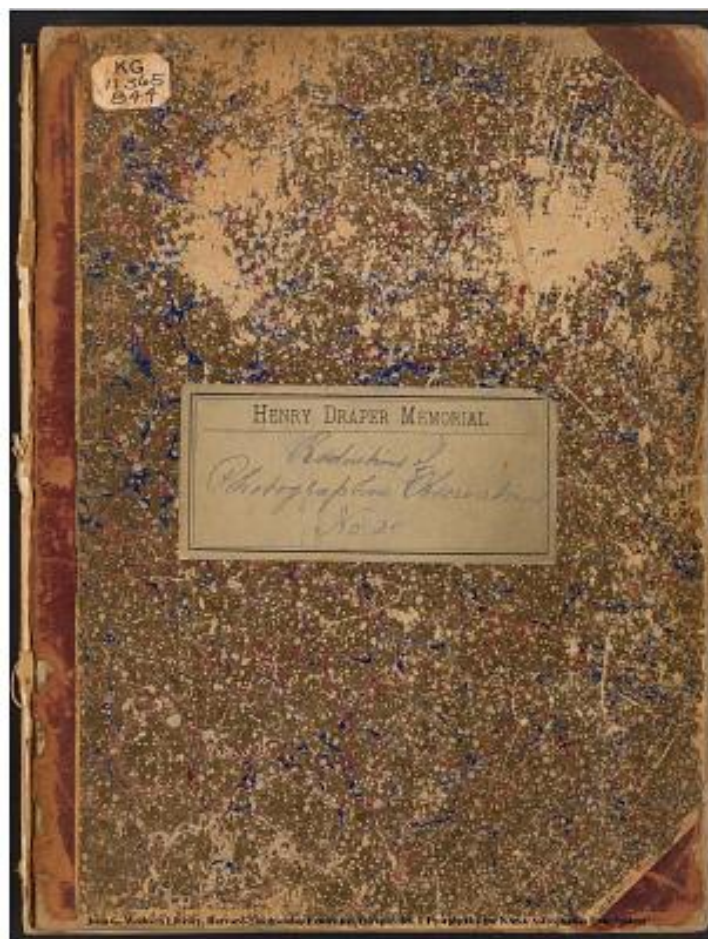
The Smithsonian Institution (the "Smithsonian") provides the content on this website (transcription.si.edu), other Smithsonian websites, and third-party sites on which it maintains a presence ("SI Websites") in support of its mission for the "increase and diffusion of knowledge." The Smithsonian invites visitors to use its online content for personal, educational and other non-commercial purposes. By using this website, you accept and agree to abide by the [following terms](#).

- If sharing the material in personal and educational contexts, please cite the Harvard-Smithsonian Center for Astrophysics as source of the content and the project title as provided at the top of the document. Include the accession number or collection name; when possible, link to the Harvard-Smithsonian Center for Astrophysics website.
- If you wish to use this material in a for-profit publication, exhibition, or online project, please contact Harvard-Smithsonian Center for Astrophysics or transcribe@si.edu

For more information on this project and related material, contact the Harvard-Smithsonian Center for Astrophysics. [See this project](#) and other collections in the Smithsonian Transcription Center.

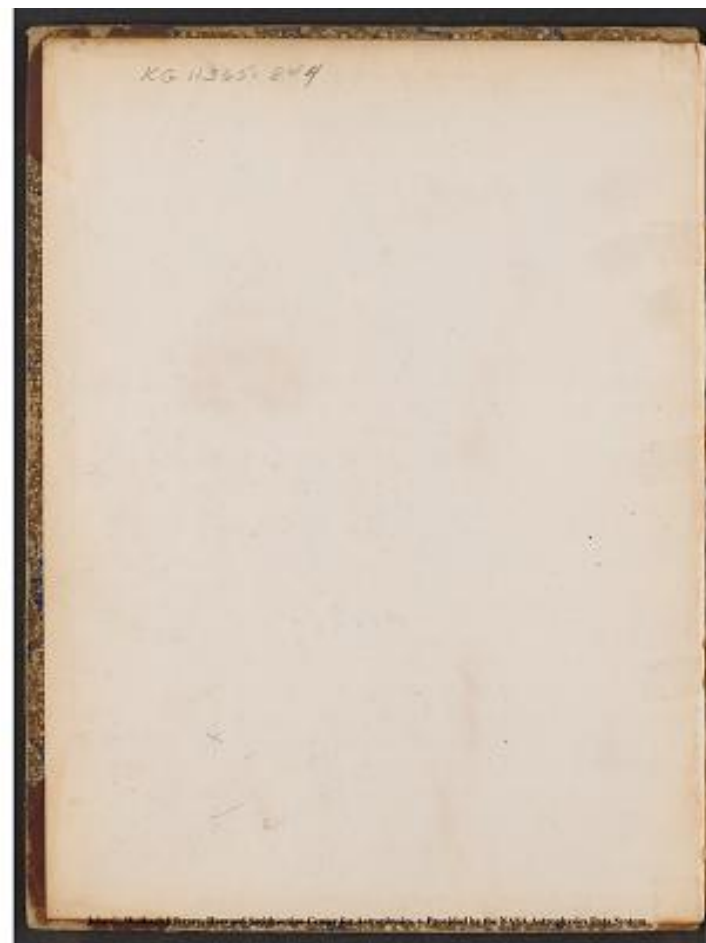
KG
11365
844

Henry Draper Memorial
Reductions of
Photographic Observations
No. 20.



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

KG 11365.844



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

plates to be reduced.

[L column]

Book 20 p.4.

V=7.7}plate 1373

H=50.4}17^h.

V=17.6}plate 1460

H=51.5}17^h.

V=27.7}plate 1419

H=51.4}17^h. Correc. 1.00

V=32.4}plate 1321

H=71.2}17^h sigma 18^h. Correc. 1.00

V=12.4}plate 1535

H=68.8}17^h.

V=22.6}plate 1443.

H=76.7}17^h sigma 18^h.

V=7.6}plate 1413

H=90.7}17^h sigma 18^h.

[L column]

[R column]

Sept. 19, 1887.

V=7.7}plate 1633

H=90.4}17^h sigma 18^h.

~~V~~

V=17.6}plate 1455

H=90.6}17^h sigma 18^h.

V=32.6}plate 1578

H=90.9}17^h sigma 18 Correc. 1.00

V=12.8}plate 1565

H=88.4}16^h

V=12.8}plate 1466

H=53.0}18^h

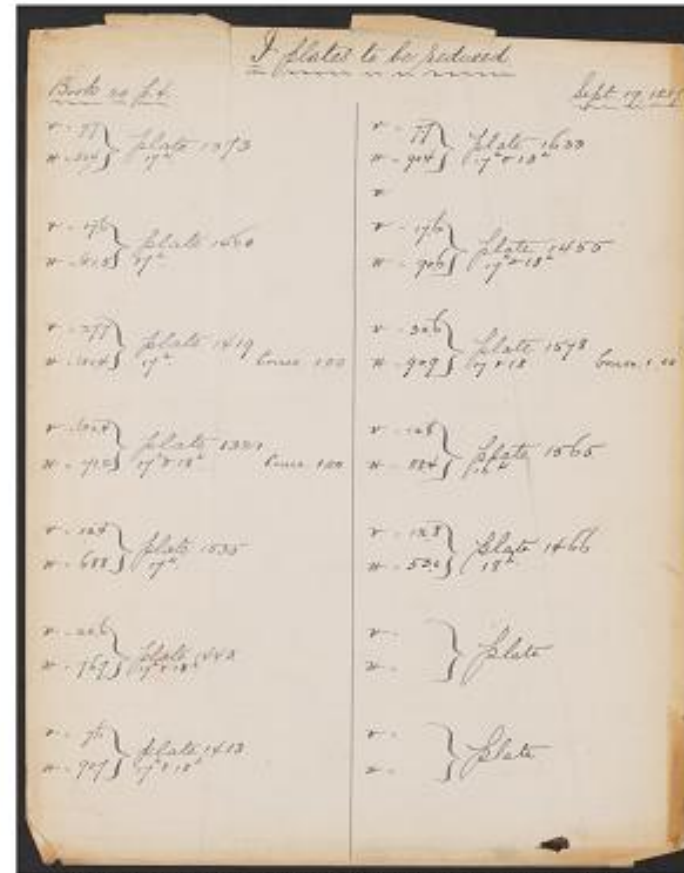
V= }plate

H= }

V= }plate

H= }

[R column]



John G. Wolkoff Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

I plates to be reduced.

[L column]
Book 20 p

V=12.6}plate 1529
H=103.9}17^h sigma 18^h

-

V=22.5}plate 1595
H= 51.5}18^h

V=32.5}plate 1599
H=50.5}18^h Correct. 1.00

V=42.5}plate 1420
H=51.8}18^h Correc. 1.00

V=7.7}plate 1528
H=70.3}18^h

V=7.7}plate 1623
H=70.7}18^h

V=7.7}plate 1456
H=70.7}18^h
[L column]

[R column]
Dec. 10th/87.

V=27.5}plate 1632
H=69.9}18^h Corr. 1.00

V=37.6}plate 1657
H=70.5}18^h & 19^h Corr. 1.00

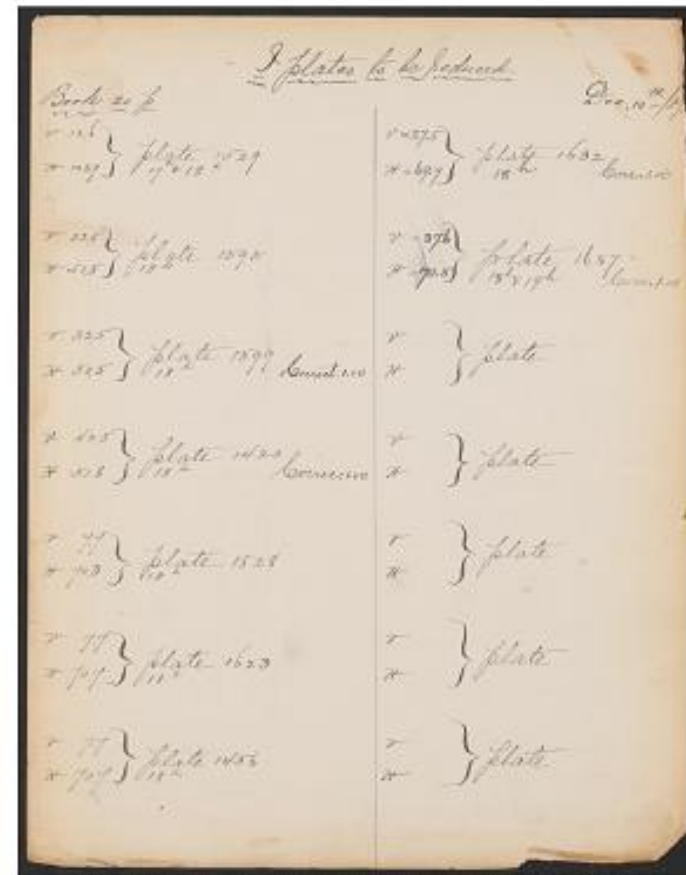
V= }plate
H= }

V= }plate
H= }

V= }plate
H= }

V= }plate
H= }

V= }plate
H= }
[R column]



John G. Wolkovich Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

KG 11365.844

V 17.6} Plate 2155
H 524} 1^h No correc.

[[stamped]]
HARVARD UNIVERSITY LIBRARY JUL 17 1956
[[/stamped]]

[[left margin]]
04
[[/left margin]]

17.6

[[right margin]]
[[strikethrough]]17.6[[/strikethrough]]

17.6
[[/right margin]]



John G. Wolkovich Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASM Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

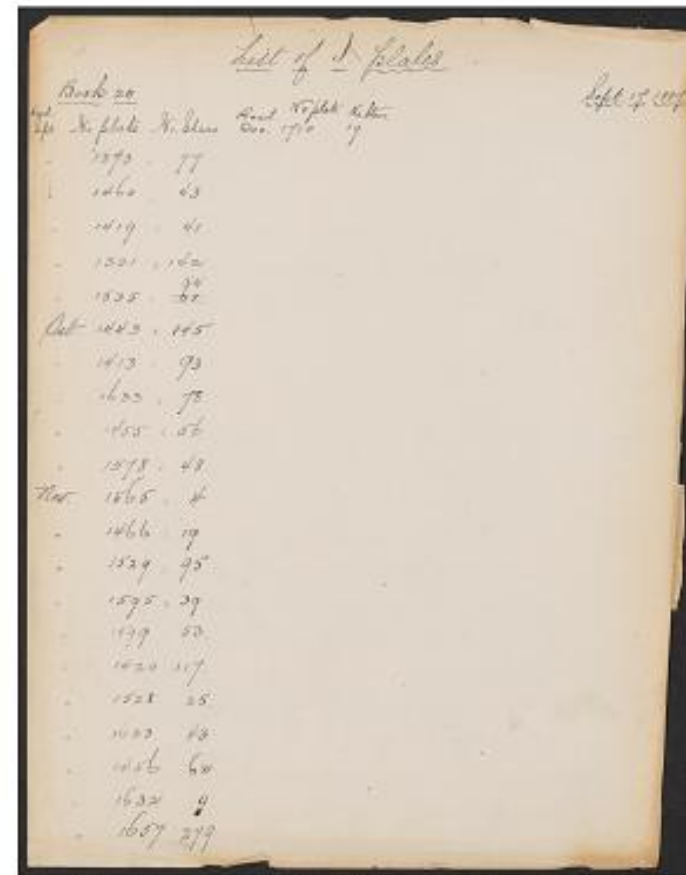
List of I. plates

Book 20 Sept. 17 1887.

[6 columned table]

Read.	No. plate	No. Stars.	Dec.	1710	19
Sept. 1373	77				
Sept. 1460	43				
Sept. 1419	41				
Sept. 1321	142				
Sept. 1535	61	54			
Oct. 1443	145				
Oct. 1413	93				
Oct. 1633	78				
Oct. 1455	56				
Oct. 1578	48				
Nov. 1565	4				
Nov. 1466	19				
Nov. 1529	95				
Nov. 1595	39				
Nov. 1599	53				
Nov. 1420	117				
Nov. 1528	25				
Nov. 1623	43				
Nov. 1456	62				
Nov. 1632	9				
Nov. 1657	279				

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

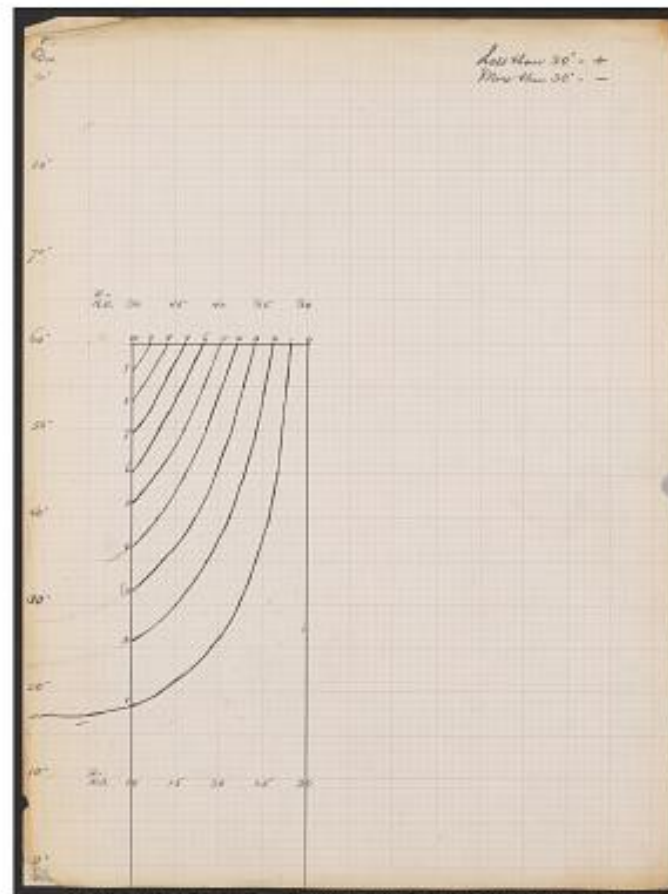


John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

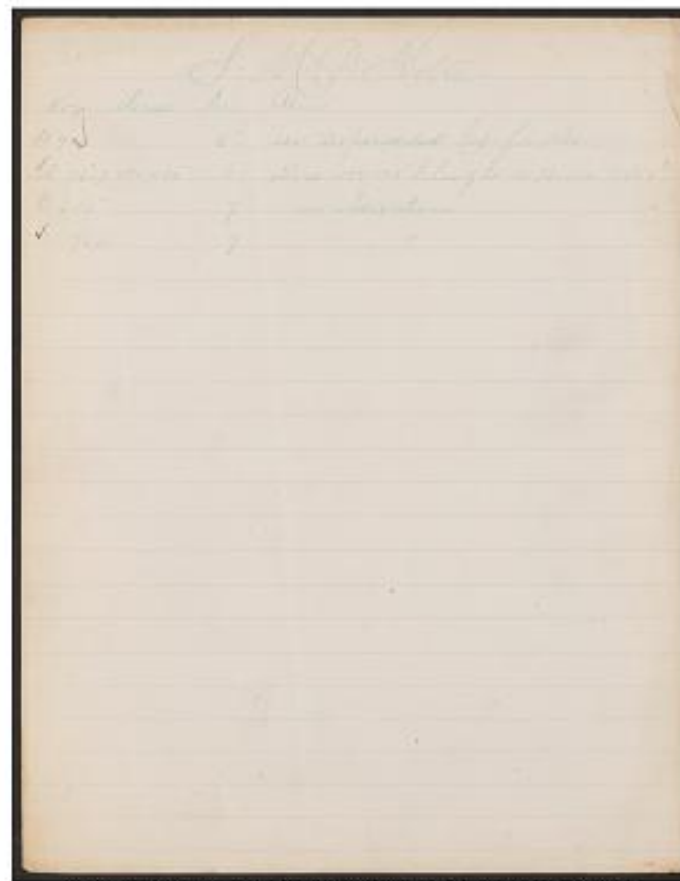
Less than $30^\circ = +$
More than $30^\circ = -$

[[graph]]



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

S. M. P. Notes.
[[table, 4 columns]]
No.|Series|Hr.|Rem.
G904| |5|see superceeded [[fas.??]] for Dec.
H 7601, 1184, 1185| |6|Does 1184, 1185 belong to A 7601 or 7410?
G 645| |7|no observations
A 9616| |7|no observations
[[/table]]



John G. Wolkovich Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

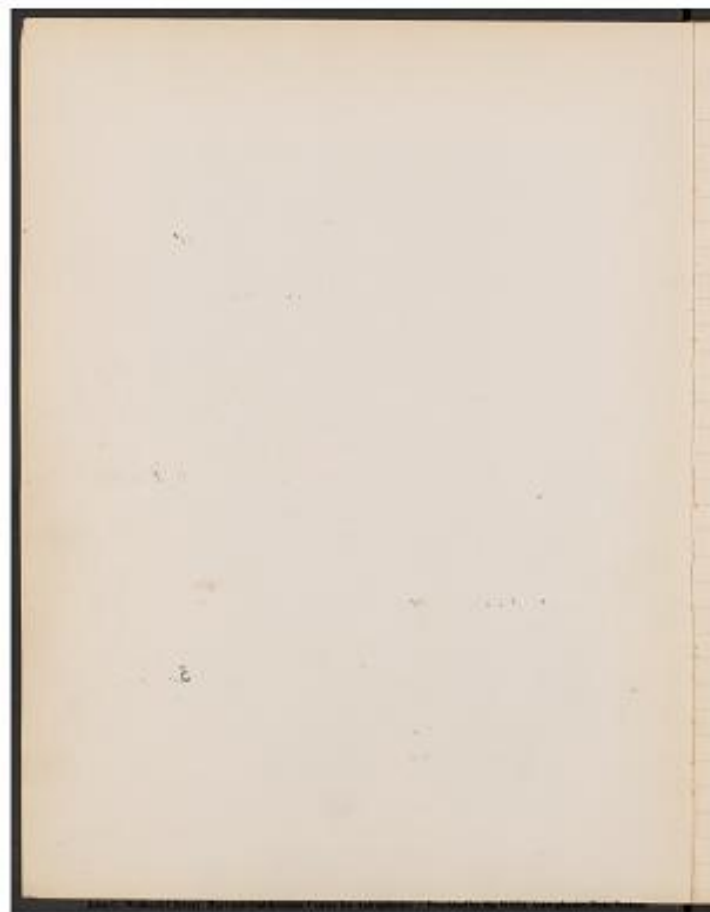
[[equations]]



John G. Volokas Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[blank page]]



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

Index

[9 columned table]

Letter|Plate|Page|Letter|Plate|Page|Letter|Plate|Page|

1373	4	2987	164					
1460	10	3056	172					
1419	12	1923	198	+80°				
1321	142	142	142	16	3132	204		
1535	28	*3133	212					
1443	32							
1413	42							
1633	50							
1455	56							
1578	60							
1565	64							
1466	64							
1529	66							
1595	72							
1599	76							
1420	80							
1528	88							
1623	92							
1456	94							
1632	98							
1657	100							
1710	122							
1712	122							
1738	128							
2137	132							
1740	138							
2155	144							
2988	148							

For plates 2988 & 2987 Group [^][(in B. 47) p 110).]] diff. between M.P. Magn. and Obs. br. (omitting ~~meas~~ values enclosed in parentheses).

*Continued in Book ~~20~~ 39 p 4.

[[left margin]]
+90°
[[/left margin]]

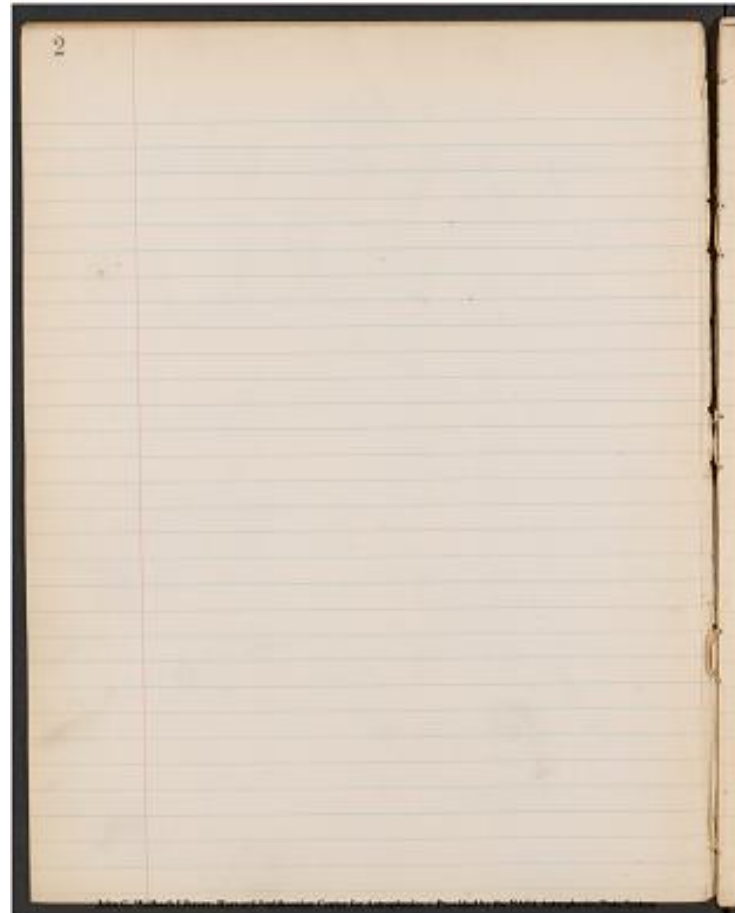
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics.
Provided by the NASA Astrophysics Data Systems

Index

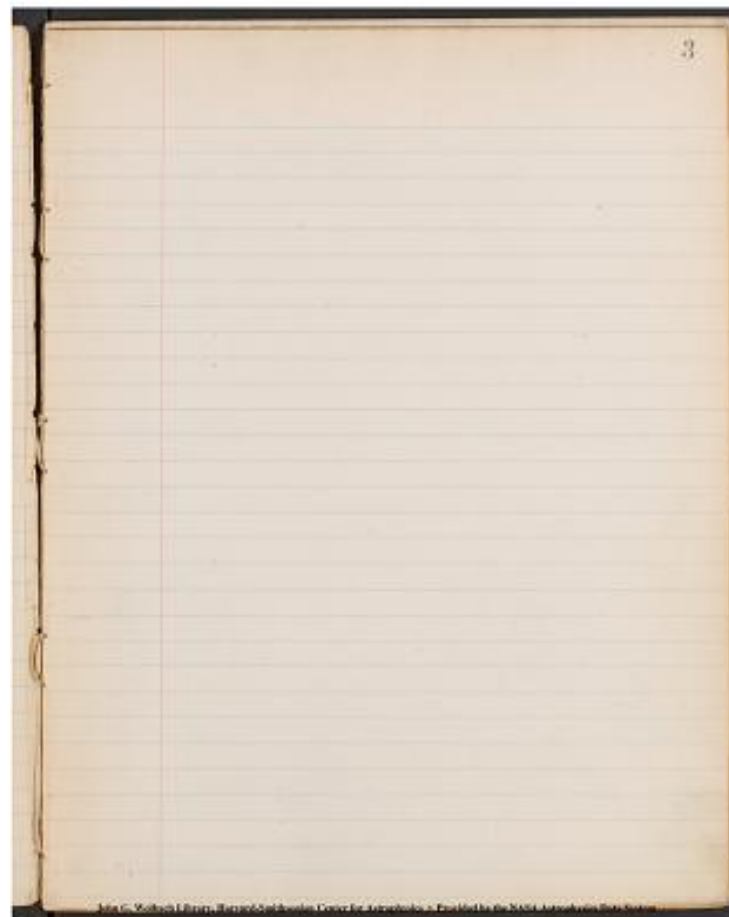
Letter	Plate	Page	Letter	Plate	Page	Letter	Plate	Page
J	1373	4	J	2987	164			
-	1460	10	-	3056	172			
-	1419	12	-	1923	198	+80°		
-	1321	142	-	142	142	16	3132	204
-	1535	28	-	*3133	212			
-	1443	32						
-	1413	42						
-	1633	50						
-	1455	56						
-	1578	60						
-	1565	64						
-	1466	64						
-	1529	66						
-	1595	72						
-	1599	76						
-	1420	80						
-	1528	88						
-	1623	92						
-	1456	94						
-	1632	98						
-	1657	100						
-	1710	122						
-	1712	122						
-	1738	128						
-	2137	132						
-	1740	138						
-	2155	144						
-	2988	148						

*In plates 2988 & 2987
(in B. 47) p 110).
Group diff. between M.P. Magn.
and Obs. br. (omitting
values enclosed in parentheses).*

* Continued in Book 39 p 4.



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[Underlined]]September 17, 1887. [[/Undrelined]]

Plate 1373.

[[11 Coulmed Table]]

V.|Remarks.|No. Lines|K|Focus|Other Lines|V.|H.|V.|H.|
|---|---|---|---|---|---|---|---|

9 50 |21.9|8.9|III|2|K=H|1|-|11.0|17.8|6.7|32.6|

?|21.0|11.9|IIa|1 2|K=H|1|seen.|10.5|23.8|7.2|26.6|

|21.0|17.0|III?|2|K=H|1|-|10.5|34.0|7.2|16.4|

|20.4|6.3|II|3|N|1|-|10.2|12.6|7.5|37.8|

|20.6|10.3|III|1|N|1|-|10.3|20.6|7.4|29.8|

|20.7|11.2|III|K=H|1|-|10.4|22.4|7.3|28.0|

|20.0|13.2|III|1|N|1|-|10.0|26.4|7.7|24.0|

|20.6|13.5|III|1|N|1|-|10.3|27.0|7.4|23.4|

?|20.5|19.3|IIa2|~~2~~~~4~~|K=H|2|seen|10.2|38.6|7.5|11.8|

|19.3|8.8|III|1|N|1|-|9.6|17.6|8.1|32.8|

|19.3|10.7|III|1|N|1|-|9.6|21.4|8.1|29.0|

|19.8|17.3|III|5|K=H|2|F|9.9|34.6|7.8|15.8|

|18.6|6.9|II|4|K=H|1|-|9.3|13.8|8.4|36.6|

|18.2|11.5|II|5|K=.5H|1|-|9.1|23.0|8.6|27.4|

|18.5|11.7|III|2|K=H|1|-|9.2|23.4|8.5|27.0|

?|18.4|15.8|IIa3|5|K=H|3|seen|9.2|31.6|8.5|18.8|

|18.0|19.4|III|1|N|1|-|9.0|38.8|8.7|11.6|

|17.1|10.2|II|2|N|1|-|8.6|20.4|9.1|30.0|

?|17.2|13.7|III?fe4|~~2~~~~4~~|K=H|4|F? Bright
seen|8.6|27.4|9.1|23.0|

|17.0|15.4|II|5|K=H|1|-|8.5|30.8|9.2|19.6|

4

September 17, 1887

	N.	H.	N.	H.
9 50	21.9	8.9	11.0	17.8
?	21.0	11.9	10.5	23.8
	21.0	17.0	10.5	34.0
	20.4	6.3	10.2	12.6
	20.6	10.3	10.3	20.6
	20.7	11.2	10.4	22.4
	20.0	13.2	10.0	26.4
	20.6	13.5	10.3	27.0
? 20.5 19.3 IIa2 2 4	10.2	38.6	7.5	11.8
	19.3	8.8	9.6	17.6
	19.3	10.7	9.6	21.4
	19.8	17.3	9.9	34.6
	18.6	6.9	9.3	13.8
	18.2	11.5	9.1	23.0
	18.5	11.7	9.2	23.4
? 18.4 15.8 IIa3 5 K=H 3 seen	9.2	31.6	8.5	18.8
	18.0	19.4	9.0	38.8
	17.1	10.2	8.6	20.4
? 17.2 13.7 III?fe4 2 4	8.6	27.4	9.1	23.0
	17.0	15.4	8.5	30.8

|16.4|8.1|I|3|N|1|-|8.2|16.2|9.5|34.2|

|16.4|9.0|I|7|N|3|-|8.2|18.0|9.5|32.4|

|16.7|16.8|III|1|N|1|-|8.4|33.6|9.3|16.8|

|16.6|19.6|II|1|N|1|-|8.3|39.2|9.4|11.2|

?|16.0|20.4|IIIbe5|2|K=i.2H?|4|Bright seen|8.0|40.8|9.7|9.6|

|15.0|13.0|III|2|K=H|1|-|7.5|26.0|X0.2|24.4|

|15.4|14.2|I|?|5|K=H|1|-|7.7|28.4|X0.0|22.0|

|14.4|6.8|III|1|N|1|-|7.2|13.6|X0.5|36.8|

John G. Wolback Library, Harvard-Smithsonian Center for Astrophysics.
Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[6 Columned Table]]

No.	R.A.	Dec.	Mag	H.	V.	Br[[?]]
4150	17 32.5-3	27	7.3	50.3	17.6	7.1
3490	17 33.3+6	39	7.0			
4398	17 26.5-2	57	7.0	50.3	17.5	7.0
4346	17 15.9-2	59	7.4	49.9	17.5	
4443	17 37.7-2	41	7.3	50.3	17.5	
4413	17 29.7-2	47	7.3	50.3	17.5	
4402	17 27.9-2	47	7.5	50.3	17.6	
2381	17 23.9-2	25	8.0	50.3	17.6	
4377	17 23.4-2	43	6.8	50.4	17.6	
4330	17 11.3-2	39	6.1	49.9	17.6	
4425	17 32.7-2	4	6.2	50.3	17.5	
4408	17 29.0-2	6	8.4	50.4	17.5	
4343	17 15.3-2	14	6.3	49.9	17.7	
3384	17 36.5-1	44	7.7	50.3	17.6	
3362	17 27.4-1	30	8.0	50.4	17.6	
3358	17 26.9-1	40	8.0	50.3	17.5	
3329	17 18.4-1	29	6.7	50.0	17.7	
3312	17 11.2-1	22	8.4	50.0	17.6	
3327	17 30.1-0	57	8.5	50.5	17.6	
3300	17 22.9-0	56	5.4	50.3	17.7	
3283	17 19.2-0	52	7.7	50.0	17.6	
3346	17 34.2-0	36	8.1	50.4	17.6	
3338	17 32.5-0	32	6.5	50.5	17.7	
3275	17 16.5-0	43	8.5	50.1	17.7	
3260	17 10.8-0	36	8.0	50.0	17.7	
3255	17 9.2-0	16	4.3	50.0	17.7	
3709	17 24.5+0	10	6.8	50.5	17.7	
3296	17 22.1+0	2	8.0	50.5	17.7	
3763	17 36.8+0	26	7.7	50.4	17.6	

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

6

September 17, 1887.

Plate 1373

[12 column table]

v|H|Type|No. Remarks|No. Lines|K|Focus|Other Lines|V.|H.|V.|H.|

14.5|14.5||| 9|K=.5H|4|F.|7.2|29.0|0.5|21.4|

[left margin-Goh fail & double?]

14.2|22.3|||a|6|2|K=H|2|seen.|7.1|44.6|0.6|5.8|

14.0|23.6||| 1|N|1|-7.0|47.2|0.7|3.2|

13.0|5.7||| 1|N|1|-6.5|11.4|1.2|39.0|

13.0|11.0||| 5|N|2|-6.5|22.0|1.2|39.0|

13.2|14.3||| 5|K=H|1|-6.6|28.6|1.1|21.8|

13.5|15.5||| 2|K=H|1|-6.8|31.0|0.9|19.4|

12.9|13.5||| 6|K=H|2|-6.4|27.0|1.3|23.4|

[left margin-?] 12.0|13.5|||a|7|2|K=H|1|seen.|6.0|27.0|1.7|23.4|

12.0|14.1||| 5|N|1|-6.0|28.2|1.7|22.2|

12.0|17.0||| 3|N|1|-6.0|34.0|1.7|16.4|

12.2|18.2||| 2|K=H|2|-6.1|36.4|1.6|14.0|

12.7|20.5||| 8|N|4|F|6.4|41.0|1.3|9.4|

11.1|9.3||| 2|K=H|1|-5.6|18.6|2.1|31.8|

11.8|13.2||| 2|K=H|1|-5.9|26.4|1.8|24.0|

[left margin - ?] 11.6|19.9|||a|8|2|K=H|2|seen.|5.8|39.8|1.8|10.6|

10.0|6.6||| 8|N|4|F|5.0|13.2|2.7|37.2|

10.8|18.8||| 2|K=H|1|-5.4|37.6|2.3|12.8|

10.7|20.6||| 8|K=.2H|3|F?|5.4|41.2|2.3|9.2|

[left margin-?] 9.8|9.4|||a|9|2|K=H|1|seen.|4.9|18.8|2.8|31.6|

9.5|12.9||| 5|N|2|-4.8|25.8|2.9|24.6|

[left margin-?] 9.8|13.2|||sc|10|3|K=H|3|F Brihl seen.|4.9|26.4|2.8|24.0|

9.0|14.1||| 4|N|1|-4.5|28.2|3.2|21.2|

9.6|20.8||| 3|N|1|-4.8|41.6|2.9|9.8|

8.4|9.1||| 1|N|1|-4.2|18.2|3.5|32.2|

[left margin-?] 8.0|9.2|||b|11|2|K=H|1|seen.|4.0|18.4|3.7|32.0|

8.6|16.0||| 6|K=.5H|2|-4.3|32.0|3.4|18.4|

8.5|17.8||| 3|N|1|-4.2|35.6|3.5|14.8|

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[6 column table]]

No.	R.A.	Dec.	Mag.	H.	V.
3697	17 21.4	+0 28	5.5	50.4	7.7
3654	17 5.5	+0 33	7.0	50.1	7.7
3649	17 2.9	+0 41	7.0	50.1	7.7
3501	17 39.0	+1 7	6.8	50.4	7.6
3463	17 28.5	+1 6	7.7	50.5	7.6
3440	17 21.8	+1 4	7.8	50.4	7.7
3690	17 19.2	+0 58	7.2	50.2	7.8
3449	17 23.5	+1 15	7.5	50.5	7.6
3448	17 23.5	+1 42	8.2	50.5	7.7
3443	17 22.3	+1 40	8.0	50.5	7.7
3427	17 16.2	+1 38	8.3	50.2	7.6
3421	17 13.8	+1 35	7.2	50.2	7.7
3408	17 9.2	+1 23	5.5	50.2	7.8
3373	17 31.8	+2 7	6.7	50.4	7.7
4021	17 23.9	+1 43	7.1	50.3	7.6
3960	17 10.5	+1 47	6.5	50.3	7.6
3390	17 37.3	+2 40	6.5	50.5	7.7
3296	17 12.5	+2 19	7.0	50.1	7.7
3283	17 8.9	+2 21	6.5	50.1	7.8
3370	17 31.7	+2 45	7.8	50.5	7.7
3341	17 24.8	+2 56	7.8	50.6	7.7
3337	17 24.1	+2 51	5.5	50.5	7.7
3376	17 9.5	+3 9	8.7	51.1	8.0
3466	17 32.3	+3 29	7.2	50.5	7.7
3465	17 32.1	+3 39	6.5	50.5	7.6
3404	17 18.3	+3 27	7.5	50.3	7.7
3389	17 14.7	+3 27	8.5	50.3	7.6

No.	R.A.	Dec.	Mag.	H.	V.
3697	17 21.4	+0 28	5.5	50.4	7.7
3654	17 5.5	+0 33	7.0	50.1	7.7
3649	17 2.9	+0 41	7.0	50.1	7.7
3501	17 39.0	+1 7	6.8	50.4	7.6
3463	17 28.5	+1 6	7.7	50.5	7.6
3440	17 21.8	+1 4	7.8	50.4	7.7
3690	17 19.2	+0 58	7.2	50.2	7.8
3449	17 23.5	+1 15	7.5	50.5	7.6
3448	17 23.5	+1 42	8.2	50.5	7.7
3443	17 22.3	+1 40	8.0	50.5	7.7
3427	17 16.2	+1 38	8.3	50.2	7.6
3421	17 13.8	+1 35	7.2	50.2	7.7
3408	17 9.2	+1 23	5.5	50.2	7.8
3373	17 31.8	+2 7	6.7	50.4	7.7
4021	17 23.9	+1 43	7.1	50.3	7.6
3960	17 10.5	+1 47	6.5	50.3	7.6
3390	17 37.3	+2 40	6.5	50.5	7.7
3296	17 12.5	+2 19	7.0	50.1	7.7
3283	17 8.9	+2 21	6.5	50.1	7.8
3370	17 31.7	+2 45	7.8	50.5	7.7
3341	17 24.8	+2 56	7.8	50.6	7.7
3337	17 24.1	+2 51	5.5	50.5	7.7
3376	17 9.5	+3 9	8.7	51.1	8.0
3466	17 32.3	+3 29	7.2	50.5	7.7
3465	17 32.1	+3 39	6.5	50.5	7.6
3404	17 18.3	+3 27	7.5	50.3	7.7
3389	17 14.7	+3 27	8.5	50.3	7.6

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

8

September 17, 1887.

Plate 1373

[12 column table]

[V|H|Type|No. Remark|No. Lines|K|Focus|Other Lines|V.|H.|V.|H.]

[[left margin-?]]8.8|19.7|IIa|12|2|K=H|2|seen.|4.4|3|[[strikethrough]]8

[[/strikethrough]]9.4|3.3|12.0|

8.2|20.4|III|1|N|1|-|4.1|40.8|3.6|9.6|

8.1|21.1|III|1|N|1|-|4.0|42.2|3.7|8.2|

7.0|11.2|III|1|N|1|-|3.5|22.4|4.2|28.0|

[[left margin-?]]7.0|15.5|IIIbc|13|2|K=H|3|F?|Bright seen.|3.5|31.0|4.2|19.4|

[[left margin-?]]6.1|7.2|IIIbc|14|3|K=2.5H|5|F|Bright seen.|3.0|14.4|4.7|36.0|

6.4|7.9|III?|1|N|1|-|3.2|15.8|4.5|34.6|

6.8|8.5|II|5|N|1|-|3.4|17.0|4.3|33.4|

6.1|9.8|II|4|N|1|-|3.0|19.6|4.7|30.8|

6.4|17.5|II|4|K=H|1|-|3.2|35.0|4.5|15.4|

5.1|17.7|III|2|K=H|1|-|2.6|35.4|5.1|15.0|

5.8|23.0|III|2|K=H|1|-|2.9|46.0|4.8|4.4|

4.8|20.4|II|3|N|1|-|2.4|40.8|5.3|9.6|

4.0|5.8|II|5|?|1|-|2.0|11.6|5.7|38.8|

4.0|18.7|II|3|N|1|-|2.0|37.4|5.7|13.0|

3.4|5.9|II|3|N|1|-|1.7|11.8|6.0|38.6|

3.0|6.8|I?|4|K=H|-|1|-|1.5|13.6|6.2|36.8|

[[left margin-?]]3.1|11.5|IIa|5|2|K=H|1|seen.|1.6|23.0|6.1|12.0|

3.0|19.2|II|7|K=H|2|-|1.5|38.4|6.2|12.0|

[[left margin-?]]2.6|8.1|IIIb|16|2|K=H|1|seen.|1.3|16.2|6.4|34.2|

2.1|9.9|II|3|N|1|-|1.0|19.8|30.6|

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 columned table]]

[No. | R.A. | Dec. | Mag. | H. | V. |]

3379	17 10.8	+4 18	7.0	50.2	7.7	
3375	17 9.4	+3 34	8.2	50.2	7.7	
3370	17 7.9	+3 36	8.5	50.1	7.6	
3451	17 28.1	+4 3	8.3	50.5	7.5	
3422	17 19.3	+4 16	4.0	50.3	7.8	
3489	17 36.3	+4 38	3.0	50.7	7.6	
3482	17 34.7	+4 26	7.5	50.5	7.6	
3476	17 33.6	+4 13	7.8	50.6	7.6	
{3464	17 31.0	+4 34	8.1	50.6	7.6	
{3461	17 30.6	+4 38	8.6	49.6	7.6	
3406	17 15.3	+4 29	8.7	50.3	7.7	
3378	17 14.9	+5 10	6.8	50.3	7.8	
3349	17 4.2	+4 52	7.1	50.2	7.8	
3360	17 9.4	+5 18	8.0	50.2	7.7	
3482	17 38.9	+5 45	7.8	50.5	7.8	
3370	17 12.9	+5 40	8.2	50.3	7.7	
3481	17 38.8	+5 58	7.3	50.6	7.7	
3514	17 37.0	+6 8	8.0	50.6	7.6	
3456	17 27.7	+6 8	8.0	50.7	7.7?	
3386	17 11.8	+6 15	7.0	50.2	7.7	
3498	17 34.5	+6 24	6.5	50.7	7.7?	
{3475	17 30.7	+6 34	8.9	50.5	7.6	
{3476	17 31.0	+6 34	8.2	50.8	7.6?	

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

The image shows a handwritten astronomical data table on aged, yellowed paper. The table is organized into columns for star number, Right Ascension (R.A.), Declination (Dec.), Magnitude (Mag.), and other parameters (H. and V.). The handwriting is in cursive and somewhat faded. The table contains approximately 20 rows of data, with some entries in curly braces. The paper is slightly wrinkled and has a dark border around the edges.

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[September 19, 1887.]]

Plate 1460.

[[12 columned table]]

|V|H|Type|No. Remark.|No. Lines|K|Focus|Other Lines.|V.|H.|V.|H.|

|22.0|8.6|III| |2|K=H|1|-|11.0|17.2|6.6|34.3|

|22.4|19.7|I|3|N|1|-|11.2|39.4|6.4|12.1|

[[left margin-

?]]|19.5|16.0|I|^[[d]]|4|?|2|seen|[[~~8.0~~]]|9.8|[[~~strikethrough~~]]2|[[~~strikethrough~~]]32.0|7.8|[[~~strikethrough~~]]2|[[~~strikethrough~~]]19.5|

|19.0|22.5|III| |2|K=H|1|-|9.5|45.0|8.1|6.5|

|18.8|23.2|III| |2|K=H|1|-|9.4|46.4|8.2|5.1|

|17.9|15.2|III| |1|N|1|-|9.0|30.4|8.6|12.2|

|17.1|17.1|III| |2|K=H|1|-|8.6|34.2|9.0|17.3|

|15.9|8.1|I| |3|N|1|-|8.0|16.2|9.6|35.3|

|15.7|12.0|I| |7|K=2H|3|-|[[~~strikethrough~~]]8|[[~~strikethrough~~]]7.8|

24.0|9.8|27.5|

|15.8|17.4|I| |3|N|1|-|7.9|34.8|9.7|16.7|

|14.7|10.8|I| |3|N|1|-|7.4|21.6|10.2|29.9|

|13.6|10.9|III| |1|N|1|-|6.8|21.8|10.8|29.7|

|13.4|14.0|III| |1|N|1|-|6.7|28.0|10.9|23.5|

|13.0|14.6|III| |4|K=H|1|-|6.5|29.2|11.1|22.3|

|13.8|14.8|I| |6|K=5H|1|-|6.9|29.6|10.7|21.9|

[[left margin-?]]|13.0|19.7|III|^[[bc]]|17|2|K=H|2|bright|6.5|39.4|11.1|

22.3|

|13.5|22.7|III| |2|K=H|1|-|6.8|45.4|10.8|6.1|

|12.0|15.1|I| |4|K=H|1|-|6.0|30.2|11.6|21.3|

|11.0|13.1|I| |6|N|2|F?|5.5|23.6|12.6|27.9|

|11.5|18.0|I| |4|N|1|-|5.8|36.0|11.8|15.5|

[[left margin Same Star?]]|10.0|11.8|I| |12|K=5H?|5|F.|5.0|23.6|12.6|

27.9|

|9.6|11.7|I| |4|N|1|-|4.8|23.4|12.8|28.1|

|9.8|23.4|I| |5|N|2|-|4.9|46.8|12.7|4.7|

|8.4|9.8|I|^[[a]]|18|2|K=H|2|seen|4.2|19.6|13.4|23.9|

[[left margin-G faint & double]]|8.6|11.7|I| |5|N|1|-|4.3|23.4|13.3|28.1|

|8.6|17.1|III| |2|K=H|1|-|4.3|24.2|13.3|27.3|

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[6 column table]]

No.	R.A.	Dec.	Mag.	H.	V.
3498	17 34.5	+6 24	6.5	51.7	17.4
3386	17 11.8	+6 15	7.0	51.2	17.4
3368	17 19.3	+7 44	6.5	51.3	17.5
3321	17 6.0	+7 55	7.3	51.0	17.4
3367	17 4.8	+8 5	6.2	51.2	17.5
3418	17 20.8	+8 34	7.3	51.2	17.6
3405	17 17.0	+8 60	6.2	51.2	17.6
3451	17 35.5	+9 31	8.2	51.7	17.5
3424	17 27.7	+9 42	6.7	51.7	17.5
3381	17 16.4	+9 37	7.5	51.2	17.5
3251	17 30.1	+10 8	8.2	51.7	17.5
3250	17 30.0	+10 40	8.0	51.8	17.5
3222	17 23.6	+10 53	7.5	51.6	17.6
3187	17 22.4	+11 1	7.5	51.6	17.5
3216	17 22.0	+10 40	7.2	51.6	17.6
3156	17 11.8	+11 2	5.0	51.2	17.5
3165	17 5.6	+10 47	5.8	51.0	17.6
3184	17 21.1	+11 31	7.0	51.3	17.5
3157	17 12.5	+11 20	7.3	51.1	17.5
3241	17 25.5	+12 3	6.7	51.7	17.5
3234	17 23.6	+12 3	6.5	51.6	17.5
3166	17 15.2	+11 50	7.2	51.2	17.6
3252	17 28.2	+12 40	2.0	51.8	17.7
3161	17 4.0	+12 39	7.0	50.8	17.5
3423	17 33.0	+13 23	7.5	52.6	17.6
3400	17 28.4	+13 14	7.7	51.8	17.5
3397	17 27.7	+13 16	6.5	51.9	17.6

The image shows a handwritten astronomical observation table on aged paper. The page number '11' is visible in the top right corner. The table is organized into 6 columns, corresponding to the headers in the transcription: No., R.A., Dec., Mag., H., and V. The entries are written in cursive script and include numerical values for each column, often with decimal points and some additional markings. The handwriting is consistent throughout the page, and the paper shows signs of age and wear.

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

12

September 19th 1887

Plate 1460.

[[12 columned table]]

[V|H|Type|No. Lines|No. Remarks|K|Focus|Other lines|V.|H.|V.|H.]

8.6|20.3|III|1|N|1|-|4.3|40.6|13.3|10.9|

7.4|7.2|II|4|K=H|1|-|3.7|14.4|13.9|37.1|

7.4|10.9|II|5|K=.5H|1|-|3.7|21.8|13.9|29.7|

6.1|7.2|II|/|N|2|-|3.0|14.4|13.9|37.1|

6.4|7.6|II|/K=H|2|-|3.2|15.2|14.4|36.3|

?|6.1|21.4|II|195|K=1.2H|4|F.Bright seen|3.0|42.8|14.4|8.7|

/4|12.3|III|2|K=H|1|-|2.7|24.6|14.9|26.9|

is this a star?|/.1|20./|II|6|K=.2H|2|-|2.6|41.0|15.0|10.5|

4.6|8.7|II|N|2|-|2.3|17.4|15.3|34.1|

G+H faint+double|3.1|8.3|III|a^20|2|K=H|2|F|1.6|16.6|16.0|34.9|

3.8|16.6|II|6|N|2|1.9|33.2|15.7|18.3|

2.0|12.0|II|K=H?|1|-|1.0|24.0|16.6|27.5|

2.4|12.4|III|z|K=H|1|1.2|24.8|16.4|26.7|

?|2.2|16.1|III|a^21|2|K=H|1|seen|1.1|32.2|16.5|19.3|

2.4|16.6|II|T|K=.2H|3|-|1.2|33.2|16.4|18.3|

Plate 1419

?|22.8|8.1|d^1|?|4|K=H|2|seen|11.4|16.2|16.3|35.2|+|0.5|

?|22.3|12.1|III|22|2|K+H|1|seen|11.2|24.2|16.5|27.2|+|0.2|

22.1|1/.8|II|4|K=H|1|-|11.0|31.6|16.7|19.8|-|0.1|

22.3|16.4|II|&|K=.2H|3|-|11.2|32.8|16.5|18.6|-|0.1|

20.0|13.6|I|?|3|N|1|-|10.0|27.2|17.7|24.2|+|0.1|

20.2|19./|II|6|N|2|10.1|39.0|17.6|12.4|-|0.5|

19.4|/.F|II|N|2|-|9.7|11.4|18.0|40.0|+|1.0|

19.0|18.4|III|2|K=H|2|-|9.5|36.8|18.2|14.6|-|0.3|

18.8|20.2|II|N|1|-|9.4|40.4|18.3|11.0|0.6|

17.4|16.6|II|4|N|1|-|8.7|33.2|19.0|18.2|-|0.2|

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 column table]]

| No. | R.A. | Dec. | Mag. | H. | V. | H' |

No.	R.A.	Dec.	Mag.	H.	V.	H'
3341	17 10.5	+13 17	7.2	51.1	17.6	
3444	17 37.7	+13 52	7.2	52.1	17.6	
3412	17 30.0	+13 55	6.7	51.8	17.6	
3329	17 37.7	+14 29	6.0	52.1	17.5	
3321	17 36.8	+14 22	6.0	52.0	17.6	
3207	17 8.0	+14 34	var.	50.8	17.6	
3279	17 27.1	+14 57	6.2	51.7	17.7	

3246	17 34.6	+15 15	6.0	52.0	17.5	
3256	17 35.5	+16 3	5.1	52.1	17.6	
3179	17 18.0	+15 46	6.2	51.2	17.7	
3220	17 28.0	+16 37	6.8	52.0	17.6	

[[~~3214~~]] 17 26.7 | +16 | [[~~3218~~]] ^[[3218 | 17
27.2 | +16 27 | 5.0]] | 52.0 | 17.6 | |
3183 | 17 19.2 | +16 32 | 6.5 | 51.4 | 17.6 | |

3256	17 35.5	+16 3	5.1	51.7	27.4	51.2
3218	17 27.2	+16 27	5.0	51.4	27.6	51.2
3183	17 19.2	+16 32	6.5	50.8	27.5	50.9
3174	17 18.0	+16 28	5.5	50.8	27.7	50.9
3312	17 35.8	+17 18	7.0	51.8	27.5	51.2
3256	17 24.2	+17 38	7.0	51.4	27.6	51.3
3216	17 11.7	+17 29	6.0	50.7	27.6	51.2
3334	17 40.7	+17 47	5.5	52.1	27.5	51.1
3351	17 13.9	+18 14	5.5	50.7	27.7	51.0
3336	17 10.1	+18 11	7.5	50.5	27.6	51.1
3363	17 17.7	+18 59	7.5	50.9	27.7	51.1

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

14

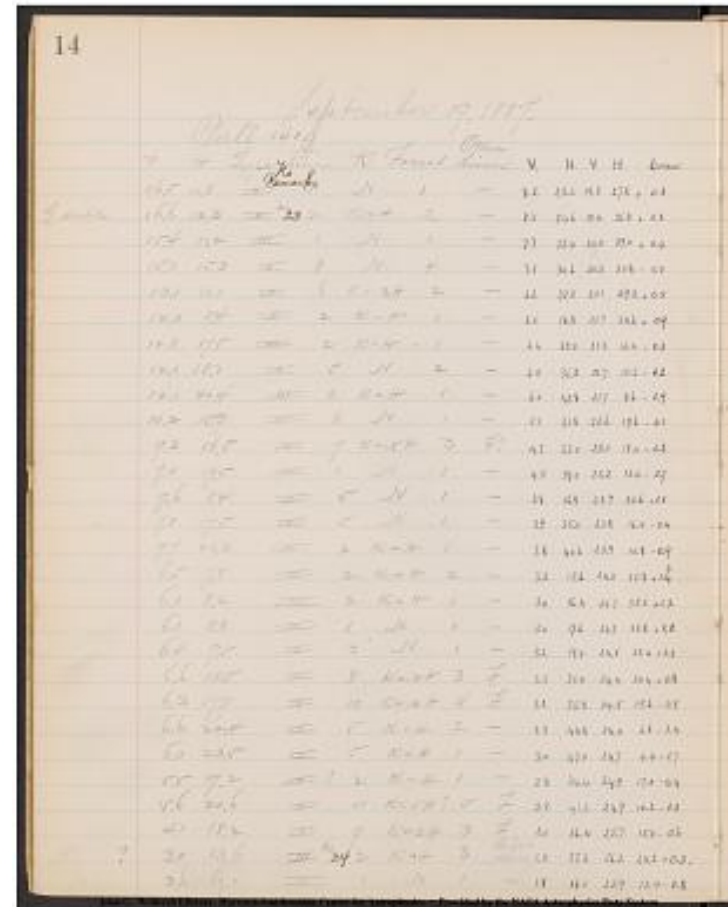
September 19, 1887

Plate 1419

| v | H | Type | No. Lines | K | Focus | Other Lines | V. | H. | V. | H. | correc

16.5|11.8|I|I|[[No Remarks]]|1|N|1|-18.2|23.6|19.5|27.8 + 0.3|
 16.6|12.3|I|I|[[a]]23|2|K=H|2|-18.3|24.6|19.4|26.8 + 0.3|
 15.4|11.2|I|I|I|1|N|1|-17.7|22.4|20.0|29.0 + 0.4|
 15.0|15.3|I|I|8|N|4|-17.5|30.6|20.2|20.8 - 0.0|
 13.1|11.1|I|I|6|K=2H|2|-16.6|22.2|21.1|29.2 + 0.5|
 12.0|8.4|I|I|2|K=H|1|-16.0|16.8|21.7|34.6 + 0.9|
 12.8|17.5|I|I|I|2|K=H|1|-16.4|35.0|21.3|16.4 - 0.3|
 12.1|18.1|I|I|5|N|2|-16.0|36.2|21.7|15.2 - 0.2|
 12.1|21.4|I|I|I|2|K=H|1|-16.0|42.8|21.7|8.6 - 0.9|
 10.2|15.9|I|I|I|1|N|1|-15.1|31.8|22.6|19.6 - 0.1|
 9.3|16.5|I|I|7|K=.5H|3|F?|4.7|33.0|32.0|18.4 - 0.2|
 9.0|19.5|I|I|I|1|N|1|-14.5|39.0|23.2|12.4 - 0.7|
 7.6|8.4|I|I|5|N|1|-13.8|16.8|23.9|34.6 + 1.1|
 7.8|17.5|I|I|5|N|1|-13.9|35.0|23.8|16.4 - 0.4|
 7.7|20.3|I|I|I|2|K=H|1|-13.8|40.6|23.9|10.8 - 0.9|
 6.5|7.8|I|I|I|2|K=H|2|-13.2|15.6|24.5|35.8 +
 1. [[~~strickethrough~~]]4 [[~~/strickethrough~~]]3|
 6.0|8.2|I|I|I|2|K=H|1|-13.0|16.4|24.7|35.0 + 1.2|
 6.1|8.8|I|I|I|1|N|1|-13.0|17.6|24.7|33.8 + 1.0|
 6.4|9.5|I|I|3|N|1|-13.2|19.0|24.5|32.4 + 1.0|
 6.6|10.5|I|I|8|K=.2H|3|F|3.3|21.0|24.4|30.4 + 0.8|
 6.3|17.9|I|I|10|K=.2H|4|F|3.2|35.8|24.5|15.6 - 0.5|
 6.6|22.4|I|I|5|K=H|2|-13.3|44.8|24.4|6.6 - 1.4|
 6.0|23.5|I|I|5|K=H|1|-13.0|47.0|24.7|4.4 - 1.7|
 5.5|17.2|I|I|?|2|K=H|1|-12.8|34.4|24.9|17.0 - 0.4|
 5.6|20.6|I|I|11|K=.5H?|5|F|2.8|41.2|24.9|10.2 - 1.0|
 4.1|18.2|I|I|9|K=.2H|3|F|2.0|36.4|25.7|15.0 - 0.6|
 ?|3.0|13.6|I|I|I|[[bc]]|24|2|K=H|3|Brynt Reece|1.5|27.2|26.2|24.2 + 0.3|
 3.6|19.0|I|I|I|1|N|1|-11.8|38.0|25.9|13.4 - 0.8|

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



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[7 column table]]

No.	R.A.	Dec.	Mag.	H.	V.	H'
3358	17 28.1	+19 20	7.5	51.7	27.5	51.4
3354	17 27.1	+19 22	5.0	51.7	27.7	51.4
3372	17 29.5	+19 56	6.6	51.9	27.6	51.5
3481	17 20.6	+20 13	5.7	51.2	27.7	51.2
3157	17 29.8	+21 6	6.0	52.0	27.7	51.5
3188	17 35.7	+21 36	7.5	52.5	27.6	51.6
3103	17 15.9	+21 18	7.0	50.9	27.7	51.2
3100	17 14.6	+21 42	7.2	50.8	27.7	51.0
3070	17 7.5	+21 37	6.5	50.3	27.6	51.2
3136	17 19.2	+22 34	8.2	51.0	27.7	51.1
3100	17 18.1	+23 6	5.8	51.1	27.8	51.3
3074	17 11.5	+23 16	6.5	50.5	27.8	51.2
3160	17 35.9	+23 50	7.7	52.7	27.6	51.6
3091	17 15.8	+23 50	7.7	50.8	27.7	51.2
3070	17 9.7	+23 55	7.0	50.3	27.7	51.2
3237	17 37.4	+24 24	6.2	53.0	27.6	51.7
3231	17 36.5	+24 38	6.0	52.9	27.6	51.7
3225	17 35.1	+24 35	6.3	52.7	27.6	51.7
3223	17 33.7	+24 30	8.1	52.7	27.7	51.7
3218	17 31.6	+24 24	6.0	52.6	27.7	51.8
3167	17 14.9	+24 38	6.0	50.7	27.8	51.2
3140	17 5.0	+24 26	6.2	49.8	27.7	51.2
3127	17 2.6	+24 41	6.5	49.6	27.7	51.3
3252	17 16.5	+25 2	7.7	50.9	27.8	51.3
3221	17 9.1	+25 1	3.0	50.3	27.8	51.3
3246	17 14.3	+25 40	6.0	50.7	27.7	51.3
3034	17 24.9	+26 14	5.0	52.1	27.7	51.8
3239	17 12.6	+25 57	7.2	50.6	27.8	51.4

15

3358 17 28.1 +19 20 7.5 51.7 27.5 51.4

3354 17 27.1 +19 22 5.0 51.7 27.7 51.4

3372 17 29.5 +19 56 6.6 51.9 27.6 51.5

3481 17 20.6 +20 13 5.7 51.2 27.7 51.2

3157 17 29.8 +21 6 6.0 52.0 27.7 51.5

3188 17 35.7 +21 36 7.5 52.5 27.6 51.6

3103 17 15.9 +21 18 7.0 50.9 27.7 51.2

3100 17 14.6 +21 42 7.2 50.8 27.7 51.0

3070 17 7.5 +21 37 6.5 50.3 27.6 51.2

3136 17 19.2 +22 34 8.2 51.0 27.7 51.1

3100 17 18.1 +23 6 5.8 51.1 27.8 51.3

3074 17 11.5 +23 16 6.5 50.5 27.8 51.2

3160 17 35.9 +23 50 7.7 52.7 27.6 51.6

3091 17 15.8 +23 50 7.7 50.8 27.7 51.2

3070 17 9.7 +23 55 7.0 50.3 27.7 51.2

3237 17 37.4 +24 24 6.2 53.0 27.6 51.7

3231 17 36.5 +24 38 6.0 52.9 27.6 51.7

3225 17 35.1 +24 35 6.3 52.7 27.6 51.7

3223 17 33.7 +24 30 8.1 52.7 27.7 51.7

3218 17 31.6 +24 24 6.0 52.6 27.7 51.8

3167 17 14.9 +24 38 6.0 50.7 27.8 51.2

3140 17 5.0 +24 26 6.2 49.8 27.7 51.2

3127 17 2.6 +24 41 6.5 49.6 27.7 51.3

3252 17 16.5 +25 2 7.7 50.9 27.8 51.3

3221 17 9.1 +25 1 3.0 50.3 27.8 51.3

3246 17 14.3 +25 40 6.0 50.7 27.7 51.3

3034 17 24.9 +26 14 5.0 52.1 27.7 51.8

3239 17 12.6 +25 57 7.2 50.6 27.8 51.4

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

$$\begin{array}{l} |3.4|19.6||N|1|-1.7|39.2|26.0|12.2|-1.0| \\ |2.4|12.8||5|K=H|1|-1.2|25.6|26.5|25.8|+0.4| \end{array}$$

Plate 1321

[22.5|8.0|]||8|N|4|]-11.2.|16.0|21.2|55.2|+1.0|
[22.2|20.2|]||7|K=2H|3|7|11.1|40.4|21.3|30.8|-0.7|
?|21.4|6.4|]||25|2|K=H|1|seen|10.7|12.8|8.2|758.4|+1.1|
[21.0|6.5|]|||2|K=H|1|]-10.5|13.0|21.9|58.2|+1.4|
[21.3|8.4|]||9|K=2H|4|7|10.6|16.8|21.8|54.4|+0.9|
[21.4|10.9|]||2|K=H|1|]-10.7|12.1|8.2|71.9|49.4|+0.6|
?|21.4|17.5|]||262|K=H|2|seen|10.7|35.0|21.7|36.2|-0.3|
[21.6|22.0|]||3|N|1|]-10.8|44.0|21.6|27.2|-1.0|
?|20.0|6.3|]||273|K=H|2|seen|10.2|16.2|62.2|458.6|+1.6|
[20.2|9.2|]||3|N|1|]-10.1|18.4|22.3|52.8|+0.8|
[20.0|13.4|]||8|K=5H|3|]-10.0|26.8|22.4|44.4|+0.2|
[20.6|15.6|]||5|K=5H|1|]-10.3|31.2|22.1|40.0|-0.1|
[19.5|8.2|]||2|K=H|1|]-9.8|16.4|22.6|544.8|+1.0|
?|19.6|11.1|]||282|K=H|2|seen|9.8|22.2|22.6|49.0|+0.6|
[19.1|16.6|]||1|N|1|]-9.6|33.2|22.8|38.0|-0.2|
[19.4|19.5|]||1|N|1|]-9.7|39.0|22.7|32.2|-0.7|
?|18.6|6.8|]||292|K=H|1|seen|9.3|13.6|23.1|57.6|+1.5|
[18.7|7.9|]||7|N|3|]-9.4|15.8|23.0|55.4|+1.1|
[18.0|11.6|]||3|N|1|]-9.0|23.2|23.4|48.0|+0.5|
[18.1|19.4|4|N|1|]-9.0|38.8|23.4|32.4|-0.7|
[18.5|22.6|]||2|K=H|1|]-9.2|45.2|23.2|26.0|-1.4|
[17.6|15.9|]||5|N|2|]-8.8|31.8|23.6|39.4|-0.1|
?|17.0|10.8|]||30|2|K=H|1|seen|8.5|21.6|23.9|49.6|+0.7|
[17.8|12.7|]||2|K=H|1|]-8.9|25.4|23.5|45.8|+0.4|

16

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

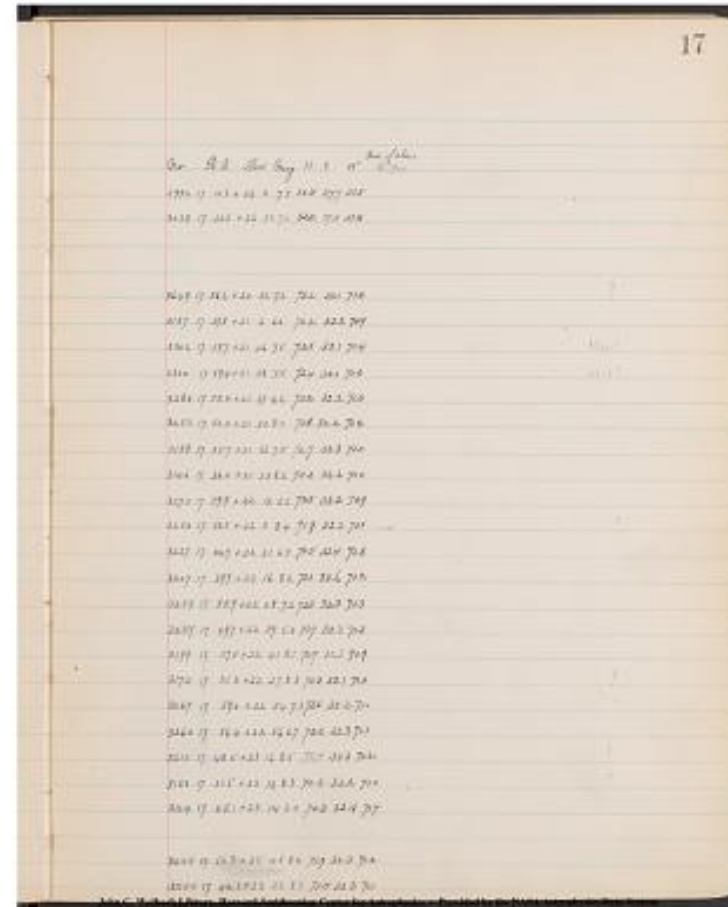
[[7 column table]]

| No. | R.A. | Dec. | Mag. | H. | V. | H' | ^[[Red. of stars to 1900]]

No.	R.A.	Dec.	Mag.	H.	V.	H'	^[[Red. of stars to 1900]]
2994	17 11.3	+26 3	7.5	50.5	27.7	51.5	
3038	17 26.6	+26 33	7.0	52.2	27.8	51.8	

3649	17 56.2	+20 5.2	7.2	72.2	32.1	71.2	?
3157	17 29.8	+21 6	6.0	70.2	32.3	70.9	
3302	17 59.7	+21 26	7.5	72.5	32.1	71.4	3300?
3300	17 59.4	+21 38	7.5	72.4	32.1	71.0	3302?
3280	17 55.4	+21 37	4.2	72.2	32.2	71.3	
3253	17 50.0	+21 30	8.0	71.8	32.2	71.2	
3188	17 35.7	+21 36	7.5	70.7	32.3	71.0	
3146	17 26.0	+21 23	8.2	70.0	32.2	71.0	
3273	17 59.9	+22 12	5.2	72.5	32.2	70.9	
3250	17 53.5	+22 5	8.4	71.9	32.2	71.1	?
3227	17 44.7	+22 21	6.5	71.5	32.4	71.3	
3207	17 39.9	+22 16	8.2	71.1	32.6	71.2	
3259	17 55.9	+22 28	7.2	72.3	32.3	71.3	
3237	17 49.7	+22 29	5.0	71.9	32.3	71.3	
3199	17 37.5	+22 41	8.1	70.7	32.3	70.9	
3172	17 31.3	+22 27	8.3	70.3	32.1	71.0	?
3267	17 59.0	+22 54	7.3	72.6	32.3	71.1	
3260	17 56.4	+22 56	6.7	72.2	32.3	71.1	
3213	17 48.5	+23 16	8.5	71.7	32.3	71.2	?
3150	17 31.5	+23 12	8.3	70.3	32.2	71.0	?
3124	17 25.1	+23 14	8.0	70.3	32.4	71.7	

3220	17 50.3	+23 45	8.4	71.9	32.3	71.2	
3200	17 46.1	+23 22	8.3	71.5	32.3	71.1	



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

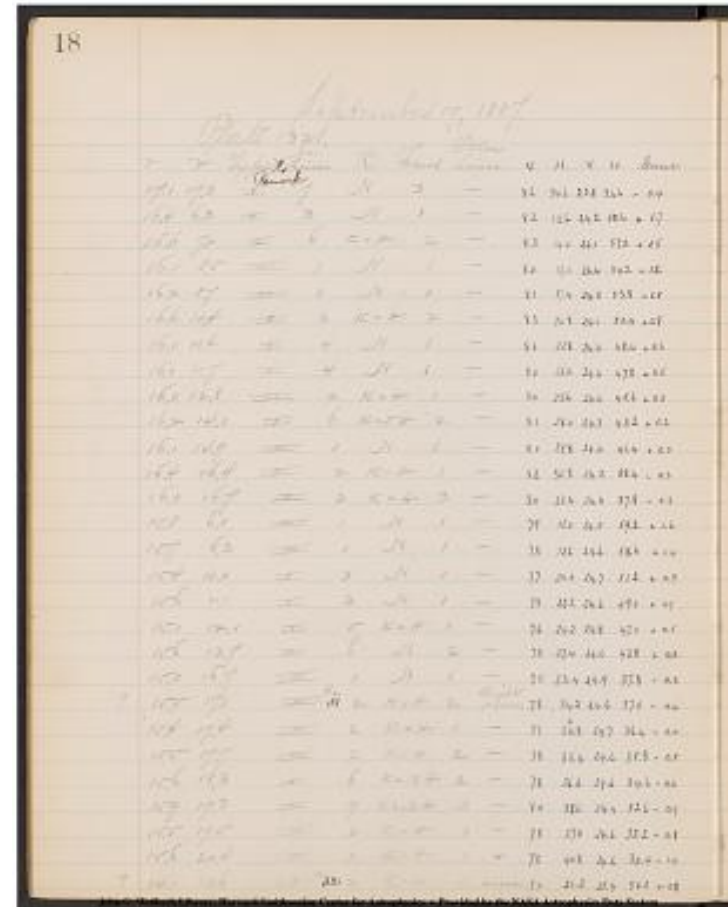
18

September 19, 1887.

Plate 1321.

| V | H | Type | No. Remark | No. Lines | K | Focus | Other Lines | V. | H. |
V. | H. | correc. |

17.1	17.3	III	N 3 -	8.6	34.6	23.8	3.66	-0.4		
16.4	6.3	III	N 1 -	8.2	12.6	24.2	58.6	+1.7		
16.6	7.0	III	K=H 2 -	8.3	14.0	24.1	57.2	+1.5		
16.1	8.5	III	N 1 -	8.0	17.0	24.4	54.2	+1.2		
16.2	8.7	III	N 1 -	8.1	17.4	24.3	53.8	+1.1		
16.6	10.4	III	2 K=H 2 -	8.3	20.8	24.1	50.4	+0.8		
16.1	11.4	III	N 1 -	8.0	22.8	24.4	48.4	+0.6		
16.0	11.7	III	N 1 -	8.0	23.4	24.4	47.8	+0.5		
16.0	12.8	III	2 K=H 1 -	8.0	25.6	24.4	45.6	+0.3		
16.2	14.0	III	6 K=5H 2 -	8.1	28.0	24.3	43.2	+0.2		
16.1	14.9	III	N 1 -	8.0	29.8	24.4	41.4	+0.0		
16.4	16.4	III	2 K=H 1 -	8.2	32.8	24.2	38.4	-0.3		
16.0	16.7	III	2 K=H 3 -	8.0	33.4	24.4	37.8	-0.3		
15.8	6.0	III	N 1 -	7.9	12.0	24.5	59.2	+1.6		
15.7	6.3	III	N 1 -	7.8	12.6	24.6	58.6	+1.4		
15.4	10.0	III	N 1 -	7.7	20.0	24.7	51.2	+0.9		
15.6	11.1	III	N 1 -	7.8	22.2	24.6	49.0	+0.7		
15.1	12.1	III	5 K=H 1 -	7.6	24.2	24.8	47.0	+0.5		
15.6	13.7	III	N 2 -	7.8	27.4	24.6	43.8	+0.2		
15.0	16.7	III	N 1 -	7.5	33.4	24.9	37.8	-0.3		
?	15.5	17.1	III	be 31	2 K=H 2	bright				
seen	7.8	34.2	24.6	37.0	-0.4					
15.4	17.4	III	2 K=H 1 -							
7.7	[[35.8]]	35.8	[[34.8]]	24.7	36.4	-0.4				
15.5	17.7	III	2 K=H 2 -	7.8	35.4	24.6	35.8	-0.5		
15.6	18.3	III	6 K=2H 2 -	7.8	36.6	24.6	34.6	-0.6		
15.9	19.3	III	9 K=2H 3 -	8.0	38.6	24.4	32.6	-0.7		
15.5	19.5	III	2 K=H 1 -	7.8	39.0	24.6	32.2	-0.8		
15.6	20.4	III	2 K=H 1 -	7.8	40.8	24.6	30.4	-1.0		
?	14.1	10.6	III	a 322 K=H 1	seen	7.0	21.2	25.4	50.0	+0.8



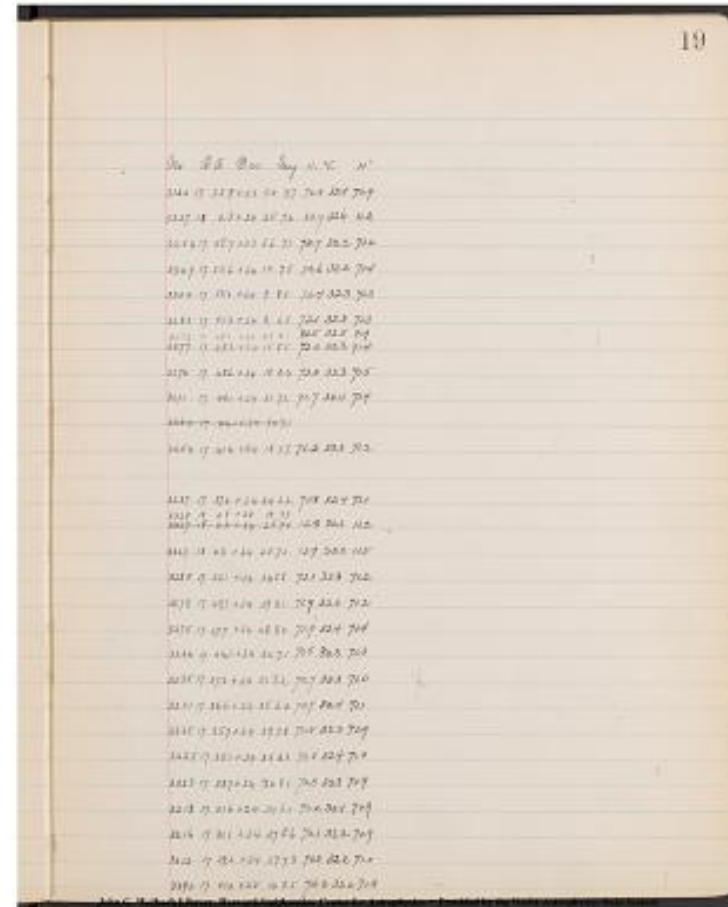
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

19

No. | R. | A. | Dec. | Mag. | H. | V. | H'

3160	17	35.9+23	50	7.7	70.5	32.4	70.9
3327	18	0.3+24	25	7.0	12.9	32.6	11.2
3254	17	58.7+23	56	7.1	72.7	32.2	71.2
3307	17	55.6+24	15	7.5	72.6	32.2	71.4
3304	17	55.0+24	9	8.5	72.4	32.3	71.3
3283	17	51.3+24	2	6.5	72.1	32.3	71.3
3278	17	49.7+24	29	8.1	72.5	32.5	71.9
3277	17	49.2+24	15	8.5	72.0	32.2	71.4
3276	17	48.6+24	18	8.4	72.0	32.3	71.5
3271	17	46.1+24	21	7.2	71.7	32.4	71.4
3254	17	41.4+24	18	7.7	71.2	32.3	71.2
3237	17	37.4+24	24	6.2	70.8	32.4	71.1
3329	18	0.8+24	19	7.7	12.8	32.2	11.2
3327	18	0.3+24	25	7.0	12.9	32.2	11.5
3285	17	{52.1?}+24	34	8.8	72.1	32.3	71.2
3278	17	49.7+24	29	8.1	71.9	32.3	71.2
3275	17	47.7+24	48	8.0	71.9	32.4	71.4
3264	17	44.1+24	30	7.1	71.5	32.3	71.3
3235	17	37.3+24	51	8.2	70.7	32.3	71.0
3231	17	36.5+24	38	6.0	70.7	32.4	71.1
3228	17	35.7+24	39	7.8	70.5	32.3	70.9
3225	17	35.1+24	35	6.3	70.5	32.4	71.0
3223	17	33.7+24	30	8.1	70.3	32.3	70.9
3218	17	31.6+24	24	6.0	70.2	32.4	70.9
3216	17	31.1+24	27	8.6	70.1	32.2	70.9
3212	17	29.2+24	27	7.3	70.0	32.2	71.0
3390	17	51.0+25	14	8.5	72.2	32.2	71.4

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



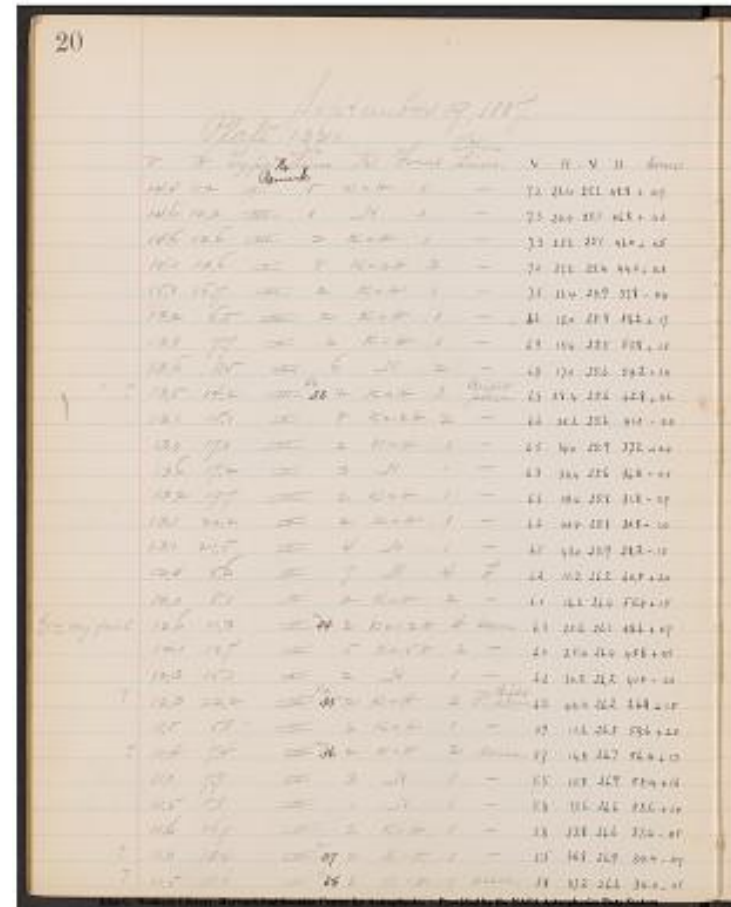
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

September 19, 1887.

Plate 13211,

V | H | Type ^ No. Remark | No. lines | K | Focus | Other Lines | V. | H. |
V. | H. | Corrie |

14.4|11.2|II|5|K=H|1|-7.2|22.4|25.2|48.8|+ 0.7|
 14.6|12.2|III|1|N|1|-7.3|24.4|25.1|46.8|+ 0.6|
 14.6|12.6|III|2|K=H|1|-7.3|25.2|25.1|46.0|+ 0.5|
 14.0|13.6|II|8|K=.2H|3|-7.0|27.2|25.4|44.0|+ 0.3|
 15.0|16.7|III|2|K=H|1|-7.5|33.4|24.9|37.8|- 0.4|
 13.2|6.5|III|2|K=H|1|-6.6|13.0|25.8|58.2|+ 1.7 |
 13.8|7.7|III|2|K=H|1|-6.9|15.4|25.5|55.8|+ 1.5|
 13.6|8.5|II|6|N|2|-6.8|17.0|25.6|54.2|+ 1.4|
 ?|13.5|14.2|III ^ bc 33|2|K=H|3|Bright seen|6.8|28.4|25.6|42.8|+ 0.2|
 13.1|15.1|II|8|K=.2H|2|-6.6|30.2|25.6|41.0|- 0.0|
 13.0|17.0|III|2|K=H|1|-6.5|34.0|25.9|37.2|- 0.4|
 13.6|17.2|II|3|N|1|-6.8|34.4|25.6|36.8|- 0.5|
 13.2|19.7|III|2|K=H|1|-6.6|39.4|25.8|31.8|- 0.9|
 13.1|20.2|II|2|K=H|1|-6.6|40.4|25.8|30.8|- 1.0|
 13.0|21.5|II|4|N|1|-6.5|43.0|25.9|28.2|- 1.3|
 12.4|5.6|II|7|N|4|F|6.2|11.2|26.2|60.0|+ 2.0|
 12.0|8.1|II|2|K=H|2|-6.0|16.2|26.4|55.0|+ 1.5|
 Grh very faint|12.6|11.3|II ^ a 34 |2|K=1.2H|4|seen|6.3|22.6|26.1|48.6|+ 0.7|
 12.1|12.7|II|5|K=.5H|2|-6.0|25.4|26.4|45.8|+ 0.5|
 12.3|15.1|II|2|N|1|-6.2|30.2|26.2|41.0|- 0.0|
 ?|12.3|22.2|III ^ be. 35|2|K=H|3|F? Bright seen|6.2|44.4|26.2|26.8|- 1.5|
 11.8|5.8|III|2|K=H|1|-5.9|11.6|26.5|59.6|+ 2.0|
 ?|11.4|7.4|II ^ a 36 |2|K=H|2|seen|5.7|14.8|26.7|56.4|+ 1.7|
 11.0|7.9|II|3|N|1|-5.5|15.8|26.9|55.4|+ 1.6|
 11.5|8.8|III|1|N|1|-5.8|17.6|26.6|53.6|+ 1.4|
 11.6|16.9|III|2|K=H|1|-5.8|33.8|26.6|37.4|- 0.5|
 ?|11.0|18.4|III ^ a 37|2|K=H|1|-5.5|36.8|26.9|34.4|- 0.7|
 ?|11.5|18.6|II ^ a 38 |2|K=H|1|seen|5.8|37.2|26.6|34.0|- 0.8|



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[9 column table]]

No.	R.	A.	Dec.	Mag	H.	V.	H'.	
3379	17	49.5	+25	17	8.0	71.9	32.5	71.2
3368	17	47.4	+25	2	7.9	71.8	32.3	71.2
3364	17	46.5	+25	1	7.8	71.7	32.3	71.2
3357	17	44.4	+25	20	7.0	71.6	32.3	71.3
x u[?] ended on page 18								
3427	18	0.1	+25	40	8.1	13.1	32.3	11.4
3415	17	57.3	+25	22	8.5	72.7	32.3	71.3
3404	17	55.7	+25	30	7.2	72.7	32.3	71.3
3353	17	42.9	+25	41	5.7	71.3	32.5	71.1
3344	17	40.8	+25	49	7.0	72.0	32.4	72.0
3328	17	36.6	+25	53	7.8	70.6	32.4	71.0

x u[[?]] ended on page 18

3427	18	0.1	+25	40	8.1	13.1	32.3	11.4
3415	17	57.3	+25	22	8.5	72.7	32.3	71.3
3404	17	55.7	+25	30	7.2	72.7	32.3	71.3
3353	17	42.9	+25	41	5.7	71.3	32.5	71.1
3344	17	40.8	+25	49	7.0	72.0	32.4	72.0
3328	17	36.6	+25	53	7.8	70.6	32.4	71.0

3308	17	30.5	+25	43	7.4	69.9	32.3	70.8
3301	17	29.4	+25	46	8.8	69.8	32.4	70.8
3283	17	26.6	+25	51	8.2	69.6	32.3	70.9
3178	18	2.0	+26	5	5.9	13.2	32.3	11.2
3151	17	56.6	+26	22	7.3	72.8	32.4	71.3
3120	17	49.6	+26	5	5.7	72.2	32.4	71.5
3100	17	46.3	+26	21	7.8	71.7	32.4	71.2
3076	17	40.8	+26	13	8.8	71.0	32.4	71.0
3034	17	24.9	+26	14	5.0	69.3	32.4	70.8
3175	18	1.7	+26	24	7.4	13.3	32.3	11.3
3160	17	58.1	+26	39	7.0	72.9	32.3	71.2
3155	17	57.2	+26	50	8.5	73.0	32.3	71.4
3145	17	55.1	+26	34	8.2	72.7	32.4	71.3
3066	17	36.8	+26	38	7.9	70.6	32.4	71.1
3054	17	33.4	+26	51	8.1	70.2	32.3	70.9
3053	17	32.9	+26	37	8.5	70.1	32.4	70.9

21

No. R.A. Dec. Mag. H. V. H'.

3379 17 49.5 +25 17 8.0 71.9 32.5 71.2

3368 17 47.4 +25 2 7.9 71.8 32.3 71.2

3364 17 46.5 +25 1 7.8 71.7 32.3 71.2

3357 17 44.4 +25 20 7.0 71.6 32.3 71.3

3427 18 0.1 +25 40 8.1 13.1 32.3 11.4

3415 17 57.3 +25 22 8.5 72.7 32.3 71.3

3404 17 55.7 +25 30 7.2 72.7 32.3 71.3

3353 17 42.9 +25 41 5.7 71.3 32.5 71.1

3344 17 40.8 +25 49 7.0 72.0 32.4 72.0

3328 17 36.6 +25 53 7.8 70.6 32.4 71.0

3308 17 30.5 +25 43 7.4 69.9 32.3 70.8

3301 17 29.4 +25 46 8.8 69.8 32.4 70.8

3283 17 26.6 +25 51 8.2 69.6 32.3 70.9

3178 18 2.0 +26 5 5.9 13.2 32.3 11.2

3151 17 56.6 +26 22 7.3 72.8 32.4 71.3

3120 17 49.6 +26 5 5.7 72.2 32.4 71.5

3100 17 46.3 +26 21 7.8 71.7 32.4 71.2

3076 17 40.8 +26 13 8.8 71.0 32.4 71.0

3034 17 24.9 +26 14 5.0 69.3 32.4 70.8

3175 18 1.7 +26 24 7.4 13.3 32.3 11.3

3160 17 58.1 +26 39 7.0 72.9 32.3 71.2

3155 17 57.2 +26 50 8.5 73.0 32.3 71.4

3145 17 55.1 +26 34 8.2 72.7 32.4 71.3

3066 17 36.8 +26 38 7.9 70.6 32.4 71.1

3054 17 33.4 +26 51 8.1 70.2 32.3 70.9

3053 17 32.9 +26 37 8.5 70.1 32.4 70.9

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

September 19, 1887.

Plate 1321

[[12 column table]]

V|H|Type|No. Lines|K|Focus|Other Lines.|V.|H. |V.|H.|Correc.|
 11.6|21.4|I^|[No Remark]]|7|K=.5H|2|-|5.8| 42.8|26.6|28.4|-1.4|
 10.4|7.1||6|N|2|F.|5.2|14.2|27.2|57.0| +1.8 |
 10.4|7.1||6|N|2|-|5.2|25.0|27.2|57.0| +1.8|
 10.4|12.5||6|K=.5H|2|5.3|26.4|27.1|38.2| -0.4|
 10.6|16.5||2|K=H|1|-|33.0|27.1|38.2| -0.4|
 ?| 10.6 | 18.4 | II^|[a]] 39 | 2 | K=H | 2 | seen. | 5.3 | 36.8 | 27.1|34.4|-
 0.8|10.8|23.1||2|K=H|1|-|46.2|27.0|25.0|[[+- symbol]]1.8|

?|9.4|15.2|II^|[a][~~bc~~][~~bc~~]].7
 40|3|K=1.5H|5|F. |[~~bc~~]]Bright?|[~~bc~~]]seen.|4.7|
 |[~~bc~~]]1|[~~bc~~]]30.4|27.7|
 |[~~bc~~]]6|[~~bc~~]]40.8|-0.0|

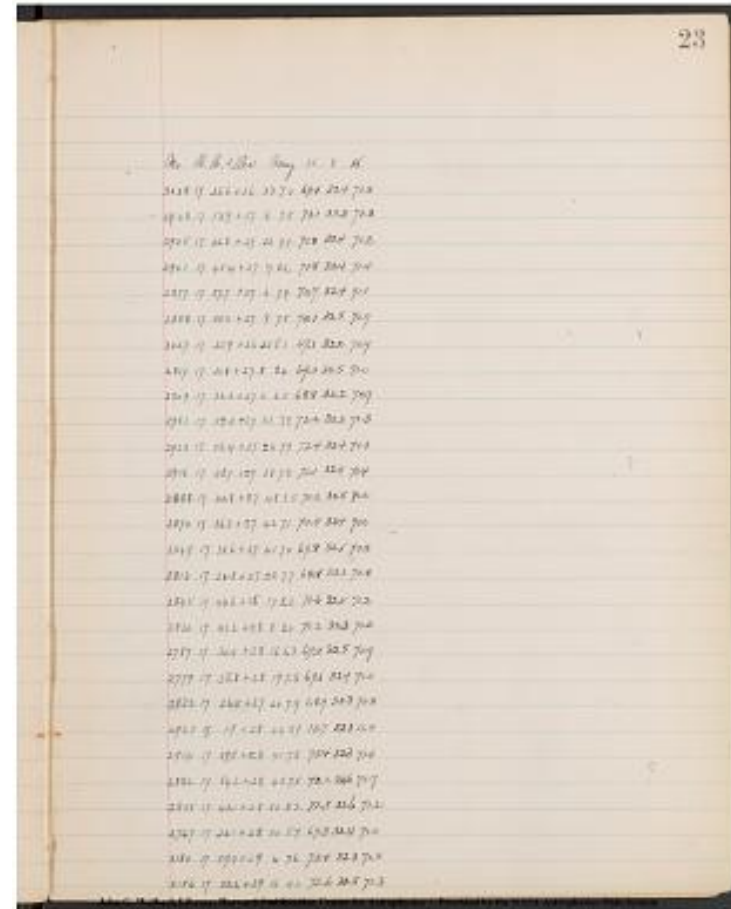
?|9.8|24.0|II^|[a]]41|2|K=H|1|seen.|4.9|48.0 |27.5|23.2|-2.0|

?|6.4|10.2|III^|[bc]]42|3|K=.5H|5| F. Bright seen. |3.2|20.4|29.2|50.8|
 +1.3|

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[6 column table]]

No.	R.A.	Dec.	Mag.	H.	V.	H'.
3038	17 26.6	+26 33	7.0	69.4	32.4	70.8
2948	17 58.9	+27 6	7.5	73.1	32.3	71.3
2905	17 46.8	+27 12	7.7	71.8	32.4	71.2
2901	17 45.4	+27 7	8.2	71.8	32.4	71.4
2877	17 37.7	+27 6	7.9	70.7	32.4	71.1
2858	17 33.3	+27 9	7.5	70.1	32.5	70.9
3027	17 22.9	+26 5.1	8.1	69.1	32.2	70.9
2817	17 21.8	+27 8	8.4	69.0	32.5	71.0
2809	17 20.2	+27 0	6.5	68.8	32.2	70.9
2951	17 59.4	+27 32	7.9	73.2	32.3	71.3
2923	17 52.4	+27 24	7.9	72.4	32.4	71.3
2916	17 48.7	+27 38	7.8	72.1	32.4	71.4
2888	17 40.8	+27 48	3.5	71.2	32.5	71.2
2870	17 36.3	+27 42	7.1	70.5	32.4	71.0
2849	17 30.6	+27 41	7.0	69.8	32.5	70.8
2813	17 20.8	+27 22	7.7	68.8	32.2	70.8
2845	17 44.6	+28 17	8.2	71.6	32.5	71.2
2830	17 41.2	+28 8	8.0	71.2	32.3	71.2
2787	17 30.4	+28 16	6.3	69.8	32.5	70.9
2779	17 28.8	+28 19	7.8	69.6	32.4	71.0
2822	17 23.5	+27 60	7.9	68.9	32.3	70.8
2925	17 1.9	+28 44	3.9	13.7	32.3	11.4
2914	17 59.8	+28 41	7.8	73.4	32.3	71.4
2882	17 54.6	+28 45	7.5	72.2	32.6	70.7
2835	17 42.1	+28 50	8.2	71.3	32.6	71.2
2767	17 26.1	+28 30	5.7	69.3	32.4	71.0
3180	17 59.4	+29 4	7.6	73.4	32.3	71.4
3156	17 52.2	+29 16	4.0	72.6	32.5	71.3



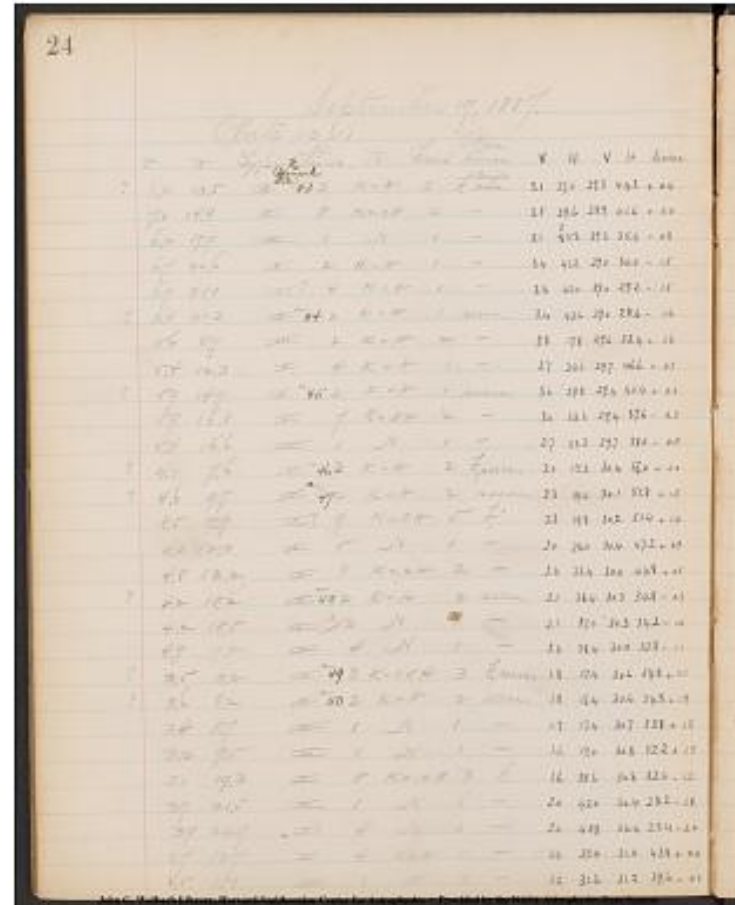
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

September 19, 1887

Plate 1321

[[12 column table]]

V H	Type	[subscript]	No.	Remark.	[/subscript]	No. of Lines	K
Focus	Other Lines	V.	H.	V.	H.	boree.	
? 6.2 13.5 II [^] [b.c.]	[[?]]	? 43	3	K=H	3	F. Bright seen.	3.1 27.0
29.3	44.2	+0.4					
7.0	14.8	III	8	K=2H	2	-	3.5 29.6 28.9 41.6 +0.0
6.2	17.9	III	1	N	1	-	3.1 5 35.8
29.3	35.4	-0.8					
6.7	20.6	II	2	K=H	1	-	3.4 41.2 29.0 30.0 -1.5
6.9	21.0	I?	4	K=H	1	-	3.4 42.0 29.0 29.2 -1.5
? 6.8	21.3	II [^] [a]	44	2	K=H	1	seen. 3.4 42.6 29.0 28.6 -1.6
5.6	8.9	III	2	K=H	2	-	2.8 17.8 29.6 53.4 +1.6
5.4	12.3	III	4	K=H	1	-	2.7 24.6 29.7 46.6 +0.7
? 5.9	14.9	II [^] [a]	45	2	K=H	1	seen. 3.0 29.8 29.4 41.4 +0.0
5.9	16.8	I	7	K=8H	2	-	3.0 33.6 29.4 37.6 -0.5
5.4	16.6	III	1	N	1	-	2.7 33.2 29.7 38.0 -0.5
? 4.0	7.6	II [^] [a]	46	3	K=H	2	F. seen. 2.0 15.2 30.4 56.0 +2.0
? 4.6	9.7	II [^] [a]	47	2	K=H	2	seen. 2.3 19.4 30.1 51.8 +1.5
4.5	9.9	I?	9	K=8H	5	F	2.2 19.8 30.2 51.4 +1.4
4.0	12.0	I	5	N	i	-	2.0 24.0 30.4 47.2 +0.9
4.8	13.2	I	8	K=2H	2	-	2.4 26.4 30.0 44.8 +0.5
? 4.2	18.2	II [^] [a]	2	K=H	2	seen.	2.1 36.4 30.3 34.8 -0.9
4.2	18.2	II	3	N	1	-	2.1 37.0 30.3 34.2 -1.0
4.9	19.2	I	4	N	1	-	2.4 38.4 30.0 32.8 -1.1
? 3.5	6.2	II [^] [a]	49	3	K=1.5H	3	F. seen. 1.8 12.4 30.6 58.8 +2.5
? 3.6	8.2	II [^] [a]	50	2	K=H	2	seen. 1.8 16.4 30.6 54.8 +1.9
3.4	8.7	III	1	N	1	-	1.7 17.4 30.7 53.8 +1.8
3.2	9.5	III	1	N	1	-	1.6 19.0 30.8 52.2 +1.5
3.1	19.3	I	8	K=2H	3	F.	1.6 38.6 30.8 32.6 -1.2
3.9	21.5	III	1	N	1	-	2.0 43.0 30.4 28.2 -1.8
3.9	22.9	I	4	N	1	-	2.0 45.8 30.4 25.4 -2.2
2.7	13.7	I	4	K=H	1	-	1.4 27.4 31.0 43.8 +0.3
2.5	15.8	III	1	N	1	-	1.2 31.6 31.2 39.6 -0.3



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[9 columned table]]

No.	R.	A.	Dec.	Mag.	[[Mag.]]	H.	V.	H'.
3126	17	44.8	+29 22	6.0	71.8	32.5	71.4	
2831	17	41.6	+28 59	7.5	71.2	32.5	71.2	
3079	17	34.5	+29 20	7.5	70.3	32.4	71.1	
3049	17	28.3	+28 1	8.1	69.5	32.5	71.0	
2776	17	27.4	+28 52	8.4	69.4	32.3	70.9	
2771	17	26.7	+28 54	8.0	69.3	32.3	70.9	
3165	17	55.1	+29 34	7.5	72.9	32.4	71.3	
3134	17	47.3	+29 43	8.0	71.9	32.4	71.2	
3108	17	41.3	+29 28	8.2	71.1	32.5	71.1	
3091	17	37.0	+29 30	6.5	70.6	32.5	71.1	
3095	17	37.4	+29 43	7.8	70.6	32.4	71.1	
3113	17	58.4	+30 24	6.7	73.6	32.4	71.6	
3096	17	53.5	+30 6	7.7	72.9	32.4	71.4	
3093	17	53.0	+30 12	4.5	72.8	32.4	71.4	
3078	17	48.3	+30 24	7.9	72.3	32.4	71.4	
3069	17	45.4	+30 2	7.2	71.8	32.4	71.3	
3128	18	1.6	+30 33	5.0	14.0	32.4	11.5	
3111	17	57.1	+30 33	6.7	73.5	32.4	71.6	
3106	17	55.9	+30 39	7.0	73.3	32.3	71.5	
3100	17	54.0	+30 44	8.0	73.0	32.3	71.5	
3133	17	31.1	+30 53	6.0	69.7	32.5	70.9	
3013	17	26.1	+30 26	7.1	69.1	32.4	70.9	
2997	17	22.8	+30 22	8.1	68.6	32.4	70.8	
3100	17	44.4	+31 5	7.7	71.8	32.5	71.5	
3087	17	39.4	+31 12	7.5	71.0	32.4	71.3	



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

26

September 19, 1887

Plate 1321

[[12 column table]]

| V | H | Type | No. Lines | K | Focus | Other Lines | V. | H. | V. | H. |

Correc. |

| 2.1 | 71.4^[[No Remark.]][[?]] | I? | 3 | N | 1 | - | 1.0 | 34.8 | 31.4 | 36.4 | -

0.7 |

| 2.2 | 17.5 | III | 2 | K=H | 2 | - | 1.1 | 35.0 | 31.3 | 36.2 | -0.8 |

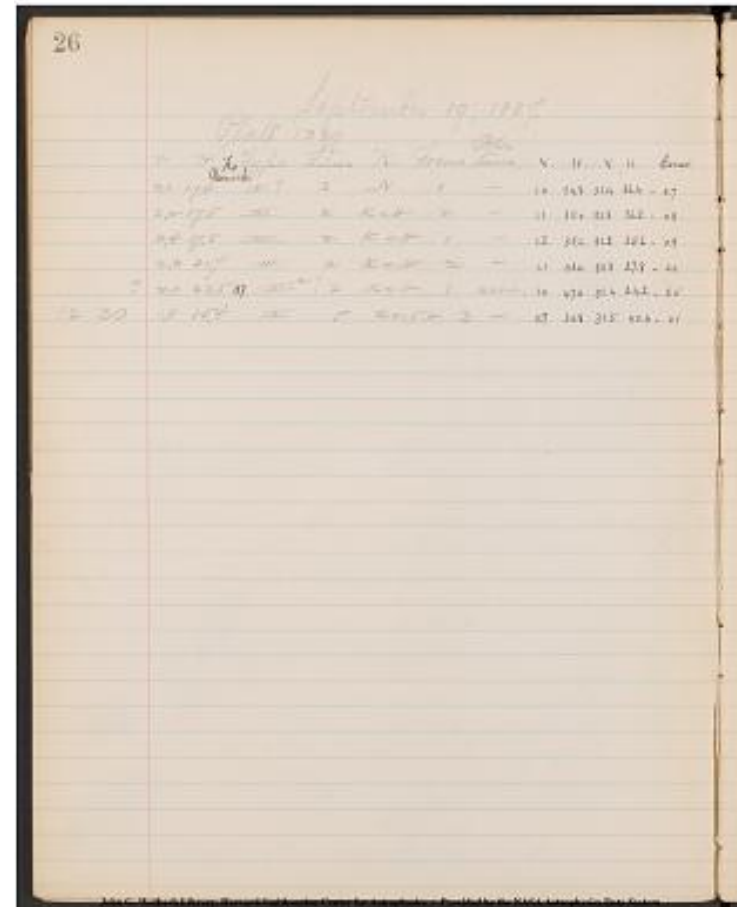
| 2.4 | 17.8 | III | 2 | K=H | 1 | - | 1.2 | 35.6 | 31.2 | 35.6 | -0.9 |

| 2.3 | 21.7 | III | 2 | K=H | 2 | 1.1 | 43.4 | 31.3 | 27.8 | -2.0 |

? | 2.0 | 23.5 | 51 | III^[[a]]? | 2 | K=H | 1 | seen. | 1.0 | 47.0 | 31.4 | 24.2 | -

2.5 |

| 12 30 | 1.8 | 15.4 | I | 5 | K=.5H | 3 | - | 0.9 | 30.8 | 31.5 | 40.4 | -0.1 |



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20

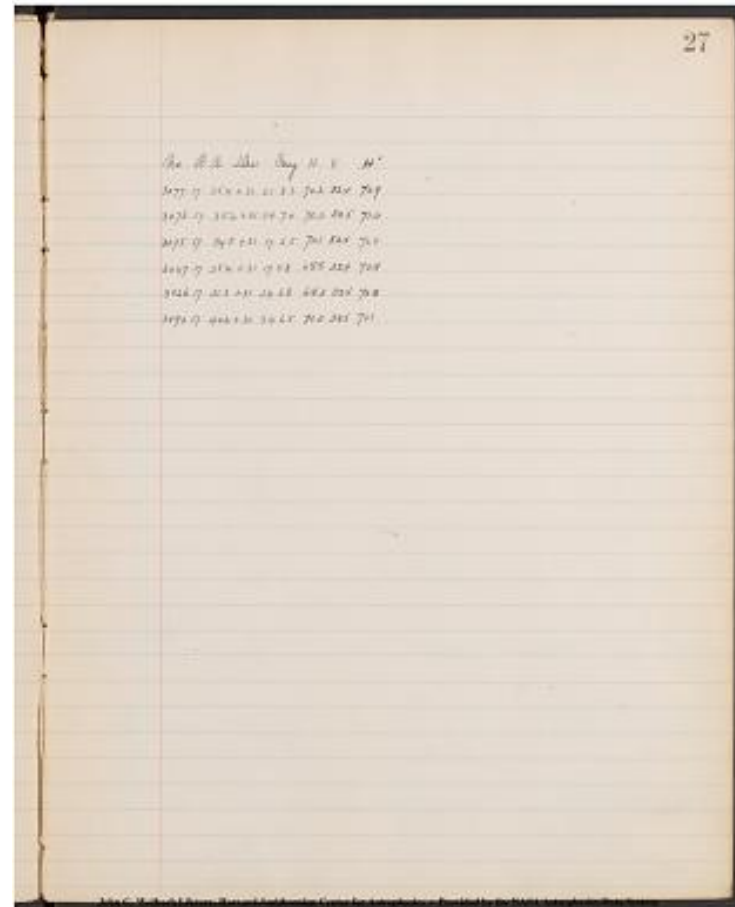
Transcribed and Reviewed by Digital Volunteers

Extracted Aug-29-2022 02:37:24

27

[No. | RA. | Dec | Mag. | H. | V. | H']

3077	17	35.4	+31 21	8.3	70.2	32.4	70.9
3076	17	35.2	+31 24	7.0	70.2	32.5	71.0
3075	17	34.5	+31 17	6.5	70.1	32.5	71.0
3047	17	25.4	+31 17	5.8	68.8	32.4	70.8
3026	17	21.3	+31 24	6.8	68.3	32.4	70.8
3090	17	40.2	+31 34	6.5	71.0	32.5	71.1



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

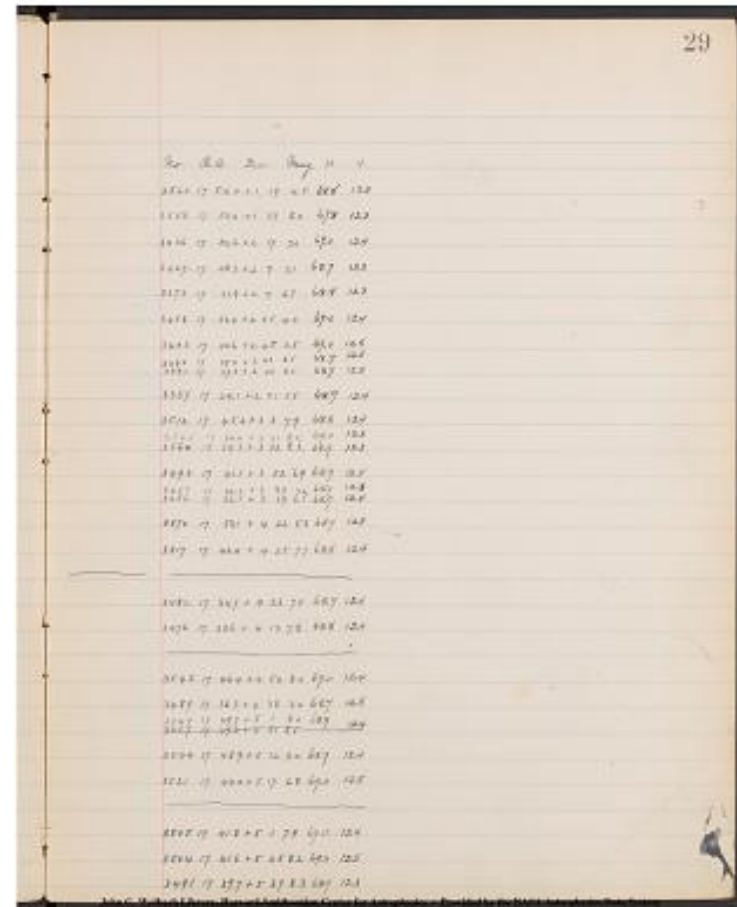
No.	R.a.	Doc.	Mag.	H.	V.
3560	17	54.4 + 1 19	4.5	68.8	12.3
3556	17	53.0 + 1 37	8.0	67.8	12.3
3436	17	50.6 + 2 17	7.0	69.0	12.4
3427	17	48.3 + 2 7	7.1	68.9	12.3
3373	17	31.8 + 2 7	6.7	68.8	12.3
3458	17	53.4 + 2 55	4.0	69.0	12.4
3403	17	40.6 + 2 45	3.5	69.0	12.5
3390	17	37.3 + 2 40	6.5	68.7	12.5
3391	17	37.3 + 2 40	6.5	68.7	12.5
3337	17	24.1 + 2 51	5.5	68.7	12.4
3512	17	45.2 + 3 3	7.9	68.8	12.4
3565	17	54.4 + 3 31	8.2	69.0	12.3
3564	17	54.3 + 3 32	8.2	68.9	12.3
3493	17	41.1 + 3 52	6.9	68.9	12.5
3457	17	32.3 + 3 29	7.2	68.9	12.3
3456	17	32.1 + 3 29	6.5	68.7	12.4
3570	17	53.1 + 4 22	5.3	68.9	12.5
3517	17	42.4 + 4 25	7.7	68.8	12.4

3482	17	34.7 + 4 26	7.5	68.7	12.4
3476	17	33.6 + 4 12	7.8	68.8	12.4

3543	17	46.4 + 4 54	8.0	69.0	12.4
3489	17	36.3 + 4 38	3.0	68.7	12.5
3547	17	49.7 + 5 1	8.0	68.9	12.4
3557	17	49.6 + 4 51	8.5	[[Strike Through]]	
3544	17	48.9 + 5 12	8.0	68.9	12.4
3521	17	44.0 + 5 17	6.8	69.0	12.5

3505	17	41.8 + 5 1	7.9	69.0	12.4
3504	17	41.6 + 5 45	8.2	69.0	12.5
3491	17	39.7 + 5 37	8.3	68.7	12.3

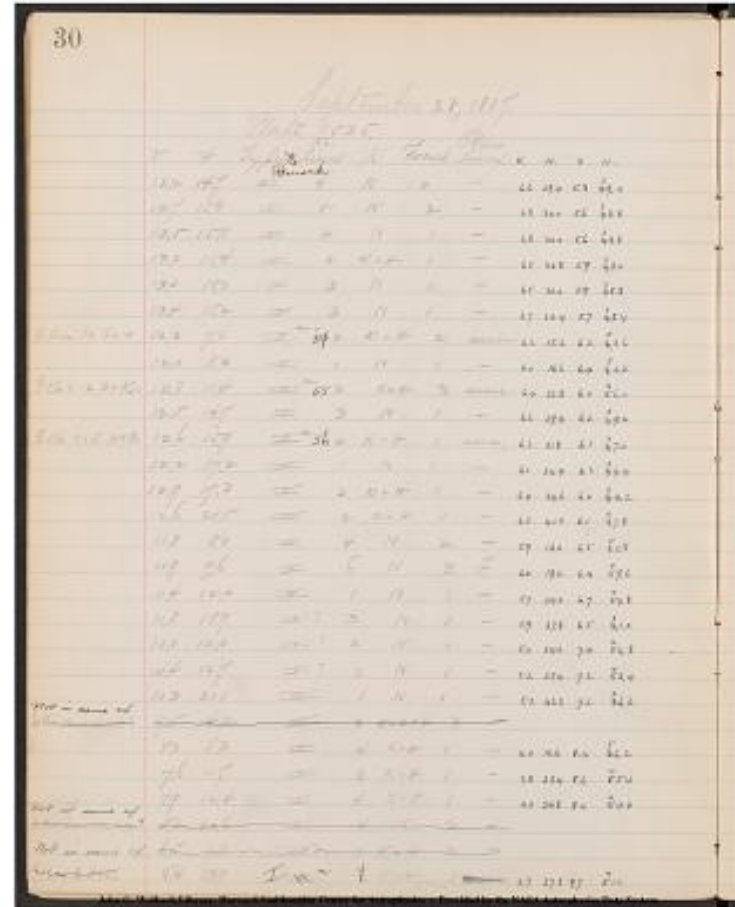
Josh G. Wolbach Library, Harvard Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

30
 September 28, 1887.
 Plate 1535
 [[12 Columned Table]]

V	H	Type	No Remark	No. Lines	K	Focus	Other Lines	V	H
13.2	14.7	I		4	N	2	-	6.6	29.4
49.4	39.4								
13.7	15.0	I		5	N	2	-	6.8	30.0
48.8	38.8								
13.5	15.0	I		4	N	1	-	6.8	30.0
48.8	38.8								
13.0	15.4	II		2	K=H	1	-	6.5	30.8
48.0	38.0								
13.0	15.0	I		3	N	1	-	6.5	30.0
48.8	38.8								
13.4	15.2	I		3	N	1	-	6.7	30.4
48.4	38.4								
^[[3 lines bt. F + H]] 12.3 7.6 II a754 2 K=H 2 seen 6.2 15.2									
6.2	63.6								
12.0	8.3	II		1	N	1	-	6.0	16.6
62.2	52.2								
^[[G + L = .2 H + K.]] 12.8 11.4 II a55 2 K=H 3 seen 6.4 22.8									
6.0	56.0								
12.5	14.7	I		3	N	1	-	6.2	29.4
49.4	39.4								
^[[G + L = 5 H + K]] 12.6 15.9 II a56 2 K=H 1 seen 6.3 31.8									
6.1	47.0								
12.2	17.2	III		1	N	1	-	6.1	34.4
44.4									
12.9	17.3	II		2	K=H	1	-	6.4	34.6
44.2	34.2								
12.6	20.5	III		2	K=H	1	-	6.3	41.0
37.8	27.8								
11.8	8.0	II		4	N	2	-	5.9	16.0
62.8	52.8								
11.9	9.6	II		6	N	3	F	6.0	19.2
64.4	49.6								
11.4	12.0	II		1	N	1	-	5.7	24.0
67.4	54.8								
44.8									
11.8	18.9	I		3	N	1	-	5.9	37.8
65.4	41.0								
10.0	12.0	I		2	N	1	-	5.0	24.0
74.4	54.8								
10.4	12.7	I		2	N	1	-	5.2	25.4
72.2	53.4								
10.3	21.1	III		1	N	1	-	5.2	42.2
72.2	36.6								
^[[Not in same ef.]] So this plane [[?]] same									
ef. ? [[?]] 9.5 14.2 III 2 K=2.0H 3 -									
8.0	6.3	II		4	K=H	1	-		
66.2	56.2								
7.6	11.7	III		2	K=H	1	-		
55.4	45.4								
7.9	12.4	II		4	K=H	1	-		
54.0	44.0								
^[[Not in same ef.]] So this plane in same									
ef. ? [[?]] 8.0 20.6 II 4 N 2 -									
^[[Not in same ef.]] 6.5 9.3 III 2 K=H 3 -									
^[[G+L.8									
H+K [[?]] 4 13.9 I [[?]] I [[?]] I [[?]]									



rough]]a~~]]~~ ~~]]2]]4~~
K=H|1~~]]seen]]2.7|27.8|9.7]]~~
51.0~~]] 41.0~~
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics.
Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[6 column table]]

No.	R.A.	Dec.	Mag.	H.	V.
3490	17 39.6	+5 50	7.1	69.0	12.4
3483	17 39.0	+5 36	7.5	69.0	12.4
3484	17 39.1	+5 43	7.7	69.1	12.5

3481	17 38.8	+5 58	7.3	68.8	12.5
3478	17 38.5	+5 47	7.8	68.9	12.5
3597	17 53.8	+6 16	7.0	69.0	12.5
3589	17 52.4	+6 26	7.2	69.0	12.4
3566	17 46.2	+6 8	5.9	69.0	12.5
3524	17 39.4	+6 18	7.9	68.8	12.5
3514	17 37.0	+6 8	8.0	68.8	12.4
3498	17 34.5	+6 24	6.5	68.9	12.5
3494	17 34.2	+6 1	7.9	68.8	12.4
3456	17 27.7	+6 8	8.0	68.7	12.4
3593	17 53.1	+6 34	7.5	69.1	12.5
3589	17 52.4	+6 26	7.2	68.4	12.3
3578	17 49.9	+6 30	6.8	69.1	12.5
3560	17 45.0	+6 45	8.0	69.0	12.5
3476	17 31.0	+6 34	8.2	68.8	12.5
3488	17 44.9	+7 26	7.1	68.9	12.4
3481	17 43.6	+7 16	7.8	69.0	12.5
3400	17 26.5	+7 17	8.1	68.7	12.5

3567	17 56.4	+8 25	7.0	69.0	12.4
3523	17 45.8	+8 42	7.7	69.2	12.5
3511	17 44.1	+8 35	7.0	68.9	12.6

3471	17 41.1	+9 50	7.0	68.9	12.5
------	---------	-------	-----	------	------

31

No. R.A. Dec. Mag. H. V.

3490 17 39.6 +5 50 7.1 69.0 12.4

3483 17 39.0 +5 36 7.5 69.0 12.4

3484 17 39.1 +5 43 7.7 69.1 12.5

3481 17 38.8 +5 58 7.3 68.8 12.5

3478 17 38.5 +5 47 7.8 68.9 12.5

3597 17 53.8 +6 16 7.0 69.0 12.5

3589 17 52.4 +6 26 7.2 69.0 12.4

3566 17 46.2 +6 8 5.9 69.0 12.5

3524 17 39.4 +6 18 7.9 68.8 12.5

3514 17 37.0 +6 8 8.0 68.8 12.4

3498 17 34.5 +6 24 6.5 68.9 12.5

3494 17 34.2 +6 1 7.9 68.8 12.4

3456 17 27.7 +6 8 8.0 68.7 12.4

3593 17 53.1 +6 34 7.5 69.1 12.5

3589 17 52.4 +6 26 7.2 68.4 12.3

3578 17 49.9 +6 30 6.8 69.1 12.5

3560 17 45.0 +6 45 8.0 69.0 12.5

3476 17 31.0 +6 34 8.2 68.8 12.5

3488 17 44.9 +7 26 7.1 68.9 12.4

3481 17 43.6 +7 16 7.8 69.0 12.5

3400 17 26.5 +7 17 8.1 68.7 12.5

3567 17 56.4 +8 25 7.0 69.0 12.4

3523 17 45.8 +8 42 7.7 69.2 12.5

3511 17 44.1 +8 35 7.0 68.9 12.6

3471 17 41.1 +9 50 7.0 68.9 12.5

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

September 28, 1887.

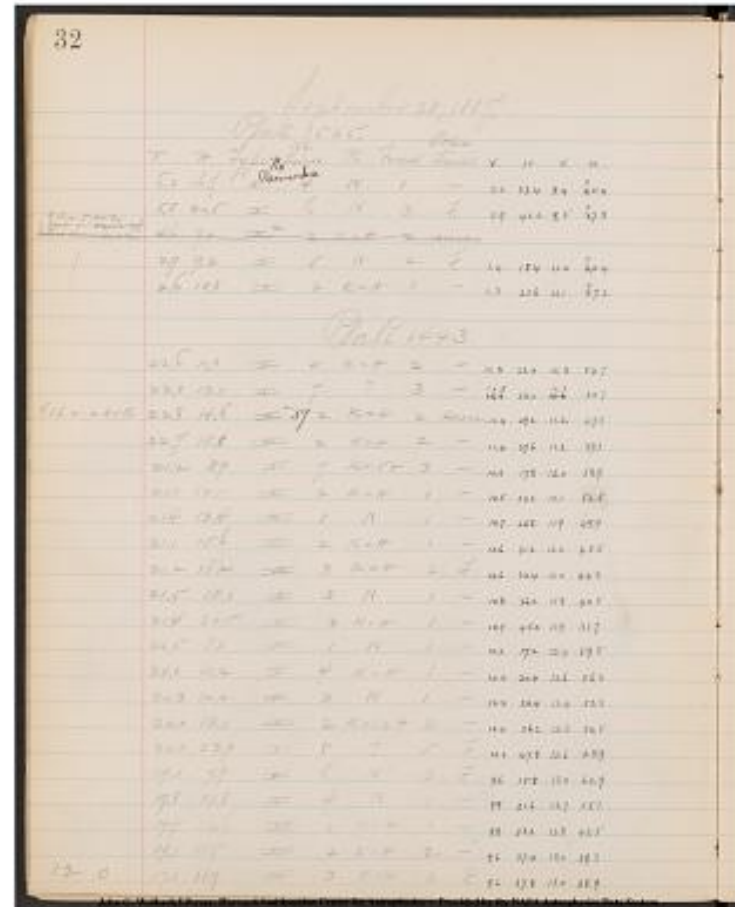
Plate 1535.

v | H | Type | No. Lines | K | Focus | Other Lines | V. | H. | V. | H.
 6.0 | 16.7 | I^A [No remarks.] | 4 | N | 1 | - | 3.0 | 33.4 | 9.4 |
~~4~~ 35.4
 5.8 | 20.5 | I | 6 | N | 3 | F₁ | 2.9 | 41.0 | 9.5 |
~~3~~ 27.8
 [[margin]] [[?]] th=.5H+K not in [[?]] [[margin]] Is
 this plan [[?]] 4.6 | 9.0 | II^a | 2 | K=H
 | 2 | [[?]]
 2.9 | 9.2 | I | 5 | N | 2 | F₁ | 1.4 | 18.4 | 11.0 |
~~6~~ 50.4 |
 2.6 | 10.8 | II | 2 | K=H | 1 | - | 1.3 | 21.6 | 11.1 |
~~5~~ 47.2

Plate 1443

22.6 | 11.0 | I | 4 | K=H | 2 | - | 11.3 | 22.0 | 11.3 | 54.7
 23.0 | 13.0 | I | 7 | ? | 3 | - | ~~12.0~~ 11.5 |
 26.0 | ~~10.6~~ 11.1 | 50.7
 [[margin]] 5rh=.2HrK [[margin]] 22.8 | 14.6 |
 II^a 57 | 2 | K=H | [[?]] | 11.4 | 29.2 | 11.2 |
 47.5
 22.7 | 18.8 | II | 2 | K=H | 2 | - | 11.4 | 37.6 | 11.2 | 39.1
 21.2 | 8.9 | I | 7 | K=5H | 3 | - | 10.6 | 17.8 | 12.0 | 58.9
 21.0 | 12.1 | II | 2 | K=H | 1 | - | 10.5 | 24.2 | 12.1 | 52.5
 21.4 | 13.4 | III | 1 | N | 1 | - | 10.7 | 26.8 | 11.9 | 49.9
 21.1 | 15.6 | III | 1 | K=H | 1 | - | 10.6 | 31.2 | 12.0 | 45.5
 21.2 | 16.2 | III | 3 | K=H | 2 | F₁ | 10.6 | 32.4 |
 12.0 | 44.3
 21.5 | 18.1 | I | 3 | N | 1 | - | 10.8 | 36.2 | 11.8 | 40.5
 21.4 | 22.5 | III | 2 | K=H | 1 | - | 10.7 | 45.0 | 11.9 | 31.7
 20.5 | 8.6 | III | 1 | N | 1 | - | 10.2 | 17.2 | 12.4 | 59.5
 20.0 | 10.2 | I | 4 | K=H | 1 | - | 10.0 | 20.4 | 12.6 | 56.3
 20.3 | 12.2 | I | 3 | N | 1 | - | 10.2 | 24.4 | 12.4 | 52.3
 20.0 | 13.1 | II | 2 | K=1.2H | 2 | - | 10.0 | 26.2 | 12.6 | 50.5
 20.0 | 23.9 | I | 8 | ? | 5 | F₁ | 10.0 | 47.8 | 12.6 |
 28.9
 19.1 | 7.9 | I | 6 | N | 3 | F₁ | 9.6 | 15.8 | 13.0 |
 60.9
 19.8 | 10.8 | I | 4 | N | 1 | - | 9.9 | 21.6 | 12.7 | 55.1
 19.7 | 16.6 | III | 2 | K=H | 1 | - | 9.8 | 33.2 | 12.8 | 43.5
 19.1 | 18.5 | III | 2 | K=H | 2 | - | 9.6 | 37.4 | 13.0 | 39.3
 19.1 | 18.9 | III | 3 | K=H | 2 | F₁ | 9.6 | 37.8 | 13.0 |
 | 38.9

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



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

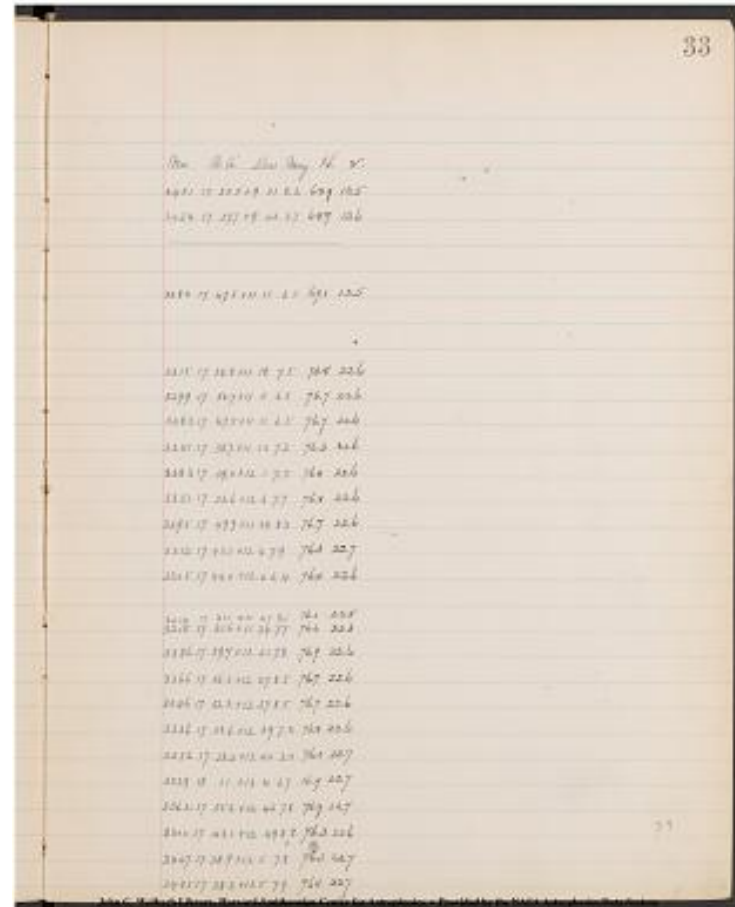
No. R.A. [Dec. Mag.?] 74. [V.?]
 3451 17 35.5 + 9 31 8.2 68.9 12.5
 3424 17 27.7 + 9 42 6.7 68.7 12.6

3283 17 47.5 + 11 11 6.5 69.1 12.5

3315 17 54.8 + 11 18 7.5 76.8 22.6
 3299 17 50.7 + 11 5 6.5 76.7 22.6
 3283 17 47.5 + 11 11 6.5 76.7 22.6
 3251 17 38.7 + 11 13 7.2 76.3 22.6
 3383 17 59.0 + 12 1 7.5 76.8 22.6
 3351 17 52.6 + 12 6 7.7 76.8 22.6
 3295 17 49.9 + 11 54 8.3 76.7 22.6
 3312 17 45.1 + 12 4 7.9 76.3 22.7
 3305 17 44.0 + 12 0 6.4 76.4 22.6

3214 17 31.1 + 11 47 8.1 76.1 22.5
 3215 17 31.6 + 11 34 7.7 76.6 22.3
 3386 17 59.7 + 12 21 7.8 76.9 22.6
 3366 17 56.3 + 12 37 8.5 76.7 22.6
 3346 17 52.3 + 12 27 8.5 76.7 22.6
 3336 17 50.6 + 12 39 7.3 76.8 22.6
 3252 17 28.2 + 12 40 2.0 76.0 22.7
 3529 18 1.1 + 13 4 6.7 16.9 22.7
 3362 17 55.3 + 12 46 7.8 76.9 22.7
 3300 17 43.1 + 12 49 8.8 76.3 22.6 ^[[??]]
 3447 17 38.9 + 13 5 7.8 76.3 22.7
 3445 17 38.3 + 13 5 7.9 76.1 22.7

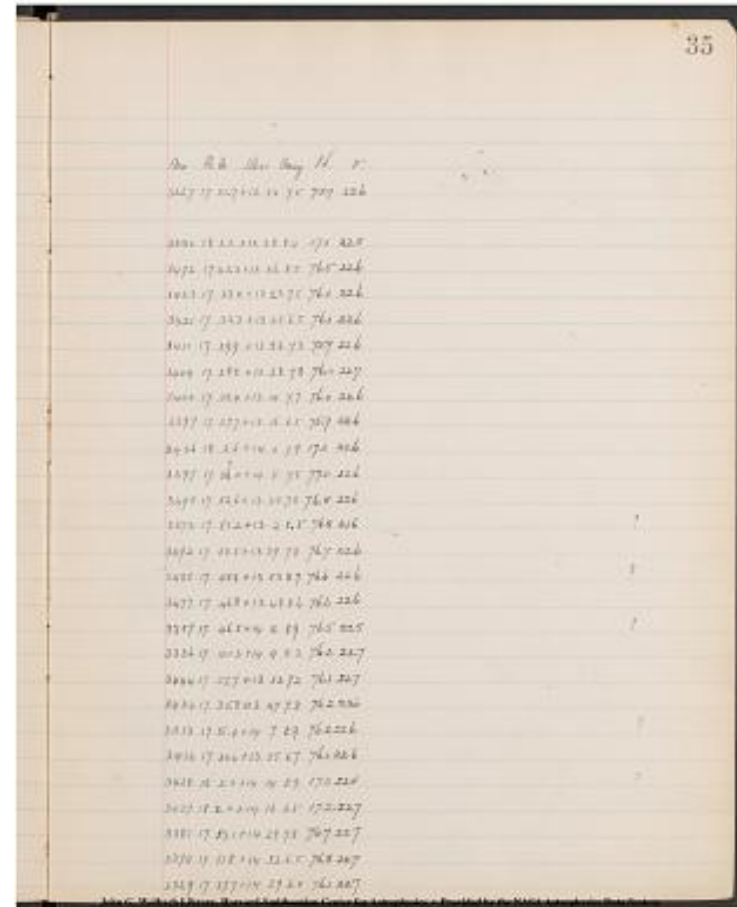
John G. Wolbach Library, Harvard Smithsonian Center for Astrophysics
 Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[6 columned table]]

No.	R. a.	Dec.	Mag.	H.	V.
3267	17 31.7	+12 50	7.5	75.9	22.6
3540	18 2.6	+13 28	8.4	17.0	22.5
3472	17 45.3	+13 36	8.5	76.9	22.6
3423	17 33.0	+13 23	7.5	76.0	22.6
3421	17 32.3	+13 25	6.5	76.1	22.6
2411	17 29.9	+13 22	7.3	75.9	22.6
3404	17 28.8	+13 28	7.8	76.0	22.6
3400	17 28.4	+13 14	7.7	76.0	22.6
3397	17 27.7	+13 16	6.5	75.9	22.6
3436	18 2.6	+14 0	7.9	17.0	22.6
3397	17 5 [[/strikethrough]]	6 [[/strikethrough]]	7.0	+14	5
5	7.5	77.0	22.6		
3498	17 52.6	+13 55	7.8	76.8	22.6
3373	17 51.2	+13 2	8.5	76.8	21.6
3492	17 50.5	+13 59	7.8	76.7	22.6
3485	17 48.8	+13 53	8.7	76.6	22.6
3477	17 46.8	+13 48	8.6	76.6	22.6
3357	17 46.5	+14 2	8.9	76.5	22.5
3336	17 40.2	+14 4	8.3	76.2	22.7
3444	17 37.7	+13 52	7.2	76.1	22.7
3434	17 35.8	+13 47	7.8	76.2	22.6
3313	17 35.0	+14 7	8.9	76.2	22.6
3412	17 30.0	+13 55	6.7	76.0	22.6
3428	18 2.0	+14 14	8.9	17.0	22.4
3427	18 2.0	+14 16	6.5	17.2	22.7
3381	17 53.1	+14 29	7.8	76.7	22.7
3374	17 51.8	+14 32	6.5	76.8	22.7
3329	17 37.7	+14 29	6.0	76.1	22.7

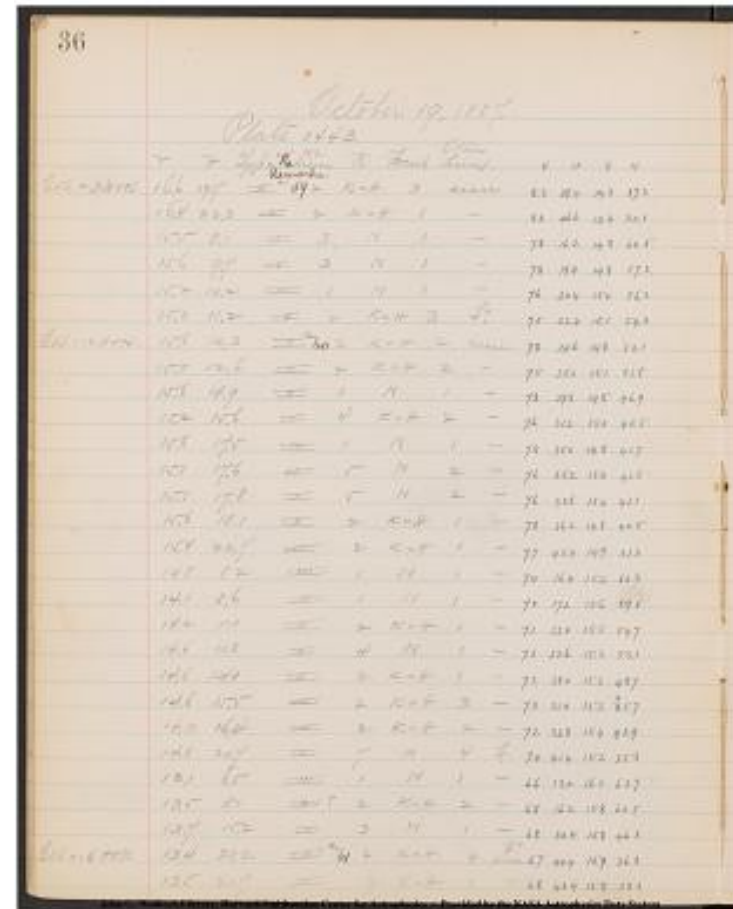


Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

October 19, 1887.

Plate 1443.

V H Type No Remarks. No. Lines K Focus Other Lines. V.	
H. V. H.	
Soh=3HoK 16.6 19.7 II^a 59 2 K=H 3 seen	
8.3 39.4 14.3 37.3	
16.4 23.3 II	2 K=H 1 - 8.2 46.6 14.4 30.1
15.5 8.1 I	3 N 1 - 7.8 16.2 14.8 60.5
15.6 9.7 I	3 N 1 - 7.8 19.4 14.8 57.3
15.2 10.2 III	1 N 1 - 7.6 20.4 15.0 56.3
15.0 11.2 II	2 K=H 3 F? 7.5 22.4 15.1 54.3
Soh=2HoK 15.6 12.3 II^a 60 2 K=H 2 seen	
7.8 24.6 14.8 52.1	
15.0 12.6 II	2 K=H 2 - 7.5 25.2 15.1 51.5
15.6 14.9 II	1 N 1 - 7.8 29.8 14.8 46.9
15.2 15.6 I	4 K=H 2 - 7.6 31.2 15.0 45.5
15.6 17.5 III	1 N 1 - 7.8 35.0 14.8 41.7
15.1 17.6 I	5 N 2 - 7.6 35.2 15.0 41.5
15.1 17.8 I	5 N 2 - 7.6 35.6 15.0 41.1
15.6 18.1 II	2 K=H 1 - 7.8 36.2 14.8 40.5
15.4 22.7 III	2 K=H 1 - 7.7 45.4 14.9 31.3
14.8 8.2 III	1 N 1 - 7.4 16.4 15.2 60.3
14.1 8.6 II	1 N 1 - 7.0 17.2 15.6 59.5
14.2 11.0 II	2 K=H 1 - 7.1 22.0 15.5 54.7
14.6 11.8 I	4 N 1 - 7.3 23.6 15.3 53.1
14.6 14.0 II	2 K=H 1 - 7.3 28.0 15.3 48.7
14.6 15.5 II	2 K=H 3 - 7.3 31.0 15.3
35.7 14.3 16.4 II 45.7	
14.3 16.4 II	2 K=H 2 - 7.2 32.8 15.4 43.9
14.8 20.7 I	7 N 4 F. 7.4 41.4 15.2 35.3
13.1 6.5 III	1 N 1 - 6.6 13.0 16.0 63.7
13.5 8.1 II?	2 K=H 2 - 6.8 16.2 15.8 60.5
13.7 15.2 I	3 N 1 - 6.8 30.4 15.8 46.3
Soh=4HoK 13.4 20.2 II^a 61 2 K=H 4 F? seen	
6.7 40.4 15.9 36.3	
13.5 21.7 II	2 K=H 1 - 6.8 43.4 15.8 33.3



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

37

[6 columned table]

No.	RA	Dec	Mag	H.	V.
3321	17 36.8 + 14 22	6.0	76.2	22.7	
3286	17 29.2 + 14 22	7.5	75.8	22.6	
3420	18 0.9 + 14 53	8.2	17.1	22.7	
3404	17 57.6 + 14 46	8.0	77.0	22.6	
3341	17 56.4 + 15 0	8.0	76.8	22.6	
3327	17 54.4 + 15 7	6.5	76.8	22.6	
3378	17 52.2 + 14 52	7.0	76.8	22.7	
3311	17 51.6 + 15 9	6.8	76.8	22.7	
3360	17 46.8 + 14 49	8.6	76.6	22.6	
3290	17 45.3 + 15 2	7.7	76.5	22.6	
3339	17 41.4 + 14 48	8.4	76.4	22.6	
3272	17 41.4 + 15 6	7.8	76.3	22.7	
3270	17 40.6 + 15 6	7.8	76.2	22.7	
3335	17 40.1 + 14 51	8.2	76.3	22.6	
3289	17 30.5 + 14 57	7.7	75.9	22.7	
3363	18 0.8 + 15 13	7.4	17.2	22.6	
3358	17 59.8 + 15 34	8.5	77.0	22.6	
3335	17 54.8 + 15 31	8.4	76.8	22.6	
3317	17 53.2 + 15 19	8.3	76.8	22.6	
3301	17 48.7 + 15 19	8.0	76.7	22.6	
3292	17 45.4 + 15 23	6.5	76.4	22.7	
3285	17 43.6 + 15 33	7.8	76.4	22.8	
3246	17 34.6 + 15 15	6.0	76.0	22.6	
3393	18 4.2 + 16 2	7.8	17.2	22.6	
3365	18 0.9 + 15 55	6.5	17.1	22.7	
3293	17 46.1 + 15 46	8.3	76.5	22.6	
3256	17 35.5 + 16 3	5.1	75.9	22.7	
3235	17 32.4 + 15 54	8.5	75.8	22.7	

37

No. RA Dec Mag H. V.

3321 17 36.8 + 14 22 6.0 76.2 22.7

3286 17 29.2 + 14 22 7.5 75.8 22.6

3420 18 0.9 + 14 53 8.2 17.1 22.7

3404 17 57.6 + 14 46 8.0 77.0 22.6

3341 17 56.4 + 15 0 8.0 76.8 22.6

3327 17 54.4 + 15 7 6.5 76.8 22.6

3378 17 52.2 + 14 52 7.0 76.8 22.7

3311 17 51.6 + 15 9 6.8 76.8 22.7

3360 17 46.8 + 14 49 8.6 76.6 22.6

3290 17 45.3 + 15 2 7.7 76.5 22.6

3339 17 41.4 + 14 48 8.4 76.4 22.6

3272 17 41.4 + 15 6 7.8 76.3 22.7

3270 17 40.6 + 15 6 7.8 76.2 22.7

3335 17 40.1 + 14 51 8.2 76.3 22.6

3289 17 30.5 + 14 57 7.7 75.9 22.7

3363 18 0.8 + 15 13 7.4 17.2 22.6

3358 17 59.8 + 15 34 8.5 77.0 22.6

3335 17 54.8 + 15 31 8.4 76.8 22.6

3317 17 53.2 + 15 19 8.3 76.8 22.6

3301 17 48.7 + 15 19 8.0 76.7 22.6

3292 17 45.4 + 15 23 6.5 76.4 22.7

3285 17 43.6 + 15 33 7.8 76.4 22.8

3246 17 34.6 + 15 15 6.0 76.0 22.6

3393 18 4.2 + 16 2 7.8 17.2 22.6

3365 18 0.9 + 15 55 6.5 17.1 22.7

3293 17 46.1 + 15 46 8.3 76.5 22.6

3256 17 35.5 + 16 3 5.1 75.9 22.7

3235 17 32.4 + 15 54 8.5 75.8 22.7

W. A. Fleming, 1908

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

10.1|18.0|III|1|N|1|-|5.0|36.0|17.6|40.7

10.6|20.0|II|6|N|2|-|5.3|40.0|17.3|36.7

9.0|14.2|II|5|N|2|-|4.5|28.4|18.1|48.3

9.6|15.0|III|2|K=H|1|-|4.8|30.0|17.8|46.7

9.1|21.4|III|1|N|1|-|4.6|42.8|18.0|33.9

9.4|23.5|II|7|K=H.2|F|4.7|47.0|17.9|29.7

8.6|6.1|I|?|2|N|1|-|4.3|12.2|18.3|64.5

8.3|6.5|II|4|N|2|-|4.2|13.0|18.4|63.7

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 columned table]]

No. | R.A. | Dec | Mag | H. | V. | |

3390	18 3.7	+16 27	6.0	17.3	22.6	
3358	17 58.9	+16 23	8.7	77.1	22.6	
3333	17 53.0	+16 39	8.6	76.8	22.6	
3312	17 48.1	+16 20	8.2	76.7	22.6	
3295	17 45.6	+16 41	7.5	76.4	22.7	
3251	17 34.6	+16 33	8.0	76.0	22.6	
3227	17 30.1	+16 30	7.5	75.7	22.6	
3220	17 28.0	+16 37	6.8	75.6	22.6	
3218	17 27.2	+16 27	5.0	75.6	22.6	
3356	17 58.6	+16 55	7.0	77.2	22.7	
3347	17 56.3	+16 47	4.9	76.8	22.8	
3403	17 54.3	+17 11	7.7	76.9	22.7	
3401	17 54.1	+17 7	7.5	76.7	22.6	
3300	17 46.1	+16 56	6.7	76.5	22.7	
3261	17 36.1	+16 57	8.1	75.9	22.7	

[[~~3210~~]]1735.8[[~~17 35.7~~]]+17 18[[~~17 18~~]]+177[[~~7.0~~]]8.5|75.9|22.6|

3209 | 17 35.2 | +17 5 | 8.0 | 75.8 | 22.7 |

| 17 | | | |

3334 | 17 40.7 | +1[[~~6~~]] 7 47 | 5.5 | 76.1 |

22.8 |

3331 | 17 40.1 | +17 39 | 7.9 | 76.1 | 22.6 |

3312 | 17 35.8 | +17 18 | 7.0 | 75.8 | 22.6 |

3495 | 17 48.3 | +18 13 | 8.0 | 76.7 | 22.7 |

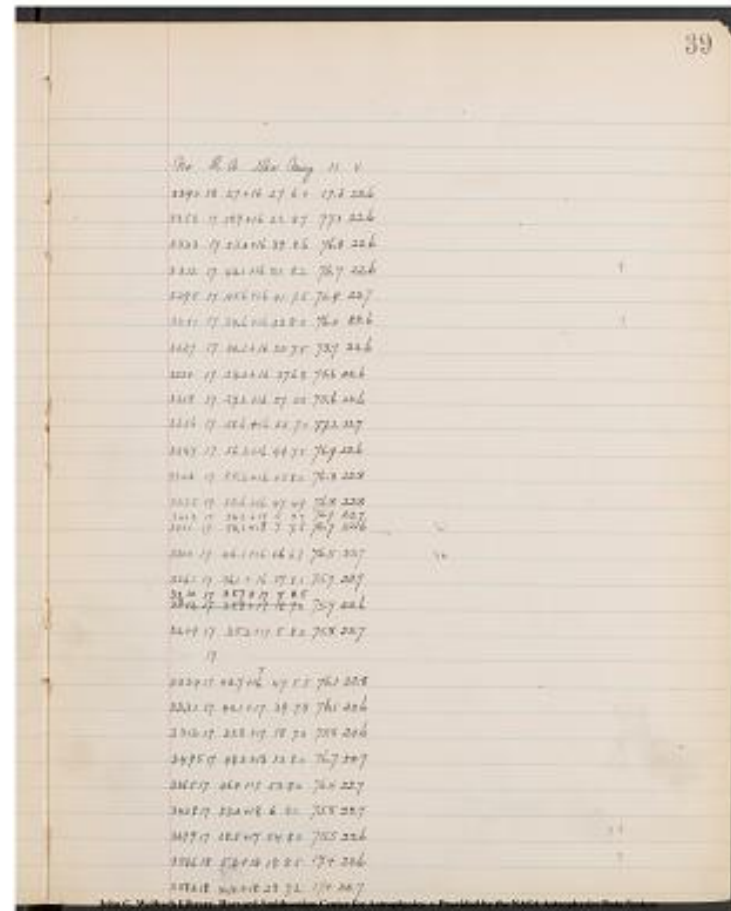
3365 | 17 46.4 | +17 53 | 8.0 | 76.4 | 22.7 |

3428 | 17 33.0 | +18 6 | 8.0 | 75.8 | 22.7 |

3279 | 17 28.5 | +17 54 | 8.0 | 75.5 | 22.6 |

3586 | 18 5.2 | +18 18 | 8.5 | 17.4 | 22.6 |

3582 | 18 4.4 | +18 28 | 7.2 | 17.4 | 22.7 |



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[7 columned table]]

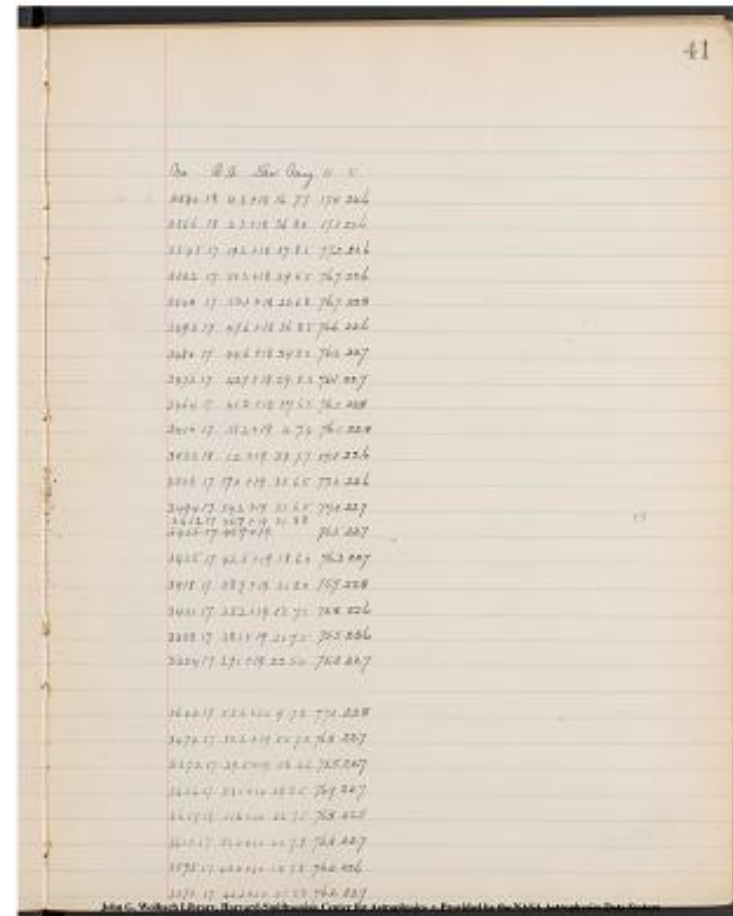
No. | R.A. | Dec. | Mag. | H. | V. | |

3580	18 4.2	+18 16	7.7	17.4	22.6	
3466	18 2.3	+18 36	8.0	17.3	22.6	
3545	17 59.2	+18 27	8.5	77.2	22.6	
3502	17 50.3	+18 39	6.5	76.7	22.6	
3500	17 50.1	+18 22	6.8	76.7	22.8	
3493	17 47.6	+18 36	8.5	76.7	22.6	
3480	17 44.6	+18 24	8.0	76.2	22.7	
3473	17 42.7	+18 29	8.3	76.1	22.7	
3464	17 41.2	+18 57	6.5	76.2	22.8	
3416	17 38.2	+19 4	7.4	76.0	22.8	
3533	18 1.2	+19 39	7.7	17.4	22.6	
3508	17 57.0	+19 35	6.5	77.2	22.6	
3494	17 54.2	+19 31	6.5	77.0	22.7	

[[~~3455~~]]1746.9[[~~3455~~]]17 46.7[[~~3455~~]]+19[[~~3455~~]]+19

31	8.8	76.5	22.7	???		
3452	17 46.7	+19 31	8.8	76.5	22.7	
3435	17 42.5	+19 18	6.0	76.3	22.7	
3418	17 38.7	+19 21	8.0	75.9	22.8	
3401	17 35.2	+19 13	7.1	75.8	22.6	
3358	17 28.1	+19 20	7.5	75.5	22.6	
3354	17 27.1	+19 22	5.0	75.3	22.7	
3642	17 55.6	+20 9	7.8	77.0	22.8	
3474	17 50.2	+19 55	7.3	76.8	22.7	
3372	17 29.5	+19 56	6.6	75.5	22.7	
3626	17 53.1	+20 29	8.5	76.9	22.7	
3617	17 51.6	+20 22	7.5	76.8	22.8	
3613	17 51.0	+20 40	7.9	76.8	22.7	
3575	17 43.0	+20 14	7.8	76.2	22.6	
3570	17 42.2	+20 37	5.8	76.2	22.7	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 • provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

October 19, 1887

Plate 1443

[[13 columned table]]

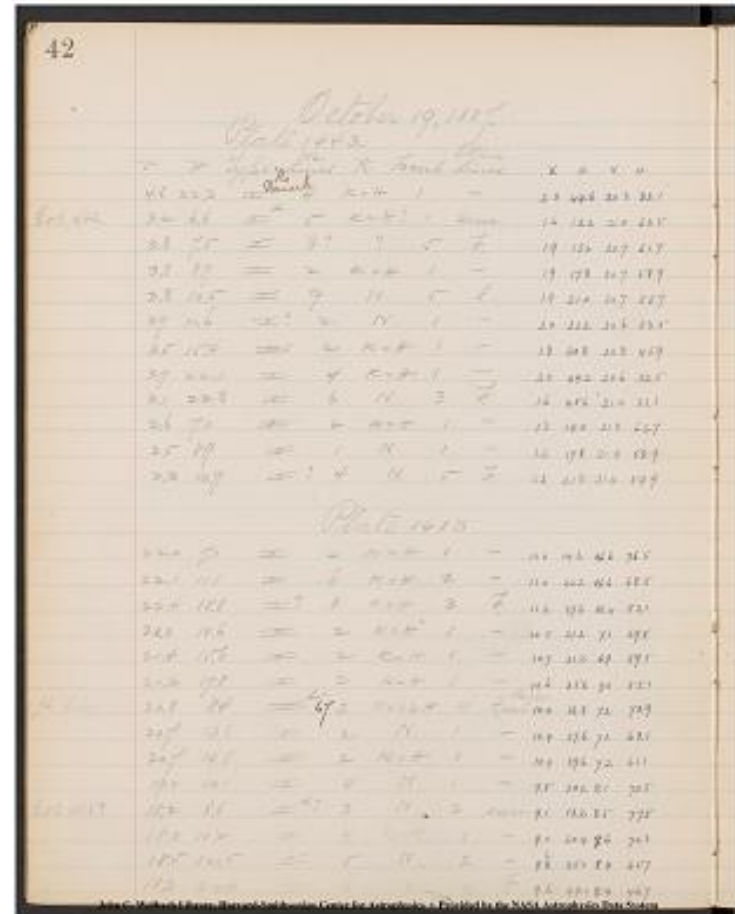
[V H Type No. Remark. No. Lines K Focus Other Lines. V. H. V. H.]												
4.6 22.3 II	4 K=H 1	2.3 44.6 20.3										
Goh dbl. 3.2 6.6 I^ [a]]	5 K=H? 1 seen 1.6 13.2 21.0											
3.8 7.5 II	8? 5 F 1.9 15.0 20.7											
3.8 8.9 III	2 K=H 1	1.9 17.8 20.7										
3.8 10.5 II	9 N 5 F 1.9 21.0 20.7											
3.9 11.6 I?	2 N 1	2.0 23.2 20.6										
3.5 15.4 III	2 K=H 1	1.8 30.8 20.8										
3.9 22.1 II	4 K=H 1	2.0 44.2 20.6										
3.1 22.8 II	6 N 3 F 1.6 45.6 21.0											
2.6 7.0 III	2 K=H 1	1.3 14.0 21.3										
2.5 8.9 III	1 N 1	1.2 17.8 21.4										
2.3 10.9 I?	4 N 5 F 1.2 21.8 21.4											

Plate 1413

[[13 columned table]]

22.0 7.1 III	2 K=H											
1	11.0 14.2	1 	6.6 76.5 									
22.1 11.1 II	6 K=H 2											
11.0 22.2	1 	6.6 68.5 										
22.4 18.8 I?	8 K=H											
3 F 11.2 37.6	1 	6.4 53.1 										
21.0 10.6 III	2 K=H 1	10.5 21.2 7.1 69.5										
21.4 15.6 III	2 K=H 1	10.7 31.2 6.9 59.5										
21.2 15.8 II	2 K=H 1	10.6 35.6 7.0 55.1										
lff lire 20.8 8.4 III^ [b]]	67 3 K=1.2H 4 F,											
seen^ [Bright]]	10.4 16.8 7.2 73.9											
20.7 13.8 II	2 N 1	10.4 27.6 7.2 63.1										
20.7 14.8 III	2 K=H 1	10.4 29.6 7.2 61.1										
19.0 10.1 II	4 N 1	9.5 20.2 8.1 70.5										
Goh dbl? 18.2 6.6 I^ [a]]?	3 N 2 seen 9.1 13.2 8.5 77.5											
18.0 10.2 II	4 K=H 1	9.0 20.4 8.6 70.3										
18.5 12.5 II	5 N 2	9.2 25.0 8.4 65.7										
18.3 22.0 II	6 N 2 F 9.2 44.0 8.4 46.7											

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



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

| No. | R A | Dec | Mag. | H. | V. |

3527 | 17 30.9 | +20 22 | 7.5 | 75.5 | 22.7 |
 3328 | 18 4.4 | +21 0 | 8.5 | 17.6 | 22.6 |
 3674 | 18 2.6 | +20 49 | 4.2 | 17.6 | 22.7 |
 3659 | 17 59.6 | +20 48 | 8.0 | 77.4 | 22.7 |
 3649 | 17 56.2 | +20 52 | 5.2 | 77.2 | 22.8 |
 3633 | 17 53.9 | +20 46 | 7.8 | 77.1 | 22.8 |
 3586 | 17 45.6 | +20 54 | 8.5 | 76.4 | 22.7 |
 3531 | 17 31.3 | +20 42 | 7.5 | 75.5 | 22.7 |
 3157 | 17 29.8 | +21 6 | 6.0 | 75.4 | 22.7 |
 3325 | 18 3.6 | +21 20 | 8.0 | 17.6 | 22.6 |
 3302 | 17 59.7 | +21 26 | 7.5 | 77.5 | 22.6 |
 3280 | 17 55.4 | +21 37 | 4.2 | 77.2 | 22.8 |

4277 | 18 16.4 | -3 39 | 6.5 | 30.6 | 17.4 |
 4259 | 18 8.3 | -3 39 | 6.6 | 30.5 | 17.4 |
 4217 | 17 52.8 | -3 40 | 5.2 | 30.4 | 17.5 |
 4263 | 18 9.3 | -3 2 | 6.5 | 30.5 | 17.5 |
 4237 | 17 59.3 | -3 15 | 7.0 | 30.5 | 17.5 |
 4225 | 17 54.9 | -3 9 | 6.5 | 30.5 | 17.4 |
 4599 | 18 13.8 | -2 56 | 3.0 | 30.6 | 17.5 |
 4564 | 18 3.1 | -2 60 | 7.9 | 30.7 | 17.4 |
 4558 | 18 1.1 | -2 55 | 6.5 | 30.7 | 17.5 |
 4588 | 18 10.5 | -2 5 | 8.2 | 30.7 | 17.4 |
 3486 | 18 17.4 | -1 39 | 6.5 | 30.7 | 17.5 |
 3468 | 18 10.2 | -1 30 | 7.6 | 30.6 | 17.5 |
 3461 | 18 5.8 | -1 45 | 7.3 | 30.8 | 17.4 |
 3416 | 17 46.6 | -1 34 | 7.1 | 30.6 | 17.6 |



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

October 20, 1887

Plate 1413,

[[13 columned table]]

[V|H|Type|No. Remark|No. Lines|K|Focus|Other Lines.|V.|H.|V.|H.]
 [9 45|17.4|7.2|| |4|K=H|1|N|8.7|14.4|8.9|76.3|

| 17.5|7.8|| |4|6 K=H 2 F 8.8 15.6 8.8 75.1

| 17.7|10.0|| |4|6 K=H I - 8.8 20.0 8.8 70.7

| 17.7|17.6|| |4|5|K=.8H??- 8.8 35.2 8.8 55.5

| 17.8|22.8|| |4|2 K=H / - 8.9 45.6 8.7 45.1

| 17.5|23.0|| |4|1 N 1 - 8.8 46.0 8.8 44.7

| 16.0|16.0|| |4|3 K=H 2 F 8.0 32.0 9.6 58.7

| 15.1|16.2|| |2| K=H 1 - 7.6 32.4 0.0 58.3

| 15.0|20.5|| |4|9 K=.2H 3 F 7.5 41.0 0.1 49.7

| 15.0|22.6|| |4|3 N I - 7.5 45.2 0.1 45.5

| 14.6|5.5|| |4|6 N 3 - 7.3 11.0 0.3 79%

[Goh = .5HoK|14.6|11.8||^[[a]]|68|1| |4|N I - 7.3 23.6 0.3 66.1

| 14.0|13.9|| |4|6 K=H 1 - 7.0 27.8 0.6 62.9

| 14.3|14.3|| |4|4 K=H 1 - 7.2 28.6 0.4 62.1

| 14.8|17.9||?| |1 N 1 - 7.4 35.8 0.2 54.9

| 13.5|6.0|| |5 K=H 2 - 6.8 12.0 0.8 78.7

| 13.1|10.6|| |7 K=H 2 F 6.6 21.2 1.0 69.5

| 13.8|18.9|| |7 N 3 F 6.9 37.8 0.7 52.9

| 13.6|20.9|| |8 N 3 F 6.8 41.8 0.8 48.9

| 12.0|15.9|| |4 K=H 1 = 6.0 31.8 1.6 58.9

| 12.6|16.7|| |2 K=H 1 - 6.3 33.4 1.3 57.3

44

October 20, 1887

No.	Type	V.	H.
9 45		17.4	7.2
17.5		7.8	
17.7		10.0	
17.7		17.6	
17.8		22.8	
17.5		23.0	
16.0		16.0	
15.1		16.2	
15.0		20.5	
15.0		22.6	
14.6		5.5	
14.0		13.9	
14.3		14.3	
14.8		17.9	
13.5		6.0	
13.1		10.6	
13.8		18.9	
13.6		20.9	
12.0		15.9	
12.6		16.7	

| |12.6|18.1|| |11 K=.1H 4 F 6.3 36.2 1.3 54.5

| |12.5|22.7|III| |2 K=H 1 - 6.~~3~~2 45.4
1.4 45.3

|GoH = .5HoK|12.8|23.0|III^[[a]]?|69|2 K=H 2|seeee| 6.4 46.0 1.2 44.7

| |11.5|13.1|| |3 N 1 - 5.8 26.2 1.8 64.5

|G0H = .2HoK|11.1|14.6 II^[[a]]|70|2
K=H|~~2~~1|seeee|5.6 29.2 2.0 61.5

| |11.1|11.1|III| |1 N 1 - 5.6 32.2 2.0 58.5

| |11.3|16.7|| |8 N 3 - 5.6 33.4 2.0 57.30

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
· Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[6 columned table]]

[No. | R.A. | Dec. | Mag. | H. | V. |]

3481	18 16.3	-1 12	7.6	30.7	17.5
3476	18 14.9	-1 16	7.1	30.5	17.5
3469	18 10.6	-1 22	7.6	30.6	17.4
3435	17 55.3	-1 19	8.0	90.5	17.5
3413	17 44.9	-1 22	7.8	90.5	17.5
3412	17 44.5	-1 11	6.5	90.5	17.6
3414	17 58.7	-1 27	6.5	90.7	16.6
3816	17 49.6	+0 6	6.2	90.6	7.6
3375	17 45.4	+0 0	8.2	90.6	7.5
3936	18 19.8	+0 7	5.4	30.8	7.4
3892	18 7.1	+0 9	7.5	30.7	7.5
3870	18 3.0	+0 31	7.9	30.8	7.5
3865	18 2.1	+0 22	8.0	30.7	7.6
3840	17 54.8	+0 6	8.2	91.6	7.5
3931	18 18.7	+0 43	7.0	30.7	7.5
3907	17 9.7	+0 57	6.8	30.9	7.6
3832	17 52.9	+0 38	7.1	90.7	7.5
3813	17 48.9	+0 43	5.8	90.7	7.5
3589	17 58.9	+1 34	8.0	90.7	7.6
3576	17 57.2	+1 14	7.7	90.6	7.5
3560	17 54.4	+1 19	4.5	90.6	7.6
3528	17 45.3	+1 21	6.0	90.7	7.6
3526	17 44.7	+1 9	6.8	90.7	7.6
3615	18 4.6	+1 46	8.3	30.8	7.6
3604	18 1.6	+1 58	7.0	30.8	7.6
3585	17 58.5	+1 59	7.8	90.7	7.6
3578	17 57.3	+1 56	6.5	90.7	7.5

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

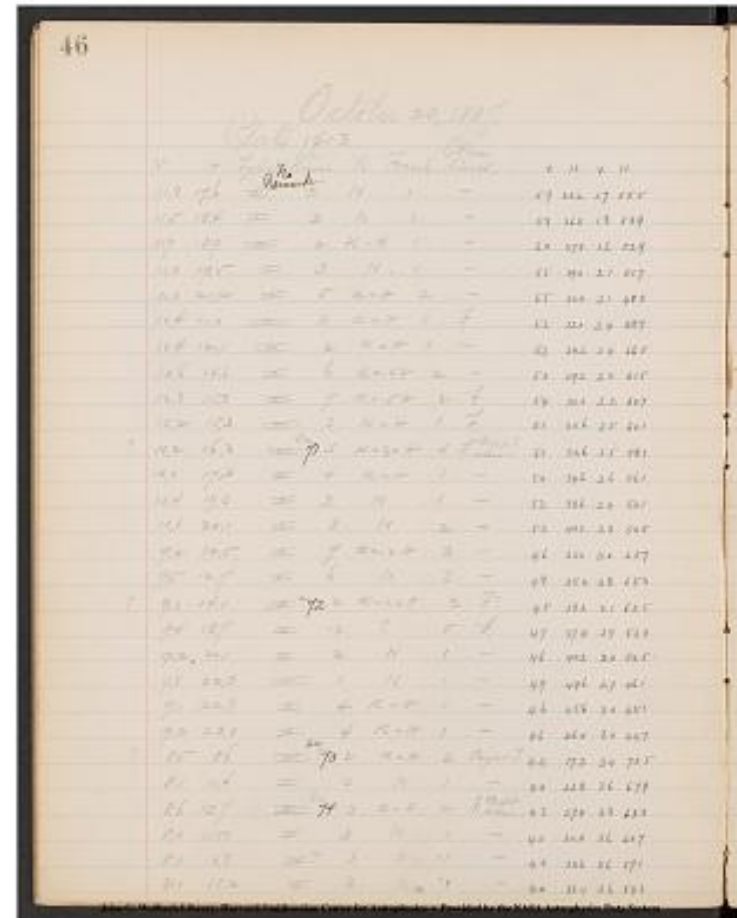
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

October 20, 1887.
Plate 1413.

[[11 column table]]

V|H|Type[[subscript]]No Remark. [[/subscript]]No. Lines|K|Focus|Other
Lines|V.|H.|V.|H.|

11.8	17.6	3 N 1	-5.9 35.2 1.7 55.5
11.5	18.4	3 N 1	-5.8 36.8 1.8 53.9
11.9	18.9	2 K=H 1	-6.0 37.8 1.6 52.9
11.0	19.5	3 N 1	-5.5 39.0 2.1 51.7
11.0	21.2	5 K=H 2	-5.5 42.4 2.1 48.3
10.4	11.0	3 K=H 1	F 5.2 22.0 2.4 68.7
10.4	12.1	2 K=H 1	-5.2 24.2 2.4 66.5
10.6	14.6	6 K=.4H 2	-5.3 29.2 2.3 61.5
10.8	15.0	7 K=.5H 2	F 5.4 30.0 2.2 60.7
10.2	15.3	3 K=H 1	F 5.1 30.6 2.5 60.1
?	10.2	16.3	[[superscript]]b.e. [[/superscript]]71 3 K=20H 4 F. Bright?
[[illegible]]	5.1	32.6	2.5 58.1
10.0	17.3	4 K=H 1	-5.0 34.6 2.6 56.1
10.4	19.3	3 N 1	-5.2 38.6 2.4 52.1
10.6	20.1	8 N 2	-5.3 40.2 2.3 50.5
9.2	12.5	7 K=.2H 3	-4.6 25.0 3.0 65.7
9.5	12.7	6 N 3	-4.8 25.4 2.8 65.3
?	9.0	14.1	[[superscript]]a [[/superscript]]72 2 K=1.2H 3 F? 4.5 28.2 3.1 62.5
9.4	18.7	12 ? 5 F.	4.7 37.4 2.9 53.3
9.2	20.1	2 N 1	-4.6 40.2 3.0 50.5
9.8	22.3	1 N 1	-4.9 44.6 2.7 46.1
9.1	22.8	4 K=H 1	-4.6 45.6 3.0 45.1
9.2	23.0	4 K=H 1	-4.6 46.0 3.0 44.7
?	8.5	8.6	[[superscript]]bc [[/superscript]]73 2 K=H 3 Bright? 4.2 17.2 3.4 73.5
8.1	11.4	3 N 1	-4.0 22.8 3.6 67.9
8.6	13.7	[[superscript]]bc [[/superscript]]74 3 K=H 2 F. Bright	
[[illegible]]	4.3	27.4	3.3 63.3
8.0	15.0	3 N 1	-4.0 30.0 3.6 60.7
8.1	16.8	? 3 N 1	-4.0 33.6 3.6 57.1
8.1	18.2	3 N 1	-4.0 36.4 3.6 54.3



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[6 columned table]]

[No. | R.A. | Dec | Mag. | H. | V.]

3566	17 55.5	+1 36	8.7	90.7	7.5
3557	17 53.9	+1 45	8.7	90.7	7.6
3557	17 53.0	+1 37	8.0	90.8	7.6
3443	17 51.7	+2 4	8.0	90.7	7.6
3427	17 48.3	+2 7	7.1	90.7	7.6
3547	18 8.8	+2 21	6.3	30.8	7.6
3537	18 6.6	+2 22	6.8	30.8	7.6
3503	18 1.6	+2 13	7.8	30.8	7.5
3498	18 0.8	+2 12	6.8	30.8	7.6
3493	18 0.1	+2 28	7.1	30.7	7.6
3482	17 58.1	+2 33	4.0	90.7	7.7
3473	17 56.1	+2 30	8.0	90.7	7.5
3447	17 52.2	+2 22	8.8	90.8	7.6
3436	17 50.6	+2 17	7.0	90.8	7.6
3542	18 5.8	+2 57	7.1	30.8	7.6
3528	18 5.4	+2 47	6.8	30.8	7.6
3613	18 2.7	+3 7	6.5	30.9	7.6
3458	17 53.4	+2 55	4.0	90.8	7.6
3435	17 50.5	+2 55	8.1	90.7	7.5
3420	17 46.0	+2 42	7.5	90.6	7.6
3512	17 45.2	+3 3	7.9	90.8	7.6
3415	17 44.6	+2 56	8.0	90.6	7.5
3680	18 13.6	+3 19	5.5	30.8	7.5
3643	18 7.7	+3 38	8.2	30.5	7.6
3620	18 3.4	+3 18	6.0	30.8	7.6
3598	18 0.7	+3 35	8.7	30.7	7.6
3578	17 57.1	+3 31	8.5	90.7	7.5
3564	17 54.3	+3 32	8.2	90.7	7.5

47

Star. R.A. Dec. Mag. H. V.

3443 17 51.7 +2 4 8.0 90.7 7.6

3427 17 48.3 +2 7 7.1 90.7 7.6

3547 18 8.8 +2 21 6.3 30.8 7.6

3537 18 6.6 +2 22 6.8 30.8 7.6

3503 18 1.6 +2 13 7.8 30.8 7.5

3498 18 0.8 +2 12 6.8 30.8 7.6

3493 18 0.1 +2 28 7.1 30.7 7.6

3482 17 58.1 +2 33 4.0 90.7 7.7

3473 17 56.1 +2 30 8.0 90.7 7.5

3447 17 52.2 +2 22 8.8 90.8 7.6

3436 17 50.6 +2 17 7.0 90.8 7.6

3542 18 5.8 +2 57 7.1 30.8 7.6

3528 18 5.4 +2 47 6.8 30.8 7.6

3613 18 2.7 +3 7 6.5 30.9 7.6

3458 17 53.4 +2 55 4.0 90.8 7.6

3435 17 50.5 +2 55 8.1 90.7 7.5

3420 17 46.0 +2 42 7.5 90.6 7.6

3512 17 45.2 +3 3 7.9 90.8 7.6

3415 17 44.6 +2 56 8.0 90.6 7.5

3680 18 13.6 +3 19 5.5 30.8 7.5

3643 18 7.7 +3 38 8.2 30.5 7.6

3620 18 3.4 +3 18 6.0 30.8 7.6

3598 18 0.7 +3 35 8.7 30.7 7.6

3578 17 57.1 +3 31 8.5 90.7 7.5

3564 17 54.3 +3 32 8.2 90.7 7.5

Star. R.A. Dec. Mag. H. V.

3443 17 51.7 +2 4 8.0 90.7 7.6

3427 17 48.3 +2 7 7.1 90.7 7.6

3547 18 8.8 +2 21 6.3 30.8 7.6

3537 18 6.6 +2 22 6.8 30.8 7.6

3503 18 1.6 +2 13 7.8 30.8 7.5

3498 18 0.8 +2 12 6.8 30.8 7.6

3493 18 0.1 +2 28 7.1 30.7 7.6

3482 17 58.1 +2 33 4.0 90.7 7.7

3473 17 56.1 +2 30 8.0 90.7 7.5

3447 17 52.2 +2 22 8.8 90.8 7.6

3436 17 50.6 +2 17 7.0 90.8 7.6

3542 18 5.8 +2 57 7.1 30.8 7.6

3528 18 5.4 +2 47 6.8 30.8 7.6

3613 18 2.7 +3 7 6.5 30.9 7.6

3458 17 53.4 +2 55 4.0 90.8 7.6

3435 17 50.5 +2 55 8.1 90.7 7.5

3420 17 46.0 +2 42 7.5 90.6 7.6

3512 17 45.2 +3 3 7.9 90.8 7.6

3415 17 44.6 +2 56 8.0 90.6 7.5

3680 18 13.6 +3 19 5.5 30.8 7.5

3643 18 7.7 +3 38 8.2 30.5 7.6

3620 18 3.4 +3 18 6.0 30.8 7.6

3598 18 0.7 +3 35 8.7 30.7 7.6

3578 17 57.1 +3 31 8.5 90.7 7.5

3564 17 54.3 +3 32 8.2 90.7 7.5

Star. R.A. Dec. Mag. H. V.

3443 17 51.7 +2 4 8.0 90.7 7.6

3427 17 48.3 +2 7 7.1 90.7 7.6

3547 18 8.8 +2 21 6.3 30.8 7.6

3537 18 6.6 +2 22 6.8 30.8 7.6

3503 18 1.6 +2 13 7.8 30.8 7.5

3498 18 0.8 +2 12 6.8 30.8 7.6

3493 18 0.1 +2 28 7.1 30.7 7.6

3482 17 58.1 +2 33 4.0 90.7 7.7

3473 17 56.1 +2 30 8.0 90.7 7.5

3447 17 52.2 +2 22 8.8 90.8 7.6

3436 17 50.6 +2 17 7.0 90.8 7.6

3542 18 5.8 +2 57 7.1 30.8 7.6

3528 18 5.4 +2 47 6.8 30.8 7.6

3613 18 2.7 +3 7 6.5 30.9 7.6

3458 17 53.4 +2 55 4.0 90.8 7.6

3435 17 50.5 +2 55 8.1 90.7 7.5

3420 17 46.0 +2 42 7.5 90.6 7.6

3512 17 45.2 +3 3 7.9 90.8 7.6

3415 17 44.6 +2 56 8.0 90.6 7.5

3680 18 13.6 +3 19 5.5 30.8 7.5

3643 18 7.7 +3 38 8.2 30.5 7.6

3620 18 3.4 +3 18 6.0 30.8 7.6

3598 18 0.7 +3 35 8.7 30.7 7.6

3578 17 57.1 +3 31 8.5 90.7 7.5

3564 17 54.3 +3 32 8.2 90.7 7.5

Star. R.A. Dec. Mag. H. V.

3443 17 51.7 +2 4 8.0 90.7 7.6

3427 17 48.3 +2 7 7.1 90.7 7.6

3547 18 8.8 +2 21 6.3 30.8 7.6

3537 18 6.6 +2 22 6.8 30.8 7.6

3503 18 1.6 +2 13 7.8 30.8 7.5

3498 18 0.8 +2 12 6.8 30.8 7.6

3493 18 0.1 +2 28 7.1 30.7 7.6

3482 17 58.1 +2 33 4.0 90.7 7.7

3473 17 56.1 +2 30 8.0 90.7 7.5

3447 17 52.2 +2 22 8.8 90.8 7.6

3436 17 50.6 +2 17 7.0 90.8 7.6

3542 18 5.8 +2 57 7.1 30.8 7.6

3528 18 5.4 +2 47 6.8 30.8 7.6

3613 18 2.7 +3 7 6.5 30.9 7.6

3458 17 53.4 +2 55 4.0 90.8 7.6

3435 17 50.5 +2 55 8.1 90.7 7.5

3420 17 46.0 +2 42 7.5 90.6 7.6

3512 17 45.2 +3 3 7.9 90.8 7.6

3415 17 44.6 +2 56 8.0 90.6 7.5

3680 18 13.6 +3 19 5.5 30.8 7.5

3643 18 7.7 +3 38 8.2 30.5 7.6

3620 18 3.4 +3 18 6.0 30.8 7.6

3598 18 0.7 +3 35 8.7 30.7 7.6

3578 17 57.1 +3 31 8.5 90.7 7.5

3564 17 54.3 +3 32 8.2 90.7 7.5

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

October 20, 1887.

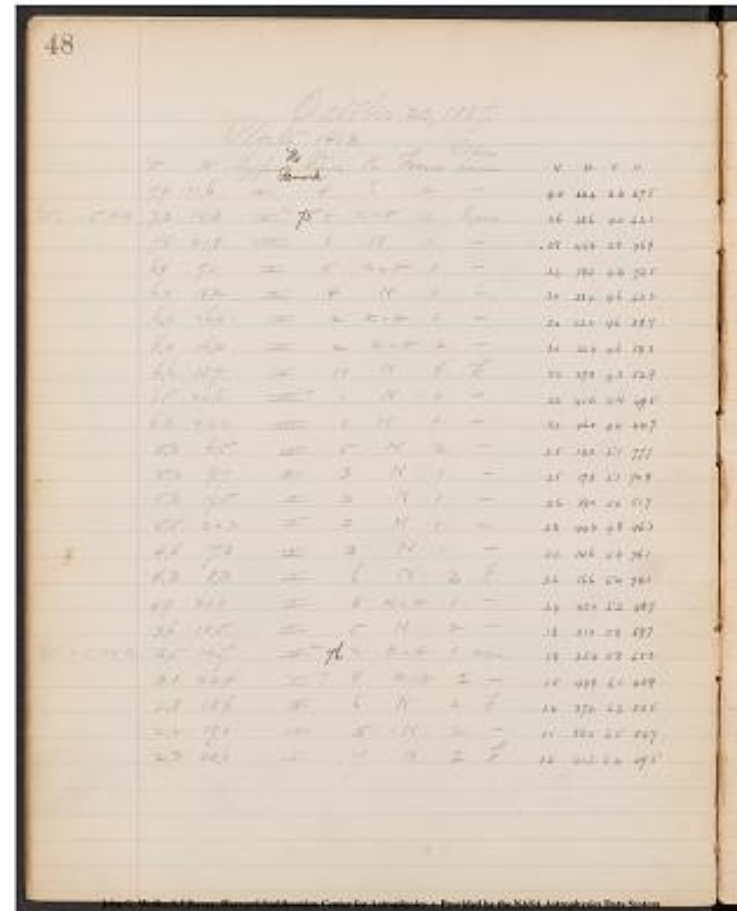
Plate 1413.

[[13 columned table]]

V.	H.	Type	No Remark.	No. Lines	K	Focus	Other Lines	V.
H.	V.	H.						

7.9	11.6	I	4	?	2	-	4.0	23.2	3.6	67.5
Goh=.5HoK	7.3		14.3	II	[[a]]		75	4	K=H	3
4.0	62.1								F. seen.	3.6
										28.6

7.6	21.8	III	1	N	1	-	3.8	43.8	3.8	46.9
6.4	9.1	I	4	K=H	1	-	3.2	18.2	4.4	72.5
6.0	14.2	I	4	N	1	-	3.0	28.4	4.6	62.3
6.0	16.0	II	2	K=H	1	-	3.0	32.0	4.6	58.7
6.0	16.2	II	2	K=H	2	-	3.0	32.4	4.6	58.3
6.6	18.9	I	10	N	4	F.	3.3	37.8	4.3	52.9
6.5	20.6	III?	1	N	1	-	3.2	41.2	4.4	49.5
6.3	23.0	III	1	N	1	-	3.2	46.0	4.4	44.7
5.0	6.5	I	5	N	2	-	2.5	13.0	5.1	77.7
5.0	9.9	I	3	N	1	-	2.5	19.9	5.1	70.9
5.3	19.5	I	3	N	1	-	2.6	39.0	5.0	51.7
5.5	22.2	I	3	N	1	-	2.8	44.4	46.3	
4.4	7.3	I	3	N	1	-	2.2	14.6	5.4	76.1
4.3	8.3	I	6	N	3	F.	2.2	16.6	5.4	74.1
4.9	21.0	I	4	K=H	1	-	2.4	42.0	5.2	48.7
3.6	10.5	I	5	N	2	-	1.8	21.0	5.8	69.7
Goh=.5HoK	3.5		12.7	II	[[a]]		76	2	K=H	1
65.3									seen.	1.8
										25.4
										5.8
3.0	22.4	I?	4	K=H	2	-	1.5	44.8	6.1	45.9
2.8	18.6	II	6	N	2	F.	1.4	37.2	6.2	53.5
2.2	19.0	I	5	N	2	-	1.1	38.0	6.5	52.7
2.3	20.6	I	7	N	2	F.	1.2	41.2	6.4	49.5



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[6 columned table]]

No. | R.A. | Dec. | Mag. | H. | V. |

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

3643 | 18 7.7 | +3 38 | 8.2 | 30.9 | 7.6 |

3610 | 18 2.4 | +3 58 | 6.2 | 31.0 | 7.6 |

3528 | 17 47.3 | +3 46 | 7.5 | 91.1 | 7.6 |

3702 | 18 12.7 | +4 26 | 7.5 | 30.9 | 7.6 |

3624 | 18 2.6 | +4 35 | 8.1 | 31.0 | 7.6 |

[[~~3589~~]] [[~~3593~~]] [[~~17~~]]58.5 [[~~17~~]] 58.8 [[~~17~~]] +4 40 [[~~17~~]] +434 [[~~7.2~~]] 8.5 [[~~90.8~~]] 7.6 |

3589 | 17 58.5 | +4 40 | 7.2 | 90.9 | 7.7 |

3570 | 17 53.1 | +4 22 | 5.3 | 90.9 | 7.7 |

3556 | 17 49.6 | +4 24 | 8.0 | 90.8 | 7.6 |

3541 | 17 44.8 | +4 32 | 7.0 | 90.8 | 7.7 |

3730 | 18 18.0 | +4 1 | 7.0 | 31.0 | 7.5 |

3685 | 18 11.3 | +5 5 | 8.0 | 31.1 | 7.6 |

3564 | 17 52.0 | +4 58 | 8.8 | 91.0 | 7.6 |

3543 | 17 46.4 | +4 54 | 8.0 | 90.8 | 7.7 |

3720 | 18 16.4 | +5 16 | 8.1 | 31.0 | 7.5 |

3704 | 18 14.4 | +5 22 | 6.9 | 31.0 | 7.6 |

3544 | 17 48.9 | +5 12 | 8.0 | 90.9 | 7.6 |

3673 | 18 10.2 | +5 42 | 8.0 | 31.2 | 7.5 |

3643 | 18 8.7 | +5 48 | 8.1 | 31.1 | 7.6 |

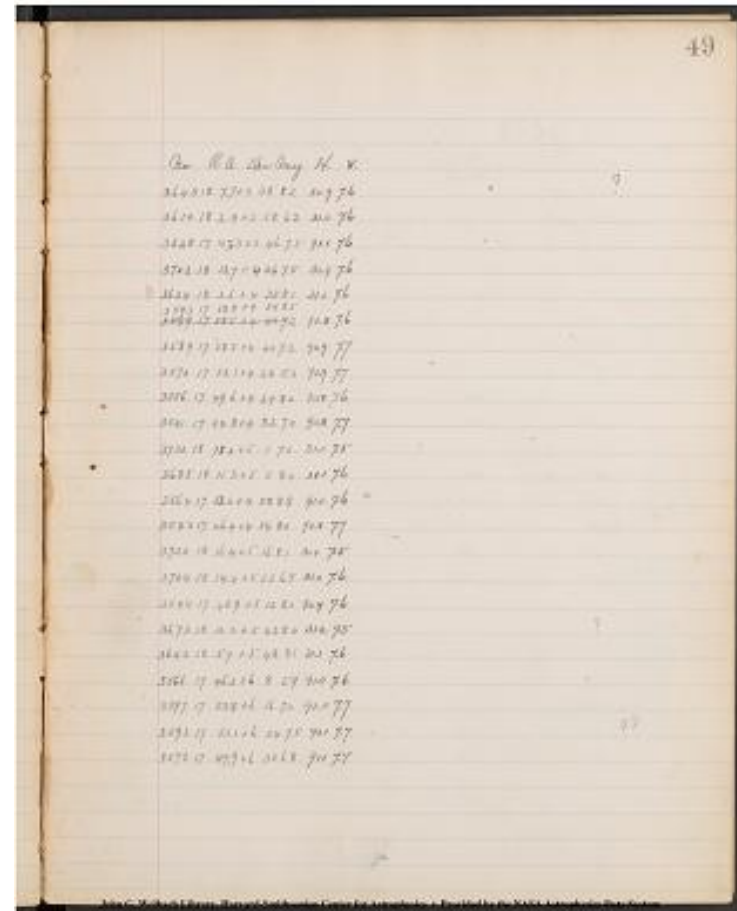
3566 | 17 46.2 | +6 8 | 5.9 | 91.0 | 7.6 |

3597 | 17 53.8 | +6 16 | 7.0 | 91.0 | 7.7 |

3593 | 17 53.1 | +6 34 | 7.5 | 91.1 | 7.7 |

3578 | 17 49.9 | +6 30 | 6.8 | 91.1 | 7.7 |

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 • Provided by the NASA Astrophysics Data System



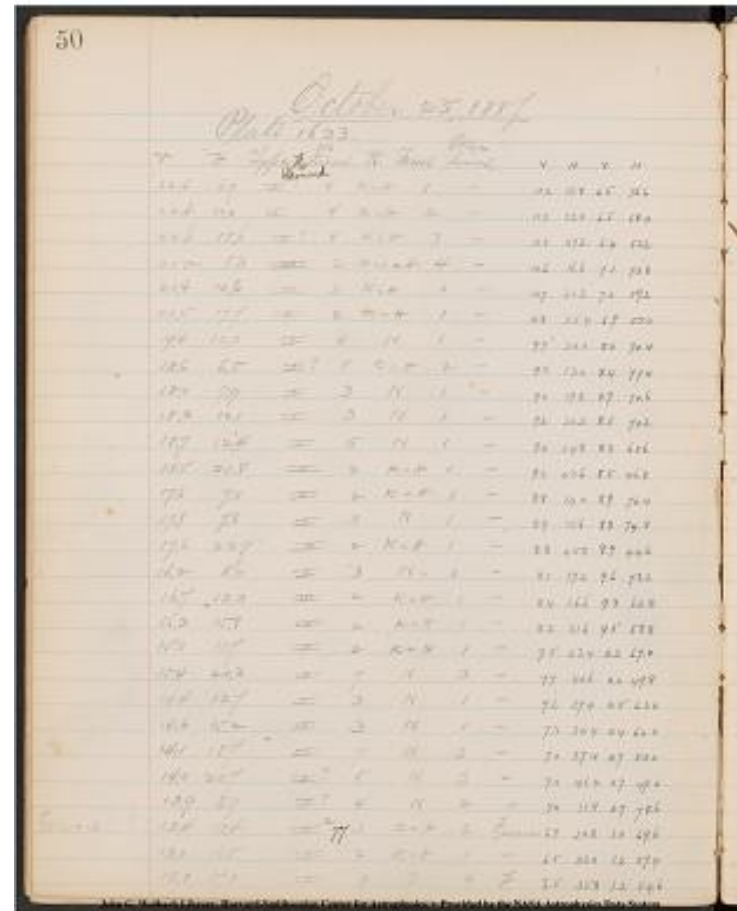
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[underlined]]October 25, 1887. [[/underlined]]

Plate 1633.

[[13 columned table]]

V H Type No. Lines K Focus Other Lines. V. H. V. H.									
22.4 6.9 I?	4 K=H 1 -11.2 13.8 6.5 76.6								
22.4 11.0 I	4 K=H 2 -11.2 22.0 6.5 68.4								
22.6 18.6 I?	4 K=H 3 -11.3 37.2 6.4 53.2								
21.2 8.3 III	2 K=1.2H 4 -10.6 16.6 7.1 73.8								
21.4 10.6 III	2 K=H 1 -10.7 31.2 7.0 59.2								
21.5 17.7 III	2 K=H 1 -10.8 35.4 6.9 55.0								
19.4 10.0 I	4 N 1 -9.7 20.0 8.0 70.4								
18.6 6.5 I?	4 K=H 2 -9.3 13.0 8.4 77.4								
18.0 9.9 I	3 N 1 -9.0 19.8 8.7 70.6								
18.3 10.1 I	3 N 1 -9.2 20.2 8.5 70.2								
18.7 12.4 I	5 N 1 -9.4 24.8 8.3 65.6								
18.5 21.8 III	2 K=H 1 -9.2 43.6 8.5 46.8								
17.6 7.0 III	2 K=H 1 -8.8 14.0 8.9 76.4								
17.8 7.8 I	3 N 1 -8.9 15.6 8.8 74.8								
17.6 22.9 III	2 K=H 1 -8.8 45.8 8.9 44.6								
16.2 8.6 I	3 N 1 -8.1 17.2 9.6 73.2								
16.7 13.3 III	2 K=H 1 -8.4 26.6 9.3 63.8								
16.3 15.8 III	2 K=H 1 -8.2 31.6 9.5 58.8								
15.0 11.7 I	2 K=H 1 -7.6 23.4 0.2 67.0								
18.4 20.3 I	7 N 3 -7.7 40.6 0.0 49.8								
14.4 13.7 I	3 N 1 -7.2 27.4 0.5 63.0								
14.6 15.2 I	3 N 1 -7.3 30.4 0.4 60.0								
14.1 18.7 I	7 N 3 -7.0 37.4 0.7 53.0								
14.0 20.7 I?	5 N 3 -7.0 41.4 0.7 49.0								
13.9 5.9 I?	4 N 2 -7.0 11.8 0.7 78.6								
Goh=.2? 13.4 10.4 IIa 77 3 K=H 2 F seen 6.7 20.8 1.0 69.6									
13.0 16.5 III	2 K=H 1 -6.5 33.0 1.2 57.4								
13.0 17.9 I	9 ? 4 F 6.5 35.8 1.2 54.6								



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

October 25, 1887

Plate 1633.

[[13 columned table]]

V	H	Type	No.	Lines	K	Focus	Other Lines.	V.	H.	V.	H.
13.2	22.7	III	2	K=H	1	6.6	45.4	1.1	45.0		
13.1	22.8	II	2	K=H	1	6.6	45.6	1.1	44.8		
12.3	15.7	I	3	N	1	6.2	31.4	1.5	59.0		
12.8	22.5	III	2	K=H	1	6.4	45.0	1.3	45.4		
11.5	14.5	I	4	K=H	1	5.8	29.0	1.9	61.4		
11.0	14.9	I	5	K=H	2	5.5	29.8	2.2	60.6		
11.6	16.5	I	4	N	3	5.8	33.0	1.9	57.4		
11.1	21.0	II	2	K=H	1	5.6	42.0	2.1	48.4		
10.7	10.8	III	1	N	1	5.4	21.6	2.3	68.8		
10.8	11.9	III	1	N	1	5.4	23.8	2.3	66.6		
11.0	14.5	I	4	K=H	1	5.5	29.0	2.2	61.4		
10.6	15.1	III	2	K=H	1	5.3	30.2	2.4	60.2		
10.5	16.1	III	be 78	2	K=1.2H	4	F? Bright-seen	5.2	32.2	2.5	58.2
9.6	12.4	I	5	N	2	4.8	24.8	2.9	65.6		
9.9	12.5	I	v	N	2	5.0	25.0	2.7	65.4		
9.0	13.5	III	2	K=H	2	4.5	27.0	3.2	63.4		
goh=	2H	9.3	13.9	II	a 79	2	K=H	2	seen	4.6	27.8
9.6	18.4	I	10	K=.4H	4	F?	4.8	36.8	2.9	53.6	
8.9	8.4	II?	2	K=H	3	4.4	16.8	3.3	73.6		
8.4	11.1	I	4	N	1	4.2	22.2	3.5	68.2		
8.1	11.4	I	4	K=H	1	4.0	22.8	3.7	67.6		
8.5	16.6	II	2	K=H	1	4.2	33.2	3.5	57.2		
8.4	17.9	II	2	K=H	1	4.2	35.8	3.5	54.6		
7.1	11.8	III	2	K=H	1	3.6	23.6	4.1	66.8		
Goh=	5	7.6	14.1	II	a 80	3	K=H	3	F. seen	3.8	28.2
6.8	8.9	II	2	K=H	1	3.4	17.8	4.3	72.6		
6.6	13.4	III	2	K=H	1	3.3	26.8	4.4	63.6		
6.3	14.0	I	4	K=H	1	3.2	28.0	4.5	62.4		

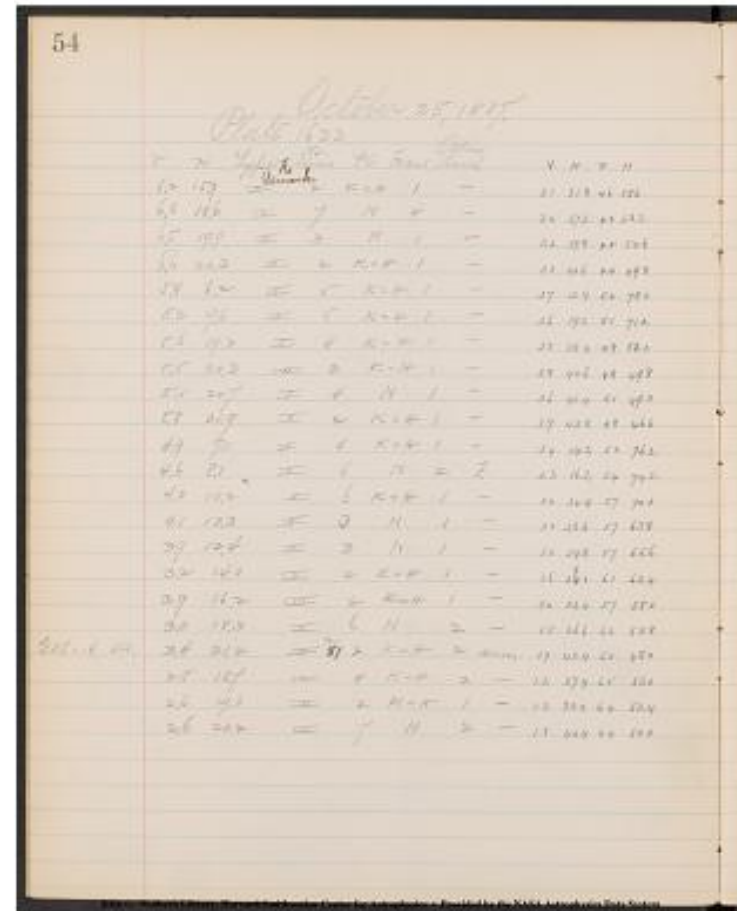
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

October 25, 1887.

Plate 1633.

[[13 columned table]]

V.	H.	Type	No.	Remark	No.	Lines	K	Focus	Other Lines	V.	H.	V.	H.
6.2	15.9	III			2	K=H	1	-	3.1	31.8	4.6	58.6	
6.8	18.6	II			7	N	4	-	3.4	37.2	4.3	53.2	
6.5	19.9	II			3	N	1	-	3.2	39.8	4.5	50.6	
6.6	20.3	III			2	K=H	1	-	3.3	40.6	4.4	49.8	
5.4	6.2	II			5	K=H	1	-	2.7	12.4	5.0	78.0	
5.2	9.6	II			5	K=H	1	-	2.6	19.2	5.1	71.2	
5.6	19.2	II			4	K=H	1	-	2.8	38.4	4.9	52.0	
5.5	20.3	III			2	K=H	1	-	2.8	40.6	4.9	49.8	
5.1	20.7	II			4	N	1	-	2.6	41.4	5.1	49.0	
5.8	21.9	III			2	K=H	1	-	2.9	43.8	4.8	46.6	
4.9	7.1	II			4	K=H	1	-	2.4	14.2	5.3	76.2	
4.6	8.1	II			6	N	2	F	2.3	16.2	5.4	74.2	
4.0	10.2	II			6	K=H	1	-	2.0	20.4	5.7	70.0	
4.1	13.3	II			3	N	1	-	2.0	26.6	5.7	63.8	
3.9	12.4	II			3	N	1	-	2.0	24.8	5.7	65.6	
3.2	14.0	III			2	K=H	1	-					
1.6	2	II			4	II			8.0	6.1	62.4		
3.9	16.2	III			2	K=H	1	-	2.0	32.4	5.7	58.0	
3.0	18.3	II			6	N	2	-	1.5	36.6	6.2	53.8	
Goh=4. dbi. 3.4													
2.5	18.7	II			4	K=H	2	-	1.2	37.4	6.5	53.0	
2.6	19.0	III			2	K=H	1	-	1.3	38.0	6.4	52.4	
2.6	20.2	II			7	N	2	-	1.3	40.4	6.4	50.0	



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[Right Corner]] 55

[[7 Column Chart]]

No.	R.	A.	Dec.	Mag.	H.	V.
3589	17	58.5+4	40	7.2	90.3	7.8
3570	17	53.1+4	22	5.3	90.3	7.8
3560	17	50.6+4	28	8.7	90.4	7.7
3556	17	49.6+4	24	8.0	91.2	7.7
3730	18	18.0+5	1	7.0	30.4	7.7
3685	18	11.3+5	5	8.0	30.5	7.7
3564	17	52.0+4	58	8.8	90.4	7.8
3558	17	49.6+4	51	8.5	90.2	7.6
3544	17	48.9+5	12	8.0	90.3	7.8
3543	17	46.4+4	54	8.0	90.2	7.8
3720	18	16.4+5	16	8.1	30.6	7.7
3704	18	14.4+5	22	6.9	30.6	7.7
3673	18	10.2+5	42	8.0	30.6	7.7
3630	18	4.0+5	38	8.4	30.6	7.6
3643	18	5.7+5	48	8.1	30.5	7.8
3639	18	2.7+6	11	7.0	30.7	7.8
3599	17	58.1+5	48	8.5	90.5	7.8
3597	17	53.8+6	16	7.0	90.4	7.8
3542	17	48.2+5	44	7.0	90.6	7.4
3593	17	53.1+6	34	7.5	90.5	7.8
3589	17	52.4+6	26	7.2	90.4	7.7
3578	17	49.9+6	30	6.8	90.3	7.8

55

No.	R.	A.	Dec.	Mag.	H.	V.
3589	17	58.5+4	40	7.2	90.3	7.8
3570	17	53.1+4	22	5.3	90.3	7.8
3560	17	50.6+4	28	8.7	90.4	7.7
3556	17	49.6+4	24	8.0	91.2	7.7
3730	18	18.0+5	1	7.0	30.4	7.7
3685	18	11.3+5	5	8.0	30.5	7.7
3564	17	52.0+4	58	8.8	90.4	7.8
3558	17	49.6+4	51	8.5	90.2	7.6
3544	17	48.9+5	12	8.0	90.3	7.8
3543	17	46.4+4	54	8.0	90.2	7.8
3720	18	16.4+5	16	8.1	30.6	7.7
3704	18	14.4+5	22	6.9	30.6	7.7
3673	18	10.2+5	42	8.0	30.6	7.7
3630	18	4.0+5	38	8.4	30.6	7.6
3643	18	5.7+5	48	8.1	30.5	7.8
3639	18	2.7+6	11	7.0	30.7	7.8
3599	17	58.1+5	48	8.5	90.5	7.8
3597	17	53.8+6	16	7.0	90.4	7.8
3542	17	48.2+5	44	7.0	90.6	7.4
3593	17	53.1+6	34	7.5	90.5	7.8
3589	17	52.4+6	26	7.2	90.4	7.7
3578	17	49.9+6	30	6.8	90.3	7.8

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

October 28, 1887.

Plate 1455.

[[12 columned table]]

V\H	Type	No.	Remark.	No.	Lines	K	Focus	Other Lines.	V.	H.	V.	H.
22.6	18.3		[b]]	82	5?	2	seen.	11.3	36.6	6.3	54.0	
22.0	18.6		[6	N	2			11.0	37.2	6.6	53.4	
22.2	20.2		[7	N	2			11.1	40.4	6.5	50.2	
22.9	22.1		[a]]	83	2	K=H	2	seen	11.4	44.2	6.2	46.4
20.8	9.3		[b.c.]]?	84	2	K=H	2	Bright? seen	10.4	18.6	7.2	72.0
19.2	6.1		[a]]	85	2	K=H	2		9.6	12.2	8.0	78.4
18.6	10.5		[4	K=H	1			9.3	21.0	8.3	69.6	
18.0	15.0		[b.c.]]	86	3	K=1.2H	3	F. Bright seen.	9.0	30.0	8.6	60.6
18.5	17.0		[5	?	1			9.2	34.6	8.4	56.6	
17.6	15.2		[2	K=H	1			8.8	30.4	8.8	60.2	
17.6	18.5		[2	K=H	1			8.8	37.0	8.8	53.6	
17.8	22.2		[3	N	1			8.9	44.4	8.7	46.2	
18.0	23.0		[4	K=H	1			9.0	46.0	8.6	44.6	
16.4	15.0		[12	K=2H	5	F		8.2	30.0	9.4	60.6	
15.8	14.9		[6	N	2			7.9	29.8	9.7	60.8	
13.5	6.8		[4	K=H	1			6.8	13.6	10.8	77.0	
13.8	10.7		[4	N	1			6.9	21.4	10.7	69.2	
13.2	19.8		[7	K=2H	2			6.6	39.6	11.0	51.0	
13.0	21.4		[a]]	87	2	K=H	2	F? seen.	6.5	24.6	11.4	66.0
12.5	12.3		[4	K=H	2	1		6.2	24.6	11.4	66.0	
12.8	17.8		[5	K=H	1			6.4	35.6	11.2	55.0	
11.4	7.6		[6	N	3			5.7	15.2	11.9	75.4	
11.7	9.1		[5	N	1			5.8	18.2	11.8	72.4	
11.1	9.3		[6	K=8H	2			5.6	18.6	12.0	72.0	
11.0	9.8		[4	K=H	1			5.5	19.6	12.1	71.0	
11.7	9.9		[5	N	2			5.8	19.8	11.8	70.8	
11.8	12.1		[7	N	2			5.9	24.2	11.7	66.4	
11.4	15.7		[7	K=5H	2			5.7	31.4	11.9	59.2	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

No.	R.A.	Dec.	Mag.	H.	V.
3597	17 53.8	+6 16	7.0	90.4	17.6
3593	17 53.1	+6 34	7.5	90.3	17.6
3578	17 49.9	+6 30	6.8	90.3	17.6
3566	17 46.2	+6 8	5.9	90.4	17.5
3629	18 12.2	+7 12	5.8	30.8	17.6
3682	18 18.7	+7 57	5.8	30.9	17.6
3634	18 9.6	+8 19	7.3	30.6	17.6
3582	18 0.4	+8 43	5.0	30.4	17.7
3567	17 56.4	+8 25	7.0	90.4	17.6
3581	17 59.9	+8 52	7.8	90.3	17.7
3555	17 53.3	+8 52	7.0	90.3	17.7
3523	17 45.8	+8 42	7.7	90.2	17.6
3517	17 44.8	+8 44	8.9	90.8	17.7
3564	18 0.5	+9 33	3.3	30.5	17.8
3567	18 0.9	+9 50	7.1	30.7	17.7
3498	18 17.3	+10 53	7.3	30.9	17.7
3452	18 9.6	+10 47	8.0	31.0	17.7
3299	17 50.7	+11 5	6.5	90.3	17.7
[strickethrough]					
3337	17 50.7	+10 58	8.1		
[strickethrough]					
3283	17 47.5	+11 11	6.5	90.3	17.7
3377	18 6.3	+11 25	7.7	30.8	17.6
3315	17 54.8	+11 18	7.5	90.4	17.7
3442	18 15.8	+11 56	6.0	31.0	17.6
3427	18 12.8	+11 49	7.3	31.0	17.6
3467	18 12.4	+12 8	6.8	31.0	17.7
3456	18 11.3	+12 9	7.5	30.9	17.7
3415	18 11.1	+11 50	7.1	30.9	17.6
3379	18 6.7	+11 51	6.9	30.9	17.7
3382	17 11.9	+12 1	7.6	43.3	17.7
3383	17 12.0	+12 1	7.5	43.4	17.7

Should not
no.85,19.2-6.1 .11^a page 56 have a remark.

57

3597 17 53.8 +6 16 7.0 90.4 17.6

3593 17 53.1 +6 34 7.5 90.3 17.6

3578 17 49.9 +6 30 6.8 90.3 17.6

3566 17 46.2 +6 8 5.9 90.4 17.5

3629 18 12.2 +7 12 5.8 30.8 17.6

3682 18 18.7 +7 57 5.8 30.9 17.6

3634 18 9.6 +8 19 7.3 30.6 17.6

3582 18 0.4 +8 43 5.0 30.4 17.7

3567 17 56.4 +8 25 7.0 90.4 17.6

3581 17 59.9 +8 52 7.8 90.3 17.7

3555 17 53.3 +8 52 7.0 90.3 17.7

3523 17 45.8 +8 42 7.7 90.2 17.6

3517 17 44.8 +8 44 8.9 90.8 17.7

3564 18 0.5 +9 33 3.3 30.5 17.8

3567 18 0.9 +9 50 7.1 30.7 17.7

3498 18 17.3 +10 53 7.3 30.9 17.7

3452 18 9.6 +10 47 8.0 31.0 17.7

3299 17 50.7 +11 5 6.5 90.3 17.7

[~~strickethrough~~]

3337 17 50.7 +10 58 8.1

[~~strickethrough~~]

3283 17 47.5 +11 11 6.5 90.3 17.7

3377 18 6.3 +11 25 7.7 30.8 17.6

3315 17 54.8 +11 18 7.5 90.4 17.7

3442 18 15.8 +11 56 6.0 31.0 17.6

3427 18 12.8 +11 49 7.3 31.0 17.6

3467 18 12.4 +12 8 6.8 31.0 17.7

3456 18 11.3 +12 9 7.5 30.9 17.7

3415 18 11.1 +11 50 7.1 30.9 17.6

3379 18 6.7 +11 51 6.9 30.9 17.7

3382 17 11.9 +12 1 7.6 43.3 17.7

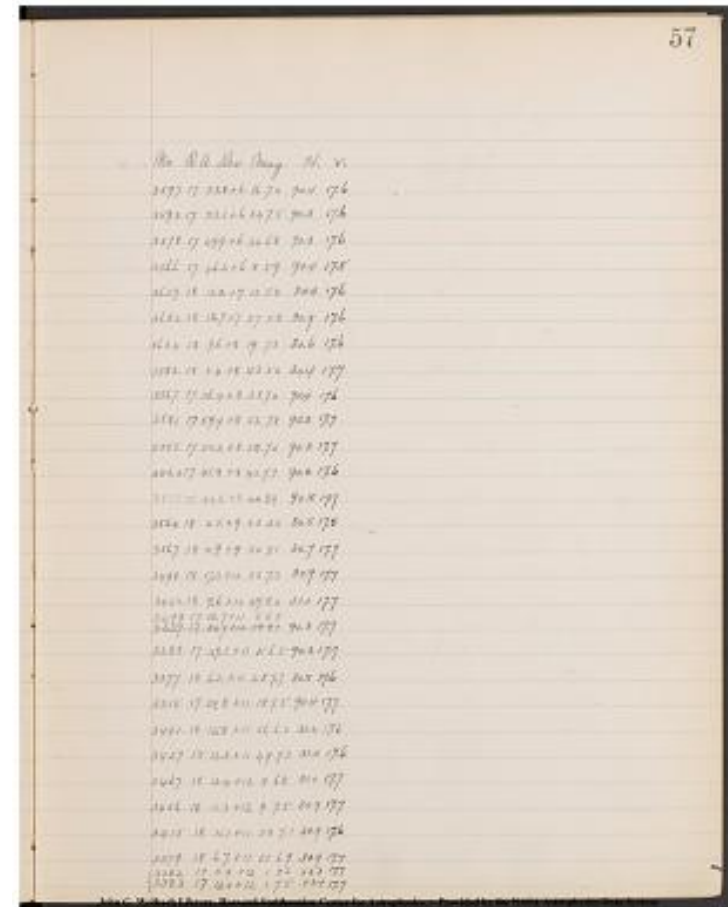
3383 17 12.0 +12 1 7.5 43.4 17.7

Should not
no.85,19.2-6.1 no.
page 56
have a remark.

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[6 column table]]

No.	R.A.	Dec.	Mag.	H.	V.
3597	17 53.8	+6 16	7.0	90.4	17.6
3593	17 53.1	+6 34	7.5	90.3	17.6
3578	17 49.9	+6 30	6.8	90.3	17.6
3566	17 46.2	+6 8	5.9	90.4	17.5
3629	18 12.2	+6 12	5.8	30.8	17.6
3682	18 18.7	+7 57	5.8	30.9	17.6
3634	18 9.6	+8 19	7.3	30.6	17.6
3582	18 0.4	+8 43	5.0	30.4	17.7
3567	17 56.4	+8 25	7.0	90.4	17.6
3581	17 59.9	+8 52	7.8	90.3	17.7
3555	17 53.3	+8 52	7.0	90.3	17.7
3523	17 45.8	+8 42	7.7	90.2	17.6
3517	17 44.8	+8 44	8.9	90.8	17.7
3564	18 0.5	+9 33	3.3	30.5	17.8
3567	18 0.9	+9 50	7.1	30.7	17.7
3498	18 17.3	+10 53	7.3	30.9	17.7
3452	18 9.6	+10 47	8.0	31.0	17.7
3299	17 50.7	+11 5	6.5	90.3	17.7
[[strikethrough]]					
3337	17 50.7	+10 58	8.1		
[[/strikethrough]]					
3283	17 47.5	+11 11	6.5	90.3	17.7
3377	18 6.2	+11 25	7.7	30.8	17.6
3315	17 54.8	+11 18	7.5	90.4	17.7
3442	18 15.8	+11 56	6.0	31.0	17.6
3427	18 12.8	+11 49	7.3	31.0	17.6
3467	18 12.4	+12 8	6.8	31.0	17.7
3456	18 11.3	+12 9	7.5	30.9	17.7
3415	18 6.7	+11 50	7.1	30.9	17.6
3379	18 6.7	+11 51	6.9	30.9	17.7
3382	17 11.9	+12 1	7.6	43.4	17.7
3383	17 12.0	+12 1	7.5	43.4	17.7

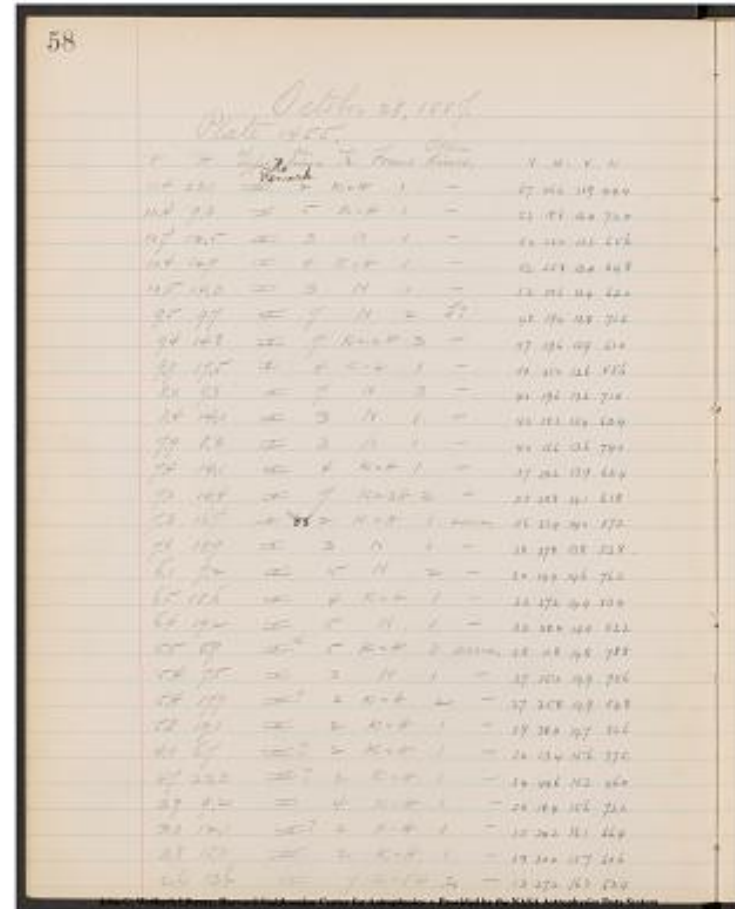


Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

October 18, 1887.
Plate 1455.

[[11 columned table]]

V	H	Type	No. Lines	K	Focus	Other lines	V	H	V	H
11.4	23.1	III	2	K=H	1	-	5.7	46.2	11.9	44.4
10.4	9.3	I	5	K=H	1	-	5.2	18.6	12.4	72.0
10.7	12.5	I	3	N	1	-	5.4	25.0	12.2	65.5
10.4	12.0	I	4	K=H	1	-	5.2	25.8	12.4	64.8
10.5	14.3	I	3	N	1	-	5.2	28.6	12.4	62.0
9.5	9.7	I	7	N	2	F?	4.8	19.4	12.8	71.2
9.4	14.8	I	7	K=12H	3	-	4.7	29.6	12.9	61.0
9.9	17.5	I	4	K=H	1	-	5.0	35.0	12.6	55.6
8.0	9.8	I	7	N	3	-	4.0	19.6	13.6	71.0
8.4	14.1	I	3	N	1	-	4.2	28.2	13.4	62.4
7.9	8.3	I	3	N	1	-	4.0	16.6	13.6	74.0
7.4	14.1	I	4	K=H	1	-	3.7	28.2	13.9	62.4
7.0	14.4	I	7	K=13H	2	-	3.5	28.8	14.1	61.8
7.3	16.7	II	2	K=H	1	[?]	2.8	11.8	14.8	78.8
7.6	18.9	I	3	N	1	-	3.8	37.8	13.8	52.8
6.1	7.2	I	5	N	2	-	3.0	14.4	14.6	76.2
6.5	18.6	I	4	K=H	1	-	3.2	37.2	14.4	53.4
6.4	19.2	I	5	N	1	-	3.2	38.4	14.4	52.2
5.5	5.9	I	5	K=H	3	[?]	2.8	11.8	14.8	78.8
5.4	7.5	I	3	N	1	-	2.7	15.0	14.9	75.6
5.4	17.9	II?	2	K=H	2	-	2.7	35.8	14.9	54.8
5.8	19.0	II	2	K=H	1	-	2.9	38.0	14.7	52.6
4.0	6.7	III?	2	K=H	1	-	2.0	13.4	15.6	77.2
4.7	22.3	III?	2	K=H	1	-	2.4	44.6	15.2	46.0
3.9	9.2	I	4	K=H	1	-	2.0	18.4	15.6	72.2
3.0	12.1	II?	2	K=H	1	-	1.5	24.2	16.1	66.4
3.8	15.0	III	2	K=H	1	-	1.9	30.0	15.7	60.0
2.6	13.6	I	7	K=15H	2	-	1.3	27.2	16.3	63.4



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[6 column table]]

| No. | R.A. | Dec. | Mag. | H. | V. |

| 3305 | 17 44.0 | +12 0 | 6.4 | 90.2 | 17.7 |

~~| 3467 | 18 12.4 | +12 8 | 6.8 |~~~~| 3469 | 18 12.5 | +12 29 | 7.3 | 31.1 | 17.7 |~~

| 3422 | 18 5.9 | +12 22 | 7.1 | 30.9 | 17.8 |

| 3419 | 18 4.9 | +12 32 | 7.8 | 30.7 | 17.7 |

| 3403 | 18 2.1 | +12 27 | 8.0 | 30.7 | 17.6 |

| 3461 | 18 11.7 | +12 56 | 6.7 | 31.1 | 17.7 |

| 3529 | 18 1.1 | +13 4 | 6.7 | 30.7 | 17.8 |

| 3362 | 17 55.3 | +12 46 | 7.8 | 90.3 | 17.8 |

| 3593 | 18 11.4 | +13 44 | 6.1 | 31.0 | 17.7 |

| 3540 | 18 2.6 | +13 28 | 8.4 | 30.8 | 17.7 |

| 3612 | 18 14.4 | +13 45 | 7.8 | 31.0 | 17.8 |

| 3436 | 18 2.6 | +14 0 | 7.9 | 30.8 | 17.7 |

| 3427 | 18 2.0 | +14 16 | 6.5 | 30.8 | 17.8 |

| 3397 | 18 57.0 | +14 5 | 7.5 | 90.4 | 17.7 |

| 3498 | 17 52.6 | +13 55 | 7.8 | 90.4 | 17.7 |

| 3511 | 18 16.7 | +14 38 | 6.3 | 31.1 | 17.6 |

| 3381 | 17 53.1 | +14 29 | 7.8 | 90.3 | 17.7 |

~~| 3375 | 17 48.8 | +14 37 | 7.8 |~~~~| 3374 | 17 51.8 | +14 32 | 6.5 | 90.2 | 17.7 |~~

| 3533 | 18 19.4 | +14 54 | 6.5 | 31.2 | 17.7 |

| 3506 | 18 16.3 | +14 56 | 7.1 | 31.3 | 17.6 |

| 3327 | 17 54.4 | +15 7 | 6.5 | 90.2 | 17.8 |

| 3375 | 17 51.8 | +14 37 | 7.8 | 89.8 | 17.5 |

| 3453 | 18 17.8 | +15 35 | 7.3 | 31.2 | 17.6 |

| 3292 | 17 45.4 | +15 23 | 6.5 | 90.0 | 17.8 |

| 3426 | 18 12.8 | +15 46 | 6.9 | 31.2 | 17.8 |

| 3405 | 18 6.8 | +16 14 | 6.5 | 31.0 | 17.7 |

| 3365 | 18 0.9 | +15 55 | 6.5 | 30.9 | 17.8 |

| 3390 | 18 3.7 | +16 27 | 6.0 | 30.9 | 17.7 |

59

3305 17 44.0 +12 0 6.4 90.2 17.7

~~3467 18 12.4 +12 8 6.8~~

~~3469 18 12.5 +12 29 7.3 31.1 17.7~~

3422 18 5.9 +12 22 7.1 30.9 17.8

3419 18 4.9 +12 32 7.8 30.7 17.7

3403 18 2.1 +12 27 8.0 30.7 17.6

3461 18 11.7 +12 56 6.7 31.1 17.7

3529 18 1.1 +13 4 6.7 30.7 17.8

3362 17 55.3 +12 46 7.8 90.3 17.8

3593 18 11.4 +13 44 6.1 31.0 17.7

3540 18 2.6 +13 28 8.4 30.8 17.7

3612 18 14.4 +13 45 7.8 31.0 17.8

3436 18 2.6 +14 0 7.9 30.8 17.7

3427 18 2.0 +14 16 6.5 30.8 17.8

3397 18 57.0 +14 5 7.5 90.4 17.7

3498 17 52.6 +13 55 7.8 90.4 17.7

3511 18 16.7 +14 38 6.3 31.1 17.6

3381 17 53.1 +14 29 7.8 90.3 17.7

~~3375 17 48.8 +14 37 7.8~~

~~3374 17 51.8 +14 32 6.5 90.2 17.7~~

3533 18 19.4 +14 54 6.5 31.2 17.7

3506 18 16.3 +14 56 7.1 31.3 17.6

3327 17 54.4 +15 7 6.5 90.2 17.8

3375 17 51.8 +14 37 7.8 89.8 17.5

3453 18 17.8 +15 35 7.3 31.2 17.6

3292 17 45.4 +15 23 6.5 90.0 17.8

3426 18 12.8 +15 46 6.9 31.2 17.8

3405 18 6.8 +16 14 6.5 31.0 17.7

3365 18 0.9 +15 55 6.5 30.9 17.8

3390 18 3.7 +16 27 6.0 30.9 17.7

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[underline]] October 28, 1887. [[underline]]

Plate 1578

[[13 column table]]

V | H | Type | No Remarks. | No. Lines | K | Focus | Other Lines. | V. | H.
| V. | H. | Correc. |

22.0 | 8.1 | I | | 3 | N | 1 | - | 11.0 | 16.2 | 21.6 | 74.7 | + 0.9 |

22.0 | 17.5 | I | | 8 | K=.2H | 4 | F? | 11.0 | 35.0 | 21.6 | 55.9 | - 0.4 |

21.6 | 7.3 | III | bc.89 | 3 | K=1. [[root]]H? | 3 | F. [[Brightseese.?]] | 10.8 |
14.6 | 21.8 | 76.3 | +1.0 |

21.2 | 8.8 | III | | 2 | K=H | 1 | - | 10.6 | 17.6 | 22.0 | 73.3 | + 0.9 |

20.8 | 15.3 | I? | | 2 | N | 1 | - | 10.4 | 30.6 | 22.2 | 60.3 | - 0.1 |

20.2 | 20.0 | III | | 2 | k = H | 1 | - | 10.1 | 40.0 | 22.5 | 50.9 | - | 0.8 |

20.3 | 22.4 | I | d | 4 | K = .H | 1 | [[?]] | 10.2 | 44.8 | 22.4 | 46.1 | - | 1.1

19.7 | 6.4 | I | 3 | N | 1 | - | 9.8 | 12.8 | 22.8 | 78.1 | + | 1.2

19.6 | 8.7 | I | | 4 | 1 | - | 9.8 | 17.4 | 22.8 | 73.5 | + | 1.0

19.4 | 16.9 | I | | 6 | N | 2 | - | 9.7 | 33.8 | 22.9 | 57.1 | - | 0.3

18.7 | 8.1 | III | 1 | N | 1 | - | 9.4 | 16.2 | 23.2 | 74.7 | + 1.0

18.5 | 15.0 | I | 4 | N | 1 | - | 9.2 | 30.0 | 23.4 | 60.9 | + | 0.0

17.5 | 15.9 | I | 7 | K = H | 1 | - | 8.8 | 31.8 | 23.8 | 59.1 | - | 0.2

17.2 | 19.3 | II | 2 | K = H | 1 | - | 8.6 | 38.6 | 24.0 | 52.3 | - | 0.7

16.5 | 19.4 | III | 1 | N | 1 | - | 8.2 | 38.8 | 24.4 | 52.1 | - | 0.8

15.1 | 8.4 | I | 4 | N | 2 | - | 7.6 | 16.8 | 25.0 | 74.1 | + | 1.2

15.4 | 14.1 | I | 6 | K = .1H | 2 | - | 7.7 | 28.2 | 24.9 | 62.7 | + | 0.1

15.0 | 14.4 | I | 3 | N | 1 | - | 7.5 | 28.8 | 25.1 | 62.1 | + | 0.1

16.0 | 22.6 | I | 5 | N | 1 | - | 8.0 | 45.2 | 24.6 | 45.7 | - | 1.4

60

October 28, 1887

Plate 1578

V	H	Type	No Remarks.	No. Lines	K	Focus	Other Lines.	V.	H.	Correc.
22.0	8.1	I		3	N	1	-	11.0	16.2	21.6 74.7 + 0.9
22.0	17.5	I		8	K=.2H	4	F?	11.0	35.0	21.6 55.9 - 0.4
21.6	7.3	III	bc.89	3	K=1. [[root]]H?	3	F. [[Brightseese.?]]	10.8		14.6 21.8 76.3 +1.0
21.2	8.8	III		2	K=H	1	-	10.6	17.6	22.0 73.3 + 0.9
20.8	15.3	I?		2	N	1	-	10.4	30.6	22.2 60.3 - 0.1
20.2	20.0	III		2	k = H	1	-	10.1	40.0	22.5 50.9 - 0.8
20.3	22.4	I	d	4	K = .H	1	[[?]]	10.2	44.8	22.4 46.1 - 1.1
19.7	6.4	I		3	N	1	-	9.8	12.8	22.8 78.1 + 1.2
19.6	8.7	I		4	1	-		9.8	17.4	22.8 73.5 + 1.0
19.4	16.9	I		6	N	2	-	9.7	33.8	22.9 57.1 - 0.3
18.7	8.1	III		1	N	1	-	9.4	16.2	23.2 74.7 + 1.0
18.5	15.0	I		4	N	1	-	9.2	30.0	23.4 60.9 + 0.0
17.5	15.9	I		7	K = H	1	-	8.8	31.8	23.8 59.1 - 0.2
17.2	19.3	II		2	K = H	1	-	8.6	38.6	24.0 52.3 - 0.7
16.5	19.4	III		1	N	1	-	8.2	38.8	24.4 52.1 - 0.8
15.1	8.4	I		4	N	2	-	7.6	16.8	25.0 74.1 + 1.2
15.4	14.1	I		6	K = .1H	2	-	7.7	28.2	24.9 62.7 + 0.1
15.0	14.4	I		3	N	1	-	7.5	28.8	25.1 62.1 + 0.1
16.0	22.6	I		5	N	1	-	8.0	45.2	24.6 45.7 - 1.4

14.2 | 17.2 | I | 5 | K = H | 1 | - | 7.1 | 34.4 | 25.5 | 56.5 | - | 0.5

14.3 | 22.4 | I | 5 | N | 2 | F? | 7.2 | 44.8 | 25.4 | 46.1 | - | 1.4

13.2 | 14.5 | I | 9 | K = ; 2H | 4 | F | 6.6 | 29.0 | 26.0 | 61.9 | + | 0.1

13.1 | 20.0 | I | a90 | 2 | K = H | 3 | F? peer | 6.6 | 40.0 | 26.0 | 50.9 | - | 1.0

12.4 | 6.1 | I | 5 | K = .8H | 1 | - | 6.2 | 12.2 | 26.4 | 78.7 | + | 2.0

12.4 | 6.2 | II? | 2 | K = H | 1 | - | 6.2 | 12.4 | 26.4 | 78.5 | + | 2.0

12.8 | 6.2 | I | 5 | N | 1 | - | 6.4 | 12.4 | 26.2 | 78.5 | + | 2.0

12.0 | 16.2 | I | 4 | K = H | 1 | - | 6.0 | 32.4 | 26.6 | 58.5 | - | 0.2

11.1 | 15.8 | I | 4 | K = H | 1 | - | 5.6 | 31.6 | 27.0 | 59.3 | - | 0.2

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
• Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 column table]]

No. | R.A. | Dec. | Mag. | H. | V. | H' |

No.	R.A.	Dec.	Mag.	H.	V.	H'
3400	18 15.7	+21 26	7.5	31.9	32.4	31.0
3280	17 55.4	+21 37	4.2	90.4	32.6	90.8
3411	18 17.5	+21 42	4.5	32.1	32.5	31.1
3390	18 14.2	+21 54	6.0	31.8	32.5	30.9
3073	18 0.2	+22 17	6.0	30.8	32.7	30.9
3035	17 50.2	+22 21	7.8	90.2	32.5	91.0
3227	17 44.7	+22 21	6.5	89.5	32.6	90.6
3136	18 19.2	+22 34	8.2	32.0	32.4	30.8
3337	18 14.6	+22 44	7.2	32.0	32.5	31.0

[[strikethrough]]

3260 | 17 56.4 | +22 56 | 6.7 |

[[\strikethrough]]

3260 | 17 56.4 | +22 56 | 6.7 | 90.2 | 32.6 | 90.5 |

No.	R.A.	Dec.	Mag.	H.	V.	H'
3400	18 15.7	+21 26	7.5	31.9	32.4	31.0
3280	17 55.4	+21 37	4.2	90.4	32.6	90.8
3411	18 17.5	+21 42	4.5	32.1	32.5	31.1
3390	18 14.2	+21 54	6.0	31.8	32.5	30.9
3073	18 0.2	+22 17	6.0	30.8	32.7	30.9
3035	17 50.2	+22 21	7.8	90.2	32.5	91.0
3227	17 44.7	+22 21	6.5	89.5	32.6	90.6
3136	18 19.2	+22 34	8.2	32.0	32.4	30.8
3337	18 14.6	+22 44	7.2	32.0	32.5	31.0
3260	17 56.4	+22 56	6.7			
3260	17 56.4	+22 56	6.7	90.2	32.6	90.5

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

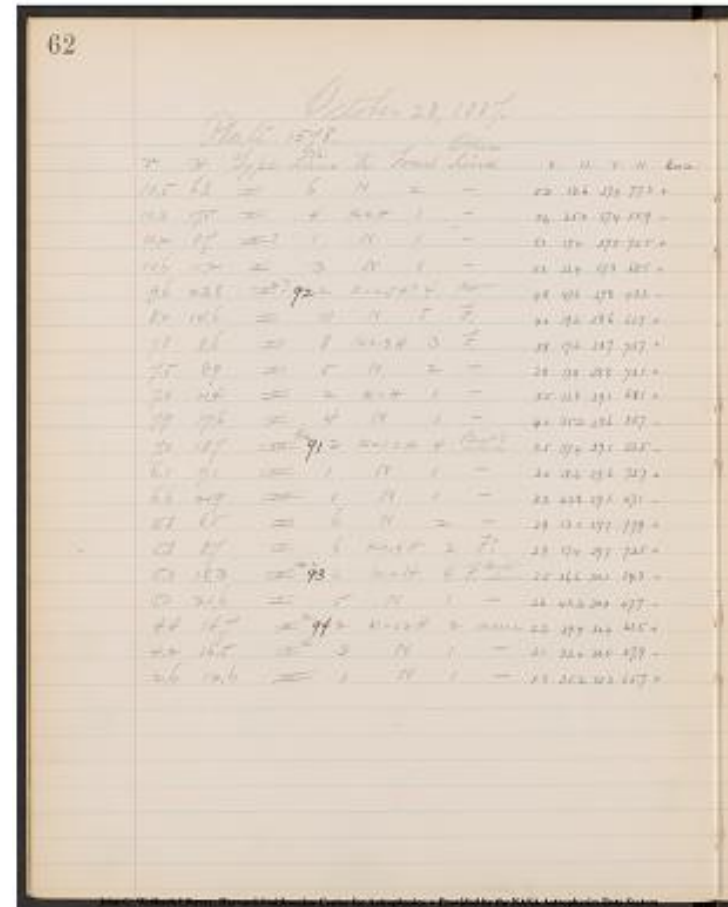
October 28, 1887.

Plate 1578.

[[13 columned table]]

| V | H | Type | | No. Lines | K | Focus | Other Lines. | V. | H. | V. | H. |
Correc. |

10.5	6.8		6	N	2	—	5.2	13.6	27.4	77.3	+		
10.3	17.5		4	K=H	1	—	5.2	35.0	27.4	55.9	-		
10.2	8.7		2	N	1	—	5.1	17.4	27.5	73.5	+		
10.6	11.2		3	N	1	—	5.3	22.4	27.3	68.5	+		
9.6	23.8		92	2	K=2.5H	?	4	seen	4.8	47.6	27.8	43.3	-
8.0	14.6		10	N	5	F	4.0	29.2	28.6	61.7	+		
7.8	8.6		8	K=	3H	3	F	3.9	17.2	28.7	73.7	+	
7.5	8.9		5	N	2	—	3.8	17.8	28.8	73.1	+		
7.0	11.4		2	K=H	1	—	3.5	22.8	29.1	68.1	+		
7.9	17.6		4	N	1	—	4.0	35.2	28.6	55.7	-		
7.0	18.7		91	2	K=1.2H	4	Bright seen.	3.5	37.4	29.1	53.5	-	
6.1	9.1		11	N	1	—	3.0	18.2	29.6	72.7	+		
6.6	21.9		1	N	1	—	3.3	43.8	29.3	47.1	-		
5.8	6.5		6	N	2	—	2.9	13.0	29.7	77.9	+		
5.8	8.7		6	K=	4H	2	F?	2.9	17.4	29.7	73.5	+	
5.0	18.3		93	3	K=1H	4	Bright seen.	2.5	36.6	30.1	54.3	-	
5.1	21.6		5	N	1	—	2.6	43.2	30.2	47.7	-		
4.4	14.7		942	k=	1.2h	2	seen	2.2	29.4	30.4	61.5	+	
4.2	16.5		3	N	1	—	2.1	33.0	30.5	57.9	-		
2.6	12.6		1	n	1	—	1.3	25.2	31.3	65.7	+		

Joh G. Wolbach Library, Harvard Smithsonian Center for Astrophysics •
Provided by NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

November, 4, 1887

Plate 1565

[[12 columned table]]

V H Type No.	Remark.	No. Lines K Focus Other Lines.	V. H. V. H.
14.4 23.9	5 ? 1 —	7.2 47.8 5.6 40.6	
10.6 22.6	4 N 1 —	5.3 45.2 7.5 43.2	
6.6 18.8	95 3 K=H 3 —	3.3 37.6 9.5 50.8	
4.9 20.7	6 N 3 —	2.4 41.4 10.4 47.0	

Plate 1466

[[12 columned table]]

21.4 7.8	7 K=2H 3 —	10.7 15.6 2.1 37.4	
18.3 14.1	4 K 1 —	9.2 28.2 3.6 24.8	
18.8 19.6	96 2 K=H 2 —	9.4 39.2 3.4 49.6	
17.5 15.0 	97 2 K=H 1 seen 	8.8 30.0 4.0 	49.0
16.6 14.7 	4 K=H 1 —	8.4 	8.3
29.4 4.5	48.6 	23.6 	
15.7 12.4	4 N 2 —	7.8 24.8 5.0	
15.4 17.4 	5 ? 1 —	7.7 34.8 5.1 	
14.6 7.4 	6 N 2 —	7.3 14.8 5.5 	
14.7 19.2 	5 N 2 —	6.9 	22.4
13.8 11.2 	4 N 1 —	6.7 	6.9
13.4 16.0 	7 N 3 —	6.2 	6.7
12.4 11.8 	98 4 K=H 3 —	6.4 	6.2
12.8 16.5 	2 K=H 1 —	5.5 	6.4
11.0 20.3 	2 K=H 1 —	5.5 40.6 7.3 	
9.1 13.4 	5 N 2 —	4.6 26.8 8.2 	
9.6 17.1 	99 2 K=H 1 seen 	4.8 34.2 8.0 	
7.6 11.9 	100 3 K=H 2 seen 	3.8 23.8 9.0 	
2.9 11.5 	3 N 1 seen 	1.4 23.0 11.4 	
10.8 	42.2 	28.0 	
41.6 	30.0 		

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

Should not ^[No.] 98 12.4-11.8 II^[a]. page 64 have a remark

[[7 columned table]]

No.	R.A.	Dec.	Mag.	H	V	Br.
3272	16 40.6	+5 30	5.3	88.4	12.7	6.9
3256	16 43.3	+7 31	6.0	88.5	12.8	7.0
3298	16 50.8	+9 36	3.0	88.4	12.9	6.3
3092	16 47.1	+10 25	4.1	88.5	12.8	6.3
3766	18 37.5	+1 55	5.0	53.1	12.6	5.5
3737	18 24.9	+3 34	6.7	53.1	12.8	6.5
3680	18 13.6	+3 19	5.5	52.8	12.7	6.2
3727	18 22.9	+3 58	7.0	52.9	12.8	6.5
3774	18 23.5	+4 25	7.2	52.9	12.7	6.9
3801	18 28.5	+4 50	7.0	52.8	12.7	6.6
3730	18 18.0	+5 1	7.0	52.8	12.7	6.8
3941	18 38.3	+5 21	6.3	53.1	12.7	6.4
3704	18 14.4	+5 22	6.9	52.8	12.8	6.5
3486	18 14.4	+5 46	6.8	53.1	12.7	6.7
3790	18 20.9	+6 7	7.0	52.9	12.8	6.2
3855	18 29.6	+6 33	5.8	53.2	12.8	6.2
3762	18 19.8	+6 21	8.4	52.8	12.8	6.9
3629	18 12.2	+7 12	5.8	52.8	12.7	6.5
3741	18 26.4	+8 10	6.2	53.2	12.8	6.5
3682	18 18.7	+7 57	5.8	52.9	12.8	6.6
3783	18 29.5	+9 1	5.3	53.3	12.8	6.3
3573	18 28.0	+10 47	6.7	53.0	12.8	6.8
3530	18 30.4	+11 19	6.3	53.4	12.7	6.9

John G. Wolbach Library, Harvard Smithsonian Center for Astrophysics.
Provided by the NASA Astrophysics Data System

Should not 98 12.4-11.8 II^[a]. page 64 have a remark

No.	R.A.	Dec.	Mag.	H	V	Br.
3272	16 40.6	+5 30	5.3	88.4	12.7	6.9
3256	16 43.3	+7 31	6.0	88.5	12.8	7.0
3298	16 50.8	+9 36	3.0	88.4	12.9	6.3
3092	16 47.1	+10 25	4.1	88.5	12.8	6.3
3766	18 37.5	+1 55	5.0	53.1	12.6	5.5
3737	18 24.9	+3 34	6.7	53.1	12.8	6.5
3680	18 13.6	+3 19	5.5	52.8	12.7	6.2
3727	18 22.9	+3 58	7.0	52.9	12.8	6.5
3774	18 23.5	+4 25	7.2	52.9	12.7	6.9
3801	18 28.5	+4 50	7.0	52.8	12.7	6.6
3730	18 18.0	+5 1	7.0	52.8	12.7	6.8
3941	18 38.3	+5 21	6.3	53.1	12.7	6.4
3704	18 14.4	+5 22	6.9	52.8	12.8	6.5
3486	18 14.4	+5 46	6.8	53.1	12.7	6.7
3790	18 20.9	+6 7	7.0	52.9	12.8	6.2
3855	18 29.6	+6 33	5.8	53.2	12.8	6.2
3762	18 19.8	+6 21	8.4	52.8	12.8	6.9
3629	18 12.2	+7 12	5.8	52.8	12.7	6.5
3741	18 26.4	+8 10	6.2	53.2	12.8	6.5
3682	18 18.7	+7 57	5.8	52.9	12.8	6.6
3783	18 29.5	+9 1	5.3	53.3	12.8	6.3
3573	18 28.0	+10 47	6.7	53.0	12.8	6.8
3530	18 30.4	+11 19	6.3	53.4	12.7	6.9

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

65

V3.0 12.8

[[7 column table]]

No. | R.A. | Dec. | Mag. | H. | V. | Br. [[whole column strikethrough]]

3272 | 16 40.6 | +5 30 | 5.3 | 88.4 | 12.7 | 6.9 |

3256 | 16 43.3 | +7 31 | 6.0 | 88.5 | 12.8 |

7.0 |

3298 | 16 50.8 | +9 36 | 3.0 | 88.4 | 12.9 | 6.3 |

3092 | 16 47.1 | +10 25 | 4.1 | 88.5 | 12.8 | 6.3 |

3466 | 18 37.5 | +1 55 | 5.0 | 53.1 | 12.6 | 5.5 |

3737 | 18 24.9 | +3 34 | 6.7 | 53.1 | 12.8 | 6.5 |

3680 | 18 13.6 | +3 19 | 5.5 | 52.8 | 12.7 | 6.2 |

3727 | 18 22.9 | +3 58 | 7.0 | 52.9 | 12.8 | 6.5 |

3774 | 18 23.5 | +4 25 | 7.2 | 52.9 | 12.7 | 6.9 |

3801 | 18 28.5 | +4 50 | 7.0 | 53.3 | 12.6 | 6.6 |

3730 | 18 18.0 | +5 1 | 7.0 | 52.8 | 12.7 | 6.8 |

3941 | 18 38.3 | +5 21 | 6.3 | 53.1 | 12.7 | 6.4 |

3704 | 18 14.4 | +5 22 | 6.9 | 52.8 | 12.8 | 6.5 |

3846 | 18 30.7 | +5 46 | 6.8 | 53.1 | 12.7 | 6.7 |

3790 | 18 20.9 | +6 7 | 7.0 | 52.9 | 12.8 | 6.2 |

3855 | 18 29.6 | +6 33 | 5.8 | 53.2 | 12.8 | 6.2 |

3762 | 18 19.8 | +6 21 | 8.4 | 52.8 | 12.8 | 6.9 |

3629 | 18 12.2 | +7 12 | 5.8 | 52.8 | 12.7 | 6.5 6.9 |

3741 | 18 26.4 | +8 10 | 6.2 | 53.2 | 12.8 | 6.5 |

3682 | 18 18.7 | +7 57 | 5.8 | 52.9 | 12.8 | 6.6 |

3783 | 18 29.5 | +9 1 | 5.3 | 53.3 | 12.8 | 6.3 |

3573 | 18 28.0 | +10 47 | 6.7 | 53.0 | 12.8 | 6.8 |

3530 | 18 30.4 | +11 19 | 6.3 | 53.4 | 12.7 | 6.9 |

No.	R.A.	Dec.	Mag.	H.	V.	Br.
3272	16 40.6	+5 30	5.3	88.4	12.7	6.9
3256	16 43.3	+7 31	6.0	88.5	12.8	
3298	16 50.8	+9 36	3.0	88.4	12.9	6.3
3092	16 47.1	+10 25	4.1	88.5	12.8	6.3
3466	18 37.5	+1 55	5.0	53.1	12.6	5.5
3737	18 24.9	+3 34	6.7	53.1	12.8	6.5
3680	18 13.6	+3 19	5.5	52.8	12.7	6.2
3727	18 22.9	+3 58	7.0	52.9	12.8	6.5
3774	18 23.5	+4 25	7.2	52.9	12.7	6.9
3801	18 28.5	+4 50	7.0	53.3	12.6	6.6
3730	18 18.0	+5 1	7.0	52.8	12.7	6.8
3941	18 38.3	+5 21	6.3	53.1	12.7	6.4
3704	18 14.4	+5 22	6.9	52.8	12.8	6.5
3846	18 30.7	+5 46	6.8	53.1	12.7	6.7
3790	18 20.9	+6 7	7.0	52.9	12.8	6.2
3855	18 29.6	+6 33	5.8	53.2	12.8	6.2
3762	18 19.8	+6 21	8.4	52.8	12.8	6.9
3629	18 12.2	+7 12	5.8	52.8	12.7	6.5 6.9
3741	18 26.4	+8 10	6.2	53.2	12.8	6.5
3682	18 18.7	+7 57	5.8	52.9	12.8	6.6
3783	18 29.5	+9 1	5.3	53.3	12.8	6.3
3573	18 28.0	+10 47	6.7	53.0	12.8	6.8
3530	18 30.4	+11 19	6.3	53.4	12.7	6.9

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[7 column table]]

No.	R.A.	Dec.	Mag.	H.	V.	Br.	[[whole column strikethrough]]
3272	16 40.6	+5 30	5.3	88.4	12.7	6.9	
3256	16 43.3	+7 31	6.0	88.5	12.8	7.0	
3298	16 50.8	+9 36	3.0	88.4	12.9	6.3	
3092	16 47.1	+10 25	4.1	88.5	12.8	6.3	

3766	18 37.5	+1 55	5.0	53.1	12.6	5.5	
3737	18 24.9	+3 34	6.7	53.1	12.8	6.5	
3680	18 13.6	+3 19	5.5	52.8	12.7	6.2	
3721	18 22.9	+3 58	7.0	52.9	12.8	6.5	
3774	18 23.5	+4 25	7.2	52.9	12.7	6.9	
3801	18 28.5	+4 50	7.0	53.3	12.6	6.6	
3730	18 18.0	+5 1	7.0	52.8	12.7	6.8	
3941	18 38.3	+5 21	6.3	53.1	12.7	6.4	
3704	18 14.4	+5 22	6.9	52.8	12.8	6.5	
3846	18 30.7	+5 46	6.8	53.1	12.7	6.7	
3790	18 20.9	+6 7	7.0	52.9	12.8	6.2	
3855	18 29.6	+6 33	5.8	53.2	12.8	6.2	
3762	18 19.8	+6 21	8.4	52.8	12.8	6.9	
3629	18 12.2	+7 12	5.8	52.8	12.7	{6.5 6.9}	
3741	18 26.4	+8 10	6.2	53.2	12.8	6.5	
3682	18 18.7	+7 57	5.8	52.9	12.8	6.6	
3783	18 29.5	+9 1	5.3	53.3	12.8	6.3	
3573	18 28.0	+10 47	6.7	53.0	12.8	6.8	
3530	18 30.4	+11 19	6.3	53.4	12.7	6.9	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

November, 7, 1887.

1.50 P.M.

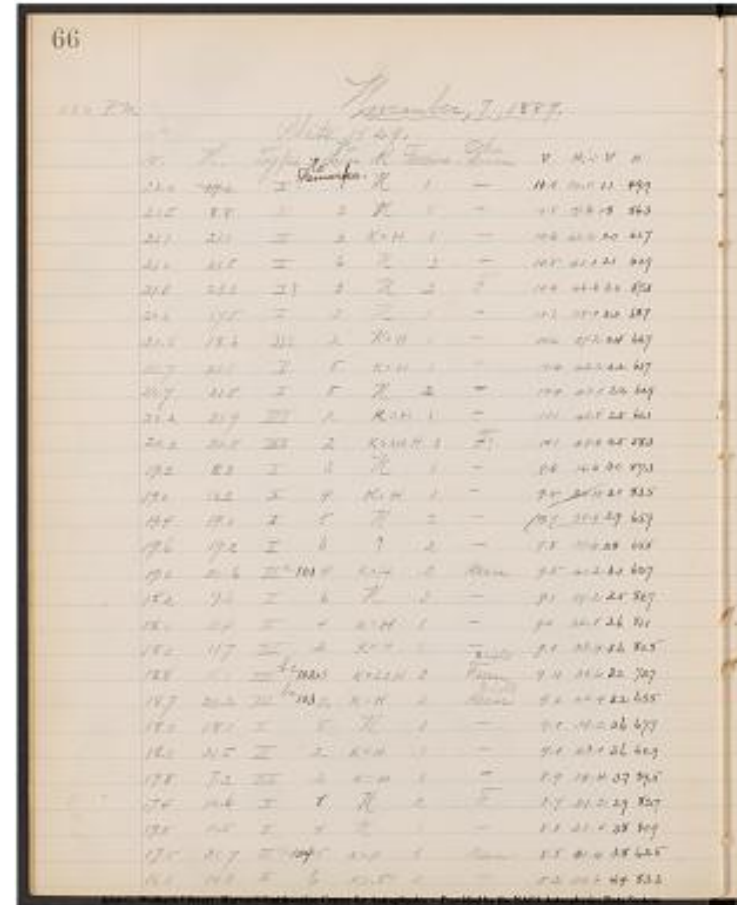
Plate 1529

[[12 columned table]]

V. | H. | Type | No. | Remarks. | No. | Lines. | K. | Focus | Other Lines | V | H.

23.0	11.5	54.0	1.1	49.9	27.0	11.5	54.0	1.1	49.9	27.0	11.5	54.0	1.1	49.9
21.5	8.8	11	3	N	1	10.8	17.6	1.8	86.3					
21.1	21.1	III	2	K=H	1	-	10.6	42.2	2.0	61.7				
21.0	21.5	II	6	N	2	-	10.5	43.0	2.1	60.9				
21.3	23.3	I?	3	N	2	F	10.6	46.6	2.0	57.3				
20.6	17.5	I	3	N	1	10.3	35.0	2.3	68.9					
20.5	18.6	III	2	K=H	1	-	10.2	37.2	2.4					
20.7	21.1	II	5	K=H	1	-	10.4	42.2	2.2	61.7				
20.7	21.5	II	5	N	2	-	10.4	43.0	2.2	60.9				
20.2	21.9	III	2	K=H	1	-	10.1	43.8	2.5	60.1				
20.2	22.8	III	2	K=2.0H	3	F?	10.1	45.6	2.5	58.3				
19.2	8.3	I	3	N	1	-	9.6	16.6	3.0	87.3				
19.0	10.2	II	4	K=H	1	-	9.5	20.4	3.1	83.5				
19.4	19.0	II	5	N	2	-	9.7	38.0	2.9	65.9				
19.6	19.2	II	6	?	2	-	9.8	38.4	2.8	65.5				
19.0	20.6	II^[[a]]	101	4	K=H	3	seen	9.5	41.2	3.1	62.7			
18.2	9.6	I	6	N	3	-	9.1	19.2	3.5	84.7				
18.0	11.4	II	4	K=H	1	-	9.0	22.8	3.6	81.1				
18.0	11.7	III	2	K=H	1	-	9.0	23.4	3.6	80.5				
18.8	15.1	III^[[b.c]]	102	3	K=1.2H	3	F	Bright seen	9.4	30.2				
3.2	73.7													
18.7	20.2	III^[[bc]]	103	2	K=H	2	Bright seen	9.4	40.4	3.2				
63.5														
18.0	18.1	II	5	N	1	-	9.0	36.2	3.6	67.7				
18.0	21.5	III	2	K=H	1	-	9.0	43.0	3.6	60.9				
17.8	7.2	III	2	K=H	1	-	8.9	14.4	3.7	89.5				
17.4	10.6	II	8	N	2	F	8.7	21.2	3.9	82.7				
17.5	11.5	II	4	N	1	8.8	23.0	3.8	80.9					
17.5	20.7	II^[[a]]	104	5	K=H	3	seen	8.8	41.4	3.8	62.5			
16.5	10.3	II	6	K=.5H	2	-	8.2	20.6	4.4	83.3				

John G. Wolbach Library. Harvard-Smithsonian Center for Astrophysics.
Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

67

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

November, 7, 1887.

Plate 1529

| v. | H. | Type | No. Lines | K. | Other Lines | v. | H. | V. | H. |

16.6|15.5||4|K=H|1|-|8.3|31.0|4.3|72.9
 16.0|20.6||3|N|1|-|8.0|41.2|4.6|62.7
 16.0|22.6||2|K=H|1|-|8.0|45.2|4.6|62.7
 15.0|5.7||2|K=4|2|-|7.5|11.4|5.1|92.5
 15.8|6.3||1|N|1|-|7.9|12.6|4.7|91.3
 15.0|7.3||1a|105|2|K=4|1|sum|7.5|14.6|5.1|89.3
 15.6|7.3||1|N|1|-|7.8|14.6|4.8|89.3
 15.6|7.8||1|N|2|-|7.8|15.6|4.8|88.3
 15.8|11.4||4|N|1|-|7.9|22.8|4.7|81.1
 15.4|13.0||6|N|2|-|7.7|26.0|4.9|77.9
 15.2|16.2||7|N|1|-|7.6|32.4|5.0|71.5
 14.2|8.8||4|K=4|1|-|7.1|17.6|5.5|86.3
 14.6|9.0||3|N|1|-|7.3|18.0|5.3|85.9
 14.0|10.1||4|N|1|-|7.0|20.2|5.6|83.7
 14.8|13.8||6|K=5H|2|-|7.4|27.6|5.2|76.3
 14.6|14.9||b|106|7|N|3|sum|7.3|29.8|5.3|74.1
 14.0|16.8||6|N|1|-|7.0|33.6|5.6|70.3
 13.0|6.1||3|N|1|-|6.5|12.2|6.1|91.7
 13.7|6.7||7|N|1|-|6.8|13.4|5.8|90.5
 13.4|7.2||4|K=H|1|-|6.7|14.4|5.9|89.5
 13.2|11.6||8|N|3|F|6.6|23.3|6.0|80.7
 13.8|19.0||5|N|1|-|6.9|38.0|5.7|65.9
 13.1|20.5||2|K=H|1|-|6.6|41.0|6.0|62.9
 13.1|20.7||2|K=H|1|-|6.6|44.6|6.4|62.5
 12.3|7.3||1a|107|4|K=H|3|sum|6.2|14.6|6.4|89.3
 12.0|9.5||2|K=H|1|-|6.0|19.0|6.6|84.9
 12.6|9.9||4|K=H|1|-|6.3|19.8|6.3|84.1
 12.0|10.7||4|K=H|1|-|6.0|21.4|6.6|82.5

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

68

November 7, 1887.
Plate 1529.

v.	H.	Type	No. Lines	K.	Other Lines	v.	H.	V.	H.			
16.6	15.5		4	K=H	1	8.3	31.0	4.3	72.9			
16.0	20.6		3	N	1	8.0	41.2	4.6	62.7			
16.0	22.6		2	K=H	1	8.0	45.2	4.6	62.7			
15.0	5.7		2	K=4	2	7.5	11.4	5.1	92.5			
15.8	6.3		1	N	1	7.9	12.6	4.7	91.3			
15.0	7.3		1a	105	2	K=4	1	sum	7.5	14.6	5.1	89.3
15.6	7.3		1	N	1	7.8	14.6	4.8	89.3			
15.6	7.8		1	N	2	7.8	15.6	4.8	88.3			
15.8	11.4		4	N	1	7.9	22.8	4.7	81.1			
15.4	13.0		6	N	2	7.7	26.0	4.9	77.9			
15.2	16.2		7	N	1	7.6	32.4	5.0	71.5			
14.2	8.8		4	K=4	1	7.1	17.6	5.5	86.3			
14.6	9.0		3	N	1	7.3	18.0	5.3	85.9			
14.0	10.1		4	N	1	7.0	20.2	5.6	83.7			
14.8	13.8		6	K=5H	2	7.4	27.6	5.2	76.3			
14.6	14.9		b	106	7	N	3	sum	7.3	29.8	5.3	74.1
14.0	16.8		6	N	1	7.0	33.6	5.6	70.3			
13.0	6.1		3	N	1	6.5	12.2	6.1	91.7			
13.7	6.7		7	N	1	6.8	13.4	5.8	90.5			
13.4	7.2		4	K=H	1	6.7	14.4	5.9	89.5			
13.2	11.6		8	N	3	F	6.6	23.3	6.0	80.7		
13.8	19.0		5	N	1	6.9	38.0	5.7	65.9			
13.1	20.5		2	K=H	1	6.6	41.0	6.0	62.9			
13.1	20.7		2	K=H	1	6.6	44.6	6.4	62.5			
12.3	7.3		1a	107	4	K=H	3	sum	6.2	14.6	6.4	89.3
12.0	9.5		2	K=H	1	6.0	19.0	6.6	84.9			
12.6	9.9		4	K=H	1	6.3	19.8	6.3	84.1			
12.0	10.7		4	K=H	1	6.0	21.4	6.6	82.5			

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

70

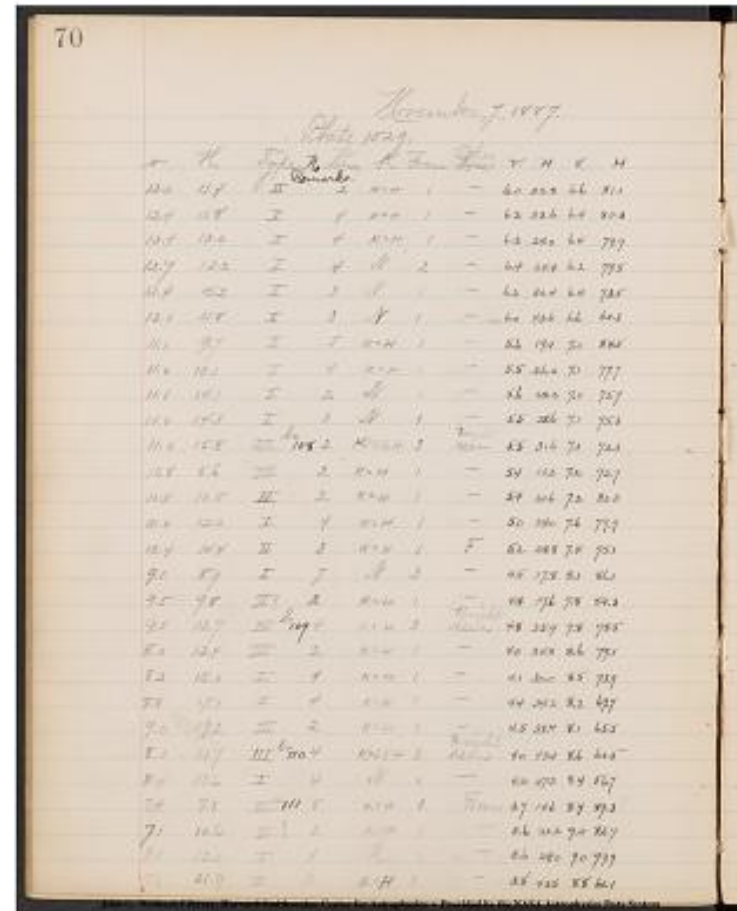
November, 7, 1887.

Plate 1529.

[[12 columned table]]

V	H	Type	No.	Remarks	No.	Lines	K	Focus	Other Lines	V	H	V	H
12.0	11.4	II	2	K=H	1	6.0	22.8	6.6	81.1				
12.4	11.8	I	4	K=H	1	6.2	23.6	6.4	80.3				
12.4	12.0	I	4	K=H	1	6.2	24.0	6.4	79.9				
12.7	12.2	I	4	N	2	6.4	24.4	6.2	79.5				
12.4	15.2	I	3	N	1	6.2	30.4	6.4	73.5				
12.0	21.8	I	3	N	1	6.0	43.6	6.6	60.3				
11.1	9.7	I	5	K=H	1	5.6	19.4	7.0	84.5				
11.0	13.1	I	4	K=H	1	5.5	26.2	7.1	77.7				
11.1	14.1	I	2	N	1	5.6	28.2	7.0	75.7				
11.0	14.3	I	3	N	1	5.5	28.6	7.1	75.3				
11.0	15.8	III	bc 108	2	K=1.2H	3	Bright seen	5.5	31.6	7.1			
72.3													
10.8	5.6	III	2	K=H	1	5.4	11.2	7.2	92.7				
10.8	10.8	II	2	K=H	1	5.4	21.6	7.2	82.3				
10.0	12.0	I	4	K=H	1	5.0	24.0	7.6	79.9				
10.4	14.4	II	3	K=H	1	F	5.2	28.8	7.4	75.1			
9.0	8.9	I	7	N	3	4.5	17.8	8.1	86.1				
9.5	9.8	II?	2	K=H	1	4.8	19.6	7.8	84.3				
9.5	12.7	III	bc 109	4	K=H	3	Bright seen	4.8	25.4	7.8	78.5		
8.0	12.4	III	2	K=H	1	4.0	24.8	8.6	79.1				
8.2	15.0	I	4	K=H	1	4.1	30.0	8.5	73.9				
8.8	17.1	I	4	K=H	1	4.4	34.2	8.2	69.7				
9.0	19.2	III	2	K=H	1	4.5	38.4	8.1	65.5				
8.0	21.7	III	bc 110	4	K=1.5H	3	Bright seen	4.0	43.4	8.6			
60.5													
8.4	23.6	I	4	N	1	4.2	47.2	8.4	56.7				
7.4	7.3	II	a 111	5	K=H	3	F seen	3.7	14.6	8.9	89.3		
7.1	10.6	II?	2	K=H	1	3.6	21.2	9.0	82.7				
7.1	12.0	I	3	N	1	3.6	24.0	9.0	79.9				
7.6	21.9	II	2	K=H	1	3.8	43.8	8.8	60.1				

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



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 Column Chart]]

No.	R.A.	Dec.	Mag.	H.	V.	Br.
3797	18 21.3	+6 45	8.5	44.1	12.8	7.0
3772	18 20.2	+6 26	8.5	43.8	12.6	7.0
3763	18 19.8	+6 24	8.6	43.8	12.6	7.0
3762	18 19.8	+6 21	8.4	44.2	12.8	6.6
3701	18 13.3	+6 29	8.1	43.7	12.7	7.1
3626	18 0.2	+6 41	7.5?	43.8	12.7	7.0
3627	18 0.3	+6 32	7.5	43.9	12.5	7.0
3730	18 24.7	+7 8	7.5	44.1	12.7	7.8
3676	18 17.7	+7 9	7.5	43.9	12.7	7.0
3661	18 15.8	+7 8	7.7	44.0	12.7	7.2
3658	18 15.4	+7 9	8.1	44.0	12.7	7.1
3629	18 12.2	+7 12	5.8	43.8	12.7	6.4 6.6
3798	18 32.8	+7 13	6.5	44.0	12.6	6.6 6.9
3712	18 22.5	+7 16	7.8	44.1	12.7	7.2
3694	18 20.0	+7 39	8.0	44.0	12.6	7.0
3657	18 15.3	+7 29	7.0	44.1	12.7	6.9
3741	18 26.4	+8 10	6.2	44.2	12.7	6.2
3729	18 24.5	+7 56	7.5	44.1	12.7	7.2
3682	18 18.7	+7 57	5.8	44.1	12.8	6.1 6.4
3689	18 19.3	+8 43	8.0	44.1	12.7	7.1 7.5
3654	18 14.1	+8 34	7.9	44.1	12.7	7.0
3634	18 9.6	+8 19	7.3	43.8	12.7	6.9
3610	18 5.2	+8 12	7.0	43.6	12.7	7.0 7.3
3582	18 0.4	+8 43	5.0	43.8	12.7	5.8 6.1
3567	17 56.4	+8 25	7.0	103.6	12.6	6.8
3783	18 29.5	+9 1	5.3	44.1	12.7	5.8
3737	18 23.0	+9 7	7.6	44.2	12.7	7.2
3714	18 20.1	+9 8	7.6	44.1	12.7	7.1
3581	18 59.9	+8 52	7.8	103.7	12.7	6.9

71

No.	R.A.	Dec.	Mag.	H.	V.	Br.
3797	18 21.3	+6 45	8.5	44.1	12.8	7.0
3772	18 20.2	+6 26	8.5	43.8	12.6	7.0
3763	18 19.8	+6 24	8.6	43.8	12.6	7.0
3762	18 19.8	+6 21	8.4	44.2	12.8	6.6
3701	18 13.3	+6 29	8.1	43.7	12.7	7.1
3626	18 0.2	+6 41	7.5?	43.8	12.7	7.0
3627	18 0.3	+6 32	7.5	43.9	12.5	7.0
3730	18 24.7	+7 8	7.5	44.1	12.7	7.8
3676	18 17.7	+7 9	7.5	43.9	12.7	7.0
3661	18 15.8	+7 8	7.7	44.0	12.7	7.2
3658	18 15.4	+7 9	8.1	44.0	12.7	7.1
3629	18 12.2	+7 12	5.8	43.8	12.7	6.4 6.6
3798	18 32.8	+7 13	6.5	44.0	12.6	6.6 6.9
3712	18 22.5	+7 16	7.8	44.1	12.7	7.2
3694	18 20.0	+7 39	8.0	44.0	12.6	7.0
3657	18 15.3	+7 29	7.0	44.1	12.7	6.9
3741	18 26.4	+8 10	6.2	44.2	12.7	6.2
3729	18 24.5	+7 56	7.5	44.1	12.7	7.2
3682	18 18.7	+7 57	5.8	44.1	12.8	6.1 6.4
3689	18 19.3	+8 43	8.0	44.1	12.7	7.1 7.5
3654	18 14.1	+8 34	7.9	44.1	12.7	7.0
3634	18 9.6	+8 19	7.3	43.8	12.7	6.9
3610	18 5.2	+8 12	7.0	43.6	12.7	7.0 7.3
3582	18 0.4	+8 43	5.0	43.8	12.7	5.8 6.1
3567	17 56.4	+8 25	7.0	103.6	12.6	6.8
3783	18 29.5	+9 1	5.3	44.1	12.7	5.8
3737	18 23.0	+9 7	7.6	44.2	12.7	7.2
3714	18 20.1	+9 8	7.6	44.1	12.7	7.1
3581	18 59.9	+8 52	7.8	103.7	12.7	6.9

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

72

November, 7, 1887.

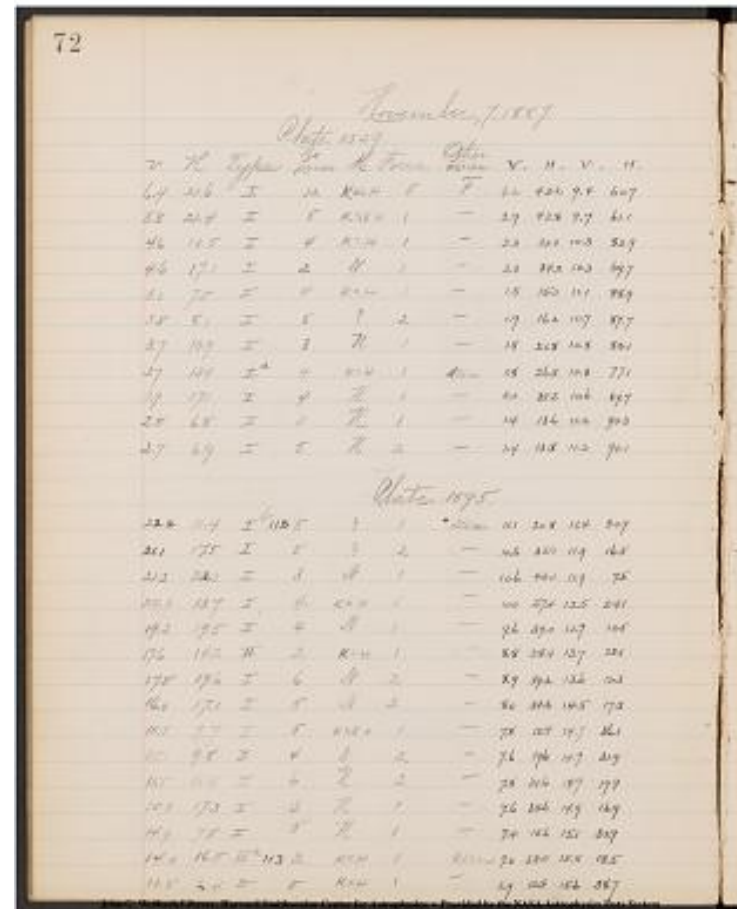
Plate 1529.

[[11 column table]]

V.	H.	Type	No.	Remark.	No.	Lines	K.	Focus.	Other Lines	V.		
H.	V.	H.										
6.4	21.6	I	-	12	K=2H	5	F.	3.2	43.2	9.4	60.7	
5.8	21.4	I	-	5	K=.5H	1	-	2.9	42.8	9.7	61.1	
4.6	10.5	I	-	4	K=H	1	-	2.3	21.0	10.3	82.9	
4.6	17.1	I	-	2	N	1	-	2.3	34.2	10.3	69.7	
3.0	7.5	I	-	4	K=H	1	-	1.5	15.0	11.1	88.9	
3.8	8.1	I	-	5	?	2	-	1.9	16.2	10.7	87.7	
3.7	10.9	I	-	3	N	1	-	1.8	21.8	10.8	82.1	
3.7	13.4	I [^]	[a]	-	4	K=H	1	seen	1.8	26.8	10.8	77.1
3.9	17.1	I	-	4	N	1	-	2.0	34.2	10.6	69.7	
2.8	6.8	I	-	3	N	1	-	1.4	13.6	11.2	90.3	
2.7	6.9	I	-	5	N	2	-	1.4	13.8	11.2	90.1	

Plate 1595.

22.2	10.4	I	^	[I]	112	5	?	1	1	*[[?]]	seen	11.1	20.8	11.4	30.7
21.1	17.5	I	-	5	?	2	-	10.6	35.0	11.9	16.5				
21.2	22.0	I	-	3	N	1	-	10.6	44.0	11.9	7.5				
20.0	13.7	I	-	4	K=H	1	-	10.0	27.4	12.5	24.1				
19.2	19.5	I	-	4	N	1	-	9.6	39.0	12.9	12.5				
17.6	14.2	I	-	2	K=H	1	-	8.8	28.4	13.7	23.1				
17.8	19.6	I	-	6	N	2	-	8.9	39.2	13.6	12.3				
16.0	17.1	I	-	5	N	2	-	8.0	34.2	14.5	17.3				
15.5	7.7	I	-	5	K=.5H	1	-	7.8	15.4	14.7	36.1				
15.1	9.8	I	-	4	N	2	-	7.6	19.6	14.9	31.9				
15.5	15.8	I	-	6	N	2	-	7.8	31.6	14.7	19.9				
15.3	17.3	I	-	3	N	1	-	7.6	34.6	14.9	16.9				
14.9	7.8	I	-	5	N	1	-	7.4	15.6	15.1	35.9				
14.0	16.5	I	^	[a]	113	2	K=H	1	seen	7.0	33.0	15.5	18.5		
13.8	6.4	I	-	5	K=H	1	-	6.9	12.8	15.6	38.7				



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 Column Table]]

No.	R.A.	Dec.	Mag.	H.	V.	[[Br.]]
3565	18 0.6	+9 28	7.8	43.8	12.7	

[[~~4.6~~]]

3567	18 0.9	+9 50	7.1	43.7	12.7	
------	--------	-------	-----	------	------	--

[[~~6.7~~]]

3532	18 23.1	+10 23	6.8	44.1	12.7	
------	---------	--------	-----	------	------	--

[[~~6.9~~]]

3455	18 9.6	+10 24	8.7	43.8	12.7	
------	--------	--------	-----	------	------	--

[[~~7.2~~]]

3519	18 29.3	+11 10	8.3	44.3	12.7	
------	---------	--------	-----	------	------	--

[[~~7.1~~]]

3573	18 28.0	+10 47	6.7	44.2	12.7	
------	---------	--------	-----	------	------	--

[[~~6.5~~]]

3526	18 22.1	+10 53	8.5	43.9	12.7	
------	---------	--------	-----	------	------	--

[[~~7.1~~]]

3495	18 17.1	+10 49	8.8	43.9	12.6	
------	---------	--------	-----	------	------	--

[[~~7.0~~]]

3452	18 9.6	+10 47	8.0	43.8	12.8	
------	--------	--------	-----	------	------	--

[[~~7.0~~]]

3531	18 9.6	+11 14	6.5	44.2	12.6	
------	--------	--------	-----	------	------	--

[[~~7.0~~]]

3530	17 30.4	+11 19	6.3	44.2	12.7	
------	---------	--------	-----	------	------	--

[[~~6.8~~]]

3530	18 30.4	+11 19	6.3	51.2	22.4	
------	---------	--------	-----	------	------	--

[[~~6.9~~]]

3442	18 15.8	+11 58	6.0	50.8	22.6	
------	---------	--------	-----	------	------	--

[[~~6.6~~]]

3379	18 6.7	+11 51	6.9	50.7	22.4	
------	--------	--------	-----	------	------	--

[[~~7.1~~]]

3557	18 23.9	+12 31	7.0	51.3	22.5	
------	---------	--------	-----	------	------	--

[[~~7.1~~]]

3461	18 11.7	+12 56	6.7	50.7	22.5	
------	---------	--------	-----	------	------	--

[[~~6.9~~]]

3658	18 22.8	+13 46	6.8	51.2	22.6	
------	---------	--------	-----	------	------	--

[[~~7.1~~]]

3593	18 11.4	+13 44	6.1	50.6	22.6	
------	---------	--------	-----	------	------	--

[[~~6.6~~]]

3511	18 16.7	+14 38	6.3	50.9	22.6	
------	---------	--------	-----	------	------	--

[[~~6.7~~]]

3615	18 36.2	+14 43	6.9	51.6	22.5	
------	---------	--------	-----	------	------	--

[[~~7.0~~]]

3603	18 32.0	+14 58	6.5	50.6	22.6	
------	---------	--------	-----	------	------	--

[[~~6.7~~]]

3531	18 19.0	+14 40	7.8	50.6	22.5	
------	---------	--------	-----	------	------	--

[[~~6.5~~]]

3506	18 16.3	+14 56	7.1	50.9	22.5	
------	---------	--------	-----	------	------	--

[[~~7.3~~]]

3453	18 17.8	+15 35	7.3	50.8	22.6	
------	---------	--------	-----	------	------	--

[[~~7.0~~]]

3546	18 39.1	+15 34	6.5	51.9	22.5	
------	---------	--------	-----	------	------	--

[[~~6.9~~]]

No.	R.A.	Dec.	Mag.	H.	V.	Br.
3465	18 0.6	+9 28	7.8	43.8	12.7	
3567	18 0.9	+9 50	7.1	43.7	12.7	
3532	18 23.1	+10 23	6.8	44.1	12.7	
3455	18 9.6	+10 24	8.7	43.8	12.7	
3519	18 29.3	+11 10	8.3	44.3	12.7	
3573	18 28.0	+10 47	6.7	44.2	12.7	
3526	18 22.1	+10 53	8.5	43.9	12.7	
3495	18 17.1	+10 49	8.8	43.9	12.6	
3452	18 9.6	+10 47	8.0	43.8	12.8	
3531	18 9.6	+11 14	6.5	44.2	12.6	
3530	17 30.4	+11 19	6.3	44.2	12.7	
3530	18 30.4	+11 19	6.3	51.2	22.4	
3442	18 15.8	+11 58	6.0	50.8	22.6	
3379	18 6.7	+11 51	6.9	50.7	22.4	
3557	18 23.9	+12 31	7.0	51.3	22.5	
3461	18 11.7	+12 56	6.7	50.7	22.5	
3658	18 22.8	+13 46	6.8	51.2	22.6	
3593	18 11.4	+13 44	6.1	50.6	22.6	
3511	18 16.7	+14 38	6.3	50.9	22.6	
3615	18 36.2	+14 43	6.9	51.6	22.5	
3603	18 32.0	+14 58	6.5	50.6	22.6	
3531	18 19.0	+14 40	7.8	50.6	22.5	
3506	18 16.3	+14 56	7.1	50.9	22.5	
3453	18 17.8	+15 35	7.3	50.8	22.6	
3546	18 39.1	+15 34	6.5	51.9	22.5	

74

November, 7, 1887.

Plate 1595

[[12 column table]]

V. | H. | Type | No Remarks | No. Lines | K. | Focus | Other Lines | V. | H.
| V. | H.

13.0 | 10.5 | I | - | 3 | N | 1 | - | 6.5 | 21.0 | 16.0 | 30.5

13.7 | 19.0 | I | - | 4 | K=H | 1 | - | 6.8 | 38.0 | 15.7 | 13.5

12.0 | 17.2 | III | 1 | N | 1 | - | 6.0 | 34.4 | 16.5 | 17.1

12.6 | 21.8 | I | 2 | N | 1 | - | 6.3 | 43.6 | 16.2 | 7.9

12.2 | 23.3 | IIa 114 | 2 | K=H | 1 | sum | 6.1 | 46.6 | 16.4 | 4.9

11.5 | 11.1 | IIa 115 | 2 | K=H | 1 | sum | 5.8 | 26.8 | 16.7 | 24.7

11.6 | 13.4 | I | 7 | K=2H | 3 | - | 5.8 | 26.8 | 16.7 | 24.7

10.3 | 7.5 | II | 2 | K=H | 1 | - | 5.2 | 15.0 | 17.3 | 36.5

10.2 | 14.0 | I | 3 | N | 1 | - | 5.1 | 28.0 | 17.4 | 23.5

9.0 | 5.8 | I | 8 | N | 4 | F | 4.5 | 11.6 | 18.0 | 39.9

9.0 | 11.4 | I | 8 | K=.1H | 3 | - | 4.5 | 22.8 | 18.0 | 28.7

9.4 | 14.2 | I | 7 | N | 2 | F | 4.7 | 28.4 | 17.8 | 23.1

9.8 | 17.2 | IIIbc 112 | 2 | K=H | 2 Bright Sum | 4.9 | 33.4 | 17.6 | 17.1

9.1 | 19.4. | I | 6 | N | 2 | - | 4.6 | 38.8 | 17.9 | 12.7

8.3 | 6.2 | I | 4 | K=H | 1 | - | 4.2 | 12.4 | 18.3 | 39.1

6.3 | 7.6 | I | 3 | N | 1 | - | 3.2 | 15.2 | 19.3 | 36.3

5.2 | 23.7 | I | 6 | N | 3 | - | 2.6 | 47.4 | 19.9 | 4.1

4.3 | 6.5 | IIa 117 | 4 | K=2.5H | 3 | F sum | 2.2 | 13.0 | 20.3 | 27.7

4.5 | 11.9 | I | 7 | K=.54 | 1 | - | 2.2 | 23.8 | 20.3 | 27.7

4.6 | 16.6 | I | 4 | K=H | 1 | - | 2.3 | 33.2 | 20.2 | 18.3

3.7 | 23.7 | I | 9 | N | 4 | F? | 1.8 | 47.4 | 20.7 | 4.1 |

2.4 | 11.7 | I | 4 | K=H | 1 | - | 1.2 | 23.4 | 21.3 | 28.1

2.0 | 16.7 | IIIbc 118 | 2 | K=H | 3 | Bright Sum | 1.0 | 33.4 | 21.5 | 18. 1

2.4 | 17.6 | In 119 | 4 | N | 1 | sum | 1.2 | 35.2 | 21.3 | 16.3

3.30 P.m

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

No.	R.A.	Dec.	Mag.	H.	V.	Br.
3563	18 30.6	+ 16 5	6.1	51.6	22.6	7.0
3426	18 12.8	+ 15 46	6.9	50.8	22.6	6.9
3478	18 16.6	+ 16 37	6.5	51.0	22.6	7.4
3405	18 6.8	+ 16 14	6.5	50.4	22.5	7.1
3390	18 3.7	+ 16 27	6.0	50.3	22.6	6.9
3560	18 29.4	+ 16 52	6.3	51.6	22.7	6.8
3529	18 24.6	+ 16 50	5.6	51.4	22.6	6.0
3701	18 36.9	+ 17 21	7.2	51.9	22.6	7.1
3601	18 23.4	+ 17 31	7.7	57.4	22.6	6.0
3823	18 40.6	+ 18 2 4.1	52.2	22.5	5.5	
3740	18 28.8	+ 18 5 6.1	57.6	22.6	5.9	
3595	18 23.0	+ 17 53	6.5	51.4	22.6	6.7
3555	18 16.4	+ 17 45	5.2	50.8	22.7	6.6
			6.9			
3520	18 11.5	+ 17 55	7.6	50.3	22.5	6.5
3814	18 39.7	+ 18 20	6.9	52.1	22.5	7.0
3762	18 36.9	+ 19 20	7.2	52.1	22.5	7.1
3675	18 2.6	+ 20 2 5.5	50.0	22.6	5.9	
3926	18 39.4	+ 20 25	4.1	52.4	22.6	5.5
3847	18 28.1	+ 20 21	6.5	51.9	22.6	6.8
3769	18 17.9	+ 20 22	6.7	51.1	22.7	7.0
3674	18 2.6	+ 20 49	4.2	50.0	22.6	5.2
3483	18 28.6	+ 21 22	7.5	52.0	22.6	7.1
3461	18 17.5	+ 21 42	4.5	50.9	22.7	5.7
			6.1			
3400	18 15.7	+ 21 26	7.5	50.9	22.6	6.9

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[underline]] November 9, 1887. [[/underline]]

Plate 1599

V | H | Type | No Remark. | No. Lines | K. | Focus. | Other Lines. | V. | H.
| V. | H. | Correc. |

22.1 | 11.4 | I | | 3 | N | 1 | - | 11.0 | 22.8 | 21.5 | 27.7 | +0.6 |

22.0 | 17.2 | I | | 5 | K=.5H | 1 | - | 11.0 | 34.4 | 21.5 | 16.1 | +0.3 |

22.9 | 23.4 | I? | | 4 | N | 5 | - | 11.4 | 46.8 | 21.1 | 3.7 | -1.1 |

21.0 | 6.3 | I | d | 3 | N | 1 | seen | 10.5 | 12.6 | 22.0 | 37.9 | +1.2 |

21.6 | 16.4 | III | bc 120 | 3 | K=1.2H | 4 | Bright F seen. | 10.8 | 32.8 |
21.7 | 17.7 | -0.2 |

21.2 | 17.9 | III | bc 121 | 1 | N | 1 | - | 10.6 | 35.8 | 21.9 | 14.7 | -0.4 |

19.7 | 15.5 | I | | b 122 | 5 | N | 2 | seen | 9.8 | 31.0 | 22.7 | 19.5 | -0.1 |

19.5 | 17.7 | I | | 5 | N | 2 | - | 9.8 | 35.4 | 22.7 | 15.1 | -0.5 |

18.0 | 6.8 | II | a 123 | 2 | K=H | 1 | seen | 9.0 | 13.6 | 23.5 | 36.9 | +1.3 |

18.0 | 11.0 | III | b 124 | 1 | N | 2 | seen | 9.0 | 22.0 | 23.5 | 28.5 | +0.7 |

18.0 | 12.3 | III | | 2 | K=H | 1 | - | 9.0 | 24.6 | 23.5 | 25.9 | +0.5 |

18.6 | 17.1 | III | b 125 | 1 | N | 1 | seen | 9.3 | 34.2 | 23.2 | 16.3 | -0.4 |

17.6 | 13.7 | I | | 8 | N | 3 | - | 8.8 | 27.4 | 23.7 | 23.1 | +0.2 |

16.0 | 14.6 | I | | 6 | N | 2 | - | 8.0 | 29.2 | 24.5 | 21.3 | +0.1 |

16.4 | 18.3 | III | bc 126 | 2 | K=H | 2 | seen | 8.2 | 36.6 | 24.3 | 13.9 | -0.6 |

15.8 | 14.6 | I | | 6 | N | 2 | - | 7.9 | 29.2 | 24.6 | 21.3 | +0.1 |

15.2 | 17.3 | I | | 6 | N | 2 | - | 7.6 | 34.6 | 24.9 | 15.9 | -0.5 |

15.1 | 22.9 | I | d | 6 | N | 2 | seen | 7.6 | 45.8 | 24.9 | 4.7 | -1.5 |

13.0 | 8.8 | I | | 5 | N | 2 | - | 6.5 | 17.6 | 26.0 | 32.9 | +1.3 |

13.0 | 15.0 | I | | b 127 | 5 | N | 2 | seen | 6.5 | 30.0 | 26.0 | 20.5 | 0.0 |

76

November 2, 1887
Plate 1599

V.	H.	Type	No. Lines	K.	Focus	Other Lines	V.	H.	V.	H.	Correc.	
22.1	11.4	I	3	N	1	-	11.0	22.8	21.5	27.9	+0.6	
22.0	17.2	I	5	K=.5H	1	-	11.0	34.4	21.5	31.0	+0.3	
22.9	23.4	I?	4	N	5	-	11.4	46.8	21.1	34.7	-1.1	
21.0	6.3	I	d	3	N	1	seen	10.5	12.6	22.0	37.9	+1.2
21.6	16.4	III	bc 120	3	K=1.2H	4	Bright F seen.	10.8	32.8	21.7	17.7	-0.2
21.2	17.9	III	bc 121	1	N	1	-	10.6	35.8	21.9	14.7	-0.4
19.7	15.5	I	b 122	5	N	2	seen	9.8	31.0	22.7	19.5	-0.1
19.5	17.7	I	5	N	2	-	9.8	35.4	22.7	15.1	-0.5	
18.0	6.8	II	a 123	2	K=H	1	seen	9.0	13.6	23.5	36.9	+1.3
18.0	11.0	III	b 124	1	N	2	seen	9.0	22.0	23.5	28.5	+0.7
18.0	12.3	III	2	K=H	1	-	9.0	24.6	23.5	25.9	+0.5	
18.6	17.1	III	b 125	1	N	1	seen	9.3	34.2	23.2	16.3	-0.4
17.6	13.7	I	8	N	3	-	8.8	27.4	23.7	23.1	+0.2	
16.0	14.6	I	6	N	2	-	8.0	29.2	24.5	21.3	+0.1	
16.4	18.3	III	bc 126	2	K=H	2	seen	8.2	36.6	24.3	13.9	-0.6
15.8	14.6	I	6	N	2	-	7.9	29.2	24.6	21.3	+0.1	
15.2	17.3	I	6	N	2	-	7.6	34.6	24.9	15.9	-0.5	
15.1	22.9	I	d	6	N	2	seen	7.6	45.8	24.9	4.7	-1.5
13.0	8.8	I	5	N	2	-	6.5	17.6	26.0	32.9	+1.3	
13.0	15.0	I	b 127	5	N	2	seen	6.5	30.0	26.0	20.5	0.0
12.0	21.3	I	7	N	2	-	6.5	46.6	26.0	3.7	-1.7	
11.0	6.8	II	a 128	2	K=H	1	seen	6.0	12.6	26.5	37.9	+1.6
11.0	11.7	I	b 129	1	N	2	seen	6.5	29.8	26.3	30.7	+0.2
11.0	16.0	I	5	N	2	-	6.2	30.0	26.3	15.5	0.0	
11.0	18.0	I	6	N=H	1	-	6.2	31.0	27.2	20.5	0.0	
11.0	18.0	I	8	K=H=H	2	-	6.3	31.0	27.0	19.5	-0.1	
11.0	18.0	I	8	K=H	1	-	6.1	32.0	27.0	15.1	-0.3	
11.0	17.0	I	2	K=H	1	-	6.0	30.0	27.0	15.7	-0.3	

13.0 | 23.3 | I | | 7 | ? | 3 | - | 6.5 | 46.6 | 26.0 | 3.9 | -1.7 |
 12.0 | 6.3 | III | b 128 | 2 | K=H | 3 | seen | 6.0 | 12.6 | 26.5 | 37.9 | +1.8 |
 12.5 | 14.9 | I | b 129 | 8 | N | 3 | seen | 6.2 | 29.8 | 26.3 | 20.7 | +0.0 |
 12.5 | 15.0 | I | | 5 | N | 2 | - | 6.2 | 30.0 | 26.3 | 20.5 | 0.0 |
 10.6 | 15.0 | II | | 2 | K=H | 1 | - | 5.3 | 30.0 | 27.2 | 20.5 | 0.0 |
 10.6 | 15.6 | I | | 8 | K=.2H | 2 | - | 5.3 | 31.2 | 27.2 | 19.3 | -0.1 |
 10.2 | 16.2 | I | | 5 | K=H | 1 | - | 5.1 | 32.4 | 27.4 | 18.1 | -0.3 |
 10.3 | 17.4 | II | | 2 | K=H | 1 | - | 5.2 | 34.8 | 27.3 | 15.7 | -0.6 |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[8 Columned Table]]

[No. | R.A. | Dec. | Magn. | H | V | H' | Br |

3483|18|28.6 + 21
22|7.5|51.4|32.4|~~[[50.8]]~~31.8~~[[/del]]~~~~[[underline]]~~
7.5~~[[/underline]]~~
3400|18|15.7 + 21
26|7.5|50.1|32.4|~~[[49.8]]~~32.1~~[[/del]]~~~~[[underline]]~~
6.8~~[[/underline]]~~
3674|18|2.6 + 20
49|4.2|49.4|32.2|~~[[50.5]]~~33.3~~[[/del]]~~~~[[underline]]~~
5.0~~[[/underline]]~~
3803|18|40.1 + 22
7|8.1|52.7|32.6|~~[[51.5]]~~31.4~~[[/del]]~~~~[[underline]]~~6
.9~~[[/underline]]~~
3411|18|17.5 + 21
42|4.5|50.3|32.5|~~[[50.5]]~~32.7~~[[/del]]~~~~[[underline]]~~~~[[5.6]]~~~~[[und~~
erline]]6.0~~[[/underline]]~~
3390|18|14.2 + 21
54|60|50.0|32.5|~~[[50.4]]~~32.9~~[[/del]]~~~~[[underline]]~~~~[[6.7]]~~~~[[und~~
erline]]7.0~~[[/underline]]~~
3358|18|19.4 + 22
38|7.5|50.4|32.4|~~[[50.5]]~~32.4~~[[/del]]~~6.7
3337|18|14.6 + 22
44|7.2|50.0|32.5|~~[[50.5]]~~33.0~~[[/del]]~~6.8
3439|18|38.6 + 23
26|6.5|52.2|32.4|~~[[50.9]]~~31.1~~[[/del]]~~~~[[underline]]~~
6.9~~[[/underline]]~~
3385|18|29.5 + 23
29|6.0|51.5|32.5|~~[[50.8]]~~31.8~~[[/del]]~~6.9
3363|18|26.7 + 23
31|6.0|51.3|32.5|~~[[50.8]]~~32.07~~[[/del]]~~~~[[underline]]~~~~[[7.0]]~~7.4
3316|18|16.1 + 23
13|6.5|50.3|32.5|~~[[50.7]]~~32.9~~[[/del]]~~[[6.8]]7.2
3347|18|23.6 + 23
46|6.0|51.0|32.6|~~[[50.8]]~~32.4~~[[/del]]~~5.8
3425|18|21.8 + 24
36|6.8|51.0|32.6|~~[[50.9]]~~32.5~~[[/del]]~~6.5
3381|18|13.2 + 24
24|5.5|49.8|32.6|~~[[50.4]]~~33.2~~[[/del]]~~[[6.5]]6.9
3425|18|21.8 + 24
36|6.8|51.0|32.5|~~[[50.9]]~~32.4~~[[/del]]~~6.5
3395|18|15.5 + 24
60|7.5|50.1|32.6|~~[[50.6]]~~33.1~~[[/del]]~~6.5
3342|18|3.0 + 24
56|7.4|48.8|32.5|~~[[50.3]]~~34.0~~[[/del]]~~6.6
3324|18|34.5 + 26
0|6.9|52.1|32.5|~~[[50.8]]~~31.2~~[[/del]]~~6.4
3255|18|20.5 + 26
9|7.1|50.5|32.7|~~[[50.5]]~~32.7~~[[/del]]~~6.3
3178|18|2.0 + 26
5|5.9|48.6|32.6|~~[[50.3]]~~34.3~~[[/del]]~~5.5
3349|18|40.2 + 26
31|4.9|52.8|32.5|~~[[51.0]]~~30.7~~[[/del]]~~~~[[underline]]~~~~[[6.1]]~~~~[[und~~
erline]]6.5~~[[/underline]]~~
~~[[3259]]~~~~[[strikethrough]]~~32.57~~[[/del]]~~~~[[18]]~~~~[[strikethrough]]~~18~~[[/s~~
trikethrough]]~~[[20.9 + 26 22]]~~~~[[strikethrough]]~~20.6 + 26
22~~[[strikethrough]]~~~~[[6.1]]~~~~[[strikethrough]]~~6.5~~[[/del]]~~50.7|32.6|~~[[50.8]]~~

No.	Re.	De.	Re.	No.	Re.	De.
2083	18	246 + 20	20	75	510	225
2084	18	257 + 20	20	75	510	225
2085	18	26 + 20	20	75	510	225
2086	18	26 + 20	20	75	510	225
2087	18	26 + 20	20	75	510	225
2088	18	26 + 20	20	75	510	225
2089	18	26 + 20	20	75	510	225
2090	18	26 + 20	20	75	510	225
2091	18	26 + 20	20	75	510	225
2092	18	26 + 20	20	75	510	225
2093	18	26 + 20	20	75	510	225
2094	18	26 + 20	20	75	510	225
2095	18	26 + 20	20	75	510	225
2096	18	26 + 20	20	75	510	225
2097	18	26 + 20	20	75	510	225
2098	18	26 + 20	20	75	510	225
2099	18	26 + 20	20	75	510	225
2100	18	26 + 20	20	75	510	225
2101	18	26 + 20	20	75	510	225
2102	18	26 + 20	20	75	510	225
2103	18	26 + 20	20	75	510	225
2104	18	26 + 20	20	75	510	225
2105	18	26 + 20	20	75	510	225
2106	18	26 + 20	20	75	510	225
2107	18	26 + 20	20	75	510	225
2108	18	26 + 20	20	75	510	225
2109	18	26 + 20	20	75	510	225
2110	18	26 + 20	20	75	510	225
2111	18	26 + 20	20	75	510	225
2112	18	26 + 20	20	75	510	225
2113	18	26 + 20	20	75	510	225
2114	18	26 + 20	20	75	510	225
2115	18	26 + 20	20	75	510	225
2116	18	26 + 20	20	75	510	225
2117	18	26 + 20	20	75	510	225
2118	18	26 + 20	20	75	510	225
2119	18	26 + 20	20	75	510	225
2120	18	26 + 20	20	75	510	225

0.7]]~~32.6~~]]5.9
 3257|18|20.6 + 26
 22|6.5|50.6|32.6|~~50.6~~]]~~32.6~~]]6.5
 3023|18|20.7 + 27
 15|8.5|50.7|32.5|~~50.7~~]]~~32.5~~]]7.3
 3016|18|19.2 + 27
 19|6.5|50.4|32.6|~~50.5~~]]~~32.7~~]]5.9
 3010 |18|17.7 + 27
 26|8.5|50.1|32.5|~~50.4~~]]~~32.8~~]]6.8
 3003|18|15.1 + 27
 28|7.0|49.9|32.7|~~50.5~~]]~~33.3~~]]7.0

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

November 9, 1887.

Plate 1599

[v.|H.|Type|No remark|[No lines.]]|K.|Focus.|Other
 Lines.[v.|H.|v.|H.|Correc.]
 9.0|7.1|I|^a|[a]|130|2|K=H|1|seen|4.5|14.2|28.0|36.3|+1.9|
 9.0|17.9|II|3|N|1|-4.5|35.8|28.0|14.7|-0.7|
 9.8|15.3|III|2|K=H|1|-4.9|30.6|27.6|19.9|-0.1|
 8.6|7.7|II|3|N|1|-4.3|15.4|28.2|35.1|+0.8|
 8.1|9.9|II|7|N|2|-4.0|19.8|28.5|30.7|+1.3|
 8.7|11.6|II|5|N|1|-4.4|23.2|28.1|27.3|+0.8|
 8.4|12.9|II|5|N|1|-4.2|25.8|28.3|24.7|+0.5|
 7.6|17.2|II|10|K=.5|H|4|F|3.8|34.4|28.7|16.1|-0.6|
 7.4|17.5|II|7|N|2|-3.7|35.0|28.8|15.5|-0.6|
 7.7|23.2|II|9|N|5|F|3.8|46.4|28.7|4.1|-2.0|
 6.4|13.8|III|2|K=H|1|-3.2|27.6|29.3|22.9|+0.3|
 6.6|13.3|II|4|K=H|1|-3.3|26.6|29.2|23.9|+0.4|
 6.4|17.6|III|2|K=H|1|-3.2|35.2|29.3|15.3|-0.7|
 6.0|17.7|III|2|K=H|1|-3.0|35.4|29.5|15.1|-0.7|
 6.8|20.0|II|^a|[a]|131|2|K=H|1|seen|3.4|40.0|29.1|10.5|-1.2|
 5.4|11.4|II|4|K=H|1|-2.7|22.8|29.8|27.7|+0.9|
 5.8|15.1|II|9|K=.1|H|3|F|2.9|30.2|29.6|20.3|-0.0|
 5.7|17.2|II|7|K=.3|H|3|-2.8|34.4|29.7|16.1|-0.6|
 4.4|11.6|II|3|N|1|-2.2|23.2|30.3|27.3|+0.9|
 4.4|12.2|II|8|N|3|-2.2|24.4|30.3|26.1|+0.7|
 4.0|23.2|II|^a|[a]|132|4|K=2.5|H|3|seen|2.0|46.4|30.5|4.1|-2.2|
 3.6|9.1|III|2|K=H|1|-1.8|18.2|30.7|32.3|+1.6|
 3.6|11.9|II|^a|[b]|133|7|N|2|seen|1.8|23.8|30.7|26.7|+0.8|
 2.1|8.4|II|^a|[d]|5|N|2|seen|1.0|16.8|31.5|33.7|+1.9|
 2.5|21.0|III|^a|[b]|134|3|K=H|1|F|seen|1.2|42.0|31.3|8.5|-1.8|

78

November 9, 1887
 Plate 1599

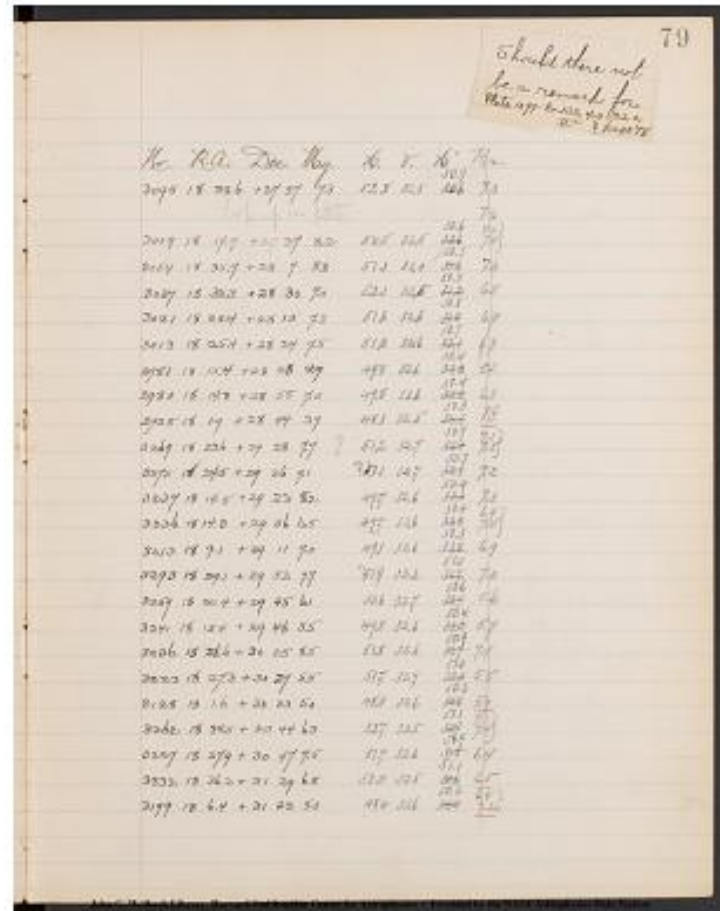
No.	Time	Alt.	Dist.	Lat.	Long.	Corr.	Red.	Obs.	Comp.	Result	
1	21	22	130.2	27.0	1	1000	10	142	28.2	26.2	-0.9
2	17.9	22	3	R	1	-	10	142	28.2	19.7	-0.7
3	21.3	22	2	R	1	-	10	142	28.2	19.7	-0.7
4	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
5	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
6	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
7	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
8	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
9	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
10	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
11	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
12	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
13	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
14	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
15	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
16	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
17	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
18	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
19	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
20	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
21	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
22	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
23	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
24	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
25	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
26	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
27	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
28	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
29	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
30	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
31	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
32	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
33	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
34	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
35	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
36	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
37	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
38	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
39	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
40	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
41	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
42	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
43	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
44	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
45	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
46	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
47	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
48	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
49	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
50	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
51	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
52	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
53	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
54	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
55	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
56	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
57	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
58	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
59	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
60	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
61	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
62	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
63	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
64	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
65	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
66	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
67	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
68	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
69	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
70	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
71	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
72	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
73	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
74	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
75	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
76	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
77	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
78	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
79	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
80	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
81	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
82	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
83	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
84	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
85	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
86	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
87	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
88	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
89	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
90	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
91	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
92	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
93	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
94	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
95	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
96	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
97	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
98	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
99	22	22	3	R	1	-	10	142	28.2	19.7	-0.7
100	22	22	3	R	1	-	10	142	28.2	19.7	-0.7

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

Should there not be a remark for Plate 1099-no.132, 4.0 23.2
II^a ? Page 78

[[8 column table]]

No.	R.A.	Dec.	Mag.	H.	V.	H ¹ .	Br.
3095	18 38.6	+27 57	7.3	52.8	32	[[strikethrough]]	30.6
[[strikethrough]]	50.9	7.0					
3019	18 19.9	+27 37	8.2	50.5	32.5	[[strikethrough]]	32.6
[[strikethrough]]	50.6	7.4 [^] [[7.0]]					
3054	18 35.7	+28 7	8.8	51.1	32.4	[[strikethrough]]	31.6
[[strikethrough]]	50.3	7.0					
3037	18 32.3	+28 30	7.0	52.1	32.5	[[strikethrough]]	31.2
[[strikethrough]]	50.8	6.5					
3021	18 28.4	+28 10	7.3	51.6	32.6	[[strikethrough]]	31.8
[[strikethrough]]	50.8	6.9					
3013	18 25.4	+28 24	7.5	51.2	32.6	[[strikethrough]]	32.1
[[strikethrough]]	50.7	6.9					
2981	18 15.4	+28 48	4.9	49.8	32.6	[[strikethrough]]	33.2
[[strikethrough]]	50.4	5.4					
2980	18 14.8	+28 55	7.0	49.8	32.6	[[strikethrough]]	33.2
[[strikethrough]]	50.4	6.3					
2925	18 1.9	+28 44	3.9	48.3	32.5	[[strikethrough]]	34.5
[[strikethrough]]	50.3	7.3					
3269	18 23.6	+29 28	7.7	51.2	32.7	[[strikethrough]]	32.4
[[strikethrough]]	50.9	7.5 [^] [[7.1]]					
3275	18 24.5	+29 26	9.1	51.1	32.7	[[strikethrough]]	32.3
[[strikethrough]]	50.7	7.2					
3237	18 14.5	+29 23	8.2	49.7	32.6	[[strikethrough]]	33.3
[[strikethrough]]	50.4	7.3					
3236	18 14.3	+29 36	6.5	49.7	32.6	[[strikethrough]]	33.3
[[strikethrough]]	50.4	7.4 [^] [[6.9]]					
3213	18 9.1	+29 11	7.0	49.1	32.6	[[strikethrough]]	33.8
[[strikethrough]]	50.3	6.9					
3293	18 29.1	+29 52	7.7	51.9	32.6	[[strikethrough]]	31.7
[[strikethrough]]	51.0	7.0					
3259	18 20.4	+29 45	6.1	50.6	32.7	[[strikethrough]]	33.4
[[strikethrough]]	50.6	5.6					
3241	18 15.4	+29 48	5.5	49.8	32.6	[[strikethrough]]	33.2
[[strikethrough]]	50.4	5.7					
3236	18 28.6	+30 25	8.5	51.8	32.6	[[strikethrough]]	31.~
[[strikethrough]]	50.9	7.4					
3223	18 27.3	+30 27	5.5	51.7	32.7	[[strikethrough]]	32.0
[[strikethrough]]	51.0	5.5					
3128	18 1.6	+30 33	5.0	48.0	32.6	[[strikethrough]]	34.8
[[strikethrough]]	50.2	5.9					
3262	18 34.5	+30 44	6.3	52.7	32.5	[[strikethrough]]	30.9
[[strikethrough]]	51.1	7.4 [^] [[7.1]]					
3227	18 27.9	+30 47	7.5	51.7	32.6	[[strikethrough]]	31.8
[[strikethrough]]	50.9	6.4					
3332	18 36.2	+31 29	6.5	33.0	32.3	[[strikethrough]]	30.6
[[strikethrough]]	51.1	6.5					
3199	18 6.4	+31 22	5.0	48.4	32.6	[[strikethrough]]	34.4
[[strikethrough]]	50.2	7.2 [^] [[6.8]]					



[[8 columned table]]

No. | R.A. | Dec. | Mag. | H. | V. | H. | Br. |

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

3095 | 18 38.6 | +27 57 | 7.3 | 52.8 | 32.5 | 50.9 | 30.6

[[/strikethrough]] | 7.0 7.0 |

^[[Look up on plate]]

3019 | 18 19.9 | +27 37 | 8.2 | 50.5 | 32.5 | 50.6 | 32.6

[[/strikethrough]] | [[equation]] 70.0 7.4 |

3054 | 18 35.7 | +28 7 | 8.8 | 51.1 | 32.4 | 50.3 | 31.6

[[/strikethrough]] | 7.0 |

3037 | 18 | 32.3 | +28 30 | 7.0 | 52.1 | 32.5 | 50.8 | 31.2

[[/strikethrough]] | 6.5 |

3021 | 18 28.4 | +28 10 | 7.3 | 51.6 | 32.6 | 50.8 | 31.8

[[/strikethrough]] | 6.9 |

3013 | 18 25.4 | +28 24 | 7.5 | 52.1 | 32.6 | 50.7 | 32.1

[[/strikethrough]] | 6.9 |

2981 | 18 15.4 | +28 48 | 4.9 | 49.8 | 32.6 | 50.4 | 33.2

[[/strikethrough]] | 5.4 |

2980 | 18 14.8 | +28 55 | 7.0 | 49.8 | 32.6 | 50.4 | 33.2

[[/strikethrough]] | 6.3 |

2925 | 18 1.9 | +28 44 | 3.9 | 48.3 | 32.5 | 50.3 | 34.5

[[/strikethrough]] | 7.3 |

3269 | 18 23.6 | +29 28 | 7.7 | 51.2 | 32.7 | 50.9 | 32.4

[[/strikethrough]] | [[equation]] 7.1 7.5 |

3275 | 18 24.5 | +29 26 | 9.1 | 51.1 | 32.7 | 50.7 | 32.3

[[/strikethrough]] | 7.2 |

3237 | 18 14.5 | +29 23 | 8.2 | 49.7 | 32.6 | 50.4 | 33.3

[[/strikethrough]] | 7.3 |

3236 | 18 14.3 | +29 36 | 6.5 | 49.7 | 32.6 | 33.3

[[/strikethrough]] | 50.4 | 6.9 7.4 |

3213 | 18. 9.1 | +29 11 | 7.0 | 49.1 |

32.6 | 33.8 | 50.3 | 6.9 |

3293 | 18 29.1 | +29 52 | 7.7 | 51.9 | 32.6 | 31.71

[[/strikethrough]] | 51.0 | 7.0 |

3259 | 18 20.4 | +29 45 | 6.1 | 50.6 | 32.7 | 32.7

[[/strikethrough]] | 50.6 | 5.6 |

3241 | 18 15.4 | +29 48 | 5.5 | 49.8 | 32.6 | 33.2

[[/strikethrough]] | 50.4 | 5.7 |

3236 | 18 28.6 | +30 25 | 8.5 | 51.8 | 32.6 | 31.7

[[/strikethrough]] | 50.9 | 7.4 |

3223 | 18 27.3 | +30 27 | 5.5 | 51.7 | 32.7 | 32.0 |

[[/strikethrough]] | 51.0 | 5.5 |

3128 | 18 1.6 | +30 33 | 5.0 | 48.0 | 32.6 | 34.8

[[/strikethrough]] | 50.2 | 5.9 |

3262 | 18 34.5 | +30 44 | 6.3 | 52.7 | 32.5 | 30.9

[[/strikethrough]] | 57.1 | 7.1 7.4 |

3227 | 18 27.9 | +30 47 | 7.5 | 51.7 | 32.6 | 31.8

[[/strikethrough]] | 50.9 | 6.4 |

3332 | 18 36.2 | +31 29 | 6.5 | 53.0 | 32.5 | 30.6

[[/strikethrough]] | 51.1 | 6.5 |

3199 | 18 6.4 | +31 22 | 5.0 | 48.4 | 32.6 | 34.4

[[/strikethrough]] | 50. W | 6.8 7.2 |

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

No.	R.A.	Dec.	Mag.	H.	V.	H.	Br.
3095	18 38.6	+27 57	7.3	52.8	32.5	50.9	30.6
							7.0 7.0
3019	18 19.9	+27 37	8.2	50.5	32.5	50.6	32.6
							70.0 7.4
3054	18 35.7	+28 7	8.8	51.1	32.4	50.3	31.6
							7.0
3037	18	32.3	+28 30	7.0	52.1	32.5	50.8
							6.5
3021	18 28.4	+28 10	7.3	51.6	32.6	50.8	31.8
							6.9
3013	18 25.4	+28 24	7.5	52.1	32.6	50.7	32.1
							6.9
2981	18 15.4	+28 48	4.9	49.8	32.6	50.4	33.2
							5.4
2980	18 14.8	+28 55	7.0	49.8	32.6	50.4	33.2
							6.3
2925	18 1.9	+28 44	3.9	48.3	32.5	50.3	34.5
							7.3
3269	18 23.6	+29 28	7.7	51.2	32.7	50.9	32.4
							7.1 7.5
3275	18 24.5	+29 26	9.1	51.1	32.7	50.7	32.3
							7.2
3237	18 14.5	+29 23	8.2	49.7	32.6	50.4	33.3
							7.3
3236	18 14.3	+29 36	6.5	49.7	32.6		33.3
							50.4 6.9 7.4
3213	18. 9.1	+29 11	7.0	49.1			
							32.6 33.8 50.3 6.9
3293	18 29.1	+29 52	7.7	51.9	32.6		31.71
							51.0 7.0
3259	18 20.4	+29 45	6.1	50.6	32.7		32.7
							50.6 5.6
3241	18 15.4	+29 48	5.5	49.8	32.6		33.2
							50.4 5.7
3236	18 28.6	+30 25	8.5	51.8	32.6		31.7
							50.9 7.4
3223	18 27.3	+30 27	5.5	51.7	32.7		32.0
							51.0 5.5
3128	18 1.6	+30 33	5.0	48.0	32.6		34.8
							50.2 5.9
3262	18 34.5	+30 44	6.3	52.7	32.5		30.9
							57.1 7.1 7.4
3227	18 27.9	+30 47	7.5	51.7	32.6		31.8
							50.9 6.4
3332	18 36.2	+31 29	6.5	53.0	32.5		30.6
							51.1 6.5
3199	18 6.4	+31 22	5.0	48.4	32.6		34.4
							50. W 6.8 7.2

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

November. 9, 1887.

Plate 1420

[[13 column table]]

V | H. | Type. | No Remark. | No. Lines | K. | Focus | Other Lines. | V. | H.
| V. | H. | Correc. |

22.0 | 8.7 | I | | 7 | N | 2 | - | 11.0 | 17.4 | 31.5 | 34.4 | +1.9 |

22.0 | 20.5 | II^[[a]]? | 135 | 2 | K=H | 1 | - | 11.0 | 41.0 | 31.5 | 10.8 | -1.6 |

22.3 | 21.4 | III | | 1 | N | 2 | - | 11.2 | 42.8 | 31.3 | 9.0 | -1.8 |

21.6 | 6.1 | I | | 6 | N | 3 | - | 10.8 | 12.2 | 31.7 | 39.6 | +2.7 |

21.4 | 7.9 | II^[[a]]? | 136 | 4 | K=H | 3 | seen | 10.7 | 15.8 | 31.8 | 36.0 | +2.1 |

21.3 | 15.0 | III | | 2 | K=H | 1 | - | 10.6 | 30.0 | 31.9 | 21.8 | 0.0 |

21.0 | 16.1 | I? | | 3 | N | 1 | -
| 10.5 | 32.2 | 32.0 | 19.6 | -0.3 |20.0 | 5.3 | I | | 6 | N | 1 | F |
| 10.0 | 10.6 | 32.5 | 41.2 | +3.1 |20.8 | 13.3 | I | | 5 | ? | 2 | -
| 10.4 | 26.6 | 32.1 | 25.2 | +0.5 |20.1 | 13.5 | I | | 5 | N | 1 | -
| 10.0 | 27.0 | 32.5 | 24.8 | +0.5 |20.4 | 22.0 | I | | 3 | N | 1 | -
| 10.2 | 44.0 | 32.3 | 7.8 | -2.1 |

20.4 | 24.0 | III^[[b]] | 137 | 2 | K=H | 2 | F | 10.2 | 48.0 | 32.3 | 3.8 | -2.9 |

19.4 | 5.4 | I | | 6 | K=.5H | 2 | - | 9.7 | 10.8 | 32.8 | 41.0 | +3.1 |

19.8 | 14.0 | I | | 5 | K=H | 1 | - | 9.9 | 28.0 | 32.6 | 23.8 | +0.3 |

19.0 | 15.9 | III | | 2 | K=H | 1 | - | 9.5 | 31.8 | 33.0 | 20.0 | -0.3 |

19.5 | 17.4 | II^[[a]] | 138 | 2 | K=H | 1 | seen | 9.8 | 34.8 | 32.7 | 17.0 | -0.7 |

18.5 | 5.5 | I? | | 8? | N? | 5 | F | 9.2 | 11.0 | 33.3 | 40.8 | +3.1 |

80

November 9, 1887.
Plate 1420

V	H.	Type	No	Remark	No.	Lines	K	Focus	Other Lines	V.	H.	Correc.
22.0	8.7	I		7	N	2	-	11.0	17.4	31.5	34.4	+1.9
22.0	20.5	II ^a	135	2	K=H	1	-	11.0	41.0	31.5	10.8	-1.6
22.3	21.4	III		1	N	2	-	11.2	42.8	31.3	9.0	-1.8
21.6	6.1	I		6	N	3	-	10.8	12.2	31.7	39.6	+2.7
21.4	7.9	II ^a	136	4	K=H	3	seen	10.7	15.8	31.8	36.0	+2.1
21.3	15.0	III		2	K=H	1	-	10.6	30.0	31.9	21.8	0.0
21.0	16.1	I?		3	N	1	-	10.5	32.2	32.0	19.6	-0.3
20.0	5.3	I		6	N	1	F	10.0	10.6	32.5	41.2	+3.1
20.8	13.3	I		5	?	2	-	10.4	26.6	32.1	25.2	+0.5
20.1	13.5	I		5	N	1	-	10.0	27.0	32.5	24.8	+0.5
20.4	22.0	I		3	N	1	-	10.2	44.0	32.3	7.8	-2.1
20.4	24.0	III ^b	137	2	K=H	2	F	10.2	48.0	32.3	3.8	-2.9
19.4	5.4	I		6	K=.5H	2	-	9.7	10.8	32.8	41.0	+3.1
19.8	14.0	I		5	K=H	1	-	9.9	28.0	32.6	23.8	+0.3
19.0	15.9	III		2	K=H	1	-	9.5	31.8	33.0	20.0	-0.3
19.5	17.4	II ^a	138	2	K=H	1	seen	9.8	34.8	32.7	17.0	-0.7
18.5	5.5	I?		8?	N?	5	F	9.2	11.0	33.3	40.8	+3.1
18.0	9.5	II		2	K=H	1	-	9.0	17.0	33.5	35.6	+1.6
17.5	10.5	I		7	N	1	F	9.0	20.0	33.3	38.5	+1.0
16.3	9.1	III		1	N	1	-	9.0	28.0	33.3	33.0	-1.6
16.3	24.0	I		8	N	3	F	9.0	32.0	33.3	9.0	-3.0
15.5	4.6	I		5	N	1	-	8.9	10.0	33.6	36.4	+3.2
15.0	4.6	III		1	N	1	-	8.8	12.0	34.0	31.0	-0.9
14.4	7.7	I		2	K=H	1	-	8.7	13.8	34.8	36.7	+2.5
14.1	8.9	II		6	N	1	-	8.6	19.8	34.9	31.0	-1.2
13.6	12.2	I		1	K=H	1	-	8.5	24.0	35.7	23.8	+0.6
13.7	17.7	III ^c	139	2	K=H	1	seen	8.5	30.0	35.7	16.0	-2.9
13.0	9.2	I		7	K=H	1	-	8.2	17.0	36.3	37.0	+0.5

18.0 | 9.5 | II | | 2 | K=H | 1 | - | 9.0 | 19.0 | 33.5 | 32.8 | +1.8 |

18.4 | 11.1 | I | | 9 | N | 3 | F
| 9.2 | 22.0 | 33.3 | 29.8 | +1.3 |

18.3 | 19.1 | III | | 1 | N | 1 | - | 9.2 | 38.2 | 33.3 | 13.6 | -1.3 |

18.3 | 21.3 | I | | 8 | N | 3 | F
| 9.2 | 42.6 | 33.3 | 9.2 | -2.0 |

17.8 | 5.6 | I | | 5 | N | 1 | -
| 8.9 | 11.2 | 33.6 | 40.6 | +3.2 |

17.0 | 6.6 | III | | 1 | N | 1 | -
| 8.5 | 13.2 | 34.0 | 38.6 | +2.9 |

17.4 | 7.7 | II | | 2 | K=H | 1 | - | 8.7 | 15.4 | 33.8 | 36.4 | +2.5 |

17.1 | 8.9 | I | | 6 | N | 1 | -
| 8.6 | 17.8 | 33.9 | 34.0 | +2.0 |

17.6 | 13.0 | I | | 4 | K=H | 1 | - | 8.8 | 26.0 | 33.7 | 25.8 | +0.6 |

17.7 | 17.7 | II^[[a]] | 139 | 2 | K=H | 1 | seen | 8.8 | 35.4 | 33.7 | 16.4 | -
0.9 |

16.3 | 7.2 | I | | 7 | K=H | 2 | -
| 8.2 | 14.4 | 34.3 | 37.4 | +2.8 |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

3126	18 26.5	+33 47	8.3	52.5	42.6	51.9
3078	18 15.1	+33 44	8.0	50.5	42.5	51.4
3310	18 40.6	+34 22	7.3	55.0	42.6	52.2

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

November 9, 1887.

Plate 1420.

[[13 columned table]]

[V|H|Type|No. Remark|No. Lines|K|Focus|Other
Lines.|V.|H.|V.|H.|Correc.]

16.9 7.4 I ?	2 N 1 -8.4 14.8 34.1 37.0 +2.7
16.3 8.0 I	5 K=H 1 -8.2 16.0 34.3 35.8 +2.4
16.6 11.7 I	8 N 3 F 8.3 23.4 34.2 28.4 +1.1
16.6 11.9 I	2 K=H 1 -8.3 23.8 34.2 28.0 +1.0
16.5 12.1 I ?	2 K=H 1 -8.2 24.2 34.3 27.6 +1.0
16.2 12.3 I ^a	140 2 K=H 1 seen 8.1 24.6 34.4 27.2 +0.9
16.0 15.0 I	4 K=H 1 -8.0 30.0 34.5 21.8 0.0
16.4 16.1 I I	2 K=H 1 -8.2 32.2 34.3 19.6 -0.4
15.4 7.6 I	6 N 2 -7.7 15.2 34.8 36.6 +2.7
15.9 8.8 I	8 N 3 F 8.0 17.6 34.5 34.2 +2.1
15.6 16.4 I I	2 K=H 1 -7.8 32.8 34.7 19.0 -0.5
14.3 14.8 I	6 N 1 -7.2 29.6 35.3 22.2 +0.1
14.7 15.4 I I	2 K=H 1 -7.4 30.8 35.1 21.0 -0.1
14.8 20.5 I ^a	141 2 K=H 1 seen 7.4 41.0 35.1 10.8 -2.0
14.8 21.7 I ^a	142 2 K=H 2 seen 7.4 43.4 35.1 8.4 -2.5
13.5 6.8 I	5 N 2 -6.8 13.6 35.7 38.2 +3.1
13.5 7.2 I	5 K=H 1 -6.8 14.4 35.7 37.4 +3.0
13.4 10.3 I ^a	143 3 K=H 2 seen 6.7 20.6 35.8 31.2 +1.7
13.8 11.8 I	6 N 1 -6.8 23.6 35.7 28.2 +1.2
13.3 14.9 I	3 N 1 -6.6 29.8 35.9 22.0 +0.1
13.4 17.7 I ^a	144 5 K=1.2H 4 Bright F. seen 6.7 35.4 35.8 16.4 -1.0
12.4 6.2 I	5 N 1 -6.2 12.4 36.3 39.4 +3.5
12.2 7.5 I	6 N 2 -6.1 15.0 36.4 36.8 +3.0
12.4 8.2 I I	2 K=1.5H 2 -6.2 16.4 36.3 35.4 +2.6
12.4 8.7 I	6 N 2 -6.2 17.4 36.3 34.4 +2.5
12.0 14.9 I	4 K=H 1 -6.0 29.8 36.5 22.0 +0.0
12.8 16.8 I I	2 K=1.2H 1 -6.4 33.6 36.1 18.2 -0.7
12.4 21.7 I I	2 K=1.5H 3 -6.2 43.4 36.3 8.4 -2.7

82

November 9, 1887

Plate 1420.

W. R. Fleming

Reductions of Photographic Observations #20

Transcribed and Reviewed by Digital Volunteers

Extracted Aug-29-2022 02:37:24

[[8 columned table]]

No. | R.A. | Dec. | Mag. | H. | V. | H' | Br.

No.	R.A.	Dec.	Mag.	H.	V.	H'	Br.
3036	18 4.6	+36 30	8.0	48.4	42.5	51.2	
3027	18 3.0	+36 23	5.9	48.0	42.6	51.0	
3019	18 2.0	+36 24	7.9	47.8	42.5	50.9	
3270	18 43.0	+36 55	7.4	56.0	42.5	52.5	
3202	18 31.1	+36 51	7.2	53.7	42.6	52.3	
3104	18 17.4	+36 50	7.3	50.8	42.6	51.5	
3223	18 32.2	+36 55	7.4	52.2	42.6	52.5	
3183	18 33.0	+37 19	8.0	54.2	42.6	52.5	
3180	18 33.0	+37 39	7.0	54.0	42.6	52.3	
3156	18 27.9	+37 20	7.8	53.1	42.6	52.2	
3130	18 23.7	+37 10	7.5	52.1	42.6	51.8	
3196	18 34.8	+37 52	7.5	54.6	42.7	52.6	
3176	18 31.3	+37 56	7.0	53.7	42.6	52.2	
3312	18 44.7	+38 16	7.3	56.5	42.5	52.5	
3276	18 39.2	+38 23	7.0	55.4	42.6	52.4	
3254	18 35.3	+38 14	7.2	54.7	42.6	52.5	
3238	18 32.8	+38 14	7.2	54.7	42.6	52.5	
3237	18 32.7	+38 14	7.2	54.7	42.6	52.5	
3213	18 28.0	+38 44	6.8	53.2	42.7	52.2	
3166	18 20.5	+38 22	7.5	51.3	42.7	51.5	
3160	18 19.1	+38 41	6.5	51.1	42.7	51.6	

85

No. R.A. Dec. Mag. H. V. H' Br.

3036	18 4.6	+36 30	8.0	48.4	42.5	51.2	
3027	18 3.0	+36 23	5.9	48.0	42.6	51.0	
3019	18 2.0	+36 24	7.9	47.8	42.5	50.9	
3270	18 43.0	+36 55	7.4	56.0	42.5	52.5	
3202	18 31.1	+36 51	7.2	53.7	42.6	52.3	
3104	18 17.4	+36 50	7.3	50.8	42.6	51.5	
3223	18 32.2	+36 55	7.4	52.2	42.6	52.5	
3183	18 33.0	+37 19	8.0	54.2	42.6	52.5	
3180	18 33.0	+37 39	7.0	54.0	42.6	52.3	
3156	18 27.9	+37 20	7.8	53.1	42.6	52.2	
3130	18 23.7	+37 10	7.5	52.1	42.6	51.8	
3196	18 34.8	+37 52	7.5	54.6	42.7	52.6	
3176	18 31.3	+37 56	7.0	53.7	42.6	52.2	
3312	18 44.7	+38 16	7.3	56.5	42.5	52.5	
3276	18 39.2	+38 23	7.0	55.4	42.6	52.4	
3254	18 35.3	+38 14	7.2	54.7	42.6	52.5	
3238	18 32.8	+38 14	7.2	54.7	42.6	52.5	
3237	18 32.7	+38 14	7.2	54.7	42.6	52.5	
3213	18 28.0	+38 44	6.8	53.2	42.7	52.2	
3166	18 20.5	+38 22	7.5	51.3	42.7	51.5	
3160	18 19.1	+38 41	6.5	51.1	42.7	51.6	

3159 | 18 18.9 | +38 17 | 7.0 | 51.1 | 42.7 | 51.6 |
~~6.3~~
 3113 | 18 8.2 | +38 46 | 6.0 | 48.6 | 42.8 | 50.8 |
~~5.4~~
 3095 | 18 4.9 | +38 28 | 6.7 | 48.1 | 42.7 | 51.0 | ~~6.8~~
~~6.5~~
 3278 | 18 39.7 | +38 55 | 7.7 | 55.7 | 42.5 | 52.6 |
~~7.0~~
 3229 | 18 30.5 | +38 47 | 7.3 | 53.7 | 42.7 | 52.2 |
~~6.5~~
 3383 | 18 15.0 | +39 2 | 7.4 | 50.2 | 42.6 | 51.3 |
~~6.8~~

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

November, 9, 1887.

Plate 1420.

[[13 columned table]]

[V|H|Type|No. Remark|No. Lines|K|Focus|Other
Lines|V.|H.|V.|H.|Correc.]

7.1	20.9	I	6	K=2H	2	-	3.6	41.8	38.9	10.0	-2.6
7.4	21.0	I	5	N	1	-	3.7	42.0	38.8	9.8	-2.6
7.1	21.3	I	3	N	1	-	3.6	42.6	38.9	9.2	-2.9
7.1	21.9	I	3	N	1	-	3.6	43.8	38.9	8.0	-3.1
7.1	23.0	I?	3	N	1	-	3.6	46.0	38.9	5.8	-3.6
6.3	8.1	I	9	? 5 F	3.2	16.2	39.3	35.6		+3.2	
6.2	8.2	I	8	? 5 F?	3.1	16.4	39.4	35.4		+3.1	
6.6	10.4	I	4	K=H	1	-	3.3	20.8	39.2	31.0	+2.0
6.2	10.5	I?	3	N	1	-	3.1	21.0	39.4	30.8	+2.0
6.5	11.7	I	6	N	1	-	3.2	23.4	39.3		
[[38.4]]2 / 38.4 +1.5											
6.6	15.8	I	11	K=2H	4	F	3.3	31.6	39.2	20.2	-0.4
5.0	11.5	I	5	K=H?	1	-	2.5	23.0	40.0	28.8	+1.6
5.2	12.4	II [^] [a]	148	2	K=H	1	-	2.6	24.8	39.9	27.0 +1.2
5.5	21.3	I	3	N	1	-	2.8	42.6	39.7	9.2	-3.0
5.4	22.0	I	4	K=H	1	-	2.7	44.0	39.8	7.8	-3.3
6.2	23.6	I [^] [d]	3	N	1	-	3.1	47.2	39.4	4.6	-4.0
5.0	23.3	II	2	K=H	2	-	2.5	46.6	40.0	5.2	-3.9
4.0	9.2	I	5	K=H	2	-	2.0	18.4	40.5	33.4	+2.8
4.0	11.5	II [^] [a]	149	2	K=H	1	seen	2.0	23.0	40.5	28.8 +1.7
4.5	12.5	III	2	K=H	1	-	2.2	25.0	40.3	26.8	+1.2
4.6	13.4	II [^] [a]	150	2	K=H	1	seen	2.3	26.8	40.2	25.0 +0.8
4.8	16.5	I	3	N	1	seen	2.4	33.0	40.1	18.8	-0.7
4.9	18.3	I	7	K=5H	2	-	2.4	36.6	40.1	15.2	-1.5
4.5	22.6	I	3	N	1	-	2.2	45.2	40.3	6.6	-3.7
3.6	10.0	I	7	N	3	-	1.8	20.0	40.7	31.8	+2.4
3.0	11.3	I	7	K=2H	2	-	1.5	22.6	41.0	29.2	+1.8
3.4	13.3	II [^] [a]	151	2	K=1.5H	1	seen	1.7	26.6	40.8	25.2 +0.9
3.6	13.4	III	2	K=H	1	-	1.8	26.8	40.7	25.0	+0.8

86

November 9, 1887.
Plate 1420.

V.	H.	Type	No.	Remark	No.	Lines	K	Focus	Other	V.	H.	V.	H.	Correc.
7.1	20.9	I	6	K=2H	2	-	3.6	41.8	38.9	10.0	-2.6			
7.4	21.0	I	5	N	1	-	3.7	42.0	38.8	9.8	-2.6			
7.1	21.3	I	3	N	1	-	3.6	42.6	38.9	9.2	-2.9			
7.1	21.9	I	3	N	1	-	3.6	43.8	38.9	8.0	-3.1			
7.1	23.0	I?	3	N	1	-	3.6	46.0	38.9	5.8	-3.6			
6.3	8.1	I	9	? 5 F	3.2	16.2	39.3	35.6		+3.2				
6.2	8.2	I	8	? 5 F?	3.1	16.4	39.4	35.4		+3.1				
6.6	10.4	I	4	K=H	1	-	3.3	20.8	39.2	31.0	+2.0			
6.2	10.5	I?	3	N	1	-	3.1	21.0	39.4	30.8	+2.0			
6.5	11.7	I	6	N	1	-	3.2	23.4	39.3		+1.5			
6.6	15.8	I	11	K=2H	4	F	3.3	31.6	39.2	20.2	-0.4			
5.0	11.5	I	5	K=H?	1	-	2.5	23.0	40.0	28.8	+1.6			
5.2	12.4	II ^a	148	2	K=H	1	-	2.6	24.8	39.9	27.0	+1.2		
5.5	21.3	I	3	N	1	-	2.8	42.6	39.7	9.2	-3.0			
5.4	22.0	I	4	K=H	1	-	2.7	44.0	39.8	7.8	-3.3			
6.2	23.6	I ^a	3	N	1	-	3.1	47.2	39.4	4.6	-4.0			
5.0	23.3	II	2	K=H	2	-	2.5	46.6	40.0	5.2	-3.9			
4.0	9.2	I	5	K=H	2	-	2.0	18.4	40.5	33.4	+2.8			
4.0	11.5	II ^a	149	2	K=H	1	seen	2.0	23.0	40.5	28.8	+1.7		
4.5	12.5	III	2	K=H	1	-	2.2	25.0	40.3	26.8	+1.2			
4.6	13.4	II ^a	150	2	K=H	1	seen	2.3	26.8	40.2	25.0	+0.8		
4.8	16.5	I	3	N	1	seen	2.4	33.0	40.1	18.8	-0.7			
4.9	18.3	I	7	K=5H	2	-	2.4	36.6	40.1	15.2	-1.5			
4.5	22.6	I	3	N	1	-	2.2	45.2	40.3	6.6	-3.7			
3.6	10.0	I	7	N	3	-	1.8	20.0	40.7	31.8	+2.4			
3.0	11.3	I	7	K=2H	2	-	1.5	22.6	41.0	29.2	+1.8			
3.4	13.3	II ^a	151	2	K=1.5H	1	seen	1.7	26.6	40.8	25.2	+0.9		
3.6	13.4	III	2	K=H	1	-	1.8	26.8	40.7	25.0	+0.8			

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[8 column table]]

No. | R.A. | Dec. | Mag. | H. | V. | H' | [[whole column is crossed out]]Br.

3343	18 6.4	+39 4	6.9	48.2	42.7	50.8	6.5
3100	18 6.1	+38 56	8.0	48.1	42.6	50.7	6.9
3339	18 5.5	+39 3	7.9	48.1	42.6	50.7	7.0
3330	18 3.9	+39 3	8.0	47.7	42.6	50.8	7.3
3075	18 1.0	+38 60	7.6	47.0	42.6	50.6	7.3
3510	18 39.6	+39 28	4.6	55.8	42.7	52.6	4.7?
3509	18 39.5	+39 32	4.3	55.9	42.6	52.8	4.6?
3479	18 33.7	+39 18	7.8	54.5	42.6	52.5	7.0
3476	18 33.3	+39 33	6.5	54.3	42.7	52.3	6.9
3463	18 30.3	+39 25	7.7	53.7	42.6	52.2	6.8
3518	18 40.4	+39 22	8.5	63.8	42.6		
3410	18 19.5	+39 26	5.1	51.1	42.7	51.5	4.8
3423	18 30.9	+40 12	7.3	53.9	42.7	52.3	6.8
3411	18 28.5	+40 3	6.6	53.3	42.6	52.1	6.8
3336	18 5.1	+39 51	7.4	47.7	42.6	50.7	7.0
3327	18 3.3	+39 54	6.8	47.3	42.6	50.6	7.0
3327	18 3.3	+39 54	6.8	47.3	42.6	50.6	7.0
3310	17 59.4	+39 29	7.0	106.6	42.6	50.6	6.7
3276	18 0.0	+40 5	6.5	46.6	42.6	50.5	6.5
3459	18 37.0	+40 35	6.8	55.4	42.6	52.6	6.5
3425	18 30.9	+40 39	6.8	53.9	42.6	52.2	7.0
3409	18 28.5	+40 25	6.5	53.5	42.6	52.3	6.8 7.2
3395	18 26.1	+40 24	7.5	52.9	42.7	52.1	7.0
3350	18 17.7	+40 19	7.5	50.7	42.7	51.4	6.9
3332	18 12.5	+40 53	6.0	49.1	43.3	50.6	6.7
3286	18 1.8	+40 22	7.0	47.0	42.6	50.7	6.8
3446	18 34.9	+40 48	6.2	54.9	42.6	52.5	5.7
3100	18 31.6	+41 10	6.8	54.2	42.7	52.4	6.5
3075	18 26.3	+41 0	6.9	52.9	42.7	52.0	6.9
3394	18 25.9	+40 53	7.0	52.7	42.7	51.9	7.0 7.4

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

88

November, 9, 1887.

Plate, 1420

[[13 columned table]]

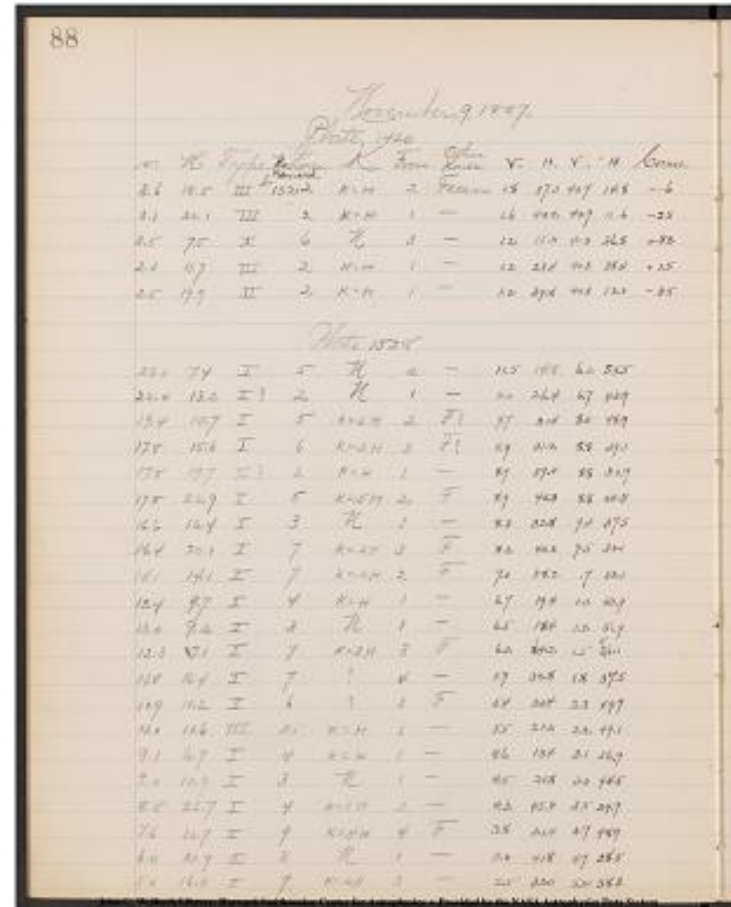
V|H|Type|No. Remarks|No. Lines|K|Focus|Other
Lines|V.|H.|V.|H.|Correc.]

3.6	18.5	III	152	2	K=H	2	F	seen	1.8	37.0	40.7	14.8	-1.6
3.1	20.1	III		2	K=H	1	-		1.6	40.2	40.9	11.6	-2.5
2.5	7.5	I	6	N	3	-	1.2	15.0	41.3	36.8		+3.8	
2.3	11.7	III		2	K=H	1	-	1.2	23.4	41.3	28.4	+1.5	
2.5	19.9	II		2	K=H	1	-	1.2	39.8	41.3	12.0	-2.5	

Plate 1528

[[12 columned table]]

23.0	7.4	I	5	N	2	-	11.5	14.8	6.2	55.5			
22.0	13.2	I?	2	N	1	-	11.0	26.4	6.7	43.9			
19.4	10.7	I	5	K=2H	2	F?	9.7	21.4	8.0	48.9			
17.8	15.6	I	6	K=2H	3	F?	8.9	31.2	8.8	39.1			
17.8	19.7	II?	2	K=H	1	-	8.9	39.4	8.8	30.9			
17.8	22.9	I	5	K=5H	2	F	8.9	45.8	8.8	24.5			
16.6	16.4	I	3	N	1	-	8.3	32.8	9.4	37.5			
16.4	20.1	I	7	K=2H	3	F	8.2	40.2	9.5	30.1			
14.1	14.1	I	7	K=2H	2	F	7.0	28.2	.7	42.1			
13.4	9.7	I	4	K=H	1	-	6.7	19.4	1.0	50.9			
13.0	9.2	I	3	N	1	-	6.5	18.4	1.2	51.9			
12.3													
11.8	16.4	I	7	?	4	-	5.9	32.8	1.8	37.5			
10.9	10.2	I	6	?	3	F	5.4	20.4	2.3	49.9			
11.0	10.6	III	2	K=H	1	-	5.5	21.2	2.2	49.1			
9.1	6.7	I	4	K=H	1	-	4.6	13.4	3.1	56.9			
9.0	10.9	I	3	N	1	-	4.5	21.8	3.2	48.5			
8.5	22.7	I	4	K=5H	2	-	4.2	45.4	3.5	24.9			
7.6	10.7	I	9	K=4H	4	F	3.8	21.4	3.9	48.9			
6.0	20.9	I	3	N	1	-	3.0	41.8	4.7	28.5			
5.0	16.0	I	7	K=2H	3	-	2.5	32.0	5.2	38.3			



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[8 column table]
 [No. | R.A. | Dec. | Mag. | H. | V. | H' | Br. |]
 3035 | 18 17.3 | +41 9 | 7.3 | 54.3 | 43.0 | 55.9 | 6.4 | 6.8 |
 3011 | 18 8.1 | +41 7 | 5.8 | 48.3 | 42.7 | 50.8 | 6.8 |
 7.1 |
 3137 | 18 41.6 | +41
 17 | 6.0 | 56.6 | 42.5 | 52.8 | 5.8 |
 3096 | 18 30.7 | +41 27 | 6.8 | 54.1 | 42.7 | 52.6 | 6.9
 7.2 |
 3013 | 18 8.5 | +41
 28 | 7.0 | 48.3 | 42.7 | 50.8 | 7.1 |
 3879 | 18 55.8 | +3 38 | 8.5
 3602 | 18 48.9 | -1 58 | 6.5 | 70.3 | 17.7 | 6.8 |
 3559 | 18 39.0 | -1 7 | 6.1 | 70.2 | 17.8 | 5.9 |
 3529 | 18 30. | 9 | 8 | -1 14 | 6.7 | 70.2 | 17.7 |
 3504 | 18 24.5 | -1 6 | 6.7 | 70.3 | 17.8 | 6.7 |
 3543 | 18 37.5 | -0 31 | 7.2 | 70.3 | 17.8 | 7.0 |
 3521 | 18 30.2 | -0 26 | 5.5 | 70.4 | 17.8 | 5.8 |
 3837 | 18 51.1 | +1 1 | 7.0 | 70.5 | 7.7 | 7.0 |
 3843 | 18 52.0 | +1 13 | 8.2 | 70.4 | 7.7 | 7.3 |
 3865 | 18 56.2 | +1 36 | 6.0 | 70.4 | 7.8 | 6.0 |
 3766 | 18 37.5 | +1 55 | 5.0 | 70.3 | 7.8 | 5.2 |
 3738 | 18 50.0 | +2 21 | 5.8 | 70.4 | 7.8 | 5.5 |
 3730 | 18 49.1 | +2 17 | 7.0 | 70.3 | 7.8 | 7.0 |
 7.4 |
 3882 | 18 56.9 | +3 7 | 6.8 | 70.3 | 7.7 | 7.0 |
 3836 | 18 48.5 | +3 16 | 7.1 | 70.3 | 7.8 | 7.0 |
 3737 | 18 24.9 | +3 34 | 6.7 | 70.3 | 7.8 | 6.7 |
 3916 | 3917 | 18 49.0 | +4 1 | 4.0 | 4.3 | 70.4 | 7.8 |
 3914 | 18 48.9 | +4 38 | 9.5 | 7.9 |
 3801 | 18 28.5 | +4 49 | 7.0 | 70.3 | 7.8 | 6.7 |
 3941 | 18 38.3 | +5 21 | 6.3 | 70.3 | 7.9 | 5.9 |

89

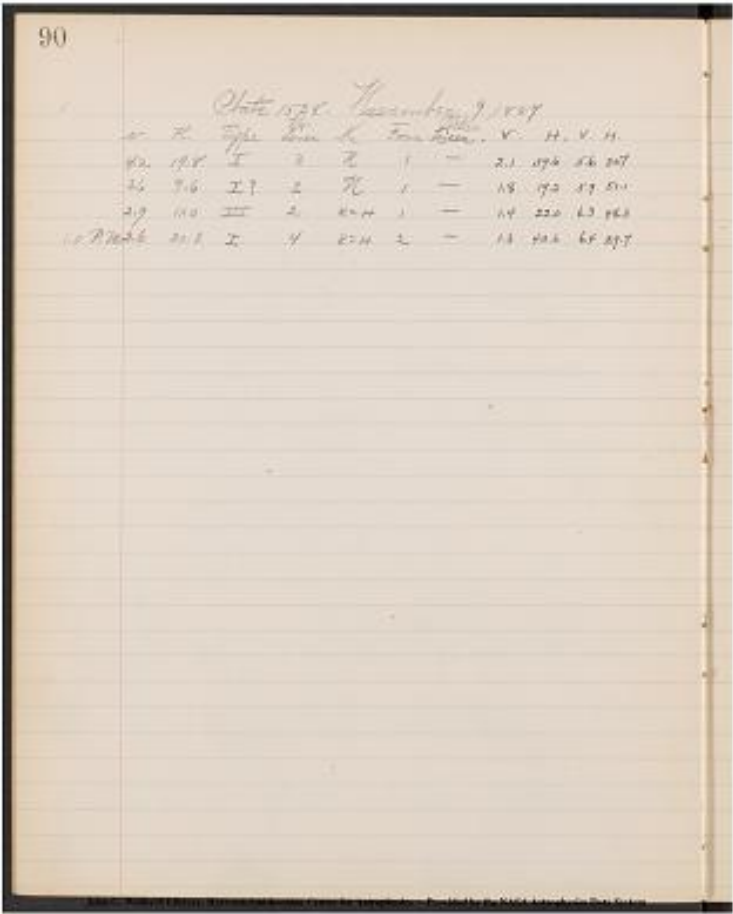
No.	R.A.	Dec.	Mag.	H.	V.	H'	Br.
3035	18 17.3	+41 9	7.3	54.3	43.0	55.9	6.4 6.8
3011	18 8.1	+41 7	5.8	48.3	42.7	50.8	6.8
3137	18 41.6	+41					
17	6.0	56.6	42.5	52.8	5.8		
3096	18 30.7	+41 27	6.8	54.1	42.7	52.6	6.9
7.2							
3013	18 8.5	+41					
28	7.0	48.3	42.7	50.8	7.1		
3879	18 55.8	+3 38	8.5				
3602	18 48.9	-1 58	6.5	70.3	17.7	6.8	
3559	18 39.0	-1 7	6.1	70.2	17.8	5.9	
3529	18 30.		9	8	-1 14	6.7	70.2 17.7
3504	18 24.5	-1 6	6.7	70.3	17.8	6.7	
3543	18 37.5	-0 31	7.2	70.3	17.8	7.0	
3521	18 30.2	-0 26	5.5	70.4	17.8	5.8	
3837	18 51.1	+1 1	7.0	70.5	7.7	7.0	
3843	18 52.0	+1 13	8.2	70.4	7.7	7.3	
3865	18 56.2	+1 36	6.0	70.4	7.8	6.0	
3766	18 37.5	+1 55	5.0	70.3	7.8	5.2	
3738	18 50.0	+2 21	5.8	70.4	7.8	5.5	
3730	18 49.1	+2 17	7.0	70.3	7.8	7.0	
7.4							
3882	18 56.9	+3 7	6.8	70.3	7.7	7.0	
3836	18 48.5	+3 16	7.1	70.3	7.8	7.0	
3737	18 24.9	+3 34	6.7	70.3	7.8	6.7	
3916	3917	18 49.0	+4 1	4.0	4.3	70.4	7.8
3914	18 48.9	+4 38	9.5				
3801	18 28.5	+4 49	7.0	70.3	7.8	6.7	
3941	18 38.3	+5 21	6.3	70.3	7.9	5.9	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

Plate 1528. November 9, 1887

[[11 columned table]]

| V. | H. | Type | No. Lines | K. | Focus | Other Lines. | V. | H. | V. | H. |
4.2|19.8||3|N|1|-|2.1|39.6|5.6|30.7|
3.6|9.6||2|N|1|-|1.8|19.2|5.9|51.1|
2.9|11.0||2|K=H|1|-|1.4|22.0|6.3|48.3|
[[left margin]]1.0 P.M. [[/left margin]]2.6|20.3||4|K=H|2|-|1.3|40.6|6.4|29.7|



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 column table]]

No.	R.A.	Dec.	Mag.	H.	V.	Br.
3846	18 30.7+5	45	6.8	70.3	7.9	6.9
3989	18 51.3+6	0	6.8	71.5	7.8	7.0
3978	18 48.4+6	26	5.8	70.4	7.8	7.0 7.4 }
3857	18 29.7+6	43	9.4	70.3	8.0	6.4

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 • Provided by the NASA Astrophysics Data System

No.	R.A.	Dec.	Mag.	H.	V.	Br.
3846	18 30.7+5	45	6.8	70.3	7.9	6.9
3989	18 51.3+6	0	6.8	71.5	7.8	7.0
3978	18 48.4+6	26	5.8	70.4	7.8	7.0 7.4 }
3857	18 29.7+6	43	9.4	70.3	8.0	6.4

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

8.45 November 10, 1887.
Plate 1623.

[[11 columned table]]

V.	H.	Type	No Lines	K	Focus	Other Lines	V.	H.	V.	H.
---	---	---	No Remark	---	---	---	---	---	---	---
22.8	7.6	I	6 ? 2	-	11.4	15.2	6.3	55.5		
22.0	13.4	I	6 K=H	1	-	11.0	26.8	6.7	43.9	
21.7	19.8	II	a 153	2	K=H	1	seen	10.8	39.6	6.9 31.1
19.1	10.9	I	6 N	2	-	9.6	21.8	8.1	48.9	
17.6	15.6	I	7 K=2H	3	-	8.8	31.2	8.9	39.5	
18.0	17.6	II	2 K=H	1	-	9.0	35.2	8.7	35.5	
17.8	19.7	I?	4 K=H	1	-	8.9	39.4	8.8	31.3	
17.4	22.9	I	6 K=2H	2	-	8.7	45.8	9.0	24.9	
16.3	16.4	I	5 ? 2	-	8.2	32.8	9.5	37.9		
16.2	20.0	I	7 K=.1H	3	F	8.1	40.0	9.6	30.7	
15.0	11.1	I	4 K=H	1	-	7.5	22.2	0.2	48.5	
16.2	23.2	I?	4 K=H	1	-	8.1	46.4	9.6	24.3	
11.0	14.2	I	8 K=.1H	2	-	7.0	28.4	0.7	42.3	
13.2	9.7	I	4 N	1	-	6.6	19.4	1.1	51.3	
13.4	11.5	I	4 K=H	1	-	6.7	23.0	1.0	47.7	
13.8	12.2	I	4 K=H	1	-	6.9	24.4	0.8	46.3	
13.0	15.8	I	4 N	1	-	6.5	31.6	1.2	39.1	
13.6	20.2	II	a 154	2	K=H	1	seen	6.8	40.4	0.9 30.3
12.0	7.2	I	6 K=2H	2	-	6.0	14.4	1.7	56.3	
12.8	9.2	I	3 N	1	-	6.4	18.4	1.3	52.3	
12.0	12.4	II?	2 K=H	1	-	6.0	24.8	1.7	45.9	
11.8	11.7	I	4 K=H	1	-	5.9	23.4	1.8	47.3	
11.6	16.3	I	9 N	4	F	5.8	32.6	1.9	38.1	
10.6	10.3	I	7 N	3	-	5.3	20.6	2.4	50.1	
10.7	10.7	III	2 K=H	1	-	5.4	21.4	2.3	49.3	
9.0	6.7	I	4 K=H	1	-	4.5	13.4	3.2	57.3	
8.8	10.9	I	4 K=H	1	-	4.4	21.8	3.3	48.9	
8.1	22.6	I	5 N	2	-	4.0	45.2	3.7	25.5	

92

Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

V.	H.	Type	No Lines	K	Focus	Other Lines	V.	H.	V.	H.
---	---	---	No Remark	---	---	---	---	---	---	---
22.8	7.6	I	6 ? 2	-	11.4	15.2	6.3	55.5		
22.0	13.4	I	6 K=H	1	-	11.0	26.8	6.7	43.9	
21.7	19.8	II	a 153	2	K=H	1	seen	10.8	39.6	6.9 31.1
19.1	10.9	I	6 N	2	-	9.6	21.8	8.1	48.9	
17.6	15.6	I	7 K=2H	3	-	8.8	31.2	8.9	39.5	
18.0	17.6	II	2 K=H	1	-	9.0	35.2	8.7	35.5	
17.8	19.7	I?	4 K=H	1	-	8.9	39.4	8.8	31.3	
17.4	22.9	I	6 K=2H	2	-	8.7	45.8	9.0	24.9	
16.3	16.4	I	5 ? 2	-	8.2	32.8	9.5	37.9		
16.2	20.0	I	7 K=.1H	3	F	8.1	40.0	9.6	30.7	
15.0	11.1	I	4 K=H	1	-	7.5	22.2	0.2	48.5	
16.2	23.2	I?	4 K=H	1	-	8.1	46.4	9.6	24.3	
11.0	14.2	I	8 K=.1H	2	-	7.0	28.4	0.7	42.3	
13.2	9.7	I	4 N	1	-	6.6	19.4	1.1	51.3	
13.4	11.5	I	4 K=H	1	-	6.7	23.0	1.0	47.7	
13.8	12.2	I	4 K=H	1	-	6.9	24.4	0.8	46.3	
13.0	15.8	I	4 N	1	-	6.5	31.6	1.2	39.1	
13.6	20.2	II	a 154	2	K=H	1	seen	6.8	40.4	0.9 30.3
12.0	7.2	I	6 K=2H	2	-	6.0	14.4	1.7	56.3	
12.8	9.2	I	3 N	1	-	6.4	18.4	1.3	52.3	
12.0	12.4	II?	2 K=H	1	-	6.0	24.8	1.7	45.9	
11.8	11.7	I	4 K=H	1	-	5.9	23.4	1.8	47.3	
11.6	16.3	I	9 N	4	F	5.8	32.6	1.9	38.1	
10.6	10.3	I	7 N	3	-	5.3	20.6	2.4	50.1	
10.7	10.7	III	2 K=H	1	-	5.4	21.4	2.3	49.3	
9.0	6.7	I	4 K=H	1	-	4.5	13.4	3.2	57.3	
8.8	10.9	I	4 K=H	1	-	4.4	21.8	3.3	48.9	
8.1	22.6	I	5 N	2	-	4.0	45.2	3.7	25.5	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 columned table]]

[No.|R.A|Dec.|Mag.|H.|V.|Br.]

[-----|-----|-----|-----|-----|-----|-----]

4460|18 55.3|-3

54|5.7|70.5|17.5|[[[strikethrough]]][[6.3]]|[[[strikethrough]]]]

4392|18 43.8|-3

29|70.6|17.5|[[[strikethrough]]][[6.8]]|[[[strikethrough]]]]

[[[strikethrough]]]3959|18 30.2|-3 6|8.0|[[[strikethrough]]]]

[[[strikethrough]]][[7.1]]|[[[strikethrough]]]]

X 3602|18 48.9|-1 58|6.5|70.7|17.6|[[[strikethrough]]]6.2|[[[strikethrough]]]]

3559|18 39.0|-1 7|6.1|70.2|17.7|[[[strikethrough]]]5.8|[[[strikethrough]]]]

3549|18 35.8|-1 46|7.8|71.0|17.2|[[[strikethrough]]]7.2|[[[strikethrough]]]]

3529|18 30.8|-1 14|6.7|70.2|17.7|[[[strikethrough]]]6.9|[[[strikethrough]]]]

3504|18 24.5|-1 6|6.7|70.3|17.6|[[[strikethrough]]]6.4|[[[strikethrough]]]]

3543|18 37.5|-0 31|7.2|70.3|17.7|[[[strikethrough]]]6.7|[[[strikethrough]]]]

3521|18 30.1|-0 26|5.5|70.1|17.7|[[[strikethrough]]]5.7|[[[strikethrough]]]]

4055|18 48.4|+0 5|7.4|70.6|7.6|[[[strikethrough]]]7.0|[[[strikethrough]]]]

3502|18 24.0|-0 22|8.3|70.4|17.7|[[[strikethrough]]]7.0|[[[strikethrough]]]]

4027|18 42.2|+0 41|6.5|70.6|7.7|[[[strikethrough]]]5.9|[[[strikethrough]]]]

3837|18 51.4|+1 1|7.0|70.8|7.6|[[[strikethrough]]]7.0|[[[strikethrough]]]]

4051|18 47.5|+0 57|7.6|70.5|7.7|[[[strikethrough]]]7.2|[[[strikethrough]]]]

4045|18 46.1|+0 42|7.8|70.5|7.6|[[[strikethrough]]]7.5|[[[strikethrough]]]]

3773|18 38.6|+1 10|7.7|70.2|7.7|[[[strikethrough]]]7.2|[[[strikethrough]]]]

3975|18 29.8|+0 50|6.8|70.2|7.6|[[[strikethrough]]]7.3|[[[strikethrough]]]]

3865|18 56.2|+1 36|6.0|70.6|7.6|[[[strikethrough]]]5.9|[[[strikethrough]]]]

3843|18 52.0|+1 13|8.2|70.4|7.6|[[[strikethrough]]]7.2|[[[strikethrough]]]]

3803|18 45.8|+1 35|7.8|70.6|7.6|[[[strikethrough]]]7.5|[[[strikethrough]]]]

3815^|[[3814]]|18 47.3^|18 47.2]]|+1 43^|+1

44]]|7.7^|[[7.7]]|70.7^|[[70.6]]|7.6|[[[strikethrough]]]7.3|[[[strikethrough]]]]

3766|18|37.5|+1 55|5.0|70.1|7.7|[[[strikethrough]]]5.2|[[[strikethrough]]]]

3738|18 50.0|+2 21|5.8|70.6|7.7|[[[strikethrough]]]5.6|[[[strikethrough]]]]

3730|18 49.1|+2 17|7.0|70.5|7.7|[[[strikethrough]]]6.7

7.0|[[[strikethrough]]]]

3882|18|56.9|+3

7|6.8|70.3|7.6|[[[strikethrough]]][[6.8]]|[[[strikethrough]]]]

3836|18 48.5|+3 16|7.1|70.3|7.7|[[[strikethrough]]]6.7|[[[strikethrough]]]]

3737|18 24.9|+3 34|6.7|70.1|7.6|[[[strikethrough]]]6.4|[[[strikethrough]]]]

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics

• Provided by the NASA Astrophysics Data System

93

No.	R.A.	Dec.	Mag.	H.	V.	Br.
4460	18 55.3	-3				
54	5.7	70.5	17.5	6.3		
4392	18 43.8	-3				
29	70.6	17.5		6.8		
3959	18 30.2	-3	6	8.0		
				7.1		
X 3602	18 48.9	-1	58	6.5	70.7	17.6
3559	18 39.0	-1	7	6.1	70.2	17.7
3549	18 35.8	-1	46	7.8	71.0	17.2
3529	18 30.8	-1	14	6.7	70.2	17.7
3504	18 24.5	-1	6	6.7	70.3	17.6
3543	18 37.5	-0	31	7.2	70.3	17.7
3521	18 30.1	-0	26	5.5	70.1	17.7
4055	18 48.4	+0	5	7.4	70.6	7.6
3502	18 24.0	-0	22	8.3	70.4	17.7
4027	18 42.2	+0	41	6.5	70.6	7.7
3837	18 51.4	+1	1	7.0	70.8	7.6
4051	18 47.5	+0	57	7.6	70.5	7.7
4045	18 46.1	+0	42	7.8	70.5	7.6
3773	18 38.6	+1	10	7.7	70.2	7.7
3975	18 29.8	+0	50	6.8	70.2	7.6
3865	18 56.2	+1	36	6.0	70.6	7.6
3843	18 52.0	+1	13	8.2	70.4	7.6
3803	18 45.8	+1	35	7.8	70.6	7.6
3815^	18 47.3^	18 47.2]]	+1	43^	+1	
44]]	7.7^	[[7.7]]	70.7^	[[70.6]]	7.6	[[[strikethrough]]]7.3 [[[strikethrough]]]]
3766	18 37.5 +1	55 5.0 70.1 7.7	[[[strikethrough]]]5.2	[[[strikethrough]]]]		
3738	18 50.0 +2	21 5.8 70.6 7.7	[[[strikethrough]]]5.6	[[[strikethrough]]]]		
3730	18 49.1 +2	17 7.0 70.5 7.7	[[[strikethrough]]]6.7			
	7.0	[[[strikethrough]]]]				
3882	18 56.9 +3					
	7 6.8 70.3 7.6	[[[strikethrough]]][[<u>6.8</u>]]	[[[strikethrough]]]]			
3836	18 48.5 +3	16 7.1 70.3 7.7	[[[strikethrough]]]6.7	[[[strikethrough]]]]		
3737	18 24.9 +3	34 6.7 70.1 7.6	[[[strikethrough]]]6.4	[[[strikethrough]]]]		

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

94
 November, 10, 1887.
 Plate 1623
 N.I.H.|Type|No Lines.|K.|Focus.|Other Lines.|V.|H.|V.|H.
 8.0|20.2|III|2|K=H|1|-14.0|40.4|3.7|30.3
 7.1|10.5|III|2|K=H|1|-13.6|21.0|4.1|49.7
 7.4|10.7|III|1|K=3H|4|F|3.7|21.4|4.0|49.3
 7.2|14.8|III|2|K=H|1|-13.6|29.6|4.1|41.1
 8.0|17.0|III|4|K=H|1|-4.0|34.0|3.7|36.7
 6.5|8.8|I|3|K=H|1|-3.2|17.6|4.5|53.1
 6.5|18.0|III|[[superscript]]a[[superscript]]155|2|K=H|1|seen|3.2|36.0|4.5|34.
 7
 5.0|18.8|III|[[superscript]]a[[superscript]]156|2|K=H|1|seen|2.5|37.6|5.2|33.
 1
 5.8|20.9|III|5|N|2|-12.9|41.8|4.8|28.9
 4.8|15.9|III|10|K=2H|3|-12.4|31.8|5.3|38.9
 3.2|9.6|III|4|K=H|1|-1.6|19.2|6.1|51.5
 3.8|19.7|III|6|N.|1|-1.9|39.4|5.8|31/3
 2.5|11.1|III|[[superscript]]b[[superscript]]157|2|K=H|2|seen|1.2|22.2|6.5|48.
 5
 3.0|19.2|III|3|N|1|-1.5|38.4|6.2|32.2
 2.3|20.3|I|7|K=H|3|-1.2|40.6|6.5|30.1
 Plate 1456
 22.9|7.7|III|6|K=.8H|2|-11.4|15.4|6.3|55.3
 22.2|13.5|III|5|K=H|1|-11.1|27.0|6.6|43.7
 22.1|13.6|III|3|N|1|-11.0|27.2|6.7|43.5
 22.0|19.8|I|3|N.|1|-11.0|39.6|6.7|31.1
 19.2|11.0|I|6|2|-9.6|22.0|8.1|48.7
 18.3|5.8|III|2|K=H|1|-9.2|11.6|8.5|59.1
 18.6|6.4|III|2|K=H|1|-9.3|12.8|8.4|57.9
 18.2|17.7|III|2|K=H|1|-9.1|35.4|35.3
 18.6|16.9|III|2|K=H|1|-9.3|33.8|36.9
 17.5|6.5|III|[[superscript]]a[[superscript]]3|K=H|1|1|seen|8.8|13.0|57.7
 17.2|10.7|III|2|K=H|1|-8.6|21.4|21.4|49.3

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

94

November 10, 1887
Plate 1623

N.	H.	Type	No Lines	K.	Focus	Other Lines	V.	H.	V.	H.	
8.0	20.2	III	2	K=H	1	-14.0	40.4	3.7	30.3		
7.1	10.5	III	2	K=H	1	-13.6	21.0	4.1	49.7		
7.4	10.7	III	1	K=3H	4	F	3.7	21.4	4.0	49.3	
7.2	14.8	III	2	K=H	1	-13.6	29.6	4.1	41.1		
8.0	17.0	III	4	K=H	1	-4.0	34.0	3.7	36.7		
6.5	8.8	I	3	K=H	1	-3.2	17.6	4.5	53.1		
6.5	18.0	III	[[superscript]]a[[superscript]]155	2	K=H	1	seen	3.2	36.0	4.5	34.
7											
5.0	18.8	III	[[superscript]]a[[superscript]]156	2	K=H	1	seen	2.5	37.6	5.2	33.
1											
5.8	20.9	III	5	N	2	-12.9	41.8	4.8	28.9		
4.8	15.9	III	10	K=2H	3	-12.4	31.8	5.3	38.9		
3.2	9.6	III	4	K=H	1	-1.6	19.2	6.1	51.5		
3.8	19.7	III	6	N.	1	-1.9	39.4	5.8	31/3		
2.5	11.1	III	[[superscript]]b[[superscript]]157	2	K=H	2	seen	1.2	22.2	6.5	48.
5											
3.0	19.2	III	3	N	1	-1.5	38.4	6.2	32.2		
2.3	20.3	I	7	K=H	3	-1.2	40.6	6.5	30.1		

Plate 1456

22.9	7.7	III	6	K=.8H	2	-11.4	15.4	6.3	55.3	
22.2	13.5	III	5	K=H	1	-11.1	27.0	6.6	43.7	
22.1	13.6	III	3	N	1	-11.0	27.2	6.7	43.5	
22.0	19.8	I	3	N.	1	-11.0	39.6	6.7	31.1	
19.2	11.0	I	6	2		-9.6	22.0	8.1	48.7	
18.3	5.8	III	2	K=H	1	-9.2	11.6	8.5	59.1	
18.6	6.4	III	2	K=H	1	-9.3	12.8	8.4	57.9	
18.2	17.7	III	2	K=H	1	-9.1	35.4	35.3		
18.6	16.9	III	2	K=H	1	-9.3	33.8	36.9		
17.5	6.5	III	[[superscript]]a[[superscript]]3	K=H	1	1	seen	8.8	13.0	57.7
17.2	10.7	III	2	K=H	1	-8.6	21.4	21.4	49.3	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[7 column table]]

No: [R.A. |Dec. |Mag. |H. |V. |Br. |[whole column crossed out]]

3755 |18 29.7 | + 3 41 |7.6 |70.1 |7.7 |7.3}

|7.5

3919 |18 49.4 | + 4 4 |7.3 |70.4 |7.7 |7.3

3916 |18 49.0 | + 4 1 |4.0 |70.4 |7.7 |4.5

3917 |18 49.0 | + 4 1 |4.3 | | |

3884 |18 40.9 | + 4 5 |6.5 |70.5 |7.7 |7.3}

|7.6

3784 |18 36.2 | + 3 39 |7.9 |70.2 |7.6 |7.5

3939 |18 52.8 | + 4 25 |8.3 |70.4 |7.6 |7.4

3838 |18 34.2 | + 4 25 |7.3 |70.2 |7.6 |7.2

3891 |18 32.5 | + 5 8 |6.7 |70.1 |7.6 |6.9

3801 |18 28.5 | + 4 50 |7.0 |70.3 |7.7 |6.5

3941 |18 38.3 | + 5 21 |6.3 |70.1 |7.8 |5.8

3989 |18 51.3 | + 6 3 |6.8 |70.5 |7.6 |6.9

3846 |18 30.7 | + 5 46 |6.8 |70.1 |7.7 |6.6

3978 |18 48.4 | + 6 27 |5.8 |70.6 |7.6 |6.8}

|7.1

3874 |18 31.8 | + 6 9 |7.3 |70.2 |7.7 |7.3

3855 |18 29.6 | + 6 33 |5.8 |70.2 |7.8 |6.0

4460 |18 55.3 | - 3 54 |5.7 |70.7 |17.5 |6.4

4392 |18 43.8 | - 3 29 |6.5 |70.8 |17.6 |6.7

4390 |18 43.5 | - 3 25 |7.3 |70.7 |17.6 |7.1

4331 |18 30.8 | - 3 19 |6.5 |70.4 |17.7 |7.0

3602 |18 48.9 | - 1 58 |6.5 |70.9 |17.6 |6.5

3649 |18 59.1 | - 1 33 |6.8 |70.7 |17.6 |7.0

3642 |18 57.8 | - 1 44 |6.5 |70.6 |17.6 |6.9

3549 |18 35.8 | - 1 46 |7.8 |71.2 |17.3 |7.2}

|7.5

3551 |18 36.1 | - 1 41 |7.5 |69.9 |17.6 |7.2}

|7.5

3641 |18 57.8 | - 1 9 |7.1 |70.8 |17.6 |7.0

3603 |18 49.4 | - 0 58 |8.1 |70.8 |17.6 |7.5

No.	R.A.	Dec.	Mag.	H.	V.	Br.
3755	18 29.7	+ 3 41	7.6	70.1	7.7	7.3
3919	18 49.4	+ 4 4	7.3	70.4	7.7	7.3
3916	18 49.0	+ 4 1	4.0	70.4	7.7	4.5
3917	18 49.0	+ 4 1	4.3			
3884	18 40.9	+ 4 5	6.5	70.5	7.7	7.3
3784	18 36.2	+ 3 39	7.9	70.2	7.6	7.5
3939	18 52.8	+ 4 25	8.3	70.4	7.6	7.4
3838	18 34.2	+ 4 25	7.3	70.2	7.6	7.2
3891	18 32.5	+ 5 8	6.7	70.1	7.6	6.9
3801	18 28.5	+ 4 50	7.0	70.3	7.7	6.5
3941	18 38.3	+ 5 21	6.3	70.1	7.8	5.8
3989	18 51.3	+ 6 3	6.8	70.5	7.6	6.9
3846	18 30.7	+ 5 46	6.8	70.1	7.7	6.6
3978	18 48.4	+ 6 27	5.8	70.6	7.6	6.8
3874	18 31.8	+ 6 9	7.3	70.2	7.7	7.3
3855	18 29.6	+ 6 33	5.8	70.2	7.8	6.0
4460	18 55.3	- 3 54	5.7	70.7	17.5	6.4
4392	18 43.8	- 3 29	6.5	70.8	17.6	6.7
4390	18 43.5	- 3 25	7.3	70.7	17.6	7.1
4331	18 30.8	- 3 19	6.5	70.4	17.7	7.0
3602	18 48.9	- 1 58	6.5	70.9	17.6	6.5
3649	18 59.1	- 1 33	6.8	70.7	17.6	7.0
3642	18 57.8	- 1 44	6.5	70.6	17.6	6.9
3549	18 35.8	- 1 46	7.8	71.2	17.3	7.2
3551	18 36.1	- 1 41	7.5	69.9	17.6	7.2
3641	18 57.8	- 1 9	7.1	70.8	17.6	7.0
3603	18 49.4	- 0 58	8.1	70.8	17.6	7.5

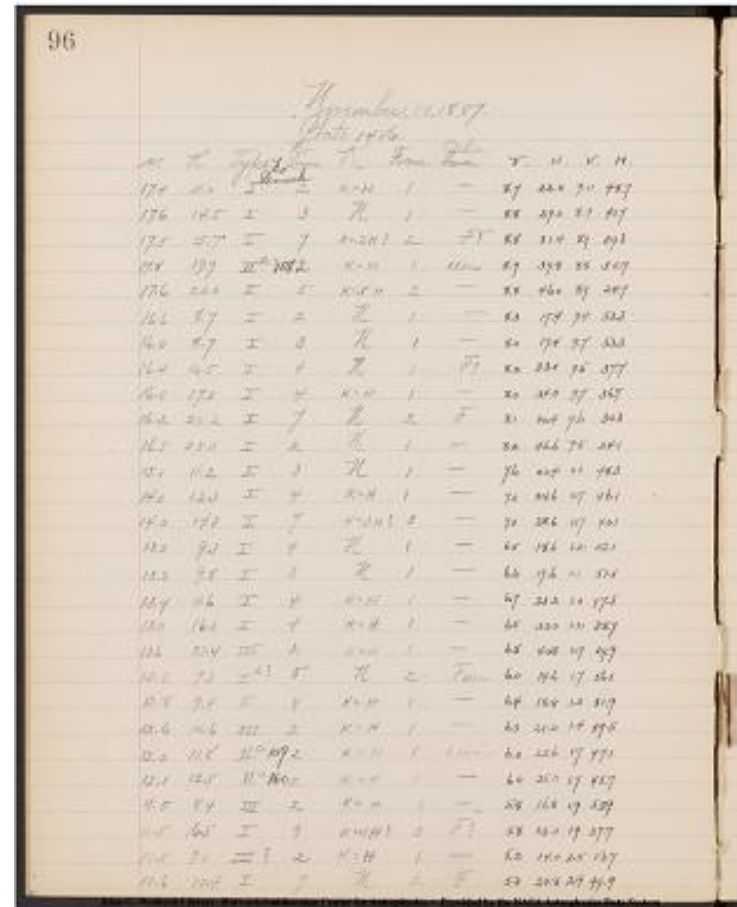
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

November 10, 1887
Plate 1456

N. | H. | Type | No Remark | NO Lines | K. | Focus. | Other Lines | V. | H. |
V. | H.

17.4	11.0	I	-	2	K=H	1	-	8.7	22.0	9.0	48.7
17.6	14.5	I	-	3	N	1	-	8.8	29.0	8.9	41.7
17.5	15.7	I	-	7	K=.2H?	2	F?	8.8	31.4	8.9	39.3
17.8	19.9	IIa	158	2	K=H	1	Seen	8.9	39.8	8.8	30.9
17.6	23.0	I	-	5	K=.8H	2	-	8.8	46.0	8.9	24.7
16.6	8.7	I	-	2	N	1	-	8.3	17.4	9.4	53.3
16.0	8.7	I	-	3	N	1	-	8.0	17.4	9.7	53.3
16.4	16.5	I	-	4	N	1	F?	8.2	33.0	9.5	37.7
16.0	17.0	I	-	4	K=H	1	-	8.0	34.0	9.7	36.7
16.2	20.2	I	-	7	N	2	F	8.1	40.4	9.6	30.3
16.5	23.3	I	-	2	N	1	-	8.2	46.6	9.5	24.1
15.1	11.2	I	-	3	N	1	-	7.6	22.4	0.1	48.3
14.0	12.3	I	-	4	K=H	1	-	7.0	24.6	0.7	46.1
14.0	14.3	I	-	7	K=.3H?	3	-	7.0	28.6	0.7	42.1
13.0	9.3	I	-	4	N	1	-	6.5	18.6	1.2	52.1
13.3	9.8	I	-	3	N	1	-	6.6	19.6	1.1	51.1
13.4	11.6	I	-	4	K=H	1	-	6.7	23.2	1.0	47.5
13.0	16.0	I	-	4	K=H	1	-	6.5	32.0	1.2	38.7
13.6	20.4	III	-	2	K=H	1	-	6.8	40.8	0.9	29.9
12.0	7.3	Id?	-	5	N	2	Fseen	6.0	14.6	1.7	56.1
12.8	9.4	I	-	4	K=H	1	-	6.4	18.8	1.3	51.9
12.6	10.6	III	-	2	K=H	1	-	6.3	21.2	1.4	49.5
12.0	11.8	IIa	159	2	K=H	1	seen	6.0	23.6	1.7	47.1
12.1	12.5	IIa	160	2	K=H	1	-	6.0	23.6	1.7	45.7
11.5	8.4	III	-	2	K=H	1	-	6.0	25.0	1.7	45.7
11.5	16.5	I	-	9	K=.1H?	3	F?	5.8	33.0	1.9	37.7
10.5	7.0	III?	-	2	K=H	1	-	5.2	14.0	2.5	56.7
10.6	10.4	I	-	7	N	2	F	5.3	20.8	2.4	49.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

97

[[7 column table]]

No. [R.A. | Dec. | Mag. | H. | V. | Br. | [[whole column crossed out]]

3595	18 48.4	- 0 55	7.6	70.4	17.8	7.5
3570	18 41.8	- 1 8	8.0	70.8	17.7	7.2
3559	18 39.0	- 1 7	6.1	70.4	17.7	6.4
3529	18 30.8	- 1 14	6.7	70.6	17.7	7.0
3504	18 24.5	- 1 6	6.7	70.5	17.7	6.7
3626	18 53.3	- 0 39	7.4	70.7	17.7	7.5
3625	18 53.3	- 0 25	8.0	70.7	17.6	7.5
3543	18 37.5	- 0 31	7.2	70.5	17.7	6.7
3540	18 36.5	- 0 21	8.0	70.5	17.6	7.4
3521	18 30.2	- 0 26	5.5	70.6	17.7	6.4
3501	18 23.9	- 0 35	7.0	70.5	17.6	7.2
4055	18 48.4	+ 0 5	7.4	70.8	7.7	6.9
4045	18 46.1	+ 0 42	7.8	70.7	7.7	7.3
4027	18 42.2	+ 0 41	6.5	70.8	7.7	6.5
3843	18 52.0	+ 1 13	8.2	70.6	7.7	7.0
3837	18 51.1	+ 1 1	7.0	70.7	7.6	6.9
4051	18 47.5	+ 0 57	7.6	70.7	7.7	7.0
3773	18 38.6	+ 1 10	7.7	70.6	7.7	7.0
3975	18 29.8	+ 0 50	6.8	70.6	7.6	7.0

7.3

3865	18 56.2	+ 1 36	6.0	70.8	7.6	6.5
3843	18 52.0	+ 1 13	8.2	70.8	7.6	7.0
3827	18 49.7	+ 1 19	7.7	70.9	7.6	7.2

7.5

3814	18 47.2	+ 1 44	7.7	70.8	7.6	7.1
3815	18 47.3	+ 1 44	7.7	70.9	7.6	
3803	18 45.8	+ 1 35	7.8	70.8	7.6	7.2
3854	18 53.9	+ 1 50	7.2	70.7	7.6	7.2

7.5

3766	18 37.5	+ 1 55	5.0	70.5	7.7	5.7
3765	18 56.3	+ 2 20	7.5	70.3	7.5	7.3

7.7

3738	18 50.0	+ 2 21	5.8	70.8	7.7	6.1
------	---------	--------	-----	------	-----	-----

97

No.	R.A.	Dec.	Mag.	H.	V.	Br.
3395	18 48.4	- 0 55	7.6	70.4	17.8	7.5
3570	18 41.8	- 1 8	8.0	70.8	17.7	7.2
3559	18 39.0	- 1 7	6.1	70.4	17.7	6.4
3529	18 30.8	- 1 14	6.7	70.6	17.7	7.0
3504	18 24.5	- 1 6	6.7	70.5	17.7	6.7
3626	18 53.3	- 0 39	7.4	70.7	17.7	7.5
3625	18 53.3	- 0 25	8.0	70.7	17.6	7.5
3543	18 37.5	- 0 31	7.2	70.5	17.7	6.7
3540	18 36.5	- 0 21	8.0	70.5	17.6	7.4
3521	18 30.2	- 0 26	5.5	70.6	17.7	6.4
3501	18 23.9	- 0 35	7.0	70.5	17.6	7.2
4055	18 48.4	+ 0 5	7.4	70.8	7.7	6.9
4045	18 46.1	+ 0 42	7.8	70.7	7.7	7.3
4027	18 42.2	+ 0 41	6.5	70.8	7.7	6.5
3843	18 52.0	+ 1 13	8.2	70.6	7.7	7.0
3837	18 51.1	+ 1 1	7.0	70.7	7.6	6.9
4051	18 47.5	+ 0 57	7.6	70.7	7.7	7.0
3773	18 38.6	+ 1 10	7.7	70.6	7.7	7.0
3975	18 29.8	+ 0 50	6.8	70.6	7.6	7.0
3865	18 56.2	+ 1 36	6.0	70.8	7.6	6.5
3843	18 52.0	+ 1 13	8.2	70.8	7.6	7.0
3827	18 49.7	+ 1 19	7.7	70.9	7.6	7.2
3814	18 47.2	+ 1 44	7.7	70.8	7.6	7.1
3815	18 47.3	+ 1 44	7.7	70.9	7.6	
3803	18 45.8	+ 1 35	7.8	70.8	7.6	7.2
3854	18 53.9	+ 1 50	7.2	70.7	7.6	7.2
3766	18 37.5	+ 1 55	5.0	70.5	7.7	5.7
3765	18 56.3	+ 2 20	7.5	70.3	7.5	7.3
3738	18 50.0	+ 2 21	5.8	70.8	7.7	6.1

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

Plate 1456

[[12 columned table]]

[illegible]

10.7|10.8||| |2|K=H|1|—|5.4|21.6|2.3|49.1|
9.0|6.9|I|[d]? |4|K=H|1|seen|4.5|13.8|3.2|56.9|
9.6|13.0|III| |2|K=H|1|—|4.8|26.0|2.9|44.7|
9.4|20.3|III| |2|K=H|1|—|4.7|40.6|3.0|30.1|
9.1|21.6|I|[a]?|161|2|K=H|1|seen|4.6|43.2|3.1|27.5|
8.8|11.1|I| |5|N|1|—|4.4|22.2|3.3|48.5|
8.0|20.4|III| |2|K=H|1|—|4.0|40.8|3.7|29.9|
8.1|22.8|I| |6|K=H|1|—|4.0|45.6|3.7|25.1|
7.0|6.1|I| |2|N|1|—|3.5|12.2|4.2|58.5|
7.1|10.7|III| |2|K=H|1|—|3.6|21.4|4.1|49.3|
7.4|10.9|I| |10|K=3H|3|F|7.2|12.8|4.0|48.9|
7.2|15.0|III| |2|K=H|1|—|3.6|30.0|4.1|40.7|
6.4|9.0|I| |2|K=H|1|—|3.2|18.0|4.5|52.7|
6.5|18.2|III| |2|K=H|1|—|3.2|36.4|4.5|34.3|
5.7|21.0|I|[a]?|162|2|K=H|2|seen|2.8|42.0|4.9|28.7|
5.0|19.0|III| |2|K=H|1|—|2.5|38.0|5.2|32.7|
4.7|16.1|I| |7|?|2|—|2.4|32.2|5.3|38.5|
4.2|17.0|III| |2|K=H|1|—|2.1|34.0|5.6|36.7|
3.2|9.8|I| |4|K=H|1|—|1.6|19.6|6.1|51.1|
3.1|19.4|III| |2|K=H|1|—|1.6|38.8|6.1|31.9|
3.8|20.0|I| |5|K=8H?|1|—|1.9|40.0|5.8|30.7|
2.5|11.2|III| |2|K=H|1|—|1.2|22.4|5.5|48.3|
2.3|20.5|I? |4|K=H|2|—|1.2|41.0|6.5|29.7|

Plate 1632.

[[13 columned table]]

[[15.3, 14.1, 13.2, 12.3]] | Correc. |
 22.3 | 17.3 | III? |
 2 | K=H | 1 | 11.2 | 14.6 | 16.3 | 55.3 | +0. | [~~striketrough~~] 8 | [~~striketrough~~] 5 |
 19.0 | 14.6 | || 7 | K=3H | 3 | 9.5 | 29.2 | 18.0 | 40.7 | +0.1 |
 16.5 | 13.8 | || 4 | K=5H? | 1 | 8.2 | 27.6 | 19.3 | 42.3 | +0.2 |

[illegible]

Project PhAEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 columned table]]

No.	R.A.	Dec.	Magn.	H.	V.	Br.
---	---	---	---	---	---	---
3730	18 49.1	+2 17	7.0	70.7	7.7	
3730	18 49.1	+2 17	7.0	70.7	7.7	
3882	18 56.9	+3 7	6.8	70.7	7.6	
3882	18 56.9	+3 7	6.8	70.7	7.6	
3699	18 44.5	+2 52	7.8	70.5	7.7	[[3699]] 7.3 7.6
3757	18 30.2	+3 6	8.0	70.8	7.8	
3747	18 27.3	+3 2	7.5	70.5	7.6	
3836	18 48.5	+3 16	7.1	70.7	7.7	
3755	18 29.7	+3 41	7.6	70.5	7.7	[[3755]] 7.1
3737	18 24.9	+3 34	6.7	70.5	7.6	
3969	18 58.5	+4 4	7.2	70.7	7.6	
3919	18 49.4	+4 4	7.3	70.8	7.6	
3916	18 49.0	+4 1	4.0	70.8	7.7	
3917	18 49.0	+4 1	4.3	70.8	7.7	
3884	18 40.9	+4 5	6.5	70.9	7.7	[[3884]] 7.3
3939	18 52.8	+4 25	8.3	70.8	7.6	
3838	18 34.2	+4 25	7.3	70.6	7.6	[[3838]] 7.2
3801	18 28.5	+4 50	7.0	70.5	7.6	
3891	18 32.5	+5 8	6.7	70.5	7.6	[[3891]] 6.8
3941	18 38.3	+5 21	6.3	70.5	7.8	
3934	18 36.6	+5 35	8.2	70.6	7.7	[[3934]] 7.3
3989	18 51.3	+6 3	6.8	70.9	7.6	
3874	18 31.8	+6 9	7.3	70.6	7.8	[[3874]] 7.3
3846	18 30.7	+5 46	6.8	70.7	7.7	
3978	18 48.4	+6 27	5.8	70.8	7.6	[[3978]] 6.8
3855	18 29.6	+6 33	5.8	70.6	7.8	
3798	18 42.6	+19 10	6.1	70.2	27.4	70.0

[[8 columned table]]

---	---	---	---	---	H'	---
1372	18 55.6	+16 24	8.4	70.2	27.6	69.7
1372	18 55.6	+16 24	8.4	70.2	27.6	69.7
3823	18 40.6	+18 2	4.1	69.8	27.5	
3823	18 40.6	+18 2	4.1	69.8	27.5	
69.7	18 42.6	+19 10	6.1	70.2	27.4	70.0
3798	18 42.6	+19 10	6.1	70.2	27.4	70.0

No.	R.A.	Dec.	Magn.	H	V	Br
---	---	---	---	---	---	---
1720	18 49.1	+2 17	7.0	70.7	7.7	
1720	18 49.1	+2 17	7.0	70.7	7.7	
1882	18 56.9	+3 7	6.8	70.7	7.6	
1882	18 56.9	+3 7	6.8	70.7	7.6	
3699	18 44.5	+2 52	7.8	70.5	7.7	[[3699]] 7.3 7.6
3757	18 30.2	+3 6	8.0	70.8	7.8	
3747	18 27.3	+3 2	7.5	70.5	7.6	
3836	18 48.5	+3 16	7.1	70.7	7.7	
3755	18 29.7	+3 41	7.6	70.5	7.7	[[3755]] 7.1
3737	18 24.9	+3 34	6.7	70.5	7.6	
3969	18 58.5	+4 4	7.2	70.7	7.6	
3919	18 49.4	+4 4	7.3	70.8	7.6	
3916	18 49.0	+4 1	4.0	70.8	7.7	
3917	18 49.0	+4 1	4.3	70.8	7.7	
3884	18 40.9	+4 5	6.5	70.9	7.7	[[3884]] 7.3
3939	18 52.8	+4 25	8.3	70.8	7.6	
3838	18 34.2	+4 25	7.3	70.6	7.6	[[3838]] 7.2
3801	18 28.5	+4 50	7.0	70.5	7.6	
3891	18 32.5	+5 8	6.7	70.5	7.6	[[3891]] 6.8
3941	18 38.3	+5 21	6.3	70.5	7.8	
3934	18 36.6	+5 35	8.2	70.6	7.7	[[3934]] 7.3
3989	18 51.3	+6 3	6.8	70.9	7.6	
3874	18 31.8	+6 9	7.3	70.6	7.8	[[3874]] 7.3
3846	18 30.7	+5 46	6.8	70.7	7.7	
3978	18 48.4	+6 27	5.8	70.8	7.6	[[3978]] 6.8
3855	18 29.6	+6 33	5.8	70.6	7.8	
3798	18 42.6	+19 10	6.1	70.2	27.4	70.0

~~7.0~~ |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

100

Nov. 10, 1887.

Plate 1632.

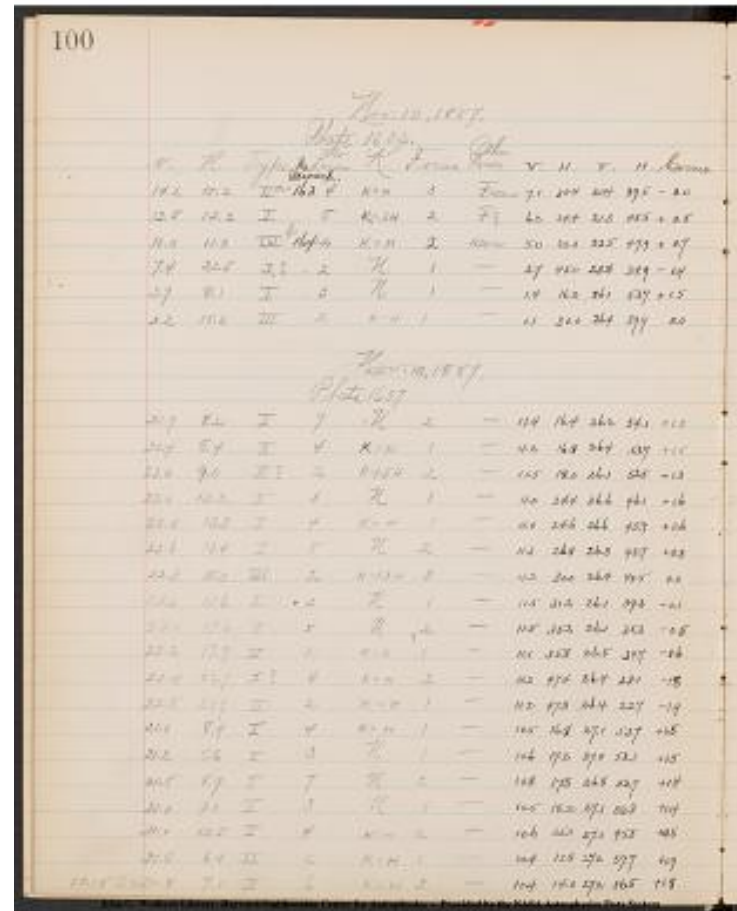
[[12 columned table]]

V.	H.	Type	No.	Lines.	K.	Focus	Other Lines	V.	H.	V.	H.	
Correc.												
--- --- No Remark --- --- --- --- --- --- --- ---												
14.2	15.2	II^a	163	4	K=H	3	F. seen	7.1	30.4	20.4	39.5	
0.0												
12.5	12.2	I	5	K=.2H	2	F^2	6.2	24.4	21.3	45.5	+0.5	
10.0	11.0	III^b	164	2	K=H	2	seen	5.0	22.0	22.5	47.9	+0.7
7.4	22.5	I?	2	N	1	-	3.7	45.0	23.8	24.9	-1.4	
2.7	8.1	I	3	N	1	-	1.4	16.2	26.1	53.7	+1.5	
2.2	15.0	III	2	K=H	1	-	1.1	30.0	26.4	39.9	0.0	

Nov. 10, 1887.

Plate 1657

22.9	8.2	I	7	N	2	-	11.4	16.4	26.2	54.1	+1.5	
22.4	8.4	I	4	K=H	1	-	11.2	16.8	26.4	53.7	+1.5	
23.0	9.0	II?	2	K=1.5H	2	-	11.5	18.0	26.1	52.5	+1.3	
22.0	12.2	I	3	N	1	-	11.0	24.4	26.6	46.1	+0.6	
22.0	12.3	I	4	K=H	1	-	11.0	24.6	26.6	45.9	+0.6	
22.6	13.4	I	5	N	2	-	11.3	26.8	26.3	43.7	+0.3	
22.3	15.0	III	2	K=1.2H	3	-	11.2	30.0	26.4	40.5	0.0	
23.0	15.6	I	2	N	1	-	11.5	31.2	26.1	39.3	-0.1	
23.0	17.6	I	5	N	2	-	11.5	35.2	26.1	35.3	-0.5	
22.2	17.9	II	2	K=H	1	-	11.1	35.8	26.5	34.7	-0.6	
22.4	23.7	I?	4	K=H	2	-	11.2	47.4	26.4	23.1	-1.8	
22.5	23.9	II	2	K=H	1	-	11.2	47.8	26.4	22.7	-1.9	
21.0	8.4	I	4	K=H	1	-	10.5	16.8	27.1	53.7	+1.5	
21.2	8.6	I	3	N	1	-	10.6	17.2	27.0	53.3	+1.5	
21.5	8.9	I	7	N	2	-	10.8	17.8	26.8	52.7	+1.4	
21.0	9.1	I	3	N	1	-	10.5	18.2	27.1	52.3	+1.4	
21.1	12.5	I	4	K=H	2	-	10.6	25.0	27.0	45.5	+0.5	
20.8	6.4	II	2	K=H	1	-	10.4	12.8	27.2	57.7	+1.9	
10.18 a.m.	20.8	7.0	I	6	K=H	2	-	10.4	14.0	27.2	56.5	+1.8



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[8 columned table]

No. | R.A. | Dec. | Magn. | H. | V | H' | | Br. |

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

3926 | 18 39.4 | +[[~~18~~]]20 25 | 4.1 | 69.8 |[[~~25.4~~]]27.5 | 69.8 |[[~~5.6~~]]

3582 | 18 46.1 | +21 16 | 5.5 | 70.5 | 27.5 | 70.0 |

[[~~6.3~~]]

3324 | 18 48.6 | +22 28 | 5.0 | 70.6 | 27.5 | 69.9 |

[[~~7.0~~]]6.7 |33[[~~54~~]]47 | 18[[~~25.0~~]]23.6 |[[~~18~~]]+23[[~~45~~]]46 |[[~~8.6~~]]6.0 | 68.6 | 27.5 | 70.0 |[[~~7.1~~]]

3418 | 18 53.8 | +26 2 | 5.8 | 70.0 | 27.4 | 68.5 |

[[~~6.9~~]]

3349 | 18 40.2 | +26 31 | 4.9 | 70.2 | 27.6 | 70.2

[[~~7.4~~]]7.1 |

[[left margin]]

H.P. 3246 5.5

[[left margin]]

[[11 columned table]]

3429 | 18 55.4 | +26 5 | 6.2 | 71.8 | 37.5 | 70.3 |

[[~~5.9~~]]1 |

3425 | 18 55.1 | +26 25 | 8.2 | 71.9 | 37.6 | 70.4

[[~~6.8~~]]6.9 |

7.0 |

3418 | 18 53.8 | +26 2 | 5.8 | 71.8 | 37.5 | 70.5

[[~~6.3~~]]1 |

3380 | 18 46.8 | +26 31 | 8.1 | 71.2 | 37.5 | 70.6

[[~~6.9~~]]6.9 |

7.0 |

3378 | 18 46.6 | +26 34 | 8.0 | 71.2 | 37.6 | 70.6

[[~~6.7~~]]6.6 |

6.7 |

3368 | 18 44.1 | +26 16 | 6.7 | 70.9 | 37.6 | 70.6

[[~~6.5~~]]6.8 |

6.4 |

3349 | 18 40.2 | +26 31 | 4.9 | 70.2 | 37.7 | 70.2

[[~~6.2~~]]6.2 |

6.3 |

3344 | 18 39.0 | +26 3 | 7.8 | 70.2 | 37.5 | 70.3

[[~~6.8~~]]

3324 | 18 34.5 | +26 0 | 6.9 | 69.7 | 37.5 | 70.2

[[~~6.4~~]]

3319 | 18 33.7 | +26 28 | 7.7 | 69.5 | 37.6 | 70.1

[[~~7.1~~]]7.0 |

7.1 |

3259 | 18 20.9 | +26 22 | 6.1 | 68.3 | 37.6 | 70.1

[[~~6.3~~]]6.2 |

6.3 |

3257 | 18 20.6 | +26 22 | 6.5 | 68.4 | 37.6 | 70.3 |

6.7 |

7.0 |

The photograph shows a handwritten astronomical table on aged paper, labeled '101' in the top right corner. The table is organized into columns for star numbers, Right Ascension (R.A.), Declination (Dec.), Magnitude (Magn.), and various spectral or photometric indices (H, V, H', Br.). The handwriting is in cursive, and the table contains approximately 15 rows of data. Some entries are crossed out with a single stroke.

~~3203~~3264 |
~~18~~18
~~55.4~~55.7 |
~~+27~~+27
~~2~~11 |
~~8.0~~8.8 | 72.5 | 37.7 | 71.0 |
7.1~~6.9~~ | .1 |
7.0 |
3203 | 18 55.4 | +27 2 | 8.0 | 72.6 | 37.6 | 71.1 |
7.2~~7.0~~ | .1 |
7.1 |
3421 | 18 54.1 | +26 46 | 7.5 | 71.9 | 37.6 | 70.5 |
6.4~~6.0~~ | .1 |
6.1 |
3195 | 18 53.8 | +27 3 | 8.7 | 72.1 | 37.5 | 70.6 |
7.3~~7.4~~ | .1 |
7.5 |
3142 | 18 46.3 | +27 5 | 7.6 | 71.3 | 37.7 | 70.8 |
6.6~~6.6~~ | .1 |
6.7 |
3240 | 18 59.8 | +27 11 | 8.0 | 72.6 | 37.6 | 70.7 |
7.1~~6.9~~ | .1 | 7.0 |
3228 | 18 58.5 | +27 6 | 7.4 | 72.5 | 37.5 | 70.7 |
6.5~~6.3~~ | .1 |
6.4 |

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

Nov. 19, 1887.

Plate 1657

[[13 columned table]]

10 0 AM | V | H | Type | No. Lines | K | Focus | Other Lines | V. | H. | V. | H. | [[?]]

20.0	8.0	II	2	K=H	1	-	10.0	16.0	27.6	54.5	+1.6		
20.6	9.4	I	2	N	1	-	10.3	18.8	27.3	51.7	+1.3		
20.0	11.2	I	3	N	1	-	10.0	22.4	27.6	48.1	+0.8		
20.3	13.9	III?	2	K=H	2	-	10.2	27.8	27.4	42.7	+0.3		
20.6	15.8	I	3	N	1	-	10.3	31.6	27.3	38.9	-0.2		
20.6	16.7	II	2	K=H	1	-	10.3	33.4	27.3	37.1	-0.4		
20.6	16.8	II	2	K=H	1	-	10.3	33.6	27.3	36.9	-0.4		
19.2	6.9	I	5	K=H	2	-	9.6	13.8	28.0	56.7	+2.0		
19.4	9.9	III	2	K=H	1	-	9.7	19.8	27.9	50.7	+1.2		
19.4	10.6	III	2	K=H	2	-	9.7	21.2	27.9	49.3	+1.0		
19.9	11.6	III	3	K=H	2	F.	10.0	23.2	27.6	47.3	+0.8		
19.2	13.6	I	5	K=H	1	-	9.6	27.2	28.0	43.3	+0.3		
19.2	15.0	I	2	N	1	-	9.6	30.0	28.0	40.5	0.0		
19.1	15.3	III	2	K=H	1	-	9.6	30.6	28.0	39.9	-0.1		
19.5	15.8	I	5	K=5H	2	-	9.8	31.6	27.8	38.9	-0.2		
19.0	16.5	I	6	N	2	-	9.5	33.0	28.1	37.5	-0.4		
19.4	16.7	I	5	N	2	-	9.7	33.4	27.9	37.1	-0.4		
19.8	17.2	I	5	N	1	-	9.9	34.4	27.7	36.1	-0.5		
19.8	18.3	II	2	K=H	1	-	9.9	36.6	27.7	33.9	-0.8		
18.4	6.1	I	6	[d]?	6	? 3	-	9.2	12.2	28.4	58.3	+2.2	
18.6	7.6	II?	2	K=H	1	-	9.3	15.2	28.3	55.3	+1.8		
18.8	8.5	I	6	N	2	F?	9.4	17.0	28.2	53.5	+1.6		
18.3	18.9	III	2	K=H	1	-	9.2	37.8	28.4	32.7	-0.9		
18.1	12.6	I	3	N	1	-	9.0	25.2	28.6	45.3	+0.6		
18.2	12.7	III	2	K=H	2	-	9.1	25.4	28.5	45.1	+0.6		
18.6	13.2	I?	2	N	1	-	9.3	26.4	28.3	44.1	+0.5		
18.6	13.5	I	5	N	1	-	9.3	27.0	28.3	43.5	+0.4		
10 35	18.4	14.5	II?	2	K=H	1	-	9.2	29.0	28.4	41.5	+0.2	

102

Nov. 19, 1887

Plate 1657

10 35 AM | V | H | Type | No. Lines | K | Focus | Other Lines | V. | H. | V. | H. |

18.4 6.1 I 6 [d]? 6 ? | 3 - 9.2 12.2 28.4 58.3 +2.2

18.6 7.6 II? 2 K=H 1 - 9.3 15.2 28.3 55.3 +1.8

18.8 8.5 I 6 N 2 F? 9.4 17.0 28.2 53.5 +1.6

18.3 18.9 III 2 K=H 1 - 9.2 37.8 28.4 32.7 -0.9

18.1 12.6 I 3 N 1 - 9.0 25.2 28.6 45.3 +0.6

18.2 12.7 III 2 K=H 2 - 9.1 25.4 28.5 45.1 +0.6

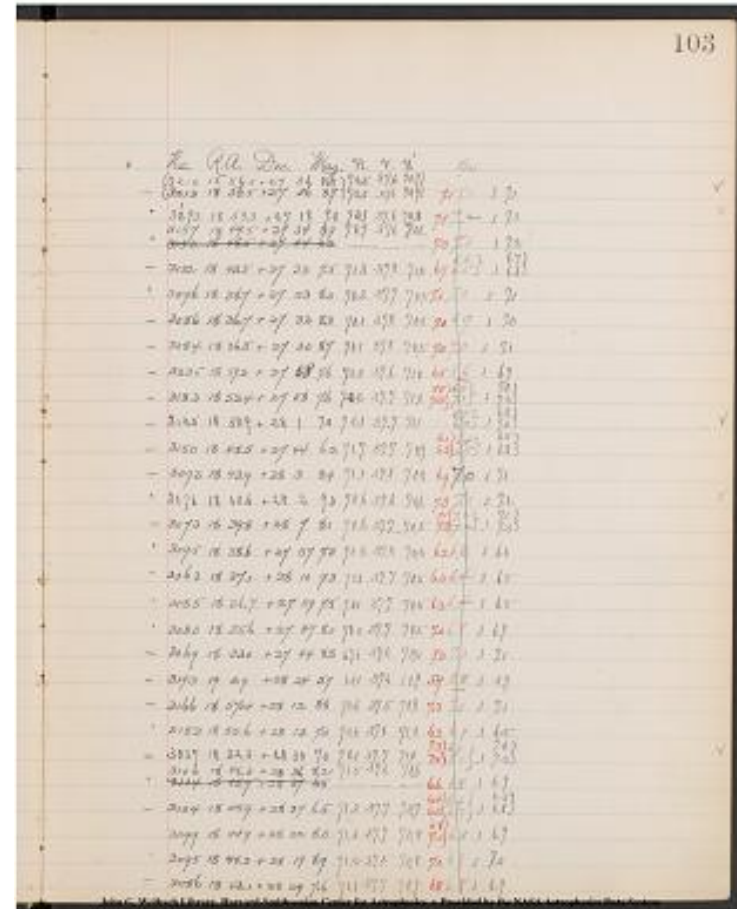
18.6 13.2 I? 2 N 1 - 9.3 26.4 28.3 44.1 +0.5

18.6 13.5 I 5 N 1 - 9.3 27.0 28.3 43.5 +0.4

10 35 18.4 14.5 II? 2 K=H 1 - 9.2 29.0 28.4 41.5 +0.2

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

No. | R.A. | Dec. | Mag. | H. | V. | H' | Br | -
 3212 | 18 56.5 | +27 36 | 8.8 | 72.5 | 37.6 | 70.9 | - | -
 3213 | 18 56.5 | +27 36 | 8.7 | 72.5 | 37.6 | 70.9 | 7.1
~~7.0~~ | 7.1
 3893 | 18 53.3 | +27 18 | 9.0 | 72.1 | 37.6 | 70.8 | 7.4
~~7.2~~ | 7.3
~~3150~~ | ~~3157~~³¹⁵⁷ |
~~18~~ | ~~18~~¹⁸ |
~~48.5~~ | +27 |
~~49.5~~ | +27 | ~~44~~ |
~~34~~ | ~~6.2~~ | ~~8.9~~ | ~~71.9~~ | ~~37.6~~ |
~~71.1~~ | 7.3 | ~~7.1~~ | 7.2
 3122 | 18 43.5 | +27 | 33 | 7.5 | 71.3 | 37.8 | 71.0 | 6.7
~~6.5~~ | ~~6.6~~ | ~~6.7~~
 3096 | 18 38.7 | +27 23 | 8.0 | 70.3 | 37.7 | 70.5 | 7.1
~~7.0~~ | 7.1
 3086 | 18 36.7 | +27 32 | 8.3 | 70.1 | 37.8 | 70.5 | 7.0
~~6.9~~ | 7.0
 3084 | 18 36.5 | +27 30 | 8.7 | 70.1 | 37.8 | 70.5 | 7.0
~~7.0~~ | 7.1
 3235 | 18 59.2 | +27 58 | 7.6 | 73.0 | 37.6 | 71.0 | 6.5
~~6.6~~ | 6.7
 3183 | 18 52.4 | +27 58 | 7.6 | 72.2 | 37.7 | 71.0 | 7.3 | ~~7.0~~
~~7.1~~ | ~~6.9~~ | ~~7.2~~ | ~~7.0~~
 3125 | 18 50.9 | +28 1 | 7.0 | 72.1 | 37.7 | 71.1 | - | ~~6.95~~
~~6.72~~ | ~~6.8~~
 3150 | 18 48.5 | +27 44 | 6.2 | 71.7 | 37.7 | 70.9 | 6.5 | ~~6.1~~
~~6.7~~ | ~~6.4~~ | ~~6.8~~
 3093 | 18 43.9 | +28 3 | 8.4 | 71.1 | 37.6 | 70.8 | 6.9
~~7.0~~ | 7.1
 3076 | 18 40.6 | +28 2 | 9.0 | 70.6 | 37.6 | 70.6 | 7.3
~~7.1~~ | 7.2
 3073 | 18 39.8 | +28 7 | 8.1 | 70.2 | 37.7 | 70.5 | 7.3 | ~~7.1~~
~~7.2~~ | ~~7.0~~ | 7.1
 3095 | 18 38.6 | +27 | 57 | 7.3 | 70.2 | 37.8 | 70.2 | 6.2
~~6.3~~ | 6.4
 3063 | 18 37.1 | +28 10 | 7.3 | 70.1 | 37.7 | 70.5 | 6.3
~~6.4~~ | 6.5
 3085 | 18 36.7 | +27 59 | 7.5 | 70.1 | 37.7 | 70.5 | 6.3
~~6.4~~ | 6.5
 3080 | 18 35.6 | +27 47 | 8.0 | 70.0 | 37.7 | 70.5 | 7.0
~~6.8~~ | 6.9
 3069 | 18 33.0 | +28 44 | 8.8 | 69.6 | 37.6 | 70.4 | 7.3
~~7.0~~ | 7.1
 3193 | 19 0.9 | +28 | 24 | 5.7 | 13.1 | 37.6 | 10.9 | 5.4
~~5.8~~ | 5.9
 3166 | 18 57.4 | +28 12 | 8.8 | 72.6 | 37.5 | 70.8 | 7.3
~~7.0~~ | 7.1
 3153 | 18 55.6 | +28 13 | 7.0 | 72.6 | 37.6 | 71.0 | 6.3
~~6.4~~ | 6.5
 3037 | 18 32.3 | +28 | 30 | 7.0 | 70.1 | 37.7 | 71.0 | 7.4 | ~~7.3~~
~~7.1~~ | ~~6.9~~ | ~~7.2~~ | ~~7.0~~
~~3104~~ | ~~3106~~ |
~~18~~ | ~~18~~¹⁸ |
~~45.9~~ | +28 | ~~46.3~~ | +28 |
~~37~~ | ~~36~~³⁶ |
~~6.5~~ | ~~8.2~~ | - | ~~71.5~~ | - | ~~37.6~~ | - | -
~~70.6~~ | 6.6 | ~~6.8~~ | 6.9
 3104 | 18 45.9 | +28 37 | 6.5 | 71.3 | 37.7 | 70.7 | 6.5 | ~~6.4~~



~~6.7~~^{6.4} | 6.8^{6.5}
 3099 | 18 44.9 | +28 22 | 8.0 | 71.3 | 37.7 | 70.8 |
~~7.0~~^{6.8} | ~~6.8~~^{6.8} |
 6.9
 3095 | 18 44.2 | +28 19 | 8.9 | 71.2 | 37.5 | 70.8 | 7.0
~~6.9~~ | 7.0
 3086 | 18 42.1 | +28 29 | 7.6 | 71.1 | 37.7 | 70.9 | 6.8
~~6.8~~ | 6.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

December, 14, 1887.

Plate 1657.

[[13 columned table]]

V.	H.	Type	No Remark.	No Lines.	K.	Focus.	Other Lines	V.
H.	V.	H.	borrec.					
18.7	17.1	II ^a	165	3	K=H	1	seen	9.4 34.2
28.2	36.3	-0.5						
18.2	18.3	I		4	N	1	-	9.1 36.6 28.5
33.9	-0.8							
18.4	18.5	I		7	N	3	-	9.2 37.0 28.4
33.5	-0.9							
18.1	20.0	I		3	N	1	-	9.0 40.0 28.6
30.5	-1.2							
18.9	20.2	I		5	N	2	-	9.4 40.4 28.2
30.1	-1.3							
18.4	21.5	I		5	N	2	-	9.2 43.0 28.4
27.5	-1.7							
17.4	6.4	I		5	N	2	-	8.7 12.8 28.9
57.7	+2.1							
17.4	6.8	II		2	K=H	1	-	8.7 13.6 28.9
56.9	+2.0							
17.0	7.8	II		2	K=H	1	-	8.5 15.6 29.1
54.9	+1.9							
17.0	8.4	I?		3	N	1	-	8.5 16.8 29.1
53.7	+1.8							
17.5	8.9	I		6	N	2	-	8.8 17.8 28.8
52.7	+1.5							
17.2	10.7	II		2	K=H	1	-	8.6 21.4 29.0
49.1	+1.0							
17.2	11.0	II		2	K=H	1	-	8.6 22.0 29.0
48.5	+1.0							
17.0	13.7	I		4	N	1	-	8.5 27.4 29.1
43.1	+0.3							
17.6	14.3	I		4	N	1	-	8.8 28.6 28.8
41.9	+0.2							
17.8	14.6	I		4	N	1	-	8.9 27.2 28.7
41.3	+0.1							
17.8	16.4	II		2	K=H	1	-	8.9 32.8 28.7
37.7	-0.3							
17.5	18.8	III		2	K=H	1	-	8.8 37.6 28.8
32.9	-0.9							
17.4	23.2	II?		2	K=H	1	-	8.7 46.4 28.9
24.1	-2.0							
16.7	6.6	III		2	K=H	1	-	8.4 13.2 29.2
57.3	+2.1							
16.6	8.5	I		6	N	3	-	8.3 17.0 29.3
53.5	+1.7							
16.4	9.3	II?		1	N	1	-	8.2 18.6 29.4
51.9	+1.5							
16.2	11.5	I?		3	N	1	-	8.1 23.0 29.5
47.5	+0.9							
16.5	11.8	II		2	K=H	1	-	8.2 23.6 29.4
46.9	+0.8							
16.6	12.3	I		3	N	1	-	8.3 24.6 29.3
45.9	+0.7							
16.0	13.4	I		5	N	2	-	8.0 26.8 29.6
43.7	+0.4							
16.9	13.6	I		4	N	1	-	8.4 27.2 29.2
43.3	+0.3							

104

December 14, 1887

Plate 1657

V.	H.	Type	No Remark.	No Lines.	K.	Focus.	Other Lines	V.
H.	V.	H.	borrec.					
18.7	17.1	II ^a	165	3	K=H	1	seen	9.4 34.2
28.2	36.3	-0.5						
18.2	18.3	I		4	N	1	-	9.1 36.6 28.5
33.9	-0.8							
18.4	18.5	I		7	N	3	-	9.2 37.0 28.4
33.5	-0.9							
18.1	20.0	I		3	N	1	-	9.0 40.0 28.6
30.5	-1.2							
18.9	20.2	I		5	N	2	-	9.4 40.4 28.2
30.1	-1.3							
18.4	21.5	I		5	N	2	-	9.2 43.0 28.4
27.5	-1.7							
17.4	6.4	I		5	N	2	-	8.7 12.8 28.9
57.7	+2.1							
17.4	6.8	II		2	K=H	1	-	8.7 13.6 28.9
56.9	+2.0							
17.0	7.8	II		2	K=H	1	-	8.5 15.6 29.1
54.9	+1.9							
17.0	8.4	I?		3	N	1	-	8.5 16.8 29.1
53.7	+1.8							
17.5	8.9	I		6	N	2	-	8.8 17.8 28.8
52.7	+1.5							
17.2	10.7	II		2	K=H	1	-	8.6 21.4 29.0
49.1	+1.0							
17.2	11.0	II		2	K=H	1	-	8.6 22.0 29.0
48.5	+1.0							
17.0	13.7	I		4	N	1	-	8.5 27.4 29.1
43.1	+0.3							
17.6	14.3	I		4	N	1	-	8.8 28.6 28.8
41.9	+0.2							
17.8	14.6	I		4	N	1	-	8.9 27.2 28.7
41.3	+0.1							
17.8	16.4	II		2	K=H	1	-	8.9 32.8 28.7
37.7	-0.3							
17.5	18.8	III		2	K=H	1	-	8.8 37.6 28.8
32.9	-0.9							
17.4	23.2	II?		2	K=H	1	-	8.7 46.4 28.9
24.1	-2.0							
16.7	6.6	III		2	K=H	1	-	8.4 13.2 29.2
57.3	+2.1							
16.6	8.5	I		6	N	3	-	8.3 17.0 29.3
53.5	+1.7							
16.4	9.3	II?		1	N	1	-	8.2 18.6 29.4
51.9	+1.5							
16.2	11.5	I?		3	N	1	-	8.1 23.0 29.5
47.5	+0.9							
16.5	11.8	II		2	K=H	1	-	8.2 23.6 29.4
46.9	+0.8							
16.6	12.3	I		3	N	1	-	8.3 24.6 29.3
45.9	+0.7							
16.0	13.4	I		5	N	2	-	8.0 26.8 29.6
43.7	+0.4							
16.9	13.6	I		4	N	1	-	8.4 27.2 29.2
43.3	+0.3							

16.8 | 15.5 | II? | | 2 | K=H | 1 | - | 8.4 | 31.0 | 29.2 |
39.5 | -0.1

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

No.	R.a.	Dec.	Wag.	H.	V.	H	Br.
- 3054	18 35.7	+287	8.8	70.9	37.5	70.4	7.0 .1 7.0
- 3040	18 32.7	+2834	8.8	69.3	37.7	71.1	7.3 .1 7.1
. 3037	18 32.3	+28.30	7.0	69.3	37.7	30.2	5.9 .1 .60
. 3024	18 28.8	+28.38	7.6	68.8	37.6	70.0	7.1 .1 7.0
. 3021	18 28.4	+28.10	7.3	68.8	37.6	70.1	6.4 .1 6.6
. 3013	18 25.4	+28.24	7.5	68.4	37.6	70.1	6.4 .1 6.6
. 3186	19 0.2	+28.53	8.0	13.0	37.6	10.9	6.6 .1 6.6
- 3180	18 59.3	+28.51	9.0	72.9	37.5	70.9	7.3 .1 7.1
- 3453	18 57.0	+29.5	7.8	72.6	37.6	70.5	7.3 .1 7.1
- 3445	18 55.8	+29.5	8.2	72.6	37.6	70.8	7.0 .1 7.0
. 3148	18 54.6	+28.56	8.4	72.2	37.7	70.9	6.6 .1 6.7
- 3393	18 50.4	+29.1	9.3	71.8	37.6	70.8	7.5 .1 7.2
- 3399	18 49.8	+29.2	8.5	71.8	37.6	70.8	7.2 .1 6.9
. 3357	18 43.8	+29.10	8.3	71.2	37.3	70.9	7.2 .1 7.0
. 3087	18 42.3	+28.53	8.3	70.9	37.7	70.7	7.1 .1 7.0
. 3081	18 41.6	+28.50	8.1	70.8	37.7	70.7	7.0 .1 6.9
- 3066	18 37.5	+28.48	8.4	70.3	37.7	70.6	7.0 .1 7.0
- 3032	18 31.6	+28.56	8.0	69.2	37.7	70.1	7.3 .1 7.1
- 3002	18 21.6	+28.51	8.6	68.0	37.6	70.0	7.2 .1 7.0
- 3467	18 59.7	+29.12	8.8	72.9	37.6	70.8	7.3 .1 7.4
. 3444	18 55.7	+29.19	6.8	72.7	37.6	71.0	6.0 .1 6.2
- 3429	18 53.7	+29.24	8.5	72.3	37.6	70.8	7.3 .1 7.2
3386	18 48.6	+20.35	8.5	71.6	37.7	70.7	7.2 .2 7.3
- 3384	18 48.1	+29.28	8.3	71.7	37.7	70.9	7.1 .7.0
. 3375	18 46.8	+29.21	8.1	71.4	37.7	70.7	6.9 .6.8
. 3361	18 44.4	+29.39	7.2	91.2	37.6	70.6	6.2 .2 6.5
. 3357	18 43.8	+29.10	8.3	71.0	37.6	70.7	7.1 .1 7.0
- 3335	18 39.3	+29.18	9.0	70.3	37.7	70.4	7.3 .1 7.1

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

106

December 14, 1887.

Plate 1657.

[[13 columned table]]

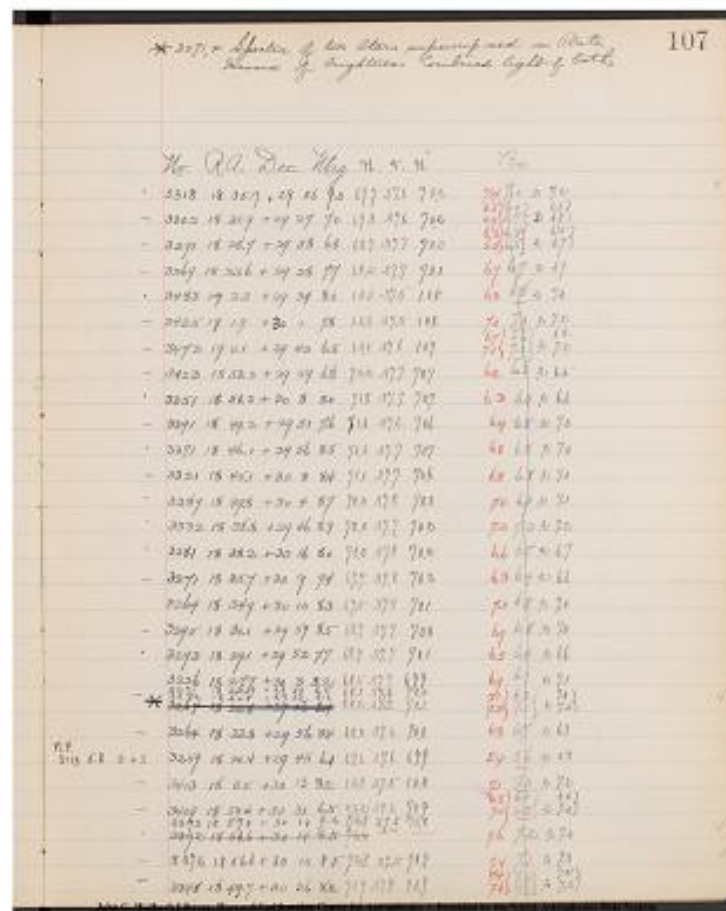
V | H | Type | No. Lines | K | Focus | Other Lines | V. | H. | V. | H. |
Correc. |

[No Remark]													
16.0	17.0	I	3	N	1	-	8.0	34.0	29.6	36.5	-0.5		
16.5	18.7	III	2	K=H	2	-	8.2	37.4	29.4	33.1	-0.9		
16.2	20.0	III	2	K=H	2	-	8.1	40.0	29.5	30.0	-1.3		
16.4	22.3	II	2	K=H	1	-	8.2	44.6	29.4	25.9	-1.9		
15.8	5.5	I	4	N	1	-	7.9	11.0	29.7	59.1	+2.5		
15.0	5.7	II	2	K=H	1	-	7.5	11.4	30.1	59.1	+2.5		
15.8	6.5	III	3	K=H	1	F	7.9	13.0	29.7	57.5	+2.2		
15.4	9.5	II	3	K=H	2	F	7.7	19.0	29.9	51.5	+1.5		
15.1	10.8	I	5	N	2	-	7.6	21.6	30.0	48.9	+1.1		
15.6	11.2	II ^a	166	2	K=H	1	seen	7.8	22.4	29.8	48.1	+1.0	
15.6	12.6	I	4	N	1	-	7.8	25.2	29.8	45.3	+0.6		
15.1	13.0	I	7	K=H	1	-	7.6	26.0	30.0	44.5	+0.5		
15.4	15.2	I	5	N	1	-	7.7	30.4	29.9	40.1	-0.1		
15.8	15.6	I	4	N	1	-	7.9	31.2	29.7	39.3	-0.2		
15.0	15.9	I	5	K=5H	2	-	7.5	31.8	30.1	38.7	-0.2		
15.2	17.0	II?	2	K=H	2	F?	7.6	34.0	30.0	36.5	-0.5		
15.1	17.3	I?	3	N	1	-	7.6	34.6	30.0	35.9	-0.6		
15.4	19.4	I	4	K=H	1	-	7.7	38.8	29.9	31.7	-1.1		
15.6	19.9	I	6	N	2	-	7.8	39.8	29.8	30.7	-1.2		
15.4	20.4	I?	4	N	1	-	7.7	40.8	29.9	29.7	-1.4		
15.5	22.1	III	2	K=H	1	-	7.8	44.2	29.8	26.3	-1.9		
15.4	22.6	I	5	K=H	1	-	7.7	45.2	29.9	25.3	-2.0		
15.7	23.6	I	8	N	3	F?	7.8	47.2	29.8	23.3	-2.3		
14.6	6.4	II	2	K=H	1	-	7.3	12.8	30.3	57.7	+2.5		
14.2	6.9	III	3	K=H	2	F	7.1	13.8	30.5	56.7	+2.3		
14.6	7.9	I	3	N	1	-	7.3	15.8	30.3	54.7	+2.0		
14.6	8.1	I	4	K=H	1	-	7.3	16.2	30.3	54.3	+1.9		
14.0	11.1	III	1	N	1	-	7.2	22.2	30.4	48.3	+1.0		

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

No.	R.A.	Dec.	Mag.	H.	V.	H'.	Br.
-----	------	------	------	----	----	-----	-----

- 3318 | 18 35.7 | +29 36 | 9.0 | 69.7 | 37.6 | 70.2 | 7.4
 [[\strikethrough]]7.0[[\strikethrough]] .2 7.2 |
 - 3302 | 18 31.9 | +29 27 | 7.0 | 69.3 | 37.6 | 70.2 | 6.9^[[6.5]]
 [[\strikethrough]]6.7^[[6.4]][[\strikethrough]] 2 6.9^[[6.6]] |
 - 3291 | 18 28.7 | +29 38 | 6.8 | 68.7 | 37.7 | 70.0 | 6.5^[[6.3]]
 [[\strikethrough]]6.5^[[6.3]][[\strikethrough]] 2 6.7^[[6.5]] |
 - 3269 | 18 23.6 | +29 28 | 7.7 | 68.2 | 37.7 | 70.1 | 6.7
 [[\strikethrough]]6.7[[\strikethrough]] .2 6.9 |
 . 3483 | 19 2.3 | +29 34 | 8.0 | 13.3 | 37.5 | 10.8 | 6.8 [[\strikethrough,
 underline]]6.8[[\strikethrough, underline]] .2 7.0 |
 - 3425 | 19 1.9 | +30 1 | 7.8 | 13.3 | 37.5 | 10.8 | 7.0 [[\strikethrough,
 underline]]7.0[[\strikethrough, underline]] .2 7.2 |
 - 3472 | 19 0.1 | +29 42 | 6.5 | 13.1 | 37.6 | 10.9 | 7.1^[[6.7]]
 [[\strikethrough, underline]]7.0^[[6.6]][[\strikethrough, underline]] 2
 7.2^[[6.8]] |
 - 3423 | 18 53.2 | +29 59 | 6.8 | 72.2 | 37.7 | 70.7 | 6.2
 [[\strikethrough]]6.3[[\strikethrough]] .2 6.5 |
 . 3351 | 18 50.2 | +30 8 | 8.0 | 71.8 | 37.7 | 70.7 | 6.3
 [[\strikethrough]]6.4[[\strikethrough]] .2 6.6 |
 - 3391 | 18 49.2 | +29 51 | 7.6 | 71.6 | 37.6 | 70.6 | 6.9
 [[\strikethrough]]6.8[[\strikethrough]] .2 7.0 |
 . 3371 | 18 46.1 | +29 56 | 8.5 | 71.3 | 37.7 | 70.7 | 6.8
 [[\strikethrough]]6.8[[\strikethrough]] .2 7.0 |
 - 3321 | 18 45.1 | +30 8 | 8.4 | 71.1 | 37.7 | 70.6 | 6.8
 [[\strikethrough]]6.8[[\strikethrough]] .2 7.0 |
 . 3289 | 18 39.8 | +30 4 | 8.7 | 70.2 | 37.8 | 70.3 | 7.0
 [[\strikethrough]]6.9[[\strikethrough]] .2 7.1 |
 . 3332 | 18 38.8 | +29 46 | 8.9 | 70.0 | 37.7 | 70.2 | 7.2
 [[\strikethrough]]7.0[[\strikethrough]] .2 7.2 |
 . 3281 | 18 38.2 | +30 16 | 8.0 | 70.0 | 37.8 | 70.2 | 6.6
 [[\strikethrough]]6.5[[\strikethrough]] .2 6.7 |
 - 3271 | 18 35.7 | +30 9 | 7.4 | 69.7 | 37.8 | 70.2 | 6.3
 [[\strikethrough]]6.4[[\strikethrough]] .2 6.6 |
 . 3264 | 18 34.9 | +30 10 | 8.3 | 69.5 | 37.8 | 70.1 | 6.9
 [[\strikethrough]]6.8[[\strikethrough]] .2 7.0 |
 - 3295 | 18 30.1 | +29 59 | 8.5 | 68.9 | 37.7 | 70.0 | 6.9
 [[\strikethrough]]6.8[[\strikethrough]] .2 7.0 |
 . 3293 | 18 29.1 | +29 52 | 7.7 | 68.9 | 37.7 | 70.1 | 6.5
 [[\strikethrough]]6.4[[\strikethrough]] .2 6.6 |
 . 3226 | 18 27.7 | +30 3 | 8.2 | 68.5 | 37.7 | 69.9 | 6.9
 [[\strikethrough]]6.9[[\strikethrough]] .2 7.1 |
 . 3271 | 18 23.9 | +29 50 | 8.5 | 68.1 | 37.6 | 70.0 |
 - 3272 | 18 24.0 | +29 53 | 8.6 | 68.2 | 37.7 | 70.1 |
 * [[\strikethrough]]3264[[\strikethrough]][[\strikethrough]]18
 22.8[[\strikethrough]][[\strikethrough]]+29
 56[[\strikethrough]][[\strikethrough]]8.4[[\strikethrough]][[\strikethrough]]
 \strikethrough]][[\strikethrough]][[\strikethrough]][[\strikethrough]]
 - 3264 | 18 22.8 | +29 56 | 8.4 | 68.0 | 37.6 | 70.0 |
 [[\margin]]M.P. [[\margin]]
 [[\margin]]3113 5.8 0 + 3 [[\margin]]
 . 3259 | 18 20.4 | +29 45 | 6.1 | 67.6 | 37.6 | 69.9 | 5.4 [[\strikethrough,
 underline]]5.6[[\strikethrough, underline]] .2 5.8 |
 - 3413 | 18 0.5 | +30 13 | 8.2 | 13.3 | 37.5 | 10.8 | 7.1 [[\strikethrough,
 underline]]7.0[[\strikethrough, underline]] .2 7.2 |



- 3409 | 18 59.4 | +30 31 | 6.5 | 73.2 | 37.6 | 70.9 | 7.0^{[[6.5]]}
~~6.8^{[[6.4]]}~~ .2
 7.0^{[[6.6]]} |
 - 3393 | 18 57.0 | +30 14 | 9.2 | 72.8 | 37.5 | 70.8 |
~~3392~~ 18
 56.6~~[[30]]~~ +30
 14~~[[8.5]]~~ 7
 2.4~~[[37.8]]~~ 7
 - 3392 | 18 56.6 | +30 14 | 8.5 | 72.8 | 37.5 | 70.9 | 7.4
~~7.1~~ .2 7.3 |
 - 3348 | 18 49.7 | +30 36 | 8.2 | 71.9 | 37.8 | 70.9 | 7.6^{[[7.4]]}
~~7.3^{[[7.0]]}~~ .2 7.5^{[[7.2]]} |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

December, 15 1887.
Plate 1657.

[[12 columned table]]

[V][H]TypeNo. LinesK|Focus|Other Lines.[V].[H].[V].[H].[Correc.]

[V]	[H]	Type	No.	Lines	K	Focus	Other Lines	[V]	[H]	[V]	[H]	[Correc.]
14.0	11.2	III?	2	K=H	1	—	7.0 22.4 30.6 48.1 +1.0					
14.6	12.6	III	2	K=H	1	—	7.3 25.2 30.3 45.3 +0.6					
14.4	13.5	II	5	K=H	1	—	7.2 27.0 30.4 43.5 +0.4					
14.4	14.0	II?	2	K=H	1	—	7.2 28.0 30.4 42.5 +0.3					
14.9	14.6	II	4	K=H	1	—	7.4 29.2 30.2 41.3 +0.1					
14.6	14.9	III	2	K=H	1	—	7.3 29.8 30.3 40.7 +0.0					
14.0	17.1	II	3	N	1	—	7.0 34.2 30.6 36.3 -0.6					
14.0	17.5	III	2	K=H	2	F?	7.0 35.0 30.6 35.5 -0.7					
14.2	18.2	I?	4	K=H	1	—	7.1 36.4 30.5 34.1 -0.9					
14.8	18.2	III	1	N	1	—	7.4 36.4 30.2 34.1 -0.9					
14.2	18.7	I	^	[d]	?	3	N	1	—	7.1 37.4 30.5 33.1 -0.1		
14.8	19.0	III	2	K=H	1	—	7.4 38.0 30.2 32.5 -0.1					
14.5	19.2	III	1	N	1	F?	7.2 38.4 30.4 32.1 -1.1					
14.5	20.1	II	6	N	2	F?	7.2 40.2 30.4 30.3 -1.4					
14.4	20.6	II	10	N	4	F?	7.2 41.2 30.4 29.3 -1.5					
13.8	7.3	II	3	N	1	—	6.9 14.6 30.7 55.9 +2.2					
13.7	8.2	I?	2	N	1	—	6.8 16.4 30.8 54.1 +2.0					
13.7	8.5	II	4	K=H	1	—	6.8 17.0 30.8 53.5 +1.8					
13.0	10.4	II	4	K=H	1	—	6.5 20.8 31.1 49.7 +1.4					
13.5	11.3	III	2	K=H	1	—	6.8 22.6 30.8 47.9 +1.0					
13.6	11.9	I	^	[a]	?	^	[16]	7.2 K=H	1	—	6.8 23.8 30.8 46.7 +0.9	
13.0	12.2	II	2	K=H	1	—	6.5 24.4 31.1 46.1 +0.8					
13.0	12.6	II	5	?	2	—	6.5 25.2 31.1 45.3 +0.7					
13.1	13.1	II?	2	K=H	1	—	6.6 26.2 31.0 44.3 +0.5					
13.0	14.6	III	2	K=H	2	—	6.5 29.2 31.1 41.3 +0.1					
13.0	15.8	III	2	K=H	1	—	6.5 31.6 31.1 38.9 -0.2					
13.5	16.2	II	6	N	2	F	6.8 32.4 30.8 38.1 -0.4					
13.4	18.1	II	5	N	1	—	6.7 36.2 30.9 34.3 -0.9					

108

December 15 1887
Plate 1657

V. H. Type No. Lines K. Focus Other Lines V. H. V. H. Correc.

14.0	11.2	III?	2	K=H	1	—	7.0 22.4 30.6 48.1 +1.0					
14.6	12.6	III	2	K=H	1	—	7.3 25.2 30.3 45.3 +0.6					
14.4	13.5	II	5	K=H	1	—	7.2 27.0 30.4 43.5 +0.4					
14.4	14.0	II?	2	K=H	1	—	7.2 28.0 30.4 42.5 +0.3					
14.9	14.6	II	4	K=H	1	—	7.4 29.2 30.2 41.3 +0.1					
14.6	14.9	III	2	K=H	1	—	7.3 29.8 30.3 40.7 +0.0					
14.0	17.1	II	3	N	1	—	7.0 34.2 30.6 36.3 -0.6					
14.0	17.5	III	2	K=H	2	F?	7.0 35.0 30.6 35.5 -0.7					
14.2	18.2	I?	4	K=H	1	—	7.1 36.4 30.5 34.1 -0.9					
14.8	18.2	III	1	N	1	—	7.4 36.4 30.2 34.1 -0.9					
14.2	18.7	I	^	[d]	?	3	N	1	—	7.1 37.4 30.5 33.1 -0.1		
14.8	19.0	III	2	K=H	1	—	7.4 38.0 30.2 32.5 -0.1					
14.5	19.2	III	1	N	1	F?	7.2 38.4 30.4 32.1 -1.1					
14.5	20.1	II	6	N	2	F?	7.2 40.2 30.4 30.3 -1.4					
14.4	20.6	II	10	N	4	F?	7.2 41.2 30.4 29.3 -1.5					
13.8	7.3	II	3	N	1	—	6.9 14.6 30.7 55.9 +2.2					
13.7	8.2	I?	2	N	1	—	6.8 16.4 30.8 54.1 +2.0					
13.7	8.5	II	4	K=H	1	—	6.8 17.0 30.8 53.5 +1.8					
13.0	10.4	II	4	K=H	1	—	6.5 20.8 31.1 49.7 +1.4					
13.5	11.3	III	2	K=H	1	—	6.8 22.6 30.8 47.9 +1.0					
13.6	11.9	I	^	[a]	?	^	[16]	7.2 K=H	1	—	6.8 23.8 30.8 46.7 +0.9	
13.0	12.2	II	2	K=H	1	—	6.5 24.4 31.1 46.1 +0.8					
13.0	12.6	II	5	?	2	—	6.5 25.2 31.1 45.3 +0.7					
13.1	13.1	II?	2	K=H	1	—	6.6 26.2 31.0 44.3 +0.5					
13.0	14.6	III	2	K=H	2	—	6.5 29.2 31.1 41.3 +0.1					
13.0	15.8	III	2	K=H	1	—	6.5 31.6 31.1 38.9 -0.2					
13.5	16.2	II	6	N	2	F	6.8 32.4 30.8 38.1 -0.4					
13.4	18.1	II	5	N	1	—	6.7 36.2 30.9 34.3 -0.9					

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]

No. | R.A. | Dec. | Magn. | H. | V. | H' | - | Br. | -

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

3345 | 18 49.4 | +30 42 | 8.5 | 71.8 |

[[[strikethrough]]71.8[[/strikethrough]]37.7 | 70.8 | 7.3^[[7.2]]

[[[strikethrough]]7.0^[[6.9]] [[/strikethrough]] | 2 7.2^[[7.1]]

3329 | 18 46.4 | +30 28 | 8.6 | 71.6 | 37.8 | 71.0 | 7.6^[[7.5]] |

[[[strikethrough]]7.3^[[7.0]] [[/strikethrough]] | 2 7.5^[[7.2]]

[[[strikethrough]]3307[[/strikethrough]]^[[3312]] |

[[[strikethrough]]18[[/strikethrough]]^[[18]]

[[[strikethrough]]43.9[[/strikethrough]]^[[44.2]] |

[[[strikethrough]]+30[[/strikethrough]]^[[+30]]

[[[strikethrough]]26[[/strikethrough]]^[[32]] |

[[[strikethrough]]8.9[[/strikethrough]]^[[8.8]] |

[[[strikethrough]]70.9[[/strikethrough]]^[[71.2]] | -^[[37.7]] | -^[[70.8]] | 7.0 |

[[[strikethrough]]6.8[[/strikethrough]] | 2 7.0

3303 | 18 43.1 | +30 31 | 8.5 | 71.1 | 37.7 | 70.8 | 7.3 |

[[[strikethrough]]7.0[[/strikethrough]] | 2 7.2

3297 | 18 41.7 | +30 16 | 8.9 | 70.9 | 37.7 | 70.8 | 7.3 |

[[[strikethrough]]7.1[[/strikethrough]] | 2 7.3

3294 | 18 41.1 | +30 26 | 7.8 | 70.9 | 37.7 | 70.9 | 7.3^[[7.0]] |

[[[strikethrough]]7.0^[[6.8]] [[/strikethrough]] | 2 7.2^[[7.0]]

3270 | 18 35.7 | +30 40 | 8.9 | 69.9 | 37.7 | 70.5 | 7.3 |

[[[strikethrough]]7.1[[/strikethrough]] | 2 7.3

3262 | 18 34.5 | +30 44 | 6.3 | 69.5 | 37.7 | 70.2 | 6.3^[[6.2]] |

[[[strikethrough]]6.2^[[6.0]] [[/strikethrough]] | 2 6.4^[[6.2]]

3253 | 18 33.0 | +30 38 | 8.9 | 69.4 | 37.7 | 70.3 | 7.0 |

[[[strikethrough]]6.8[[/strikethrough]] | 2 7.0

3255 | 18 33.1 | +30 20 | 7.4 | 69.5 | 37.7 | 70.4 | 7.3^[[6.9]] |

[[[strikethrough]]7.2^[[6.8]] [[/strikethrough]] | 2 7.4^[[7.0]]

3248 | 18 31.6 | +30 36 | 8.3 | 69.0 | 37.7 | 70.0 | 7.1 |

[[[strikethrough]]7.0[[/strikethrough]] | 2 7.2

3245 | 18 31.0 | +30 20 | 7.8 | 69.0 | 37.7 | 70.0 | 7.0^[[6.7]] |

[[[strikethrough]]6.8^[[6.6]] [[/strikethrough]] | 2 7.0^[[6.8]]

3244 | 18 30.7 | +30 29 | 7.0 | 69.1 | 37.7 | 70.2 | 6.9^[[6.6]] |

[[[strikethrough]]6.7^[[6.5]] [[/strikethrough]] | 2 6.9^[[6.7]]

[[[strikethrough]]3234[[/strikethrough]]^[[3236]] |

[[[strikethrough]]18[[/strikethrough]]^[[18]]

[[[strikethrough]]28.3[[/strikethrough]]^[[28.6]] |

[[[strikethrough]]+30[[/strikethrough]]^[[+30]]

[[[strikethrough]]27[[/strikethrough]]^[[25]] |

[[[strikethrough]]8.9[[/strikethrough]]^[[8.5]] |

[[[strikethrough]]68.5[[/strikethrough]]^[[68.8]] | -^[[37.6]] | -^[[70.2]] | 6.5 |

[[[strikethrough]]6.6[[/strikethrough]] | 2 6.8

[[right margin]]H.P. 3132 5.4 -6 -3 [[/right margin]] 3223 | 18 27.3 | +30

27 | 5.5 | 68.5 | 37.6 | 70.0 | 4.9 | [[[strikethrough]]4.6[[/strikethrough]] | 2

4.8

3397 | 18 58.4 | +30 48 | 8.7 | 73.0 | 37.7 | 70.8 | 7.3 |

[[[strikethrough]]7.0[[/strikethrough]] | 2 7.2

3390 | 18 56.4 | +30 51 | 8.4 | 72.8 | 37.6 | 70.8 | 7.5 |

[[[strikethrough]]7.2[[/strikethrough]] | 2 7.4

3389 | 18 55.9 | +30 47 | 8.8 | 72.9 | 37.6 | 71.1 | 7.4 |

[[[strikethrough]]7.1[[/strikethrough]] | 2 7.3

3410 | 18 51.4 | +31 11 | 8.5 | 72.2 | 37.7 | 70.8 | 6.7 |

[[[strikethrough]]6.8[[/strikethrough]] | 2 7.0

3344 | 18 49.3 | +30 56 | 7.5 | 71.9 | 37.7 | 70.9 | 7.3^[[7.0]] |

[[[strikethrough]]7.0^[[6.8]] [[/strikethrough]] | 2 7.2^[[7.0]]

[[[strikethrough]]3384[[/strikethrough]]^[[3335]] |

[[[strikethrough]]18[[/strikethrough]]^[[18]]

~~47.3~~^{48.0} |
~~+31~~⁺³⁰
~~14~~⁴⁸ |
~~8.5~~^{9.1} | -^{71.8} | -^{71.8} | -
^{37.6} | 7.5 | ~~7.3~~^{7.5} | 2 7.5
3384 | 18 47.3 | +31 14 | 8.5 | 71.7 | 37.7 | 70.9 | 7.0 |
~~6.8~~^{7.0} | 2 7.0
3382 | 18 46.4 | +31 13 | 8.5 | 71.6 | 37.7 | 70.9 | 6.6 |
~~6.5~~^{6.7} | 2 6.7
3376 | 18 45.2 | +31 11 | 8.9 | 71.4 | 37.8 | 70.9 | 7.3 |
~~6.9~~^{7.1} | 2 7.1
3365 | 18 41.7 | +31 14 | 7.3 | 71.9 | 37.7 | 71.8 | 6.7^{6.6} |
~~6.7~~^{6.4} | ~~6.9~~^{6.6} | 2 6.9^{6.6}
3351 | 18 38.6 | +31 19 | 8.5 | 70.2 | 37.8 | 70.4 | 7.2^{6.9} |
~~7.0~~^{6.6} | ~~7.2~~^{6.8} | 2 7.2^{6.8}
3280 | 18 37.5 | +30 60 | 8.0 | 69.9 | 37.8 | 70.3 | 6.5 |
~~6.3~~^{6.5} | 2 6.5
3390 | 18 33.2 | +31 3 | 8.5 | 69.4 | 37.7 | 70.3 | 6.7 |
~~6.5~~^{6.7} | 2 6.7

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

110

December, 15, 1887.

Plate 1657.

[[12 column table]]

V. | H. | Type. | No. Lines. | K. | Focus | Other Lines. | V. | H. | V. | H. |
Correc. |

13.1 | 18.3 | III | | 2 | K=H | 1 | - | 6.6 | 36.6 | 31.0 | 33.9 | -0.9 |

13.8 | 20.3 | I | | 8 | N | 2 | F? | 6.9 | 40.6 | 30.7 | 29.9 | -1.5 |

13.1 | 21.4 | I | | 3 | N | 1 | - | 6.6 | 42.8 | 31.0 | 27.7 | -1.8 |

13.0 | 22.7 | III | | 2 | K=H | 1 | - | 6.5 | 45.4 | 31.1 | 25.1 | -2.2 |

13.4 | 23.2 | III? | | 2 | K=H | 1 | - | 6.7 | 46.4 | 30.9 | 24.1 | -2.4 |

12.8 | 6.9 | III | | 2 | K=H | 1 | - | 6.4 | 13.8 | 31.2 | 56.7 | +2.4 |

12.2 | 7.0 | II^[[b]] | | 168 | 3 | K=H | 2 | F.seen | 6.1 | 14.0 | 31.5 | 56.5 |
+2.4 |

12.9 | 7.2 | I | | 6 | K=.6H | 1 | - | 6.4 | 14.4 | 31.2 | 56.1 | +2.2 |

12.9 | 7.9 | II^[[a]] | | 169 | 3 | K=H | 1 | F.seen | 6.4 | 15.8 | 31.2 | 54.7 |
+2.0 |

12.4 | 9.5 | I | | 8 | K=.8H | 2 | F | 6.2 | 19.0 | 31.4 | 51.5 | +1.6 |

12.6 | 9.7 | I^[[d]] | | 4 | ? | 1 | seen | 6.3 | 19.4 | 31.3 | 51.1 | +1.5 |

12.6 | 13.5 | I | | 10 | N. | 3 | F. | 6.3 | 27.0 | 31.3 | 43.5 | +0.4 |

12.6 | 13.8 | I | | 6 | N | 1 | - | 6.3 | 27.6 | 31.3 | 42.9 | +0.3 |

12.4 | 14.3 | I | | 9 | N | 4 | F | 6.2 | 28.6 | 31.4 | 41.9 | +0.2 |

12.8 | 14.8 | I | | 2 | N | 1 | - | 6.4 | 29.6 | 31.2 | 40.9 | +0.1 |

12.0 | 15.8 | II^[[a]] | | 170 | 3 | K=H | 4 | F.seen | 6.0 | 31.6 | 31.6 | 38.9 | -
0.2 |

12.6 | 16.1 | I? | | 4 | K=H | 1 | - | 6.3 | 32.2 | 31.3 | 38.3 | -0.3 |

12.6 | 16.8 | I | | 10 | N | 3 | F | 6.3 | 33.6 | 31.3 | 36.9 | -0.5 |

12.4 | 17.3 | I | | 8 | K=H | 2 | F | 6.2 | 34.6 | 31.4 | 35.9 | -0.6 |

12.4 | 19.4 | I? | | 2 | N | 1 | - | 6.2 | 38.8 | 31.4 | 31.7 | -1.2 |

12.2 | 19.8 | II | | 2 | K=H | 1 | - | 6.1 | 39.6 | 31.5 | 30.9 | -1.5 |

12.4 | 21.6 | III | | 2 | K=H | 1 | - | 6.2 | 43.2 | 31.4 | 27.3 | -1.9 |

11.1 | 6.1 | I? | | 3 | N | 1 | -
| 5.6 | 12.2 | 32.0 | 58.3 | +2.8 |

11.0 | 8.5 ~~1~~ ~~1~~ | | 7 | N | 2 | F | 5.5 |
17.0 ~~37.0~~ ~~32.1~~ | 43.5 ~~33.5~~ |
+2.0 ~~-1.0~~ |

11.5 | 9.2 | III^[[b.c]] | 171 | 3 | K=H | 3 | Bright F. seen | 5.8 | 18.4 | 31.8 |
52.1 | +1.7 |

11.8 | 10.4 | I | | 5 | K=H | 2 | - | 5.9 | 20.8 | 31.7 | 49.7 | +1.4 |

11.0 | 11.2 | I | | 5 | N | 2 | -
| 5.5 | 22.4 | 32.1 | 48.1 | +1.1 |

11.1 | 12.3 | III | | 2 | K=H | 1 | - | 5.6 | 24.6 | 32.0 | 45.9 | +0.8 |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]

No.	R.A.	Dec.	Mag.	H	V	H'	Br.		
---	---	---	---	---	---	---	---	---	---

[-3313|18 32.5|+31 12|7.7|69.1|37.8|70.0|6.7|6.9|
[[~~3313~~]]6.6[[~~3313~~]]6.8|2 7.1}

|.3227|18 27.9|+30 47|7.5|68.5|37.7|70.0|5.5|
[[~~3227~~]]5.5[[~~3227~~]]2 5.7

|.3282-18 25.5|+31 8|8.7|68.3|37.7|70.1|7.4
[[~~3282~~]]7.2[[~~3282~~]]3 7.2|

[-3272|18 22.3|+31 7|7.7|67.7|37.6|69.9|7.2|7.5|[[~~3272~~]]7.0|7.3[[~~3272~~]]7.2|2 7.5|]

[-3206|18 21.4|+30 53|6.8|67.8|37.6|70.2|6.8|7.0|[[~~3206~~]]6.5|6.8[[~~3206~~]]6.7|2 7.0|]

[-3457-18 59.7|+31 13|8.0|73.5|37.6|71.1|7.0|7.2|6.8|7.0|
[[~~3457~~]]6.8|7.0|7.0|2 7.2|]

[-3453|18 59.4|+31 32|6.0|73.4|37.6|71.0|6.1|6.6|
[[~~3453~~]]6.0[[~~3453~~]]6.2|2 6.5|]

[-3448|18 58.8|+31 9|8.2|73.2|37.6|71.0|6.9
[[~~3448~~]]6.7[[~~3448~~]]2 6.9|]

[-3441|18 57.2|+31 12|8.2|73.0|37.6|71.0|6.7
[[~~3441~~]]6.5[[~~3441~~]]2 6.7

[-3419|18 53.8|+31 30|8.2|72.8|37.7|71.2|6.5
[[~~3419~~]]6.4[[~~3419~~]]2 6.6|]

[[3417|18 53.1|+31 19|9.1|72.5|37.6|71.0|7.1
[[~~3417~~]]6.8[[~~3417~~]]2 7.0|]

|.3373|18 44.3|+31 28|7.0|71.3|37.8|70.9|5.7|
[[~~3373~~]]5.4[[~~3373~~]]2 5.6|]

|.3371|18 43.7|+31 25|8.5|71.3|37.8|71.0|6.9|
[[~~3371~~]]6.5[[~~3371~~]]2 6.7|]

|H.P. 3184 5.8 -4 -1|3369|18 42.5|+31 36|6.0|71.1|37.8|70.9|5.3
[[~~3369~~]]5.2[[~~3369~~]]2 5.4|]

|.3365|18 41.7|+31 14|7.3|91.3|37.6|71.2|7.5
[[~~3365~~]]7.1[[~~3365~~]]2 7.3|]

No.	R.A.	Dec.	Mag.	H	V	H'	Br.		
3313	18 32.5	+31 12	7.7	69.1	37.8	70.0	6.7	6.9	
3227	18 27.9	+30 47	7.5	68.5	37.7	70.0	5.5		
3282	18 25.5	+31 8	8.7	68.3	37.7	70.1	7.4		
3272	18 22.3	+31 7	7.7	67.7	37.6	69.9	7.2	7.5	
3206	18 21.4	+30 53	6.8	67.8	37.6	70.2	6.8	7.0	
3457	18 59.7	+31 13	8.0	73.5	37.6	71.1	7.0	7.2	6.8
3453	18 59.4	+31 32	6.0	73.4	37.6	71.0	6.1	6.6	
3448	18 58.8	+31 9	8.2	73.2	37.6	71.0	6.9		
3441	18 57.2	+31 12	8.2	73.0	37.6	71.0	6.7		
3419	18 53.8	+31 30	8.2	72.8	37.7	71.2	6.5		
3417	18 53.1	+31 19	9.1	72.5	37.6	71.0	7.1		
3373	18 44.3	+31 28	7.0	71.3	37.8	70.9	5.7		
3371	18 43.7	+31 25	8.5	71.3	37.8	71.0	6.9		
H.P. 3184	5.8	-4 -1	3369	18 42.5	+31 36	6.0	71.1	37.8	70.9
3365	18 41.7	+31 14	7.3	91.3	37.6	71.2	7.5		

| -|3348|18 38.4|+31 47|5.5|70.0|37.8|70.2|5.4| ~~5.3|2 5.5|~~

| -|~~3347~~ ~~3346~~~~18~~
38.3~~18 37.8|~~ ~~31 32~~~~22|~~
~~8.9|70.0|37.7|70.3|7.5|~~
7.1 ~~2 7.3|~~

| .|3332|18 36.2|+31 29|6.5|69.8|37.8|70.5|5.5
~~5.4|2 5.6|~~

| -|3327|18 35.0|+31 30|7.7|69.6|37.7|70.2|6.5
~~6.2|2 6.4|~~

|3323|19 1.7|+32.1
8.4|13.9|37.6|11.1|6.9|~~6.9|~~
2 7.1|

| .|~~3164|18 32.5|+32~~
7|8.8|69.5|37.6|~~3299|18 56.0|+32~~
11|8.0|73.0|37.7|71.0|6.2|~~5.9|2 6.1|~~

| -|3424|18 64.5|+31
57|5.8|72.9|37.8|71.2|5.7|61|~~5.8|6.1|~~
6.0|6.3|

| -|3411|18 51.6|+31
49|7.4|72.4|37.7|71.0|6.5|~~6.2|2 6.2|~~

| .|3254|18 49.8|+32
13|7.7|72.2|97.7|71.1|6.4|~~6.1|2 6.3|~~

| -|3237|18 47.3|+32
14|8.6|71.9|37.8|71.1|7.3|7.5|~~6.8|7.2|~~
2 7.0|7.4|

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

112

December, 15, 1887.

Plate 1657

[[12 columned table]]

[V|H|Type|No. Lines|K|Focus|Other Lines.|V.|H.|V.|H.|Correc.]

V	H	Type	No. Lines	K	Focus	Other Lines	V.	H.	V.	H.	Correc.
11.1	14.4	I	4	N	1	5.6	28.8	32.0	41.7	+0.2	
11.2	14.6	II	a? 172	2	K=H	1	seen	5.6	29.2	32.0	41.3
										+0.1	
11.4	14.9	II	2	K=H	1	5.7	29.8	31.9	40.7	+0.0	
11.3	15.0	I	3	N	1	5.6	30.0	32.0	40.5	0.0	
11.4	18.0	III	2	K=H	1	5.7	36.0	31.9	34.5	-0.9	
11.4	20.1	II	2	K=H	1	5.7	40.2	31.9	30.3	-	
											1.5
11.1	21.2	I	7	N	2	F	5.6	42.4	32.0	28.1	-1.9
11.6	21.9	IIa	2	K=H	1	F seen	5.8	43.8	31.8	26.7	-2.0
11.4	22.9	II?	173	2	K=H	1	5.7	45.8	31.9	24.7	-2.4
11.0	24.0	I?	4	N.	1	5.5	48.0	32.1	22.5	-2.8	
10.8	6.0	I?	9	K=H	4	F	5.4	12.0	32.2	58.5	+2.8
10.2	7.4	IIa	2	K=H	1	seen	5.1	14.8	32.5	55.7	+2.5
10.5	9.7	I	12	?	5	F	5.2	19.4	32.4	51.1	+1.6
10.1	10.5	IIa	3	K=H	3	F seen	5.0	21.0	32.6	49.5	+1.4
10.8	13.5	I	10	K=2H	4	F	5.4	27.0	32.2	43.5	+0.5
10.3	13.5	I	9	N	3	F?	5.2	27.0	32.4	43.5	+0.5
10.9	14.0	I	4	K=H	1	5.4	28.0	32.2	42.5	+0.3	
10.3	14.1	III	2	K=H	1	5.2	28.2	32.4	42.3	+0.2	
10.1	16.8	I	3	N	1	5.0	33.6	32.6	36.9	-0.5	
10.2	17.8	I	2	N	1	5.1	35.6	32.5	34.9	-0.8	
10.3	21.5	I	5	N	2	5.2	43.0	32.4	27.5	-2.0	
10.0	21.9	I	5	K=H	1	5.0	43.8	32.6	26.7	-2.2	
10.5	22.5	III?	2	K=H	1	5.2	45.0	32.4	25.5	-2.4	
9.0	7.4	I	4	K=H	1	4.5	14.8	33.1	55.7	+2.5	
9.6	7.5	Id?	4	K=H	1	seen	4.8	15.0	32.8	55.5	+2.4
9.6	9.6	I	7	K=.3H	2	4.8	19.2	32.8	51.3	+1.7	
9.8	10.2	I	6	K=H	2	F?	4.9	20.4	32.7	50.1	+1.5
9.2	12.1	I	4	K=H	1	4.6	24.2	33.0	46.3	+0.9	

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

112

December, 15, 1887
Plate 1657

V.	H.	Type	No. Lines	K	Focus	Other Lines	V.	H.	V.	H.	Correc.
11.1	14.4	I	4	N	1	5.6	28.8	32.0	41.7	+0.2	
11.2	14.6	II	a? 172	2	K=H	1	seen	5.6	29.2	32.0	41.3
										+0.1	
11.4	14.9	II	2	K=H	1	5.7	29.8	31.9	40.7	+0.0	
11.3	15.0	I	3	N	1	5.6	30.0	32.0	40.5	0.0	
11.4	18.0	III	2	K=H	1	5.7	36.0	31.9	34.5	-0.9	
11.4	20.1	II	2	K=H	1	5.7	40.2	31.9	30.3	-	
											1.5
11.1	21.2	I	7	N	2	F	5.6	42.4	32.0	28.1	-1.9
11.6	21.9	IIa	2	K=H	1	F seen	5.8	43.8	31.8	26.7	-2.0
11.4	22.9	II?	173	2	K=H	1	5.7	45.8	31.9	24.7	-2.4
11.0	24.0	I?	4	N.	1	5.5	48.0	32.1	22.5	-2.8	
10.8	6.0	I?	9	K=H	4	F	5.4	12.0	32.2	58.5	+2.8
10.2	7.4	IIa	2	K=H	1	seen	5.1	14.8	32.5	55.7	+2.5
10.5	9.7	I	12	?	5	F	5.2	19.4	32.4	51.1	+1.6
10.1	10.5	IIa	3	K=H	3	F seen	5.0	21.0	32.6	49.5	+1.4
10.8	13.5	I	10	K=2H	4	F	5.4	27.0	32.2	43.5	+0.5
10.3	13.5	I	9	N	3	F?	5.2	27.0	32.4	43.5	+0.5
10.9	14.0	I	4	K=H	1	5.4	28.0	32.2	42.5	+0.3	
10.3	14.1	III	2	K=H	1	5.2	28.2	32.4	42.3	+0.2	
10.1	16.8	I	3	N	1	5.0	33.6	32.6	36.9	-0.5	
10.2	17.8	I	2	N	1	5.1	35.6	32.5	34.9	-0.8	
10.3	21.5	I	5	N	2	5.2	43.0	32.4	27.5	-2.0	
10.0	21.9	I	5	K=H	1	5.0	43.8	32.6	26.7	-2.2	
10.5	22.5	III?	2	K=H	1	5.2	45.0	32.4	25.5	-2.4	
9.0	7.4	I	4	K=H	1	4.5	14.8	33.1	55.7	+2.5	
9.6	7.5	Id?	4	K=H	1	seen	4.8	15.0	32.8	55.5	+2.4
9.6	9.6	I	7	K=.3H	2	4.8	19.2	32.8	51.3	+1.7	
9.8	10.2	I	6	K=H	2	F?	4.9	20.4	32.7	50.1	+1.5
9.2	12.1	I	4	K=H	1	4.6	24.2	33.0	46.3	+0.9	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[12 columned table]]
No.	R.A.	Dec.	Mag.	H	V	H'		Br.		
*3212	18 42.2	+32 10	8.8	71.0	37.8	70.8				
6.9[[/strikethrough]]6.8[[/strikethrough]].2	7.0									
—3210	18 42.2	+32 10	8.8	71.0	37.8	70.8	6.9[[/strikethrough]]			
6.9[[/strikethrough]].2	7.1									
—3203	18 40.9	+32 9	8.9	70.7	37.9	70.8	6.9[[/strikethrough]]			
6.9[[/strikethrough]].2	7.1									
*3201	18 40.6	+32 13	8.6	70.6	37.8	70.6	7.1[[/strikethrough]]			
6.8 [[/strikethrough]].2	7.0									
—3172	18 33.6	+32 6	8.1	69.6	27.8	70.5				
7.3^[[6.8]]][[/strikethrough]]7.0^[[6.5]]][[/strikethrough]].2	7.2^[[6.7]]]									
—3152	18 28.5	+32 2	8.3	68.7	37.7	70.2	7.1[[/strikethrough]]			
6.9 [[/strikethrough]].2	7.1									
*3143	18 25.7	+32 9	7.2	68.1	37.8	70.0	6.2[[/strikethrough]] 6.0			
[[/strikethrough]].2	6.2									
—3279	18 24.3	+31 45	8.2	68.1						
37.6	70.1	7.1 [[/strikethrough]] 6.9 [[/strikethrough]] 2 7.1								
—3271	18 21.8	+31 54	7.8	67.6	37.6	70.0	7.1[[/strikethrough]]			
6.9 [[/strikethrough]].2	7.1									
3118	18 19.0	+32 4	7.8	67.0	37.6	79.8				
6.8[[/strikethrough]][[underlined]]6.9[[/underlined]][[/strikethrough]].2	7.1									
—3326	19 1.9	+32 16	6.0	13.9	37.7	11.1				
5.2[[/strikethrough]][[underlined]]5.2[[/underlined]][[/strikethrough]].2	5.4									
 —3306 | 18 58.8 | +32 32 | 8.5 | 73.6 | 37.6 | 71.1 | 7.0[[/strikethrough]]
 6.8 [[/strikethrough]].2|7.0 |
 —3286 | 18 53.5 | +32 29 | 3.2 | 72.9 | 37.7 | 71.3 | 7.3[[/strikethrough]]
 4.0 [[/strikethrough]].2|4.2 |
 —3267 | 18 51.6 | +32 43 | 6.7 | 72.6 | 37.7 | 71.2 | 5.4[[/strikethrough]]
 5.4 [[/strikethrough]].2|5.6 |
 H.P. 3192 5.1 -3.0 | 3228 | 18 44.5 | +32 24 | 5.5 | 71.5 | 37.8 | 71.0 |
 4.7[[/strikethrough]]4.6[[/strikethrough]].2|4.8 |
 H.P. 3191 5.6 -1 +2 | 3227 | 18 44.4 | +32 39 | 6.3 | 71.4 | 37.8 | 70.9 |
 5.2[[/strikethrough]]5.3[[/strikethrough]].2| 5.5 |
 —3221 | 18 43.3 | +32 20 | 8.5 | 71.3 | 37.7 | 71.0 |
 6.9[[/strikethrough]]6.8[[/strikethrough]].2|7.0 |
 —3220 | 18 43.1 | +32 37 | 7.2 | 71.3 | 37.8 | 71.1
 7.4^[[6.9]]][[/strikethrough]]7.1^[[6.8]]][[/strikethrough]].2|7.0^[[7.3]]]
 *3183 | 18 36.2 | +32 43 | 9.3 | 69.8 | 37.7 | 70.3 |
 7.3[[/strikethrough]]7.2 [[/strikethrough]].2|7.4 |
 *3175 | 18 33.8 | +32 34 | 9.1 | 69.4 | 37.7 | 70.2 |
 7.4[[/strikethrough]]7.3 [[/strikethrough]].2|7.5 |
 *3141 | 18 25.2 | +32 33 | 7.7 | 68.2 37.8 | 70.2 | 6.3[[/strikethrough]]6.2
 [[/strikethrough]].2|6.4 |
 —3137 | 18 24.2 | +32 40 | 8.2 | 68.0 | 37.7 | 70.2 |
 6.5[[/strikethrough]]6.3 [[/strikethrough]].2|6.5 |
 —3129|18 22.6 | +32 22 | 8.5 | 67.6 | 37.6 | 70.0
 7.2^[[7.1]]][[/strikethrough]]6.9^[[6.8]]][[/strikethrough]].2|7.1^[[7.0]]]
 —3310|18 58.8 | +33 6
 7.7|73.6|37.6|71.1|6.8[[/strikethrough]]6.8[[/strikethrough]].2|7.0 |
 —3305|18 58.6 | +32 50
 8.4|73.6|37.6|71.2|6.9[[/strikethrough]]6.9[[/strikethrough]].2|7.1 |
 *3287|18 53.6 | +32 56
 7.4|72.8|37.7|71.2|6.0[[/strikethrough]]6.0[[/strikethrough]].2|6.2 |
 —3271|18 52.2 | +32 48
 8.0|72.6|37.7|71.1|6.4[[/strikethrough]]6.2[[/strikethrough]].2|6.4 |

113

No.	R.A.	Dec.	Mag.	H	V	H'	Br.
3212	18 42.2	+32 10	8.8	71.0	37.8	70.8	
3210	18 42.2	+32 10	8.8	71.0	37.8	70.8	6.9
3203	18 40.9	+32 9	8.9	70.7	37.9	70.8	6.9
3201	18 40.6	+32 13	8.6	70.6	37.8	70.6	7.1
3172	18 33.6	+32 6	8.1	69.6	27.8	70.5	
3152	18 28.5	+32 2	8.3	68.7	37.7	70.2	7.1
3143	18 25.7	+32 9	7.2	68.1	37.8	70.0	6.2
3279	18 24.3	+31 45	8.2	68.1			
3271	18 21.8	+31 54	7.8	67.6	37.6	70.0	7.1
3118	18 19.0	+32 4	7.8	67.0	37.6	79.8	
3326	19 1.9	+32 16	6.0	13.9	37.7	11.1	
3306	18 58.8	+32 32	8.5	73.6	37.6	71.1	7.0
3286	18 53.5	+32 29	3.2	72.9	37.7	71.3	7.3
3267	18 51.6	+32 43	6.7	72.6	37.7	71.2	5.4
3192	18 44.5	+32 24	5.5	71.5	37.8	71.0	
3228	18 44.4	+32 39	6.3	71.4	37.8	70.9	
3221	18 43.3	+32 20	8.5	71.3	37.7	71.0	
3220	18 43.1	+32 37	7.2	71.3	37.8	71.1	
3183	18 36.2	+32 43	9.3	69.8	37.7	70.3	
3175	18 33.8	+32 34	9.1	69.4	37.7	70.2	
3141	18 25.2	+32 33	7.7	68.2	37.8	70.2	6.3
3137	18 24.2	+32 40	8.2	68.0	37.7	70.2	
3129	18 22.6	+32 22	8.5	67.6	37.6	70.0	
3310	18 58.8	+33 6					
3305	18 58.6	+32 50					
3287	18 53.6	+32 56					
3271	18 52.2	+32 48					
3240	18 47.8	+32 8	8.8	71.2	37.6	70.0	

|—|3245|18 47.8| +33 ~~3~~2 | 8.8 | 72.0 |
37.6 | 71.1 | 7.2~~6.8~~2|7.0 |

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

December, 1887

Plate. 1657

[[12 columned table]]

V.	H.	Type.	No. Lines.	K.	Focus.	Other Lines.	V.	H.	V.	Correc.		
9.1	12.4	I	5	1	-	4.6	24.8	33.0	45.7	+0.8		
9.3	13.4	I?	11?	?	5	F?	4.6	26.8	33.0	43.7	+0.5	
9.1	13.9	II	2	K=H	1	-	4.6	27.8	33.0	42.7	+0.4	
9.1	14.7	III	1	1	-	4.6	29.4	33.0	41.1	+0.1		
9.5	15.4	III	2	K=H	1	F?	4.8	30.8	32.8	39.7	-0.1	
9.1	18.1	II	2	K=H	1	-	4.6	36.2	33.0	34.3	-1.0	
9.0	23.3	II?	2	K=H	1	-	4.5	46.6	33.1	23.9	-2.8	
8.4	6.3	II^[a]]?	176	2	K=H	1	seen	4.2	12.6	33.4	57.9	+3.0
8.6	8.5	I	8	3	F	4.3	17.0	33.3	53.5	+2.1		
8.7	8.8	I?	4?	1	-	4.4	17.6	33.2	52.9	+2.0		
8.3	8.8	III	3	K=H	2	F	4.2	17.6	33.4	52.9	+2.0	
8.4	9.1	II	2	K=H	1	-	4.2	18.2	33.4	52.3	+1.9	
8.9	10.1	II	2	K=H	1	-	4.4	20.2	33.2	50.3	+1.6	
8.2	10.9	I	8	2	-	4.1	21.8	33.5	48.7	+1.4		
8.0	11.4	Ila	177	2	K=H	3	F seen?	4.0	22.8	33.6	47.7	+1.2
8.5	13.6	I	7	K=.2H	2	F	4.2	27.2	33.4	43.3	+0.5	
8.2	13.4	II	2	K=H	1	-	4.1	26.8	33.5	43.7	+0.5	
8.4	14.0	III	2	K=H	1	-	4.2	28.0	33.4	42.5	+0.4	
8.9	15.7	I	3	1	-	4.4	31.4	33.2	39.1	-0.2		
8.4	17.3	Ila	178	3	K=H	2	F seen	4.2	34.6	33.4	35.9	-0.7
8.0	17.6	I?	5	?	1	-	4.0	35.2	33.6	35.3	-0.9	
8.2	17.9	II?	1	1	-	4.1	35.8	33.5	34.7			
8.3	21.0	III	2	K=H	1	-	4.2	42.0	33.4	28.5	-2.0	
8.6	21.5	II?	2	K=H	1	-	4.3	43.0	33.3	27.5	-2.1	
7.6	7.4	III	2	K=H	1	-	3.8	14.8	33.8	55.7	+2.6	
7.5	7.6	I	6	2	-	3.8	15.2	33.8	55.3	+2.6		
7.6	8.6	I	3	1	-	3.8	17.2	33.8	53.3	+2.1		
7.7	9.4	Ila?	179	2	K=H	1	F? seen	3.8	18.8	33.8	51.7	+1.9

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24



~~3192~~~~18~~
~~39.5~~~~+33~~
~~2~~~~70.~~
~~9~~~~37.4~~~~-~~
~~3171~~~~18 35.0~~~~+33~~
~~33~~~~7.3~~~~69.6~~~~37.8~~~~70.3~~~~6.4~~~~6.3~~~~2~~~~6.5~~
~~3165~~~~18 34.3~~~~+33~~
~~45~~~~8.7~~~~69.5~~~~37.8~~~~70.4~~~~7.2~~~~6.8~~~~2~~~~7.0~~
~~3164~~~~18 33.6~~~~+33~~
~~37~~~~8.9~~~~69.4~~~~37.7~~~~70.4~~~~7.5~~~~7.1~~~~2~~~~7.3~~
~~3124~~~~18 26.0~~~~+33~~
~~32~~~~7.5~~~~68.0~~~~37.7~~~~70.0~~~~7.1~~~~6.8~~~~6.9~~~~6.6~~~~gh~~~~2~~~~7.1~~~~6.8~~
~~3118~~~~18 24.9~~~~+33~~
~~16~~~~8.5~~~~67.9~~~~37.6~~~~70.0~~~~7.2~~~~7.0~~~~2~~~~7.2~~
~~3312~~~~18 59.0~~~~+33~~
~~52~~~~7.5~~~~73.8~~~~37.7~~~~71.2~~~~7.2~~~~7.0~~~~6.9~~~~6.7~~~~gh~~~~2~~~~7.1~~~~6.9~~
~~3309~~~~18 58.6~~~~+33~~
~~56~~~~7.2~~~~73.8~~~~37.7~~~~71.2~~~~6.1~~~~6.0~~~~2~~~~6.2~~
~~3293~~~~18 56.2~~~~+33 53~~~~8.7~~~~73.4~~~~37.7~~~~71.3~~
~~7.0~~~~6.7~~~~2~~~~6.9~~
~~3287~~~~18~~
~~55.6~~~~+33~~
~~36~~~~6.8~~~~7~~
~~2.8~~~~-~~
~~3283~~~~18 54.4~~~~+33~~
~~54~~~~7.9~~~~73.2~~~~37.7~~~~71.3~~~~6.7~~~~6.4~~~~2~~~~6.6~~

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

December 15, 1887.

Plate 1657.

[[12 columned table]]

[V|H|Type|No. Lines|K|Focus|Other Lines.|V.|H.|V.|H.|Correc.]

7.6|10.4|III|1|N|1|-3.8|20.3|33.8|49.7|+1.5|

7.1|13.0|II|7|K=.5H|2|-3.6|26.0|34.0|44.5|+0.7|

7.4|13.5|II|5|N|1|-3.7|27.0|33.9|43.5|+0.5|

7.8|15.5|III|2|K=H|1|-3.9|31.0|33.7|39.5|-0.2|

7.3|16.3|III|2|K=H|1|-3.6|32.6|34.0|37.9|-0.4|

7.8|16.7|II|8|N|2|F|3.9|33.4|33.7|37.1|-0.5|

7.9|17.0|II|2|K=H|1|-4.0|34.0|33.6|36.5|-0.7|

7.1|17.2|III|2|K=H|1|-3.6|34.4|34.0|36.1|-0.8|

7.6|18.5|III|2|K=H|1|-3.8|37.0|33.8|33.5|-1.1|

7.0|19.3|I|1|b|180|9|N|3|F. seen|3.5|38.6|34.1|31.9|-1.5|[[right margin]]H.P. 31|[[/right margin]]

7.0|19.6|III|3|K=H|1|F|3.5|39.2|34.1|31.3|-1.6|

7.0|19.7|II|1|a|181|2|K=H|1|seen|3.5|39.4|34.1|31.1|-1.6|

7.9|[[/strikethrough]]1|[[/strikethrough]]21.1|II|2|K=H|1|-

4.0|[[/strikethrough]]2|[[/strikethrough]]42.2|33.6|[[/strikethrough]]4|[[/strikethrough]]28.3|[[/strikethrough]]+1.3|[[/strikethrough]]-2.0|

6.0|[[/strikethrough]]1|[[/strikethrough]]5.6|II|6|N|2|-

3.0|[[/strikethrough]]3|[[/strikethrough]]11.2|34.6|[[/strikethrough]]39.3|[[/strikethrough]]59.3|[[/strikethrough]]-0.2|[[/strikethrough]]+3.3|

6.9|6.0|II|1|a|182|2|K=H|1|-3.4|12.0|34.2|58.5|+3.1|

6.8|6.4|II|3|N|1|-3.4|12.8|34.2|57.7|+3.0|

6.5|8.6|II|3|N|1|-3.2|17.2|34.4|53.3|+2.2|

6.1|10.4|II|2|K=H|2|-3.0|20.8|34.6|49.7|+1.6|

6.6|11.9|III|2|K=H|1|-3.3|23.8|34.3|46.7|+1.0|

6.8|13.7|III|2|K=H|1|-3.4|27.4|34.2|43.1|+0.5|

6.5|14.1|II|6|N|1|-3.2|28.2|34.4|42.3|

6.8|15.0|II|8|K=.3H|2|F|3.4|30.0|34.2|40.5|0.0|

6.8|15.7|II|7|K=.5H|2|-3.4|31.4|34.2|39.1|-0.2|

6.4|16.4|II|8|N|3|F|3.2|32.8|34.4|37.7|-0.5|

6.0|18.5|III|2|K=H|1|-3.0|37.0|34.6|33.5|-1.2|

6.6|20.0|II|3|N|1|-3.3|40.0|34.3|30.5|-1.7|

6.2|22.7|II|3|N|1|-3.1|45.4|34.5|25.1|-2.8|

5.1|11.7|II|2|N|1|-2.6|23.4|35.0|47.1|+1.1|

116

December 15, 1887.
Plate 1657

T.	H.	Type	No.	Lines	K	Focus	Other Lines	V.	H.	V.	H.	Correc.		
7.6	10.4	III	1	N	1	-3.8	20.3	33.8	49.7	+1.5				
7.1	13.0	II	7	K=.5H	2	-3.6	26.0	34.0	44.5	+0.7				
7.4	13.5	II	5	N	1	-3.7	27.0	33.9	43.5	+0.5				
7.8	15.5	III	2	K=H	1	-3.9	31.0	33.7	39.5	-0.2				
7.3	16.3	III	2	K=H	1	-3.6	32.6	34.0	37.9	-0.4				
7.8	16.7	II	8	N	2	F	3.9	33.4	33.7	37.1	-0.5			
7.9	17.0	II	2	K=H	1	-4.0	34.0	33.6	36.5	-0.7				
7.1	17.2	III	2	K=H	1	-3.6	34.4	34.0	36.1	-0.8				
7.6	18.5	III	2	K=H	1	-3.8	37.0	33.8	33.5	-1.1				
7.0	19.3	I	1	b	180	9	N	3	F. seen	3.5	38.6	34.1	31.9	-1.5
7.0	19.6	III	3	K=H	1	F	3.5	39.2	34.1	31.3	-1.6			
7.0	19.7	II	1	a	181	2	K=H	1	seen	3.5	39.4	34.1	31.1	-1.6
7.9	[[/del]]1	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]
4.0	[[/del]]2	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]
28.3	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]
6.0	[[/del]]1	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]
3.0	[[/del]]3	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]
59.3	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]	[[/del]]
6.9	6.0	II	1	a	182	2	K=H	1	-3.4	12.0	34.2	58.5	+3.1	
6.8	6.4	II	3	N	1	-3.4	12.8	34.2	57.7	+3.0				
6.5	8.6	II	3	N	1	-3.2	17.2	34.4	53.3	+2.2				
6.1	10.4	II	2	K=H	2	-3.0	20.8	34.6	49.7	+1.6				
6.6	11.9	III	2	K=H	1	-3.3	23.8	34.3	46.7	+1.0				
6.8	13.7	III	2	K=H	1	-3.4	27.4	34.2	43.1	+0.5				
6.5	14.1	II	6	N	1	-3.2	28.2	34.4	42.3					
6.8	15.0	II	8	K=.3H	2	F	3.4	30.0	34.2	40.5	0.0			
6.8	15.7	II	7	K=.5H	2	-3.4	31.4	34.2	39.1	-0.2				
6.4	16.4	II	8	N	3	F	3.2	32.8	34.4	37.7	-0.5			
6.0	18.5	III	2	K=H	1	-3.0	37.0	34.6	33.5	-1.2				
6.6	20.0	II	3	N	1	-3.3	40.0	34.3	30.5	-1.7				
6.2	22.7	II	3	N	1	-3.1	45.4	34.5	25.1	-2.8				
5.1	11.7	II	2	N	1	-2.6	23.4	35.0	47.1	+1.1				

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]
 | No. | R.A. | Dec. | Mag. | H | V | H' | Br. | | |
 |-----|-----|-----|-----|-----|-----|-----|-----|
 | 3268 | 18 51.9 | +33
 58 | 8.6 | 72.7 | 37.8 | 71.2 | 7.4 | 7.5 | ~~7.0~~ | 7.4 | ~~7.0~~ |
 2 | 7.2 | 7.6 |
 | 3334 | 18 45.8 | +34
 13 | 7.3 | 71.8 | 37.8 | 71.1 | 6.3 | ~~6.2~~ | ~~6.2~~ | 6.4 |
 | 3212 | 18 43.4 | +33 52 | 8.7 | | |
 | 3329 | 18 44.3 | +34 5 | 8.3 | 71.3 | 37.8 | 70.8
 6.8 | ~~6.5~~ | ~~6.5~~ | 2 | 6.7 |
 | 3197 | 18 40.6 | +33 58 | 8.8 | | |
 | 3190 | 3191 | 18 39.2 | 18 39.2 | +33 51 | +33
 52 | 8.0 | 8.6 | 70.2 | 70.2 | 37.8 | 37.8 | 70.4 | 6.4 | 6.5 | ~~6.4~~ |
 5 | ~~6.6~~ | 6.7 |
 | 3180 | 18 36.4 | +33 58 | 7.7 | | |
 | 3289 | 18 37.1 | +34
 11 | 9.0 | 69.7 | 37.8 | 70.1 | 7.3 | 7.4 | ~~6.8~~ | 7.0 | ~~6.8~~ | 2 |
 7.0 | 7.2 |
 | 3171 | 18 35.1 | +33 33 | 7.3 | | |
 | 3180 | 18 36.4 | +33
 58 | 7.7 | 69.8 | 37.8 | 70.3 | 6.1 | ~~6.1~~ | ~~6.3~~ |
 | 3165 | 18 34.3 | +33 45 | 8.7 | | |
 | 3174 | 18 35.6 | +33
 50 | 9.1 | 69.6 | 37.8 | 70.3 | 7.4 | ~~7.1~~ | ~~7.3~~ |
 | 3262 | 18 32.0 | +34 0 | 8.2 | | |
 | 3274 | 18 35.0 | +34
 17 | 7.7 | 69.4 | 37.9 | 70.2 | 7.3 | ~~7.0~~ | ~~7.1~~ | ~~6.8~~ |
 ugh | 2 | 7.3 | ~~7.0~~ |
 | 3262 | 18 32.0 | +34
 0 | 8.2 | 69.0 | 37.8 | 70.1 | 7.5 | ~~7.2~~ | ~~7.2~~ | ~~6.8~~ |
 gh | 2 | 7.4 | ~~7.0~~ |
 | H.P. 3140 5.9 -6 -3 | 3245 | 18 30.0 | +34
 20 | 6.4 | 68.6 | 37.8 | 70.1 | 5.3 | ~~5.1~~ | ~~5.3~~ |
 | 3239 | 18 29.2 | +34
 18 | 7.8 | 68.4 | 37.8 | 70.0 | 6.9 | ~~6.5~~ | ~~6.7~~ |
 | 3238 | 18 28.9 | +34
 20 | 7.5 | 68.3 | 37.8 | 70.9 | 6.9 | ~~6.5~~ | ~~6.7~~ | 2 | 6.7 |
 | 3257 | 18 49.6 | +33 47 | 7.0 | | |
 | 312 | 18 25.7 | +33
 50 | 8.2 | 67.9 | 37.8 | 69.9 | 6.9 | ~~6.8~~ | ~~6.7~~ | 2 | 7.0 |
 | 3297 | 18 38.7 | +34 23 | 8.2 | | |
 | 3437 | 19 3.5 | +34 19 | 3.5 | +34 19 | +34 19 |
 31 | 14.7 | 14.6 | 37.5 | 11.4 | 11.3 | 6.1 | ~~6.1~~ |
 ough | 6.0 | ~~6.2~~ | 2 | 6.2 |
 | 3431 | 19 2.3 | +34
 10 | 7.5 | 14.3 | 37.6 | 11.2 | 6.7 | ~~6.4~~ | ~~6.4~~ |
 | 3423 | 19 1.0 | +34 12 | 8.3 | 13.8 | 37.6 | 10.8 | 7.2 | ~~6.8~~ |
 underlined | 6.8 | ~~6.8~~ | 2 | 7.0 |
 | 3392 | 18 55.8 | +34
 27 | 8.5 | 73.0 | 37.6 | 70.8 | 7.1 | ~~6.8~~ | ~~6.7~~ | 2 | 7.0 |
 | 3368 | 18 51.9 | +34
 40 | 7.6 | 72.7 | 37.7 | 71.1 | 6.5 | ~~6.5~~ | ~~6.7~~ | 2 | 6.7 |
 | 3346 | 18 48.2 | +34
 27 | 7.9 | 72.0 | 37.7 | 71.0 | 7.3 | ~~7.2~~ | ~~6.9~~ | ~~6.7~~ |
 gh | 2 | 7.1 | ~~6.9~~ |
 | 3323 | 18 43.4 | +34 17 | 8.0 | | |
 | 3226 | 18 43.8 | +34

117

No.	R.A.	Dec.	Mag.	H	V	H'	Br.
3268	18 51.9	+33					
58	8.6	72.7	37.8	71.2	7.4	7.5	7.0
2	7.2	7.6					
3334	18 45.8	+34					
13	7.3	71.8	37.8	71.1	6.3	6.2	6.4
3212	18 43.4	+33 52	8.7				
3329	18 44.3	+34 5	8.3	71.3	37.8	70.8	
6.8	6.5	6.5	2	6.7			
3197	18 40.6	+33 58	8.8				
3190	3191	18 39.2	18 39.2	+33 51	+33		
52	8.0	8.6	70.2	70.2	37.8	37.8	70.4
6.4	6.5	6.4					
5	6.6	6.7					
3180	18 36.4	+33 58	7.7				
3289	18 37.1	+34					
11	9.0	69.7	37.8	70.1	7.3	7.4	6.8
7.0	7.2						
3171	18 35.1	+33 33	7.3				
3180	18 36.4	+33					
58	7.7	69.8	37.8	70.3	6.1	6.1	6.3
3165	18 34.3	+33 45	8.7				
3174	18 35.6	+33					
50	9.1	69.6	37.8	70.3	7.4	7.1	7.3
3262	18 32.0	+34 0	8.2				
3274	18 35.0	+34					
17	7.7	69.4	37.9	70.2	7.3	7.0	7.1
6.8							
3262	18 32.0	+34					
0	8.2	69.0	37.8	70.1	7.5	7.2	7.2
6.8							
3239	18 29.2	+34					
18	7.8	68.4	37.8	70.0	6.9	6.5	6.7
3238	18 28.9	+34					
20	7.5	68.3	37.8	70.9	6.9	6.5	6.7
3257	18 49.6	+33 47	7.0				
312	18 25.7	+33					
50	8.2	67.9	37.8	69.9	6.9	6.8	6.7
3297	18 38.7	+34 23	8.2				
3437	19 3.5	+34 19	3.5	+34 19	+34 19		
31	14.7	14.6	37.5	11.4	11.3	6.1	6.1
6.0	6.2	2	6.2				
3431	19 2.3	+34					
10	7.5	14.3	37.6	11.2	6.7	6.4	6.4
3423	19 1.0	+34 12	8.3	13.8	37.6	10.8	7.2
6.8	6.8	2	7.0				
3392	18 55.8	+34					
27	8.5	73.0	37.6	70.8	7.1	6.8	6.7
3368	18 51.9	+34					
40	7.6	72.7	37.7	71.1	6.5	6.5	6.7
3346	18 48.2	+34					
27	7.9	72.0	37.7	71.0	7.3	7.2	6.9
6.9	6.7						
3323	18 43.4	+34 17	8.0				
3226	18 43.8	+34					

22|8.3|71.2|37.8|70.8|6.8|~~6.4~~|.2|6.6|
 |•3319|18 42.8|+34
 29|8.3|71.0|37.7|70.7|6.8|~~6.5~~|.2|6.7|
 |•3310|18 40.6|+34
 22|7.3|70.6|37.8|70.6|6.2|~~6.0~~|.2|6.2|
 |•3297|18 38.7|+34
 23|8.2|70.1|37.8|70.3|6.5|~~6.4~~|.2|6.6|
 |•3285^~~3286~~|18^~~18~~| 36.9^~~36.9~~|+34^~~34~~|
 36^~~36~~|7.0^~~8.5~~|69.7^~~69.7~~|37.8^~~37.8~~|70.2^~~70.2~~|5.4|~~5.2~~|.2|5.4|
 |—|3257|18 3~~3~~|4~~4~~|1.8|+34
 45|8.0|68.8|37.8|70.0|7.4^~~7.3~~|~~7.1~~^~~6.9~~|~~7.1~~^~~6.9~~|~~7.1~~^~~6.9~~|
 |.2|7.3^~~7.1~~|
 |•~~3238~~|18 28.9|+34 20|7.5| | |~~3236~~|18
 28.2|+34
 27|8.3|68.2|37.7|69.9|6.8|~~6.7~~|.2|6.9|
 |•3207|18 21.8|+34
 36|8.3|67.1|37.7|69.9|6.9|~~6.8~~|.2|7.0|
 |—|~~3388~~|18 47.5|+35 18|7.2| | |
 |~~3400~~|18 48.8|+35
 6|8.9|72.2|37.7|71.1|7.2|~~6.9~~|.2|7.1|

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

December, 16, 1887
 Plate 1657
 [[13 columned table]]

No					Other							
V.	H.	Type	Lines.	K.	Focus.	Lines.	V.	H.	V.	H.		
Corr.												
5.8	14.8	I	4	N	1	-	2.9	29.6	34.7	40.9	+0.1	
5.9	5.2	I	8	?	2	F.	3.0	30.4	34.6	40.1	-0.1	
5.4	16.0	I	3	N	1	-	2.7	32.0	34.9	38.5	-0.3	
5.0	17.4	I	3	N	1	-	2.5	34.8	35.1	35.7	-0.8	
5.9	19.3	I	3	N	1	-	3.0	38.6	34.6	31.9	-1.5	
4.1	7.6	II	2	K=H	1	-	2.0	15.2	35.6	55.3	+2.8	
4.2	7.8	I	4	K=H	1	-	2.1	15.6	35.5	54.9	+2.7	
4.1	9.1	I	6	K=H	1	-	2.0	18.2	35.6	52.3	+2.1	
4.8	10.9	II?	2	K=H	1	-	2.4	21.8	35.2	48.7	+1.5	
4.2	10.9	III	2	K=H	2	-	2.1	21.8	35.5	48.7	+1.5	
4.4	11.7	III	1	N	1	-	2.2	23.4	35.4	47.1	+1.2	
4.9	12.2	III	3	K=H	1	F.	2.4	24.4	35.2	46.1	+1.0	
4.4	13.0	I	4	N	1	-	2.2	26.0	35.4	44.5	+0.7	
4.1	14.5	I	7	?	2	F.	2.0	29.0	35.6	41.5	+0.2	
4.1	15.0	I	4	N	1	-	2.0	30.0	35.6	40.5	0.0	
4.8	15.5	I	4	K=H	1	-	2.4	31.0	35.2	39.5	-0.2	
4.7	15.9	I	3	N	1	-	2.4	31.8	35.2	38.7	-0.3	
4.1	19.4	I	4	N	2	-	2.0	38.8	35.6	31.7	-1.6	
4.4	22.4	I	5	N	1	-	2.2	44.8	35.4	25.7	-2.8	
4.8	23.1	II?	2	K=H	1	-	2.4	46.2	35.2	24.3	-3.0	
3.5	6.3	I?	8	K=H	3	F.	1.8	12.6	35.8	57.9	+3.4	
3.9	6.8	I	3	N	1	-	2.0	13.6	35.6	56.9	+3.1	
3.9	11.1	II	2	K=H	1	-	2.0	22.2	35.6	48.3	+1.4	
3.0	14.0	I	5	N	2	F.	1.5	28.0	36.1	42.5	+0.4	
3.8	14.2	I?	3	N	1	-	1.9	28.4	35.7	42.1	+0.3	
3.8	17.9	II ^a	183	2	K=H	2	seen	1.9	35.8	35.7	34.7	-1.0
3.4	22.5	II	2	K=H	1	-	1.7	45.0	35.9	25.5	-2.9	
2.7	9.4	II	1	N	1	-	1.4	18.8	36.2	51.7	+2.1	

December 16, 1887
Plate 1657

V.	H.	Type	No	Lines	V.	H.	V.	H.	Focus			
5.8	14.8	I	4	N	1	-	2.9	29.6	34.7	40.9	+0.1	
5.9	5.2	I	8	?	2	F.	3.0	30.4	34.6	40.1	-0.1	
5.4	16.0	I	3	N	1	-	2.7	32.0	34.9	38.5	-0.3	
5.0	17.4	I	3	N	1	-	2.5	34.8	35.1	35.7	-0.8	
5.9	19.3	I	3	N	1	-	3.0	38.6	34.6	31.9	-1.5	
4.1	7.6	II	2	K=H	1	-	2.0	15.2	35.6	55.3	+2.8	
4.2	7.8	I	4	K=H	1	-	2.1	15.6	35.5	54.9	+2.7	
4.1	9.1	I	6	K=H	1	-	2.0	18.2	35.6	52.3	+2.1	
4.8	10.9	II?	2	K=H	1	-	2.4	21.8	35.2	48.7	+1.5	
4.2	10.9	III	2	K=H	2	-	2.1	21.8	35.5	48.7	+1.5	
4.4	11.7	III	1	N	1	-	2.2	23.4	35.4	47.1	+1.2	
4.9	12.2	III	3	K=H	1	F.	2.4	24.4	35.2	46.1	+1.0	
4.4	13.0	I	4	N	1	-	2.2	26.0	35.4	44.5	+0.7	
4.1	14.5	I	7	?	2	F.	2.0	29.0	35.6	41.5	+0.2	
4.1	15.0	I	4	N	1	-	2.0	30.0	35.6	40.5	0.0	
4.8	15.5	I	4	K=H	1	-	2.4	31.0	35.2	39.5	-0.2	
4.7	15.9	I	3	N	1	-	2.4	31.8	35.2	38.7	-0.3	
4.1	19.4	I	4	N	2	-	2.0	38.8	35.6	31.7	-1.6	
4.4	22.4	I	5	N	1	-	2.2	44.8	35.4	25.7	-2.8	
4.8	23.1	II?	2	K=H	1	-	2.4	46.2	35.2	24.3	-3.0	
3.5	6.3	I?	8	K=H	3	F.	1.8	12.6	35.8	57.9	+3.4	
3.9	6.8	I	3	N	1	-	2.0	13.6	35.6	56.9	+3.1	
3.9	11.1	II	2	K=H	1	-	2.0	22.2	35.6	48.3	+1.4	
3.0	14.0	I	5	N	2	F.	1.5	28.0	36.1	42.5	+0.4	
3.8	14.2	I?	3	N	1	-	1.9	28.4	35.7	42.1	+0.3	
3.8	17.9	II ^a	183	2	K=H	2	seen	1.9	35.8	35.7	34.7	-1.0
3.4	22.5	II	2	K=H	1	-	1.7	45.0	35.9	25.5	-2.9	
2.7	9.4	II	1	N	1	-	1.4	18.8	36.2	51.7	+2.1	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[12 columned table]]
 | No. | R.A. | Dec. | Mag. | H | V | H' | Br. | | |
 |-----|-----|-----|-----|-----|-----|-----|-----|
 | 3312 | 18 14.2 | +34
 50 | 9.0 | 70.8 | 37.7 | 70.7 | 7.1 | ~~6.8~~ | ~~2~~ | 7.0 |
~~3319~~ | 18 42.8 | +34 | 29 | 8.5 | ~~6.8~~ | | |
 | 3302 | 18 39.9 | +34
 52 | 7.0 | 70.1 | 37.9 | 70.2 | 6.2 | ~~6.1~~ | ~~2~~ | 6.3 |
 | ~~3310~~ | 18 40.6 | +34 | 22 | 7.3 | ~~6.1~~ | | |
 | 3341 | 18 37.9 | +35
 58 | 8.6 | 69.9 | 37.8 | 70.2 | 7.3 | ~~7.1~~ | ~~2~~ | 7.3 |
 | ~~3296~~ | 18 38.3 | +34 | 51 | 8.5 | 70.3 | 37.5 | ~~6.8~~ | | |
 | 3324 | 18 34.4 | +35
 14 | 8.8 | 69.1 | 37.7 | 69.9 | 7.4 | ~~7.2~~ | ~~2~~ | 7.1 |
 | 3247 | 18 30.1 | +34
 48 | 8.7 | 66 | ~~6~~ | ~~6~~ | ~~8~~ | 7 | 37.8 | 70.2 | 7.0 | ~~7.0~~ |
~~h~~ | 7.0 | ~~6~~ | ~~6~~ | ~~6~~ | ~~6~~ | ~~6~~ | ~~6~~ | ~~6~~ |
 | ~~3245~~ | 18 30.0 | +34 | 20 | 6.4 | ~~6.4~~ | | |
 | 3463 | 18 58.9 | +35
 34 | 7.8 | 74.1 | 37.6 | 71.3 | 6.9 | ~~6.6~~ | ~~2~~ | 6.8 |
 | 3460 | 18 58.5 | +35
 32 | 7.7 | 74.1 | 37.6 | 71.4 | 6.7 | ~~7.1~~ | ~~2~~ | 6.8 |
 | 3444 | 18 55.2 | +35
 37 | 7.9 | 73.4 | 37.6 | 71.3 | 6.6 | ~~6.5~~ | ~~2~~ | 6.7 |
 | 3412 | 18 50.9 | +35
 19 | 8.6 | 72.7 | 37.7 | 71.2 | 7.4 | ~~7.1~~ | ~~2~~ | 7.3 |
 | 3411 | 18 50.7 | +35
 37 | 6.8 | 72.5 | 37.7 | 71.0 | 6.8 | ~~6.5~~ | ~~6.3~~ | ~~6.3~~ |
~~gh~~ | 2 | 6.8 | ~~6.5~~ | | |
 | 3399 | 18 48.7 | +35
 36 | 7.5 | 72.1 | 37.8 | 70.9 | 7.5 | ~~7.1~~ | ~~7.2~~ | ~~6.8~~ |
~~gh~~ | 2 | 7.4 | ~~7.0~~ | | |
 | 338 | ~~338~~ | 18 47.5 | +35
 18 | 7.2 | 71.9 | 37.7 | 70.9 | 7.4 | ~~7.1~~ | ~~7.0~~ | ~~6.7~~ |
~~gh~~ | 2 | 7.2 | ~~6.9~~ | | |
 | 3376 | 18 45.7 | +35
 32 | 8.5 | 71.7 | 37.7 | 71.0 | 7.3 | ~~6.9~~ | ~~2~~ | 7.1 |
 | 3361 | 18 42.0 | +35
 43 | 7.3 | 71.0 | 37.7 | 70.8 | 6.3 | ~~6.2~~ | ~~2~~ | 6.4 |
 | 3355 | 18 40.8 | +35
 43 | 8.3 | 70.8 | 37.7 | 70.8 | 6.7 | ~~6.5~~ | ~~2~~ | 6.7 |
 | 3346 | 18 39.2 | +35
 22 | 8.2 | 70.2 | 37.8 | 70.4 | 7.1 | ~~7.0~~ | ~~2~~ | 7.2 |
 | 3342 | 18 38.2 | +35
 24 | 8.3 | 70.0 | 37.8 | 70.3 | 7.1 | ~~6.7~~ | ~~2~~ | 7.1 |
 | 3294 | 18 29.5 | +35
 41 | 7.2 | 68.3 | 37.7 | 69.9 | 6.5 | ~~6.4~~ | ~~2~~ | 6.6 |
 | 3255 | 18 22.2 | +35
 26 | 8.1 | 67.0 | 37.6 | ~~6~~ | ~~6~~ | ~~9~~ | 8 | 6.7 | ~~6~~ |
~~h~~ | 6.5 | ~~6~~ | ~~6~~ | ~~6~~ | ~~6~~ | ~~6~~ | ~~6~~ |
 | ~~3240~~ | 18 20.6 | +35
 16 | 7.2 | 66.8 | 37.7 | 69.8 | 6.8 | ~~6.4~~ | ~~6.4~~ | ~~6.4~~ |
~~gh~~ | 2 | 6.8 | | |
 | 3485 | 18 21.1 | +35
 52 | 5.2 | 14.7 | 37.7 | 11.3 | 5.0 | ~~5.0~~ | ~~2~~ | 5.2 |
 | 3477 | 19 0.8 | +35
 40 | 8.0 | 14.4 | 37.7 | 11.3 | 6.9 | ~~6.8~~ | ~~2~~ | 7.0 |
 | 3408 | 18 50.3 | +35
 45 | 8.3 | 72.5 | 37.8 | 71.1 | 7.2 | ~~6.9~~ | ~~2~~ | 7.1 |

119

|•3272|18 43.4|+36
 17|7.2|71.4|37.8|71.0|6.3|~~6.3~~|.2|6.5 |
 | 3362|18 42.8|+35
 53|8.7|71.2|37.8|70.9|7.4|~~7.0~~|.2|7.2 |
 | ~~3361~~|18|42.0|+35|43|7.3|70.4|37.6|~~37.6~~| |
 |—3319|18 33.3|+35
 56|7.0|69.1|37.8|70.1|6.1|~~6.3~~|.2|6.5 |
 |—3251|18 21.8|+35
 60|8.0|66.8|37.7|69.7|7.0|~~6.7~~|.2|6.9 |
 | ~~3130~~|18|21.6|+36|5|7.7|66.6|37.8|~~37.8~~| |
 |—{3361^[[3360]]18^[[18]] 54.6^[[54.6]]
 +36^[[+36]]20^[[21]]9.5^[[8.8]]73.4^[[73.4]]37.7^[[37.8]]71.3^[[71.3]]
 underlined]]7.3|~~6.9~~|6.9|.2|7.1 |
 | ~~3348~~|18|53.3|+36|14|8.0|~~8.0~~| | |

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

120

December, 16, 1887

Plate 1657.

[[12 column table]]

V. | H. | Type | No. Lines | K. | Focus. | Other Lines. | V. | H. | V. | H. |
Correc.

2.6	10.1	I?	4	K=H	1	-	1.3	20.2	36.3	50.3	+1.8
2.9	10.4	III	2	K=H	1	-	1.4	20.8	36.2	49.7	+1.7
2.4	11.3	I	4	N	1	-	1.2	22.6	36.4	47.9	+1.5
2.8	12.7	I	8	?	3	F.	1.4	25.4	36.2	45.1	+0.9
2.8	15.1	I	6	N	2	-	1.4	30.2	36.2	40.3	-0.0
2.8	15.8	III	2	K=H	2	-	1.4	31.6	36.2	38.9	-0.3
2.7	16.3	I	7	N.	2	F.	1.4	32.6	36.2	37.9	-0.5
2.8	20.3	II	2	K=H	1	-	1.4	40.6	36.2	29.9	-2.0

120

December 16, 1887
Plate 1657

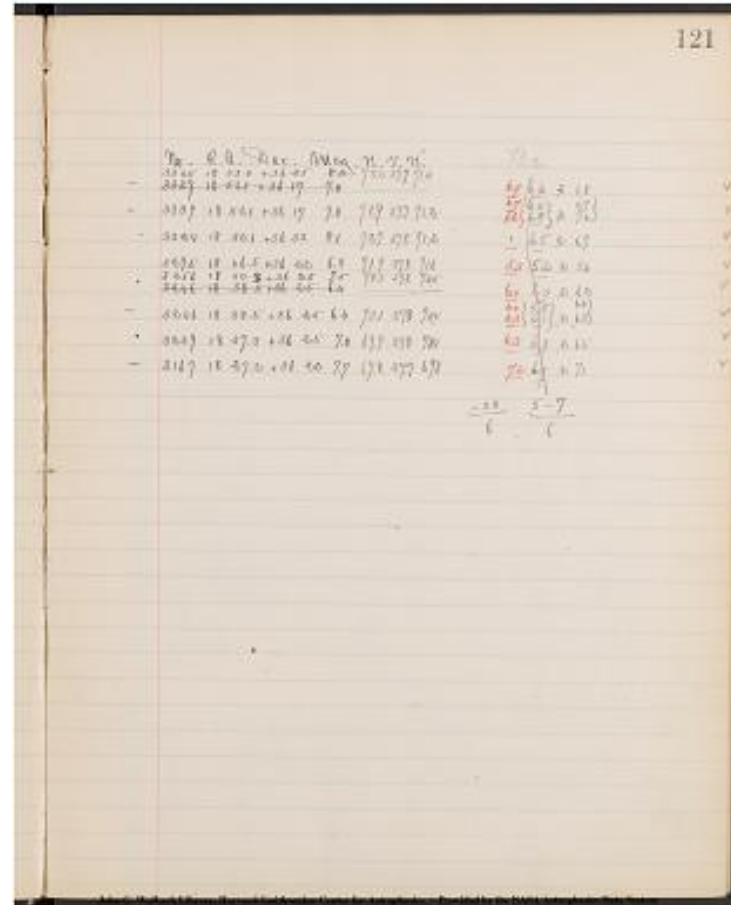
V.	H.	Type	No. Lines	K.	Focus	Other Lines	V.	H.	V.	H.	Correc.
2.6	10.1	I?	4	K=H	1	-	1.3	20.2	36.3	50.3	+1.8
2.9	10.4	III	2	K=H	1	-	1.4	20.8	36.2	49.7	+1.7
2.4	11.3	I	4	N	1	-	1.2	22.6	36.4	47.9	+1.5
2.8	12.7	I	8	?	3	F.	1.4	25.4	36.2	45.1	+0.9
2.8	15.1	I	6	N	2	-	1.4	30.2	36.2	40.3	-0.0
2.8	15.8	III	2	K=H	2	-	1.4	31.6	36.2	38.9	-0.3
2.7	16.3	I	7	N.	2	F.	1.4	32.6	36.2	37.9	-0.5
2.8	20.3	II	2	K=H	1	-	1.4	40.6	36.2	29.9	-2.0

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]
 | No. | R.A. | Dec. | Mag. | H | V | H' | Br. | | |
 |-----|-----|-----|-----|-----|-----|-----|-----|-----|
 |---|~~3339~~|~~3345~~|~~18~~
 52.1|~~18~~|53.0|~~36~~|17|~~36~~
 25|~~7.0~~|~~8.0~~|73.2|37.7|71.4|6.8
 9|~~6.6~~|~~2.6~~|2.6
 |---|3339|18 52.1|+36
 17|7.0|72.9|37.7|71.2|7.0^{[[6.7]]}|~~6.8~~^{[[6.5]]}
 }|~~2.7~~⁰^{[[6.7]]}|
 |•|3324|18 50.1|+36
 33|8.1|72.7|37.8|71.2|6.5|~~6.5~~
 |---|2|6.7|
 |3295|18 46.5|+36
 22|6.3|71.9|37.8|71.0|5.3|~~5.2~~
 }|~~2.5~~
 |•|~~3246~~|~~3256~~|18
 38.5|~~18~~
 40.|~~2~~|~~3~~|+36
 25|~~6.4~~|~~7.5~~|70.5|37.8|70.5|6.0
 0|~~6.0~~|~~2.6~~|2.6
 |---|3246|18 38.5|+36
 25|6.4|70.1|37.8|70.4|6.3^{[[6.0]]}|~~6.1~~^{[[5.8]]}
 }|~~2.6~~³^{[[6.0]]}|
 |•|3239|18 37.3|+36
 25|7.0|69.9|37.8|70.4|6.3|~~6.3~~
 }|~~2.6~~
 |---|3167|18 27.2|+36
 20|7.7|67.8|37.7|69.8|7.2|~~6.9~~
 }|2.7
 |

[[equation]] [[equation]]

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



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

122

December 19, 1887.

Plate 1710

[[left margin]]

2 35

[[left margin]]

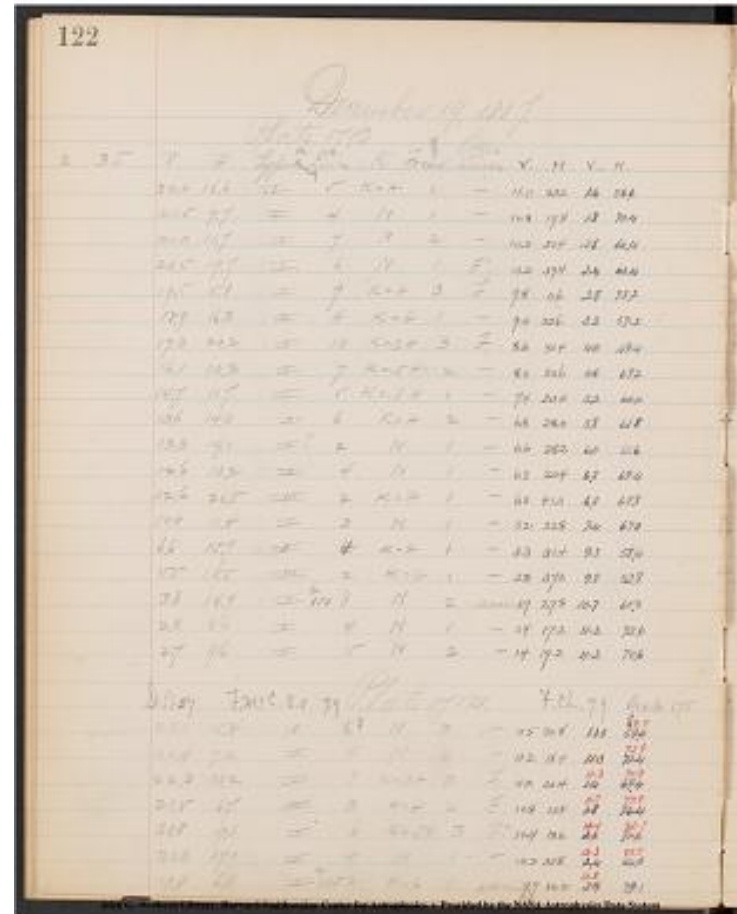
[[12 columned table]]

V|H|Type|No. Remarks|No. Lines|K|Focus|Other Lines|V.|H.|V.|H.|

22.0	16.6	I	-	5	K=H	1	-	11.0	33.2	1.6	56.6	
21.5	9.7	I	-	4	N	1	-	10.8	19.4	1.8	70.4	
21.0	11.7	I	-	7	N	2	-	10.5	23.4	2.1	66.4	
20.5	19.7	I	-	6	N	1	F?	10.2	39.4	2.4	60.4	
19.5	5.8	I	-	7	K=H	3	F	9.8	11.6	2.8	78.2	
18.9	16.3	I	-	4	K=H	1	-	9.4	32.6	3.2	57.2	
17.3	20.2	I	-	10	K=3H	3	F	8.6	40.4	4.0	49.4	
16.1	10.3	I	-	7	K=.5H	2	-	8.0	20.6	4.6	69.2	
14.7	11.7	I	-	5	K=.8H	1	-	7.4	23.4	5.2	66.4	
13.6	14.0	I	-	6	K=H	2	-	6.8	28.0	5.8	61.8	
13.3	19.1	I?	-	2	N	1	-	6.6	38.2	6.0	51.6	
12.6	10.2	I	-	4	N	1	-	6.3	20.4	6.3	69.4	
12.6	20.5	III	-	2	K=H	1	-	6.3	41.0	6.3	48.8	
10.4	11.4	I	-	3	N	1	-	5.2	22.8	7.4	67.0	
6.6	15.7	I	-	4	K=H	1	-	3.3	31.4	9.3	58.4	
5.5	18.5	III	-	2	K=H	1	-	2.8	37.0	9.8	52.8	
3.8	14.9	I	b	184	8	N	2	seen	1.9	29.8	10.7	60.0
2.8	8.6	I	-	4	N	1	-	1.4	17.2	11.2	72.6	
2.7	9.6	I	-	5	N	2	-	1.4	19.2	11.2	70.6	

St.Lt5.7 7.m.r.c.8.0 7.9 Plate 1712 F.Ch.7.9 Bozuro. 175

23.0	15.4	I	-	?	N	3	-	11.5	30.8	11.0	60.5	
22.4	9.2	I	-	5	N	2	-	11.2	18.4	11.3	72.9	
22.3	10.2	I	-	8	K=	3H	3	F.	11.2	20.4	11.3	70.9
21.5	6.7	III	-	3	K=H	2	F.	10.8	13.4	11.7	77.9	
20.8	9.3	I	-	6	K=	5H	3	F?	10.4	18.6	12.1	72.7
20.3	17.9	I	-	4	N	1	-	10.2	35.8	12.3	55.5	
19.4	6.1	III	a	185	2	K=H	1	seen	9.7	12.2	12.8	79.1



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[7 columned table]]
No.	R.A.	Dec.	Magn.	H.	V.	~~Br.~~	~~Br.~~	~~Br.~~
 3865 | 18 56.2 | +1
 36 | 6.0 | 89.4 | 12.6 | ~~6.9~~ | ~~6.9~~ | ~~6.9~~ | ~~6.9~~ | ~~6.9~~
 3960 | 19 | 10.5 | +1 47 | 6.5 | 29.9 | 12.6 | ~~6.9~~ | ~~6.9~~ | ~~6.9~~
 3824 | 19 | 6.4 | +2 3 | 5.6 | 29.8 | 12.5 | ~~6.9~~ | ~~6.9~~ | ~~6.9~~
 3791 | 19 | 0.4 | +2 3 | 8.5 | | | | | |
 3879 | 19 | 18.2 | +2
 50 | 3.2 | 29.8 | 12.6 | ~~5.3~~ | ~~5.3~~ | ~~5.3~~ | ~~5.3~~ | ~~5.3~~
 3882 | 18 | 56.9 | +3
 7 | 6.8 | 89.5 | 12.5 | ~~7.2~~ | ~~7.2~~ | ~~7.2~~ | ~~7.2~~ | ~~7.2~~
 3916 | 18 | 49.0 | +4 1 | 4.0 | | | | | |
 3917 | 18 | 49.0 | +4
 1 | 4.3 | 89.0 | 12.6 | ~~5.3~~ | ~~5.3~~ | ~~5.3~~ | ~~5.3~~ | ~~5.3~~
 4045 | 19 | 9.3 | +4
 35 | 5.7 | 29.9 | 12.6 | ~~6.5~~ | ~~6.5~~ | ~~6.5~~ | ~~6.5~~ | ~~6.5~~
 4081 | 19 | 6.6 | +5
 16 | 6.0 | 30.0 | 12.7 | ~~6.5~~ | ~~6.5~~ | ~~6.5~~ | ~~6.5~~ | ~~6.5~~
 4040 | 19 | 1.9 | +5
 52 | 5.0 | 29.9 | 12.7 | ~~6.2~~ | ~~6.2~~ | ~~6.2~~ | ~~6.2~~ | ~~6.2~~
 3989 | 18 | 51.3 | +6
 3 | 6.8 | 89.5 | 12.6 | ~~7.0~~ | ~~7.0~~ | ~~7.0~~ | ~~7.0~~ | ~~7.0~~
 4075 | 19 | 9.5 | +6
 20 | 7.2 | 29.9 | 12.6 | ~~6.9~~ | ~~6.9~~ | ~~6.9~~ | ~~6.9~~ | ~~6.9~~
 3978 | 18 | 48.4 | +6
 27 | 5.8 | 89.4 | 12.7 | ~~6.9~~ | ~~6.9~~ | ~~6.9~~ | ~~6.9~~ | ~~6.9~~
 4002 | 19 | 7.2 | +7
 32 | 7.2 | 30.0 | 12.7 | ~~7.2~~ | ~~7.2~~ | ~~7.2~~ | ~~7.2~~ | ~~7.2~~
 3979 | 18 | 58.2 | +9
 26 | 7.0 | 89.6 | 12.7 | ~~7.3~~ | ~~7.3~~ | ~~7.3~~ | ~~7.3~~ | ~~7.3~~
 3951 | 18 | 52.4 | +9
 57 | 6.5 | 89.4 | 12.8 | ~~7.1~~ | ~~7.1~~ | ~~7.1~~ | ~~7.1~~ | ~~7.1~~
 3787 | 19 | 0.2 | +10
 51 | 5.2 | 30.0 | 12.7 | ~~5.9~~ | ~~5.9~~ | ~~5.9~~ | ~~5.9~~ | ~~5.9~~
 3802 | 19 | 13.1 | +11
 16 | 6.2 | 30.2 | 12.7 | ~~6.7~~ | ~~6.7~~ | ~~6.7~~ | ~~6.7~~ | ~~6.7~~
 3790 | 19 | 11.0 | +11
 20 | 5.4 | 30.2 | 12.7 | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~

123

No.	R.A.	Dec.	Magn.	H.	V.	Br.	Br.	Br.
3865	18 56.2	+1						
36	6.0	89.4	12.6	6.9	6.9	6.9	6.9	6.9
3960	19	10.5	+1 47	6.5	29.9	12.6	6.9	6.9
3824	19	6.4	+2 3	5.6	29.8	12.5	6.9	6.9
3791	19	0.4	+2 3	8.5				
3879	19	18.2	+2					
50	3.2	29.8	12.6	5.3	5.3	5.3	5.3	5.3
3882	18	56.9	+3					
7	6.8	89.5	12.5	7.2	7.2	7.2	7.2	7.2
3916	18	49.0	+4 1	4.0				
3917	18	49.0	+4					
1	4.3	89.0	12.6	5.3	5.3	5.3	5.3	5.3
4045	19	9.3	+4					
35	5.7	29.9	12.6	6.5	6.5	6.5	6.5	6.5
4081	19	6.6	+5					
16	6.0	30.0	12.7	6.5	6.5	6.5	6.5	6.5
4040	19	1.9	+5					
52	5.0	29.9	12.7	6.2	6.2	6.2	6.2	6.2
3989	18	51.3	+6					
3	6.8	89.5	12.6	7.0	7.0	7.0	7.0	7.0
4075	19	9.5	+6					
20	7.2	29.9	12.6	6.9	6.9	6.9	6.9	6.9
3978	18	48.4	+6					
27	5.8	89.4	12.7	6.9	6.9	6.9	6.9	6.9
4002	19	7.2	+7					
32	7.2	30.0	12.7	7.2	7.2	7.2	7.2	7.2
3979	18	58.2	+9					
26	7.0	89.6	12.7	7.3	7.3	7.3	7.3	7.3
3951	18	52.4	+9					
57	6.5	89.4	12.8	7.1	7.1	7.1	7.1	7.1
3787	19	0.2	+10					
51	5.2	30.0	12.7	5.9	5.9	5.9	5.9	5.9
3802	19	13.1	+11					
16	6.2	30.2	12.7	6.7	6.7	6.7	6.7	6.7
3790	19	11.0	+11					
20	5.4	30.2	12.7	6.3	6.3	6.3	6.3	6.3

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

124

January 30, 1888.

Plate 1712

[[left margin]]

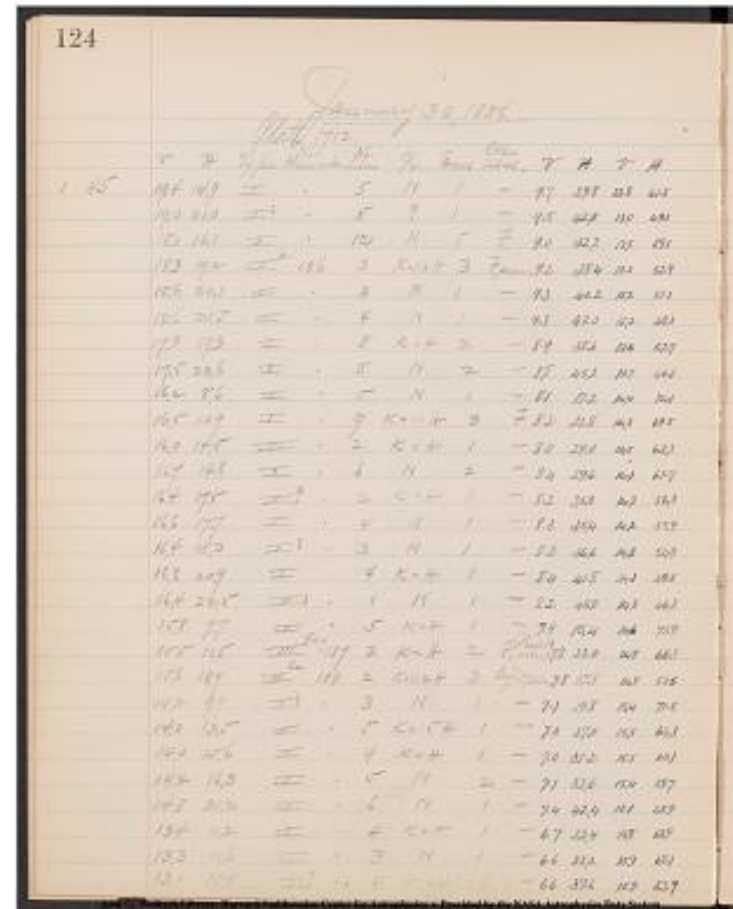
1 45

[[left margin]]

[[12 columned table]]

[V][H]TypeNo. LinesK|Focus|Other Lines.[V].[H].[V].[H].[Correc.]

19.4	14.9	I	5	N	1	9.7	29.8	12.8	61.5
19.0	21.0	I?	5	?	1	9.5	42.0	13.0	49.3
18.0	16.1	I	12	N	5	F	9.0	32.2	13.5
18.3	19.2	II	186	3	K=1.2H	3	F. seen.	9.2	38.4
52.9									
18.6	20.1	I	3	N	1	9.3	40.2	13.2	51.1
18.6	21.5	I	4	N	1	9.3	43.0	13.2	48.3
17.8	19.3	I	8	K=H	2	8.9	38.6	13.6	52.7
17.5	22.6	I	5	N	2	8.8	45.2	13.7	46.1
16.2	8.6	I	5	N	1	8.1	17.2	14.4	74.1
16.5	10.9	I	9	K=1H	3	F	8.2	21.8	14.3
16.0	14.5	III	2	K=H	1	8.0	29.0	14.5	62.3
16.7	14.8	I	6	N	2	8.4	29.6	14.1	61.7
16.4	17.5	II?	2	K=H	1	8.2	35.0	14.3	56.3
16.6	17.7	I	4	N	1	8.3	35.4	14.2	55.9
16.4	18.3	I?	3	N	1	8.2	36.6	14.3	54.7
16.8	20.9	I	4	K=H	1	8.4	41.8	14.1	49.5
16.4	22.5	III?	1	N	1	8.2	45.0	14.3	46.3
15.8	7.7	I	5	K=H	1	7.9	15.4	14.6	75.9
15.5	11.5	III	187	2	K=H	2	F? Bright seen?	7.8	23.0
14.7	68.3								
15.6	18.9	III	188	2	K=1.2H	3	Bright. seen.	7.8	37.8
14.7	53.5								
14.2	9.9	I?	3	N	1	7.1	19.8	15.4	71.5
14.0	13.5	I	5	K=5H	1	7.0	27.0	15.5	64.3
14.0	15.6	I	4	K=H	1	7.0	31.2	15.5	60.1
14.2	16.3	I	5	N	2	7.1	32.6	15.4	58.7
14.8	21.2	I	6	N	1	7.4	42.4	15.1	48.9
13.4	11.2	I	4	K=H	1	6.7	22.4	15.8	68.9
13.3	11.6	I	3	N	1	6.6	23.2	15.9	68.1
13.1	18.8	I?	4	K=H	1	6.6	37.6	15.9	53.7



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

Wedge B.

[[11 columned table]]

No. | R.A. | Dec. | Magn. | H. | V. | - | ~~Br.~~

| - | - | - |

No.	R.A.	Dec.	Magn.	H.	V.	-	Br.
3819	19 1.7	+12 53	6.8	31.5	22.6		
3813	18 48.8	+13 2	6.5	90.8	22.5		
3899	18 58.7	+13 39	3.0	90.9	22.6		19 0.8 +13 43
3841	18 52.4	+13 26	5.3	90.8	22.6		18 54.5 +13 30
3832	18 51.4	+13 16	8.8	91.6	22.6		18 54.2 +13 46
3807	18 47.7	+13 13	6.7	90.7	22.5		
3841	18 52.4	+13 26	5.3	90.8	22.6		18 54.5 +13 30
3802	19 2.4	+14 33	7.2	31.4	22.6		18 54.2 +13 46
3797	19 2.0	+14 13	6.8	31.6	22.6		
3755	18 56.0	+14 22	7.4	91.0	22.6		
3750	18 55.5	+14 13	7.7	90.9	22.5		
3745	18 54.2	+14 21	8.0	90.8	22.6		
3709	18 48.9	+14 12	6.5	90.7	22.6		
3680	18 45.7	+14 22	7.0	90.7	22.6		
3892	19 15.9	+14 47	7.7	31.3	22.7		
3846	19 8.7	+14 50	6.1	31.7	22.6		19 10.8 +14 54
3736	18 53.1	+14 53	3.9	90.9	22.7		18 55.1 +14 56
3762	19 12.1	+15 25	7.5	31.9	22.5		
3721	19 4.6	+15 33	7.5	31.6	22.6		
3690	18 59.8	+15 38	7.3	91.0	22.6		
3683	18 58.3	+15 31	7.5	90.9	22.6		
3615	18 48.2	+15 10	7.0	90.6	22.6		
3747	19 9.5	+15 55	6.8	31.9	22.6		

The image shows a handwritten astronomical table on aged paper. The table is organized in columns and includes various numerical data and some handwritten notes. The columns are labeled as follows:

- No.
- R.A.
- Dec.
- Magn.
- H.
- V.
-
- ~~Br.~~

The table contains several rows of data, with some entries crossed out. The handwriting is in cursive and the paper shows signs of age and wear.

~~6.7~~ | 6.9 | |
3743 | 19 8.6 | +15 57 | 7.0 | 31.8 | 22.6 | |
~~6.7~~ | 6.9 | |
3691 | 18 53.2 | +16 4 | 6.6 | 90.8 | 22.7 | |
~~6.9~~ | 7.0 | |

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[August ~~8~~ ~~7~~],
1888.]]

Plate 1712

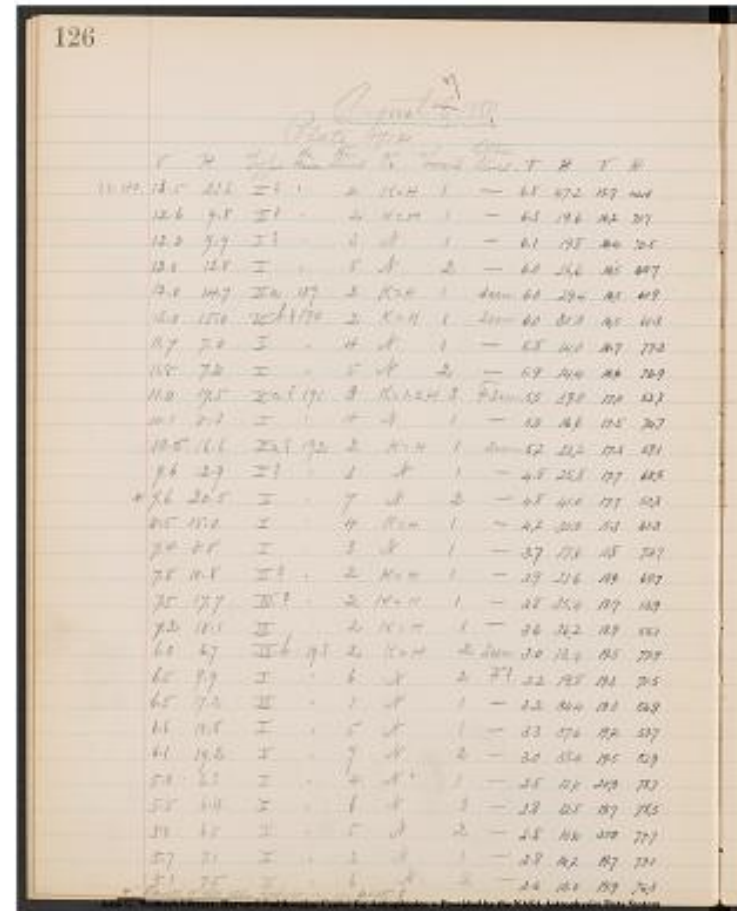
[[left margin]]
12 40
[[/left margin]]

[[12 columned table]]

V	H	Type	No. Rem.	No. Lines	K	Focus	Other Lines.	V	H	V	H
13.5	23.6	II?	2	K=H	1	-	6.8	47.2	15.7	44.1	
12.6	9.8	II?	2	K=H	1	-	6.3	19.6	16.2	71.7	
12.2	9.9	I?	3	N	1	-	6.1	19.8	16.4	70.5	
12.0	12.8	I	5	N	2	-	6.0	25.6	16.5	65.7	
12.0	14.7	IIa	189	2	K=H	1	seen	6.0	29.4	16.5	61.9
12.0	15.0	IIIb?	190	2	K=H	1	seen	6.0	30.0	16.5	61.3
11.7	7.0	I	4	N	1	-	5.8	14.0	16.7	77.3	
11.8	7.2	I	5	N	2	-	5.9	14.4	16.6	76.9	
11.0	19.5	IIa?	191	3	K=1.2H	3	F seen	5.5	39.0	17.0	52.3
10.1	8.3	I	4	N	1	-	5.0	16.6	17.5	74.7	
10.5	16.6	IIa?	192	2	K=H	1	seen	5.2	33.2	17.3	58.1
9.6	12.9	I?	3	N	1	-	4.8	25.8	17.7	68.5	
*9.6	20.5	I	7	N	2	-	4.8	41.0	17.7	50.3	
8.5	15.0	I	4	K=H	1	-	4.2	30.0	18.3	61.3	
7.4	8.8	I	3	N	1	-	3.7	17.6	18.8	73.7	
7.8	10.8	II?	2	K=H	1	-	3.9	21.6	18.6	69.7	
7.5	17.7	III?	2	K=H	1	-	3.8	35.4	18.7	55.9	
7.2	18.1	III	2	K=H	1	-	3.6	36.2	18.9	55.1	
6.0	6.7	IIIb	193	2	K=H	2	seen	3.0	13.4	19.5	77.9
6.5	9.9	I	6	N	2	F?	3.2	19.8	19.3	71.5	
6.5	17.2	III	1	N	1	-	3.2	34.4	19.3	56.9	
6.6	18.8	I	5	N	1	-	3.3	37.6	19.2	53.7	
6.1	19.2	I	7	N	2	-	3.0	38.4	19.5	52.9	
5.0	6.3	I	4	N	1	-	2.5	12.6	20.0	78.7	
5.5	6.4	I	6	N	3	-	2.8	12.8	19.7	78.5	
5.0	6.8	I	5	N	2	-	2.5	13.6	20.0	77.7	
5.7	7.1	I	3	N	1	-	2.8	14.2	19.7	77.1	
5.1	7.5	I	6	N?	2	-	2.6	15.0	19.9	76.3	

*Spectra of two stars superposed on plate?

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



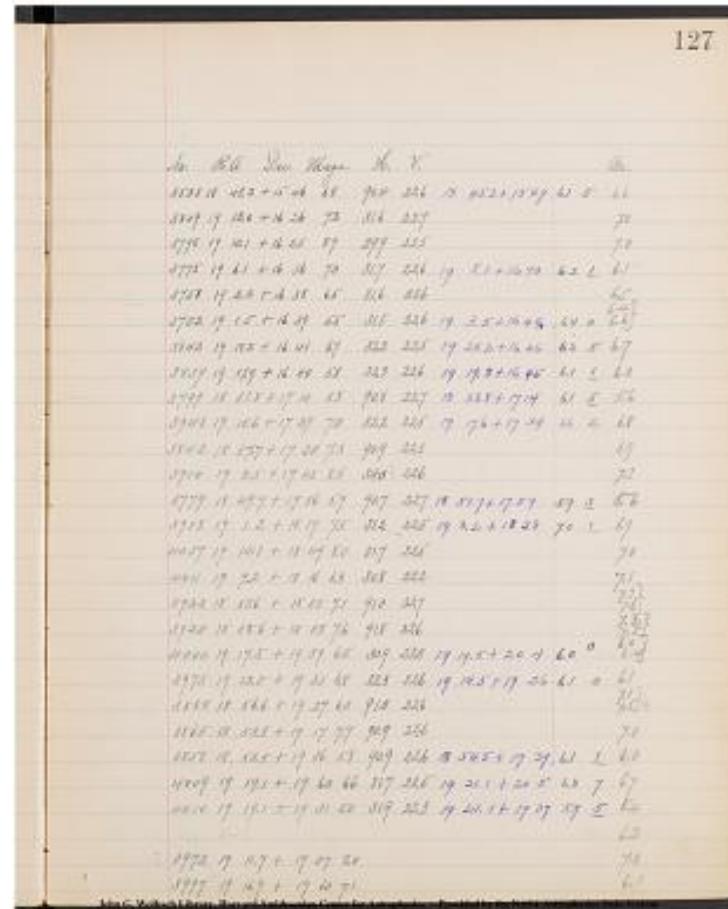
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[10 columned table]]

No. | R.A. | Dec. | Magn. | H. | V. | | Br.

3583	18 43.2	+15 46	6.8	90.4	22.6	18 45.2 +15 49 6.1 5 6.6
3809	19 12.0	+16 26	7.2	31.6	22.7	7.0
3798	19 10.1	+16 25	8.9	29.9	22.5	7.0
3775	19 6.1	+16 36	7.0	31.7	22.6	19 8.1 +16 40 6.2 1 6.1
3758	19 2.2	+16 38	6.5	31.6	22.6	6.5
3752	19 1.5	+16 39	5.5	31.5	22.6	19 3.5 +16 43 6.4 0 6.6^[[6.4]]
3842	19 18.2	+16 41	6.7	32.2	22.5	19 20.2 +16 46 6.2 5 6.7
3839	19 17.9	+16 40	5.8	32.3	22.6	19 19.8 +16 45 6.1 1 6.0
3799	18 51.8	+17 10	5.8	90.8	22.7	18 53.8 +17 14 6.1 5 5.6
3943	19 15.6	+17 29	7.0	32.2	22.5	19 17.6 +17 34 6.6 2 6.8
3842	18 57.7	+17 20	7.3	90.9	22.3	6.9
3900	19 8.5	+17 45	8.5	34.3?	22.6	7.3
3779	18 49.7	+17 56	5.9	90.7	22.7	18 51.7 +17 59 5.9 3 5.6
3958	19 1.2	+18 19	7.5	31.2	22.5	19 3.2 +18 23 7.0 1 6.9
4037	19 14.1	+18 49	8.0	31.7	22.5	7.0
4011	19 9.2	+18 16	6.3	30.8	22.2	7.1
3922	18 55.6	+18 55	7.1	91.0	22.7	7.6^[[7.3]]
3920	18 55.6	+18 58	7.6	91.8	22.6	7.5^[[7.2]]
4000	19 17.5	+19 59	6.5	30.9	23.0	19 19.5 +20 4 6.0 0 6.4^[[6.0]]
3975	19 12.5	+19 21	6.8	32.3	22.6	19 14.5 +19 26 6.1 0 6.1
3888	18 56.6	+19 27	6.0	91.0	22.6	7.5^[[7.1]]
3865	18 53.3	+19 17	7.7	90.9	22.6	7.0
3858	18 52.5	+19 36	5.8	90.9	22.6	18 54.5 +19 39 6.1 1 6.0
4009	19 19.1	+19 60	6.6	31.7	22.5	19 21.1 +20 5 6.0 7 6.7
4010	19 19.1	+19 31	5.0	31.9	22.3	19 21.1 +19 37 5.9 5 5.4
- star?						6.2
3972	19 11.7	+19 57	8.0			7.0
3997	19 16.9	+19 60	7.1			6.1

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

128

Aug. 7, 1888.

Plate 1712

[[12 columned table]]

V. | H. | Type | No. Rem. | No. Lines | K | Focus | Other Lines. | V. | H. |
V. | H.

5.4	11.7	IIIb	194	2	K=H	1	Seen	2.7	23.4	19.8	67.9	
5.4	18.0	I	3	N	1	-	2.7	36.0	19.8	55.3		
4.0	17.9	I	6	N	2	-	2.0	35.8	20.5	55.5		
4.5	19.2	I	5	N	2	-	2.2	38.4	20.3	52.9		
4.4	21.1	I	4	N	1	-	2.2	42.2	20.3	49.1		
3.0	11.1	Ib	195	9	N	3	Seen	1.5	22.2	21.0	69.1	
3.3	11.5	I	7	K=3H	2	F?	1.6	23.0	20.9	68.3		
3.2	16.8	I	4	K=H	1	-	1.6	33.6	20.9	57.7		
2.0	10.5	I	4	K=H	1	-	1.0	21.0	21.5	70.3		
2.7	12.8	I	7	K=2H	2	-	1.4	25.6	20.6	65.7		
2.4	14.9	IIa?	196	2	K=H	1	Seen	1.2	29.8	21.3	61.5	
2.6	17.9	I?	3	N	1	-	1.3	35.8	21.2	55.5		
2.8	22.1	I	6	N	1	[[strikethrough]]	2	[[strikethrough]]	3	-	1.4	44.2
21.1	47.1											

St. Lt. 5.4 F. m. t.c. 8.0 7.4 F. ch. 7.4 Box No. 201

Plate 1738

[[12 columned table]]

22.0	8.2	?	197	?	K=H?	2	hight seen	11.0	16.4	6.5	71.8
21.0	11.5	IIa?	198	3	K=H	3	F seen	10.5	23.0	7.0	65.2
21.0	16.3	I	4	K=H	1	-	10.5	32.6	7.0	55.6	
20.8	13.3	II?	2	K=H	1	-	10.4	26.6	7.1	61.6	
20.4	18.7	I	6	K=4H	2	-	10.2	37.4	7.3	50.8	
19.8	12.1	III	2	K=H	2	-	9.9	24.2	7.6	64.0	
17.9	6.7	I?	7	K=H	3	-	9.0	13.4	8.5	74.8	
17.0	13.5	IIa	199	2	K=H	1	seen	8.5	27.0	9.0	61.2
17.5	14.1	II?	2	K=H	1	-	8.8	28.2	8.7	60.0	
17.0	15.9	IIIb?	200	2	K=1.2H	2	seen	8.5	31.8	9.0	56.4
16.2	14.7	IIIb?	201	3	K=H	2	F seen	8.1	29.4	9.4	58.8
16.1	16.2	I	9	K=3H	4	F	8.0	32.4	9.5	55.8	
15.4	6.9	III	2	K=H	2	-	7.7	13.8	9.8	74.4	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics

* Provided by the NASA Astrophysics Data System

128

128

Aug. 7, 1888.

Plate 1712

No.	St.	Type	No. Rem.	No. Lines	K	H	V.	H.
5.4	11.7	IIIb	194	2	K=H	1	Seen	2.7 23.4 19.8 67.9
5.4	18.0	I	3	N	1	-	2.7	36.0 19.8 55.3
4.0	17.9	I	6	N	2	-	2.0	35.8 20.5 55.5
4.5	19.2	I	5	N	2	-	2.2	38.4 20.3 52.9
4.4	21.1	I	4	N	1	-	2.2	42.2 20.3 49.1
3.0	11.1	Ib	195	9	N	3	Seen	1.5 22.2 21.0 69.1
3.3	11.5	I	7	K=1.4H	2	F?	1.6	23.0 20.9 68.3
3.2	16.8	I	4	K=H	1	-	1.6	33.6 20.9 57.7
2.0	10.5	I	4	K=H	1	-	1.0	21.0 21.5 70.3
2.7	12.8	I	7	K=2H	2	-	1.4	25.6 20.6 65.7
2.4	14.9	IIa?	196	2	K=H	1	Seen	1.2 29.8 21.3 61.5
2.6	17.9	I?	3	N	1	-	1.3	35.8 21.2 55.5
2.8	22.1	I	6	N	1	[[strikethrough]]	2	[[strikethrough]] 3 - 1.4 44.2 21.1 67.1

11.11.20.5.1

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[10 columned table]]

No. | R.A. | Dec. | Magn. | H. | V. | R.A.^[[1900]] Dec. | | Br.

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

3949 | 19 7.3 | +19 57 | 7.5 | 30.7 | 22.7 | | | 7.1^[[6.9]] |

3880 | 18 5~~[[strikethrough]]~~5~~[[strikethrough]]~~4.9 | +19 57 | 7.0 | 90.0 |

22.7 | | | 7.0

3879 | 18 54.8 | +19 6 | 6.5 | 90.6? | | | | 6.5 |

^[[X]] 4007 | 18 | 52.4 | +20 26 | 6.5 | 90.8 | 22.6 | 18 54.3 +29 29 | 6.4 |

1 | 6.5

3985 | 18 48.3 | +20 26 | 6.5 | 90.5 | 22.6 | | | 6.6

3713 | 19 10.0 | +21 8 | 4.7 | 32.2 | 22.6 | 19 11.9 +21 13 | 4.8 | 1 | 4.7

[[strikethrough]]4088[[strikethrough]]3713 | 19 9.0 | [[strikethrough]]+20

59[[strikethrough]]+21 8 [[strikethrough]]6.0[[strikethrough]]4.7 | 32.0 |

22.6 | 19 11.0 +21 3 | 5.6 | 2 | 5.4

3648 | 18 57.5 | +21 3 | 6.7 | 91.1 | 22.6 | 18 59.4 +21 7 | 6.2 | 6 | 6.8

3719 | 19 11.3 | +21 33 | 7.3 | 32.3 | 22.6 | 19 13.2 +21 38 | 6.1 | 9 | 7.0

3686 | 19 5.1 | +21 1 | 7.6 | 30.7 | 22.4 | | | 5.8

3672 | 19 1.8 | +21 28 | 6.2 | 31.6 | 22.7 | 19 3.7 +21 32 | 6.5 | 0 | 6.5

3634 | 18 55.1 | +21 18 | 6.7 | 90.9 | 22.6 | 18 57.0 +21 22 | 6.3 | 8 | 7.1

3582 | 18 46.1 | +21 16 | 5.5 | 90.3 | 22.7 | 18 48.0 +21 18 | 5.4 | 2 | 5.2

[[right margin]]76[[/right margin]]

[[10 columned table]]

353 | 2 12.0 | -3 38 | var. | 28.4 | 17.4 | 2 14.3 -3 26 | 5.6 | 1 | 5.4

336 | 2 5.4 | -3 4 | 5.9 | 28.4 | 17.4 | 2 7.7 -2 52 | 5.8 | 4 | 5.4

304 | 1 55.5 | -3 4 | 7.0 | 88.1 | 17.4 | 1 57.8 -2 52 | 6.2 | 2 | 6.4

324 | 2 1.8 | -3 1 | 7.1 | 28.4 | 17.4 | 2 4.1 -2 49 | 6.2 | 8 | 7.0

330 | 1 50.6 | -2 46 | 6.7 | 88.0 | 17.4 | 1 52.9 -2 33 | 6.1 | 3 | 5.8

375 | 2 4.2 | -2 30 | 6.3 | 28.4 | 17.4 | 2 6.5 -2 18 | 6.2 | 3 | 6.2^[[5.9]]

322 | 2 14.8 | -1 33 | 5.8 | 28.2 | 17.4 | 2 17.1 -1 20 | 5.6 | 5 | 5.1

297 | 2 1.4 | -1 7 | 7.8 | 28.4 | 17.4 | | | 6.7

293 | 2 0.2 | -1 19 | 7.5 | 28.4 | 17.5 | 2 2.5 -1 5 | 6.6 | 0 | 6.6

285 | 1 56.4 | -1 2 | 7.3 | 88.2 | 17.5 | 1 57.1 +64 37 | 5.4 | 4 | 6.0^[[5.8]]

318 | 1 59.1 | -0 40 | 7.3 | 88.5 | 17.4 | 2 1.4 -0 27 | 6.4 | 4 | 6.2^[[6.0]]

307 | 1 55.8 | -0 34 | 6.0 | 88.2 | 17.4 | | | 4.3

355 | 2 14.6 | -0 16 | 5.5 | 28.4 | 17.4 | 2 16.8 -0 4 | 6.0 | 2 | 6.8^[[6.2]]

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

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics

* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

130

Aug. 7, 1888.

Plate 1738.

[[13 columned table]]

[V|H|Type|No. Remark.|No. Lines|K|Focus|Other Lines.|V.|H.|V.|H.]

14.8	10.4	II	17	K=2H 2 -17.4 20.8 0.1 67.4
14.4	13.6	II	14	K=H 1 -17.2 27.2 0.3 61.0
13.4	14.5	III	32	K=H 1 6.7 29.0 0.8 59.2
12.8	9.0	IIA?	202	2 K=1.2H 3 Recu 6.4 18.0 1.1 70.2
12.5	9.5	II	14	K=H 1 -16.2 18.6 1.3 69.6
12.0	9.7	II	3	N 1 -16.0 19.4 1.5 68.8
12.9	10.6	III	2	K=H 1 6.4 21.2 1.1 67.0
12.5	16.4	III	2	K=H 1 -16.2 32.8 1.3 55.4
12.7	19.8	IIA?	203	2 K=H 2 ? 6.4 39.6 1.1 48.6
11.0	9.5	I?	2	N 1 -15.5 19.0 2.0 69.2
11.0	16.8	II	13	N 5 F 5.5 33.6 2.0 54.6
10.5	8.2	III	2	K=H 1 5.2 16.4 2.3 71.8
10.8	11.8	III	204	2 K=H 1 ? 5.4 23.6 2.1 64.6
10.2	17.7	IIa?	205	2 K=1.2H 2 height? ? 5.1 35.4 2.4 52.8
10.1	21.1	IIIbc	206	2 K=1.2H 3 F? height? ? 5.0 42.2 2.5 46.0
9.4	12.2	II	18	K=5H 2 F? 4.7 24.4 2.8 63.8
9.6	16.3	IIa?	207	2 K=H 1 ? 4.8 32.6 2.7 55.6
8.8	13.1	II	16	K=5H 2 -14.4 26.2 3.1 62.0
9.0	23.6	IIIh	208	2 K=H 2 ? 4.5 47.2 3.0 41.0
7.6	17.6	III	2	K=H 1 -13.8 35.2 3.7 53.0
6.9	9.8	I?	2	N 1 -13.4 19.6 4.1 68.6
6.3	11.4	I?	17	K=H 2 -13.2 22.6 4.3 65.6
5.1	14.2	II	14	K=H 1 -12.6 28.4 4.9 59.8
4.1	12.8	IIa?	209	2 K=H 1 ? 2.0 25.6 5.5 62.6
4.4	13.4	IIa	210	3 K=H 2 ? 2.2 26.8 5.3 61.4
4.4	17.9	III	2	K=H 1 -12.2 35.8 5.3 52.4
3.5	20.3	II	5	N 1 -11.8 40.6 5.7 47.6
2.4	15.1	I?	15	K=H 2 -11.2 30.2 6.3 58.0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
• Provided by the NASA Astrophysics Data System

130

Aug. 7, 1888.

Plate 1738.

V.	H.	Type	No.	Remark.	No. Lines	K	Focus	Other Lines.	V.	H.	V.	H.
14.8	10.4	II	17	K=2H 2 -17.4 20.8 0.1 67.4								
14.4	13.6	II	14	K=H 1 -17.2 27.2 0.3 61.0								
13.4	14.5	III	32	K=H 1 6.7 29.0 0.8 59.2								
12.8	9.0	IIA?	202	2 K=1.2H 3 Recu 6.4 18.0 1.1 70.2								
12.5	9.5	II	14	K=H 1 -16.2 18.6 1.3 69.6								
12.0	9.7	II	3	N 1 -16.0 19.4 1.5 68.8								
12.9	10.6	III	2	K=H 1 6.4 21.2 1.1 67.0								
12.5	16.4	III	2	K=H 1 -16.2 32.8 1.3 55.4								
12.7	19.8	IIA?	203	2 K=H 2 ? 6.4 39.6 1.1 48.6								
11.0	9.5	I?	2	N 1 -15.5 19.0 2.0 69.2								
11.0	16.8	II	13	N 5 F 5.5 33.6 2.0 54.6								
10.5	8.2	III	2	K=H 1 5.2 16.4 2.3 71.8								
10.8	11.8	III	204	2 K=H 1 ? 5.4 23.6 2.1 64.6								
10.2	17.7	IIa?	205	2 K=1.2H 2 height? ? 5.1 35.4 2.4 52.8								
10.1	21.1	IIIbc	206	2 K=1.2H 3 F? height? ? 5.0 42.2 2.5 46.0								
9.4	12.2	II	18	K=5H 2 F? 4.7 24.4 2.8 63.8								
9.6	16.3	IIa?	207	2 K=H 1 ? 4.8 32.6 2.7 55.6								
8.8	13.1	II	16	K=5H 2 -14.4 26.2 3.1 62.0								
9.0	23.6	IIIh	208	2 K=H 2 ? 4.5 47.2 3.0 41.0								
7.6	17.6	III	2	K=H 1 -13.8 35.2 3.7 53.0								
6.9	9.8	I?	2	N 1 -13.4 19.6 4.1 68.6								
6.3	11.4	I?	17	K=H 2 -13.2 22.6 4.3 65.6								
5.1	14.2	II	14	K=H 1 -12.6 28.4 4.9 59.8								
4.1	12.8	IIa?	209	2 K=H 1 ? 2.0 25.6 5.5 62.6								
4.4	13.4	IIa	210	3 K=H 2 ? 2.2 26.8 5.3 61.4								
4.4	17.9	III	2	K=H 1 -12.2 35.8 5.3 52.4								
3.5	20.3	II	5	N 1 -11.8 40.6 5.7 47.6								
2.4	15.1	I?	15	K=H 2 -11.2 30.2 6.3 58.0								

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[11 columned table]]
No.	R.A.	Dec.	Mag.	H	V	R.A. ^ [[1900]]	Dec.		Br.
 370 | 2 7.7 | +0 3 | 28.5 | 7.4 | 2 10.1 | +0 15 |
 6.2 | 7 | 5.5 |
 356 | 2 1.3 | +0 16 | 8.3 | 28.5 | 7.5 | | | 7.2 |
 352 | 1 59.3 | +0 45 | 8.0 | 88.3 | 7.5 | | | 7.3 7.7 } |
 410 | 2 10.5 | +1 4 | 5.8 | 28.5 | 7.5 | 2 12.8 | +1 17 |
 5.8 | 5 | 5.3 |
 407 | 2 9.7 | +1 12 | 7.7 | 28.3 | 7.4 | 2 12.0 | +1 25 | 6.6 | 1 | 6.7 |
 403 | 2 9.0 | +1 35 | 8.0 | 28.4 | 7.6 | | | 7.0 |
 369 | 2 7.2 | +0 59 | 7.5 | 28.4 | 7.4 | | | 6.9 7.3 } |
 362 | 1 55.3 | +1 14 | 8.3 | 88.1 | 7.4 | | | 7.2 7.5 } |
 347 | 1 48.4 | +1 8 | 6.2 | 88.0 | 7.5 | 1 50.7 | +1 21 |
 6.0 | 4 | 5.6 |
 406 | 2 9.3 | +1 54 | 8.2 | 28.3 | 7.4 | 2 11.6 | +2 7 | 6.6 | 4 | 7.0 |
 317 | 1 54.6 | +2 4 | 3.5 | 88.2 | 7.6 | 1 56.9 | +2 17 | 4.2 | B. |
 360 | 2 12.0 | +2 9 | 7.8 | 28.4 | 7.4 | 2 13.2 | +28 11 | 5.1 | 20 | 7.1 7.4 } |
 347 | 2 4.8 | +2 5 | 7.3 | 28.4 | 7.5 | 2 5.6 | +31 3 | 6.0 | 5 | 6.5 6.8 } |
 311 | 1 52.6 | +2 24 | 6.5 | 88.0 | 7.5 | 1 55.0 | +2 |
 38 | 6.3 | 6 | 5.7 |
 290 | 1 46.1 | +2 29 | 4.5 | 88.3 | 7.5 | 1 48.4 | +2 |
 42 | 5.5 | 6 | 4.9 |
 5. | ~~9~~ | ~~2~~ |
 346 | 2 4.2 | +2 47 | 7.4 | 28.6 | 7.5 | 2 6.5 | +2 59 |
 6.2 | 5 | 5.7 |
 321 | 1 55.5 | +2 39 | 8.0 | 88.1 | 7.3 | | | 6.6 |
 289 | 2 2.4 | +3 4 | 7.1 | 28.6 | 7.5 | 2 4.7 | +3 18 |
 6.4 | 5 | 5.9 |
 270 | 1 40.9 | +2 57 | 6.5 | 88.1 | 7.5 | 1 43.3 | +3 11 | 5.6 | 5 | 6.1 6.3 } |
 273 | 1 52.8 | +3 42 | 7.5 | 88.0 | 7.5 | | | 7.0 7.2 } |
 313 | 2 8.9 | +3 57 | 8.0 | 28.5 | 7.4 | 2 9.7 | +64 48 | 6.3 | 10 | 7.3 |
 367 | 2 5.9 | +4 20 | 7.3 | 28.5 | 7.5 | 2 8.3 | +4 33 |
 6.0 | 3 | 5.7 |
 354 | ~~1~~ | ~~2~~ | 0.1 | +4 56 | 7.7 | 28.5 | 7.5 | | | 6.8 |
 293 | 2 3.0 | +5 24 | 7.7 | 28.6 | 7.4 | | | 7.0 |
 289 | 2 1.8 | +5 18 | 7.7 | 28.6 | 7.5 | 2 4.2 | +5 31 |
 6.6 | 2 | 6.4 |
 274 | 1 52.4 | +5 21 | 7.5 | 88.2 | 7.6 | 1 55.6 | +63 54 | 5.1 | 19 | 7.0 7.3 } |
 262 | 1 47.7 | +5 42 | 8.0 | 88.3 | 7.5 | 1 50.1 | +5 55 | 6.7 | 6.6 |
 324 | 1 58.2 | +6 2 | 7.0 | 88.4 | 7.6 | ~~1~~ | ~~2~~ | 0.5 | +6 |
 33 | 6.4 | | |

[[right margin]]

41

[[/right margin]]

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

131

No.	R.A.	Dec.	Mag.	H	V	R.A. ^ 1900	Dec.	Br.
370	2 7.7	+0 3	28.5	7.4	2 10.1	+0 15		
356	2 1.3	+0 16	8.3	28.5	7.5			7.2
352	1 59.3	+0 45	8.0	88.3	7.5			7.3 7.7
410	2 10.5	+1 4	5.8	28.5	7.5	2 12.8	+1 17	
407	2 9.7	+1 12	7.7	28.3	7.4	2 12.0	+1 25	6.6 1 6.7
403	2 9.0	+1 35	8.0	28.4	7.6			7.0
369	2 7.2	+0 59	7.5	28.4	7.4			6.9 7.3
362	1 55.3	+1 14	8.3	88.1	7.4			7.2 7.5
347	1 48.4	+1 8	6.2	88.0	7.5	1 50.7	+1 21	
406	2 9.3	+1 54	8.2	28.3	7.4	2 11.6	+2 7	6.6 4 7.0
317	1 54.6	+2 4	3.5	88.2	7.6	1 56.9	+2 17	4.2 B.
360	2 12.0	+2 9	7.8	28.4	7.4	2 13.2	+28 11	5.1 20 7.1 7.4
347	2 4.8	+2 5	7.3	28.4	7.5	2 5.6	+31 3	6.0 5 6.5 6.8
311	1 52.6	+2 24	6.5	88.0	7.5	1 55.0	+2	
38	6.3							6 5.7
290	1 46.1	+2 29	4.5	88.3	7.5	1 48.4	+2	
42	5.5							6 4.9
346	2 4.2	+2 47	7.4	28.6	7.5	2 6.5	+2 59	
321	1 55.5	+2 39	8.0	88.1	7.3			6.6
289	2 2.4	+3 4	7.1	28.6	7.5	2 4.7	+3 18	
270	1 40.9	+2 57	6.5	88.1	7.5	1 43.3	+3 11	5.6 5 6.1 6.3
273	1 52.8	+3 42	7.5	88.0	7.5			7.0 7.2
313	2 8.9	+3 57	8.0	28.5	7.4	2 9.7	+64 48	6.3 10 7.3
367	2 5.9	+4 20	7.3	28.5	7.5	2 8.3	+4 33	
354								6 5.7
293	2 3.0	+5 24	7.7	28.6	7.4			7.0
289	2 1.8	+5 18	7.7	28.6	7.5	2 4.2	+5 31	
274	1 52.4	+5 21	7.5	88.2	7.6	1 55.6	+63 54	5.1 19 7.0 7.3
262	1 47.7	+5 42	8.0	88.3	7.5	1 50.1	+5 55	6.7 6.6
324	1 58.2	+6 2	7.0	88.4	7.6			0.5 +6
33	6.4							

41

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

132

St. Lit.(5.6-5.4) F. m. & c. 7.8 6.2 F. ch. 6.3 Box No. 304

Dark Plate. Aug. 7, 1888.

Plate 2137

[[12 columned table]]

[V|H|Type|No. Rem.|No. Lines|K|Focus|Other Lines.|V.|H.|V.|H.]

22.3 | 18.3 | III | . | 2 | K=H | 1 | - | 11.2 | 36.6 | 6.3 | 34.4 |

22.7 | 20.3 | III | . | 3 | K=H | 3 | F. | 11.4 | 40.6 | 6.1 | 30.4 |

21.5 | 10.0 | I | . | 8 | N | 4 | F. | 10.8 | 20.0 | 6.7 | 51.0 |

21.8 | 13.6 | I | . | 4 | N | 1 | - | 10.9 | 27.2 | 6.6 | 43.8 |

21.0 | 17.4 | III | . | 2 | K=H | 1 | - | 10.5 | 34.8 | 7.0 | 36.2 |

20.8 | 9.4 | I | . | 7 | N | 3 | F. | 10.4 | 18.8 | 7.1 | 52.2 |

20.4 | 10.3 | I? | . | 4 | K=H | 1 | - | 10.2 | 20.6 | 7.3 |
50. ~~20.4~~ | 10.3 | I? | . | 4 | K=H | 1 | - | 10.2 | 20.6 | 7.3 |

20.2 | 19.5 | I | . | 4 | K=H | 1 | - | 10.1 | 39.0 | 7.4 | 32.0 |

20.6 | 20.6 | I? | . | 3 | N | 1 | - | 10.3 | 41.2 | 7.2 | 29.8 |

20.0 | 7.7 | II | . | 2 | K=H | 1 | - | 10.0 | 15.4 | 7.5 | 55.6 |

19.5 | 9.3 | I? | . | 6 | K=H | 2 | F. | 9.8 | 18.6 | 7.7 | 52.4 |

19.2 | 12.5 | I? | . | 4 | K=H | 1 | - | 9.6 | 25.0 | 7.9 | 46.0 |

18.0 | 23.1 | IIIb | 211 | 3 | K=1.2H | 3 | F seen. | 9.0 | 46.2 | 8.5 | 24.8 |

17.2 | 9.3 | II? | . | 2 | K=H | 1 | - | 8.6 | 18.6 | 8.9 | 52.4 |

17.1 | 10.7 | III? | . | 3 | K=H | 1 | F | 8.6 | 21.4 | 8.9 | 49.6 |

17.2 | 13.2 | I? | . | 5 | K=H | 1 | F? | 8.6 | 26.4 | 8.9 | 44.6 |

17.4 | 13.6 | IIa? | 212 | 2 | K=H | 1 | seen | 8.7 | 27.2 | 8.8 | 43.8 |

17.5 | 18.5 | IIa | 213 | 3 | K=1.12 | 3 | F seen | 8.8 | 37.0 | 8.7 | 34.0 |

17.3 | 21.0 | I? | . | 4 | K=H | 1 | - | 8.6 | 42.0 | 8.9 | 29.0 |

132

Dark Plate Aug. 7, 1888

No.	Type	No. Rem.	No. Lines	K	Focus	Other Lines	V.	H.	V.	H.
22.3	III	.	2	K=H	1	-	11.2	36.6	6.3	34.4
22.7	III	.	3	K=H	3	F.	11.4	40.6	6.1	30.4
21.5	I	.	8	N	4	F.	10.8	20.0	6.7	51.0
21.8	I	.	4	N	1	-	10.9	27.2	6.6	43.8
21.0	III	.	2	K=H	1	-	10.5	34.8	7.0	36.2
20.8	I	.	7	N	3	F.	10.4	18.8	7.1	52.2
20.4	I?	.	4	K=H	1	-	10.2	20.6	7.3	
20.2	I	.	4	K=H	1	-	10.1	39.0	7.4	32.0
20.6	I?	.	3	N	1	-	10.3	41.2	7.2	29.8
20.0	II	.	2	K=H	1	-	10.0	15.4	7.5	55.6
19.5	I?	.	6	K=H	2	F.	9.8	18.6	7.7	52.4
19.2	I?	.	4	K=H	1	-	9.6	25.0	7.9	46.0
18.0	IIIb	211	3	K=1.2H	3	F seen.	9.0	46.2	8.5	24.8
17.2	II?	.	2	K=H	1	-	8.6	18.6	8.9	52.4
17.1	III?	.	3	K=H	1	F	8.6	21.4	8.9	49.6
17.2	I?	.	5	K=H	1	F?	8.6	26.4	8.9	44.6
17.4	IIa?	212	2	K=H	1	seen	8.7	27.2	8.8	43.8
17.5	IIa	213	3	K=1.12	3	F seen	8.8	37.0	8.7	34.0
17.3	I?	.	4	K=H	1	-	8.6	42.0	8.9	29.0

16.1 | 11.9 | IIIb? | 214 | 2 | K=H | 1 | seen | 8.0 | 23.8 | 9.5 | 47.2 |

15.1 | 10.7 | I? | . | 6 | K=H | 2 | F? | 7.6 | 21.4 | 9.9 | 49.6 |

15.1 | 11.7 | III | . | 3 | K=H | 1 | F | 7.6 | 23.4 | 9.9 | 47.6 |

15.9 | 13.6 | III | . | 2 | K=H | 1 | F | 8.0 | 27.2 | 9.5 | 43.8 |

15.0 | 18.2 | IIa | 215 | 2 | K=H | 1 | seen | 7.5 | 36.4 | 0.0 | 34.6 |

15.0 | 18.4 | IIIb? | 216 | 3 | K=H | 2 | F seen | 7.5 | 36.8 | 0.0 | 34.2 |

15.7 | 19.2 | III? | . | 1 | N | 1 | - | 7.8 | 38.4 | 9.7 | 32.6 |

15.5 | 19.4 | I | . | 10 | N | 5 | F | 7.8 | 38.8 | 9.7 | 32.2 |

15.5 | 23.8 | I | . | 7 | K=H | 3 | F | 7.8 | 47.6 | 9.7 | 23.4 |

[[left margin]]
0 48
[[/left margin]]

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[11 columned table]]

No. | R.A. | Dec. | Magn. | H. | V. | R.A.^[[1900]] | Dec. | | | Br.

421	2 34.5	-3 50	6.3	71.1	17.4	2 36.8	-3 39	6.2	6	7.1^[[6.8]]
436	2 30.4	-4 2	6.0	71.0	17.4	2 32.7	-3 49	6.0	-	
470	2 51.4	-3 22	5.5	71.4	17.4	2 53.7	-3 11	5.3	7	4.6
453	2 44.1	-3 36	7.7	71.3	17.3					7.0
426	2 36.2	-3 9	6.7	71.0	17.3	2 38.5	-2 58	6.4	4	7.0^[[6.8]]
475	2 52.4	-3 3	6.2	71.2	17.4	2 54.7	-2 52	5.4	4	5.0
526	2 50.7	-2 55	7.9	71.3	17.3					7.0
463	2 32.0	-2 42	7.8	71.0	17.4					6.9
452	2 29.8	-2 58	7.2	71.0	17.3					7.2
538	2 55.7	-2 40	7.3	71.1	17.3					7.1
532	2 52.7	-2 23	7.8	71.3	17.4					6.5
511	2 46.2	-2 14	7.8	71.2	17.4					7.1
353	2 24.8	-1 40	5.6	71.0	17.3	2 27.1	-1 28	6.0	2	6.1^[[5.8]]
428	2 52.5	-1 16	8.2	71.1	17.3					-
429	2 52.7	-1 16	8.2	71.3	17.3					7.3
419	2 49.8	-1 9	7.5	71.2	17.4					7.1^[[6.9]]
401	2 44.8	-1 14	8.0	71.2	17.4					6.6
398	2 44.0	-1 16	8.0	71.2	17.4					6.8
377	2 33.8	-1 19	6.2	70.8	17.5	2 36.1	-1 8	5.9	3	5.6
363	2 29.1	-1 16	7.7	71.1	17.3	2 36.1	-1 4	6.6	2	6.8
450	2 47.4	-0 38	6.8	71.2	17.4					6.7^[[6.5]]
460	2 49.7	-0 8	7.5	71.1	17.5					6.0
451	2 47.8	-0 8	7.7	71.2	17.5					6.2^[[6.9]]
443	2 44.1	-0 31	8.0	71.3	17.5					7.5^[[7.1]]
411	2 34.6	-0 4	8.1	71.0	17.4					6.7
410	2 34.1	-0 4	7.3	70.9	17.4					6.9^[[6.5]]
407	2 32.4	-0 29	8.2	70.8	17.3					7.6^[[7.3]]
406	2 32.1	-0 18	3.7	70.9	17.5	2 34.4	-0 6	4.2	-	B
378	2 23.3	-0 23	6.5	70.9	17.4	2 25.7	-0 11	6.0	4	5.6

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics

* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20

Transcribed and Reviewed by Digital Volunteers

Extracted Aug-29-2022 02:37:24

[[u]] Aug. 9, 1888. [[/u]]

Plate 2137

[[left margin]]

21 30

[[/left margin]]

[[12 columned table]]

V. | H. | Type. | No. Rem. | No. Lines. | K. | Focus | Other Lines. | V | H |
V | H. |

14.0	9.2	III	2	K=H	1	-	7.0	18.4	0.5	52.6	
14.1	14.2	II	3	K=H	1	F	7.0	28.4	0.5	42.6	
14.2	14.5	III?	2	K=H	1	-	7.1	29.0	0.4	42.0	
14.0	22.8	I?	4	K=H	1	-	7.0	45.6	0.5	25.4	
13.2	7.7	III	2	K=H	1	-	6.6	15.4	0.9	55.6	
13.1	8.6	I	6	K=H?	2	-	6.6	17.2	0.9	53.8	
13.8	15.4	II?	2	K=H	1	-	6.9	30.8	0.6	40.2	
13.0	16.5	III	2	K=H	1	-	6.5	33.0	1.0	38.0	
13.4	19.4	I	5	N	1	-	6.7	38.8	0.8	32.2	
13.8	23.4	I	6	K=H	2	-	6.9	46.8	0.6	24.2	
12.3	7.0	IIIb?	217	3	K=H	2	F seen	6.2	14.0	1.3	57.0
12.7	9.6	III	1	N	1	-	6.4	19.2	1.1	51.8	
12.2	10.7	II	2	K=H	1	-	6.1	21.4	1.4	49.6	
12.0	11.6	I	6	N	3	-	6.0	23.2	1.5	47.8	
12.1	12.5	II?	2	K=H	1	-	6.0	25.0	1.5	46.0	
12.6	13.7	I	4	K=H	1	-	6.3	27.4	1.2	43.6	
12.6	15.3	III	2	K=H	1	F?	6.3	30.6	1.2	40.4	
12.3	18.9	III	2	K=H	1	-	6.2	37.8	1.3	33.2	
11.8	10.0	III?	2	K=H	1	-	5.9	20.0	1.6	51.0	
11.7	13.7	III?	1	N	1	-	5.8	27.4	1.7	43.6	
11.0	14.1	II?	2	K=H	1	-	5.5	28.2	2.0	42.8	
11.2	20.6	IIa?	218	3	K=H	2	F seen	5.6	41.2	1.9	29.8
11.6	23.4	IIIbc?	219	3	K=H	3	F bright seen.	5.8	46.8	1.7	
24.2											
10.5	5.9	I	3	N	1	-	5.2	11.8	2.3	59.2	
10.1	13.4	I?	3	N	1	-	5.0	26.8	2.5	44.2	
10.0	13.6	IIa?	220	2	K=H	2	seen	5.0	27.2	2.5	43.8
10.4	17.2	III	2	K=H	1	-	5.2	34.4	2.3	36.6	
10.2	18.8	III	2	K=H	1	-	5.1	37.6	2.4	33.4	

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

134

Relays

Aug 9, 1888

21 30	V.	H.	Type	No. Rem.	No. Lines	K.	Focus	Other Lines	V	H	
14.0	9.2	III	2	K=H	1	-	7.0	18.4	0.5	52.6	
14.1	14.2	II	3	K=H	1	F	7.0	28.4	0.5	42.6	
14.2	14.5	III?	2	K=H	1	-	7.1	29.0	0.4	42.0	
14.0	22.8	I?	4	K=H	1	-	7.0	45.6	0.5	25.4	
13.2	7.7	III	2	K=H	1	-	6.6	15.4	0.9	55.6	
13.1	8.6	I	6	K=H?	2	-	6.6	17.2	0.9	53.8	
13.8	15.4	II?	2	K=H	1	-	6.9	30.8	0.6	40.2	
13.0	16.5	III	2	K=H	1	-	6.5	33.0	1.0	38.0	
13.4	19.4	I	5	N	1	-	6.7	38.8	0.8	32.2	
13.8	23.4	I	6	K=H	2	-	6.9	46.8	0.6	24.2	
12.3	7.0	IIIb?	217	3	K=H	2	F seen	6.2	14.0	1.3	57.0
12.7	9.6	III	1	N	1	-	6.4	19.2	1.1	51.8	
12.2	10.7	II	2	K=H	1	-	6.1	21.4	1.4	49.6	
12.0	11.6	I	6	N	3	-	6.0	23.2	1.5	47.8	
12.1	12.5	II?	2	K=H	1	-	6.0	25.0	1.5	46.0	
12.6	13.7	I	4	K=H	1	-	6.3	27.4	1.2	43.6	
12.6	15.3	III	2	K=H	1	F?	6.3	30.6	1.2	40.4	
12.3	18.9	III	2	K=H	1	-	6.2	37.8	1.3	33.2	
11.8	10.0	III?	2	K=H	1	-	5.9	20.0	1.6	51.0	
11.7	13.7	III?	1	N	1	-	5.8	27.4	1.7	43.6	
11.0	14.1	II?	2	K=H	1	-	5.5	28.2	2.0	42.8	
11.2	20.6	IIa?	218	3	K=H	2	F seen	5.6	41.2	1.9	29.8
11.6	23.4	IIIbc?	219	3	K=H	3	F bright seen.	5.8	46.8	1.7	
10.5	5.9	I	3	N	1	-	5.2	11.8	2.3	59.2	
10.1	13.4	I?	3	N	1	-	5.0	26.8	2.5	44.2	
10.0	13.6	IIa?	220	2	K=H	2	seen	5.0	27.2	2.5	43.8
10.4	17.2	III	2	K=H	1	-	5.2	34.4	2.3	36.6	
10.2	18.8	III	2	K=H	1	-	5.1	37.6	2.4	33.4	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[8 columned table]]

No. | R.A. | Dec. | Magn. | H. | V. | R.A.^[[1900]] Dec. | Br.

495	2 52.8	+0 25	8.3	71.2	7.4	7.6^[[7.3]]	
471	2 42.9	+0 22	8.0	71.3	7.4	6.8	
469	2 42.2	+0 19	7.3	71.2	7.4	6.8^[[6.5]]	
421	2 25.3	+0 23	7.5	70.9	7.4	7.0	
503	2 55.7	+0 47	8.0	71.1	7.4	7.6^[[7.3]]	
499	2 54.0	+0 35	8.0	71.2	7.2	6.3	
459	2 40.0	+0 28	8.3	70.8	7.4	6.9	
456	2 38.0	+0 57	8.9	71.0	7.5	7.7^[[7.4]]	
442	2 32.1	+0 44	8.5	70.9	7.4	6.8	
415	2 24.0	+0 28	7.5	70.8	7.4	2 26.3 +0 40 15.9 3 6.2	
534	2 57.2	+1 19	6.5	71.2	7.5	6.2^[[6.0]]	
520	2 51.9	+1 4	8.0	71.1	7.5	7.7^[[7.4]]	
515	2 49.7	+1 19	7.8	71.1	7.4	6.7	
512	2 48.1	+1 27	7.8	71.3	7.4	2 50.4 +1 37 6.5 11 5.4	
509	2 46.2	+1 4	7.0	71.2	7.1	6.5	
502	2 43.8	+1 6	7.8	71.2	7.4	6.7	
487	2 40.2	+1 6	8.2	70.8	7.4	7.5^[[7.2]]	
464	2 33.0	+1 15	8.5	70.8	7.4	7.6^[[7.3]]	
517	2 51.1	+1 32	7.5	71.1	7.4	7.6^[[7.4]]	
503	2 43.9	+1 35	7.5	71.3	7.4	7.7^[[7.4]]	
497	2 42.8	+1 51	8.5	71.0	7.3	7.4	
455	2 29.7	+1 48	8.2	70.9	7.4	2 32.0 +2 0 6.6 1 6.5	
438	2 24.0	+1 38	5.5	70.8	7.4	2 26.3 +1 50 6.3 6 6.2^[[5.7]]	
478	2 59.3	+2 9	7.8	71.1	7.4	7.1	
438	2 43.8	+2 28	8.0	70.6	7.5	7.4	
437	2 43.4	+2 42	8.5	70.6	7.7	6.4	
425	2 36.3	+2 12	8.3	70.7	7.4	7.6^[[7.2]]	
412	2 33.3	+2 16	7.8	70.9	7.4	7.0^[[6.8]]	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics

* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20

Transcribed and Reviewed by Digital Volunteers

Extracted Aug-29-2022 02:37:24

136

Aug. 9, 1888.

Plate 2137.

[[12 columned table]]

V.	H.	Type.	No. Rem.	No. Lines	K.	Focus	Other Lines.	V	H		
9.7	8.4	I	4	N	1	-	4.8	16.8	2.7	54.2	
9.0	11.8	I	6	K=H	2	-	4.5	23.6	3.0	47.4	
9.8	17.5	I?	14	K=.2H	5	F	4.9	35.0	2.6	36.0	
9.2	19.8	IIIb	221	3	K=H	2	F seen	4.6	39.6	2.9	31.4
8.3	6.1	I?	4	K=H	1	-	4.2	12.2	3.3	58.8	
8.0	8.2	IIIbc?	222	3	K=1.2H	4	F bright seen	4.0	16.4	3.5	54.6
8.7	10.7	IIa?	223	2	K=H	1	seen	4.4	21.4	3.1	49.6
8.0	11.2	I	5	N	1	-	4.0	22.4	3.5	48.6	
8.0	14.8	I	5	K=H	1	-	4.0	29.6	3.5	41.4	
7.4	8.1	I	8	N	3	-	3.7	16.2	3.8	54.8	
7.1	10.8	III	3	K=H	1	F	3.6	21.6	3.9	49.4	
7.3	18.5	I	6	N	2	-	3.6	37.0	3.9	34.0	
6.0	12.2	I	4	K=.8H	1	-	3.0	24.4	4.5	46.6	
6.8	16.5	I?	8	K=H	2	F	3.4	33.0	4.1	38.0	
6.4	18.7	I?	7	K=H	2	F	3.2	37.4	4.3	33.6	
5.7	8.0	I	6	N	1	-	2.8	16.0	4.7	55.0	
5.4	8.4	IIIb	224	3	K=H	2	F seen	2.7	16.8	4.8	54.2
5.0	13.2	III?	2	K=H	1	-	2.5	26.4	5.0	44.6	
5.0	21.3	IIIbc	225	3	K=1.2H	3	F bright seen	2.5	42.6	5.0	28.4
4.4	13.6	IIa?	226	2	K=H	1	seen	2.2	27.2	5.3	43.8
4.6	16.9	I?	3	N	1	-	2.3	33.8	5.2	37.2	
4.0	18.7	III	2	K=H	1	-	2.0	37.4	5.5	33.6	
4.0	19.1	IIa?	227	3	K=H	2	F seen	2.0	38.2	5.5	32.8
3.7	7.5	IIa?	228	2	K=H	1	F? seen	1.8	15.0	5.7	56.0
3.5	7.7	I	5	K=H	2	-	1.8	15.4	5.7	55.6	
3.7	11.4	III?	1	N	1	-	1.8	22.8	5.7	48.2	
3.2	13.1	I	6	N	2	-	1.6	26.2	5.9	44.8	
3.3	21.2	I	4	N	1	-	1.6	42.4	5.9	28.6	

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

136

Aug. 9, 1888.
Plate 2137.

V.	H.	Type.	No. Rem.	No. Lines	K.	Focus	Other Lines.	V	H		
9.7	8.4	I	4	N	1	-	4.8	16.8	2.7	54.2	
9.0	11.8	I	6	K=H	2	-	4.5	23.6	3.0	47.4	
9.8	17.5	I?	14	K=.2H	5	F	4.9	35.0	2.6	36.0	
9.2	19.8	IIIb	221	3	K=H	2	F seen	4.6	39.6	2.9	31.4
8.3	6.1	I?	4	K=H	1	-	4.2	12.2	3.3	58.8	
8.0	8.2	IIIbc?	222	3	K=1.2H	4	F bright seen	4.0	16.4	3.5	54.6
8.7	10.7	IIa?	223	2	K=H	1	seen	4.4	21.4	3.1	49.6
8.0	11.2	I	5	N	1	-	4.0	22.4	3.5	48.6	
8.0	14.8	I	5	K=H	1	-	4.0	29.6	3.5	41.4	
7.4	8.1	I	8	N	3	-	3.7	16.2	3.8	54.8	
7.1	10.8	III	3	K=H	1	F	3.6	21.6	3.9	49.4	
7.3	18.5	I	6	N	2	-	3.6	37.0	3.9	34.0	
6.0	12.2	I	4	K=.8H	1	-	3.0	24.4	4.5	46.6	
6.8	16.5	I?	8	K=H	2	F	3.4	33.0	4.1	38.0	
6.4	18.7	I?	7	K=H	2	F	3.2	37.4	4.3	33.6	
5.7	8.0	I	6	N	1	-	2.8	16.0	4.7	55.0	
5.4	8.4	IIIb	224	3	K=H	2	F seen	2.7	16.8	4.8	54.2
5.0	13.2	III?	2	K=H	1	-	2.5	26.4	5.0	44.6	
5.0	21.3	IIIbc	225	3	K=1.2H	3	F bright seen	2.5	42.6	5.0	28.4
4.4	13.6	IIa?	226	2	K=H	1	seen	2.2	27.2	5.3	43.8
4.6	16.9	I?	3	N	1	-	2.3	33.8	5.2	37.2	
4.0	18.7	III	2	K=H	1	-	2.0	37.4	5.5	33.6	
4.0	19.1	IIa?	227	3	K=H	2	F seen	2.0	38.2	5.5	32.8
3.7	7.5	IIa?	228	2	K=H	1	F? seen	1.8	15.0	5.7	56.0
3.5	7.7	I	5	K=H	2	-	1.8	15.4	5.7	55.6	
3.7	11.4	III?	1	N	1	-	1.8	22.8	5.7	48.2	
3.2	13.1	I	6	N	2	-	1.6	26.2	5.9	44.8	
3.3	21.2	I	4	N	1	-	1.6	42.4	5.9	28.6	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[13 columned table]]

No.	R.A.	Dec.	Magn.	H.	V.	
465	2 54.3	+2 34 8.5	71.1	7.4		6.9
450	2 47.6	+2 54 7.5	71.2	7.4	2 49.9 +3 5 6.4	6.0
422	2 35.8	+2 38 3.5	70.8	7.5	2 38.1 +2 48 4.0	- B.
406	2 31.1	+2 48 7.2	70.7	7.4	2 33.4 +3 1 6.2	0 6.2 6.5
431	2 58.8	+3 14 8.0	71.0	7.4		7.0
419	2 54.7	+3 31 2.5	71.1	7.5	2 57.1 +3 42 4.7	7 4.0 4.5
411	2 49.6	+3 5 7.8	71.0	7.5		6.7
407	2 48.7	+3 26 8.2	71.7	7.4		6.5
387	2 41.4	+3 29 8.0	71.0	7.5		7.0
420	2 54.8	+3 46 7.3	71.0	7.5	2 57.1 +3 58 5.6	6 5.0
410	2 49.5	+3 54 6.8	71.0	7.5		6.7 7.1
373	2 33.8	+3 48 7.2	70.8	7.4		6.3
458	2 46.6	+4 28 7.8	71.0	7.5		6.6
437	2 37.8	+4 6 7.2	70.8	7.5	2 40.1 +4 17 6.0	7 5.3
425	2 33.4	+4 14 7.8	70.8	7.4	2 35.7 +4 26 6.4	0 6.4
486	2 55.0	+4 37 8.0	71.0	7.4		5.5
485	2 54.3	+4 46 7.0	71.1	7.5		6.4 6.8
453	2 44.6	+4 55 8.2	71.0	7.4		7.3 7.6
418	2 28.3	+4 57 5.3	70.9	7.5	2 30.6 +5 10 5.6	4 5.2 5.5
402	2 43.9	+5 15 7.9	71.1	7.4		7.1
386	2 36.9	+5 2 8.2	70.7	7.3		7.4
377	2 33.5	+5 27 8.0	70.9	7.4		7.4 7.7
374	2 32.6	+5 30 7.0	70.8	7.5	2 35.0 +5 41 6.2	0 6.2
444	2 56.1	+5 34 8.0	71.7	7.4		6.7
443	2 55.8	+5 40 7.2	71.2	7.5		6.4
420	2 48.4	+5 36 7.5	71.2	7.4		7.3 7.6
406	2 45.0	+5 52 7.9	71.2	7.5	2 47.4 +6 3 6.5	3 6.2
366	2 28.4	+5 48 8.3	70.8	7.4	2 30.8 +6 0 6.2	5 6.7

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[8 columned table]]

No. | R.A. | Dec. | Magn | H. | V. | | Br.

460	2 51.7	+6 5	7.8	71.1	7.5	6.8	
398	2 28.2	+6 10	6.5	70.8	7.4	2 30.5 +6 24 6.6	
928	4 47.2	-3 28	6.6	69.6	17.5	4 49.5 -3 23 6.8 2	7.0
876	4 38.3	-3 31	3.5	69.5	17.7	4 40.5 -3 26 4.0 2	4.0
830	4 28.8	-3 54	6.2	69.4	17.6	4 31.0 -3 49 6.2	
4.0							
834	4 29.1	-3 39	3.5	69.5	17.7	4 31.3 -3 34 4.2 2	
4.0							
809	4 25.4	-3 31	5.6	69.4	17.6	4 27.6 -3 25 5.8 2	
5.6							
884	4 39.1	-3 13	7.2	69.3	17.6	4 41.1 -3 8 6.2 1	
6.1							
1080	4 50.9	-2 26	6.3	69.7	17.6	4 53.2 -2 22 6.2 2	
6.0							
963	4 30.3	-2 46	5.1	69.5	17.6	4 32.6 -2 40 5.6 2	
5.4							
1095	4 53.3	-2 17	6.5	69.5	17.6	4 55.7 -2 13 6.5 0	
6.5							
1088	4 51.8	-2 22	7.8	69.8	17.6	7.2	
742	4 45.1	-1 17	8.3	69.1	17.8	6.8	
826	4 54.0	-0 54	7.8	69.6	17.7	4 56.4 -0 51 6.4 1	6.5
762	4 50.0	-1 18	7.3	69.8	17.7	6.3	
702	4 35.0	-1 13	7.5	69.4	17.6	6.7	
689	4 32.5	-1 20	7.7	69.5	17.7		
6.7							
713	4 24.5	-0 22	5.0	69.5	17.6	4 26.8 -0 16 6.0 2	6.2 6.6
923	4 54.4	-0 32	6.2	69.6	7.7	4 56.7 +0 34 6.3 5	6.8 7.1
893	4 47.4	+0 14	6.2	69.6	7.6	4 49.7 +0 19 5.8 5	5.3
834	4 37.3	+0 18	6.8	69.5	7.7	4 39.6 +0 23 6.8 6	6.2
821	4 34.2	+0 16	8.2	69.4	7.7	7.1	
800	4 30.0	+0 16	8.3	69.4	7.7	7.2	
801	4 30.0	+0 14	8.3	69.4	7.6	7.2	
798	4 29.8	+0 43	5.4	69.4	7.7	4 32.1 +0 48 5.3 3	5.0
871	4 43.3	+0 54	7.3	69.7	7.7	4 45.6 +0 59 6.2 4	5.8
817	4 33.5	+0 41	8.0	69.5	7.7	7.0	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

139

No. | R.A. | Dec. | Magn | H. | V. | | Br.

460 2 51.7 +6 5 7.8 71.1 7.5 6.8

398 2 28.2 +6 10 6.5 70.8 7.4 2 30.5 +6 24 6.6

928 4 47.2 -3 28 6.6 69.6 17.5 4 49.5 -3 23 6.8 2 7.0

876 4 38.3 -3 31 3.5 69.5 17.7 4 40.5 -3 26 4.0 2 4.0

830 4 28.8 -3 54 6.2 69.4 17.6 4 31.0 -3 49 6.2

~~4.0~~

834 4 29.1 -3 39 3.5 69.5 17.7 4 31.3 -3 34 4.2 2

~~4.0~~

809 4 25.4 -3 31 5.6 69.4 17.6 4 27.6 -3 25 5.8 2

~~5.6~~

884 4 39.1 -3 13 7.2 69.3 17.6 4 41.1 -3 8 6.2 1

~~6.1~~

1080 4 50.9 -2 26 6.3 69.7 17.6 4 53.2 -2 22 6.2 2

~~6.0~~

963 4 30.3 -2 46 5.1 69.5 17.6 4 32.6 -2 40 5.6 2

~~5.4~~

1095 4 53.3 -2 17 6.5 69.5 17.6 4 55.7 -2 13 6.5 0

~~6.5~~

1088 4 51.8 -2 22 7.8 69.8 17.6 7.2

742 4 45.1 -1 17 8.3 69.1 17.8 6.8

826 4 54.0 -0 54 7.8 69.6 17.7 4 56.4 -0 51 6.4 1 6.5

762 4 50.0 -1 18 7.3 69.8 17.7 6.3

702 4 35.0 -1 13 7.5 69.4 17.6 6.7

689 4 32.5 -1 20 7.7 69.5 17.7

~~6.7~~

713 4 24.5 -0 22 5.0 69.5 17.6 4 26.8 -0 16 6.0 2 6.2 6.6

923 4 54.4 -0 32 6.2 69.6 7.7 4 56.7 +0 34 6.3 5 6.8 7.1

893 4 47.4 +0 14 6.2 69.6 7.6 4 49.7 +0 19 5.8 5 5.3

834 4 37.3 +0 18 6.8 69.5 7.7 4 39.6 +0 23 6.8 6 6.2

821 4 34.2 +0 16 8.2 69.4 7.7 7.1

800 4 30.0 +0 16 8.3 69.4 7.7 7.2

801 4 30.0 +0 14 8.3 69.4 7.6 7.2

798 4 29.8 +0 43 5.4 69.4 7.7 4 32.1 +0 48 5.3 3 5.0

871 4 43.3 +0 54 7.3 69.7 7.7 4 45.6 +0 59 6.2 4 5.8

817 4 33.5 +0 41 8.0 69.5 7.7 7.0

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

Aug. 9 1888.
Plate 1740

IV. | H. | Type. | No. Rem. | No. Lines. | K. | Focus. | Other Lines. | V | H |
V | H. |

13.9	22.2	I	4	N	1	-	7.0	44.4	0.6	25.1	
12.6	7.6	I	6	N	2	-	6.3	15.2	1.3	54.3	
12.5	9.3	III	bc	235	3	K=H?	3	F bright seen	6.2	18.6	1.4
50.9											
12.5	10.6	I	5	K=H	1	-	6.2	21.2	1.4	48.3	
12.7	11.6	I	7	K=3H	2	-	6.4	23.2	1.2	46.3	
11.6	7.4	I	3	N	1	-	5.8	14.8	1.8	54.7	
11.0	11.5	I	b?	236	14	N	5	F seen	5.5	23.0	2.1
11.7	10.5	I	3	N	1	-	5.8	21.0	1.8	48.5	
11.4	13.8	I	3	N	1	-	5.7	27.6	1.9	41.9	
10.9	11.9	III	bc?	237	1	N	1	bright seen	5.4	23.8	2.2
10.5	14.4	III	b?	238	2	K=H	1	seen	5.2	28.8	2.4
9.2	8.3	I	3	N	1	-	4.6	16.6	3.0	52.9	
9.2	10.1	I	4	N	1	-	4.6	20.2	3.0	49.3	
9.5	10.5	I	5	N	1	-	4.8	21.0	2.8	48.5	
9.6	15.5	I	5	K=H	1	-	4.8	31.0	2.8	38.5	
9.9	17.3	I	4	N	1	-	5.0	34.6	2.6	34.9	
8.9	7.2	I	5	N	1	-	4.4	14.4	3.2	55.1	
8.4	8.1	I	6	N	1	-	4.2	16.2	3.4	53.3	
8.6	8.4	I	7	N	2	-	4.3	16.8	3.3	52.7	
8.5	13.5	I	5	K=H	1	-	4.2	27.0	3.4	42.5	
8.5	14.1	I	5	N	2	-	4.2	28.2	3.4	41.3	
8.8	14.3	III	b?	239	2	K=H	2	seen	4.4	28.6	3.2
8.6	14.4	I	5	N	1	-	4.3	28.8	3.3	40.7	
6.5	10.7	I	7	N	1	-	3.2	21.4	4.4	48.1	
5.0	10.7	I	7	N	2	-	2.5	21.4	5.1	48.1	
5.1	22.5	I	a?	240	2	K=H	1	seen	2.6	45.0	5.0
4.8	13.1	I	b	241	12	N	5	F seen	2.4	26.2	5.2
4.4	15.0	I	6	N	2	F?	2.2	30.0	5.4	39.5	

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

No.	R. A.	Dec.	Magn.	H.	V.	Br.
---	---	---	---	---	---	---
780	4 24.9	+0 40	8.0	69.3	7.7	4 27.2+0 46 6.6 0 6.6
886	4 54.5	+1 23	6.6	69.7	7.7	4 56.8+1 28 5.8 3 5.5
872	4 51.0	+1 30	5.0	69.6	7.7	4 53.4+1 33 5.7 0 6.1^[[5.7]]
857	4 48.5	+1 23	7.5	69.7	7.6	4 50.8+1 28 6.9 2 6.7
847	4 46.4	+1 20	7.5	69.6	7.7	4 48.8+1 25 6.2 1 6.1
887	4 54.9	+1 52	8.3	69.7	7.7	7.4
810	4 46.7	+2 13	3.5	69.7	7.7	4 49.1+2 17 4.1 - B
859	4 48.6	+1 48	8.0	69.6	7.6	7.3
823	4 42.0	+1 56	7.8	69.6	7.6	7.0
800	4 45.8	+2 16	5.0	69.6	7.7	6.9^[[6.4]]
773	4 40.9	+2 28	7.2	69.7	7.7	6.6^[[6.8]]
738	4 53.0	+3 4	8.2	69.6	7.7	7.4
716	4 49.4	+3 3	8.3	69.6	7.6	6.6
818	4 48.6	+2 57	8.2	69.6	7.8	4 51.0+3 2 7.0 4 6.6
764	4 38.5	+2 50	8.3	69.5	7.6	7.1
751	4 34.7	+2 43	8.0	69.3	7.7	4 37.0+2 48 6.9 4 6.5
748	4 55.1	+3 15	8.2	69.5	7.6	4 57.5+3 19 6.4 2 6.6
739	4 53.5	+3 31	8.2	69.7	7.7	6.5
737^[[736]]	4^[[4]]	52.9^[[52.9]]			+3^[[+3]]	24^[[24]] 7.8^[[7.8]] 69.7 7.7 4 55.3+3 28 6.0 5 5.5
686	4 42.6	+3 26	8.2	69.6	7.6	7.0
682	4 41.3	+3 26	7.9	69.5	7.6	4 43.7+3 31 6.4 2 6.2
681	4 41.2	+3 20	7.0	69.8	7.7	4 43.5+3 25 6.5 1 6.6^[[6.4]]
679	4 41.1	+3 24	8.4	69.9	7.7	4 43.4+3 29 6.6 1 6.5
782	4 48.2	+4 26	8.0	69.6	7.6	7.1
769	4 48.3	+5 10	7.3	69.7	7.7	4 50.6+5 15 6.2 4 5.8
674	4 24.4	+5 6	7.2	69.4	7.7	4 26.7+5 11 6.6 1 6.7
745	4 43.5	+5 22	4.0	69.7	7.8	4 45.9+5 26 4.0 - B
728	4 39.6	+5 32	7.3	69.6	7.7	4 41.9+5 37 6.3 2 6.5

No.	Red.	Den.	Major	to	Y.	Red.
710	4	247	4	00	15	4 27 2 40 46 16 9 66
711	4	105	4	125	15	4 26 8 41 35 55 2 55
712	4	116	4	100	59	4 32 24 41 32 57 0 57
713	4	105	4	145	75	4 32 5 22 55 49 26 47
714	4	100	4	144	75	4 32 5 41 25 62 2 41
715	4	105	4	145	12	4 37 7 7
716	4	105	4	145	24	4 49 1 20 17 41 - 8
717	4	105	4	145	12	4 52 7 7
718	4	100	4	144	75	4 52 7 7
719	4	105	4	145	12	4 52 7 7
720	4	105	4	145	75	4 52 7 7
721	4	105	4	145	12	4 52 7 7
722	4	105	4	145	12	4 52 7 7
723	4	105	4	145	12	4 52 7 7
724	4	105	4	145	12	4 52 7 7
725	4	105	4	145	12	4 52 7 7
726	4	105	4	145	12	4 52 7 7
727	4	105	4	145	12	4 52 7 7
728	4	105	4	145	12	4 52 7 7
729	4	105	4	145	12	4 52 7 7
730	4	105	4	145	12	4 52 7 7
731	4	105	4	145	12	4 52 7 7
732	4	105	4	145	12	4 52 7 7
733	4	105	4	145	12	4 52 7 7
734	4	105	4	145	12	4 52 7 7
735	4	105	4	145	12	4 52 7 7
736	4	105	4	145	12	4 52 7 7
737	4	105	4	145	12	4 52 7 7
738	4	105	4	145	12	4 52 7 7
739	4	105	4	145	12	4 52 7 7
740	4	105	4	145	12	4 52 7 7
741	4	105	4	145	12	4 52 7 7
742	4	105	4	145	12	4 52 7 7
743	4	105	4	145	12	4 52 7 7
744	4	105	4	145	12	4 52 7 7
745	4	105	4	145	12	4 52 7 7
746	4	105	4	145	12	4 52 7 7
747	4	105	4	145	12	4 52 7 7
748	4	105	4	145	12	4 52 7 7
749	4	105	4	145	12	4 52 7 7
750	4	105	4	145	12	4 52 7 7

142

Aug,9 1888.

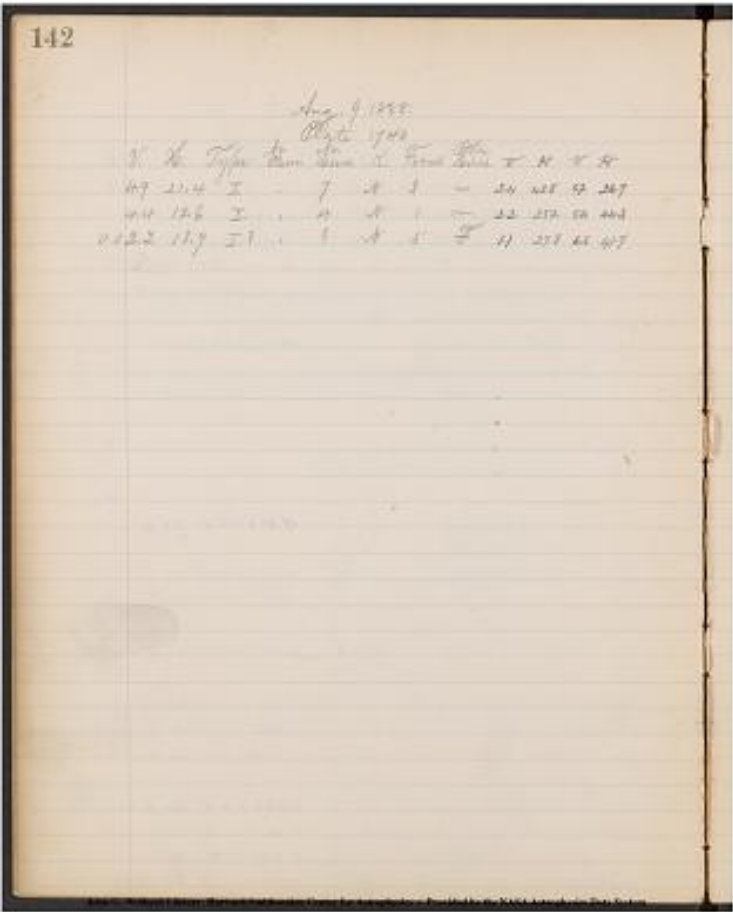
Plate 1740

[[13 column table]]

| v. | H. | Type | No. Rem. | No. Lines. | K. | Focus | Other. Lines. | V |
H | V | H |

	4.9		21.4		I		.		7		s		3		-		2.4		42.8		5.2		26.7			
	4.4		12.6		I		.		4		s		1		-		2.2		25.2		5.4		44.3			
	0 0		2.2		13.9		I?		.		?		s		5		F		1.1		27.8		6.5		41.7	

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

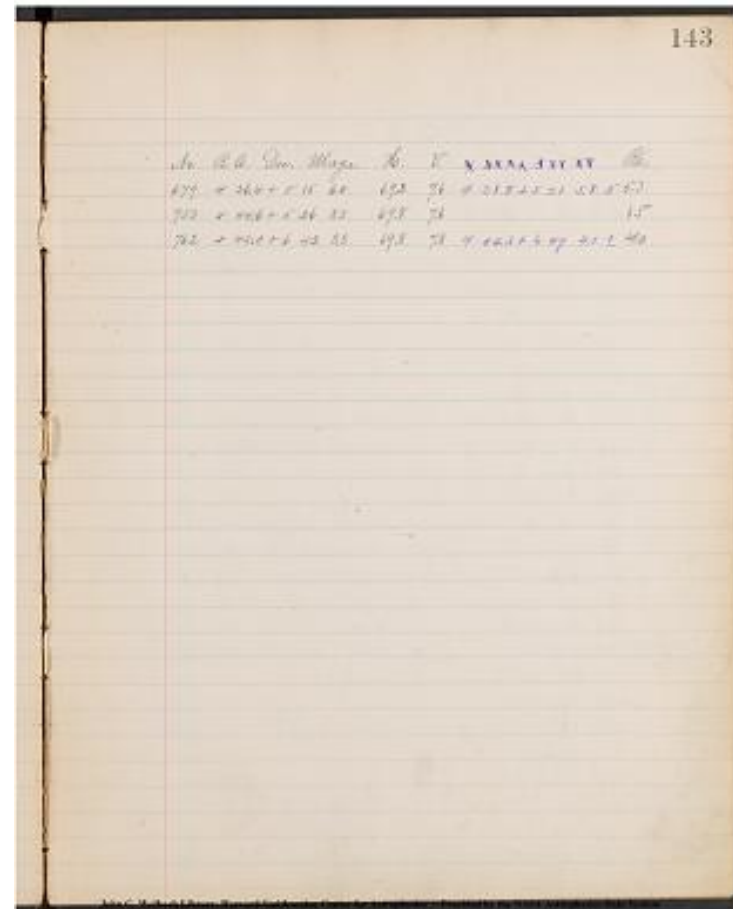


Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

143

[[8 columned table]]
 [No.|R.A.|Dec.| Magn.|H.|V.][~~4 28.8 +5 21~~
 5.8~~Br.~~]
 [---|---|---|---|---|---|---|---]
 679|4 26.4|+5 15|6.0|69.2|7.6|4 28.8 +5 21 5.8 5|5.3|
 753|4 44.6|+5 26|8.3|69.8|7.6| |6.5|
 762|4 42.0|+6 42|3.3|69.8|7.8|4 44.3 +6 47 4.1
 [1][4.0]

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



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

St. Lt. 6.0 F. m. & cl. 7.8-6.7 F ch. 6.9 Box No. 305

Sept. 13, 1888

Plate 2155

[[12 columned table]]

V. | H. | Type. | No. Rem. | No. Lines | K. | Focus | Other Lines | V | H |
V | H |

22.0|13.6|~~II~~||~~IIa~~?|~~F~~?|268|2|K=H|2|F?
 Seen|11.0|2|~~II~~||~~IIa~~?|7.2|6.6|
 2|~~II~~||~~IIa~~?|5.2|
 22.7|22.7|~~II~~||~~IIa~~?|H| |3|K=H|1|F|11.4
 45.4|6.6|~~II~~||~~IIa~~?|2|7.0|
 21.0|12.0|~~II~~||~~IIa~~?|H| |3|K=H|1|F|10.5|
 24.0|7.1|28.2|
 21.4|12.3|~~II~~||~~IIa~~?|~~F~~?|269|2|K=H|2|F?
 Seen|10.7|24.6|6.9|27.8|
 21.5|23.2|~~II~~||~~IIa~~?|A?| |2|
 K=H|3|F?|10.8|46.4|6.8|6.0|
 20.1|12.9|~~II~~||~~IIa~~?|H| |2|K=H|1|10.0|
 25.8|7.6|26.6|
 20.2|13.7|~~II~~||~~IIa~~?|K=H|1|F|Seen|10.1|27.4|7.5|25.0|
 20.8|15.9|~~II~~||~~IIa~~?|K=H|2|Seen|10.4|31.8|7.2|20.6|
 19.4|7.6| |5|N|3|9.7|15.2|7.9|37.2|
 19.0|10.1|?| |6|N|3|F2|9.5|20.2|8.1|32.2|
 18.4|7.8|~~II~~||~~IIa~~?|K=2.0|H|4|F.B|Seen|9.2|15.6|8.2|36.8|
 18.5|18.5| |4|K=H|1|9.2|37.0|8.2|15.2|
 17.6|8.3|~~IIa~~?|273|2|K=H|1|Seen|8.8|16.6|8.8|35.8|
 17.1|11.4|~~IIa~~?|274|2|K=H|1|Seen|8.6|22.8|9.0|29.6|
 17.2|22.2|~~IIa~~?|275|2|K=H|2|Seen|8.6|44.4|9.0|8.0|
 16.1|9.2| |4|N|2|8.0|18.4|9.6|34.0|
 16.1|17.2| |5|N|3|8.0|34.4|9.6|18.0|
 16.1|18.7|?| |3|K=H|1|F|8.0|37.4|9.6|13.0|
 15.8|11.8| |4|K=H|1|7.9|23.6|9.7|28.8|
 15.0|14.5|~~IIb~~?| |3|K=H|1|F|Seen|7.5|29.0|10.1|23.4|
 15.0|16.9| |3|N|1|7.5|33.8|10.1|18.6|
 15.1|18.5| |6|K=H|1|7.6|37.0|10.0|
 15.6|21.5|~~IIa~~?|276|2|K=H|1|Seen|7.8|48.0|9.8|
 14.9|6.9| |5|N|2|7.4|13.8|10.2|38.6|
 14.5|9.1| |3|N|1|7.2|18.2|10.4|34.2|
 14.9|13.6|?| |4|K=H|1|7.4|27.2|10.2|25.2|
 14.1|18.7|~~II~~||~~IIa~~?|3|K=H|1|F|7.0|37.4|10.6|15.0|
 13.8|19.5|~~IIa~~?|277|2|K=H|2|Seen|6.9|39.0|10.7|13.4|

144 Sept 13, 1888

Plate 2155

V	H	Type	No. Rem.	No. Lines	K	Focus	Other Lines	V	H	V	H
22.0	13.6	II	11.0	2	K=H	2	268	11	13.6		
22.7	22.7	II	7.2	3	K=H	1	7.2	11.4	11.4		
45.4	6.6	II	7.0	3	K=H	1	7.0	11.4	11.4		
21.0	12.0	II	10.5	3	K=H	1	10.5	11.4	11.4		
24.0	7.1	II	28.2	2	K=H	2	28.2	11.4	11.4		
21.4	12.3	II	269	2	K=H	2	269	11.4	11.4		
21.5	23.2	II	A?	2	K=H	1	A?	11.4	11.4		
20.1	12.9	II	10.8	46.4	6.8	6.0	10.8	11.4	11.4		
20.1	12.9	II	10.0	2	K=H	1	10.0	11.4	11.4		
25.8	7.6	II	26.6				26.6	11.4	11.4		
20.2	13.7	II	270	3	K=H	1	270	11.4	11.4		
20.8	15.9	II	271	3	K=H	2	271	11.4	11.4		
19.4	7.6		5	N	3	9.7	15.2	7.9	37.2		
19.0	10.1		6	N	3	F2	9.5	20.2	8.1	32.2	
18.4	7.8	II	272	3	K=2.0	H	4	F.B	Seen	9.2	15.6
18.5	18.5		4	K=H	1	9.2	37.0	8.2	15.2		
17.6	8.3	IIa?	273	2	K=H	1	Seen	8.8	16.6	8.8	35.8
17.1	11.4	IIa?	274	2	K=H	1	Seen	8.6	22.8	9.0	29.6
17.2	22.2	IIa?	275	2	K=H	2	Seen	8.6	44.4	9.0	8.0
16.1	9.2		4	N	2	8.0	18.4	9.6	34.0		
16.1	17.2		5	N	3	8.0	34.4	9.6	18.0		
16.1	18.7		3	K=H	1	F	8.0	37.4	9.6	13.0	
15.8	11.8		4	K=H	1	7.9	23.6	9.7	28.8		
15.0	14.5	IIb?	3	K=H	1	F	Seen	7.5	29.0	10.1	23.4
15.0	16.9		3	N	1	7.5	33.8	10.1	18.6		
15.1	18.5		6	K=H	1	7.6	37.0	10.0			
15.6	21.5	IIa?	276	2	K=H	1	Seen	7.8	48.0	9.8	
14.9	6.9		5	N	2	7.4	13.8	10.2	38.6		
14.5	9.1		3	N	1	7.2	18.2	10.4	34.2		
14.9	13.6		4	K=H	1	7.4	27.2	10.2	25.2		
14.1	18.7	II	3	K=H	1	F	7.0	37.4	10.6	15.0	
13.8	19.5	IIa?	277	2	K=H	2	Seen	6.9	39.0	10.7	13.4

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

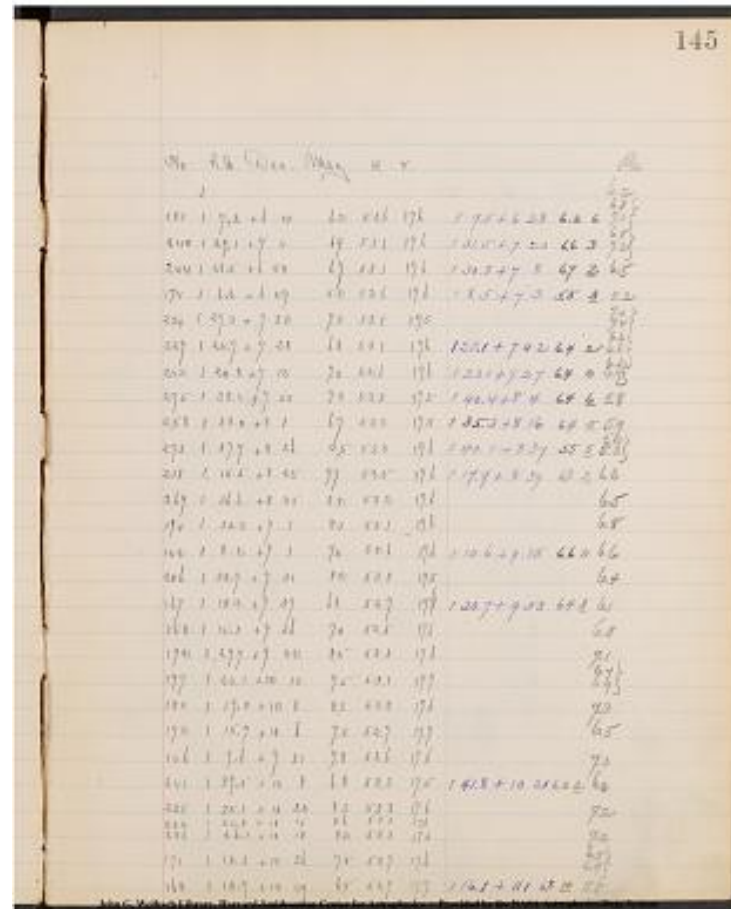
[[8 columned table]]

[No. | R.A. | Dec. | Mag. | H.V. | Br.]

[-----|-----|-----|-----|-----|-----]

No.	R.A.	Dec.	Mag.	H.V.	Br.
181	17.2	+6 14	6.2	52.6	17.6
240	129.1	+7 11	6.9	53.1	17.6
244	128.5	+6 54	6.9	53.1	17.6
174	16.2	+6 49	5.2	52.6	17.6
234	127.3	+7 32	7.3	53.1	17.5
229	125.7	+7 28	6.8	53.1	17.6
213	120.8	+7 12	7.0	52.6	17.6
275	138.1	+7 50	7.3	53.3	17.5
258	133.0	+8 1	6.7	53.2	17.5
273	137.7	+8 26	4.5	53.3	17.6
218	115.5	+8 25	7.9	52.5	17.6
269	136.6	+8 45	8.2	53.2	17.6
194	130.3	+9 1	8.1	53.1	17.6
142	18.2	+9 1	7.0	52.6	17.6
206	134.9	+9 31	8.2	53.3	17.5
167	118.3	+9 39	6.8	52.7	17.6
158	115.1	+9 36	7.0	52.5	17.6
192	129.7	+9 42	8.5	53.3	17.6
197	124.1	+10 10	7.5	53.1	17.7
184	119.0	+10 8	8.3	52.8	17.6
172	115.7	+10 6	7.3	52.7	17.7
146	19.6	+9 51	7.8	52.6	17.6
241	139.5	+10 8	6.8	53.3	17.5
225	135.1	+10 22	8.3	53.3	17.6
202	125.8	+10 15	8.6	53.0	17.6
203	126.1	+10 10	8.2	53.3	17.6
171	115.3	+10 36	7.0	52.7	17.6
168	113.7	+10 47	6.5	52.7	17.7

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



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

146

Sept. 13, 1888.

Plate 2155

[[12 column table]]

V. | H. | Type. | No. Rem. | No. Lines | K. | Focus. | Other Lines. | V | H |
V | H |

12.7 | 11.7 | ~~[[strikethrough]]~~ I ~~[[strikethrough]]~~ A | | 2 | K=H | 1 | - | 6.4 |
23.4 | 11.2 | 29.0 |

12.6 | 12.0 | ~~[[strikethrough]]~~ II[^]~~[[a2]]~~ ~~[[strikethrough]]~~ F | 278 | 3 | K=H |
3 | F. Seen | 6.3 | 24.0 | 11.3 | 28.4 |

12.1 | 15.5 | ~~[[strikethrough]]~~ I ~~[[strikethrough]]~~ A | | 5 | N | 1 | - | 6.0 |
31.0 | 11.6 | 21.4 |

12.6 | 20.3 | ~~[[strikethrough]]~~ I ~~[[strikethrough]]~~ A | | 3 | N | 1 | - | 6.3 |
40.6 | 11.3 | 11.7 |

11.9 | 10.9 | ~~[[strikethrough]]~~ II[^]~~[[2]]~~ ~~[[strikethrough]]~~ E | | 2 | K=H | 1 | - |
6.0 | 21.8 | 11.6 | 30.6 |

11.8 | 13.1 | ~~[[strikethrough]]~~ I ~~[[strikethrough]]~~ A | | 7 | K=.8H? | 2 | - |
5.9 | 26.2 | 11.7 | 26.2 |

11.8 | 19.1 | ~~[[strikethrough]]~~ III ~~[[strikethrough]]~~ H | | 2 | K=H | 2 | - | 5.9 |
38.2 | 11.7 | 14.2 |

8.3 | 10.9 | ~~[[strikethrough]]~~ III ~~[[strikethrough]]~~ H | | 2 | K=H | 2 | - | 4.2 |
21.8 | 13.4 | 30.6 |

8.9 | 11.3 | ~~[[strikethrough]]~~ I ~~[[strikethrough]]~~ A | | 4 | K=H | 1 | F? | 4.4 |
22.6 | 13.2 | 29.8 |

8.5 | 21.4 | ~~[[strikethrough]]~~ III ~~[[strikethrough]]~~ H | | 1 | N | 1 | - | 4.2 |
42.8 | 13.4 | 9.6 |

7.6 | 12.7 | ~~[[strikethrough]]~~ I ~~[[strikethrough]]~~ A | | 10 | N | 3 | F | 3.8 |
25.4 | 13.8 | 27.0 |

6.4 | 14.8 | ~~[[strikethrough]]~~ III [^]~~[[bc?]]~~ ~~[[strikethrough]]~~ K! | 279 | 3 |
K=1.2H | 4 | F? B. Seen | 3.2 | 29.6 | 14.4 | 22.8 |

4.0 | 10.8 | ~~[[strikethrough]]~~ III[^]~~[[b]]~~ ~~[[strikethrough]]~~ I | 280 | 2 | K=H | 2 |
F? Seen | 2.0 | 21.6 | 15.6 | 31.8 |

4.6 | 22.1 | ~~[[strikethrough]]~~ I ~~[[strikethrough]]~~ A | | 5 | K=H | 1 | - | 2.3 |
44.2 | 15.3 | 8.2 |

146

Sept. 13, 1888.
Plate 2155

V	H	Type	No. Rem.	No. Lines	K	Focus	Other Lines	V	H
12.7	11.7	I A	2	K=H	1	-	6.4	23.4	11.2
12.6	12.0	II [^] [[a2]]	278	3	K=H	3	F. Seen	6.3	24.0
12.1	15.5	I A	5	N	1	-	6.0	31.0	11.6
12.6	20.3	I A	3	N	1	-	6.3	40.6	11.3
11.9	10.9	II [^] [[2]]	2	K=H	1	-	6.0	21.8	11.6
11.8	13.1	I A	7	K=.8H?	2	-	5.9	26.2	11.7
11.8	19.1	III H	2	K=H	2	-	5.9	38.2	11.7
8.3	10.9	III H	2	K=H	2	-	4.2	21.8	13.4
8.9	11.3	I A	4	K=H	1	F?	4.4	22.6	13.2
8.5	21.4	III H	1	N	1	-	4.2	42.8	13.4
7.6	12.7	I A	10	N	3	F	3.8	25.4	13.8
6.4	14.8	III [^] [[bc?]]	279	3	K=1.2H	4	F? B. Seen	3.2	29.6
4.0	10.8	III [^] [[b]]	280	2	K=H	2	F? Seen	2.0	21.6
4.6	22.1	I A	5	K=H	1	-	2.3	44.2	15.3

4.7 | 23.0 | ~~I~~ ~~A~~ | 7 | N | 3 | F? | 2.4 |
46.0 | 15.2 | 6.4 |

3.6 | 10.9 | ~~III^[b?] K?~~ ~~I?~~ | 281 | 2 |
K=H | 1 | Seen | 1.8 | 21.8 | 15.8 | 30.6 |

3.0 | 14.4 | ~~III~~ ~~H~~ | 2 | K=H | 1 | - | 1.5 |
28.8 | 16.1 | 23.6 |

2.8 | 6.6 | ~~I~~ ~~A~~ | 5 | N | 3 | - | 1.4 | 13.2 |
16.2 | 39.2 |

2.6 | 14.7 | ~~I~~ ~~A~~ | 4 | K=H | 1 | - | 1.3 |
29.4 | 16.3 | 23.0 |

2.8 | 16.0 | ~~II^[a]~~ ~~F~~ | 282 | 3 | K=H | 2 |
F. Seen | 1.4 | 32.0 | 16.2 | 20.4 |

2.6 | 18.7 | ~~II^[a?]~~ ~~F?~~ | 283 | 2 | K=H |
2 | Seen | 1.3 | 37.4 | 16.3 | 15.0 |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

No.	R.A.	Dec.	Mag.	H.	V.	Br.
1			6.2			
205	1 29.4	+11 25	6.0	53.4	17.7	1 31.8 +11 38 6.0 10 5.0
187	1 21.8	+11 39	8.1	52.8	17.6	6.7
167	1 12.1	+11 24	8.0	52.7	17.7	7.1
210	1 31.5	+11 42	8.3	53.3	17.7	7.2
201	1 27.2	+11 49	6.8	53.4	17.7	1 29.6 +12 3 6.6 7 5.9
172	1 14.3	+11 50	7.0	52.5	17.7	6.6 [^] [[6.5]]
255	1 31.5	+13 34	7.5	53.3	17.8	6.8 [^] [[6.5]]
250	1 30.7	+13 11	8.1	53.3	17.6	6.9
192	1 9.7	+13 29	7.0	52.5	17.7	7.3 [^] [[6.9]]
240	1 28.0	+13 55	6.6	53.4	17.7	1 30.4 +14 9 6.0 9 5.1
231	1 23.7	+14 35	4.0	53.3	17.8	1 26.2 +14 50 5.0 10
4.4 [^] [[4.0]]						
245	1 31.9	+15 42	6.5	53.5	17.7	1 34.3 +15
45						54 6.5 2 6.6[^][[6.3]]
181	1 8.2	+15 26	7.8	52.4	17.7	7.0
177	1 6.4	+15 22	6.5	52.4	17.8	1 8.8 +15 36 5.8 8 5.0
244	1 31.4	+15 54	6.8	53.2	17.7	6.8 [^] [[6.6]]
167	1 24.2	+16 14	7.0	53.0	17.7	6.9 [^] [[6.6]]
203	1 40.3	+16 15	6.0	53.5	17.6	1 42.8 +16 27 5.7 5 5.2
164	1 23.4	+16 25	7.8	52.8	17.7	7.0
154	1 20.6	+16 20	7.2	52.6	17.7	1 23.0 +16 34 6.4 0 6.4
141	1 15.0	+16 27	8.0	52.4	17.7	1 17.4 +16 41 6.6 2 6.5

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

148

St. Let. 5.4 F. m. & c. 6.0-6.4 F. ch. 6.9 Box No. 637

R.A.^[[?? C]] 8^[[h]] 00 Dec. +88.4°

[[underlined]]November 14 1888[[/underlined]]

Plate 2988

[[left margin]]

21 15

[[/left margin]]

[[12 columned table]]

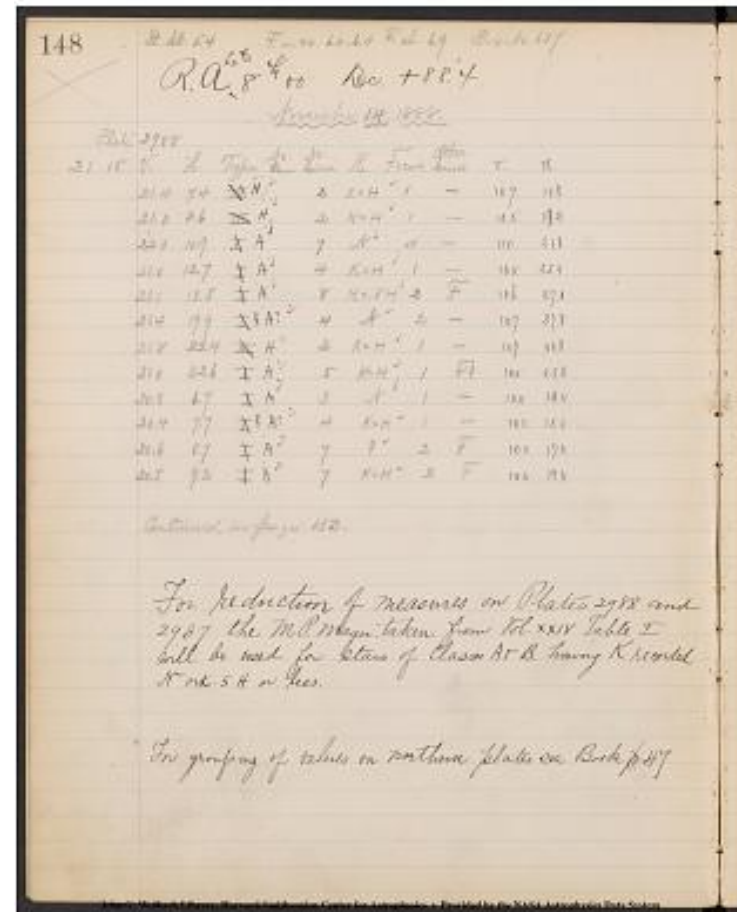
V|H|Type|No. Rem.|No. Lines|K|Focus|Other Lines.|V.|H.|V.|H.|

21.4	7.4	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
21.0	8.6	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
22.0	10.9	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
21.0	12.7	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
21.1	13.5	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
21.4	19.9	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
21.8	22.4	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
21.0	22.6	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
20.8	6.7	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
20.4	7.7	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
20.6	8.7	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]
20.5	9.2	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]	[[/strikethrough]]

Continued in page 150.

For reduction of measures on Plates 2988 and 2987 the M.P. magn. taken from Vol. XXIV Table I will be used for stars of Classes A & B having K recorded N or K=.5H or less.

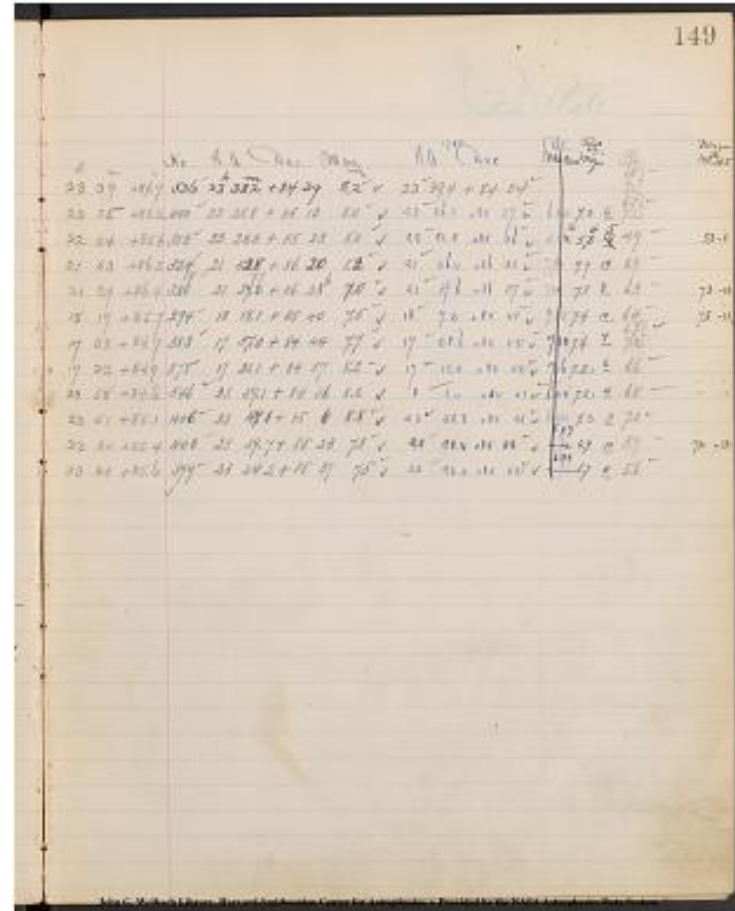
For grouping of values on northern plates see Book
[[/strikethrough]]p[[/strikethrough]]47



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

Pole Plate

[[12 columned table]]
 | [No. | R.A. | Dec. | Mag. | R.A. ^[[1900]] | Dec. | ~~D.C.~~
 Mean | ~~D.C.~~ Magn | Br. | Magn M.P. Tab |]
 |-----|-----|-----|-----|-----|-----|-----|
 23 39 +84.7 | 536 | 23 38.2 | +84 39 | 8.2 | 23 39.4 | +84 54 | | | 7.1 ^[[6.8]] |]
 |
 23 25 +85.2 | 400 | 23 25.8 | +85 13 | 8.0 | 23 26.3 | +85
 27 | ~~6.00~~ | ~~7.3~~ | 6 |]
 7.1 ^[[6.7]] | |
 22 24 +85.4 | 383 | 22 24.2 | +85 23 | 5.0 | 22 21.3 | +85
 36 | ~~5.3~~ | ~~4~~ | ~~2~~ |]
 5 | ~~3~~ | ~~4~~ | 4 | ~~4~~ |]
 kethrough]]5 | 4.9 | 5.3-4 |
 21 53 +86.3 | 324 | 21 52.8 | +86 20 | 8.2 | 21 216.2 | +86 33 |
 | ~~9.9~~ | 10 6.9 |
 21 29 +86.4 | 319 | 21 27.7 | +86 26 | 7.0 | 21 19.6 | +86
 37 | | ~~7.1~~ | 8 6.3 | 7.3-10
 18 17 +85.7 | 294 | 18 18.1 | +85 40 | 7.5 | | 18 7.2 | +85 [?] |
 | ~~7.4~~ | 10 6.4 | 7.5-11
 17 38 +84.7 | 383 | 17 37.0 | +84 44 | 7.7 | | 17 28.6 | +84 [?] |
 | ~~7.4~~ | 7 {6.7/7.0}
 17 23 +84.9 | 378 | 17 21.1 | +84 57 | 8.2 | | 17 12.3 | +84 54 |
 | ~~7.2~~ | 6 6.6
 23 58 +84.6 | 546 | 23 59.1 | +84 36 | 8.2 | | 0 1.4 | +84 51 | | ~~7.2~~ | 4 6.8
 23 51 +85.1 | 496 | 23 49.1 | +85 6 | 8.8 | 23 30.8 | +85 21 | | ~~7.3~~ | 3 7.0
 23 30 +85.4 | 403 | 23 29.7 | +85 23 | 7.8 | 23 30.4 | +85 38 |
 | ~~6.87~~ | 6.9 | 10 5. 7.2-13
 23 24 +85.6 | 399 | 23 24.2 | +85 37 | 7.5 | 23 24.4 | +85 52 |
 | ~~6.71~~ | 6.7 | 11 5.6



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

150

March 27, 1889.

Plate 2988.

[[left margin]]

23 00

[[/left margin]]

[[12 columned table]]

V|H|Type|No. Rem.|No. Lines|K|Focus|Other Lines.|V.|H.|V.|H.|Correc.]

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

20.4|9.3|A?|4|K=H|2|—|

20.0|11.4|A|3|N|1|—|

20.2|13.7|H?|2|K=H|1|—|

20.0|16.7|A|4|N|1|—|

20.8|17.7|H|3|K=H|2|F|

20.4|18.4|A?|3|N|1|—|

20.0|18.8|A|9|N|5|F|

19.0|5.7|A?|4|K=H|1|—|

19.1|7.0|A|4|K=H|1|—|

19.0|7.6|E?|2|K=H|1|—|

19.4|8.9|A|8|K=3H|2|F|

19.0|9.4|A?|3|N|1|—|

19.3|10.4|A|11|K=8H|4|—|

19.0|12.6|A|7|K=5H|2|—|

19.5|12.9|A?|4|K=H|1|—|

19.4|15.0|H|2|K=H|1|—|

19.0|16.3|A|4|N|1|—|

19.5|18.3|A|8|N|3|F|

19.0|19.0|A?|3|N|1|—|

19.7|23.9|A|4|K=H|1|—|

18.1|7.1|K|284|3|K=H|3|F seen|

18.8|17.8|A?|3|N|1|—|

18.2|20.9|A|3|N|1|—|

18.2|21.8|H|2|K=H|1|—|

17.0|8.1|A|3|N|1|—|

17.4|8.6||285|3|K=H|2|F seen|

17.1|11.4|A|3|N|1|—|

17.7|11.6|A|4|K=H|1|—|

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

152

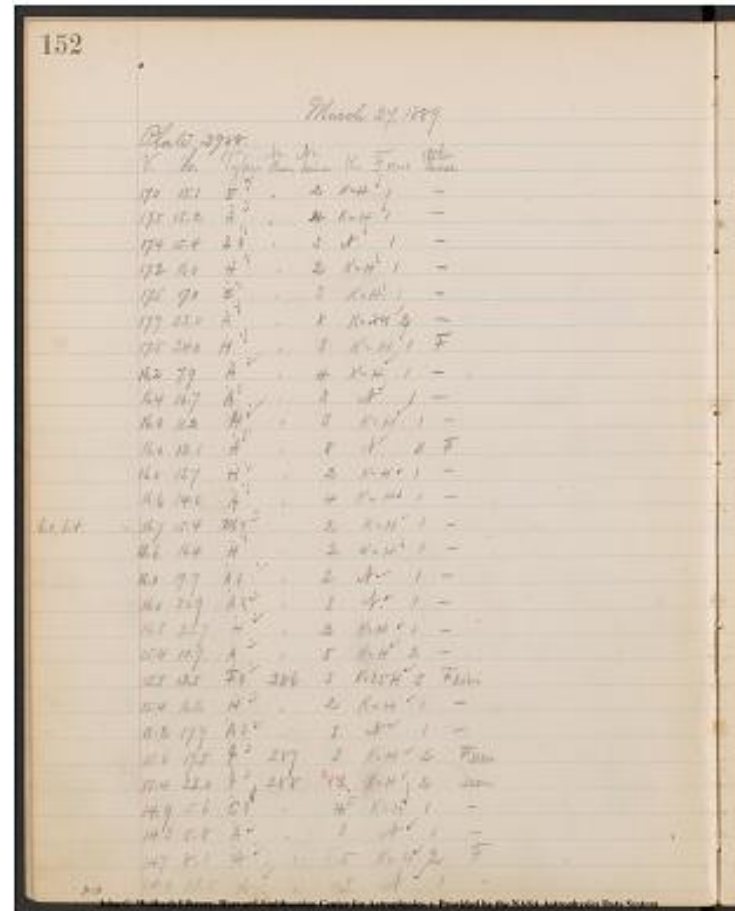
March 27, 1889

Plate 2988.

V. | H. | Type. | No. Rem. | No. Lines | K. | Focus | Other Lines

17.0	15.1	E	2	K=H	1	-
17.5	15.2	A	4	K=H	1	-
17.4	15.4	A?	3	N	1	-
17.2	16.0	H	2	K=H	1	-
17.5	17.0	E	3	K=H	1	-
17.9	23.0	A	8	K=8H	2	-
17.5	24.0	H	3	K=H	1	F
16.2	7.9	A	4	K=H	1	-
16.4	10.7	A	3	N	1	-
16.0	11.2	H	3	K=H	1	-
16.0	12.1	A	8	N	3	F
16.0	13.7	H	2	K=H	1	-
16.6	14.0	A	4	K=H	1	-
16.0	6.4					
16.7	15.4	M?	2	K=H	1	-
16.6	16.4	H	2	K=H	1	-
16.0	19.9	A?	2	N	1	-
16.0	22.9	A?	3	N	1	-
16.3	23.7	H	2	K=H	1	-
15.4	10.9	A	5	K=H	2	-
15.5	12.5	F?	286	3	K=1.5H	5 F seen
15.4	16.2	H	2	K=H	1	-
15.2	17.9	A?	3	N	1	-
15.6	19.5		287	3	K=H	2 F seen
15.4	22.0		288	2		3 K=H
2						Seen
14.9	5.6	C?	5		4	K=H 1 -
14.3	5.8	A	3	N	1	-
14.0	10.0	A	3	N	1	-

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[11 columned table]]
 |No.|R.A.|Dec.|Mag.|R.A.^[[1900]]|Dec.|D.C. Mean| |Br.| |
 |---|---|---|---|---|---|---|---|---|
 20 39 +88.7|117|20 34.6|+88 41X|var.|19 58.7 +88 50| | |6.9| |
 20 25 +88.5|115|20 24.2|+88 26|8.8|19 54.0 +88 35| | |7.0| |
 20 19 +88.6|114|20 17.2|+88 34|8.0|19 43.3 +88
 42|7.8|~~5~~|~~5~~|8|8|7.0|8.
 2 -12|
 19 30 +88.5|110|19 25.6|+88 34|8.8|18 48.3 +88 40| | |7.0| |
 18 29 +88.3|104|18 24.3|+88 14 8.0|17 53.7 +88 16| | |6.5| |
 16 7 +85.7|269|16 6.6|+85 43|7.5|15 57.4 +85
 36|6|~~68~~|~~7~~|9|5|
 15 52 +85.3|263|15 50.2|+85 18|7.2|15 42.5 +85
 10|7.3|~~4~~|~~4~~|10|6.7|
 6.3|
 1 34 +86.2|25|1 31.6|+86 13|8.8|1 40.2 +86
 26|7|~~75~~|~~8~~|10|6.8|
 0 51 +87.5|9|0 51.5|+87 29|8.8|0 59.6 +87 44| | |6.9| |
 1 9 +87.8|12|1 7.1|+87 48|8.0|1 18.0 +88
 3|7.8|~~5~~|~~5~~|11|7.1|
 6.7|
 0 45 +88.2|4|0 45.5|+88 15|7.5|0 55.6 +88
 29|6|~~55~~|~~6~~|10|5.6|
 6.5 -9|
 23 20 +89.0|38|23 21.3|+89 1|9.0|23 11.0 +89 16| | |7.2^[[6.8]]| |
 22 30 +88.7|131|22 30.6|+88 44|8.7|22 12.3 +88
 58|8.0|~~0~~|~~0~~|12|6.8|
 20 10 +88.8|112|20 8.5|+88 52|6.5|19
 23.6|~~23.6~~|~~22.5~~ +88
 59|7.4|~~0~~|~~0~~|14|6.6|
 6.0|
 18 37 +88.7|105|18 34.4|+88 42|8.5|17 51.2 +88 46| | |7.4^[[7.0]]| |
 15 46 +87.5|147|15 43.2|+87 32|7.9|15 27.3 +87
 23|7.8|~~5~~|~~5~~|10|6.8|8
 .1 -13|
 15 16 +86.1|221|15 16.6|+85 4|8.1|15 6.4 +85
 54|7.6|~~3~~|~~3~~|10|6.6|
 15 17 +85.6|249|15 16.6|+85 41|8.0|15 9.2 +85 31|
 1 38 +87.7|15|1 35.6|+87 47|8.2|1 ~~22.0~~
 +88|~~49.6~~ +88 0|
 1 9 +88.5|8|1 6.5|+88 32|2.0|1 22.0 +88
 46|4.4|~~0~~|~~0~~|1|7.6|
 17 28 +89.3|28|17 21.6|+89 18|8.7|16 9.6 +89 14| | |7.2| |
 15 30 +88.5|90|15 31.2|+88 34|8.9|15 4.8 +88 24| | |7.2| |
 15 29 +87.7|143|15 26.0|+87 47|7.0|15 9.4 +87
 37|7|~~55~~|~~6~~|13|6.8|
 ^[[6.3]]|
 14 58 +86.6|217|14 58.5|+86 33|6.8|14 49.6 +86
 22|7.6|~~5~~|~~5~~|14|6.6|
 6.2|
 2 15 +85.2|45|2 14.2|+85 10|8.6|2 23.3 +85
 22|7.1|~~0~~|~~0~~|6|6.5| |
 2^[[2]] 34^[[32]] +85.3^[[85.2]]|R 50^[[48]]|2^[[2]]
 30.9^[[29.4]] +85^[[+85]] 16^[[15]]|8.8^[[8.8]]|2^[[2]] 41.0^[[39.5]]
 +85^[[+85]] 28^[[27]]|~~6.05~~

153

No.		R.A.		Dec.		Mag.		R.A.^[[1900]]		Dec.		D.C. Mean		Br.	
20	39	117	20	34.6	+88	41	X	var.	19	58.7	+88	50			6.9
20	25	115	20	24.2	+88	26			19	54.0	+88	35			7.0
20	19	114	20	17.2	+88	34			19	43.3	+88				
42	7.8	5	5	<u>8</u>	<u>8</u>										
19	30	110	19	25.6	+88	34			18	48.3	+88	40			7.0
18	29	104	18	24.3	+88	14			17	53.7	+88	16			6.5
16	7	269	16	6.6	+85	43			15	57.4	+85				
36	6	68	7	<u>9</u>	<u>5</u>										
15	52	263	15	50.2	+85	18			15	42.5	+85				
10	7.3	4	4	<u>10</u>	<u>6.7</u>										
6.3															
1	34	25	1	31.6	+86	13			1	40.2	+86				
26	7	75	8	<u>10</u>	<u>6.8</u>										
0	51	9	0	51.5	+87	29			0	59.6	+87	44			6.9
1	9	12	1	7.1	+87	48			1	18.0	+88				
3	7.8	5	5	<u>11</u>	<u>7.1</u>										
6.7															
0	45	4	0	45.5	+88	15			0	55.6	+88				
29	6	55	6	<u>10</u>	<u>5.6</u>										
6.5	-9														
23	20	38	23	21.3	+89	1			23	11.0	+89	16			7.2^[[6.8]]
22	30	131	22	30.6	+88	44			22	12.3	+88				
58	8.0	0	0	<u>12</u>	<u>6.8</u>										
20	10	112	20	8.5	+88	52			6.5	19					
23.6		23.6	22.5												
59	7.4	0	0	<u>14</u>	<u>6.6</u>										
6.0															
18	37	105	18	34.4	+88	42			17	51.2	+88	46			7.4^[[7.0]]
15	46	147	15	43.2	+87	32			15	27.3	+87				
23	7.8	5	5	<u>10</u>	<u>6.8</u>										
.1	-13														
15	16	221	15	16.6	+85	4			15	6.4	+85				
54	7.6	3	3	<u>10</u>	<u>6.6</u>										
15	17	249	15	16.6	+85	41			15	9.2	+85	31			
1	38	15	1	35.6	+87	47			8.2	1	22.0				
+88	49.6	+88	0												
1	9	8	1	6.5	+88	32			2.0	1	22.0	+88			
46	4.4	0	0	<u>1</u>	<u>7.6</u>										
17	28	28	17	21.6	+89	18			8.7	16	9.6	+89	14		7.6^[[7.2]]
15	30	90	15	31.2	+88	34			8.9	15	4.8	+88	24		7.2
15	29	143	15	26.0	+87	47			7.0	15	9.4	+87			
37	7	55	6	<u>13</u>	<u>6.8</u>										
^[[6.3]]															
14	58	217	14	58.5	+86	33			6.8	14	49.6	+86			
22	7.6	5	5	<u>14</u>	<u>6.6</u>										
6.2															
2	15	45	2	14.2	+85	10			8.6	2	23.3	+85			
22	7.1	0	0	<u>6</u>	<u>6.5</u>										
2^[[2]]	34^[[32]]	+85.3^[[85.2]]	R	50^[[48]]	2^[[2]]										
30.9^[[29.4]]	+85^[[+85]]	16^[[15]]	8.8^[[8.8]]	2^[[2]]	41.0^[[39.5]]										
+85^[[+85]]	28^[[27]]	6.05													

7.3~~[[/strikethrough]]~~R~~[[/strikethrough]]~~5~~[[/strikethrough]]~~6.8 |
|2 20 +86.5|39|2 20.2|+86 25|8.6|2 32.2 +86
37|7.6~~[[/strikethrough]]~~~~5~~~~[[/strikethrough]]~~13~~[[/strikethrough]]~~6.3
|
|2 40 +87.4|26|2 41.0|+87 22|8.7|2 58.5 +87 33| | 7.0| |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

154

March 27.

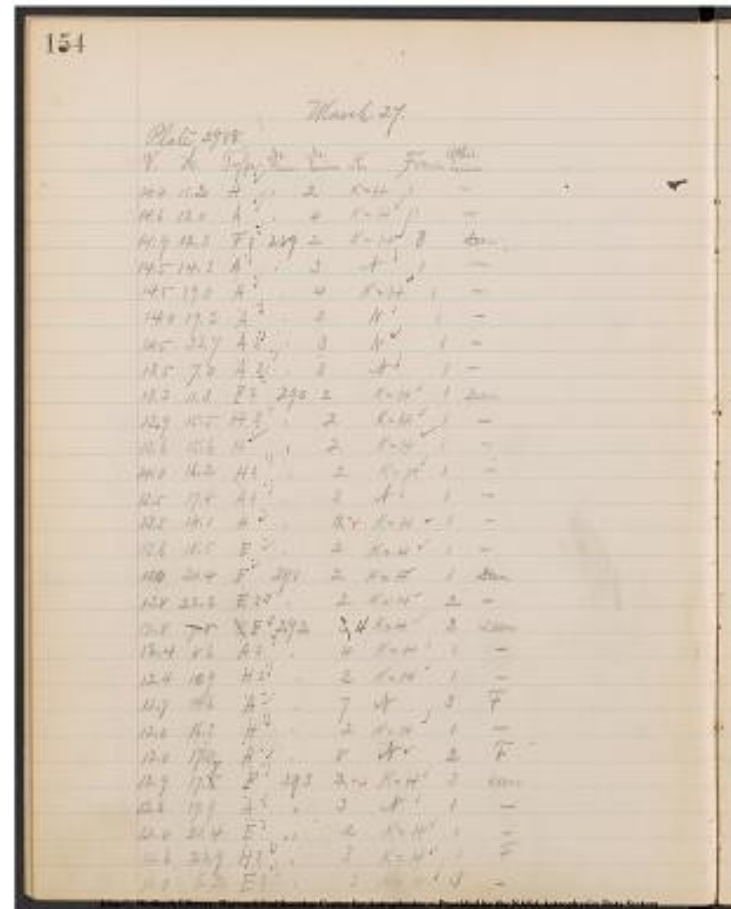
Plate 2988.

[[8 columned table]]

[V|H|Type|No. Rem.|No. Lines|K|Focus|Other Lines.]

14.4	11.2	H	2	K=H	1	—	
14.6	12.0	A	4	K=H	1	—	
14.9	12.3	F?	289	2	K=H	3	Seen
14.5	14.3	A	3	N	1	—	
14.5	19.0	A	4	K=H	1	—	
14.0	19.2	A	3	N	1	—	
14.5	22.7	A?	3	N	1	—	
13.5	7.0	A?	3	N	1	—	
13.2	11.3	F?	290	2	K=H	1	Seen
13.9	15.5	H?	2	K=H	1	—	
13.6	15.6	H	2	K=H	1	—	
14.0	16.2	H?	2	K=H	1	—	
13.5	17.4	A?	3	N	1	—	
13.5	18.1	H	3	K=H	1	—	
13.6	18.5	E	2	K=H	1	—	
13.0	20.4	F	291	2	K=H	1	Seen
13.8	22.2	E?	2	K=H	2	—	
12.8	7.7	F	292	3	K=H	3	Seen
12.4	8.6	A?	4	K=H	1	—	
12.4	10.9	H?	2	K=H	1	—	
12.7	14.6	A	7	N	3	F	
12.0	16.3	H	2	K=H	1	—	
12.0	17.0	A	8	N	2	F	
12.9	17.7	F	293	5	K=H	3	Seen
12.6	19.9	A	3	N	1	—	
12.0	21.4	E	2	K=H	1	—	
12.6	22.9	H?	3	K=H	1	F	
11.0	6.2	E?	3	K=H	3	—	

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



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[9 column table]]

| No. | R.A. | Dec. | Mag. | R.A.^[[1900]] | Dec. | D.C. Mean | Br. |

2 32 +87.9 | 23 | 2 30.6 | +87 57 | 8.7 | 2 51.9 | +88 9 | | 7.0 7.4 } |

2 19 +88.4 | 13 | 2 17.1 | +88 22 | 8.5 | 2 42.2 | +88 35 | 7.8
[[~~5~~]] 5 [[~~10~~]] 10 | 6.8 |1 52 +88.5 | 9 | 1 51.1 | +88 29 | 8.0 | 2 14.2 | +88 42 | 7.6
[[~~0~~]] 0 [[~~10~~]] 10 | 6.6 |1 45 +89.5 | 3 | 1 49.6 | +89 29 | 8.8 | 3 18.7 | +89 41 | | 7.0 | [[right
margin]] ... [[right margin]]14 30 +88.1 | 86 | 14 32.6 | +88 4 | 8.5 | 14 18.1 | +87 52 | 8.0
[[~~5~~]] 5 [[~~11~~]] 11 | 6.9 |14 7 +88.0 | 80 | 14 4.9 | +88 1 | 8.6 | 13 * 53.6 | +87 48 * | | 7.0 |
[[right margin]] ... [[right margin]]14 35 +86.3 | 211 | 14 37.0 | +86 15 | 8.5 | 14 30.0 | +86 3 | | 7.2 |
[[right margin]] ... [[right margin]]2 52 +85.8 | 53 | 2 52.3 | +85 52 | 8.8 | 3 4.5 | +86 3 | | 7.0 | [[right
margin]] ... [[right margin]]3 40 +87.8 | 33 | 3 38.7 | +87 54 | 8.5 | 4 4.9 | +88 2 | 7.9
[[~~0~~]] 0 [[~~13~~]] 13 | 6.6 |

11 3 +89.7 | 18 | 11 8.4 | +89 44 | 8.9 | 11 35.3 | +89 29 | | 7.1 7.5 } |

10 28 +89.5 | 17 | 10 26.4 | +89 32 | 9.0 | 11 0.6 | +89 18 | | 7.2 7.6 }
|13 0 +89.5 | 21 | 12 59.3 | +89 28 | 8.8 | 12 42.4 | +89 14 | | 7.1 7.4 }
|12 58 +88.7 | 75 | 12 52.8 | +88 46 | 9.0 | 12 46.1 | +88 31 | | 7.1 |
[[right margin]] ... [[right margin]]13 17 +88.4 | 76 | 13 12.2 | +88 26 | 8.0 | 13 4.5 | +88 11 | | 6.4 6.9 }
|13 38 +88.3 | 77 | 13 36.7 | +88 18 | 8.5 | 13 26.8 | +88 4 | 8.0
[[~~7.95~~]] 7.95 [[~~13~~]] 13 | 6.7
|

13 30 +87.4 | 122 | 13 30.5 | +87 19 | 8.8 | 13 25.1 | +87 5 | | 6.7 |

The image shows a handwritten astronomical data table on page 155. The table is organized into columns for star number, Right Ascension (R.A.), Declination (Dec.), Magnitude (Mag.), and other parameters. The handwriting is in cursive, and the paper shows signs of age and wear. The table contains approximately 30 rows of data, with some entries crossed out or underlined. The right margin contains additional notes and calculations.

14 6 +86.5 | 201 | 14 5.1 | +86 27 | 7.5 | 13 59.4 | +86 14 | 7.4
~~4~~ ~~13~~ 6.1 |

3 20 +86.2 | 51 | 3 19.5 | +86 11 | 6.0 | 3 33.6 | +86 20 | R5
~~6.47~~ 13 ~~5.2~~ |

3 40 +86.5 | 54 | 3 36.3 | +86 32 | 8.9 | 3 52.6 | +86 41 | | 7.0 |

4 11 +87.6 | 35 | 4 11.1 | +87 36 | 9.0 | 4 35.7 | +87 43 | | 7.1 7.4} |

7 1 +89.0 | 13 | 7 3.7 | +89 2 | 7.0 | 7 58.0 ~~59.2~~
~~56⁵⁸~~ ~~6.9~~
~~0~~ ~~11~~ 5.8 |
 7.1 -13

9 59 +88.6 | 60 | 9 59.6 | +88 36 | 8.5 | 10 19.4 | +88 23 | 7.9
~~0~~ ~~9~~ 7.0 7.3 |

10 57 +88.5 | 64 | 10 53.0 | +88 26 | 7.5 | 11 4.2 | +88 11 | 7.1
~~0~~ ~~11~~ 6.0 |
 7.4 -14

12 16 +88.5 | 71 | 12 14.4 | +88 30 | 6.5 | 12 14.4 ~~.6~~
~~+88 15~~ ~~0~~
11 5.6 |

13 3 +87.5 | 115 | 13 1.4 | +87 26 | 8.4 | 12 58.2 | +87 12 | | 7.0 |
 ...

13 4 +86.6 | 187 | 13 1.8 | +86 39 | 7.0 | 12 59.7 | +86 25 | 7.8
~~0~~ ~~13~~ 6.5 |

13 36 +86.0 | 193 | 13 35.7 | +86 1 | 7.5 | 13 32.4 | +85 47 | 7.6
~~1~~ ~~18~~ 5.8
 6.1} |

3 54 +85.2 | 63 | 3 52.4 | +85 10 | 6.5 | 4 5.1 | +85 17 | 6.7
~~2~~ ~~9~~ 5.8 |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

April 1, 1889.

Plate 2988.

[[left margin]]

0 00

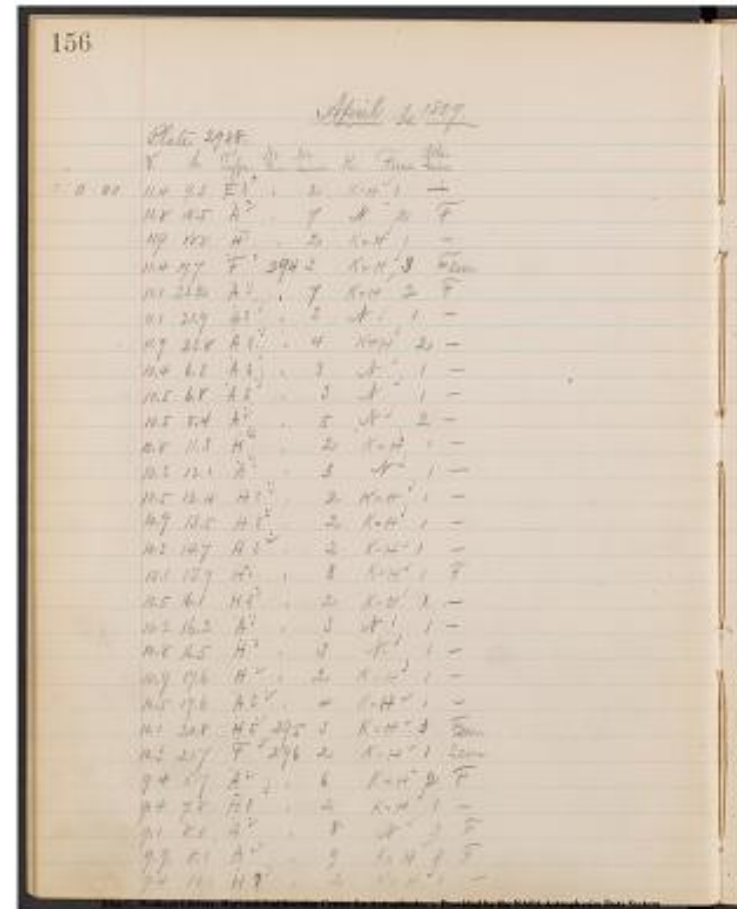
[[left margin]]

[[12 columned table]]

V|H|Type|No. Rem.|No. Lines|K|Focus|Other Lines.

11.4	9.3	E?	2	K=H 1	—
11.8	18.5	A	7	N 2	F
11.9	18.8	H	2	K=H 1	—
11.4	19.7	F	294	3 K=H 3	F seen
11.1	21.2	A	7	K=H 2	F
11.1	21.9	H?	3	N 1	—
11.9	23.8	H?	4	K=H 2	—
10.4	6.3	A?	3	N 1	—
10.5	6.8	A?	3	N 1	—
10.5	8.4	A	5	N 2	—
10.8	11.3	H	2	K=H 1	—
10.3	12.1	A	3	N 1	—
10.5	12.4	H?	2	K=H 1	—
10.9	13.5	H?	2	K=H 1	—
10.3	14.7	H?	2	K=H 1	—
10.1	15.9	H	3	K=H 1	F
10.5	16.1	H?	2	K=H 1	—
10.2	16.2	A	3	N 1	—
10.8	16.5	H	3	N 1	—
10.9	19.6	H	2	K=H 1	—
10.5	19.6	A?	4	K=H 1	—
10.1	20.8	H?	295	3 K=H 3	F seen
10.3	21.7	F	296	2 K=H 1	1 seen
9.4	5.7	A	6	K=H 2	F
9.4	7.8	H?	2	K=H 1	—
9.1	8.0	A	8	N 3	F
9.9	8.1	A	9	K=H 3	F
9.4	10.1	H?	2	K=H 1	—

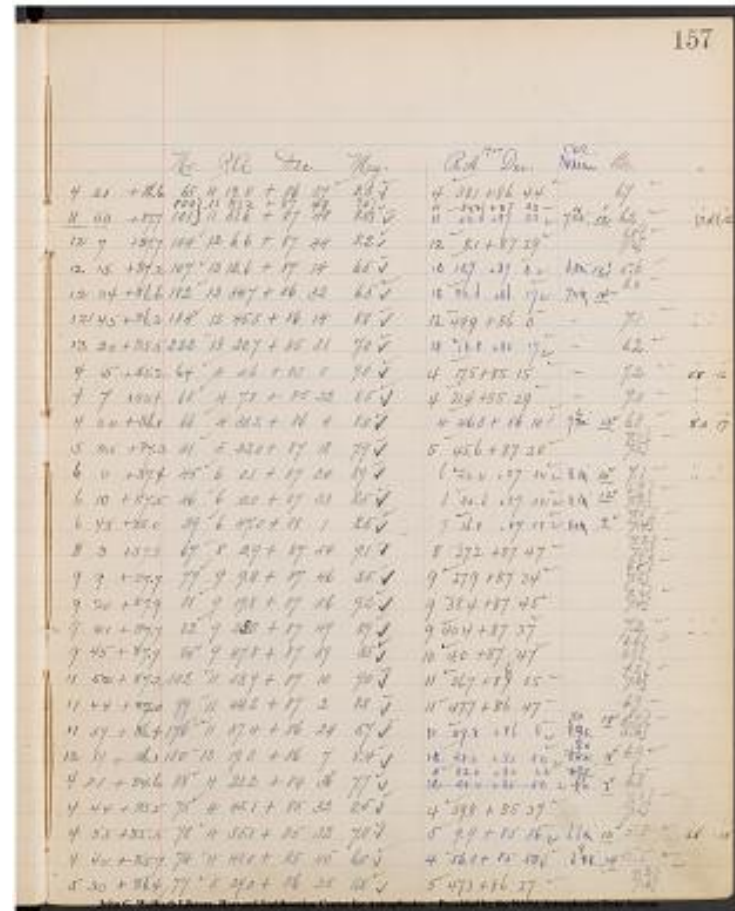
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics.
Provided by the NASA Astrophysics Data Systems



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

157
 - | No. | R.A. | Dec. | Mag. | Ra.[^][[1900]] | Dec. | D.C. Mean | Br. | - | -
 --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
 4 21 +86.6 | 65 | 4 19.8 | +86 3.7 | 8.3 | 4 38.1 | +86 44 | - | 6.7 | - | -
 11 50 +87.7 | 101[^][[100]] | 11 51.6[^][[11 51.2]] | +87 48[^][[+87 48]] |
 8.0[^][[9.0]] | 11 54.6[^][[11 56.2]] | +87 33[^][[+87 33]] |
 7.~~[[35]]~~4 12 | 6.2 | 7.8 | .16
 12 7 +87.7 | 104 | 12 6.6 | +87 44 | 8.2 | 12 8.1 | +87 29 | - | 7.2[^][[6.8]] | -
 -
 12 15 +87.2 | 107 | 12 12.6 | +87 14 | 6.5 | 12 13.7 | +87 0 |
 6.~~[[85]]~~12 | 5.6 | - | -
 12 34 +86.6 | 182 | 12 34.7 | +86 32 | 6.5 | 12 34.6 | +86 17 |
 7.4~~[[0]]~~14 | 6.0 | - | -
 12 45 +86.3 | 184 | 12 45.5 | +86 14 | 8.8 | 12 44.9 | +86 0 | - | 7.1 | - | -
 13 20 +85.5 | 222 | 13 20.7 | +85 31 | 7.0 | 13 18.8 | +85 17 | - | 6.2 | - | -
 4 5 +85.2 | 64 | 4 4.6 | +85 8 | 9.0 | 4 17.5 | +85 15 | - | 7.2 | 8.8 | .16
 4 7 +85.4 | 65 | 4 7.8 | +85 22 | 8.5 | 4 21.4 | +85 29 | - | 7.0 | - | -
 4 30 +86.1 | 66 | 4 30.2 | +86 4 | 8.0 | 4 46.3 | +86 10 |
 7.~~[[35]]~~6 13 | 6.3 | 8.0 | .17
 5 25 +87.3 | 41 | 5 22.0 | +87 18 | 7.9 | 5 45.6 | +87 20 | - | 7.5[^][[7.1]] | - |
 -
 6 0 +87.4 | 45 | 6 0.1 | +87 24 | 8.9 | 6 24.4 | +87 24 |
 8.1~~[[0]]~~10 | 7.1 | - | -
 6 10 +87.5 | 46 | 6 10.0 | +87 33 | 8.5 | 6 35.6 | +87 32 |
 8.1~~[[0]]~~12 | 7.2[^][[6.9]] | - | -
 6 48 +88.0 | 39 | 6 47.0 | +88 1 | 8.5 | 7 16.8 | +87 58 |
 8.0~~[[0]]~~9 | 7.4[^][[7.1]] | - | -
 8 3 +87.8 | 67 | 8 2.9 | +87 54 | 9.1 | 8 27.2 | +87 47 | - | 7.5[^][[7.2]] | - | -
 9 9 +87.7 | 79 | 9 9.8 | +87 46 | 8.5 | 9 27.9 | +87 34 | - | 7.3[^][[6.8]] | - | -
 9 2 +87.9 | 81 | 9 19.8 | +87 56 | 9.2 | 9 38.4 | +87 45 | - | 7.4[^][[7.2]] | - | -
 9 21 +87.7 | 82 | 9 23.0 | +87 49 | 8.9 | 9 40.4 | +87 37 | - | 7.2 | - | -
 9 45 +87.9 | 85 | 9 47.8 | +87 59 | 8.5 | 10 4.0 | +87 47 | - | 6.9[^][[6.6]] | - |
 -
 11 52 +87.2 | 102 | 11 53.9 | +87 10 | 9.0 | 11 56.7 |
 +8~~[[7]]~~6 55 | - | 7.6[^][[7.3]] | - | -
 11 44 +87.0 | 99 | 11 44.2 | +87 2 | 8.8 | 11 47.7 | +86 47 | - | 6.9 | - | -
 11 57 +86.4 | 176 | 11 57.4 | +86 24 | 5.7 | 11 59.8 | +86 8 |
~~[[6.98]]~~7.0 17 | 5.6[^][[5.3]] | - | -
 12 19 +86.1 | 180 | 12 19.3 | +86 7 | 8.4 | 12 20.4 | +85 52 |
~~[[6.65]]~~8.0 11 | 6.9 | - | -
 4 21 +84.6 | 88 | 4 21.2 | +84 36 | 7.7 | ~~[[11]]~~12
 20.4~~[[4 33.4]]~~ | ~~[[85]]~~
 52~~[[+84 42]]~~ | ~~[[5.77]]~~7.0 7
 | 6.3 | - | -
 4 44 +85.5 | 75 | 4 45.1 | +85 32 | 8.5 | 4 59.8 | +85 37 | - | 7.5[^][[7.1]] | - |
 -
 4 55 +85.5 | 78 | 4 55.1 | +85 32 | 7.0 | 5 9.9 | +85 36 |
 6.6~~[[3]]~~13 | 5.3 | 6.8 | .15
 4 40 +85.7 | 74 | 4 41.0 | +85 45 | 6.0 | 4 56.3 | +85 50 |
 6.~~[[88]]~~9 14 | 15.5 | - | -
 5 30 +86.4 | 77 | 5 29.0 | +86 25 | 8.8 | 5 47.3 | +86 27 | - | 7.6[^][[7.2]] | - |
 -

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

158

April 1, 1889

Plate 2988

[[8 columned table]]

V. | H. | Type. | No. Rem. | No. Lines | K. | Focus | Other Lines|

9.5	11.0	G	297	3	K=H	2	F seen	
9.9	12.5	K	298	3	K=H	3	F bright seen	
9.2	14.7	E?		2	K=H	1	-	
9.5	15.8	A?		4	K=H	1	-	
9.2	16.6	H			3	2	K=H 1 -	
9.3	20.1	F	299	3	K=H	2	F seen	
9.4	20.5	H		2	K=H	1	-	
9.5	21.8	A		3	N	1	-	
8.4	6.4	A?		4	K=H	1	-	
8.0	7.9	H	300	3	K=H	2	F seen	
8.0	8.2	H		2	K=H	1	-	
8.0	10.6	A2		3	N	1	-	
8.6	11.4	A2		3	N	1	-	
8.4	11.8	E		2	K=H	1	-	
8.2	12.4	F?	301	2	K=H	1	seen	
8.5	12.5	H?		2	K=H	1	-	
8.2	13.3	E?		2	K=H	1	-	
8.4	13.5	H?		2	K=H	1	-	
8.9	16.3	H?		2	K=H	1	-	
8.0	17.5	A		4	N	2	-	
8.6	17.8	H?		3	K=H	2	F	
8.8	19.4	A		6	K=.5H	3	-	
8.9	21.4	A?		3	N	1	-	
7.3	10.7	H		2	K=H	1	-	
7.4	11.4	E?		2	K=H	1	-	
7.0	13.5	H?		3	K=H	2	F	
7.2	14.4	E		2	K=H	1	-	
7.3	18.6							

158

April 1, 1889

Plate 2988

9.5	11.0	G	297	3	K=H	2	F seen
9.9	12.5	K	298	3	K=H	3	F bright seen
9.2	14.7	E?		2	K=H	1	-
9.5	15.8	A?		4	K=H	1	-
9.2	16.6	H			3	2	K=H 1 -
9.3	20.1	F	299	3	K=H	2	F seen
9.4	20.5	H		2	K=H	1	-
9.5	21.8	A		3	N	1	-
8.4	6.4	A?		4	K=H	1	-
8.0	7.9	H	300	3	K=H	2	F seen
8.0	8.2	H		2	K=H	1	-
8.0	10.6	A2		3	N	1	-
8.6	11.4	A2		3	N	1	-
8.4	11.8	E		2	K=H	1	-
8.2	12.4	F?	301	2	K=H	1	seen
8.5	12.5	H?		2	K=H	1	-
8.2	13.3	E?		2	K=H	1	-
8.4	13.5	H?		2	K=H	1	-
8.9	16.3	H?		2	K=H	1	-
8.0	17.5	A		4	N	2	-
8.6	17.8	H?		3	K=H	2	F
8.8	19.4	A		6	K=.5H	3	-
8.9	21.4	A?		3	N	1	-
7.3	10.7	H		2	K=H	1	-
7.4	11.4	E?		2	K=H	1	-
7.0	13.5	H?		3	K=H	2	F
7.2	14.4	E		2	K=H	1	-
7.3	18.6						

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[9 columned table]
 |No.|R.A.|Dec.|Mag.|R.A.^[[1900]] Dec.|DC Mean| |Br.|
 |---|---|---|---|---|---|---|
 5 50 +86.7|79|5 48.0|+86 46|7.0|6 82 +86
 46|7.7|~~35~~|~~4~~|~~13~~|~~6.6~~
 ^[[6.1]]
 6 31 +87.3|51|6 31.1|+87 15|5.0|6 53.9 +87
 12|6.8|~~0~~|~~16~~|~~6.2~~
 [5.2]]
 8 4 +87.4|~~R~~|~~69~~|~~8~~
 8.4^[[6.2]]|+87^[[+87]] 10^[[23]]|9.1^[[8.8]]|8^[[8]] 28.4^[[26.2]]
 +87^[[+87]] 2^[[15]] | 6.9|
 9 0 +87.5|78|9 0.8|+87 29|8.0|9 18.0 +87
 18|7.7|~~0~~|~~11~~|~~6.6~~
 9 28 +87.3|83|9 29.9|+87 16|7.7|9 44.0 +87
 4|7.3|~~4~~|~~11~~|~~6.2~~
 11 21 +86.4|170|11 23.8|+86 25|7.0|11 18.0 +87
 18|~~11~~|~~28.3~~ +86 10|
 11 38 +86.3|172|11 36.4|+86 20|8.2|11 40.2 +86
 5|8.0|~~0~~|~~12~~|~~7.2~~
 [6.8]]
 12 5 +85.8|196|12 4.6|+85 53|8.2|12 6.6 +85
 38|~~6.37~~|~~7.7~~|~~8~~|~~6.9~~
 |
 4 45 +84.6|97|4 45.5|+84 41|8.8|4 58.2 +84 46| | 7.1|
 5 16 +85.1|80|5 16.0|+85 6|6.0|5 29.9 +85
 9|~~5.95~~|~~7.2~~|~~12~~|~~6.7~~
 ^[[6.0]]
 5 20 +85.2|81|5 20.4|+85 14|8.0|5 34.7 +85
 17|~~6.35~~|~~7.6~~|~~9~~|~~7.0~~
 ^[[6.7]]
 6 5 +86.1|86|6 6.2|+86 4|8.9|6 23.0 +86 29| | 7.2|
 6 20 +86.5|91|6 16.5|+86 30|9.0|6 35.0 +86 29| | 7.2|
 6 30 +86.5|96|6 31.8|+86 31|8.5|6 50.2 +86 29| | 7.0|
 6 54 +86.5|102|6 51.9|+86 37|9.1|7 10.4 +86 33| | 6.5|
 6 55 +86.6|103|6 52.9|+86 39|8.2|7 11.6 +86
 36|7.6|~~0~~|~~11~~|~~6.7~~
 [6.5]]
 7 21 +86.7|107|7 22.0|+86 43|9.2|7 40.2 +86
 38|~~7.2~~|
 | 7.2|
 7 2|~~8~~|~~7~~
 +86.7|~~7~~|~~8~~|~~110~~|~~7~~
 28.7^[[27.6]]|+86^[[+86]] 46^[[50]]|8.7^[[9.1]]|7^[[7]] 47.0^[[45.9]]
 +86^[[+86]] 41^[[45]]|~~11~~|~~6.7~~
 | 7.4^[[7.1]]
 9 12 +57.1|80|9 14.5|+87 6|8.5|9 29.0 +86 54| | 7.5^[[7.2]]|
 9 45 +86.5|143|9 47.4|+86 32|8.6|9 58.2 +86
 19|7.7|~~75~~|~~8~~|~~14~~|~~6.4~~
 10 8 +86.8|152|10 8.5|+86 48|8.4|10 18.6 +86
 34|~~11~~|~~6.4~~
 | 6.7^[[6.4]]
 10 55 +86.4|161|10 56.2|+86 26|7.2|11 2.5 +86
 11|7.2|~~4~~|~~14~~|~~5.8~~
 right margin|7.2 -14|right margin|
 |~~11~~|~~20~~|~~85.8~~|~~183~~|~~11~~|~~20.0~~|~~85~~|~~30~~|~~7.5~~|~~11~~|~~24.4~~ +85
 15|62.0|~~11~~|~~41~~|~~85.8~~|~~191~~|~~11~~|~~41.7~~|~~85~~|~~48~~|~~8.4~~ | | 6.9|
 6 21 +85.7|98|6 20.6|+85 44|8.6|6 36.1 +85 42| | 7.5^[[7.2]]|
 6 35 +85.9|105|6 35.0|+85 57|8.2|6 51.1 +85 55| | 6.6|

159

No.	R.A.	Dec.	Mag.	R.A. ^{[[1900]]}	Dec.	DC Mean	Br.
5	50	+86.7	79	5 48.0	+86 46	7.0	6 82 +86
46	7.7						
6	31	+87.3	51	6 31.1	+87 15	5.0	6 53.9 +87
12	6.8						
8	4	+87.4					
8.4							
9	0	+87.5	78	9 0.8	+87 29	8.0	9 18.0 +87
18	7.7						
9	28	+87.3	83	9 29.9	+87 16	7.7	9 44.0 +87
4	7.3						
11	21	+86.4	170	11 23.8	+86 25	7.0	11 18.0 +87
18							
11	38	+86.3	172	11 36.4	+86 20	8.2	11 40.2 +86
5	8.0						
12	5	+85.8	196	12 4.6	+85 53	8.2	12 6.6 +85
38							
4	45	+84.6	97	4 45.5	+84 41	8.8	4 58.2 +84 46
5	16	+85.1	80	5 16.0	+85 6	6.0	5 29.9 +85
9							
5	20	+85.2	81	5 20.4	+85 14	8.0	5 34.7 +85
17							
6	5	+86.1	86	6 6.2	+86 4	8.9	6 23.0 +86 29
6	20	+86.5	91	6 16.5	+86 30	9.0	6 35.0 +86 29
6	30	+86.5	96	6 31.8	+86 31	8.5	6 50.2 +86 29
6	54	+86.5	102	6 51.9	+86 37	9.1	7 10.4 +86 33
6	55	+86.6	103	6 52.9	+86 39	8.2	7 11.6 +86
36	7.6						
7	21	+86.7	107	7 22.0	+86 43	9.2	7 40.2 +86
38							
7	2						
86							
28.7							
41							
9	12	+57.1	80	9 14.5	+87 6	8.5	9 29.0 +86 54
9	45	+86.5	143	9 47.4	+86 32	8.6	9 58.2 +86
19	7.7						
10	8	+86.8	152	10 8.5	+86 48	8.4	10 18.6 +86
34							
10	55	+86.4	161	10 56.2	+86 26	7.2	11 2.5 +86
11	7.2						
15	62.0						
6	21	+85.7	98	6 20.6	+85 44	8.6	6 36.1 +85 42
6	35	+85.9	105	6 35.0	+85 57	8.2	6 51.1 +85 55

|7 34 +86.2|113|7 37.2|+86 6|7.2|7 52.5 +86
 0|7.8~~5~~~~5~~156.5^{[[}
 6.3]]
 |8 5 +86.2|120|8 4.9|+86 17|8.5|8 19.~~9~~~~8~~
 +86 9| |6.9|
 |9 50 +86.1|146|9 52.7|+86 9|8.9|10 23 +85 56| |6.9|

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

160

April 1, 1889.

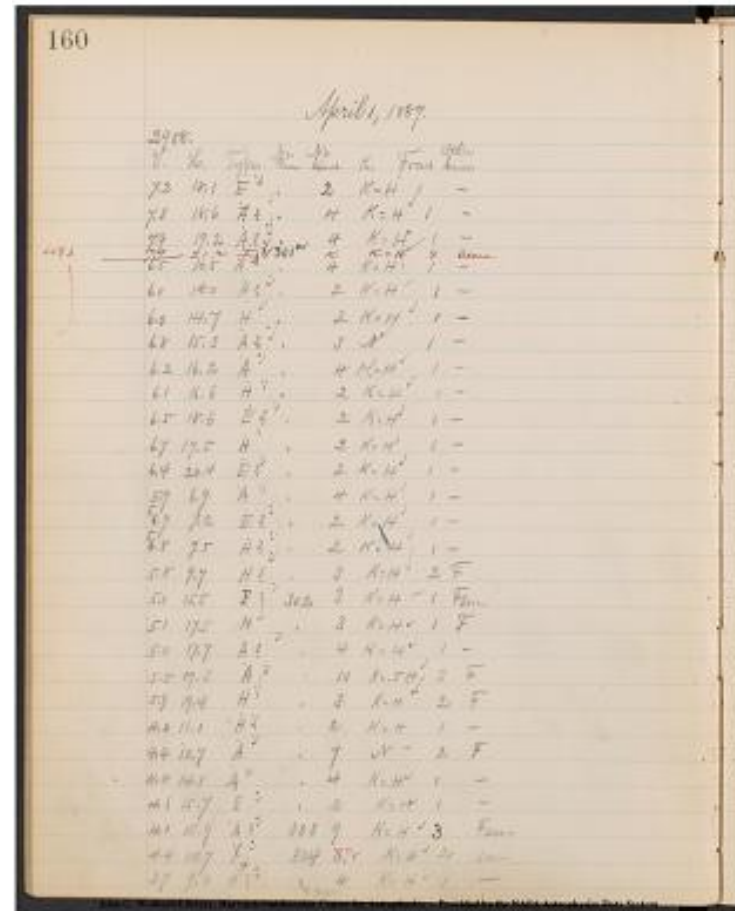
Plate 2988.

[[8 columned table]]

V. | H. | Type. | No. Lines | K | Focus | Other Lines.

7.2	18.1	E	12	K=H	1	-
7.3	18.6	A?	4	K=H	1	-
7.9	19.2	A?	4	K=H	1	-
[[margin]]448.3	[[margin]]7.9	21.2	1	301a	K	K=H 2 Seen
6.5	10.5	A	4	K=H	1	-
6.0	14.0	H?	12	K=H	1	-
6.0	14.7	H	12	K=H	1	-
6.8	15.3	A?	13	N	1	-
6.2	16.2	A	4	K=H	1	-
6.1	16.6	H	12	K=H	1	-
6.5	18.6	E?	12	K=H	1	-
6.7	19.5	H	12	K=H	1	-
6.4	20.4	E?	12	K=H	1	-
5.9	6.9	A	4	K=H	1	-
[[strikethrough]]6	[[strikethrough]]5.9	7.2	E?	2	K=H	1 -
[[strikethrough]]6	[[strikethrough]]5.8	7.5	H?	2	K=H	1 -
5.8	9.7	H?	13	K=H	2	F
5.0	15.5	F?	302	3	K=H	1 F seen
5.1	17.5	H	13	K=H	1	F
5.0	17.7	A?	14	K=H	1	-
5.5	19.3	A	10	K=5H	3	F
5.9	19.4	H	13	K=H	2	F
4.2	11.1	H	2	K=H	1	-
4.4	12.7	A	7	N	2	F
4.4	14.1	A	4	K=H	1	-
4.6	15.7	E	12	K=H	1	-
4.1	15.9	A?	303	9	K=H	3 F seen
4.4	18.7	[[symbol]]	304	[[strikethrough]]3	[[strikethrough]]2	K=H 2 Seen
3.7	9.0	H=A?	4	K=H	1	-

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[10 columned table]]
-	No.	R.A.	Dec.	Mag.	R.A.^[[1900]]	Dec.	DC Mean		Br.
 9 53 +85.9 | 155 | 9 54.7 | +85 60 | 8.7 | 10 4.0 | +85 47 | | | 7.0
 10 10 +85.9 | 160 | 10 11.5 | +85 58 | 8.5 | 10
~~20~~ 19.9 | +85 45 |
 79. ~~1~~ | 11 | 6.8
 10 32 +86.2 | 154 | 10 33.4 | +86 8 | 8.2 | 10 40.7 | +85 54 |
 78. ~~3~~ | 12 | 6.6
 11 20 +85.5 | 183 | 11 20.0 | +85 30 | 7.5 | 11 24.4.7 | +85 15 |
~~6.20~~ | 11 | 6.7^[[6.4]]
 6 25 +85.4 | 101 | 6 25.6 | +85 22 | 8.9 | 6 40.1 | +85 20 |
~~7.5~~ | 11 | 7.0
 7 54 +85.7 | 124 | 7 55.1 | +85 42 | 8.8 | 8 8.7 | +85 34 | | | 7.4^[[7.0]]
 8 14 +85.7 | 129 | 8 14.6 | +85 42 | 8.2 | 8 27.6 | +85 33 | | | 7.3^[[6.9]]
 8 32 +86.1 | 126 | 8 33.7 | +86 7 | 8.0 | 8 47.2 | +85 58 | | | 6.8 [[right
 margin]] 8.2 - 1.4[[right margin]]
 8 57 +85.8 | 142 | 8 57.0 | +85 49 | 8.5 | 9 8.7 | +85 38 | | | 6.9
 9 9 +85.7 | 147 | 9 8.5 | +85 43 | 8.5 | 9 19.5 | +85 32 | | | 7.3^[[6.9]]
 10 2 +85.6 | ~~158~~ | 10 2.1 | +85 30 | 8.4 | 10 31.1 | +85 16 | | |
~~10~~ 10
~~2.5~~ | 1.4 | +85
~~38~~ | 35
~~9.0~~ | 9.1 superpod | ~~10~~
 10.8 | ~~85 23~~ | 6.9
 10 24 +85.5 | 166 | 10 23.9 | +85 30 | 8.4 | 10 31.1 | +85 16 | | |
 7.2^[[6.8]]
 10 41 +85.1 | 170 | 10 40.7 | +85 8 | 8.6 | 10 46.7 | +84 54 | | | 7.0
 5 34 +84.1 | 114 | 5 34.4 | +84 4 | 8.9 | 5 46.3 | +84 6 | | | 6.8
 5 37 +84.2 | 12 | ~~8~~ | 7 | 5
~~41.6~~ | 37.2 | +84
~~11~~ | 6
~~8.8~~ | 9.0 | 5 49.2 | +84 7 | | | 7.1
 5 41 +84.3 | 118 | 5 41.6 | +84 11 | 8.8 | 5 53.8 | +84 12 | | | 7.2^[[7.0]]
 6 21 +84.7 | 135 | 6 20.9 | +84 48 | 8.2 | 6 34.1 | +84 47 |
~~6.20~~ | 7.4 | 10 | 6.6^[[6.4]]
 8 38 +85.2 | 132 | 8 36.9 | +85 415 | 8.2 | 8 48.2 | +85 6 |
 7. ~~79~~ | 12 | 6.6
 9 23 +85.2 | 150 | 9 25.4 | +85 9 | 8.0 | 9 36.7 | +84 57 |
 7. ~~56~~ | 9 | 7.1^[[6.7]]
 9 26 +85.0 | 151 | 9 28.4 | +85 3 | 8.5 | 9 37.5 | +84 51 |
~~7.95~~ | 8.0 | 11 | 6.9
 10 6 +84.9 | 234 | 10 7.8 | +84 59 | 5.0 | 10 15.2 | +84 46 |
~~4.36~~ | 5.6 | 5 | 5.1 [[right margin]] 5.6 -
 5[[right margin]]
 10 12 +85.2 | 161 | 10 13.4 | +85 8 | 7.5 | 10 20.8 | +84 55 |
~~6.12~~ | 7.3 | 8 | 6.8^[[6.5]]
 7 1 +84.4 | 152 | 7 1.4 | +84 29 | 8.0 | 7 13.7 | +84 25 | | | 7.3^[[6.8]]
 7 32 +84.7 | 168 | 7 33.6 | +84 47 | 7.8 | 7 5.8 | +84 41 |
~~5.79~~ | 7.0 | 11 | 5.9 [[right margin]] 7.4 -
 15[[right margin]]
 8 4 +84.8 | 179 | 8 3.8 | +84 55 | 8.3 | 8 15.5 | +84 47 |
~~6.50~~ | 7.7 | 9 | 6.8
 8 42 +85.1 | 135 | 8 42.6 | +85 3 | 9.0 | 8 53.3 | +84 53 | | | 7.0
 8 44 +84.7 | 196 | 8 44.3 | +84 45 | 6.0 | 8 54.5 | +84 35 |
~~6.42~~ | 6.23 | 9 | 5.4
 9 44 +84.6 | 225 | 9 44.7 | +84 37 | 6.5 | 9 52.6 | +84 25 |
~~3.94~~ | 7.1 | 8 | 6.8^[[6.3]]
 6 30 +83.7 | 172 | 6 29.7 | +83 47 | 8.5 | 6 41.1 | +83 45 | | | 7.1

161

Star. R.A. Dec. Mag.

R.A.	Dec.	Mag.	R.A.	Dec.	Mag.
9 53	+85.9	155	9 54.7	+85 60	8.7
10 10	+85.9	160	10 11.5	+85 58	8.5
19.9	+85 45				
79			11	6.8	
10 32	+86.2	154	10 33.4	+86 8	8.2
10 40.7	+85 54				
78			12	6.6	
11 20	+85.5	183	11 20.0	+85 30	7.5
11 24.4.7	+85 15				
6.20			11	6.7^[[6.4]]	
6 25	+85.4	101	6 25.6	+85 22	8.9
6 40.1	+85 20				
7.5			11	7.0	
7 54	+85.7	124	7 55.1	+85 42	8.8
8 8.7	+85 34				
7.4^[[7.0]]					
8 14	+85.7	129	8 14.6	+85 42	8.2
8 27.6	+85 33				
7.3^[[6.9]]					
8 32	+86.1	126	8 33.7	+86 7	8.0
8 47.2	+85 58				
6.8					
8 57	+85.8	142	8 57.0	+85 49	8.5
9 8.7	+85 38				
6.9					
9 9	+85.7	147	9 8.5	+85 43	8.5
9 19.5	+85 32				
7.3^[[6.9]]					
10 2	+85.6				
158					
10					
2.5					
1.4					
+85					
38					
35					
9.0					
9.1 superpod					
10					
10.8					
+85 23					
6.9					
10 24	+85.5	166	10 23.9	+85 30	8.4
10 31.1	+85 16				
7.2^[[6.8]]					
10 41	+85.1	170	10 40.7	+85 8	8.6
10 46.7	+84 54				
7.0					
5 34	+84.1	114	5 34.4	+84 4	8.9
5 46.3	+84 6				
6.8					
5 37	+84.2	12			
8					
7					
5					
41.6					
37.2					
+84					
11					
6					
8.8					
9.0					
5 49.2	+84 7				
7.1					
5 41	+84.3	118	5 41.6	+84 11	8.8
5 53.8	+84 12				
7.2^[[7.0]]					
6 21	+84.7	135	6 20.9	+84 48	8.2
6 34.1	+84 47				
6.20					
7.4					
10					
6.6^[[6.4]]					
8 38	+85.2	132	8 36.9	+85 415	8.2
8 48.2	+85 6				
7					
79					
12					
6.6					
9 23	+85.2	150	9 25.4	+85 9	8.0
9 36.7	+84 57				
7					
56					
9					
7.1^[[6.7]]					
9 26	+85.0	151	9 28.4	+85 3	8.5
9 37.5	+84 51				
7.95					
8.0					
11					
6.9					
10 6	+84.9	234	10 7.8	+84 59	5.0
10 15.2	+84 46				
4.36					
5.6					
5					
5.1					
5.6					
5					
10 12	+85.2	161	10 13.4	+85 8	7.5
10 20.8	+84 55				
6.12					
7.3					
8					
6.8^[[6.5]]					
7 1	+84.4	152	7 1.4	+84 29	8.0
7 13.7	+84 25				
7.3^[[6.8]]					
7 32	+84.7	168	7 33.6	+84 47	7.8
7 5.8	+84 41				
5.79					
7.0					
11					
5.9					
7.4					
15					
8 4	+84.8	179	8 3.8	+84 55	8.3
8 15.5	+84 47				
6.50					
7.7					
9					
6.8					
8 42	+85.1	135	8 42.6	+85 3	9.0
8 53.3	+84 53				
7.0					
8 44	+84.7	196	8 44.3	+84 45	6.0
8 54.5	+84 35				
6.42					
6.23					
9					
5.4					
9 44	+84.6	225	9 44.7	+84 37	6.5
9 52.6	+84 25				
3.94					
7.1					
8					
6.8^[[6.3]]					
6 30	+83.7	172	6 29.7	+83 47	8.5
6 41.1	+83 45				
7.1					

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

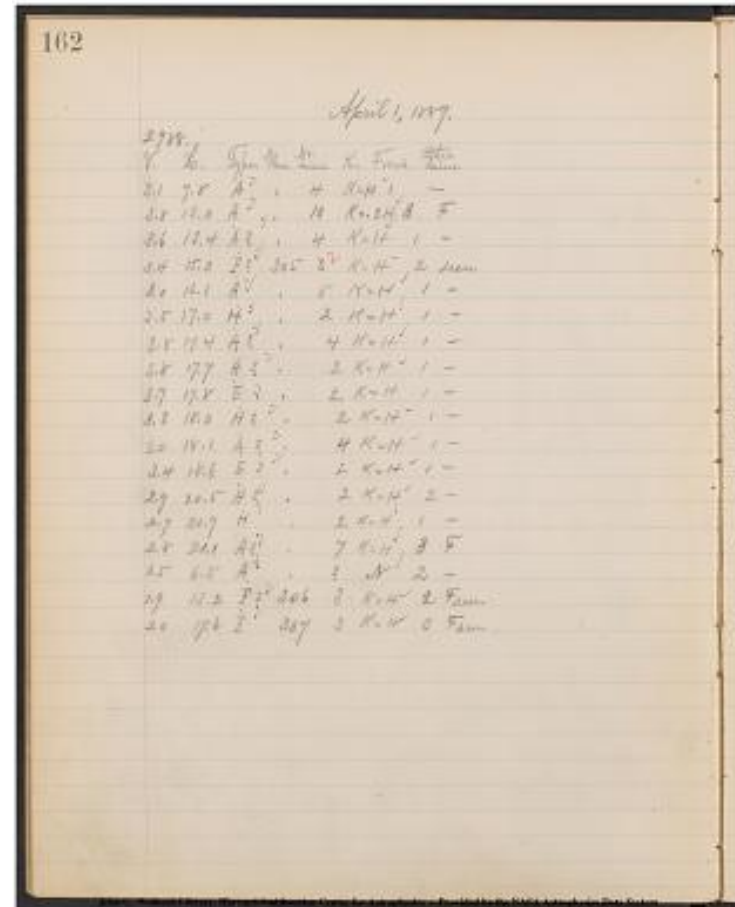
162

April 1, 1889.

2988.

[[8 columned table]]

V.	H.	Type	No. Rem.	No. Lines.	K.	Focus.	Other Lines.
3.1	9.8	A	.4	K=H	1	-	-
3.8	13.0	A	.10	K=	2H	3	F
3.6	13.4	A2	.4	K=H	1	-	-
3.4	15.0	F2	305	3	K=H	2	seen
3.0	16.1	A	.5	K=H	1	-	-
3.5	17.0	H	.2	K=H	1	-	-
3.8	17.4	A2	.4	K=H	1	-	-
3.8	17.7	H2	.2	K=H	1	-	-
3.7	17.8	E	.2	K=H	1	-	-
3.3	18.0	H2	.2	K=H	1	-	-
3.0	18.1	A2	.4	K=H	1	-	-
3.4	18.6	E2	.2	K=H	1	-	-
2.9	20.5	H2	.2	K=H	2	-	-
2.7	20.9	H	.2	K=H	1	-	-
2.8	21.1	A2	.7	K=H	3	F	-
1.5	6.5	A	.7	N	2	-	-
1.9	13.2	F2	306	3	K=H	2	Fseen
2.0	17.6	F	307	3	K=H	3	Fseen



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[9 columned table]
 |No.|R.A.|Dec.|Mag.|R.A.^[[1900]] Dec.|DC Mean| |Br.|
 |---|---|---|---|---|---|
 6 46 +83.7|182|6 48.1|+83 43|8.2|6 59.2 +83 40|
 | 6.8|
 7 42 +84.4|169|7 41.6|+84 28|6.0|7 53.1 +84
 21|~~4.89~~|~~6.1~~|5.3
 |~~right margin~~|6.4 -11|~~right margin~~|
 7 50 +84.4|173|7 50.7|+84 27|8.8|8 1.9 +84
 20|6.8|
 | 6.8|
 8 25 +84.4|186|8 25.1|+84 25|8.0|8 35.4 +84
 16|~~6.14~~|~~7.3~~|6.12|
 8 46 +84.3|199|8 47.2|+84 13|8.6|8 56.6 +84
 3|~~6.25~~|~~7.4~~|6.7|
 9 5 +84.4|206|9 5.8|+84 22|8.0|9 14.9 +84
 11|~~6.45~~|~~7.6~~|7.2|
 ^[[6.8]]|
 9 14 +84.5|212|9 15.2|+84 29|8.5|9 24.0 +84 18|
 9 22 +84.4|R 213^[[212]]|9^[[9]] 22.2^[[23.0]]|+84^[[+84]]
 27^[[24]]|8.3^[[8.7]]|9^[[9]] 30.8^[[31.5]]|+84^[[+84]]
 14^[[12]]|~~6.58~~|~~R~~|7.3^[[6.9]]|
 9 23 +84.4|~~216~~|9 23.0|+84 24|8.7|~~217~~|9
 23.8|+84 22|8.7|~~9 31.5 +84 12~~|~~7.1~~|
 9 24 +84.2|218|9 25.2|+84 10|8.3|9 33.4 +83 58| | 7.3^[[6.9]]|
 9 24 +83.9|263|9 24.6|+83 59|8.0|9 32.6 +83
 47|~~6.22~~|~~7.3~~|6.7|
 | 9 36 +84.2|222|9 36.5|+84 10|8.0|9 44.3
 +8|~~4~~|3
 57|~~6.35~~|~~7.5~~|7.0|
 | 10 5 +83.5|287|10 5.4|+83 32|6.8|10 11.7 +83
 19|~~5.94~~|~~7.0~~|6.6|
 ^[[6.3]]|
 10 11 +83.4|296|10 12.2|+83 24|8.4|10 18.3 +83 11| | 7.4^[[7.0]]|
 10 12 +83.3|297|10 13.0|+83 18|5.2|10 19.0 +83
 4|~~4.00~~|~~5.1~~|5.2|
 6 15 +82.2|177|6 13.8|+82 13|6.7|6 23.4 +82
 12|~~5.16~~|~~6.2~~|6.4|~~right margin~~|
 | 7 52 +83.5|207|7 53.7|+83 32|8.2|8 3.6 +83
 25|~~6.32~~|~~7.4~~|6.1|
 9 11 +83.6|256|9 12.5|+83 33|7.2|9 20.5 +83
 22|~~5.71~~|~~6.8~~|6.1|

163

No.	Dist.	Dec.	Mag.	R.A.	Dec.	Mag.	Br.
6	46	+83.7	182	6 48.1	+83 43	8.2	6 59.2 +83 40
7	42	+84.4	169	7 41.6	+84 28	6.0	7 53.1 +84
21	4.89	6.1	<u>5.3</u>				
7	50	+84.4	173	7 50.7	+84 27	8.8	8 1.9 +84
20	<u>6.8</u>						
8	25	+84.4	186	8 25.1	+84 25	8.0	8 35.4 +84
16	6.14	7.3	<u>6.12</u>				
8	46	+84.3	199	8 47.2	+84 13	8.6	8 56.6 +84
3	6.25	7.4	<u>6.7</u>				
9	5	+84.4	206	9 5.8	+84 22	8.0	9 14.9 +84
11	6.45	7.6	<u>7.2</u>				
9	14	+84.5	212	9 15.2	+84 29	8.5	9 24.0 +84 18
9	22	+84.4	R 213^	9^	22.2^	[[23.0]]	+84^
27	^	[[24]]	8.3^	[[8.7]]	9^	30.8^	[[31.5]] +84^
14	^	[[12]]	6.58	R	7.3^	[[6.9]]	
9	23	+84.4	216	9 23.0	+84 24	8.7	217 9
23.8	+84 22	8.7	9 31.5 +84 12	7.1			
9	24	+84.2	218	9 25.2	+84 10	8.3	9 33.4 +83 58
9	24	+83.9	263	9 24.6	+83 59	8.0	9 32.6 +83
47	6.22	7.3	<u>6.7</u>				
9	36	+84.2	222	9 36.5	+84 10	8.0	9 44.3
	+8	4	3				
57	6.35	7.5	<u>7.0</u>				
10	5	+83.5	287	10 5.4	+83 32	6.8	10 11.7 +83
19	5.94	7.0	<u>6.6</u>				
10	11	+83.4	296	10 12.2	+83 24	8.4	10 18.3 +83 11
10	12	+83.3	297	10 13.0	+83 18	5.2	10 19.0 +83
4	4.00	5.1	5.2				
6	15	+82.2	177	6 13.8	+82 13	6.7	6 23.4 +82
12	5.16	6.2	<u>6.4</u>				
7	52	+83.5	207	7 53.7	+83 32	8.2	8 3.6 +83
25	6.32	7.4	<u>6.1</u>				
9	11	+83.6	256	9 12.5	+83 33	7.2	9 20.5 +83
22	5.71	6.8	<u>6.1</u>				

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[left margin]]
 [[underlined]]Exceedingly hard to identify from chart. [[/underlined]]
 M.C.S.
 [[/left margin]]

Pole Plate

[[10 columned table]]

No.	R.A.	Dec.	Magn.	Red. to 1900	D.C. Magn	Br.	
0 26 +85.1	11	0 25.4	+85 10	8.8	0 29.2 +85 25		
7. [[/strickethrough]]35 [[/strickethrough]]4					[[underlined]]4 [[/underlined]]		7.0
0 39 +84.8	15	0 40.9	+84 40	8.2	0 45.3 +84 55	[[/strickethrough]]	
6.15 [[/strickethrough]]7.4					[[underlined]]2 [[/underlined]]	7.2 7.6	
0 21 +85.5	9	0 22.5	+85 31	8.3	0 26.2 +85 46		
[[/strickethrough]]6.00 [[/strickethrough]]7.3					[[underlined]]4 [[/underlined]]		
6.9							
23 52 +85.8	409	23 52.8	+85 54	8.0	23 54.7 +86 9		
6. [[/strickethrough]]78 [[/strickethrough]]8					[[/strickethrough]]5 [[/strickethrough]]		
[[underlined]]9 [[/underlined]]					5.9	6.7 -8	
23 53 +86.3	347	23 55.3	+86 14	8.6	23 57.3 +86 29		
7.8 [[/strickethrough]]0 [[/strickethrough]]					[[underlined]]10 [[/underlined]]		6.8
23 2 [[/strickethrough]]8 [[/strickethrough]]4							
+85 [[/strickethrough]]8 [[/strickethrough]]6					[[/strickethrough]]401 [[/strickethrough]]		
h) 399 [[/strickethrough]]23 27.2					[[/strickethrough]]23		
24.2 [[/strickethrough]]+85 46					[[/strickethrough]]+85		
37 [[/strickethrough]]8.0					[[/strickethrough]]7.5		
[[/strickethrough]]23 27.5 +86							
0 [[/strickethrough]]23 244.4 +85							
52 [[/strickethrough]]7.33					[[/strickethrough]]R		
5.8							
23 30 +86.5	344	23 27.8	+86 30	6.0	23 27.7 +86 45		
6. [[/strickethrough]]27 [[/strickethrough]]3					[[underlined]]12 [[/underlined]]		5.1
22 48 +86.5	335	22 45.6	+86 32	8.0	22 42.3 +86 46		
7.6 [[/strickethrough]]0 [[/strickethrough]]					[[underlined]]7 [[/underlined]]		6.9
21 30 +86.4	319	21 27.7	+86 26	7.0	21 19.6 +86 37		
7.1 [[/strickethrough]]4 [[/strickethrough]]					[[underlined]]7 [[/underlined]]		
6.4							
0 50 +85.5	19	0 49.7	+85 29	5.0	0 54.9 +85 43		
5.8 [[/strickethrough]]5 [[/strickethrough]]					[[underlined]]6 [[/underlined]]		5.2
5.7							
0 34 +86.2	9	0 32.5	+86 9	8.6	0 37.2 +86 23	[[/strickethrough]]	4
[[/strickethrough]]							
7.8 [[/strickethrough]]0 [[/strickethrough]]					[[underlined]]5 [[/underlined]]		7.3
22 33 +87.4	205	22 30.8	+87 21	7.5	22 24.2 +87 35		
7. [[/strickethrough]]15 [[/strickethrough]]2					[[underlined]]7 [[/underlined]]		6.5
22 9 +87.1	201	22 7.0	+87 6	8.2	21 59.2 +87 19		
7.8 [[/strickethrough]]5 [[/strickethrough]]					[[underlined]]5 [[/underlined]]		7.3
7.5							
19 32 +87.1	180	19 30.8	+87 4	8.0	19 14.5 +87 10		
7. [[/strickethrough]]75 [[/strickethrough]]8					[[underlined]]7 [[/underlined]]		
7.1							
19 3 +86.5	282	19 1.6	+86 31	7.0	18 47.7 +86 35		
[[/strickethrough]]0 [[/strickethrough]]					[[underlined]]7 [[/underlined]]		6.9 7.3

165

Handwritten astronomical data table, likely a continuation of the Pole Plate data. The table is organized into columns for Right Ascension (R.A.), Declination (Dec.), Magnitude (Magn.), and other parameters. The data is handwritten in ink on aged paper.

R.A.	Dec.	Magn.	Red. to 1900	D.C. Magn	Br.	
0 26 +85.1	11	0 25.4	+85 10	8.8	0 29.2 +85 25	
0 39 +84.8	15	0 40.9	+84 40	8.2	0 45.3 +84 55	[[/strickethrough]]
0 21 +85.5	9	0 22.5	+85 31	8.3	0 26.2 +85 46	
[[/strickethrough]]6.00 [[/strickethrough]]7.3					[[underlined]]4 [[/underlined]]	
6.9						
23 52 +85.8	409	23 52.8	+85 54	8.0	23 54.7 +86 9	
6. [[/strickethrough]]78 [[/strickethrough]]8					[[/strickethrough]]5 [[/strickethrough]]	
[[underlined]]9 [[/underlined]]					5.9	6.7 -8
23 53 +86.3	347	23 55.3	+86 14	8.6	23 57.3 +86 29	
7.8 [[/strickethrough]]0 [[/strickethrough]]					[[underlined]]10 [[/underlined]]	
23 2 [[/strickethrough]]8 [[/strickethrough]]4						
+85 [[/strickethrough]]8 [[/strickethrough]]6					[[/strickethrough]]401 [[/strickethrough]]	
h) 399 [[/strickethrough]]23 27.2					[[/strickethrough]]23	
24.2 [[/strickethrough]]+85 46					[[/strickethrough]]+85	
37 [[/strickethrough]]8.0					[[/strickethrough]]7.5	
[[/strickethrough]]23 27.5 +86						
0 [[/strickethrough]]23 244.4 +85						
52 [[/strickethrough]]7.33					[[/strickethrough]]R	
5.8						
23 30 +86.5	344	23 27.8	+86 30	6.0	23 27.7 +86 45	
6. [[/strickethrough]]27 [[/strickethrough]]3					[[underlined]]12 [[/underlined]]	
22 48 +86.5	335	22 45.6	+86 32	8.0	22 42.3 +86 46	
7.6 [[/strickethrough]]0 [[/strickethrough]]					[[underlined]]7 [[/underlined]]	
21 30 +86.4	319	21 27.7	+86 26	7.0	21 19.6 +86 37	
7.1 [[/strickethrough]]4 [[/strickethrough]]					[[underlined]]7 [[/underlined]]	
6.4						
0 50 +85.5	19	0 49.7	+85 29	5.0	0 54.9 +85 43	
5.8 [[/strickethrough]]5 [[/strickethrough]]					[[underlined]]6 [[/underlined]]	
5.7						
0 34 +86.2	9	0 32.5	+86 9	8.6	0 37.2 +86 23	[[/strickethrough]]
[[/strickethrough]]						
7.8 [[/strickethrough]]0 [[/strickethrough]]					[[underlined]]5 [[/underlined]]	
22 33 +87.4	205	22 30.8	+87 21	7.5	22 24.2 +87 35	
7. [[/strickethrough]]15 [[/strickethrough]]2					[[underlined]]7 [[/underlined]]	
22 9 +87.1	201	22 7.0	+87 6	8.2	21 59.2 +87 19	
7.8 [[/strickethrough]]5 [[/strickethrough]]					[[underlined]]5 [[/underlined]]	
7.5						
19 32 +87.1	180	19 30.8	+87 4	8.0	19 14.5 +87 10	
7. [[/strickethrough]]75 [[/strickethrough]]8					[[underlined]]7 [[/underlined]]	
7.1						
19 3 +86.5	282	19 1.6	+86 31	7.0	18 47.7 +86 35	
[[/strickethrough]]0 [[/strickethrough]]					[[underlined]]7 [[/underlined]]	

| 18 38 +86.5 | 275| 18 40.2 | +86 30 | 8.2| 18 26.2 +86 32
~~7.95~~8.0|
87.2 7.5} |
 | 18 18 -85.7 | 294| 18 18.1 | +85 40 | 7.5| 18 7.2 +85 41 |
~~35~~4| 55|
 6.9|7.5 -6|
 | 1 52 +85.0 | 41| 1 50.8 | +85 2 | 7.7~~0~~0|
 58.8 +85
 16~~7.07~~7.2~~0~~0|
~~4~~6.8 6.9} |
 | 0 54 +86.4 | 17| 0 52.8 | +86 22 | 7.5| 0 58.6 +86 37 |
~~09~~1| 1010|
 6.1 6.5} |
 | 23 45 +87.5 | 217| 23 42.4 | +87 32 | 8.5| 23 42.8 +87 47 |
~~0~~8| 87.2|
 | 19 39 +87.6 | 181| 19 36.0 | +87 36 | 8.0| 19 15.7 +87 42 |
~~0~~6| 67.2|
 | 18 29 +86.9 | 272| 18 24.4 | +86 59 | 6.0| 18 7.6 +87 0 |
~~0~~9| 99|
 5.6|5.9 -3|
 | 18 22 +86.6 | 269| 18 19.1 | +86 36 | 4.5| 18 4.5 +86 37 |
~~4~~4| 44|
 4.6|4.4 +2|
 | 2 15 +85.2 | 45| 2 14.2 | +85 10 | 8.6| 2 23.3 +85 22 | | | 6.8|
 | 1 33 +86.2 | 25| 1 31.6 | +86 13 | 8.8~~0~~0|
 40.2 +86 26 | 7.~~75~~8|
106.8|
 | 0 8 +87.6 | 1| 0 4.5 | +87 36 | 9.0| 0 7.4 +87 51 | | | 7.2| |
 | 20 28 +88.6 | 114| 20 17.2 | +88 36 | 8.0| 19 43.3 +88 42 |
~~5~~10| 106.8
 7.2}|
 | 18 29 +87.4 | 169| 18 24.2 | +87 24 | 8.1| 18 4.3 +87
~~7~~6|
 7.~~75~~8| 88| 87.0|
 |

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

166

April 10, 1889.

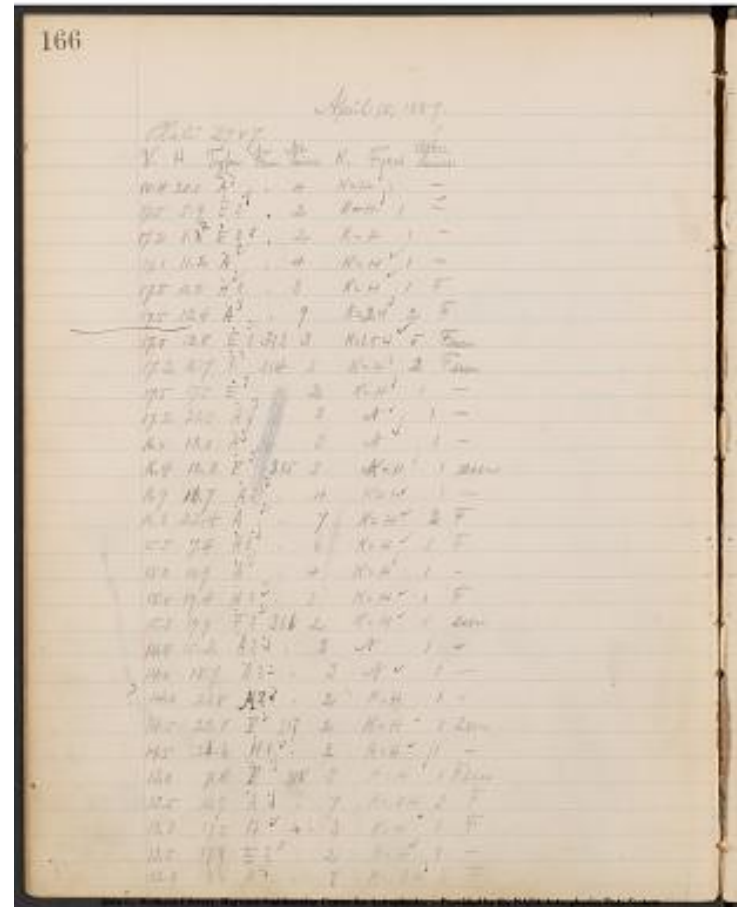
Plale 2987.

[[8 columned table]]

V. | H. | Type. | No. Rem. | No. Lines. | K. | Focus | Other Lines.

18.4	20.0	A	4	K=H	1	-	
17.5	5.9	E?	2	K=H	1	-	
17.2	8.	[[crossed-out]]	8	[[crossed-out]]	2	E?	2 K=H 1 -
17.1	11.2	A	4	K=H	1	-	
17.5	11.5	H?	3	K=H	1	F	
17.5	12.4	A	9	K=.2H	2	F	
17.0	12.8	E?	313	3	K=1.5H	5	F seen
17.2	15.7	[[symbol]]	314	3	K=H	2	F seen
17.5	17.5	E	2	K=H	1	-	
17.2	21.5	A?	3	N	1	-	
16.0	12.0	A	3	N	1	-	
16.4	12.3	F	315	3	K=H	1	seen
16.9	16.7	A?	4	K=H	1	-	
16.3	23.4	A	7	K=H	2	F	
15.5	7.4	A?	6	K=H	3	F	
15.0	10.9	A	4	K=H	1	-	
15.0	19.4	H?	3	K=H	1	F	
15.3	19.9	F?	316	2	K=H	1	seen
14.4	15.2	A?	3	N	1	-	
14.0	18.7	A?	3	N	1	-	
14.0	21.8	A?	2	K=H	1	-	
14.5	22.8	F	317	2	K=H	1	seen
14.5	23.6	H?	2	K=H	1	-	
13.0	7.4	F	318	3	K=H	1	F seen
13.5	13.9	A	7	K=.8H	3	F	
13.3	17.5	H	3	K=H	1	F	
13.5	17.9	E?	2	K=H	1	-	
12.0	6.6	A	8	K=.2H	3	F	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

167

|15 14 +86.1| 221| 15 14.6| +86 4| 8.1| 15 6.4 +85
 54|7.6~~3~~~~8~~
~~7~~7 | 6.9| |
 |15 16 +85.7| 249| 15 16.6| +85 41| 8.0| 15 9.2 +85
 31|7.5~~4~~~~5~~
~~7~~7 |
 |4 30 +86.1| 66| 4 30.2| +86 4|8.0|4 46.3 +86 10|
~~7.35~~~~7.6~~ |
~~15~~~~10~~6.6 | |
 |7 1 +89.1| 13| 7 3.7| +89 2| 7.0| 7
~~59.2~~~~58.0~~
~~88~~~~99~~
 56|6.9~~0~~~~8~~
 6.1| |
 |13 18 +88.4| 76| 13 12.2| +88 26| 8.0|~~12 14.6 +88~~
~~13 +4.5 +88 11~~ | | 7.4~~6.9~~ | |
 13 34 +88.3| 77| 13 36.7| +88 18| 8.5| 13 26.8 +88 4|
~~7.95~~~~8.0~~9
 7.1| |
 4 55 +85.5| 78| 4 55.1| +85 32| 7.0| 5 9.9 +85 36|
~~6.6~~~~3~~66.0
 6.8 -8|

John C. Wolbach Library Harvard Smithsonian Center for Astrophysics .
 Provided by NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

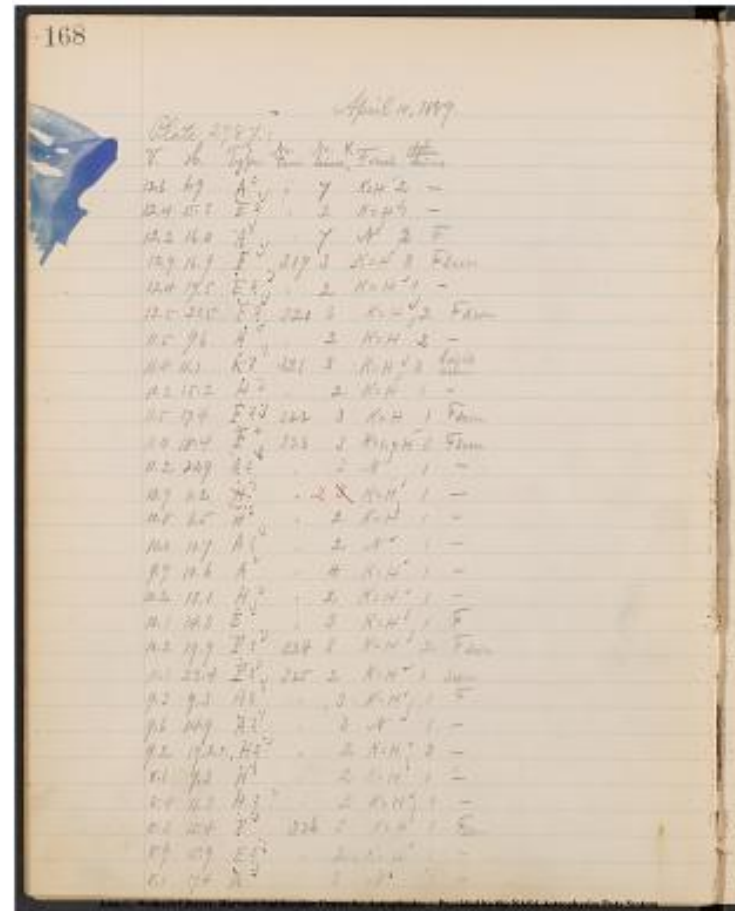
168

April 20, 1889

V. | H. | Type. | No. Rem. | No. Lines.^[K] | Focus. | | Other Lines.

12.6 | 6.9 | A | 7 | K=H | 2 | -
 12.4 | 15.3 | E? | 2 | K=H | 1 | -
 12.2 | 16.0 | A | 7 | N | 2 | F^[i]
 12.9 | 16.9 | F | 319 | 3 | K=H | 3 | F seen
 14.4 | 19.5 | E? | 2 | K=H | 1 | -
 12.5 | 21.5 | F? | 320 | 3 | K=H | 2 | F seen
 11.5 | 9.6 | H | 2 | K=H | 2 | -
 11.4 | 11.1 | K? | 321 | 3 | K=H | 3 | highs seen
 11.2 | 15.2 | H | 2 | K=H | 1 | -
 11.5 | 17.4 | F? | 322 | 3 | K=H | 1 | F seen
 11.0 | 18.4 | F | 323 | 3 | K=1.2H | 3 | F seen
 11.2 | 21.9 | A? | 3 | N | 1 | -
 10.9 | 6.2 | ~~[[strikethrough]]H[[/strikethrough]]~~ | | |
 2~~[[strikethrough]]3[[/strikethrough]]~~ | K=H | 1 | -
 10.8 | 6.5 | H | 2 | K=H | 1 | -
 10.0 | 10.7 | A? | 2 | N | 1 | -
 9.9 | 10.6 | A | 4 | K=H | 1 | -
 10.2 | 13.1 | H | 2 | K=H | 1 | -
 10.1 | 14.3 | E | 3 | K=H | 1 | F
 10.2 | 19.9 | F? | 324 | 3 | K=H | 2 | F seen
 10.1 | 22.4 | F? | 325 | 2 | K=H | 1 | seem
 9.3 | 9.3 | H? | 3 | K=H | 1 | F
 9.6 | 14.9 | A? | 3 | N | 1 | -
 9.2 | 19.2 | H? | 2 | K=H | 3 | -
 8.1 | 7.3 | H | 2 | K=H | 1 | -
 8.4 | 11.3 | H? | 2 | K=H | 1 | -
 8.3 | 15.4 | F | 326 | 3 | K=H | 1 | F seen
 8.9 | 15.9 | E? | 2 | K=H | 1 | -
 8.1 | 17.4 | A | 3 | N | 1 | -

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[10 columned table]]
 [No. | R.A. | Dec. | Magn. | Red. to 1900 | D.C. Magn. | Br. |]
 4 40 +85.7 | 74 | 4 41.0 | +85 45 | 6.0 | 4 56.3 +85
 50 | 6. | ~~88~~ | ~~9~~ | 7 | 6.2
 9 59 +88.6 | 60 | 9 59.6 | +88 36 | 8.5 | 10 19.4 +88
 23 | 7.9 | ~~0~~ | ~~0~~ | 7 | 7.2
 10 58 +88.4 | 64 | 10 53.0 | +88 26 | 7.5 | 11 4.2 +88
 11 | 7.1 | ~~0~~ | ~~0~~ | 9 | 6.2
 7.4 -12 |
 12 19 +88.5 | 71 | 12 14.4 | +88 30 | 6.5 | 12
 14. | ~~6~~ | ~~4~~ | ~~8~~ | 4 +88
 15 | 6.7 | ~~0~~ | ~~0~~ | 9 | 5.8
 13 30 +87.4 | 122 | 13 30.5 | +87 19 | 8.8 | 13
 25. | ~~2~~ | ~~1~~ | ~~8~~ | 1 +87
 5 | 7.8 | ~~0~~ | ~~0~~ | 6 | 7.2
 14 7 +86.5 | 201 | 14 5.1 | +86 27 | 7.5 | 13 59.4 +86
 14 | 7.4 | ~~4~~ | ~~4~~ | 10 | 6.4
 5 49 +86.8 | 79 | 5 48.0 | +86 46 | 7.0 | 6 8.2 +86
 46 | 7. | ~~35~~ | ~~4~~ | 10 | 6.
 7[^] | 6.4 |
 6 29 +87.3 | 51 | 6 31.1 | +87 15 | 5.0 | 6 53.9 +87
 12 | 6.8 | ~~0~~ | ~~0~~ | 10 | 6.4
 ^ | 5.8 |
 9 47 +87.9 | 85 | 9 47.8 | +87 59 | 8.5 | 10 4.0 +87 | 47 | | 7.6[^] | 7.2 | |
 11 50 +87.8 | ~~85~~ | 12 6.6 | +87 44 | 8.2 | ~~8.2~~ |
 | ~~12~~ | 9 | +87.7 | 107 | 12 12.6 | +87 14 | 6.5 | 12 8.1 +87
 29 | ~~6.5~~ |
 10 | 1[^] | 100 | 11 51.6[^] | 51.2 | +87 48[^] | 48 | 8.9[^] | 9.0 | 11 54.6 +87 33 |
 12 11 +87.2 | 107 | 12 12.6 | +87 14 | 6.5 | 12 13.7 +87
 0 | 6.8 | ~~5~~ | ~~5~~ | 10 | 5.8
 13 38 +86.0 | 193 | 13 35.7 | +86 1 | 7.5 | 13 32.4 +85
 47 | 7.6 | ~~1~~ | ~~1~~ | 7.1 | 7.1
 8.0 -9 |
 5 1.5 +85.1 | 80 | 5 16.0 | +85 6 | 6.0 | 5 29.9 +85
 9 | ~~5.95~~ | ~~7.2~~ | 8 | 7.
 1[^] | 6.4 |
 5 21 +85.2 | 81 | 5 20.4 | +85 14 | 8.0 | 5 34.7 +85
 17 | ~~6.35~~ | ~~7.6~~ | 5 | 7.1
 7.6[^] | 7.1 |
 6 54 +86.6 | 103 | 6 52.9 | +86 39 | 8.2 | 7 11.6 +86
 36 | 7.6 | ~~0~~ | ~~0~~ | 5 | 7.1
 6 52 +86.6 | 102 | 6 51.9 | +86 37 | 9.1 | 7 10.4 +86 33 | | 7.2 | |
 8 5 +87.4 | 68 | 8 6.2 | +87 23 | 8.8 | 8 26.2 +87 15 | | 7.6[^] | 7.3 | |
 9 0 +87.5 | 78 | 9 0.8 | +87 29 | 8.0 | 9 18.0 +87
 18 | 7.7 | ~~0~~ | ~~0~~ | 7 | 7.0
 12 35 +86.5 | 182 | 12 34.7 | +86 32 | 6.5 | 12 34.6 +86
 17 | 7.4 | ~~0~~ | ~~0~~ | 11 | 6.
 3 | |

169

No.	R.A.	Dec.	Magn.	Red. to 1900	D.C.	Magn.	Br.
4	40	+85.7	74	4 41.0	+85 45	6.0	4 56.3
50	6.	88	9	<u>7</u>	<u>6.2</u>		
9	59	+88.6	60	9 59.6	+88 36	8.5	10 19.4
23	7.9	0	0	<u>7</u>	<u>7.2</u>		
10	58	+88.4	64	10 53.0	+88 26	7.5	11 4.2
11	7.1	0	0	<u>9</u>	<u>6.2</u>		
7.4	-12						
12	19	+88.5	71	12 14.4	+88 30	6.5	12
14.		6	4	<u>4</u>	+88		
15	6.7	0	0	<u>9</u>	<u>5.8</u>		
13	30	+87.4	122	13 30.5	+87 19	8.8	13
25.		2	1	<u>1</u>	+87		
5	7.8	0	0	<u>6</u>	<u>7.2</u>		
14	7	+86.5	201	14 5.1	+86 27	7.5	13 59.4
14	7.4	4	4	<u>10</u>	<u>6.4</u>		
5	49	+86.8	79	5 48.0	+86 46	7.0	6 8.2
46	7.	35	4	<u>10</u>	<u>6.</u>		
7 [^]		<u>6.4</u>					
6	29	+87.3	51	6 31.1	+87 15	5.0	6 53.9
12	6.8	0	0	<u>10</u>	<u>6.4</u>		
^		<u>5.8</u>					
9	47	+87.9	85	9 47.8	+87 59	8.5	10 4.0
							47 7.6 [^] 7.2
11	50	+87.8	85	12 6.6	+87 44	8.2	8.2
		12	9	+87.7	107	12 12.6	+87 14 6.5 12 8.1 +87
29		6.5					
							10 1 [^] 100 11 51.6 [^] 51.2 +87 48 [^] 48 8.9 [^] 9.0 11 54.6 +87 33
12	11	+87.2	107	12 12.6	+87 14	6.5	12 13.7 +87
0	6.8	5	5	<u>10</u>	<u>5.8</u>		
13	38	+86.0	193	13 35.7	+86 1	7.5	13 32.4 +85
47	7.6	1	1	<u>7.1</u>	<u>7.1</u>		
8.0	-9						
5	1.5	+85.1	80	5 16.0	+85 6	6.0	5 29.9 +85
9		5.95	7.2	<u>8</u>	<u>7.</u>		
1 [^]		<u>6.4</u>					
5	21	+85.2	81	5 20.4	+85 14	8.0	5 34.7 +85
17		6.35	7.6	<u>5</u>	<u>7.1</u>		
7.6 [^]		<u>7.1</u>					
6	54	+86.6	103	6 52.9	+86 39	8.2	7 11.6 +86
36	7.6	0	0	<u>5</u>	<u>7.1</u>		
6	52	+86.6	102	6 51.9	+86 37	9.1	7 10.4 +86 33 7.2
8	5	+87.4	68	8 6.2	+87 23	8.8	8 26.2 +87 15 7.6 [^] 7.3
9	0	+87.5	78	9 0.8	+87 29	8.0	9 18.0 +87
18	7.7	0	0	<u>7</u>	<u>7.0</u>		
12	35	+86.5	182	12 34.7	+86 32	6.5	12 34.6 +86
17	7.4	0	0	<u>11</u>	<u>6.</u>		
3							

13 20 +85.5|222|13 20.7|+85 31|7.0|13 18.8 +85
 17|~~7.37~~|~~7.3~~|7|7|
 6.6| |
 16 32 +85.9|105|6 35.0|+85 57|8.2|6 51.1 +85 55| | 7.1^|[6.9]]| |
 19 28 +87.3|83|9 29.9|+87 16|7.7|9 44.0 +87
 4|8.0|~~0~~|~~0~~|10|10|7.0|
 8.0 -10|
 11 58 +86.4|176|11 57.4|+86 24|5.7|11 59.8 +86
 8|~~6.98~~|~~7.0~~|12|12|
 5.9^|[5.8]]| |
 16 21 +84.7|135|6 20.9|+84 48|8.2|6 34.1 +84
 47|~~6.30~~|~~7.4~~|6|6|
 6.9^|[6.8]]| |
 17 39 +86.1|113|7 37.2|+86 6|7.2|7 32.5 +86
 0|7.8|~~5~~|~~5~~|9|9|7.0^|[
 6.9]]| |
 19 44 +86.5|143|9 47.4|+86 32|8.6|9 58.2 +86
 19|7.|~~75~~|~~8~~|8|8|7.
 0| |
 10 7 +86.8|152|10 8.5|+86 48|8.4|10 18.6 +86
 34|7.8|~~0~~|~~0~~|7|7|7.1|
 |
 10 49 +86.3|159|10 50.4|+86 20|8.3|10 57.0 +86
 5|7.|~~78~~|~~8~~|7|7|7.1|
 |

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

170

April 10, 1889

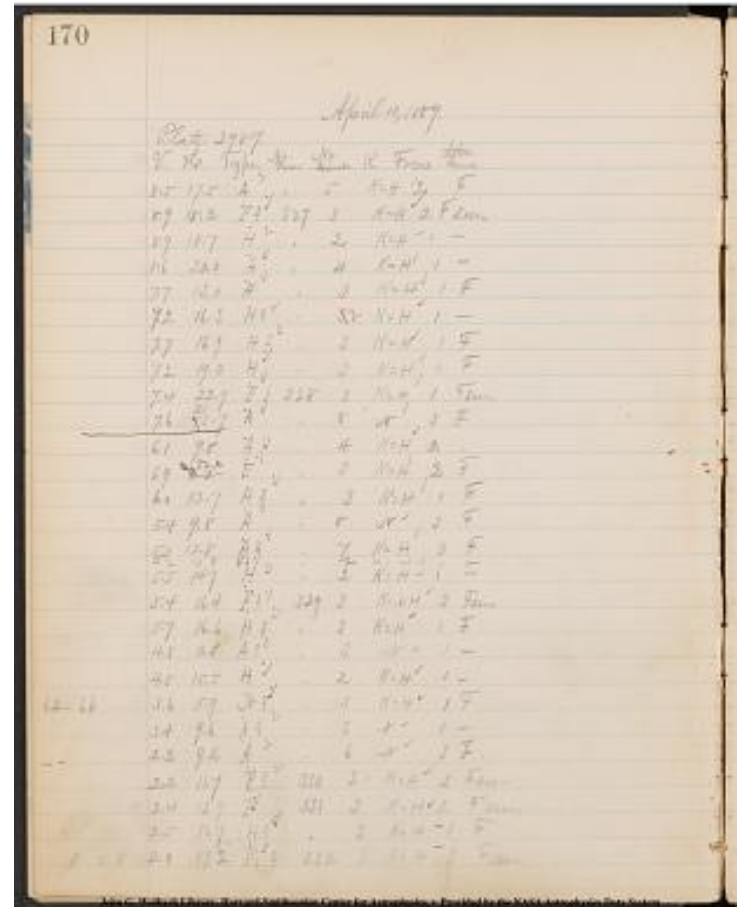
Plate 2987

[[8 columned table]]

V. | H. | Type | No. Rem. | No. Lines | K | Focus | Other Lines

8.5	17.5	A	5	K=H	2	F	
8.9	18.2	F?	327	3	K=H	2	F seen
8.9	18.7	H	2	K=H	1	-	
8.6	20.0	A	4	K=H	1	-	
7.7	13.0	H	3	K=H	1	F	
7.2	16.3	H?		3	K=H	1	-
7.7	16.9	H?	3	K=H	1	F	
7.2	19.0	H	3	K=H	1	F	
7.4	22.9	F	328	3	K=H	1	F seen
7.6	21	13	7	A	8	N	3
6.1	9.8	A	4	K=H	2	-	
6.9	4.0	12.0	E	3	K=H	2	F
6.0	12.7	H?	3	K=H	1	F	
5.4	9.8	A	8	N	3	F	
5.0	12.8	A?	7	K=H	3	F	
5.2	14.0	H	2	K=H	1	-	
5.5	14.7	H	2	K=H	1	-	
5.4	16.4	F?	329	3	K=8H	3	F seen
5.7	16.6	H?	3	K=H	1	F	
4.5	11.8	A?	3	N	1	-	
4.5	15.5	H	2	K=H	1	-	
[[margin]]6.2-6.6[[/margin]]	3.6	5.9	N?	3	K=H	1	F
3.4	9.6	A?	3	N	1	-	
2.2	9.2	A	6	N	3	F	
2.2	11.7	F?	330	3	K=H	2	F seen
2.4	13.9	F	331	3	K=H	2	F seen
2.5	16.7	H?	3	K=H	1	F seen	
2.0	17.2	F?	332	3	K=H	3	F seen

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

St. Lit. 5.2, F. m. & c. 6.0-5.8 F. ch. 7.0 Box. No. 594.
R.A. 1^h[[h]] 5^m[[m]] Dec +81.6

[[underlined]]April 21, 1889. [[/underlined]]

[[left margin]]

21 10

[[/left margin]]

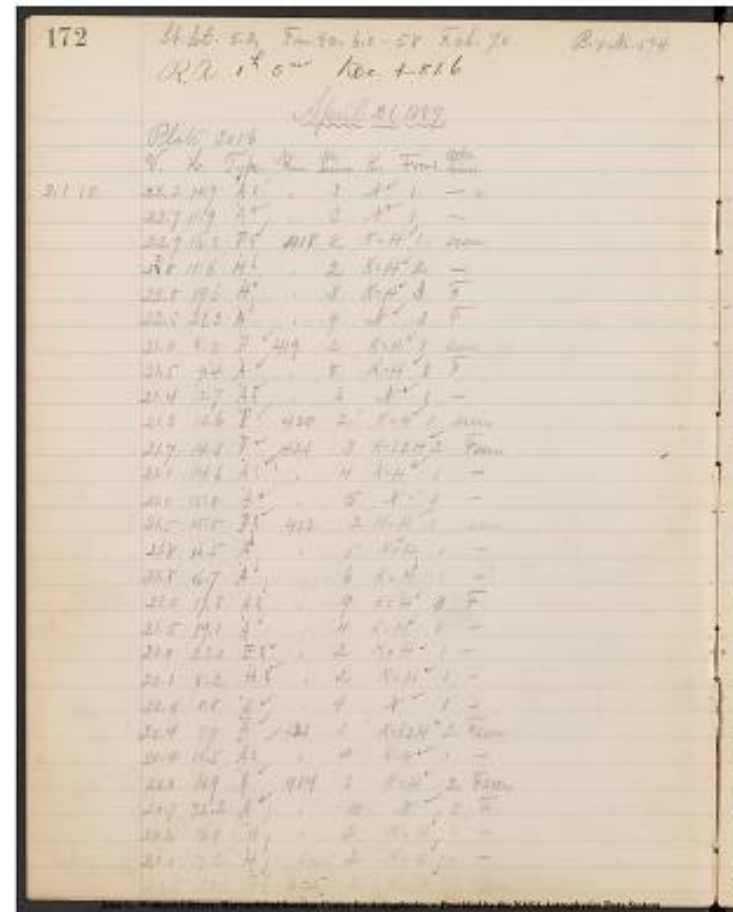
Plate 3056

[[8 columned table]]

V|H|Type|No. Rem.|No. Lines|K|Focus|Other Lines.|

22.2	10.9	A?		3	N		1	-
22.7	11.9	A		3	N		1	-
22.9	16.5	F?		418	2	K=H		1 Seen
2	18.6	H	 	1	18.6	H	 	2 K=H 2 -
22.5	19.6	H		3	K=H		3	F
22.3	21.3	A		9	N		3	F
21.8	8.0	F		419	2	K=H		1 Seen
21.5	9.4	A		8	K=H		3	F
21.4	12.7	A?		3	N		1	-
21.3	13.6	F		420	2	K=H		1 Seen
21.7	14.3	H		421	3	K=1.2H		2 F seen
21.1	14.6	A?		4	K=H		1	-
21.0	15.0	A		5	N		1	-
21.5	15.5	F?		422	2	K=H		1 Seen
21.8	16.5	A		5	K=H		1	-
21.8	16.7	A		6	K=H		1	-
21.0	17.3	A?		9	K=H		3	F
21.5	19.1	A		4	K=H		1	-
21.0	23.0	E?		2	K=H		1	-
20.1	8.2	H?		2	K=H		1	-
20.0	8.8	A		4	N		1	-
20.4	9.9	H		423	3	K=1.2H		2 F seen
20.4	10.5	A?		4	K=H		1	-
20.0	10.9	H		424	3	K=H		2 F seen
20.7	12.2	A		10	N		3	F
20.2	16.0	H		2	K=H		1	-
20.0	17.2	H		2	K=H		1	-
20.5	20.1	F?		425	2	K=H		1 Seen

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

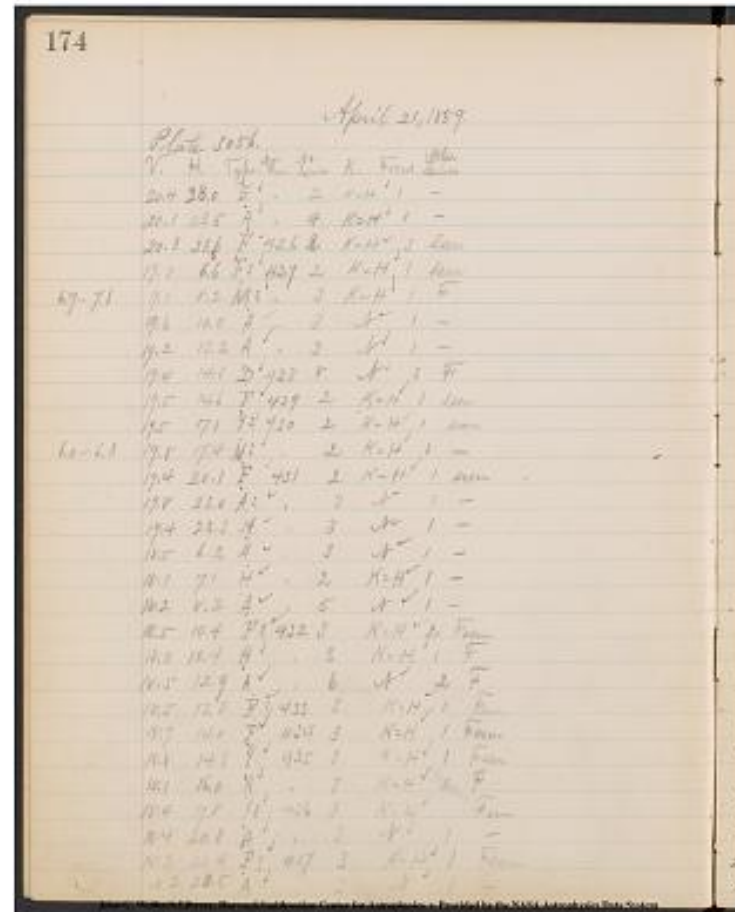
174
April 21, 1889

Plate 3056

V. | H. | Type | No. Rem. | No. Lines | K. | Focus | Other Lines

20.4	23.0	E	2	K=H	1	-
20.1	23.5	A	4	K=H	1	-
20.3	23.6	F	426	2	K=H	3 Seen
19.8	6.6	F?	427	2	K=H	1 Seen
[[margin]]6.9-7.1[[/margin]] 19.1 8.2 M? 3 K=H 1 F						
19.6	10.0	A	3	N	1	-
19.2	13.2	A	3	N	1	-
19.4	14.1	D	428	8	N	3 F
19.5	14.6	F	429	2	K=H	1 Seen
19.5	17.1	[[symbol]]?	430	2	K=H	1 Seen
[[margin]]6.0-6.3[[/margin]] 19.8 17.4 M? 2 K=H 1 -						
19.4	20.1	F	431	2	K=H	1 Seen
19.8	23.0	A?	3	N	1	-
19.4	23.3	A	3	N	1	-
18.5	6.2	A	3	N	1	-
18.1	7.1	H	2	K=H	1	-
18.2	8.2	A	5	N	1	-
18.5	10.4	F?	432	3	K=H	2 F seen
18.0	12.4	H	3	K=H	1	F
18.5	12.9	A	6	N	2	F
18.5	13.3	F?	433	3	K=H	1 F seen
18.7	14.0	F	434	3	K=H	1 F seen
18.8	14.3	[[symbol]]	435	3	K=H	1 F seen
18.1	16.0	A	7	K=H	2	F
18.4	17.8	[[symbol]]?	436	3	K=H	F seen
18.4	20.8	A	3	N	1	-
18.2	21.4	F?	437	3	K=H	1 F seen
18.2	28.5	A	3	N	1	-

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]
 [No. | R.A. | Dec. | Mag. | R.A. 1900 | Dec. | D.C. Mean | Diff. | Br. | |]
 [---|---|---|---|---|---|---|---|---|---]
 23 50.7 +76.7 | 941 | 23 50.5 | +76 46 | 8.3 | 23 52.6 +77 1 | | 6.9 | 6.8 | 6.6 |
 23 46.0 +76.9 | 935 | 23 45.8 | +76 53 | 8.7 | 23 47.9 +77 8 | | 7.0 | 6.9 | 6.7 |
 23 45.0 +76.8 | 934 | 23 45.0 | +76 48 | 6.9 | 23 47.1 +77 | | | | |
 3 | 5.6 | ~~[[3^[[0]]]]~~ | 0 | 5.6 | 5.5 | 5.3 |
 2 179 +77.0 | 84 | 2 17.7 | +77 1 | 7.5 | 2 22.6 +77 | | | | |
 13 | ~~[[5.95]]~~ | ~~[[6.0]]~~ | 7 | 6.7 | 6.6 | 6.4 |
 2 6.9 +77.6 | 79 | 2 6.1 | +77 35 | 7.9 | 2 10.9 +77 48 | | | | |
 7.3^[[6.9]] | 7.2^[[6.8]] | 7.1^[[6.7]] |
 1 48.8 +77.5 | 72 | 1 48.3 | +77 32 | 8.8 | 1 52.7 +77 45 | | 7.1 | 7.0 | 6.9 |
 1 19.2 +78.0 | 54 | 1 18.9 | +77 60 | 9.0 | 1 22.9 +78 14 | | 7.2 | 7.1 | 7.0 |
 1 11.1 +77.9 | 49 | 1 11.2 | +77 58 | 6.0 | 1 15.0 | | | | |
 +7 | ~~[[7]]~~ | ~~[[8]]~~ |
 12 | 5.2 | ~~[[4]]~~ | 0 | 5.2 | 5.1 | 5.0 |
 1 6.2 +77.8 | 46 | 1 6.2 | +77 52 | 8.5 | 1 9.9 +78 6 | | 6.9 | 6.8 | 6.7 |
 0 41.2 +77.8 | 29 | 0 41.2 | +77 49 | 8.2 | 0 44.4 +78 | | | | |
 4 | 6. | ~~[[15]]~~ | 2 | 8 | 7.3^[[7.0]] | 7.2^[[6.9]] | 7.1^[[6.8]] |
 0 38.2 +77.7 | 25 | 0 38.4 | +77 41 | 7.0 | 0 41.5 +77 | | | | |
 56 | 6.0 | ~~[[0]]~~ | 0 | 6.5^[[6.0]] | 6.4^[[5.9]] | 6.3^[[5.8]] |
 0 14.0 +77.7 | 6 | 0 13.0 | +77 41 | 8.9 | 0 15.6 +77 56 | | 7.0 | 6.9 | 6.8 |
 23 49.2 +77.1 | 929 | 23 48.8 | +77 7 | 7.8 | 23 50.9 +77 22 | | 6.9 | 6.8 | 6.6 |
 23 44.2 +77.2 | 926 | 23 44.6 | +77 16 | 8.9 | 23 46.6 +77 31 | | 7.1 | 7.0 | 6.9 |
 2 24.2 +77.5 | 92 | 2 24.5 | +77 33 | 8.9 | 2 29.6 +77 45 | | 7.2 | 7.1 | 7.0 |
 2 17.9 +77.8 | 86 | 2 18.6 | +77 51 | 8.6 | 2 23.6 +78 3 | | | | |
 7.3^[[7.1]] | 7.2^[[7.0]] | 7.1^[[6.9]] |
 2 8.9 +78.1 | 8 | 2 8.4 | +78 2 | 8.5 | 2 13.3 +78 15 | | 6.9 | 6.8 | 6.7 |
 1 48 +78.2 | 66 | 1 47.6 | +78 11 | 8.1 | 1 52.1 +78 24 | | | | |
 6.3 | ~~[[0]]~~ | ~~[[6.3]]~~ | 6.2 | 6.1 |
 1 28.1 +78.6 | 52 | 1 28.2 | +78 36 | 8.0 | 1 32.5 +78 50 | ~~[[6]]~~ |
 40 | ~~[[7.0]]~~ | 6.9^[[6.7]] | 6.8^[[6.6]] |
 1 23.9 +78.4 | 50^[[49]] | 1^[[1]] | 22.8^[[22.8]] | +78^[[+78]] |
 24^[[25]] | 9.3^[[8.5]] | 1^[[1]] | 26.9^[[26.9]] | +78^[[+78]] |
 38^[[39]] | R | ~~[[6.40]]~~ | 6.5 | 6.4 | 6.3 |
 1 19 +78.4 | 45 | 1 18.8 | +78 24 | 8.5 | 1 21.5 +78 38 | | 6.8 | 6.7 | 6.6 |
 1 12.1 +78.3 | 40 | 1 12.4 | +78 20 | 8.3 | 1 15.0 +78 34 | | 6.7 | 6.6 | 6.5 |
 1 9.9 +78.3 | 36 | 1 9.3 | +78 15 | 7.5 | 1 11.8 +78 29 | | | | |
 6.7^[[6.2]] | 6.6^[[6.1]] | 6.5^[[6.0]] |
 0 49.8 +78.6 | 28 | 0 51.0 | +78 37 | 8.1 | 0 54.4 +78 | | | | |
 52 | 6.5 | ~~[[0]]~~ | 1 | 6.6 | 6.5 | 6.4 |
 0 32.3 +78.4 | 21 | 0 32.8 | +78 24 | 8.0 | 0 35.9 +78 39 | | | | |
 7.2^[[6.8]] | 7.1^[[6.7]] | 7.0^[[6.6]] |
 0 4.9 +78.1 | 2 | 0 4.9 | +78 6 | 9.5 | 0 7.3 +78 21 | | 7.2 | 7.1 | 7.0 |
 23 58.1 +78.2 | 855 | 23 58.1 | +78 8 | 9.1 | 0 0.4 +78 23 | | 6.6 | 6.5 | 6.4 |
 23 39.8 +77.7 | 922 | 23 39.1 | +77 45 | 8.9 | 23 41.0 +78 0 | | 7.0 | 6.9 | 6.8 |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[12 columned table]]

| No. | R.A. | Dec. | Magn. | R.A.^[[1900]] | Dec. | D.C. Mean | Diff. | Br.

No.	R.A.	Dec.	Magn.	R.A.^[[1900]]	Dec.	D.C. Mean	Diff.	Br.
2 0 +78.5 73 1 59.9 +78 29 7.3 2 4.7 +78 42								
5.5[[strikethrough]]3[[/strikethrough]] 2 5.7 5.6 5.5								
1 53 +78.6 69 1 53.2 +78 38 7.3 1 58.0 +78 51								
5.5[[strikethrough]]68[[/strikethrough]]7 1 5.8 5.7 5.6								
1 43.9 +79.0 62 1 43.8 +78 60 8.3 1 48.5 +79 14								
6.1[[strikethrough]]0[[/strikethrough]] 6 6.9^[[6.7]] {6.8^[[6.6]]								
{6.7^[[6.5]]								
1 4 +79.1 36 1 39 +79 8 6.5 1 7.6 +79 23								
[[strikethrough]]5.30[[/strikethrough]]^[[
5.5[[strikethrough]]29[[/strikethrough]]3 2 5.5 5.4 5.3								
1 0.1 +78.8 34 1 0.0 +78 54 5.6 6 3.6 +79 8								
4.5[[strikethrough]]67[[/strikethrough]]7 0 4.7 4.6 4.5								
0 57 +79.2 29 0 57.1 +79 14 6.4 1 0.7 +79 29								
5.5[[strikethrough]]4[[/strikethrough]] 1 5.9^[[5.6]] {5.8^[[5.5]]								
{5.7^[[5.4]]								
0 58.1 +78.7 33 0 58.1 +78 49 8.8 1 1.8 +79 4 6.9 6.8								
6.7								
0 42 +79.1 19 0 41.6 +79 2 7.7 0 44.9 +79 17								
5.8[[strikethrough]]4[[/strikethrough]] 1 5.9 5.8 5.7								
0 15.8 +78.7 11 0 15.4 +78 44 8.6 0 18.1 +78 59								
7.4^[[7.1]] {7.3^[[7.0]] {7.2^[[6.9]]								
23 56.1 +78.5 854 23 56.1 +78 30 9.2 23 58.3 +78 45 7.0								
6.9 6.8								
[[underlined]]2 27.0[[/underlined]] +78.5^[[R]]								
[[strikethrough]]96[[/strikethrough]]^[[95]] [[strikethrough]]2								
27.0[[/strikethrough]]^[[2 26.8]] [[strikethrough]]+78								
35[[/strikethrough]]^[[+78 34]]								
[[strikethrough]]9.2[[/strikethrough]]^[[8.0]] [[strikethrough]]2								
32.4[[/strikethrough]]^[[2 32.2]] [[strikethrough]]+78								
47[[/strikethrough]]^[[+78 46]] -^[[6.4[[strikethrough]]0[[/strikethrough]]								
]] 3 6.7 6.6 6.5								
2 23.8 +78.8 94 2 23.2 +78 54 8.5 2 28.7 +79 6 6.9 6.8								
6.7								
2 [[strikethrough]]15.7 +78.6[[/strikethrough]]^[[18.5 +79.4]]								
[[strikethrough]]87[[/strikethrough]]^[[75]] [[strikethrough]]2								
15.2[[/strikethrough]]^[[2 18.4]] [[strikethrough]]+78								
37[[/strikethrough]]^[[+79 5]] [[strikethrough]]9.2[[/strikethrough]]^[[7.5]]								
2 23.8 +79 17 5.8[[strikethrough]]0[[/strikethrough]] 6								
6.8^[[6.4]] {6.7^[[6.3]] {6.6^[[6.2]]								
2 7.4 +79.2 68 2 7.2 +79 6 7.7 2 12.3 +79 19								
6.5[[strikethrough]]17[[/strikethrough]]2 1 6.3 6.2 6.1								
2 5.3 +78.9 78 2 5.0 +78 60 9.0 2 10.1 +79 13 7.0 6.9								
6.8								
[[underlined]]1 56.2 +79.0[[/underlined]] 63 1 56.6 +79 0 6.7 2 1.5								
+79 13 5.5[[strikethrough]]25[[/strikethrough]] 3 5.5 5.4 5.3								
71 1 56.2 +78 60 7.3 2 1.1 +79 13								
5.5[[strikethrough]]65[[/strikethrough]] 6 6.2 6.1 6.0								
1 37 +79.4 55 1 36.7 +79 30 8.6 1 41.3 +79 44 6.7 6.6								
6.6								
1 33 +79.5 51 1 31.2 +79 31 8.0 1 35.7 +79 45 7.2^[[6.6]]								
{7.1^[[6.5]] {7.1^[[6.5]]								
1 14 +79.7^[[R]] 41^[[42]] 1 14.0^[[1 14.1]] +79 42^[[+79 39]]								
9.1^[[9.2]] 1 18.1^[[1 18.2]] +79 56^[[+79 53]] 7.0 6.9 6.9								
1 12 +79.5 40 1 11.1 +79 33 9.0 1 15.1 +79 47 6.8 6.7								
6.7								

|1 10 +79.4 | 39 | 1 9.2 | +79 22 | 8.0 | 1 13.2 | +79 36 |
 5.~~86~~9 | 1 | 6.0 | 5.9 | 5.9 |
 |0 55 +79.3 | 26 | 0 54.4 | +79 20 | 8.8 | 0 58.0 | +79 35 | | | 6.8 | 6.7 |
 6.7
 |0 32 +79.3^[R] | 16^[15] | 0 32.0^[0 31.4] | +79 19^[+79 21] |
 8.9^[8.8] | 0 35.1^[0 34.5] | +79 34^[+79 36] | | |
 7.6^[7.2] | {7.5^[7.1] | {7.5^[7.1]
 |0 27 +79.3 | 14 | 9 27.8 | +79 21 | 8.5 | 0 30.8 | +79 36 | | | 7.6^[7.2] |
 {7.5^[7.1] | {7.5^[7.1] |
 |0 18 +79.2 | 10 | 0 17.9 | +79 14 | 7.0 | 0 20.7 | +79 30 |
 5.1~~2~~ | 0 | 5.1 | 5.0 | 5.0 |
 |0 1.9 +78.8 | 1 | 0 1.5 | +78 55 | 6.5 | 0 3.8 | +79 10 |
 5.0~~4~~ | 1 | 4.9 |
 4.8 | 4.7 |
 |23 50.3 +78.9 | 851 | 23 50.1 | +78 57 | 7.8 | 23 52.2 | +79 12 |
~~5.95~~6.0 | 2 | 6.2 | 6.1 | 6.0 |

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

178

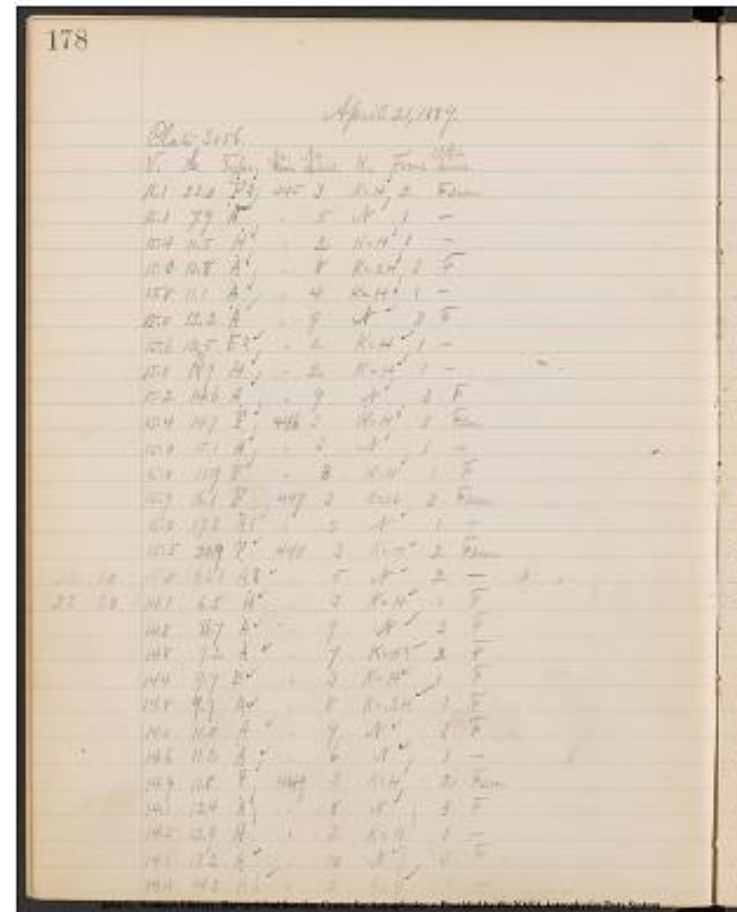
April 21, 1889.

Plate 3056.

[[9 columned table]]

[V]	[H]	Type	No.	Rem.	[No. Lines]	K	Focus	Other Lines.
16.1	22.0	F?	445	3	K=H	2	F seen	
15.1	7.9	A	5	N	1			
15.4	10.5	H	2	K=H	1			
15.0	10.8	A	8	K=2H	3	F		
15.8	11.1	A	4	K=H	1			
15.0	12.2	A	9	N	3	F		
15.6	12.5	E?	2	K=H	1			
15.0	1	[[strikethrough]]	4	[[strikethrough]]	39	H	2	K=H
15.2	14.6	A	9	N	3	F		
15.4	14.7	F	446	3	K=H	3	F seen	
15.0	15.1	H	3	N	1			
15.0	15.9	E	3	K=H	1	F		
15.9	16.1	F	447	3	K=H	3	F seen	
15.0	17.3	A?	3	N	1			
15.5	20.9	F	448	3	K=H	2	F seen	
22 10	15.8	23.1	A?	5	N	2		
23 30	14.1	6.5	H	3	K=H	1	F	
14.8	1	[[strikethrough]]	1	[[strikethrough]]	6.7	A	9	N
14.8	9.2	A	7	K=H?	2	F		
14.4	9.7	E	3	K=H	1	F		
14.8	9.7	A	8	K=3H	3	F		
14.0	11.0	A	9	N	3	F		
14.6	11.2	A	6	N	1			
14.9	11.8	1449	3	K=H	2	F seen		
14.1	12.4	A	8	N	3	F		
14.5	12.9	H	2	K=H	1			
14.1	13.2	A	10	N	3	F		
14.4	14.3	H?	2	K=H	1			

John G. Wolbach Library, Harvard Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[12 columned table]]
 |No.|R.A.|Dec.|Magn.|R.A.^[[1900]]|Dec.|D.C. Mean|Diff.|Br.| | |
 |---|---|---|---|---|---|---|---|---|---|
 23 47 +79.0|796|23 46.1|+79 2|8.3|23 48.1|+79
 17|6. |[[~~strickethrough~~]]|15|[[~~strickethrough~~]]|2|1|6.3|6.2|6.1|
 2 22 +79.5 2^[[R]]|77^[[76]]|2^[[2]]| 21.9^[[21.2]]|+79^[[+79]]
 34^[[28]]|8.9^[[8.4]]|2^[[2]]| 27.4^[[26.7]]|+79^[[+79]]|46^[[40]]|
 |6.8|6.7|6.7|
 1 53 +79.7|62|1 52.6|+79 43|9.0|1 57.6 +79 56|
 |7.6^[[7.3]]|{7.5^[[7.2]]|{7.5^[[7.2]]|
 1 52 +79.9|61|1 50.7|+79 58|7.5|1 55.7 +80
 11|5.6|[[~~strickethrough~~]]5|[[~~strickethrough~~]] 2|5.8|5.7|5.7|
 1 47 +79.6|57|1 45.7|+79 34|8.8|1 50.5 +79 47| |6.8|6.7|6.7|
 1 35 +80.2|55|1 34.1|+80 10|7.5|1 38.8 +80
 24|5.4|[[~~strickethrough~~]]5|[[~~strickethrough~~]]|
 |[[~~strickethrough~~]]1|[[~~strickethrough~~]]5.3|5.2|5.2|
 1 32 +79.7|[[~~strickethrough~~]]51|1 31.2|+79 31|8.0|[[~~strickethrough~~]]50|1
 30.4|+79 48|9.0|1 34.9 +80 2| |6.9|6.8|6.8|
 1 15 +80.3|43|1 14.7|+80 17|8.6|1 18.9 +80 31|
 7.4^[[7.1]]|{7.3^[[7.0]]|{7.3^[[7.0]]|
 1 7 +80.2|[[~~strickethrough~~]]5|[[~~strickethrough~~]]36|1 6.2|+80 8|6.7|1 10.2
 +80 22|5.2|[[~~strickethrough~~]]1|[[~~strickethrough~~]]1|5.3|5.2|5.2|
 1 6 +80.1|35|1 5.6|+80 6|7.3|1 9.6 +80
 20|5.5|[[~~strickethrough~~]]4|[[~~strickethrough~~]] 6|6.1|6.0|6.0|
 0 58 +80.2|[[~~strickethrough~~]]793|23 58.2|+80 17|8.8|[[~~strickethrough~~]]31|0
 59.9|+80 11|8.7|0 3.8 +80 26| |7.0^[[6.6]]|{6.9^[[6.5]]|{6.9^[[6.5]]|
 0 51 80.2|26|0 49.7|+80 13|8.5|0 53.3 +80 28| |6.5|6.4|6.4|
 0 48 +79.7|24|0 48.6|+79 46|6.5|0 52.1 +80
 1|5.4|[[~~strickethrough~~]]0|[[~~strickethrough~~]] 1|5.5|5.4|5.4|
 0 35 +80.1|17|0 34.2|+80 6|8.8|0 37.4 +80 21| |7.0|6.9|6.9|
 23 56 +79.4|799|23 55.4|+79 30|7.5|23 57.6 +79
 45|5.9|[[~~strickethrough~~]]2|[[~~strickethrough~~]] 1|6.0|5.9|5.9|
 23 35 +79.0|790|23 34.0|+79 1|8.2|23 35.7 +79
 16|6.0|[[~~strickethrough~~]]0|[[~~strickethrough~~]] 3|6.3|6.2|6.1|
 2 39 +79.6|88|2 39.7|+79 39|8.4|2 45.5 +79 51|
 7.0^[[6.8]]|{6.9^[[6.7]]|{6.9^[[6.7]]|
 2 36 +79.5|86|2 36.1|+79 29|7.0|2 41.9 +79
 41|[[~~strickethrough~~]]5.63|[[~~strickethrough~~]]5.6|[[~~strickethrough~~]]0|[[~~strickethrough~~]]
 |0|5.6|5.5|5.5|
 2 10 +79.9|69|2 10.0|+79 57|8.3|2 15.3
 +[[~~strickethrough~~]]79|[[~~strickethrough~~]]80
 10|6.3|[[~~strickethrough~~]]3|[[~~strickethrough~~]] 1|6.4|6.3|6.3|
 2 6 +80.2|72|2 5.4|+80 13|8.7|2 10.9 +80 26| |6.8|6.7|6.7|
 2 4 +80.1|70|2 3.3|+80 3|7.2|2 8.6 +80
 16|5.7|[[~~strickethrough~~]]4|[[~~strickethrough~~]] 0|5.7|5.6|5.6|
 1 53 +80.6|64|1 51.8|+80 36|6.1|1 57.1 +80 49|[[~~strickethrough~~]]4.80
 79|[[~~strickethrough~~]]4.8 0|4.8|4.7|4.7|
 1 48 80.3|61|1 46.9|+80 17|8.6|1 51.9 +80
 30|6. |[[~~strickethrough~~]]30|[[~~strickethrough~~]]4 2|6.6|6.5|6.5|
 1 39 +80.2|58|1 39.7|+80 11|6.8|1 44.5 +80
 25|6.3|[[~~strickethrough~~]]0|[[~~strickethrough~~]]|
 |[[~~strickethrough~~]]3|[[~~strickethrough~~]]6.6^[[6.0]]|{6.5^[[5.9]]|{6.5^[[5.9]]|
 1 36 +80.6|57|1 34.9|+80 39|7.5|1 39.7 +80
 53|5.7|[[~~strickethrough~~]]0|[[~~strickethrough~~]] 0|5.7|5.6|5.6|
 1 28 +80.4|52|1 27.9|+80 27|9.1|1 31.0 +80 41|
 7.5^[[7.2]]|{7.4^[[7.1]]|{7.4^[[7.1]]|
 1 26 +80.6|50|1 25.0|+80 41|7.4|1 29.6 +80
 55|5.4|[[~~strickethrough~~]]4|[[~~strickethrough~~]]|
 |[[~~strickethrough~~]]2|[[~~strickethrough~~]]5.2|5.1|5.1|

179

No.	R.A.	Dec.	Magn.	R.A. ¹⁹⁰⁰	Dec.	D.C. Mean	Diff.	Br.
23 47	+79.0	796	23 46.1	+79 2	8.3	23 48.1	+79	
17	6.	[[strickethrough]]	15	[[strickethrough]]	2	1	6.3	6.2
2 22	+79.5	2^[[R]]	77^[[76]]	2^[[2]]	21.9^[[21.2]]	+79^[[+79]]		
34	^[[28]]	8.9^[[8.4]]	2^[[2]]	27.4^[[26.7]]	+79^[[+79]]	46^[[40]]		
1 53	+79.7	62	1 52.6	+79 43	9.0	1 57.6	+79 56	
1 52	+79.9	61	1 50.7	+79 58	7.5	1 55.7	+80	
11	5.6	[[strickethrough]]	5	[[strickethrough]]	2	5.8	5.7	5.7
1 47	+79.6	57	1 45.7	+79 34	8.8	1 50.5	+79 47	6.8
1 35	+80.2	55	1 34.1	+80 10	7.5	1 38.8	+80	
24	5.4	[[strickethrough]]	5	[[strickethrough]]				
1 32	+79.7	[[strickethrough]]	51	1 31.2	+79 31	8.0	[[strickethrough]]	50
30.4	+79 48	9.0	1 34.9	+80 2		6.9	6.8	6.8
1 15	+80.3	43	1 14.7	+80 17	8.6	1 18.9	+80 31	
7.4	^[[7.1]]		{7.3	^[[7.0]]	{7.3	^[[7.0]]		
1 7	+80.2	[[strickethrough]]	5	[[strickethrough]]	36	1 6.2	+80 8	6.7
						1 10.2		
1 6	+80.1	35	1 5.6	+80 6	7.3	1 9.6	+80	
20	5.5	[[strickethrough]]	4	[[strickethrough]]	6	6.1	6.0	6.0
0 58	+80.2	[[strickethrough]]	793	23 58.2	+80 17	8.8	[[strickethrough]]	31
59.9	+80 11	8.7	0 3.8	+80 26		7.0	^[[6.6]]	{6.9
							^[[6.5]]	{6.9
0 51	80.2	26	0 49.7	+80 13	8.5	0 53.3	+80 28	6.5
						6.4	6.4	6.4
0 48	+79.7	24	0 48.6	+79 46	6.5	0 52.1	+80	
1	5.4	[[strickethrough]]	0	[[strickethrough]]	1	5.5	5.4	5.4
0 35	+80.1	17	0 34.2	+80 6	8.8	0 37.4	+80 21	7.0
						6.9	6.9	6.9
23 56	+79.4	799	23 55.4	+79 30	7.5	23 57.6	+79	
45	5.9	[[strickethrough]]	2	[[strickethrough]]	1	6.0	5.9	5.9
23 35	+79.0	790	23 34.0	+79 1	8.2	23 35.7	+79	
16	6.0	[[strickethrough]]	0	[[strickethrough]]	3	6.3	6.2	6.1
2 39	+79.6	88	2 39.7	+79 39	8.4	2 45.5	+79 51	
7.0	^[[6.8]]		{6.9	^[[6.7]]	{6.9	^[[6.7]]		
2 36	+79.5	86	2 36.1	+79 29	7.0	2 41.9	+79	
41	[[strickethrough]]	5.63	[[strickethrough]]	5.6	[[strickethrough]]	0	[[strickethrough]]	
2 10	+79.9	69	2 10.0	+79 57	8.3	2 15.3		
10	6.3	[[strickethrough]]	3	[[strickethrough]]	1	6.4	6.3	6.3
2 6	+80.2	72	2 5.4	+80 13	8.7	2 10.9	+80 26	6.8
2 4	+80.1	70	2 3.3	+80 3	7.2	2 8.6	+80	
16	5.7	[[strickethrough]]	4	[[strickethrough]]	0	5.7	5.6	5.6
1 53	+80.6	64	1 51.8	+80 36	6.1	1 57.1	+80 49	[[strickethrough]]
79	[[strickethrough]]	4.8	0	4.8	4.7	4.7		
1 48	80.3	61	1 46.9	+80 17	8.6	1 51.9	+80	
30	6.	[[strickethrough]]	30	[[strickethrough]]	4	2	6.6	6.5
1 39	+80.2	58	1 39.7	+80 11	6.8	1 44.5	+80	
25	6.3	[[strickethrough]]	0	[[strickethrough]]				
1 36	+80.6	57	1 34.9	+80 39	7.5	1 39.7	+80	
53	5.7	[[strickethrough]]	0	[[strickethrough]]	0	5.7	5.6	5.6
1 28	+80.4	52	1 27.9	+80 27	9.1	1 31.0	+80 41	
7.5	^[[7.2]]		{7.4	^[[7.1]]	{7.4	^[[7.1]]		
1 26	+80.6	50	1 25.0	+80 41	7.4	1 29.6	+80	
55	5.4	[[strickethrough]]	4	[[strickethrough]]				

|1 11 +80.6|38|1 10.5|+80 36|8.4|1 13.1 +80 50|
|7.1^[[6.8]]|{7.0^[[6.7]]|7.0^[[6.7]]|

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

180

April 21, 1889.

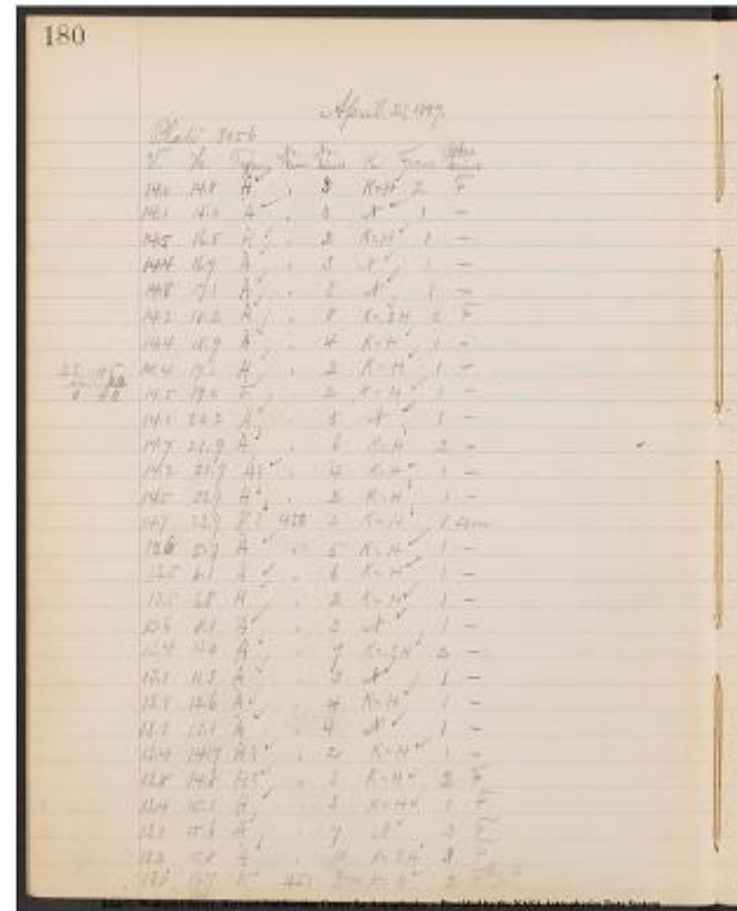
Plate 3056.

[8 columned table]

[V|H|Type|No. Rem.|No. Lines|K|Focus|Other Lines.]

[V H Type No. Rem. No. Lines K Focus Other Lines.]							
14.0	14.8	H	-	3	K=H	2	F
14.1	15.0	A	-	3	N	1	-
14.5	16.5	H	-	2	K=H	1	-
14.4	16.9	A	-	3	N	1	-
14.8	17.1	A	-	3	N	1	-
14.2	18.2	A	-	8	K=2H	2	F
14.4	18.9	A	-	4	K=H	1	-
14.4	19.1	H	-	2	K=H	1	-
14.5	19.0	E	-	2	K=H	1	-
14.1	20.2	A	-	5	N	1	-
14.7	21.9	A	-	6	K=H	2	-
14.2	22.9	H?	-	4	K=H	1	-
14.7	23.9	F?	450	2	K=H	1	seen
13.6	5.7	A	-	5	K=H	1	-
13.5	6.1	A	-	6	K=H	1	-
13.5	6.8	H	-	2	K=H	1	-
13.6	8.1	A	-	3	N	1	-
13.4	11.0	A	-	7	K=.3H	2	-
13.1	11.3	A	-	3	N	1	-
13.1	12.6	A	-	4	K=H	1	-
13.3	13.1	A	-	4	N	1	-
13.4	14.7	H?	-	2	K=H	1	-
13.8	14.8	H?	-	3	K=H	2	F
13.4	15.1	H	-	3	K=H	1	F
13.1	15.6	A	-	7	N	2	F
13.2	15.8	A	-	10	K=.2H	3	F
13.0	16.7	K	451	3	K=H	2	F
14.4	14.3	H?	-	2	K=H	1	F bright seen

John G. Wolbach Library, Harvard Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]

- | No. | R.A. | Dec. | Magn. | R.A.^[[1900]] | Dec. | D.C. Mean | Diff. | Br.
| - | -

No.	R.A.	Dec.	Magn.	R.A.^[[1900]]	Dec.	D.C. Mean	Diff.	Br.
15	+80.7	34	1 4.4	+80 48	8.0	1 8.5	+81 2	6.5^[[6.3]]
6.4^[[6.2]]	6.4^[[6.2]]							
12	+80.6	32	1 2.0	+80 43	9.3	1 6.0	+80 57	7.0 6.9 6.9
0 45	+80.5	24	0 43.5	+80 30	9.1	0 47.0	+80 45	7.5^[[7.1]]
7.4^[[7.0]]	7.4^[[7.0]]							
0 38	+80.6	20	0 38.2	+80 33	9.1	0 41.6	+80 48	6.7 6.6
6.6								
0 36	+80.4	19	0 36.2	+80 20	8.4	0 39.5	+80 35	6.7 6.6
6.6								
0 24	+80.5	10	0 21.2	+80 34	7.9	0 24.1	+80 49	
6.0	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
0 15	+80.4	8	0 14.4	+80 23	9.0	0 17.1	+80 38	6.8 6.7 6.7
0 12	+80.4	6	0 11.1	+80 24	9.1	0 13.7	+80 39	7.6^[[7.2]]
7.5^[[7.1]]	7.5^[[7.1]]							
0 14	+80.3	7	0 13.4	+80 19	9.2	0 16.1	+80 34	7.0 6.9 6.9
23 58	+80.3	793	23 58.2	+80 17	8.8	0 0.5	+80 32	6.7 6.6
6.6								
23 42	+79.8	793	23 41.8	+79 45	8.3	23 43.7	[[6.2]]	+79 45
45	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	0
6.2	6.1	6.1						
23 31	+79.8	785	23 30.0	+79 47	8.8	23 31.6	+80 2	6.7
6.6	6.6							
23 32	+79.6	786	23 30.5	+79 39	8.2	23 32.1	+79 54	
7.3^[[6.8]]	7.2^[[6.7]]	7.2^[[6.7]]						
23 22	+79.4	781	23 21.7	+79 22	8.8	23 23.1	+79 37	6.8
6.7	6.7							
2 51	+79.7	91	2 49.5	+79 44	8.3	2 55.7	+79 55	
6	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
2 47	+79.8	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
2 53.1	+80 1	6	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
2 38	+80.1	90	2 38.9	+80 4	8.3	[[6.2]]	[[6.2]]	
53.1	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
1	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
2 27	+80.2	85	2 25.5	+80 14	9.0	2 31.2	+80 26	6.9 6.8
6.8								
1 54	+80.8	65	1 52.6	+80 46	6.7	1 57.9	+80 59	
[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
5.4	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
1 50	+80.9	63	1 49.0	+80 56	8.9	1 54.2	+81 9	6.9 6.8 6.8
1 34	+81.1	57	1 33.5	+81 5	8.6	1 38.4	+81 19	6.8 6.7 6.7
1 27	+80.9	51	1 26.1	+80 57	9.1	1 30.8	+81 11	6.9 6.8
6.8								
1 8	+80.9	37	1 6.2	+80 57	9.1	1 10.4	+81 11	6.9^[[6.8]]
6.8^[[6.7]]	6.8^[[6.7]]							
1 5	+60.7	34	1 4.4	+80 48	8.0	1 8.5	+81 2	6.5^[[6.3]]
6.4^[[6.2]]	6.4^[[6.2]]							
0 59	+81.0	34	0 59.4	+81 0	8.7	1 3.4	+81 15	7.3^[[6.8]]
7.2^[[6.7]]	7.2^[[6.7]]							
0 54	+81.2	30	0 52.5	+81 11	8.3	0 56.3	+81 26	
5	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
0 51	+81.1	25	0 49.6	+81 6	7.5	0 53.3	+81 21	
5.3	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
0 38	+81.2	9	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
0 42.0	+81 25							

181

No.	R.A.	Dec.	Magn.	R.A.^[[1900]]	Dec.	D.C. Mean	Diff.	Br.
15	+80.7	34	1 4.4	+80 48	8.0	1 8.5	+81 2	6.5^[[6.3]]
6.4^[[6.2]]	6.4^[[6.2]]							
12	+80.6	32	1 2.0	+80 43	9.3	1 6.0	+80 57	7.0 6.9 6.9
0 45	+80.5	24	0 43.5	+80 30	9.1	0 47.0	+80 45	7.5^[[7.1]]
7.4^[[7.0]]	7.4^[[7.0]]							
0 38	+80.6	20	0 38.2	+80 33	9.1	0 41.6	+80 48	6.7 6.6
6.6								
0 36	+80.4	19	0 36.2	+80 20	8.4	0 39.5	+80 35	6.7 6.6
6.6								
0 24	+80.5	10	0 21.2	+80 34	7.9	0 24.1	+80 49	
6.0	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
0 15	+80.4	8	0 14.4	+80 23	9.0	0 17.1	+80 38	6.8 6.7 6.7
0 12	+80.4	6	0 11.1	+80 24	9.1	0 13.7	+80 39	7.6^[[7.2]]
7.5^[[7.1]]	7.5^[[7.1]]							
0 14	+80.3	7	0 13.4	+80 19	9.2	0 16.1	+80 34	7.0 6.9 6.9
23 58	+80.3	793	23 58.2	+80 17	8.8	0 0.5	+80 32	6.7 6.6
6.6								
23 42	+79.8	793	23 41.8	+79 45	8.3	23 43.7	[[6.2]]	+79 45
45	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	0
6.2	6.1	6.1						
23 31	+79.8	785	23 30.0	+79 47	8.8	23 31.6	+80 2	6.7
6.6	6.6							
23 32	+79.6	786	23 30.5	+79 39	8.2	23 32.1	+79 54	
7.3^[[6.8]]	7.2^[[6.7]]	7.2^[[6.7]]						
23 22	+79.4	781	23 21.7	+79 22	8.8	23 23.1	+79 37	6.8
6.7	6.7							
2 51	+79.7	91	2 49.5	+79 44	8.3	2 55.7	+79 55	
6	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
2 47	+79.8	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
2 53.1	+80 1	6	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
2 38	+80.1	90	2 38.9	+80 4	8.3	[[6.2]]	[[6.2]]	
53.1	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
1	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
2 27	+80.2	85	2 25.5	+80 14	9.0	2 31.2	+80 26	6.9 6.8
6.8								
1 54	+80.8	65	1 52.6	+80 46	6.7	1 57.9	+80 59	
[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
5.4	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
1 50	+80.9	63	1 49.0	+80 56	8.9	1 54.2	+81 9	6.9 6.8 6.8
1 34	+81.1	57	1 33.5	+81 5	8.6	1 38.4	+81 19	6.8 6.7 6.7
1 27	+80.9	51	1 26.1	+80 57	9.1	1 30.8	+81 11	6.9 6.8
6.8								
1 8	+80.9	37	1 6.2	+80 57	9.1	1 10.4	+81 11	6.9^[[6.8]]
6.8^[[6.7]]	6.8^[[6.7]]							
1 5	+60.7	34	1 4.4	+80 48	8.0	1 8.5	+81 2	6.5^[[6.3]]
6.4^[[6.2]]	6.4^[[6.2]]							
0 59	+81.0	34	0 59.4	+81 0	8.7	1 3.4	+81 15	7.3^[[6.8]]
7.2^[[6.7]]	7.2^[[6.7]]							
0 54	+81.2	30	0 52.5	+81 11	8.3	0 56.3	+81 26	
5	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
0 51	+81.1	25	0 49.6	+81 6	7.5	0 53.3	+81 21	
5.3	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
0 38	+81.2	9	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	[[6.2]]	
0 42.0	+81 25							

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
· Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

182

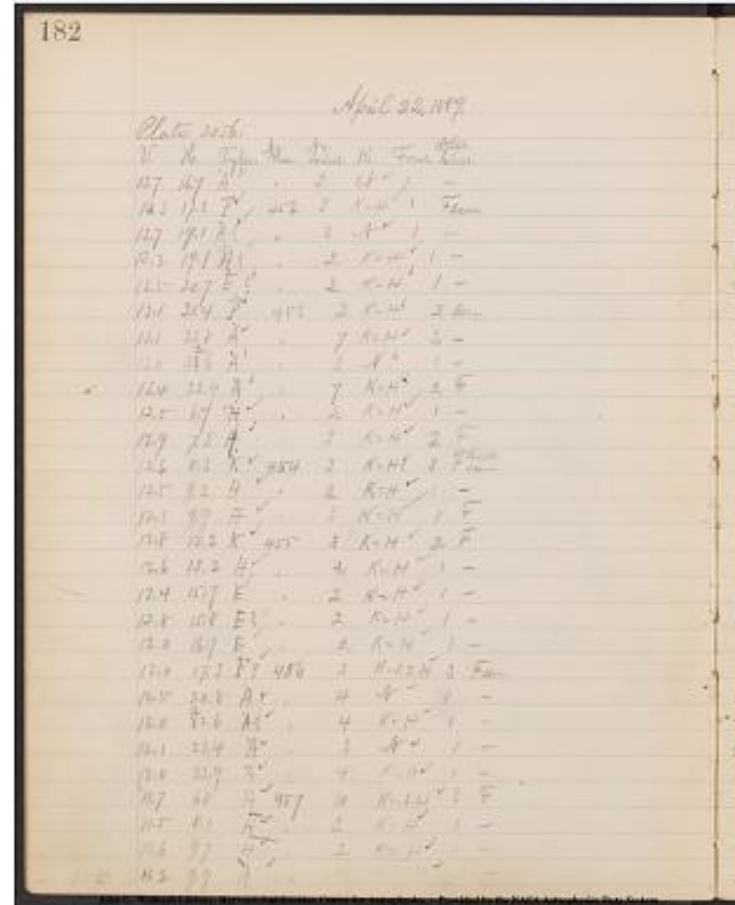
April 22, 1889

Plate 3056

V. | H. | Type. | No. Rem. | No. Lines | K. | Focus | Other Lines

V.	H.	Type.	No. Rem.	No. Lines	K.	Focus	Other Lines
13.7	16.7	A	3	N	1	-	
13.3	17.2	F	452	3	K=H	1	F seen
13.7	19.1	A?	3	N	1	-	
13.2	19.1	H?	2	K=H	1	-	
13.5	20.7	E?	2	K=H	1	-	
13.1	21.4	F	453	2	K=H	2	Seen
13.1	21.8	A	7	K=H	2	-	
13.0	21.8	A	1	K=H	2	-	
13.4	22.9	A	7	K=H	2	F	
12.5	6.7	H	2	K=H	1	-	
12.9	7.3	H	3	K=H	2	F	
12.6	8.3	K	454	3	K=H?	3	F high seen
12.5	9.2	H	2	K=H	1	-	
12.1	9.9	H	3	K=H	1	F	
12.8	12.2	K	455	3	K=H	2	F
12.6	13.2	H	2	K=H	1	-	
12.4	15.7	E	2	K=H	1	-	
12.8	15.8	E?	5	K=H	1	-	
12.0	16.7	E	2	K=H	1	-	
12.0	17.3	F?	456	3	K=1.2H	3	F seen
12.5	20.8	A	4	N	1	-	
12.0	20.8	A	4	N	1	-	
12.1	23.4	A	3	N	1	-	
12.0	23.9	A	4	K=H	1	-	
11.7	6.8	A	457	10	K=.2H	3	F
11.5	8.1	H	2	K=H	1	-	
11.6	9.7	H	2	K=H	1	-	
11.2	9.9	A	4	K=H	1	-	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[12 columned table]]
 - | No. | R.A. | Dec. | Magn. | R.A.^[[1900]] | Dec. | D.C. Mean | Diff. | Br.
 | - | -
 --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
 0 39 +80.7 | 21 | 0 39.1 | +80 49 | 8.9 | 0 42.5 | +81 4 | - | - | 6.8 | 6.7 |
 6.7
 0 32 +80.9 | 16 | 0 31.8 | +80 60 | 8.9 | 0 35.1 | +81 15 | - | - | 6.8 | 6.7 |
 6.7
 0 11 +80.6 | 4 | 0 10.5 | +80 39 | 9.0 | 0 13.1 | +80 54 | - | - | 7.2 | 7.1 |
 7.1
 0 9 +80.8 | 3 | 0 8.2 | +80 51 | 8.8 | 0 10.8 | +81 6 | - | - | 7.3^[[7.1]] |
 7.2^[[7.0]] | 7.2^[[7.0]]
 23 52 +80.5 | 791 | 23 51.0 | +80 32 | 8.4 | 23 53.1 | +80 47 | - | - | 6.9 |
 6.8 | 6.8
 23 41 +80.5 | 784 | 23 40.6 | +80 34 | 8.0 | 23 42.4 | +80 49 |
 [[/strikethrough]]6.05[[/strikethrough]]^[[
 [[/strikethrough]]5.98[[/strikethrough]]^[[6.0]] | 2 | 6.2 | 6.1 | 6.1
 23 37 +80.5 | 780 | 23 37.1 | +80 30 | 7.8 | 23 38.8 | +80 45 |
 [[/strikethrough]]5.90[[/strikethrough]]^[[
 [[/strikethrough]]5.86[[/strikethrough]]^[[9]] | 1 | 6.0 | 5.9 | 5.9
 23 29 +80.3 | [[/strikethrough]]784[[/strikethrough]]^[[772]] |
 [[/strikethrough]]23 279[[/strikethrough]]^[[23 273]] | [[/strikethrough]]+80
 17[[/strikethrough]]^[[+80 23]] |
 [[/strikethrough]]8.5[[/strikethrough]]^[[9.5]] | [[/strikethrough]]23
 294[[/strikethrough]]^[[23 287]] | [[/strikethrough]]+80
 32[[/strikethrough]]^[[+80 38]] | - | - | 7.2 | 7.1 | 7.1
 23 27 +80.2 | 770 | 23 25.8 | +80 12 | 8.2 | 23 27.2 | +80 27 |
 6.0[[/strikethrough]]0[[/strikethrough]] | 3 | 6.3 | 6.2 | 6.2
 2 45 +80.5 | 96 | 2 44.7 | +80 27 | 8.8 | 2 50.9 | +80 38 | - | - | 7.5^[[7.1]] |
 7.4^[[7.0]] | 7.4^[[7.0]]
 2 37 +80.5 | 89 | 2 37.8 | +80 28 | 8.0 | 2 44.0 | +80 40 |
 6.6[[/strikethrough]]15[[/strikethrough]]2 | 2 | 6.7^[[6.4]] | 6.6^[[6.3]] |
 6.6^[[6.3]]
 2 28 +80.8 | 86 | 2 27.2 | +80 50 | 5.9 | 2 33.3 | +81 2 |
 5.7^[[5.2]]
 2 17 +80.9 | 80 | 2 17.2 | +80 58 | 8.4 | 2 23.1 | +81 10 | - | - | 7.4^[[7.0]] |
 7.3^[[6.9]] | 7.3^[[6.9]]
 2 10 +81.3 | 78 | 2 9.4 | +81 16 | 9.0 | 2 15.3 | +81 29 | - | - | 7.2^[[7.0]] |
 7.1^[[6.9]] | 7.1^[[6.9]]
 1 38 +81.2 | 61 | 1 38.4 | +81 14 | 6.8 | 1 43.5 | +81 28 |
 6.8^[[6.2]]
 1 26 +81.3 | 48^[[47]] | 1 25.4^[[1 25.2]] | +81 20^[[+81 20]] | 9.3^[[8.8]] |
 1 30.2^[[30.0]] | +81 34^[[+81 34]] | - | - | 7.4^[[7.2]] | 7.3^[[7.1]] |
 7.3^[[7.1]]
 0 53 +81.5 | 29 | 0 51.6 | +81 28 | 8.6 | 0 55.5 | +81 43 | - | - | 6.6 | 6.5 |
 6.5
 0 52 +81.3 | 27 | 0 50.9 | +81 19 | 8.6 | 0 54.7 | +81 34 | - | - | 6.6 | 6.5 |
 6.5
 0 37 +81.6 | 16 | 0 36.7 | +81 38 | 9.2 | 0 40.2 | +81 53 | - | - | 7.0 | 6.9 |
 6.9
 0 29 +81.7 | 13 | 0 29.0 | +81 42 | 6.5 | 0 32.2 | +81 56 |
 5.3[[/strikethrough]]4[[/strikethrough]] | 0 | 5.3 | 5.2 | 5.2
 23 46 +81.0 | 838 | 23 45.4 | +81 2 | 8.0 | 23 47.3 | +81 17 | - | - | 6.5 |
 6.4 | 6.4
 23 22 +80.8 | 766 | 23 22.2 | +80 53 | 8.7 | 23 23.4 | +81 8 | - | - | 6.9 |
 6.8 | 6.8
 23 14 +80.6 | 758 | 23 14.0 | +80 38 | 8.9 | 23 15.1 | +80 53 | - | - | 6.9 |

183

On R.A. Dec. Magn.	R.A. Dec. Magn.	On R.A. Dec. Magn.
0 39 +80.7 21 0 39.1 +80 49 8.9	0 42.5 +81 4 - - 6.8	6.7
0 32 +80.9 16 0 31.8 +80 60 8.9	0 35.1 +81 15 - - 6.8	6.7
0 11 +80.6 4 0 10.5 +80 39 9.0	0 13.1 +80 54 - - 7.2	7.1
0 9 +80.8 3 0 8.2 +80 51 8.8	0 10.8 +81 6 - - 7.3	7.1
23 52 +80.5 791 23 51.0 +80 32 8.4	23 53.1 +80 47 - - 6.9	6.8
23 41 +80.5 784 23 40.6 +80 34 8.0	23 42.4 +80 49	
[[/strikethrough]]6.05[[/strikethrough]]^[[
[[/strikethrough]]5.98[[/strikethrough]]^[[6.0]] 2 6.2 6.1 6.1		
23 37 +80.5 780 23 37.1 +80 30 7.8	23 38.8 +80 45	
[[/strikethrough]]5.90[[/strikethrough]]^[[
[[/strikethrough]]5.86[[/strikethrough]]^[[9]] 1 6.0 5.9 5.9		
23 29 +80.3 [[/strikethrough]]784[[/strikethrough]]^[[772]]		
[[/strikethrough]]23 279[[/strikethrough]]^[[23 273]] [[/strikethrough]]+80		
17[[/strikethrough]]^[[+80 23]]		
[[/strikethrough]]8.5[[/strikethrough]]^[[9.5]] [[/strikethrough]]23		
294[[/strikethrough]]^[[23 287]] [[/strikethrough]]+80		
32[[/strikethrough]]^[[+80 38]] - - 7.2 7.1 7.1		
23 27 +80.2 770 23 25.8 +80 12 8.2	23 27.2 +80 27	
6.0[[/strikethrough]]0[[/strikethrough]] 3 6.3 6.2 6.2		
2 45 +80.5 96 2 44.7 +80 27 8.8	2 50.9 +80 38 - - 7.5	7.1
7.4^[[7.0]] 7.4^[[7.0]]		
2 37 +80.5 89 2 37.8 +80 28 8.0	2 44.0 +80 40	
6.6[[/strikethrough]]15[[/strikethrough]]2 2 6.7	6.4 6.6	6.3
6.6^[[6.3]]		
2 28 +80.8 86 2 27.2 +80 50 5.9	2 33.3 +81 2	
5.7^[[5.2]]		
2 17 +80.9 80 2 17.2 +80 58 8.4	2 23.1 +81 10 - - 7.4	7.0
7.3^[[6.9]] 7.3^[[6.9]]		
2 10 +81.3 78 2 9.4 +81 16 9.0	2 15.3 +81 29 - - 7.2	7.0
7.1^[[6.9]] 7.1^[[6.9]]		
1 38 +81.2 61 1 38.4 +81 14 6.8	1 43.5 +81 28	
6.8^[[6.2]]		
1 26 +81.3 48^[[47]] 1 25.4^[[1 25.2]] +81 20^[[+81 20]] 9.3^[[8.8]]		
1 30.2^[[30.0]] +81 34^[[+81 34]] - - 7.4^[[7.2]] 7.3^[[7.1]]		
7.3^[[7.1]]		
0 53 +81.5 29 0 51.6 +81 28 8.6	0 55.5 +81 43 - - 6.6 6.5	
6.5		
0 52 +81.3 27 0 50.9 +81 19 8.6	0 54.7 +81 34 - - 6.6 6.5	
6.5		
0 37 +81.6 16 0 36.7 +81 38 9.2	0 40.2 +81 53 - - 7.0 6.9	
6.9		
0 29 +81.7 13 0 29.0 +81 42 6.5	0 32.2 +81 56	
5.3[[/strikethrough]]4[[/strikethrough]] 0 5.3 5.2 5.2		
23 46 +81.0 838 23 45.4 +81 2 8.0	23 47.3 +81 17 - - 6.5	
6.4 6.4		
23 22 +80.8 766 23 22.2 +80 53 8.7	23 23.4 +81 8 - - 6.9	
6.8 6.8		
23 14 +80.6 758 23 14.0 +80 38 8.9	23 15.1 +80 53 - - 6.9	

6.8 | 6.8
 23.9 +80.5 | 754 | 23.8.1 | +80.34 | 9.0 | 23.9.0 | +80.49 | - | - | 6.8 | 6.7 |
 6.7
 2.51 +80.8 | 97 | 2.49.6 | +80.54 | 5.5 | 2.56.2 | +81.5 | -
 4.8~~2~~ | 0 | 4.8 | 4.7 | 4.7
 2.36 +81.2 | 96 | 2.34.7 | +81.14 | 8.5 | ~~2.39.7~~ | 42.0
~~26~~^{2.41.2} | ~~81~~^{+81.26} | - | - | 7.2^{6.9} | 7.1^{6.8} | 7.1^{6.8}
 2.16 +81.4 | 81 | 2.14.7 | +81.27 | 9.0 | 2.20.8 | +81.40 | - | - | 7.5^{7.2} |
 7.4^{7.1} | 7.4^{7.1}
 2.14 +81.6 | 80 | 2.13.1 | +81.41 | 9.0 | 2.19.2 | +81.54 | - | - | 7.1 | 7.0 |
 7.0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

184

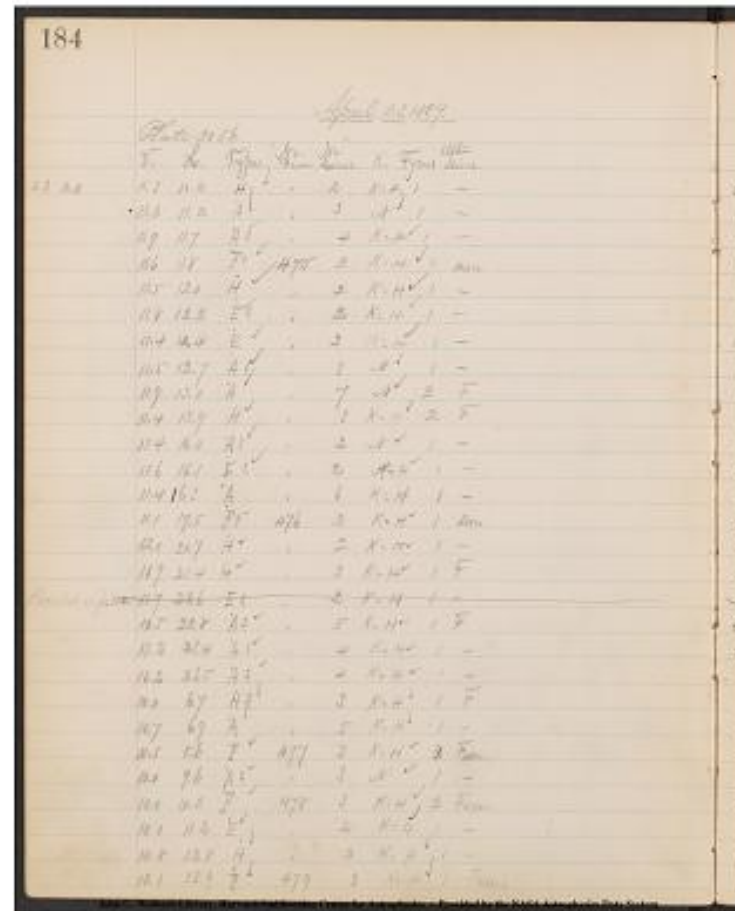
April 23, 1889

Plate 3056

V. | H. | Type. | No. Rem. | No. Lines | K. | Focus | Other Lines

11.2	11.2	A	3	N	1	-
11.9	11.7	A?	4	K=H	1	-
11.6	11.8	F?	475	2	K=H	1 Seen
11.5	12.0	H	2	K=H	1	-
11.8	12.2	E?	2	K=H	1	-
11.4	12.4	E	2	K=H	1	-
11.5	12.7	A?	3	N	1	-
11.9	13.0	A	7	N	2	F
11.4	13.9	H	3	K=H	2	F
11.4	16.0	A?	2	N	1	-
11.6	16.1	E?	2	K=H	1	-
11.4	16.3	A	6	K=H	1	-
11.1	19.5	F?	476	2	K=H	1 Seen
12.0	20.7	H	2	K=H	1	-
11.9	21.4	H	3	K=H	1	F
[[margin]] Recorded in p. 182 [[/margin]] [[/strikethrough]] 11.9 22.6 E?						
3 K=H 1 - [[/strikethrough]]						
11.5	22.8	A?	5	K=H	1	F
11.2	23.4	A?	4	K=H	1	-
11.2	23.5	A?	4	K=H	1	-
10.0	6.7	H?	3	K=H	1	F
10.7	6.9	A	5	K=H	1	-
10.5	8.6	F	477	3	K=H	2 F seen
10.0	9.6	A?	3	N	1	-
10.0	10.8	F	478	3	K=H	2 F seen
10.0	11.2	E	2	K=H	1	-
10.8	12.8	H	2	K=H	1	F
10.1	13.9	E	479	3	K=H	1 F seen

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]

- | No. | R.A. | Dec. | Magn. | R.A.^[[1900]] | Dec. | D.C. Mean | Diff. | Br.
| - | -

No.	R.A.	Dec.	Magn.	R.A. ^{[[1900]]}	Dec.	D.C. Mean	Diff.	Br.
29	+81.7	77	2 8.8	+81 43	8.8	2 14.9	+81 56	7.4 ^{[[7.0]]}
7.3 ^{[[6.9]]}	7.3 ^{[[6.9]]}							
1 57	+81.8	72	1 56.4	+81 50	9.4	2 2.2	+82 3	7.3 7.2 7.2
1 49	+81.6	69	1 47.5	+81 37	9.2	1 52.8	+81 50	6.9 6.8
6.8								
1 46	+81.7	68	1 46.4	+81 46	9.0	1 51.9	+81 59	6.8 6.7
6.7								
1 45	+81.8	67	1 44.9	+81 51	8.4	2 50.4	+82 4	7.2 ^{[[6.8]]}
7.1 ^{[[6.7]]}	7.1 ^{[[6.7]]}							
1 41	+81.7	63	1 40.8	+81 44	9.3	1 46.1	+81 58	6.9 6.8
6.8								
1 39	+81.9	62	1 38.6	+81 55	9.3	2 43.9	+82 9	6.8 6.7 6.7
1 35	+81.8	58	1 34.4	+81 51	9.2	1 39.5 ^{[[6]]}	+82 5	7.0 6.9
6.9								
1 30	+81.7	51	1 28.9	+81 45	8.7	1 34.0	+81 59	
6.8 ^{[[6.4]]}	15 ^{[[6.3]]}	2	1 6.3	6.2	6.2			
1 18	+82.0	40 ^{[[R 38]]}	1 ^{[[1]]}	18.3 ^{[[17.98]]}	+82 ^{[[+82]]}	2 ^{[[6]]}		
8.6 ^{[[9.1]]}	1 ^{[[1]]}	23.1 ^{[[22.7]]}	+82 ^{[[+82]]}	16 ^{[[20]]}		6.9 ^{[[6.5]]}		
6.8 ^{[[6.4]]}	6.8 ^{[[6.4]]}							
0 47	+82.0	24	0 46.4	+82 0	9.2	0 50.2	+82 15	7.2 7.1 7.1
0 45	+81.8	23	0 44.8	+81 54	8.9	0 48.5	+82 9	6.8 6.7 6.7
[[256+80.7]]	[[256+80.7]]							
[[100+80.7]]	[[100+80.7]]							
55.2 ^{[[40.6]]}	55.2 ^{[[40.6]]}							
47 ^{[[81.60]]}	47 ^{[[81.60]]}							
[[8.8]]	[[8.8]]							
56.2 ^{[[318]]}	56.2 ^{[[318]]}							
[[0.44.3]]	[[0.44.3]]							
5 ^{[[80.49]]}	5 ^{[[80.49]]}							
6.6 6.5 6.5								
23 57	+81.8	841	23 55.9	+81 51	9.2	23 58.1	+82 6	6.9
6.8 6.8								
23 45	+81.3	837	23 43.8	+81 19	9.0	23 45.6	+81 34	
7.3 ^{[[6.9]]}	7.2 ^{[[6.8]]}							
23 36	+81.2	827	23 35.0	+81 11	8.3	23 36.6	+81 26	
7.3 ^{[[6.9]]}	7.2 ^{[[6.8]]}							
[[23 22+80.8]]	[[23 22+80.8]]							
[[6.8]]	[[6.8]]							
23 16	+81.1	818	23 16.9	+81 3	8.5	23 18.0	+81 18	
6.0 ^{[[5]]}	6.0 ^{[[5]]}							
23 10	+80.9	755	23 9.3	+80 59	8.5	23 10.2	+81 14	6.7
6.6 6.6								
23 9	+81.6	812	23 8.2	+81 2	8.3	23 9.0	+81 17	6.5 6.4
6.4								
2 59	+81.6	107	2 59.3	+81 36	7.4	3 6.5	+81 48	
[[5.95]]	[[5.95]]							
6.9 ^{[[6.4]]}	6.9 ^{[[6.4]]}							
2 55	+81.3	100	2 53.9	+81 20	9.1			
3 1.2	+81 31		6.9 6.8 6.8					
2 34	+81.7	95	2 32.9	+81 47	8.6	2 39.6	+81 59	
6.8 ^{[[15]]}	6.8 ^{[[15]]}							
2 23	+82.2	61	2 23.2	+82 2				
11 ^{[[82.12]]}	11 ^{[[82.12]]}							
[[9.5]]	[[9.5]]							

6.8 | 6.8
 2 15 +82.4 | 55 | 2 13.6 | +82 21 | 8.7 | 2 20.0 | +82 34 |
 6.0~~5~~ | 3 | 6.3 | 6.2 | 6.2
 2 0 +82.5 | 52 | 2 0.6 | +82 28 | 9.2 | 2 6.8 | +82 41 | | | 7.1 | 7.0 | 7.0
 1 36 +82.3 | 43 | 1 34.7 | +82 18 | 8.8 | 1
~~36.2~~^{39.7} | +82 32 | | | 7.0^{6.7} |
 6.9^{6.6} | 6.9^{6.6}
 1 18 +82.6 | 39 | 1 18.0 | +82 36 | 8.8 | 1 23.0 | +82 50 | | | 6.4 | 6.3 |
 6.3

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

186

April 23, 1889.

Plate 3056

[[8 columned table]]

V. | H. | Type | No. Rem. | K. | Focus | Other Lines.

10.5	14.6	A	3	N	1	—
10.0	15.2	A	6	n	2	—
10.8	16.0	E?	3	K=H	2	F
10.7	16.3	E	2	K=H	1	—
10.6	16.7	A?	3	N	1	—
10.6	17.3	H	2	K=H	1	—
10.0	18.3	H	2	K=H	1	—
10.0	18.4	E?	2	K=H	2	—
10.2	18.7	H	2	K=H	1	—
10.5	19.4	A	10	K=.2H	3	F
10.9 19.5 A 5 N 1 -						
10.0	19.6	A	9	N	3	F
10.1	20.2	A	5	K=H	2	—
10.5	20.3	H?	3	K=H	2	F
10.4	20.5	H	3	K=H	2	F
10.2	20.7	[[symbol]]	480	2	K=H	1 seen
10.6	22.5	[[symbol]]	481	3	F	seen
10.3	22.8	H?	1	N	2	F
9.2 1 8.2 H 3 K=H 2 F						
9.0	9.0	E?	2	K=H	1	—
9.3	10.4	A	3	N	1	—
9.0	11.3	A	7	K=.2H	2	F
9.4	11.7	H	3	K=1.2H	2	F
9.2	12.7	A	5	K=.8H	1	—
9.0	12.8	A	4	K=H	1	—
9.5	15.9	A	4	K=H	1	—
9.5	16.0	A	5	K=H	1	—
9.6	16.1	A	11	K=.2H	4	F

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]

- | No. | R.A. | Dec. | Magn. | R.A.^[[1900]] | Dec. | D.C. Mean | Diff. | Br.
| - | -

--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
 18 +82.5 | 32 | 1 7.4 | +82 26 | 9.3 | ~~[[strikethrough]]~~ | - | - | 7.1 |
 12.1~~[[/strikethrough]]~~ | ~~[[strikethrough]]~~ +82 40~~[[/strikethrough]]~~ | - | - | 7.1 |
 7.0 | 7.0
 0 58 +82.6 | 30 | 0 56.9 | +82 41 | 9.0 | 1 1.2 | +82 56 |
 6.4~~[[strikethrough]]~~0~~[[/strikethrough]]~~ | 1 | 6.3 | 6.2 | 6.2
 0 47 +82.3 | 23 | 0 46.0 | +82 19 | 8.4 | 0 49.9 | +82 34 | 5.90 | 1 | 5.8 |
 5.7 | 5.7
 0 42 +82.3 | 19 | 0 41.4 | +82 19 | 9.2 | 0 45.1 | +82 34 | - | - | 7.1 | 7.0 |
 7.0
 0 36 +82.3 | 17 | 0 35.8 | +82 20 | 9.1 | 0 39.4 | +82 35 | - | - | 7.0 | 6.9 |
 6.9
 0 25 +82.3 | 15 | 0 25.3 | +82 18 | 9.1 | 0 28.5 | +82 33 | - | - | 7.4^[[7.0]] |
 7.3^[[6.9]] | 7.3^[[6.9]]
 0 11 +82.5 | 5 | 0 9.4 | +82 34 | 8.6 | 0 12.1 | +82 49 |
 6.2~~[[strikethrough]]~~0~~[[/strikethrough]]~~ | 7 | 7.4^[[6.9]] | 7.3^[[6.8]] |
 7.3^[[6.8]]
 0 9 82.5^[[R]] | ~~[[strikethrough]]~~5~~[[/strikethrough]]~~^[[4^[[3]]]] |
~~[[strikethrough]]~~0 9.4~~[[/strikethrough]]~~^[[0 7.4^[[0 7.1]]]] |
~~[[strikethrough]]~~+82 34~~[[/strikethrough]]~~^[[+82 34^[[+82 35]]]] |
~~[[strikethrough]]~~8.6~~[[/strikethrough]]~~^[[8.8^[[9.0]]]] | 0 10.0 | +82 49 | - | - |
 6.4 | 6.3 | 6.3
 0 5 +82.4 | 2 | 0 4.0 | +82 23 | 8.9 | 0 6.5 | +82 38 | - | - | 7.6^[[7.2]] |
 7.5^[[7.1]] | 7.5^[[7.1]]
 23 57 +82.2 | 748 | 23 55.4 | +82 10 | 7.0 | 23 57.6 | +82 25 |
~~[[strikethrough]]~~5.56~~[[/strikethrough]]~~^[[
 5.5~~[[strikethrough]]~~2~~[[/strikethrough]]~~]] | 1 | 5.6 | 5.5 | 5.5
 - | - | - | - | - | - | - | - | - | - |
 23 51 +82.4 | 743 | 23 49.7 | +82 23 | 6.0 | 23 51.7 | +82 38 |
 5.0~~[[strikethrough]]~~5~~[[/strikethrough]]~~3 | 0 | 5.0^[[6.9]] | 4.9 | 4.9
 23 44 +82.2 | 736 | 23 42.8 | +82 11 | 8.5 | 23 44.5 | +82 26 |
 6.~~[[strikethrough]]~~35~~[[/strikethrough]]~~4 | 0 | 6.4 | 6.3 | 6.3
 23 43 +81.9 | 832 | 23 42.2 | +81 59 | 8.8 | 23 43.9 |
~~[[strikethrough]]~~+82~~[[/strikethrough]]~~14 | - | - | 6.7^[[6.5]] | 6.6^[[6.4]] |
 6.6^[[6.4]]
 23 39 +82.0 | 735 | 23 39.7 | +82 0 | 8.2 | 23 41.4 | +82 15 |
 6.~~[[strikethrough]]~~35~~[[/strikethrough]]~~4 | 1 | 6.6^[[6.5]] | 6.5^[[6.2]] |
 6.5^[[6.2]]
 23 36 +82.1 | 733 | 23 35.8 | +82 4 | 8.5 | 23 37.3 | +82 19 | - | - |
 7.2^[[6.7]] | 7.1^[[6.6]] | 7.1^[[6.6]]
 23 15 +81.5 | 816 | 23 14.6 | +81 32 | 8.1 | 23 15.5 | +81 47 | - | - |
 6.5^[[6.2]] | 6.4^[[6.1]] | 6.4^[[6.5]]
 23 10 +81.6 | 814 | 23 9.6 | +81 36 | 8.0 | 23 10.4 | +81 51 |
~~[[strikethrough]]~~6.00~~[[/strikethrough]]~~^[[
 5.9~~[[strikethrough]]~~2~~[[/strikethrough]]~~]] | 1 | 6.3^[[6.0]] | 6.2^[[5.9]] |
 6.2^[[5.9]]
 2 48 +82.3 | 76 | 2 46.4~~[[strikethrough]]~~8~~[[/strikethrough]]~~ | +82 20 | 8.0 |
 2 54.2 | +82 31 | 5.9~~[[strikethrough]]~~0~~[[/strikethrough]]~~ | 1 | 6.2^[[5.8]] |
 6.1^[[5.7]] | 6.1^[[5.7]]
 2 36 +82.6 | 70 | 2 36.0 | +82 34 | 9.2 | 2 43.4 | +82 46 | - | - | 6.9 | 6.8 |
 6.5
 2 15 +82.6^[[R]] | 56^[[57]] | 2 13.8^[[2 14.7]] | +82 40^[[45]] | 9.3^[[9.4]] |
 2 20.6 | +82 53 | - | - | 6.9 | 6.8 | 6.8
 2 4 +83.0 | 54 | 2 3.1 | +83 0 | 8.9 | 2 9.6 | +83 13 |
 5.9~~[[strikethrough]]~~0~~[[/strikethrough]]~~ | 3 | 6.2 | 6.1 | 6.1
 1 56 +82.8 | 51 | 1 55.1 | +82 52 | 7.0 | 2 1.4 | +83 6 |

187

No.	R.A.	Dec.	Magn.	R.A.^[[1900]]	Dec.	D.C. Mean	Diff.	Br.
18	+82.5	32	1 7.4	+82 26	9.3	[[strikethrough]]	-	7.1
12.1	[[strikethrough]]	[[strikethrough]]	+82 40	[[strikethrough]]	[[strikethrough]]	[[strikethrough]]	-	7.1
7.0	7.0							
0 58	+82.6	30	0 56.9	+82 41	9.0	1 1.2	+82 56	
6.4	[[strikethrough]]	0	[[strikethrough]]	1	6.3	6.2	6.2	
0 47	+82.3	23	0 46.0	+82 19	8.4	0 49.9	+82 34	5.90 1 5.8
5.7	5.7							
0 42	+82.3	19	0 41.4	+82 19	9.2	0 45.1	+82 34	- - 7.1 7.0
7.0								
0 36	+82.3	17	0 35.8	+82 20	9.1	0 39.4	+82 35	- - 7.0 6.9
6.9								
0 25	+82.3	15	0 25.3	+82 18	9.1	0 28.5	+82 33	- - 7.4^[[7.0]]
7.3^[[6.9]]	7.3^[[6.9]]							
0 11	+82.5	5	0 9.4	+82 34	8.6	0 12.1	+82 49	
6.2	[[strikethrough]]	0	[[strikethrough]]	7	7.4^[[6.9]]	7.3^[[6.8]]		
7.3^[[6.8]]								
0 9	82.5^[[R]]		[[strikethrough]] 5 [[/strikethrough]]		4^[[3]]			
[[strikethrough]] 0 9.4 [[/strikethrough]]					0 7.4^[[0 7.1]]			
[[strikethrough]] +82 34 [[/strikethrough]]					+82 34^[[+82 35]]			
[[strikethrough]] 8.6 [[/strikethrough]]					8.8^[[9.0]]			
0 10.0	+82 49	-	-	-	-	-	-	-
6.4	6.3	6.3						
0 5	+82.4	2	0 4.0	+82 23	8.9	0 6.5	+82 38	- - 7.6^[[7.2]]
7.5^[[7.1]]	7.5^[[7.1]]							
23 57	+82.2	748	23 55.4	+82 10	7.0	23 57.6	+82 25	
[[strikethrough]] 5.56 [[/strikethrough]]								
5.5	[[strikethrough]] 2 [[/strikethrough]]				1	5.6	5.5	5.5
-	-	-	-	-	-	-	-	-
23 51	+82.4	743	23 49.7	+82 23	6.0	23 51.7	+82 38	
5.0	[[strikethrough]] 5 [[/strikethrough]]	3	0	5.0^[[6.9]]	4.9	4.9		
23 44	+82.2	736	23 42.8	+82 11	8.5	23 44.5	+82 26	
6.	[[strikethrough]] 35 [[/strikethrough]]	4	0	6.4	6.3	6.3		
23 43	+81.9	832	23 42.2	+81 59	8.8	23 43.9		
[[strikethrough]] +82 [[/strikethrough]]	14	-	-	-	6.7^[[6.5]]	6.6^[[6.4]]		
6.6^[[6.4]]								
23 39	+82.0	735	23 39.7	+82 0	8.2	23 41.4	+82 15	
6.	[[strikethrough]] 35 [[/strikethrough]]	4	1	6.6^[[6.5]]	6.5^[[6.2]]			
6.5^[[6.2]]								
23 36	+82.1	733	23 35.8	+82 4	8.5	23 37.3	+82 19	- -
7.2^[[6.7]]	7.1^[[6.6]]	7.1^[[6.6]]						
23 15	+81.5	816	23 14.6	+81 32	8.1	23 15.5	+81 47	- -
6.5^[[6.2]]	6.4^[[6.1]]	6.4^[[6.5]]						
23 10	+81.6	814	23 9.6	+81 36	8.0	23 10.4	+81 51	
[[strikethrough]] 6.00 [[/strikethrough]]								
5.9	[[strikethrough]] 2 [[/strikethrough]]				1	6.3^[[6.0]]	6.2^[[5.9]]	
6.2^[[5.9]]								
2 48	+82.3	76	2 46.4	[[strikethrough]] 8 [[/strikethrough]]	+82 20	8.0		
2 54.2	+82 31	5.9	[[strikethrough]] 0 [[/strikethrough]]	1	6.2^[[5.8]]			
6.1^[[5.7]]	6.1^[[5.7]]							
2 36	+82.6	70	2 36.0	+82 34	9.2	2 43.4	+82 46	- - 6.9 6.8
6.5								
2 15	+82.6^[[R]]	56^[[57]]	2 13.8^[[2 14.7]]	+82 40^[[45]]	9.3^[[9.4]]			
2 20.6	+82 53	-	-	6.9	6.8	6.8		
2 4	+83.0	54	2 3.1	+83 0	8.9	2 9.6	+83 13	
5.9	[[strikethrough]] 0 [[/strikethrough]]	3	6.2	6.1	6.1			
1 56	+82.8	51	1 55.1	+82 52	7.0	2 1.4	+83 6	

~~5.~~~~46~~~~5~~ | 0 | 5.8^{[[5.5]]} | 5.7^{[[5.4]]} |
 5.7^{[[5.4]]}
 1 38 +83.0 | 41 | 1 38.4 | +83 0 | 9.0 | 1 44.3 | +83 14 | - | - | 6.7 | 6.6 |
 6.8
 1 37 +83.2 | 40 | 1 37.8 | +83 10 | 9.0 | 1 43.7 | +83 24 | - | - | 6.8 | 6.7 |
 6.7
 0 47 +82.8 | 22 | 0 45.8 | +82 54 | 9.1 | 0 49.8 | +83 9 | - | - | 6.7 | 6.6 |
 6.6
 0 45 +82.9 | 21 | 0 43.9 | +82 55 | 9.1 | 0 47.8 | +83 10 | - | - | 6.7 | 6.6 |
 6.6
 0 43 +82.9 | 20 | 0 41.6 | +82 55 | 6.5 | 0 45.5 | +83 10 |
~~4.~~~~38~~~~4~~ | 1 | 4.5 | 4.4 | 4.4

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[12 columned table]]

- | No. | R.A. | Dec. | Magn. | R.A.^[[1900]] | Dec. | D.C. Mean | Diff. | Br.
| - | -

--- | --- | --- | --- | --- | --- | --- | --- | ---
 0 25 +82.8 | 14 | 0 24.6 | +82 50 | 8.3 | 0 27.9 | +83 5 |
 5.6[[~~23 33~~]] | 4 | 6.0 | 5.9 | 5.9
 23 33 +82.4 | 28 | [[~~23 33~~]] | 23 31.8 | +82 24 | 7.5
 | 23 33.2 | +82 39 | [[~~23 33~~]] | 5.95[[~~6.0~~]] | 3 |
 6.7^[[6.3]] | 6.6^[[6.2]] | 6.6^[[6.2]]
 23 8 +81.8 | 810 | 23 6.8 | +81 48 | 8.1 | 23 7.4 | +82 3 |
 5.9[[~~23 33~~]] | 1 | 6.4^[[6.0]] | 6.3^[[5.9]] |
 6.3^[[5.9]]
 2 54 +82.6 | 78 | 2 52.7 | +82 37 | 9.0 | 3 0.5 | +82 48 | | 6.9 | 6.8 | 6.8
 2 49 +83.0 | 73 | 2 48.6 | +83 0 | 9.2 | 2 56.6 | +83 11 | | 7.4^[[7.0]] |
 7.3^[[6.9]] | 7.3^[[6.9]]
 2 21 +82.9 | 59 | 2 20.8 | +82 59 | 9.0 | 2 28.0 | +83 11 |
 6.1[[~~23 33~~]] | 4 | 6.5 | 6.4 | 6.4
 2 24 +83.2 | 60 | 2 23.6 | +83 15 | 9.0 | 2 31.1 | +83 27 |
 6.1[[~~23 33~~]] | 5 | 6.6 | 6.5 | 6.5
 2 15 +83.2 | 56 | 2 13.3 | +83 11 | 8.0 | 2 20.4 | +83 24 | 5.80 | 1 |
 6.2^[[5.7]] | 6.1^[[5.6]] | 6.1^[[5.5]]
 2 2 +83.4 | 53 | 2 1.7 | +83 23 | 9.1 | 2 8.6 | +83 36 | | 7.1 | 7.0 | 7.1
 1 36 +83.4 | 39 | 1 35.1 | +83 20 | 9.3 | 1 41.0 | +83 34 | | 7.2 | 7.1 |
 7.2
 1 35 +83.6 | 38 | 1 33.2 | +83 36 | 8.7 | 1 39.2 | +83 50 |
 6.4[[~~23 33~~]] | 3 | 6.7 | 6.6 | 6.7
 1 33 +83.7 | 36 | 1 31.2 | +83 39 | 8.9 | 1 37.2 | +83 53 | | 6.9 | 6.8 |
 6.9
 1 19 +83.7 | 32 | 1 18.6 | +83 44 | 8.9 | 1 24.1 | +83 58 | | 7.6^[[7.1]] |
 7.5^[[7.0]] | 7.6^[[7.1]]
 1 6 +83.7 | 29 | 1 6.6 | +83 44 | 9.2 | 1 11.6 | +83 58 | | 7.3^[[6.8]] |
 7.2^[[6.7]] | 7.3^[[6.8]]
 1 5 +83.5 | 27 | 1 4.2 | +83 28 | 9.2 | 1 9.1 | +83 42 | | 6.9 | 6.8 | 6.9
 0 31 +83.5 | 12 | 0 30.2 | +83 35 | 9.2 | 0 33.8 | +83 50 | | 7.0 | 6.9 |
 7.0
 0 6 +83.2 | 3 | 0 4.4 | +83 14 | 9.0 | 0 6.9 | +83 29 | | 6.9^[[6.8]] |
 6.8^[[6.7]] | 6.8^[[6.7]]
 0 2 +83.3 | 1 | 0 1.8 | +83 21 | 8.5 | 0 4.2 | +83 36 | 6.25 | 1 | 6.3 | 6.2 |
 6.3
 23 48 +83.3 | 666 | 23 46.9 | +83 21 | 9.3 | 23 48.7 | +83 36 | | 7.2 |
 7.1 | 7.2
 23 41 +83.3 | 663 | 23 40.8 | +83 15 | 9.1 | 23 42.4 | +83 30 | | 6.6 |
 6.5 | 6.6
 - | 727 | 23 31.7 | +82 57 | 9.2 | 23 32.8 | +83 12 | [[~~23 33~~]] | 23
 32.9 | +83 12[[~~23 33~~]] | 6.9 | 6.8 | 6.8
 [[~~23 33~~]] | 23 34 +82.9 | 730 | 23 33.8 | +82 49 | 9.5 | 23 35.2 | +83
 4[[~~23 33~~]] | | 7.2 | 7.1 | 7.1
 23 24 +82.9 | 720 | 23 23.2 | +82 58 | 9.2 | 23 24.1 | +83 13 | | 6.9 |
 6.8 | 6.8
 23 14 +82.6 | 713^[[7.12]] | 23^[[23]] | 13.0^[[12.8]] | +82^[[+82]] | 39^[[39]] |
 8.7^[[9.0]] | 23^[[23]] | 13.7^[[13.5]] | +82^[[+82]] | 54^[[54]] | | 7.1 | 7.0 |
 7.0
 22 57 +82.3 | 707 | 22 56.4 | +82 17 | 8.5 | 22 56.7 | +82 31 | |
 7.0^[[6.6]] | 6.9^[[6.5]] | 6.9^[[6.5]]
 22 49 +82.4 | 703 | 22 47.9 | +82 23 | 5.0 | 22 47.9 | +82 37 |
 4.9[[~~23 33~~]] | 5.95 [[~~6.0~~]] |
 [[~~23 33~~]] | 12[[~~23 33~~]] | 5.3^[[4.7]] | 5.2^[[4.6]] |
 5.2^[[4.6]]
 3 30 +82.3 | 101 | 3 30.5 | +82 17 | 8.4 | 3 38.8 | +82 26 |

189

~~6.35~~4 | 3 | 6.7 | 6.6 | 6.6
 3 16 +82.8 | 90 | 3 14.9 | +82 52 | 8.2 | 3 23.4 | +83 2 |
~~6.0~~5.97~~5.97~~ | 2 | 6.2 | 6.1 | 6.1
 3 13 +82.8 | 88 | 3 12.0 | +82 54 | 8.8 | 3 20.4 | +83 4 | | | 6.9^{6.7} |
 6.8^{6.6} | 6.8^{6.6}

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

April 23, 1889

Plate 3056

[[8 columned table]]

[V|H|Type|No. Rem.|No. Lines|K|Focus|Other Lines.]

V	H	Type	No.	Rem.	No. Lines	K	Focus	Other Lines
7.7	18.1	H?	2		K=H	2		
7.6	9.2	A?	3		N	1		
7.5	10.9	A?	4		K=H	1		
7.4	11.9	A	4		K=H	1		
7.3	12.1	A	2		N	1		
7.9	12.6	E?	2		K=H	1		
7.3	13.0	I	489	3	K=H	2	F seen	
7.5	14.6	A	4		N	1		
7.9	15.6	A	10		K=8H	3	F	
7.8	16.2	E?	3		K=H	1	F	
7.5	16.7	E?	2		K=H	1		
7.5	16.8	E	3		K=H	1		
7.6	16.9	E	490	3	K=H	3	F seen	
7.4	18.7	E	2		K=H	1		
7.9	20.0	E?	491	3	K=H	1	F seen	
7.1	20.9	A	8		N	3	F	
7.4	22.7	H	3		K=H	3	F	
7.9	23.4	A	5		N	3		
6.2	6.5	A	3		N	1		
6.5	6.7	A	4		K=H	1		
6.7	6.9	A	8		N	3	F	
6.8	8.6	F	492	3	K=H	2	F seen	
6.4	10.2	A	5		K=H	1		
6.1	11.6	H?	3		K=H	1	F	
6.4	12.1	H	2		K=H	1		
6.1	12.2	E?	2		K=H	1		
6.5	13.4	H	3		K=H	1	F	
6.8	13.7	A	5		K=H	1	F	

190

April 23, 1889

Plate 3056

V	H	Type	No.	Rem.	No. Lines	K	Focus	Other Lines
7.7	18.1	H?	2		K=H	2		
7.6	9.2	A?	3		N	1		
7.5	10.9	A?	4		K=H	1		
7.4	11.9	A	4		K=H	1		
7.3	12.1	A	2		N	1		
7.9	12.6	E?	2		K=H	1		
7.3	13.0	I	489	3	K=H	2	F seen	
7.5	14.6	A	4		N	1		
7.9	15.6	A	10		K=8H	3	F	
7.8	16.2	E?	3		K=H	1	F	
7.5	16.7	E?	2		K=H	1		
7.5	16.8	E	3		K=H	1		
7.6	16.9	E	490	3	K=H	3	F seen	
7.4	18.7	E	2		K=H	1		
7.9	20.0	E?	491	3	K=H	1	F seen	
7.1	20.9	A	8		N	3	F	
7.4	22.7	H	3		K=H	3	F	
7.9	23.4	A	5		N	3		
6.2	6.5	A	3		N	1		
6.5	6.7	A	4		K=H	1		
6.7	6.9	A	8		N	3	F	
6.8	8.6	F	492	3	K=H	2	F seen	
6.4	10.2	A	5		K=H	1		
6.1	11.6	H?	3		K=H	1	F	
6.4	12.1	H	2		K=H	1		
6.1	12.2	E?	2		K=H	1		
6.5	13.4	H	3		K=H	1	F	
6.8	13.7	A	5		K=H	1	F	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[[12 columned table]]

- | No. | R.A. | Dec. | Magn. | R.A.^[[1900]] | Dec. | D.C. Mean | Diff. | Br.
| - | -

--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
 2 59 +82.9 | 82 | 2 59.9 | +82 60 | 7.5 | 3 8.1 | +83 11 |
 6.0[[/strikethrough]]5[[/strikethrough]] | 3 | 6.9^[[6.3]] | 6.8^[[6.2]] |
 6.8^[[6.2]]
 2 42 +83.2 | 67 | 2 43.0 | +83 16 | 9.2 | 2 51.0 | +83 27 | | | 6.7 | 6.6 |
 6.6
 2 18 +83.6 | 58 | 2 15.6 | +83 38 | 9.0 | 2 23.1 | +83 50 | | | 6.7 | 6.6 |
 6.7
 1 59 +83.8 | 52 | 1 58.9 | +83 54 | 9.1 | 2 6.1 | +84 7 | | | 6.7 | 6.6 | 6.7
 [[/strikethrough]]1 54 +83.9[[/strikethrough]] |
 [[/strikethrough]]49[[/strikethrough]]^[[50]] | [[/strikethrough]]1
 51.4[[/strikethrough]]^[[1 57.1]] | [[/strikethrough]]+83
 57[[/strikethrough]]^[[+83 54]] |
 [[/strikethrough]]9.5[[/strikethrough]]^[[9.3]] | [[/strikethrough]]2
 0.9[[/strikethrough]] | [[/strikethrough]]+84 10[[/strikethrough]] | | | 7.2 |
 7.1 | 7.2
 1 46 +83.6 | 45 | 1 45.6 | +83 40 | 9.2 | 1 52.1 | +83 53 | | | 7.0 | 6.9 |
 7.0
 1 39 +84.0 | 34 | 1 39.2 | +84 2 | 8.1 | 1 45.6 | +84 16 |
 6.1[[/strikethrough]]0[[/strikethrough]] | 2 | 6.7^[[6.3]] | 6.6^[[6.2]] |
 6.7^[[6.3]]
 1 10 +83.9 | 30 | 1 8.6 | +83 58 | 9.3 | 1
 [[/strikethrough]]14.0[[/strikethrough]]^[[13.4]] | +84 12 | | | 6.6 | 6.5 |
 6.6
 0 49 +83.8 | 20 | 0 48.4 | +83 49 | 7.0 | 0 52.8 | +84 4 | [[/strikethrough]]
 6.38^[[4]] | [[/strikethrough]]5.2 | [[/strikethrough]]11[[/strikethrough]]1 | 5.3
 | 5.2 | 5.3
 0 38 +83.8 | 15 | 0 37.4 | +83 51 | 8.8 | 0 41.3 | +84 6 | | | 6.6 | 6.5 | 6.6
 0 27 +83.9 | 11 | 0 27.7 | +83 57 | 9.2 | 0 31.3 | +84 12 | | | 6.8 | 6.7 |
 6.8
 0 27 +83.9 | 10 | 0 27.3 | +83 57 | 9.0 | 0 30.8 | +84 12 | | | 6.5 | 6.4 |
 6.5
 0 26 +83.8 | [[/strikethrough]]5[[/strikethrough]]9 | [[/strikethrough]]0
 14[[/strikethrough]]^[[0 26.3]] | +83 53 | 7.8 | 0 29.8 | +84 8 |
 [[/strikethrough]]6.87^[[9]] | [[/strikethrough]]5.7 |
 [[/strikethrough]]13[[/strikethrough]]1 | 5.6 | 5.5 | 5.6
 23 50 +83.7 | 669 | 23 50.7 | +83 40 | 9.3 | 23 52.6 | +83 55 | | | 7.1 |
 7.0 | 7.1
 23 32 +83.4 | 660 | 23 31.8 | +83 21 | 9.0 | 23 32.9 | +83 36 | | | 6.6 |
 6.5 | 6.6
 23 14 +83.5 | 647 | 23 12.7 | +83 27 | 8.0 | 23 13.2 | +83 42 |
 5.6[[/strikethrough]]8[[/strikethrough]] | 1 | 5.7 | 5.6 | 5.7
 22 50 +82.9 | 704 | 22 48.8 | +82 56 | 8.0 | 22 48.6 | +83 9 |
 5.6[[/strikethrough]]0[[/strikethrough]] | 3 | 6.2^[[5.9]] | 6.1^[[5.8]] |
 6.1^[[5.8]]
 22 45 +82.5 | 700 | 22 44.1 | +82 30 | 8.0 | 22 43.9 | +82 44 |
 5.7[[/strikethrough]]71[[/strikethrough]]^[[7.7]] | 66[[/strikethrough]]h |] | 0 | 5.7 | 5.6 | 5.6
 3 35 +83.1 | 94 | 3 33.9 | +83 7 | 9.0 | 3 43.1 | +83 16 | | | 7.0 | 6.9 | 6.9
 3 30 +83.0 | 92 | 3 28.0 | +83 3 | 9.3 | 3 36.9 | +83 12 | | | 7.1 | 7.0 | 7.0
 3 26 +83.1 | 91 | 3 24.8 | +83 5 | 7.3 | 3 33.7 | +83 14 |
 5.7[[/strikethrough]]0[[/strikethrough]] | 0 | 5.7 | 5.6 | 5.6
 3 1 +83.5 | 79^[[78]] | 3 0.1^[[3 0.0]] | +83 30^[[+83 31]] | 8.2^[[9.0]] | 3
 8.8 | +83 41 | [[/strikethrough]]6.0[[/strikethrough]]R |
 [[/strikethrough]]4[[/strikethrough]] | 6.4 | 6.3 | 6.4
 2 37 +84.1 | 48 | 2 36.7 | +84 2 | 9.2 | 2 45.3 | +84 15 |

191

No.	R.A.	Dec.	Magn.	R.A. ¹⁹⁰⁰	Dec.	D.C. Mean	Diff.	Br.
2 59	+82.9	82	2 59.9	+82 60	7.5	3 8.1	+83 11	
6.0			5			6.9	6.3	6.8
6.8								6.2
2 42	+83.2	67	2 43.0	+83 16	9.2	2 51.0	+83 27	6.7
6.6								6.6
2 18	+83.6	58	2 15.6	+83 38	9.0	2 23.1	+83 50	6.7
6.7								6.6
1 59	+83.8	52	1 58.9	+83 54	9.1	2 6.1	+84 7	6.7
6.7								6.6
1 54	+83.9							
49								
51.4								
57								
9.5								
0.9								
7.1								
7.2								
1 46	+83.6	45	1 45.6	+83 40	9.2	1 52.1	+83 53	7.0
7.0								6.9
1 39	+84.0	34	1 39.2	+84 2	8.1	1 45.6	+84 16	
6.1								
6.7								
1 10	+83.9	30	1 8.6	+83 58	9.3	1		
14.0								
6.6								
0 49	+83.8	20	0 48.4	+83 49	7.0	0 52.8	+84 4	
6.38								
5.2								
0 38	+83.8	15	0 37.4	+83 51	8.8	0 41.3	+84 6	6.6
0 27	+83.9	11	0 27.7	+83 57	9.2	0 31.3	+84 12	6.8
6.8								6.7
0 27	+83.9	10	0 27.3	+83 57	9.0	0 30.8	+84 12	6.5
6.5								6.4
0 26	+83.8							
14								
6.87								
13								
23 50	+83.7	669	23 50.7	+83 40	9.3	23 52.6	+83 55	7.1
7.0								7.1
23 32	+83.4	660	23 31.8	+83 21	9.0	23 32.9	+83 36	6.6
6.5								6.6
23 14	+83.5	647	23 12.7	+83 27	8.0	23 13.2	+83 42	
5.6								
22 50	+82.9	704	22 48.8	+82 56	8.0	22 48.6	+83 9	
5.6								
6.1								
22 45	+82.5	700	22 44.1	+82 30	8.0	22 43.9	+82 44	
5.7								
3 35	+83.1	94	3 33.9	+83 7	9.0	3 43.1	+83 16	7.0
3 30	+83.0	92	3 28.0	+83 3	9.3	3 36.9	+83 12	7.1
3 26	+83.1	91	3 24.8	+83 5	7.3	3 33.7	+83 14	
5.7								
3 1	+83.5	79	3 0.1	+83 30	8.2	3 0.0	+83 31	9.0
8.8								
6.0								
4								
2 37	+84.1	48	2 36.7	+84 2	9.2	2 45.3	+84 15	

~~6.15~~ 2 | 3 | 6.5 | 6.4 | 6.5
 2 12 +84.4 | 42 | 2 11.4 | +84 25 | 8.5 | 2 19.6 | +84 38 | | | 6.8^{[[6.6]]} |
 6.7^{[[6.5]]} | 6.9^{[[6.7]]}
 2 2 +84.4 | 40 | 2 2.1 | +84 24 | 9.0 | 2 9.9 | +84 37 | | | 7.0^{[[6.7]]} |
 6.9^{[[6.6]]} | 7.1^{[[6.8]]}
 2 1 +84.5 | 38 | 2 0.9 | +84 30 | 9.1 | 2 8.7 | +84 43 | | | 7.1 | 7.0 | 7.2
 1 35 +84.4 | 32 | 1 34.4 | +84 25 | 8.9 | 1 41.0 | +84 39 | | | 6.9^{[[6.6]]} |
 6.8^{[[6.5]]} | 7.0^{[[6.7]]}
 1 29 +84.3 | 30 | 1 28.6 | +84 20 | 9.0 | 1 34.9 | +84 34 | | | 6.4 | 6.3 |
 6.5

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

192

April 23, 1889.

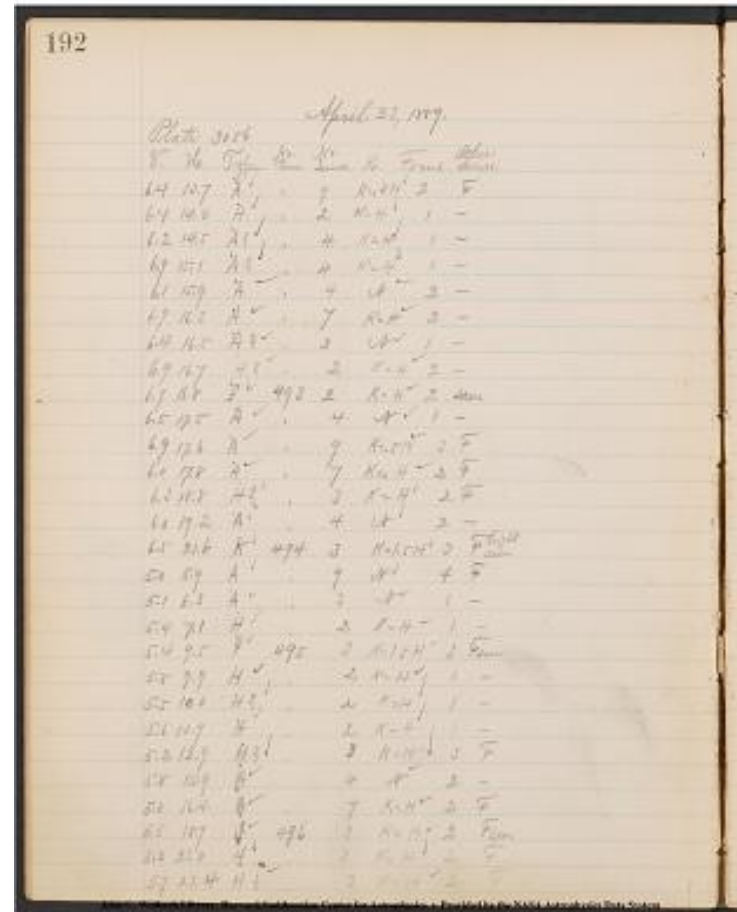
Plate 3056

[[8 columned table]]

[V|H|Type|No. Rem.|No. Lines|K|Focus|Other Lines.|V.|H.|V.|H.]

V	H	Type	No.	Rem.	No.	Lines	K	Focus	Other Lines.	V.	H.	V.	H.
6.4	13.7	A	9		9	K=.8H	2	F					
6.4	14.0	H	2		2	K=H	1						
6.2	14.5	A?	4		4	K=H	1						
6.9	15.1	A?	4		4	K=H	1						
6.1	15.9	A	4		4	N	2						
6.9	16.3	A	7		7	K=H	2						
6.4	16.5	A?	3		3	N	1						
6.9	16.7	H?	2		2	K=H	2						
6.9	16.8	F	493		2	K=H	1	Seen					
6.5	17.5	A	4		4	N	1						
6.9	17.6	A	9		9	K=.5H	3	F					
6.0	17.8	A	7		7	K=H	2	F					
6.3	18.8	H?	3		3	K=H	2	F					
6.0	19.2	A	4		4	N	2						
6.5	21.6	K	494		3	K=1.5H	3	F bright seen					
5.0	5.9	A	9		9	N	4	F					
5.1	6.3	A	3		3	N	1						
5.4	7.1	H	2		2	K=H	1						
5.4	9.5	H	495		3	K=1.5H	3	F seen					
5.8	9.9	H	2		2	K=H	1						
5.5	10.0	H?	2		2	K=H	1						
5.6	10.9	H	2		2	K=H	1						
5.2	12.9	H?	3		3	K=H	3	F					
5.8	15.9	A	4		4	N	2						
5.0	16.4	A	7		7	K=H	2	F					
5.5	18.7	H	496		3	K=H	2	F seen					
5.2	21.0	H	3		3	K=H	2	F seen					
5.7	21.4	H?	3		3	K=H	2	F					

John G. Wolbach Library, Harvard Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 column table]]

No. | R.A. | Dec. | Magn. | R.A.^[[1900]] | Dec. | ^[[D.C.]] Mean | Diff. | Br.
| | |

| 1 29 +84.5 | 29 | 1 27.5 | +84 29 | 8.0 | 1 33.9 | +84
43|6.3|~~0~~|~~0~~|3|6.0|
5.9|6.1|

| 1 21 +84.5 | 25 | 1 21.3 | +84 28 | 9.3 | 1 27.4 | +84 42 | |
| 7.5^[[7.2]] | { 7.4^[[7.1]] } { 7.6^[[7.3]] }

| 1 12 +84.6 | 23 | 1 11.9 | +84 38 | 8.8 | 1 17.7 | +84 34 | | 6.6|6.5|6.7|

| 0 58 +84.3 | 18 | 0 58.2 | +84 19 | 8.8 | 1 3.2 |

| 0 41 +84.6 | 15 | 0 40.9 | +84 40 | 8.2 | 0 45.3 | +84
55|6.1|~~15~~|~~15~~|2|
| 6.1|6.0|6.2|

| ~~38~~ 83.8 | 15 | 0 37.4 | +83 51 | 8.8 | ~~34~~ | 0
34 +84.3 | 13 | 0 33.9 | +84 15 | 9.0 | 0 37.8 |

| ~~26~~ 35 | 10 | 0 25.3 | +84 18 | 8.5 | 0 28.8 | +84
33|~~0~~ 32.9 +84 41 | | 7.0|6.9|7.1|
| ~~0~~ 28 +83.9|10|0 27.3|+83 57|9.0|~~0~~ 30
+84.3 | 12 | 0 29.6 | +84 26 | 9.4 | 0 32.9 |

| ~~0~~ 28 +83.9 | 10 | 0 27.3 | +83 57 | 9.0 | 0 30.9 | 0 25
+84.3 | 10 | 0 25.3 | ~~4~~ | +84 18 | 8.5 | 0
28.8 | +84 33 | | 6.6^[[6.3]] | { 6.5^[[6.2]] } { 6.7^[[6.4]] }

| ~~0~~ 27 +83.8 | 9 | 0 26.3 | +83 53 | 7.8 | 0 29.8 | +84
8|~~0~~ 26.6 +84 26|~~6.87~~ 9
5|~~6.4~~|6.3|6.4| 0 28.3 +84.2 | 9 | 0 23.3 | +84 11 | 9.0 | 0
26.6 |

| 0 10 +84.4 | 4 | 0 9.0 | +84 23 | 9.2 | 0 11.8 | +84 38 | | 6.8|6.7|6.9|

| 0 10 +84.2 | 3 | 0 7.8 | +84 9 | 8.0 | 0 10.6 | +84
24|5.7|~~0~~|~~0~~|1|5.8|5.7|5.8|

| 23 59 +84.6 | 546 | 23 59.1 | +84 36 | 8.2 | 0 1.4 | +84 51 |
6.0|~~0~~|~~0~~|1|6.1|6.0|6.2|

| 23 44 +84.3 | 539 | 23 42.5 | +84 16 | 8.1 | 23 44.0 | +84 31 |
6.0|~~0~~|~~0~~|3|6.5^[[6.3]] | { 6.4^[[6.2]] } |
6.6^[[6.4]] |

| 23 33 +84.4 | 533 | 23 32.8 | +84 22 | 8.7 | 23 33.8 | +84 37 |

$6.1 \frac{0}{3} | 6.4 | 6.3 | 6.5 |$
 $\frac{22}{\frac{56}{34}} + 83.6 | 640 | 22 \frac{55.4}{49} | +83 \frac{34}{5.0} | 22 \frac{55.2}{4.8} | +83$
 $\frac{5.92}{4.8} | 11 \frac{0}{5.4^{[4.8]}} | \{5.3^{[4.7]}\} | \{5.4^{[4.8]}\} |$
 $\frac{3}{5.38} \frac{55}{10} | +83.5 | 104 | 3 \frac{55.1}{4.4} | +83 \frac{26}{4.3} | 5.0 | 4 \frac{5.0}{4.3} | +83 \frac{34}{4.4} |$
 $\frac{3}{6.9} \frac{49}{6.9} | +83.5 | 100 | 3 \frac{48.0}{8.8} | +83 \frac{31}{3} | 8.8 | 3 \frac{57.9}{+83} \frac{39}{6.9} | 6.9 | 6.8 |$
 $\frac{3}{\{7.2^{[6.9]}\}} \frac{35}{\{7.3^{[7.0]}\}} | +83.6 | 96 | 3 \frac{34.3}{8.7} | +83 \frac{40}{3} | 8.7 | 3 \frac{44.1}{+83} \frac{49}{7.3^{[7.0]}} | 7.3^{[7.0]}\}$
 $\frac{2}{\frac{59}{6.32}} + 84.4 | 59 | 2 \frac{58.8}{11} | +84 \frac{23}{5.6^{[5.2]}} | 6.0 | 3 \frac{8.4}{5.5^{[5.1]}} | +84 \frac{34}{5.7^{[5.3]}} |$
 $\frac{2}{+84^{[+84]}} \frac{47}{16^{[17]}} | +84.3 | 51^{[50]}\} | 2^{[2]} | 46.7^{[46.5]}\} |$
 $\frac{9^{[9]}}{27^{[28]}} | \frac{2}{X} | 7.1^{[6.7]}\} | \{7.0^{[6.6]}\} | \{7.1^{[6.7]}\} |$
 $\frac{2}{\{6.8^{[6.6]}\}} \frac{49}{\{7.0^{[6.8]}\}} | +84.4 | 53 | 2 \frac{48.2}{7.0} | +84 \frac{25}{8.5} | 2 \frac{57.7}{+84} \frac{36}{6.9^{[6.7]}} | 6.9^{[6.7]}\}$
 $\frac{2}{\{7.3^{[6.9]}\}} \frac{29}{\{7.5^{[7.1]}\}} | +84.5 | 45 | 2 \frac{28.6}{9.0} | +84 \frac{34}{2} | 9.0 | 2 \frac{37.6}{+84} \frac{46}{7.4^{[7.0]}} | 7.4^{[7.0]}\}$
 $\frac{1}{\frac{51}{7.07}} + 85.0 | 41 | 1 \frac{50.8}{7.20} | +85 \frac{2}{5.9} | 7.7 | 1 \frac{58.8}{\underline{16}} | +85 \frac{16}{\underline{3}} | 5.8^{[5.6]}\} | \{5.7^{[5.5]}\} |$
 $\frac{0}{14} \frac{39}{0.39.8} | +84.8 | \frac{15}{8.6} | 0 \frac{40.9}{44.2} | +84 \frac{40}{+85} \frac{40}{10} | 8.2 | \frac{8.2}{6.1} | \frac{6.0}{6.0} | \frac{6.2}{6.2} |$
 $\frac{0}{\frac{27}{7.35}} + 85.1 | 11 | 0 \frac{25.4}{4} | +85 \frac{10}{6.1} | 8.8 | 0 \frac{29.2}{\underline{11}} | +85 \frac{25}{\underline{2}} | 6.3 | 6.2 | 6.4 |$
 $\frac{23}{6.7^{[6.4]}} \frac{39}{\{6.6^{[6.3]}\}} | +84.6 | 536 | 0 \frac{38.2}{6.8^{[6.5]}} | +84 \frac{39}{8.2} | 8.2 | 0 \frac{42.4}{+84} \frac{54}{6.7^{[6.4]}} | 6.7^{[6.4]}\}$
 $\frac{22}{6.7^{[6.4]}} \frac{54}{\{6.6^{[6.3]}\}} | +84.3 | 516 | 22 \frac{54.1}{\{6.8^{[6.5]}\}} | +84 \frac{16}{8.0} | 8.0 | 22 \frac{53.5}{+84} \frac{30}{6.7^{[6.4]}} | 6.7^{[6.4]}\}$
 $\frac{22}{\frac{50}{6.03}} + 84.0 | 513 | 22 \frac{50.7}{5.9} | +84 \frac{0}{\frac{7.3}{3}} | 7.3 | 22 \frac{50.0}{5.9} | +84 \frac{14}{3} |$

2 | 6.5^{[[6.1]]} | {6.4^{[[6.0]]} | {6.5^{[[6.1]]} |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]
 |No.|R.A.|Dec.|Magn.|R.A. 1900|Dec.|D.C. Mean|Diff.|Br.| | |
 |---|---|---|---|---|---|---|---|---|---|
 22 22 +83.7|630|22 22.5|+83 46|7.0|22 20.9
 +8|~~5.6~~|~~9~~|~~4~~|~~5.5~~|~~5.6~~|
 0|5.6|~~9~~|~~4~~|~~5.5~~|~~5.6~~|
 4 11 +83.6|114|4 11.0|+83 43|7.4|4 21.5 +83
 50|6.0|~~0~~|~~0~~|~~0~~|~~0~~|
 4|6.7|~~6.4~~|~~6.6~~|~~6.3~~|~~6.7~~|~~6.4~~|
 4 1 +83.7|111|4 1.1|+83 50|8.7|4 11.6 +83 57| | 6.5|6.4|6.5|
 3 |~~3~~|~~3~~|~~3~~|~~3~~|~~3~~|
 4 1 +83.7|111|4 11.0|+83 43|7.4|4 21.5 +83
 50|6.0|~~0~~|~~0~~|~~0~~|~~0~~|
 4|6.7|~~6.4~~|~~6.6~~|~~6.3~~|~~6.7~~|~~6.4~~|
 4 1 +83.7|111|4 1.1|+83 50|8.7|4 11.6 +83 57| | 6.5|6.4|6.5|
 3 |~~3~~|~~3~~|~~3~~|~~3~~|~~3~~|
 29.0|~~28.1~~|~~84~~|~~15~~|~~9.5~~|~~8.8~~|~~3~~|~~31.9~~|+84
 31|~~3~~|~~3~~|~~3~~|~~3~~|~~3~~|
 22| | 6.4|6.3|6.5|
 2 32 +85.3|50|2 30.9|+85 16|8.8|2 41.0|+85
 28|6.0|~~5~~|~~5~~|~~5~~|~~5~~|
 2 30 +85.2|48|2 29.4|+85 15|8.8|2 39.4|+85 27| 6.8|6.7|6.9|
 2 16 +85.1|45|2 14.2|+85 10|8.6|2 23.3|+85
 22|~~1~~|~~1~~|~~1~~|~~1~~|~~1~~|
 1 26 +85.5|32|1 24.8|+85 32|9.0|1 32.1|+85 46| 6.9|6.8|7.1|
 0 50 +85.5|19|0 49.7|+85 29|5.0|0 54.9|+85 43|~~5.87~~
 5|~~4.5~~|~~4.5~~|~~4.5~~|~~4.5~~|~~4.5~~|
 14|~~14~~|~~14~~|~~14~~|~~14~~|~~14~~|
 10 26 +85.6|~~409~~|~~409~~|~~409~~|~~409~~|~~409~~|
 24.2|~~27.4~~|~~85~~|~~37~~|~~7.5~~|~~9.3~~|~~13~~|~~0~~|
 28.1|+85 28|9.4|~~54.7~~|~~31.4~~|~~86~~|~~85~~|
 9|~~51~~|~~51~~|~~51~~|~~51~~|~~51~~|
 10 21 +85.5|9|0 22.5|+85 31|8.3|0 26.2|+85
 46|6.0|~~0~~|~~0~~|~~0~~|~~0~~|
 3|6.5|~~6.3~~|~~6.4~~|~~6.2~~|~~6.7~~|~~6.5~~|
 123 50 +85.1|406|23 49.1|+85 6|8.8|23 50.8|+85
 21|6.0|~~0~~|~~0~~|~~0~~|~~0~~|
 123 30 +85.4|403|23 29.7|+85 23|7.8|23 30.4|+85
 38|~~6.91~~|~~6.87~~|~~5.6~~|~~5.6~~|~~5.6~~|
 123 27 +85.2|4|~~10~~|~~00~~|~~23~~|~~25.8~~|+85
 13|8.0|23 26.3|+85 27| 6.5|~~6.2~~|~~6.4~~|~~6.6~~|~~6.3~~|
 23 20 +85.2|398|23 19.0|+85 16|8.5|23 19.2|+85 30|
 17.3|~~6.9~~|~~7.2~~|~~7.5~~|~~7.1~~|
 23 9 +84.9|523|23 7.6|+84 57|8.4|23 7.2|+85 12| 6.7|6.6|6.8|
 22 54 +84.6|517|22 54.2|+84 36|6.5|22 53.5|+84
 50|5. |~~59~~|~~5~~|~~6.0~~|~~5.4~~|
 22 30 +84.4|509|22 29.2|+84 19|7.2|22 27.5|+84
 33|~~6.05~~|~~5.9~~|~~0~~|~~0~~|~~0~~|
 3 58 +84.1|78|3 58.1|+84 7|7.5|4 8.1|+84 15|
 6.8|~~6.3~~|~~6.7~~|~~6.2~~|~~6.8~~|~~6.3~~|
 3 28 +85.2|57|3 26.4|+85 11|8.5|3 38.4|+85 20| 6.9|6.8|7.0|
 2 21 +85.6|46|2 22.0|+85 38|8.9|2 32.4|+85 50| 7.0|6.9|7.2|

195

The image shows a handwritten astronomical data table on aged paper. The table is organized into two main columns of data. The left column contains numerical values, some of which are crossed out and replaced with new ones. The right column contains similar numerical values, also with some corrections. The handwriting is in cursive, and the paper shows signs of age and wear. The table appears to be a transcription of astronomical observations, possibly related to the data provided in the adjacent text block.

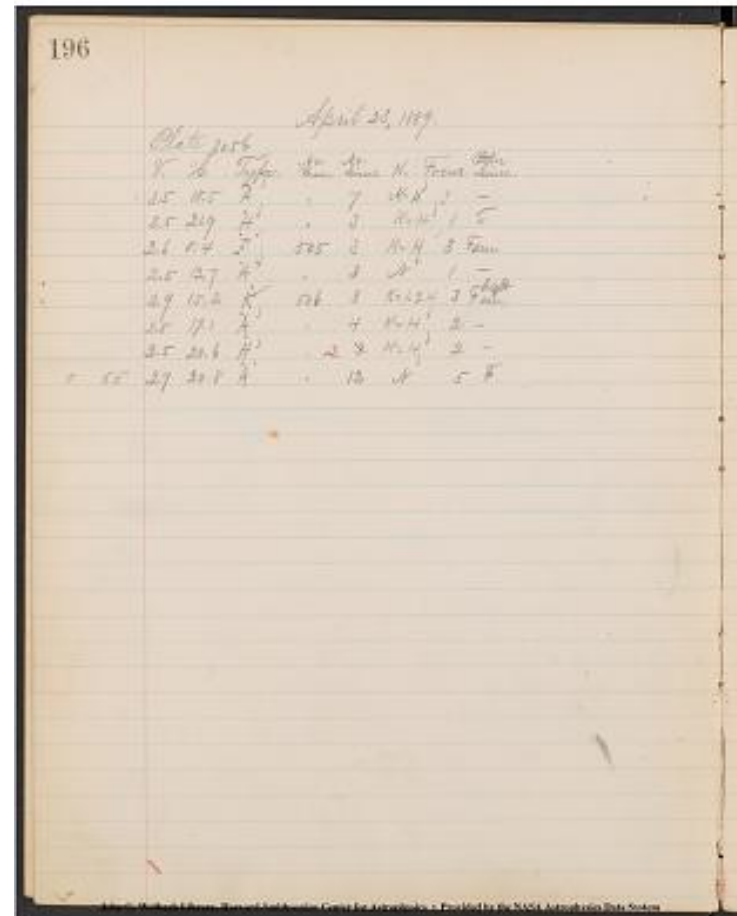
|1 40 +85.7|38|1 40.8|+85 45|9.0|1 49.2|+85 59| |7.1|7.0|7.3|
 |1 35 +86.2|25|1 31.6|+86 13|8.8|1 40.2|+86 26|~~7.75~~
~~8~~6.3 ~~[[strikethrough]]~~
 underline]]18~~[[/strikethrough]]~~3~~[[/underline]]~~6.0|5.9|6.2|
 |1 2 +86.2|21|1 4.1|+86 10|8.8|1 10.8|+86
 25|~~[[strikethrough]]~~8.00~~[[/strikethrough]]~~6.6 ~~[[strikethrough,~~
 underline]]15~~[[/strikethrough]]~~1~~[[/underline]]~~6.5|6.4|6.7|
 |0 33 +86.2|9|0 32.5|+86 9|8.6|0 37.2|+86
 23|~~[[strikethrough]]~~7.80~~[[/strikethrough]]~~6.4 ~~[[strikethrough,~~
 underline]]15~~[[/strikethrough]]~~1~~[[/underline]]~~6.3|6.2|6.5|
 |0 6 +85.9|3|0 6.6|+85 52|8.8|0 9.4|+86 7|
 |6.5^[[6.3]]|{6.4^[[6.2]]|{6.7^[[6.5]]|
 |23 54 +85.9|409|23 53.8|+85 54|8.0|23 54.7|+86 9|~~[[strikethrough]]~~6.78
 8 5~~[[/strikethrough]]~~5.4 ~~[[strikethrough,~~
 underline]]16~~[[/strikethrough]]~~2~~[[/underline]]~~5.2|5.1|5.4|
 |23 26 +85.7|401|23 27.2|+85 46|8.0|23 27.5|+86
 0|~~[[strikethrough]]~~7.33~~[[/strikethrough]]~~6.0 ~~[[strikethrough,~~
 underline]]16~~[[/strikethrough]]~~3~~[[/underline]]~~5.7|5.6|5.9|

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

April 23, 1889.
Plate 3056

[[8 column table]]

V	H	Type	No.	Remark	No.	Lines	K	Focus	Other Lines
3.5	18.5	A	7	K>=H 3 -					
3.5	21.9	H	3	K>=H 1					
2.6	8.4	F	505	3 K>=H 3 F seen					
2.5	12.7	A	3	N 1 -					
2.9	15.2	K	506	3 K>=1.2H 3 F bright seen					
2.8	17.1	A	4	K>=H 2 -					
2.5	20.6	H	2	3 K>=H 2 -					
2.7	20.8	A	12	N 5 F					



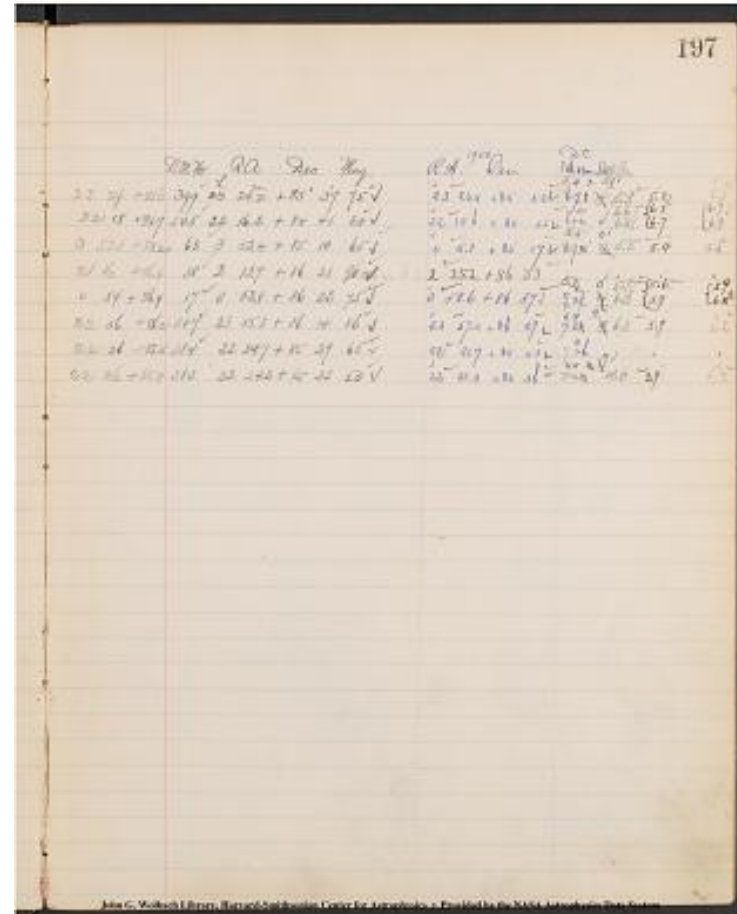
Project PhAEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[12 columned table]]

| D.M. No. | R.A. | Dec. | Mag. | R.A.^[[1900]] | Dec. | D.C. Mean | Diff. | Br. | |

|-----|-----|-----|-----|-----|
 23 24 +85.6|399|23^[[h]] 24.2^[[m]]+85° 37'|7.5|23 24.4|+85
 52|~~6.73~~^[[1]]|~~5.4~~|5.3|5.2|5.5|
 14|~~5.3~~|~~5.2~~|~~5.5~~|
 22 18 +84.7|505|22 16.2|+84 41|8.0|22 13.6|+84
 55|6. ~~15~~|~~2~~|4|6.8^[[6.6]]|{6.7^[[6.5]]}{6.9^[[6.5]]}
 |3 52 +85.2|63 |3 52.4 | +85 10|6.5|4 5.1|+85
 17|~~6.7~~|~~2~~|~~5~~|~~5~~|
 5|~~12~~|~~0~~|5.5|5.4
 5.6|
 2 16 +86.4|38|2 13.7|+86 21|9.0^[[less in R.A. & Dec.]]|2 25.2|+86 33|
 |•|•|•|
 0 54 +86.4|17|0 52.8|+86 22|7.5|0 58.6|+86
 37|~~7~~|~~09~~|~~1~~|
 5.7|~~14~~|~~0~~|6.0^[[5.7]]|{5.9^[[5.6]]}{6. ~~2~~^[[5. ~~5~~]]}
 7|~~9~~|
 23 56 +86.2|347|23 55.3 | +86 14|8.6|23 57.3|+86
 29|~~7.80~~|~~6.4~~|
 18|~~6.0~~|5.9|6.2|
 22 26 +85.5|384|22 24.7|+85 29|6.5|22 21.7|+85
 23|7. ~~36~~|~~40~~|•|•|•|
 22 26 +85.4|383|22 24.2|+85 23|5.0|22 21.3|+85
 36|~~5.34~~|~~4.0~~|
 13|~~4.0~~|3.9|4.2|

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



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

St. Lt. 54 F. m. & cl. 7.3-7.0 F.C. 7.5 Box No. 232.

April 27, 1889.

[[left margin]]

1.0

[[/left margin]]

Plate 1923.

[[8 columned table]]

V. | H. | Type. | No. Rem. | No. Lines. | K. | Focus. | Other Lines.]

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

22.5|22.9|H| 2|K=H|1|-|

20.7|14.3|A| 10|K=5H|3|F.|

20.5|22.3|A| 7|N|2|-|

19.0|10.0|H| 3|K=H|1|F.|

19.0|11.3|A?| 4|K=H|1|-|

19.5|11.4|A| 5|N|1|-|

19.1|22.2|A| 5|K=H|1|F.|

18.4|14.7|F|507|~~3~~|~~4~~|K=H|2|-|

17.0|8.6|A| 3|N|1|-|

17.2|9.6|H| 2|K=H|1|-|

17.5|9.8|A| 5|K=H|1|-|

17.4|15.6|F|508|3|K=H|1|F.Seen.]

17.2|20.3|A| 5|N|1|-|

16.5|7.1|A| 4|K=H|1|-|

16.0|10.4|A| 4|N|1|-|

16.5|18.3|H?| 2|K=H|1|-|

16.2|19.3|A| 3|N|1|-|

16.2|20.3|A| 6|N|2|F.|

16.6|20.9|F|509|~~2~~|~~3~~|K=H|1|F.Seen]

15.0|7.0|A| 6|N|2|-|

15.5|8.5|A| 4|K=H|1|-|

15.2|12.1|A?| 4|K=H|1|-|

15.9|14.9|H| 3|K=H|1|F.|

15.5|15.3|A| 4|K=H|1|-|

14.4|9.9|H| 3|K=H|1|F|

14.2|10.6|F|510|3|K=5H?|3|F.Seen]

14.5|18.6|A| 3|N|1|-|

14.3|19.2|A| 5|K=H|1|-|

198

St. Lt. 54 F. m. & cl. 7.3-7.0 F.C. 7.5 Box No. 232.

April 27, 1889.

Plate 1923.

V.	H.	Type.	No. Rem.	No. Lines.	K.	Focus.	Other Lines.
22.5	22.9	H	2	K=H	1	-	
20.7	14.3	A	10	K=5H	3	F.	
20.5	22.3	A	7	N	2	-	
19.0	10.0	H	3	K=H	1	F.	
19.0	11.3	A?	4	K=H	1	-	
19.5	11.4	A	5	N	1	-	
19.1	22.2	A	5	K=H	1	F.	
18.4	14.7	F	507	3	4	K=H	2
17.0	8.6	A	3	N	1	-	
17.2	9.6	H	2	K=H	1	-	
17.5	9.8	A	5	K=H	1	-	
17.4	15.6	F	508	3	K=H	1	F. Seen.
17.2	20.3	A	5	N	1	-	
16.5	7.1	A	4	K=H	1	-	
16.0	10.4	A	4	N	1	-	
16.5	18.3	H?	2	K=H	1	-	
16.2	19.3	A	3	N	1	-	
16.2	20.3	A	6	N	2	F.	
16.6	20.9	F	509	2	3	K=H	1
15.0	7.0	A	6	N	2	-	
15.5	8.5	A	4	K=H	1	-	
15.2	12.1	A?	4	K=H	1	-	
15.9	14.9	H	3	K=H	1	F.	
15.5	15.3	A	4	K=H	1	-	
14.4	9.9	H	3	K=H	1	F.	
14.2	10.6	F	510	3	K=5H?	3	F. Seen.
14.5	18.6	A	3	N	1	-	
14.3	19.2	A	5	K=H	1	-	

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

Mean -1.0

[[12 column table]]

| --- | D.M. No. | R.A. | Dec. | Mag. | R.A.^[1900] | Dec. | D.C. Mean |
 Diff. | Br. | Br. + Mean | Cor. Br. + Cor. delta |
 | --- | --- | --- | --- | --- | --- | --- | --- |
 | 1 51.8 +75.4 | 86 | 1 51.8 | +75 25 | 5.0 | 1 55.9 | +75 38 |
 5.3[[strikethrough]]1[[/strikethrough]] • | --- | • | --- | • |
 | 3 2.9 +77.2 | 115 | 3 2.2 | +77 11 | 6.2 | 3 7.6 | +77 22 |
 4.8[[strikethrough]]1[[/strikethrough]] • | 9 | 5.7 | 4.7 | 4.5 |
 | [[underline]]1 50.5[[/underline]] +76.6 | [[underline]]R[[/underline]]
 [[strikethrough]]62[[/strikethrough]] [[strikethrough]]63 |
 [[strikethrough]]50.6[[/strikethrough]] 1 50.8 |
 [[strikethrough]]34[[/strikethrough]] +76.35 | [[strikethrough]]9.5
 [[/strikethrough]] 5.3 | 1 55.0 | +76 48 |
 4.8[[strikethrough]]1[[/strikethrough]] • | 20 | 6.8 | 5.8 | 5.6 |
 3 42.9 +77.7 | 138 | 3 43.0 | +77 46 | 7.0 | 3 49.2 | +77 54 |
 6. [[strikethrough]]17[[/strikethrough]] 2 • | 9 | ^[[7.1]] 7.4 | ^[[6.1]] 6.4 |
 ^[[6.0]] 6.3 |
 3 31 +77.8 | 134 | 3 30.7 | +77 51 | 8.0 | 3 36.8 | +78 0 |
 6. [[strikethrough]]38[[/strikethrough]] 4 • | 8 | 7.2 | 6.2 | 6.1 |
 | 3 29.9 +77.6 | 133 | 3 29.0 | +77 39 | 7.2 | [[strikethrough]]2
 34.2[[/strikethrough]] 3 35.0 | [[strikethrough]]+77 51[[/strikethrough]]
 +77 48 | [[strikethrough]]5.50[[/strikethrough]]
 5.6[[strikethrough]]1[[/strikethrough]] • | 11 | 6.7 | 5.7 | 5.6 |
 | 1 48.9 +77.2 | 73 | 1 48.5 | +77 12 | 6.3 | 1 52.8 | +77 26 |
 5.6[[strikethrough]]1[[/strikethrough]] • | 14 | 7.0 | 6.0 | 5.8 |
 | 2 58.8 +78.3 | 109 | 2 58.3 | +78 19 | 7.0 | 3 4.2 | +78 30 |
 5. [[strikethrough]]4[[/strikethrough]] 59 • | [[underline]]10 | 6.5 | 5.5 | 5.4
 [[/underline]] |
 | 4 0.0 +78.6 | 151 | 4 0.2 | +78 38 | 8.2 | 4 7.0 | +78 46 |
 6.2[[strikethrough]]0[[/strikethrough]] • | 10 | 7.2 | 6.2 | 6.1 |
 | 3 50.7 +78.6 | 146 | 3 50.6 | +78 38 | 7.2 | 3 57.2 | +78 46 |
 6. [[strikethrough]]15[[/strikethrough]] 2 • | 9 | ^[[7.1]] 7.5 | ^[[6.1]] 6.5
 ^[[6.0]] 6.4 |
 | 3 48.2 +78.5 | 142 | 3 47.8 | +78 32 | 8.0 | 3 54.4 | +78 40 |
 60[[strikethrough]]3[[/strikethrough]] • | 9 | 6.9 | 5.9 | 5.8 |
 | 2 47.0 +78.8 | 103 | 2 47.1 | +78 51 | 5.6 | 2 52.8 | +79 1 |
 5.4[[strikethrough]]0[[/strikethrough]] • | 11 | 6.9 | 5.9 | 5.8 |
 | 2 0.0 +78.5 | 73 | 1 59.9 | +78 29 | 7.3 | 2 4.7 | +78 42 |
 5.5[[strikethrough]]3[[/strikethrough]] 10 | 6.5 | 5.5 | 5.4 |
 | 4 15.5 +78.6 | 157 | 4 15.5 | +78 41 | 7.5 |
 [[strikethrough]]2[[/strikethrough]] 22.4 | +78 48 |
 [[strikethrough]]5.95[[/strikethrough]] 6.0 9 | 6.9 | 5.9 | 5.8 |
 | 3 43.9 +79.4 | 125 | 3 43.7 | +79 22 | 8.3 | 3 50.5 | +79 30 |
 6. [[strikethrough]]16[[/strikethrough]] 2 7 | 6.9 | 5.9 | 5.9 |
 | 2 18.2 +79.1 | 75 | 2 18.4 | +79 5 | 7.5 | 2 23.8 | +79 17 |
 5.8[[strikethrough]]0[[/strikethrough]] 13 | 7.3^[[7.1]] | {6.3^[[6.1]] |
 {6.2^[[6.0]] |
 | 2 7.5 +79.1 | 68 | 2 7.2 | +79 6 | 7.7 | 2 12.3 | +79 19 |
 6. [[strikethrough]]17[[/strikethrough]] 2 10 | 7.2 | 6.2 | 6.1 |
 | [[underline]]1 56.2[[/underline]] +79.0 |
 63^[[7[[strikethrough]]3[[/strikethrough]]1]] | 1^[[1]] 56.6^[[56.2]] |
 +79^[[+78]] 0^[[60]] | 6.7^[[7.3]] | 2^[[2]] 1.5^[[1.1]] | +79^[[+79]] 13^[[13]]
 | [[strikethrough]]5.28 5[[/strikethrough]]R
 [[strikethrough]]8[[/strikethrough]] | 6.0 | 5.0 | 4.9 |

199

1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278</
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	--------

| 1 53.0 +78.6 | 69 | 1 53.2 | +78 38 | 7.3 | 1 5.80 | +78 51 |
 5.~~68~~ 7 11 | 6.8 | 5.8 | 5.7 |
 | 4 22.1 +79.4 | 150 | 4 21.7 | +79 21 | 7.0 | 4
~~5.6~~ 28.9 | +~~77~~
 50~~79 27~~ | 6.1~~0~~ | 1 | 6.2 |
 5.2 | 5.1 |
 | 4 6.1 +79.4 | 143 | 4 5.6 | +79 21 | 8.0 | 4 12.6 | +79 28 |
 6.3~~0~~ 7 | 7.0 | 6.0 | 5.9 |
 | 3 27.0 +79.8 | 110 | 3 27.1 | +79 51 | 7.8 | 3 33.9 | +80 0 |
 6.3~~0~~ 9 | 7.2 | 6.2 | 6.2 |
 | 2 55.5 +79.6 | 94 | 2 55.4 | +79 36 | 7.3 | 3 1.6 | +79 47 |
 5.9~~2~~ 8 | 6.9^{6.7} | {5.9^{5.7}} |
 {5.9^{5.7}} |
 | 2 49.9 +79.7 | 91 | 2 49.5 | +79 44 | 8.3 | 2 55.7 | +79 55 |
 6.~~15~~ 2 9 | 7.1 | 6.1 | 6.1 |
 | 3 55 +80.2 | 127 | 3 53.8 | +80 9 | 6.8 | 4
~~0.9~~ 1.1 | +80 17 |
 5.6~~5~~ 9 | 6.8^{6.5} | {5.9^{5.5}} |
 {5.8^{5.5}} |
 | 3 47 +80.3 | 125 | 3 46.0 | +80 18 | 4.9 | 3 53.3 | +80 26 |
 4.~~58~~ 6 7 | 5.3 | 4.3 | 4.3 |
 | 2 10 +79.9 | 69 | 2 10.0 | +79 57 | 8.3 | 2 15.3 | +80 10 |
 6.3~~3~~ 10 | 7.3 | 6.3 | 6.3 |
 | 2 4 +80.1 | 70 | 2 3.3 | +80 3 | 7.7 | 2 8.6 | +80 16 |
 5.7~~4~~ 11 | 6.8 | 5.8 | 5.8 |

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

202

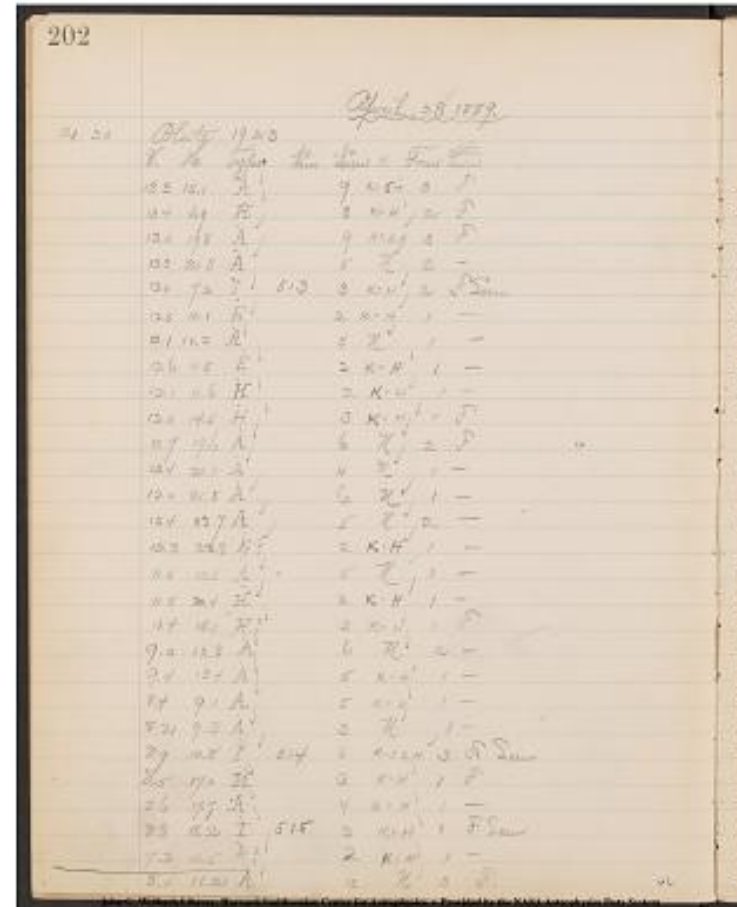
April 28 1889.

21 30 Plate 1923

[[8 columned table]]

V. | H. | Type | No. Rem. | No. Lines. | K | Focus | Other Lines |

13.3	15.11	A			9	K=	5H 3 F
13.4	16.9	H			3	K=H	2 F
13.0	19.8	A			9	K=	2H 3 F
13.3	21.5	A			5	N	2 -
12.0	7.2	H	513		3	K=H	2 F Seen
12.5	10.1	E			2	K=H	1 -
12.1	10.2	A			5	N	1 -
12.6	11.5	E			2	K=H	1 -
12.1	11.6	H			2	K=H	1 -
12.0	14.5	H			3	K=H	1 F
12.7	19.6	A			6	N	2 F
12.0	21.8	A			6	N	1 -
12.4	23.7	A			5	N	1 -
12.3	23.8	E?			2	K=H	1 -
11.5	10.5	A			5	N	1 -
11.5	20.4	H			2	K=H	1 -
10.4	15.1	H?			3	K=H	1 F
9.0	12.8	A			6	N	2 -
9.4	13.4	A			5	K=H	1 -
8.4	9.1	A			5	K=H	1 -
8.2	9.3	A			3	N	1 -
8.9	10.8	H	514		3	K=	1.2H 3 F Seen
8.5	17.0	H			3	K=H	1 F
8.6	17.7	A			4	K=H	1 -
8.8	18.2	H	515		3	K=H	1 F Seen
7.2	10.5	H?			2	K=H	1 -
8.0	11.2	A			10	N	3 F



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

205

[12 columned table]

- | D.M.No. | R.A. | Dec. | Mag. | R.A.^[[1900]] | Dec. | D.C. Mean | Diff. |
Br. | - | C. Br.

--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
5 1 +83.7 | 141 | 5 0.6 | +83 43 | 7.1 | 5 11.8 | +83 47 |
5.3[[~~5.3~~]]4[[~~4~~]] | 12 | 6.5 | 5.5 | 5.6
2 59 +84.4 | 59 | 2 58.8 | +84 23 | 6.0 | 3 8.4 | +84 34 |
[[~~5.1~~]]6.32[[~~5.1~~]]5.1 |
[[~~5.1~~]]5[[~~5.1~~]]7 | 6.0^[[5.8]] | 5.0^[[4.8]] | 5.2^[[5.0]]
0 42 +82.9 | 20 | 0 41.6 | +82 55 | 6.5 | 0 45.5 | +83 10 |
4. [[~~5.1~~]]38[[~~5.1~~]]4 | 8 | 5.2 | 4.2 | 4.2
4 21 +84.6 | 88 | 4 21.2 | +84 36 | 7.7 | 4 33.4 | +84 42 |
5. [[~~5.1~~]]77^[[8]] | [[~~5.1~~]]11 | 6.9 | 5.9 | 6.1
0 50 +83.7 | 20 | 0 48.4 | +83 49 | 7.0 | 0 52.8 | +84 4 | 6. [[~~5.1~~]]
38^[[4]] | [[~~5.1~~]]13 | 6.5 | 5.5 | 5.6
3 53 +85.2 | 63 | 3 52.4 | +85 10 | 6.5 | 4 5.1 | +85 17 |
[[~~5.1~~]]6.72[[~~5.1~~]]5.5 |
[[~~5.1~~]]0[[~~5.1~~]]12 | 6.7 | 5.7 | 5.9
2 15 +85.2 | 45 | 2 14.2 | +85 10 | 8.6 | 2 23.2 | +85 22 |
[[~~5.1~~]]7.10[[~~5.1~~]]5.8 |
[[~~5.1~~]]3[[~~5.1~~]]10 | 6.8 | 5.8 | 6.0
1 51 +85.0 | 41 | 1 50.8 | +85 2 | 7.7 | 1 58.8 | +85 16 | [[~~5.1~~]]
7.07^[[7.2]] | [[~~5.1~~]]10[[~~5.1~~]]3[[~~5.1~~]] |
7.1^[[6.9]] | 6.1^[[5.9]] | 6.3^[[6.1]]
0 26 +83.8 | 9 | 0 26.3 | +83 53 | 7.8 | 0 29.8 | +84 8 | [[~~5.1~~]]
6.87^[[9]] | [[~~5.1~~]]5.4 | [[~~5.1~~]]0[[~~5.1~~]]12 | 6.9
| 5.9 | 6.0
4 55 +85.5 | 78 | 4 55.1 | +85 32 | 7.0 | 5 9.9 | +85 36 |
[[~~5.1~~]]6.63[[~~5.1~~]]5.3 |
[[~~5.1~~]]7[[~~5.1~~]]6 | 5.9 | 4.9 | 5.2
4 40 +85.7 | 74 | 4 41.0 | +85 45 | 6.0 | 4 56.3 | +85 50 | [[~~5.1~~]]
6.88^[[9]] | [[~~5.1~~]]5.6 | [[~~5.1~~]]6[[~~5.1~~]]7 | 6.3 |
5.3 | 5.6
4 31 +86.1 | 66 | 4 30.2 | +86 4 | 8.0 | 4 46.3 | +86 10 |
7. [[~~5.1~~]]35[[~~5.1~~]]4 | - | - | -
3 10 +86.2 | 51 | 3 19.5 | +86 11 | 6.0 | 3 33.6 | +86 20 | [[~~5.1~~]]
7.35^[[6.47]] | [[~~5.1~~]]5.7 | [[~~5.1~~]]8[[~~5.1~~]]6 |
5.7 | 4.7 | 5.0
0 50 +85.5 | 19 | 0 49.7 | +85 29 | 5.0 | 0 54.9 | +85 43 |
[[~~5.1~~]]5.85[[~~5.1~~]]4.5 |
[[~~5.1~~]]6[[~~5.1~~]]7 | 5.6^[[5.2]] | 4.6^[[4.2]] | 4.9^[[4.5]]

Br. + Mean Cor.Br

Mean -.4 + Cor S

4 54.9 +76.3 | 190 | 4 54.3 | +76 17 | 6.7 | 5 0.5 | +76 21 |
5.3[[~~5.3~~]]3[[~~5.3~~]] | 4 | 5.7 | 5.3 | 5.1
4 29.9 +75.6 | 189 | 4 29.4 | +75 40 | 6.0 | 4 35.4 | +75 46 |
5. [[~~5.1~~]]28[[~~5.1~~]]3 | 5 | 5.8 | 5.4 | 5.2
4 3 +75.7 | 173 | 4 2.4 | +75 45 | 6.8 | 4 8.2 | +75 52 |
5.6[[~~5.1~~]]0[[~~5.1~~]] | 8 | 6.4 | 6.0 | 5.8
4 26.2 +76.4 | 174 | 4 26.0 | +76 19 | 6.3 | 4 32.1 | +76 25 |
5.7[[~~5.1~~]]0[[~~5.1~~]] | 8 | 6.5 | 6.1 | 5.9
5 19 +77.4 | 201 | 5 19.6 | +77 26 | 8.3 | 5 26.3 | +77 29 |
6. [[~~5.1~~]]18[[~~5.1~~]]2 | 10 | 7.2 | 6.8 | 6.6
5 7.9 +77.8 | 195 | 5 7.2 | +77 50 | 7.0 | 5 14.0 | +77 53 |
5. [[~~5.1~~]]37[[~~5.1~~]]4 | 3 | 5.7 | 5.3 | 5.2
4 12 +77.3 | 162 | 4 11.5 | +77 18 | 7.8 | 4
17. [[~~5.1~~]]8[[~~5.1~~]]9 | +77 25 | - | - | 7.4 | 7.0 | 6.8
5 11.9 +78.2 | 190 | 5 11.4 | +78 12 | 7.7 | 5 18.4 | +78 15 |
6. [[~~5.1~~]]08[[~~5.1~~]] | 5 | 6.6 | 6.2 | 6.1

205

5 6.7 +78.2 | 187 | 5 6.1 | +78 8 | 7.0 | 5 13.1 | +78 13 |
5.7~~3~~ | 4 | 6.1 | 5.7 | 5.6
5 3.8 +78.3 | 183 | 5 3.4 | +78 16 | 6.8 | 5 10.4 | +78 19 |
6.~~08~~ | 5 | 7.0⁶ | 6.6^{6.2} |
6.5^{6.1}
4 58.8 +78.2 | 180 | 4 58.2 | +78 11 | 8.0 | 5 5.1 | +78 15 |
6.3~~3~~ | 10 | 7.3 | 6.9 | 6.8

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

206

April 28, 1889

Plate 3132

[[left margin]]

6.3}

6.5}

[[/left margin]]

[[8 columned table]]

V	H	Type	No.	Rem.	No.	Lines	K	Focus	Other Lines.
18.6	20.0	H?	2				K=H	1	—
17.0	5.8	M?	522	2			K=H	1	—
17.2	6.1	A	4		N	1			—
17.0	6.6	A	5		N	1			—
17.0	18.0	A	5				K=H	2	—
17.8	21.7	H	2				K=H	1	—
17.3	22.8	A	3		N	1			—
17.5	23.2	A	6		N	2		F	
16.8	13.9	E	523	3			K=1.2H	4	F. Seen
16.8	19.5	A	3		N	1			—
16.5	20.4	H	2				K=H	1	—
16.6	20.7	A	5		N	1			—
15.5	7.3	H	2				K=H	1	—
15.4	9.0	A	4		N	1			—
15.3	13.0	A	7				K=.2H	2	F
15.8	17.1	A	8		N	3	F		
15.5	18.6	H?	2				K=H	1	—
15.0	20.6	A	5		N	1			—
14.0	6.7	F	524	3			K=1.5H	3	F. Seen
14.1	7.2	A	8		N	2		F	
13.4	9.3	F?	525	2			K=H	1	—
13.5	11.7	A	4				K=H	1	—
13.8	16.7	H	2				K=H	1	—
13.4	17.0	H	2				K=H	1	—
13.4	17.6	A	6				K=.8H	2	F
13.1	18.2	A	8				K=.2H	2	F
13.4	18.4	K	526	3			K=1.2H	3	F. Br. Seen.
13.8	19.2	I?	527	3			K=H	2	F. Seen

206

April 28, 1889

Plate 3132

V	H	Type	No.	Rem.	No.	Lines	K	Focus	Other Lines.
18.6	20.0	H?	2				K=H	1	—
17.0	5.8	M?	522	2			K=H	1	—
17.2	6.1	A	4		N	1			—
17.0	6.6	A	5		N	1			—
17.0	18.0	A	5				K=H	2	—
17.8	21.7	H	2				K=H	1	—
17.3	22.8	A	3		N	1			—
17.5	23.2	A	6		N	2		F	
16.8	13.9	E	523	3			K=1.2H	4	F. Seen
16.8	19.5	A	3		N	1			—
16.5	20.4	H	2				K=H	1	—
16.6	20.7	A	5		N	1			—
15.5	7.3	H	2				K=H	1	—
15.4	9.0	A	4		N	1			—
15.3	13.0	A	7				K=.2H	2	F
15.8	17.1	A	8		N	3	F		
15.5	18.6	H?	2				K=H	1	—
15.0	20.6	A	5		N	1			—
14.0	6.7	F	524	3			K=1.5H	3	F. Seen
14.1	7.2	A	8		N	2		F	
13.4	9.3	F?	525	2			K=H	1	—
13.5	11.7	A	4				K=H	1	—
13.8	16.7	H	2				K=H	1	—
13.4	17.0	H	2				K=H	1	—
13.4	17.6	A	6				K=.8H	2	F
13.1	18.2	A	8				K=.2H	2	F
13.4	18.4	K	526	3			K=1.2H	3	F. Br. Seen.
13.8	19.2	I?	527	3			K=H	2	F. Seen

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20

Transcribed and Reviewed by Digital Volunteers

Extracted Aug-29-2022 02:37:24

[12 columned table]

- | D.M.No. | R.A | Dec. | Mag. | R.A^[[1900]] | Dec. | D.C. Mean | Diff. |
Br. | - | -

~~3 59.8 +77.7~~ | 150 | 3 59.3 | +77 42 | 7.0 | 4 5.6 | +77 50 |
~~6.1~~ | ~~0~~ | ~~6.9~~ | ~~7.3~~ | ~~6.9~~ | ~~6.5~~ |
~~6.8~~ | ~~6.4~~ |
 6 18.0 +78.1 | 227 | 6 18.0 | +78 7 | 6.0 | 6 24.9 | +78 4 |
~~5.8~~ | ~~4~~ | ~~7.2~~ | ~~6.3~~ | ~~6.8~~ | ~~5.9~~ |
~~6.7~~ | ~~5.8~~ |
 6 14.3 +78.0 | 247 | 6 14.2 | +77 60 | 7.5 | 6 21.0 | +77 59 |
~~5.9~~ | ~~0~~ | ~~6.8~~ | ~~6.4~~ | ~~6.3~~ |
 6 11.0 +78.3 | 226 | 6 10.5 | +78 17 | 7.5 | 6 17.4 | +78 16 |
~~5.6~~ | ~~3~~ | ~~6.2~~ | ~~5.8~~ | ~~5.7~~ |
 4 15.8 +78.7 | 157 | 4 15.5 | +78 41 | 7.5 | 4 22.4 | +78 48 |
~~5.95~~ | ~~6.0~~ | ~~3~~ | ~~6.3~~ | ~~5.9~~ | ~~5.8~~ |
 3 43.0 +77.7 | 138 | 3 43.0 | +77 46 | 7.0 | 3 49.2 | +77 54 |
~~6~~ | ~~17~~ | ~~7.3~~ | ~~6.9~~ | ~~6.5~~ |
~~6.8~~ | ~~6.4~~ |
 3 31 +77.8 | 134 | 3 30.7 | +77 51 | 8.0 | 3 36.8 | +78 0 |
~~6~~ | ~~38~~ | ~~6.9~~ | ~~6.5~~ | ~~6.4~~ |
 3 29.5 +77.6 | 133 | 3 29.0 | +77 39 | 7.2 | 3 35.0 | +77 48 |
~~5.6~~ | ~~1~~ | ~~5.8~~ | ~~5.4~~ | ~~5.3~~ |
 4 58 +79.1 | 169 | 4 58.8 |
~~58.7~~ | ~~5.2~~ |
~~9.0~~ | ~~5.6~~ | +79 7 |
~~4.6~~ | ~~2~~ | ~~4.8~~ | ~~4.4~~ | ~~4.3~~ |
 4 0.0 +78.6 | 151 | 4 0.2 | +78 38 | 8.2 | 4 7.0 | +78 46 |
~~6.2~~ | ~~0~~ | ~~7.0~~ | ~~6.6~~ | ~~6.5~~ |
 3 50.9 +78.6 | 146 | 3 50.6 | +78 38 | 7.2 | 3 57.2 | +78 46 |
~~6~~ | ~~15~~ | ~~7.2~~ | ~~6.7~~ | ~~6.8~~ | ~~6.3~~ |
~~6.7~~ | ~~6.2~~ |
 3 48 +78.5 | 142 | 3 47.8 | +78 32 | 8.0 | 3 54.4 | +78 40 |
~~6.0~~ | ~~2~~ | ~~6.6~~ | ~~6.2~~ | ~~6.1~~ |
 6 10 +79.1 | 202 | 6 9.2 | +79 4 | 7.0 | 6 16.5 | +79 3 |
~~6.1~~ | ~~2~~ | ~~7.1~~ | ~~6.6~~ | ~~6.7~~ | ~~6.2~~ |
~~6.6~~ | ~~6.1~~ |
 5 54 +79.4 | 196 | 5 53.0 | +79 21 | 7.8 | 6 0.4 | +79 21 |
~~6.2~~ | ~~0~~ | ~~6.8~~ | ~~6.4~~ | ~~6.3~~ |
 5 9 +79.6 | 173 | 5 9.0 | +79 43 | 7.7 | 5 16.6 | +79 51 | 5
 16.6 | +79 46 | 5.6 | 4 22.9 | +79 27 |
 4 22 +79.4 | 150 | 4 21.7 | +79 21 | 7.0 | 4 28.9 | +79 27 |
~~5~~ | ~~3~~ | ~~5.3~~ | ~~4.9~~ | ~~4.8~~ |
 4 7 +79.4 | 143 | 4 5.6 | +79 21 | 8.0 | 4 12.6 | +79 28 |
~~6.3~~ | ~~0~~ | ~~7.0~~ | ~~6.8~~ | ~~6.6~~ | ~~6.4~~ |
~~6.5~~ | ~~6.3~~ |
 3 45 +79.4 | 125 | 3 45.7 | +79 22 | 8.3 | 3 50.5 | +79 30 |
~~6~~ | ~~16~~ | ~~6.4~~ | ~~6.0~~ | ~~6.0~~ |
 6 22 +79.7 | 212 | 6 21.4 | +79 42 | 5.5 | 6 29.2 | +79 41 |
~~4~~ | ~~9~~ | ~~5.1~~ | ~~4.7~~ | ~~4.7~~ |
 6 16 +79.7 | 208 | 6 15.4 | +79 41 | 6.3 | 6
~~23.1~~ | +79 40 |
~~5~~ | ~~2~~ | ~~5.6~~ | ~~5.2~~ | ~~5.2~~ |
 5 55 +80.4 | 202 | 5 54.0 | +80 24 | 7.8 | 6 2.3 | +80 24 |
~~6~~ | ~~6~~ | ~~6.8~~ | ~~6.4~~ | ~~6.4~~ |
 5 26 +80.5 | 181 | 5 25.4 | +80 32 | 7.9 | 5 33.7 | +80 34 |
~~6.2~~ | ~~3~~ | ~~6.8~~ | ~~6.4~~ | ~~6.4~~ |
 4 24 +80.4 | 149 | 4 23.8 | +80 22 | 8.1 | 4 31.6 | +80 28 |

207

Star	Alt. Dec.	Mag.	R.A. 1900	Dec.	D.C. Mean	Diff.
3 39.8 +77.7	150	3 39.3 +77 42	7.0	4 5.6	+77 50	
6.1	0	6.9	7.3	6.9	6.5	
6.8	6.4					
6 18.0 +78.1	227	6 18.0 +78 7	6.0	6 24.9	+78 4	
5.8	4	7.2	6.3	6.8	5.9	
6.7	5.8					
6 14.3 +78.0	247	6 14.2 +77 60	7.5	6 21.0	+77 59	
5.9	0	6.8	6.4	6.3		
6 11.0 +78.3	226	6 10.5 +78 17	7.5	6 17.4	+78 16	
5.6	3	6.2	5.8	5.7		
4 15.8 +78.7	157	4 15.5 +78 41	7.5	4 22.4	+78 48	
5.95	6.0	3	6.3	5.9	5.8	
3 43.0 +77.7	138	3 43.0 +77 46	7.0	3 49.2	+77 54	
6	17	7.3	6.9	6.5		
6.8	6.4					
3 31 +77.8	134	3 30.7 +77 51	8.0	3 36.8	+78 0	
6	38	6.9	6.5	6.4		
3 29.5 +77.6	133	3 29.0 +77 39	7.2	3 35.0	+77 48	
5.6	1	5.8	5.4	5.3		
4 58 +79.1	169	4 58.8				
58.7	5.2					
9.0	5.6	+79 7				
4.6	2	4.8	4.4	4.3		
4 0.0 +78.6	151	4 0.2 +78 38	8.2	4 7.0	+78 46	
6.2	0	7.0	6.6	6.5		
3 50.9 +78.6	146	3 50.6 +78 38	7.2	3 57.2	+78 46	
6	15	7.2	6.7	6.8	6.3	
6.7	6.2					
3 48 +78.5	142	3 47.8 +78 32	8.0	3 54.4	+78 40	
6.0	2	6.6	6.2	6.1		
6 10 +79.1	202	6 9.2 +79 4	7.0	6 16.5	+79 3	
6.1	2	7.1	6.6	6.7	6.2	
6.6	6.1					
5 54 +79.4	196	5 53.0 +79 21	7.8	6 0.4	+79 21	
6.2	0	6.8	6.4	6.3		
5 9 +79.6	173	5 9.0 +79 43	7.7	5 16.6	+79 51	5
16.6	+79 46	5.6	4 22.9	+79 27	5.5	5.5
4 22 +79.4	150	4 21.7 +79 21	7.0	4 28.9	+79 27	
5	3	5.3	4.9	4.8		
4 7 +79.4	143	4 5.6 +79 21	8.0	4 12.6	+79 28	
6.3	0	7.0	6.8	6.6	6.4	
6.5	6.3					
3 45 +79.4	125	3 45.7 +79 22	8.3	3 50.5	+79 30	
6	16	6.4	6.0	6.0		
6 22 +79.7	212	6 21.4 +79 42	5.5	6 29.2	+79 41	
4	9	5.1	4.7	4.7		
6 16 +79.7	208	6 15.4 +79 41	6.3	6		
23.1	+79 40					
5	2	5.6	5.2	5.2		
5 55 +80.4	202	5 54.0 +80 24	7.8	6 2.3	+80 24	
6	6	6.8	6.4	6.4		
5 26 +80.5	181	5 25.4 +80 32	7.9	5 33.7	+80 34	
6.2	3	6.8	6.4	6.4		
4 24 +80.4	149	4 23.8 +80 22	8.1	4 31.6	+80 28	

~~6~~~~55~~ | 6 | 7.6^{[[7.2]]} | 7.2^{[[6.8]]} |
 7.2^{[[6.8]]}
 4 19 +80.5 | 146 | 4 19.5 | +80 32 | 8.0 | 4 27.3 | +80 38 |
~~6~~~~55~~ | 7 | 7.6^{[[7.3]]} | 7.2^{[[6.9]]} |
 7.2^{[[6.9]]}
 4 12 +80.5 | 140 | 4 11.4 | +80 33 | 7.4 | 4 19.2 | +80 40 |
~~5.8~~~~4~~ | 3 | 6.1 | 5.7 | 5.7
 4 5 +80.6 | 134 | 4 4.2 | +80 35 | 7.4 | 4 11.9 | +80 42 |
~~5.6~~~~4~~ | 2 | 5.8 | 5.4 | 5.4
 4 2 +80.5 | 133 | 4 2.0 | +80 28 | 5.7 | 4 9.6 | +80 35 |
~~5.2~~~~5~~ | 0 | 5.8^{[[5.2]]} | 5.4^{[[4.8]]} |
 5.4^{[[4.8]]}
 3 55 +80.1 | 127 | 3 53.8 | +80 9 | 6.8 | 4 1.1 | +80 17 |
~~5.6~~~~5~~ | 3 | 6.3^{[[5.9]]} | 5.9^{[[5.5]]} |
 5.9^{[[5.5]]}

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

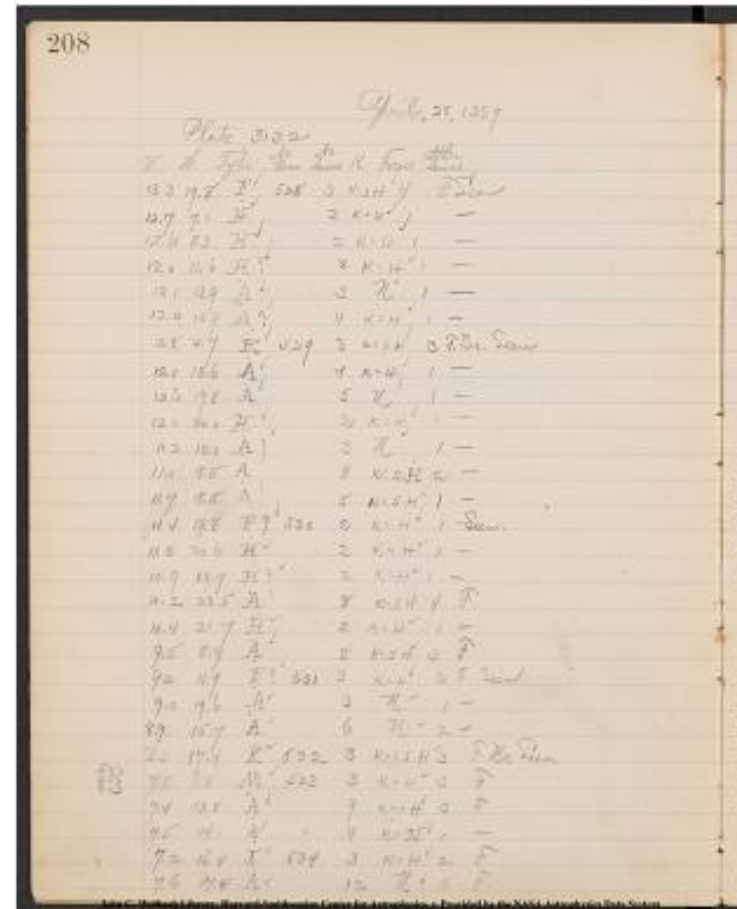
208

April, 28th, 1889

Plate 3132

[[8 columned table]]

V.	H.	Type	No. Rem.	No. Lines	K.	Focus	Other Lines
13.3	19.8	F	528	3	K=.5H	4	F. Seen
12.7	7.1	H	2	K=H	1		
12.6	8.3	H	2	K=H	1		
12.0	11.6	H?	2	K=H	1		
12.1	12.9	A	3	N	1		
12.0	15.9	A?	4	K=H	1		
12.8	15.7	K	529	3	K=.5H	3	F. Br. Seen.
12.0	18.6	A	4	K=H	1		
12.6	19.8	A	5	N	1		
12.1	20.0	H	2	K=H	1		
11.2	12.0	A?	3	N	1		
11.0	18.5	A	8	K=.2H	2		
11.7	18.5	A	5	K=.5H	1		
11.4	19.8	F?	530	2	K=H	1	Seen.
11.3	20.6	H	2	K=H	1		
10.9	19.7	H?	2	K=H	1		
10.2	23.5	A	8	K=.5H	4	F	
10.4	21.7	H	2	K=H	1		
9.5	8.9	A	8	K=.5H	3	F	
9.2	11.9	F?	531	3	K=H	2	F Seen
9.0	19.6	A	3	N	1		
8.9	15.7	A	6	N	2		
8.5	17.4	K	532	3	K=1.5H	3	F. Br. Seen.
6.0	[[5.5]]	[[5.3]]	7.5	6.5	M	533	3 K=H 3 F
7.4	13.8	A	9	K=.1H	3	F	
7.5	14.1	A	4	K=H	1		
7.2	16.4	I	534	3	K=H	2	F
7.6	17.4	A	12	N	5	F	



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[12 columned table]

- | D.M.No. | R.A. | Dec. | Mag. | R.A.^h[1900] | Dec. | D.C. Mean | Diff. |
Br. | - | -

--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
 3 47 +80.3 | 125 | 3 46.0 | +80 18 | 4.9 | 3 53.3 | +80 26 |
 2. ~~58~~ | ~~6~~ | 0 | 4.6 | 4.2 | 4.2
~~5~~ | ~~6~~ | 21 +80.3 |
~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~
 20.0 | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~
 18 | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~
~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~
 28.0 | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~
 21 | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~ | ~~8.2~~
~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~ | ~~6.3~~
~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~
 7.6 | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~ | ~~5~~
 6 10 +80.6 | 210 | 6 8.6 | +80 39 | 7.2 | 6 16.9 | +80 38 |
 6.1 | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~
 7.2 | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~ | ~~6.1~~
 5 30 +81.3 | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~
 8 | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~
 8 | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~
 6.0 | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~
 7.1 | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~ | ~~183~~
 5 14 +81.3 | 187 | 5 11.7 | +81 16 | 8.6 | 5 20.4 | +81 19 | - | - | 7.3 | 6.9 |
 6.9
 4 32 +81.3 | 168 | 4 31.0 | +81 23 | 8.5 | 4 39.5 | +81 29 |
 6.1 | ~~168~~ | ~~168~~ | ~~168~~ | ~~168~~ | ~~168~~ | ~~168~~ | ~~168~~ | ~~168~~ | ~~168~~ | ~~168~~ | ~~168~~
 4 35 +80.9 | 155 | 4 33.4 | +80 56 | 5.5 | 4 41.6 | +81 2 |
 5.0 | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~
 5.3 | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~ | ~~155~~
 3 56 +81.1 | 149 | 3 55.2 | +81 3 | 8.3 | 4 3.0 | +81 11 |
 6 | ~~149~~ | ~~149~~ | ~~149~~ | ~~149~~ | ~~149~~ | ~~149~~ | ~~149~~ | ~~149~~ | ~~149~~ | ~~149~~ | ~~149~~
 3 44 +80.6 | 123 | 3 43.3 | +80 33 | 8.3 | 3 50.7 | +80 41 |
 6 | ~~123~~ | ~~123~~ | ~~123~~ | ~~123~~ | ~~123~~ | ~~123~~ | ~~123~~ | ~~123~~ | ~~123~~ | ~~123~~ | ~~123~~
 3 39 +80.8 | 121 | 3 38.9 | +80 48 | 7.8 | 3 46.4 | +80 57 |
 6.4 | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~
 7.2 | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~ | ~~121~~
 5 26 +81.7 | 192 | 5 25.8 | +81 43 | 8.5 | 5 35.0 | +81 45 |
 6.0 | ~~192~~ | ~~192~~ | ~~192~~ | ~~192~~ | ~~192~~ | ~~192~~ | ~~192~~ | ~~192~~ | ~~192~~ | ~~192~~ | ~~192~~
 3 55 +81.6 | 147 | 3 53.8 | +81 36 | 7.5 | 4 2.0 | +81 44 |
 5 | ~~147~~ | ~~147~~ | ~~147~~ | ~~147~~ | ~~147~~ | ~~147~~ | ~~147~~ | ~~147~~ | ~~147~~ | ~~147~~ | ~~147~~
 3 56 +81.3 | 150 | 3 55.7 | +81 15 | 7.9 | 4 3.6 | +81 23 |
 5.8 | ~~150~~ | ~~150~~ | ~~150~~ | ~~150~~ | ~~150~~ | ~~150~~ | ~~150~~ | ~~150~~ | ~~150~~ | ~~150~~ | ~~150~~
 3 38 +81.2 | 135 | 3 38.2 | +81 9 | 7.8 | 3 45.8 | +81 18 |
 6.0 | ~~135~~ | ~~135~~ | ~~135~~ | ~~135~~ | ~~135~~ | ~~135~~ | ~~135~~ | ~~135~~ | ~~135~~ | ~~135~~ | ~~135~~
 3 30 +81.1 | 125 | 3 28.8 | +81 6 | 7.9 | 3 36.3 | +81 14 | - | - | 7.4 | ~~7.2~~ |
 7.0 | ~~125~~ | ~~125~~ | ~~125~~ | ~~125~~ | ~~125~~ | ~~125~~ | ~~125~~ | ~~125~~ | ~~125~~ | ~~125~~ | ~~125~~
 3 37 +81.5 | 134 | 3 37.6 | +81 27 | 7.8 | 3 45.5 | +81 36 |
 6.2 | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~
 6.6 | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~ | ~~134~~
 2 50 +80.8 | 97 | 2 49.6 | +80 54 | 5.5 | 2 56.2 | +81 5 |
 4.8 | ~~97~~ | ~~97~~ | ~~97~~ | ~~97~~ | ~~97~~ | ~~97~~ | ~~97~~ | ~~97~~ | ~~97~~ | ~~97~~ | ~~97~~
 3 13 +81.3 | 112 | 3 11.0 | +81 17 | 8.4 | 3 18.2 | +81 27 | - | - | 7.6 | ~~7.2~~ |
 7.2 | ~~112~~ | ~~112~~ | ~~112~~ | ~~112~~ | ~~112~~ | ~~112~~ | ~~112~~ | ~~112~~ | ~~112~~ | ~~112~~ | ~~112~~
 6 15 +82.2 | 177 | 6 13.8 | +82 13 | 6.7 | 6 23.4 | +82 12 |
 5 | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~ | ~~177~~
 5 31 +82.7 | 152 | 5 30.2 | +82 42 | 7.6 | 5 40.3 | +82 44 |
 6.0 | ~~152~~ | ~~152~~ | ~~152~~ | ~~152~~ | ~~152~~ | ~~152~~ | ~~152~~ | ~~152~~ | ~~152~~ | ~~152~~ | ~~152~~
 3 32 +82.3 | 101 | 3 30.5 | +82 17 | 8.4 | 3 38.8 | +82 26 |

209

~~6.~~~~35~~~~4~~ | 6 | 7.0 | 6.6 | 6.6
 4 27 +82.8 | 125 | 4 27.1 | +82 56 | 8.5 | 4 37.0 | +83 2 |
~~5.7~~~~2~~ | 1 | 5.8 | 5.4 | 5.4
 3 58 +82.9 | 113 | 3 58.5 | +82 59 | 5.0 | 4 8.0 | +83 6 |
~~4.97~~~~5.0~~ | 2 | 5.3^{[[4.8]]} | 4.9^{[[4.4]]} |
 4.9^{[[4.4]]}
 7 1 +82.7 | 201 | 7 0.3 | +82 40 | 5.5 | 7 10.0 | +82 36 |
~~2.99~~~~5.00~~ | 3 | 6.2^{[[5.3]]} | 5.8^{[[4.9]]} |
 5.8^{[[4.9]]}
 5 1 +83.7 | 141 | 5 0.6 | +83 43 | 7.1 | 5 11.8 | +83 47 |
~~5.3~~~~4~~ | 1 | 5.2 | 4.8 | 4.9
 4 55 +83.6^{[[R]]} | 137^{[[135]]} | 4 53.8^{[[4 50.0]]} | +83 39^{[[+83 41]]} |
 8.7^{[[9.5]]} | 5 4.9 | +83 43 | - | - | 7.0 | 6.6 | 6.7
 4 13 +83.9 | 114 | 4 11.0 | +83 43 | 7.4 | 4 21.5 | +83 50 |
~~6.0~~~~0~~ | 4 | 6.9^{[[6.4]]} | 6.5^{[[6.0]]} |
 6.6^{[[6.1]]}
 3 55 +83.4 | 104 | 3 55.1 | +83 26 | 5.0 | 4 5.0 | +83 34 |
~~5.~~~~38~~~~4~~ | - | B | B | B

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

210

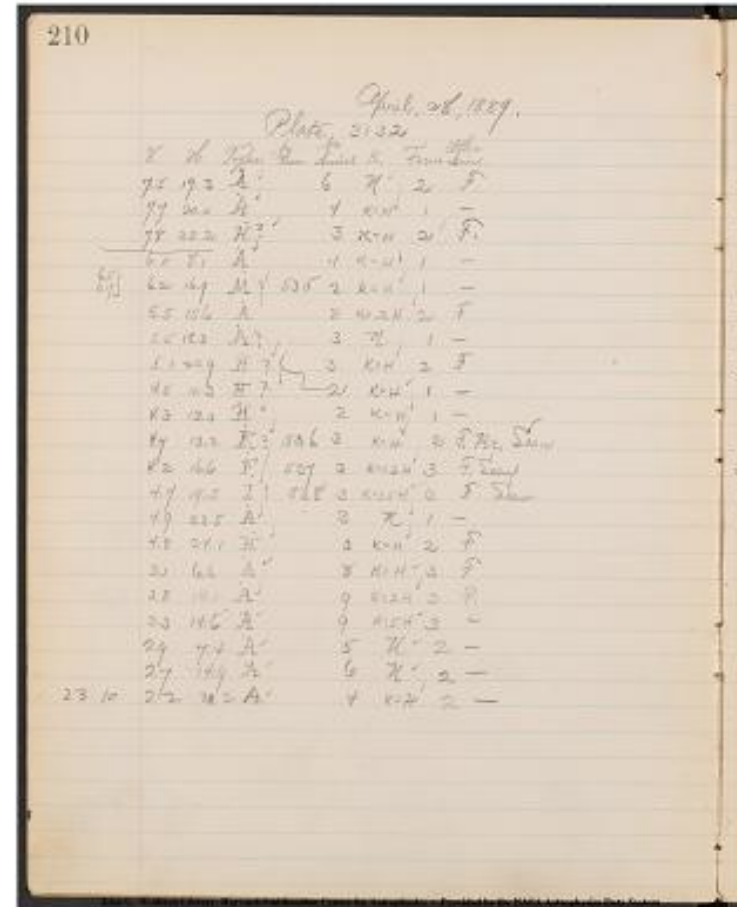
April 28, 1889.

Plate 3132.

[[8 columned table]]

| V | H | Type | No. Rem. | No. Lines | K | Focus | Other Lines. |

7.5	19.3	A	---	6	N	2	F
7.7	20.0	A	---	4	K=H	1	-
7.8	22.2	H?	---	3	K=H	2	F
6.0	8.1	A	---	4	K=H	1	-
6.2	16.9	M?	535	2	K=H	2	F
5.5	15.6	A	---	8	K=	2	H
5.5	18.3	A?	---	3	N	1	-
5.1	22.9	H?	---	3	K=H	2	F
4.5	10.3	H?	---	2	K=H	1	-
4.3	13.0	H	---	2	K=H	1	-
4.7	13.2	K?	536	3	K=H	2	F. Br. Seen
4.2	16.6	F	537	3	K=	1.2	H
4.7	19.5	I?	538	3	K=	1.5	H
4.9	23.5	A	---	3	u	1	-
4.8	24.1	H	---	3	K=H	2	F
3.1	6.6	A	---	8	K=H	3	F
3.8	14.1	A	---	9	K=	2	H
3.3	14.6	A	---	9	K=	5	H
2.9	7.4	A	---	5	u	2	-
2.7	14.9	A	---	5	u	2	-
23	10	2.2	20.2	A	---	4	K=H



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

212

St. Lt. 4.8, F m. & c. 7.1-6.8 F. ch. 7.2. Box No. 500

R.A. 6^h 50^m Dec. +82

May 1, 1889

Plate 3133

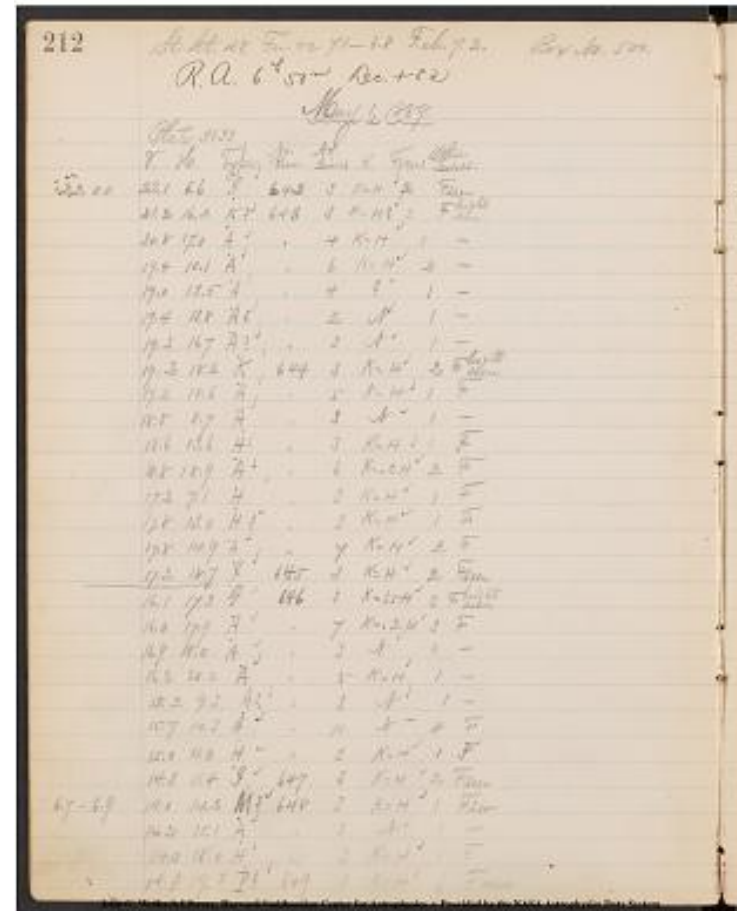
[[8 columned table]]

V. | H. | Type | No. Rem. | No. Lines | K | Focus | Other Lines.

--- | --- | --- | --- | --- | --- | --- | ---
[[left margin]]22 00[[/left margin]] 22.1 | 6.6 | [[symbol]] | 642 | 3 | K=H | 2
| F seen

21.2	16.2	K?	643	3	K=H?	3	F hight seen	
20.8	17.0	A	4	K=H	1	-		
19.4	10.1	A	6	K=H	2	-		
19.0	13.5	A	4	?	1	-		
19.4	13.8	A?	2	N	1	-		
19.2	16.7	A?	3	N	1	-		
19.2	18.2	K	644	3	K=H	2	F hight seen	
19.2	18.6	A	5	K=H	1	F		
18.8	8.7	A	3	N	1	-		
18.6	13.6	H	3	K=H	1	F		
18.8	18.9	A	6	K=2H	2	F		
17.2	7.1	H	3	K=H	1	F		
17.8	13.0	H?	3	K=H	1	F		
17.8	14.9	A	7	K=H	2	F		
17.2	18.7	[[symbol]]	645	3	K=H	2	F seen	
16.1	17.3	[[symbol]]	646	3	K=1.5H	3	F hight seen	
16.0	17.9	A	7	K=2H	3	F		
16.9	18.0	A	3	N	1	-		
16.2	20.0	A	5	K=H	1	-		
15.2	9.3	A?	3	N	1	-		
15.7	10.3	A	10	N	4	F		
15.0	11.0	H	3	K=H	1	F		
14.3	11.4	[[symbol]]	647	3	K=H	2	F seen	
[[left margin]]6.7-6.9[[/left margin]]	14.0	14.2	M?	648	3	K=H	1	F seen
14.2	15.1	A	3	N	1	-		
14.0	18.0	H	3	K=H	1	F		
14.3	19.3	F?	649	3	K=H	1	F seen	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
* Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

R.R. Co. Sta. Jan. 1890				R.R. Co. Sta. Jan. 1890			
St. No.	Sta.	Dist.	Time	St. No.	Sta.	Dist.	Time
1	100	1.00	1.00	1	100	1.00	1.00
2	100	1.00	1.00	2	100	1.00	1.00
3	100	1.00	1.00	3	100	1.00	1.00
4	100	1.00	1.00	4	100	1.00	1.00
5	100	1.00	1.00	5	100	1.00	1.00
6	100	1.00	1.00	6	100	1.00	1.00
7	100	1.00	1.00	7	100	1.00	1.00
8	100	1.00	1.00	8	100	1.00	1.00
9	100	1.00	1.00	9	100	1.00	1.00
10	100	1.00	1.00	10	100	1.00	1.00
11	100	1.00	1.00	11	100	1.00	1.00
12	100	1.00	1.00	12	100	1.00	1.00
13	100	1.00	1.00	13	100	1.00	1.00
14	100	1.00	1.00	14	100	1.00	1.00
15	100	1.00	1.00	15	100	1.00	1.00
16	100	1.00	1.00	16	100	1.00	1.00
17	100	1.00	1.00	17	100	1.00	1.00
18	100	1.00	1.00	18	100	1.00	1.00
19	100	1.00	1.00	19	100	1.00	1.00
20	100	1.00	1.00	20	100	1.00	1.00
21	100	1.00	1.00	21	100	1.00	1.00
22	100	1.00	1.00	22	100	1.00	1.00
23	100	1.00	1.00	23	100	1.00	1.00
24	100	1.00	1.00	24	100	1.00	1.00
25	100	1.00	1.00	25	100	1.00	1.00
26	100	1.00	1.00	26	100	1.00	1.00
27	100	1.00	1.00	27	100	1.00	1.00
28	100	1.00	1.00	28	100	1.00	1.00
29	100	1.00	1.00	29	100	1.00	1.00
30	100	1.00	1.00	30	100	1.00	1.00
31	100	1.00	1.00	31	100	1.00	1.00
32	100	1.00	1.00	32	100	1.00	1.00
33	100	1.00	1.00	33	100	1.00	1.00
34	100	1.00	1.00	34	100	1.00	1.00
35	100	1.00	1.00	35	100	1.00	1.00
36	100	1.00	1.00	36	100	1.00	1.00
37	100	1.00	1.00	37	100	1.00	1.00
38	100	1.00	1.00	38	100	1.00	1.00
39	100	1.00	1.00	39	100	1.00	1.00
40	100	1.00	1.00	40	100	1.00	1.00
41	100	1.00	1.00	41	100	1.00	1.00
42	100	1.00	1.00	42	100	1.00	1.00
43	100	1.00	1.00	43	100	1.00	1.00
44	100	1.00	1.00	44	100	1.00	1.00
45	100	1.00	1.00	45	100	1.00	1.00
46	100	1.00	1.00	46	100	1.00	1.00
47	100	1.00	1.00	47	100	1.00	1.00
48	100	1.00	1.00	48	100	1.00	1.00
49	100	1.00	1.00	49	100	1.00	1.00
50	100	1.00	1.00	50	100	1.00	1.00
51	100	1.00	1.00	51	100	1.00	1.00
52	100	1.00	1.00	52	100	1.00	1.00
53	100	1.00	1.00	53	100	1.00	1.00
54	100	1.00	1.00	54	100	1.00	1.00
55	100	1.00					

5 54 +79.4 | 196 | 5 53.0 | +79 21 | 7.8 | 6 0.4 | +79 21 |
 6.2~~0~~ | 8 | 7.0 | - | 6.5 | - | 6.4
 7 55 +79.9 | 269 | 7 54.0 | +79 56 | 7.8 | 8 1.2 | +79 49 |
 6.~~28~~ | 3 | 7 | 7.0 | - | 6.5 | - | 6.5
 7 42 +79.8 | 265 | 7 41.9 | +79 52 | 5.8 | 7 49.1 | +79 45 |
 4.~~16~~ | 2 | 1 | 4.3 | - | 3.8 | - | 3.8
 7 36 +80.2 | 240 | 7 35.8 | +80 14 | 6.5 | 7 43.3 | +80 7 |
 6.2~~2~~ | 5 | 7.3^{[[6.7]]} | - | 6.8^{[[6.2]]} | - |
 6.8^{[[6.2]]}
 7 33 +80.6 | 238 | 7 32.1 | +80 37 | 6.5 | 7 39.9 | +80 31 |
~~5.65~~^{[[5.4]]}
 5.~~67~~ | 2 | 6.2^{[[5.9]]} | - | 5.7^{[[5.4]]} | - |
 5.7^{[[5.4]]}
 6 58 +80.8 | 230 | 6 57.4 | +80 52 | 7.4 | 7 5.7 | +80 48 |
 6.~~08~~ | 1 | 6 | 7.1^{[[6.7]]} | - | 6.6^{[[6.2]]} | - |
 6.6^{[[6.2]]}
 6 45 +80.7 | 227 | 6 44.8 | +80 45 | 8.6 | 6 53.1 | +80 42 |
 6.2~~2~~ | 8 | 7.0 | - | 6.5 | - | 6.5
 6 10 +80.6 | 210 | 6 8.6 | +80 39 | 7.2 | 6 16.9 | +80 38 |
 6.1~~3~~ | 9 | 7.5^{[[7.0]]} | - | 7.0^{[[6.5]]} | - |
 7.0^{[[6.5]]}
 5 55 +80.4 | 202 | 5 54.0 | +80 24 | 7.8 | 6 2.3 | +80 24 |
 6.~~17~~ | 5 | 6.7 | - | 6.2 | - | 6.2

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

214

May 1, 1899

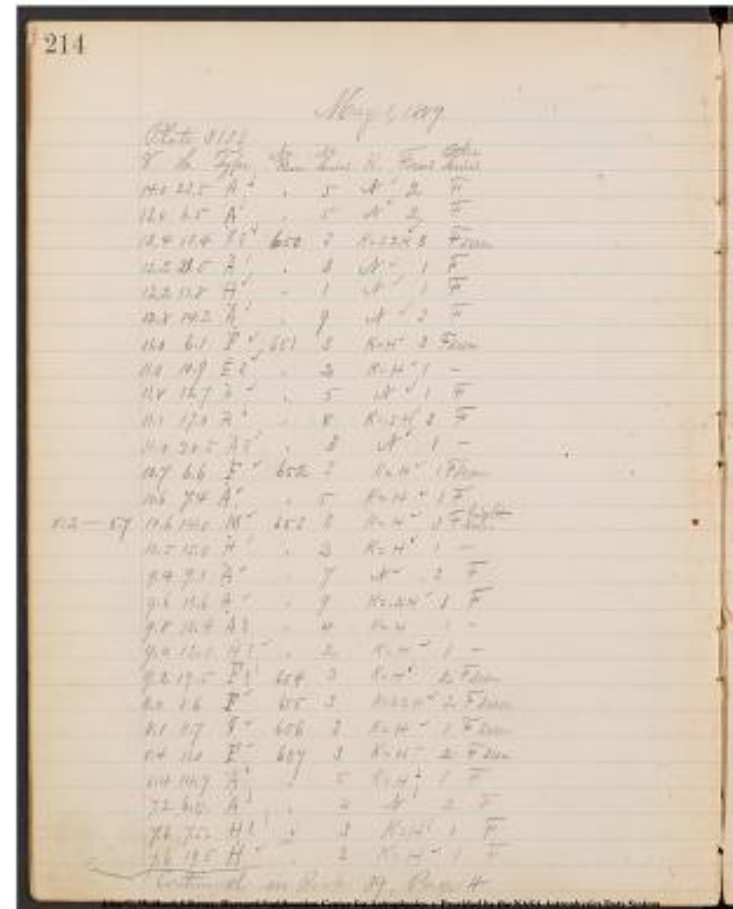
Plate 3133

[[13 columned table]]

V	H	Type	No.	Remark	No.	Lines	K	Focus	Other Lines
14.0	23.5	A	• 5	N	2	F			
13.0	6.5	A	• 5	N	2	F			
13.4	13.4	I?	650	3	K=1.2H	3	F seen		
13.2	21.5	A	• 3	N	1	F			
12.2	11.8	H	• 1	N	1	F			
12.8	14.2	A	• 9	N	3	F seen			
11.0	6.1	F	651	3	K=H	1			
11.0	10.9	E?	• 2	K=H	1				
11.8	12.7	A	• 5	N	1	F			
11.1	17.0	A	• 8	K=.5H	3	F			
11.0	20.5	A?	• 3	N	1				
10.7	6.6	F	652	3	K=H	1	F		
10.6	7.4	A	• 5	K=H	1	F			
5.2-2.7	10.6	14.0	M	653	3	K=H	3	F bright seen	
10.5	15.0	H	• 2	K=H	1				
9.4	9.1	A	• 7	N	3	F			
9.6	10.6	A	• 9	K=.2H	3	F			
9.8	13.4	A?	• 4	K=H	1				
9.0	13.1	H?	• 2	K=H	1				
9.2	19.5	F?	654	3	K=H	2	F seen		
8.0	8.6	F	655	3	K=1.2H	2	F seen		
8.1	8.7	H	656	3	K=H	1	F seen		
8.4	11.0	F	657	3	K=H	2	F seen		
8.4	14.7	A	• 5	K=H	1	F			
7.2	6.0	A	• 5	N	2	F			
7.6	7.5	H?	• 3	K=H	1	F			
7.6	19.5	H	• 3	K=H	1	F			

Continued in Book 39, Page 4

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics
 * Provided by the NASA



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

[12 columned table]
DM. No.	R.A.	Dec.	Mag.	R.A. 1900	Dec.	D.C. Mean	Diff.	B		
5 9										
+79.7	172	173	5							
8.8	9.0	+79								
44	43	9.5	5.76							
7.7	5 16.6	+79 46	5.64	5.6	5.6					
8 35 +80.5	272	8 34.0	+80 34	+80 34	7.3	8 40.9	+79			
46	5.76	5.7	4	6.3	5.8					
7 10 +81.2	252	7 8.0	+81 11	7.0	7 16.4	+81				
6	5.7	2	3	6.4	5.9	5.5	5.9	5.5		
5 26 +80.5	181	5 25.4	+80 32	7.9	5 33.7	+80				
34	6.2	3	7	6.9	6.4	6.4				
7 31 +81.7	257	7 30.4	+81 42	7.2	7 38.9	+81				
36	6.3	0	5	7.5	7.0	6.3	7.0	6.3		
6 58 +81.5	242	6 57.6	+81 30	6.3	7 6.4	+81				
26	4	66	7	14.8	4.3	4.3				
8 51 +81.4	282	8 49.2	+81 24	6.7	8 56.3	+81				
14	5	09	1	6.5	5.2	5.2				
7 48 +82.1	231	7 46.4	+82 10	8.3	7 55.2	+82				
3	6.3	0	7	0.6	5.6	5.6				
7 18 +82.0	213	7 18.8	+82 0	7.5	7 27.7	+81				
55	5.8	0	7	6.5	6.0	6.0				
6 15 +82.2	177	6 13.8	+82 13	6.7	6 23.4	+82				
12	5	16	2	1.5	3.4	4.8				
5 26 +81.7	192	5 25.8	+81 43	8.5	5 35.0	+81				
45	6.0	0	13	7.3	6.8	6.8				
8 47 +81.6	278	8 45.4	+81 36	7.9	8					
52	7 +81 26	6.27								
3	6.6	1	6.1							
279	8 46.1	+81 39	8.4	+81 29						
8 36 +81.8	273	8 35.2	+81 49	7.6	8 42.8	+81				
40	6.1	4	3	6.4	5.9	5.9				
7 0.0 +82.7	201	7 0.3	+82 40	5.5	7 10.0	+82				
36	4.99	5.0	2	6.2	5.2	5.7	4.7	5.7		
6 46 +82.6	194	6 44.8	+82 39	8.0	6 54.6	+82				
36	7.6	7.1	7.1	6.6	7.1	6.6				
8 19 +82.7	253	8 19.7	+82 44	7.0	8 28.4	+82				
36	5.1	4	3	5.4	4.9	4.9				
7 56 +82.8	235	7 56.0	+82 52	6.5	8 5.2	+82				
44	4.8	3	14.9	4.4	4.4					
7 10 +83.0	207	188	7							
10.2	7	10.3	82	60	83					
58	9.1	8								
9	20.1	7	82							
53	57									
7.0	6.5	6.5								
7 16 +83.4	191	7 15.6	+83 23	8.0	7 25.9	+83 18				
7.6	7.2	7.1	7.1	6.7	7.1	6.7				
5 30 +82.7	152	5 30.2	+82 42	7.6	5 40.3	+82				
44	6.0	2	3	6.3	5.8	5.8				
8 36 +83.3	233	8 35.8	+83 17	7.0	8 44.5	+83				
 8 | 5 | 56 | 6 | 2 | 5.8 | 5.3 | 5.3

215

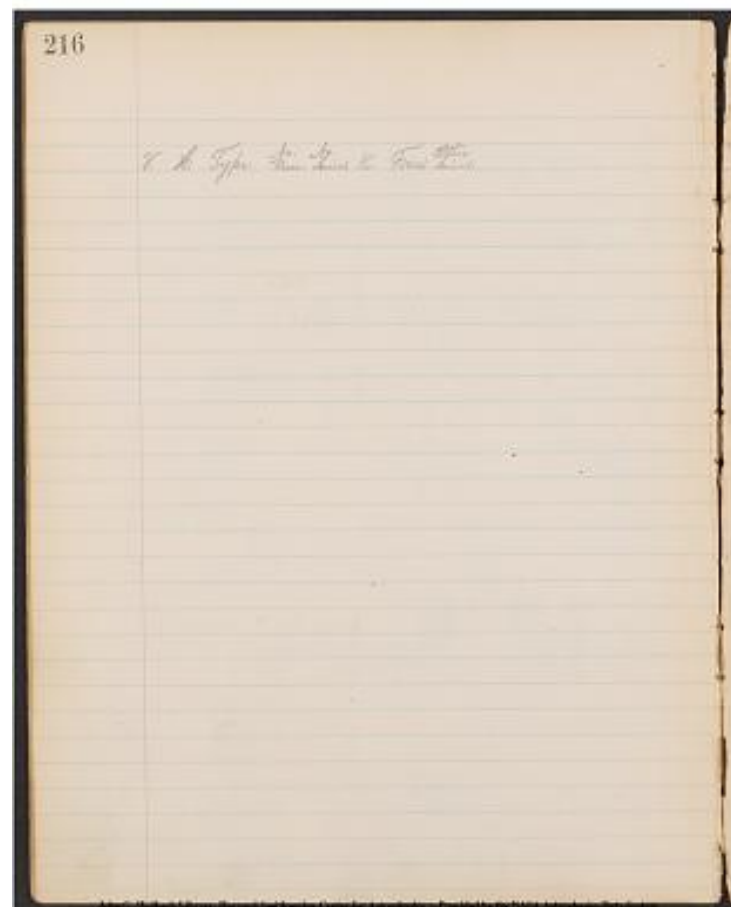
|8 34 +83.3|232|8 33.0|+83 15|7.0|8 41.8|+83
 7|6.1|~~17~~|~~24~~|7.1^[[6.6]]|6.6^[[6.1]]|{6.6^[[6.1]]|
 1]]|
 |4 55 +83.5|207|7 53.7|+83 32|8.2|8 3.6|+85
 25|6.3|~~2~~|~~1~~|6.4|5.9|5.9
 |6 49 +83.7|182|6 48.1|+83 43|8.2|6 59.2|+83 40| |6.8|6.3|6.3
 |9 19 +83.0|262|9 19.0|+83 0|7.5|9 26.4|+82
 49|5.7|~~0~~|~~7~~|6.4|5.9|5.9
 |8 55 +83.2|243|8 54.9|+83 12|8.3|9 3.1|+83
 2|6.2|~~0~~|~~7~~|7.1^[[6.9]]|6.6^[[6.4]]|{6.6^[[6.4]]|
 1]]|
 |5 19 +83.5|149|5 19.2|+83 32|8.7|5 30.4|+83 35|
 |7.6^[[7.2]]|7.1^[[6.7]]|{7.2^[[6.8]]|

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

Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
 Observations #20
 Transcribed and Reviewed by Digital Volunteers
 Extracted Aug-29-2022 02:37:24

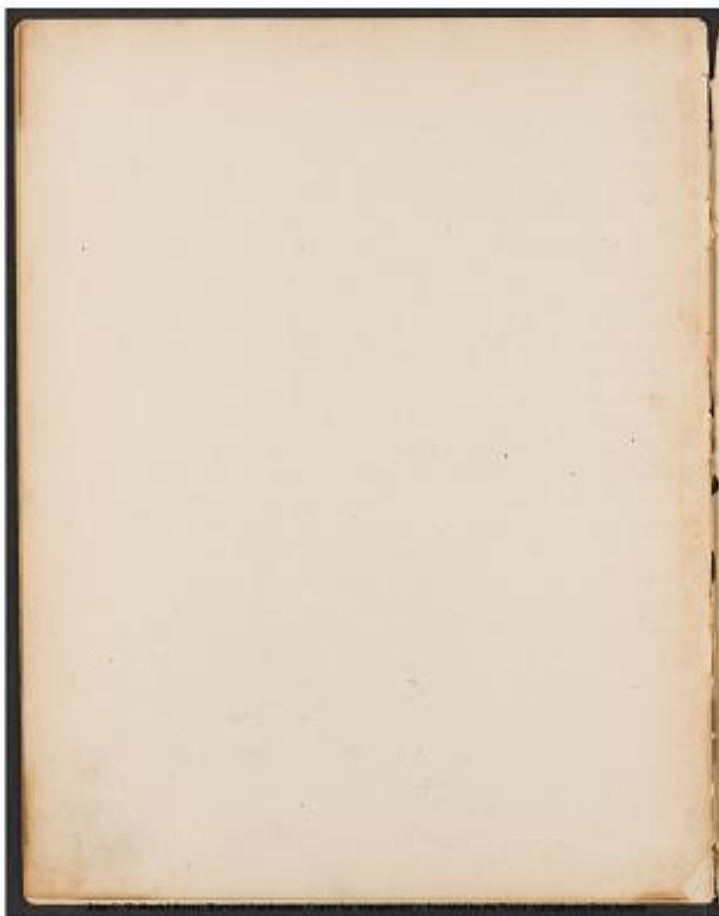
216

V. | H. | Type. | No. Rem. | No. Lines. | K. | Focus | Other Lines.



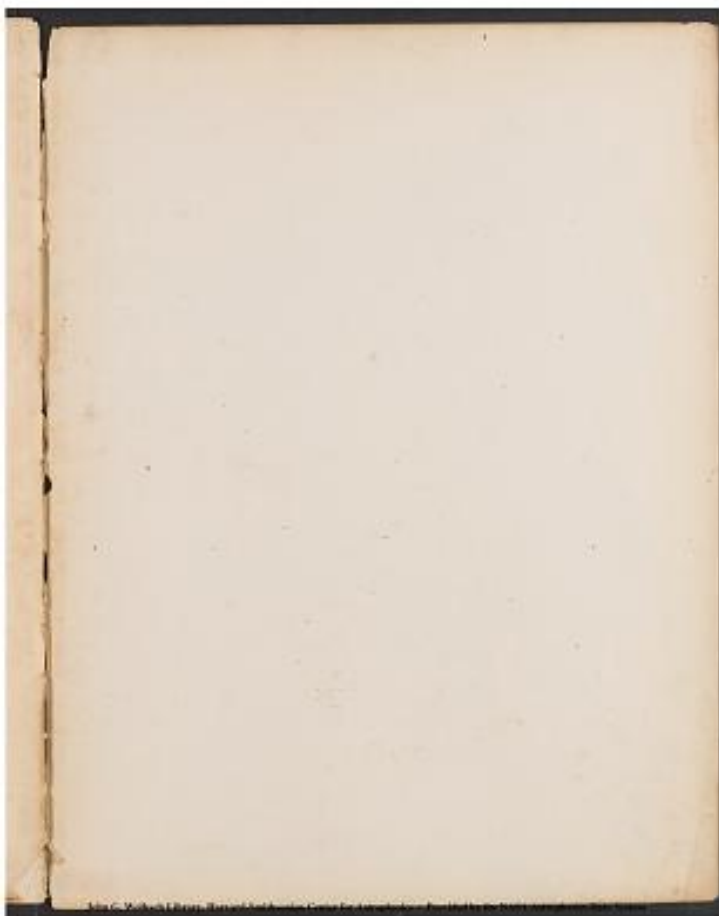
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[blank page]]



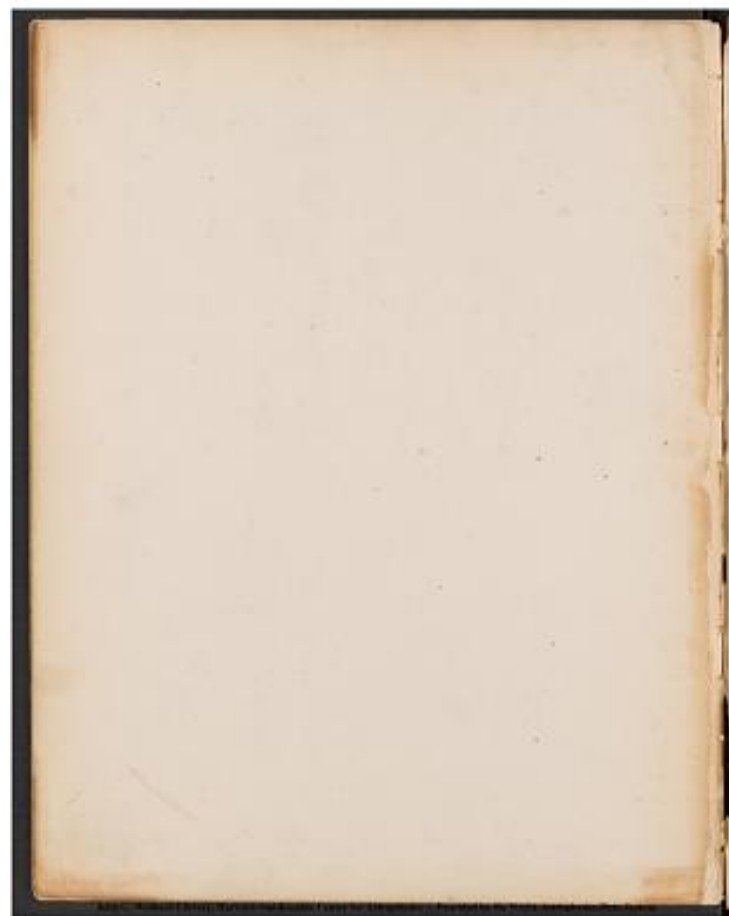
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[blank page]]



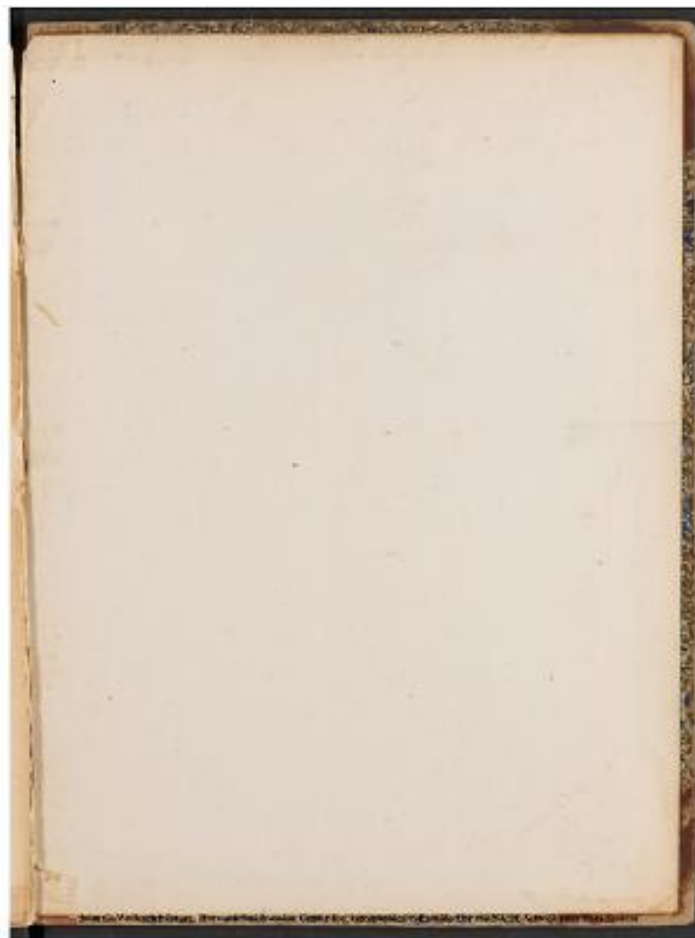
Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[blank page]]



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24

[[blank page]]



Project PHaEDRA - Williamina P. Fleming - Reductions of Photographic
Observations #20
Transcribed and Reviewed by Digital Volunteers
Extracted Aug-29-2022 02:37:24



Smithsonian Institution

Harvard-Smithsonian Center for Astrophysics

The mission of the Smithsonian is the increase and diffusion of knowledge - shaping the future by preserving our heritage, discovering new knowledge, and sharing our resources with the world. Founded in 1846, the Smithsonian is the world's largest museum and research complex, consisting of 19 museums and galleries, the National Zoological Park, and nine research facilities. Become an active part of our mission through the Transcription Center. Together, we are discovering secrets hidden deep inside our collections that illuminate our history and our world.

Join us!

The Transcription Center: <https://transcription.si.edu>

On Facebook: <https://www.facebook.com/SmithsonianTranscriptionCenter>

On Twitter: [@TranscribeSI](https://twitter.com/TranscribeSI)

Connect with the Smithsonian

Smithsonian Institution: www.si.edu

On Facebook: <https://www.facebook.com/Smithsonian>

On Twitter: [@smithsonian](https://twitter.com/smithsonian)