



**Smithsonian Institution**

*Harvard-Smithsonian Center for Astrophysics*

## **Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates, Southern Draper Catalogue #67**

Extracted on Oct-01-2023 10:45:08

**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](https://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](mailto: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.

[[cover page]]

[[label]]  
KG  
11365  
881  
[[/label]]

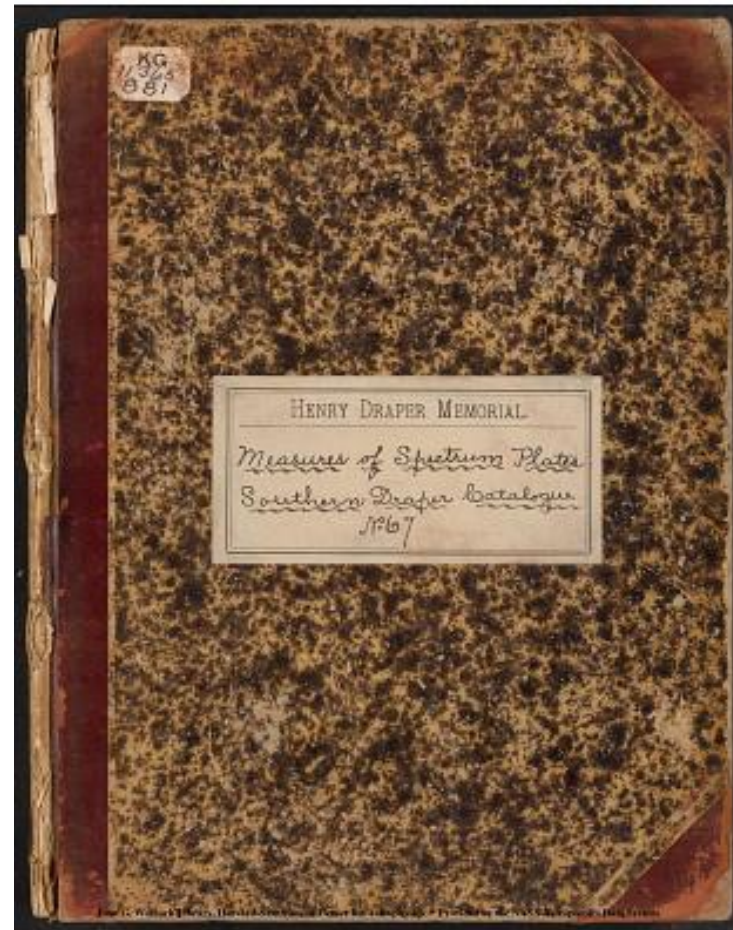
[[label]]  
[[/underline]]Henry Draper Memorial[[/underline]]

[[/underline]]Measures of Spectrum Plates[[/underline]]

[[/underline]]Southern Draper Catalogue[[/underline]]

N 67  
[[/label]]

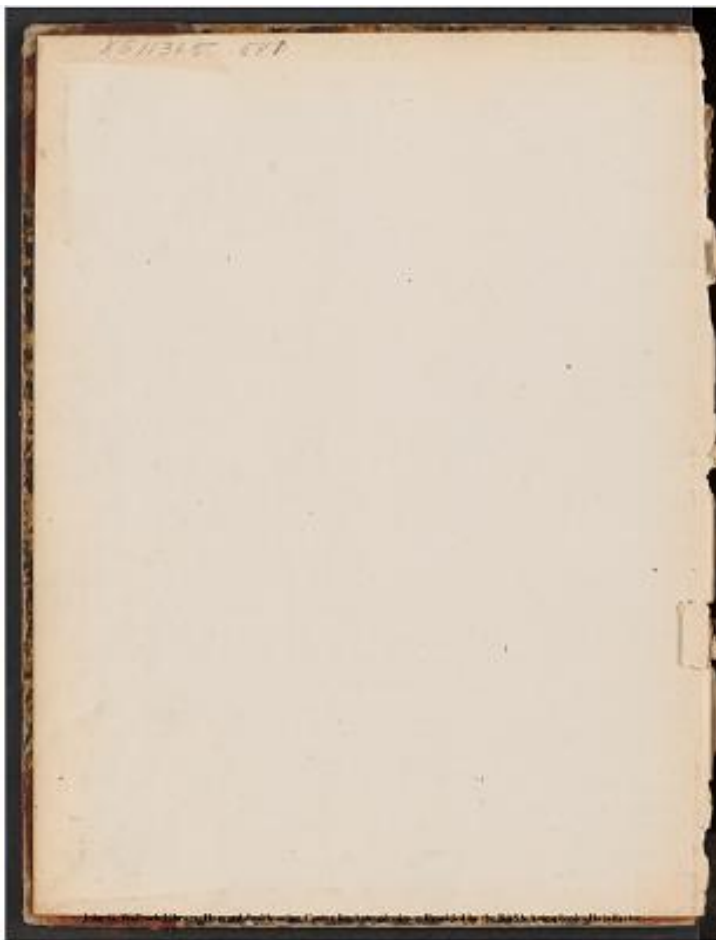
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics  
• Provided by the NASA Astrophysics Data System



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

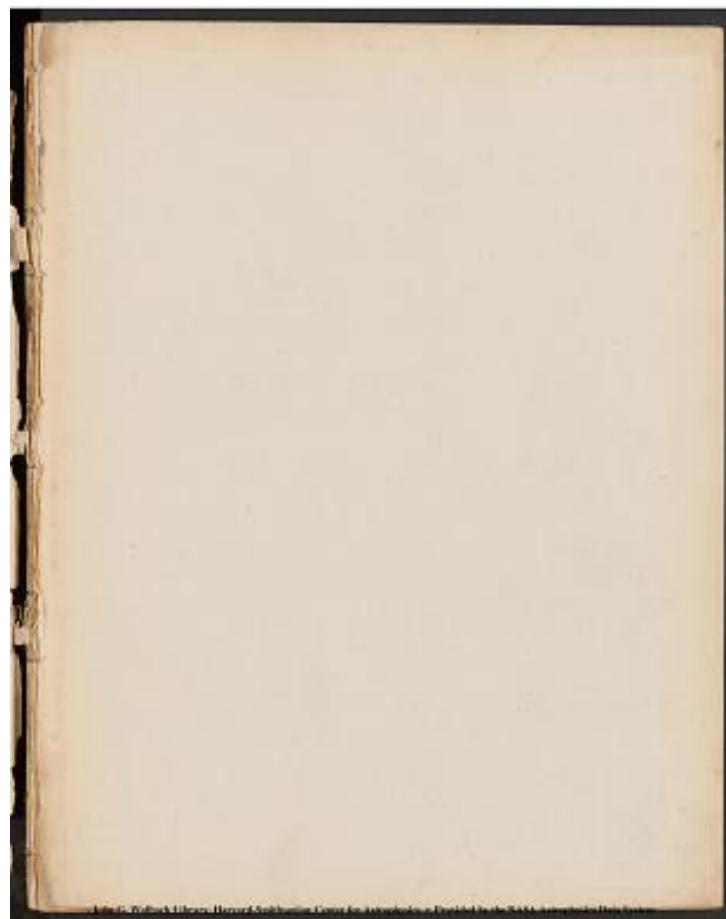
KG 11365. 881

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



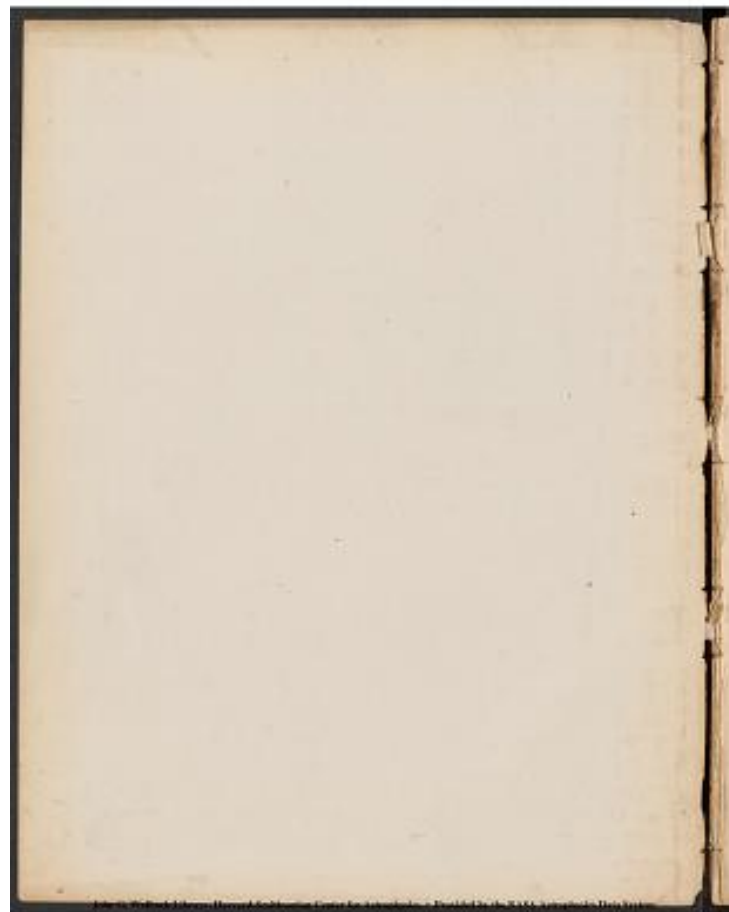
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[blank page]]



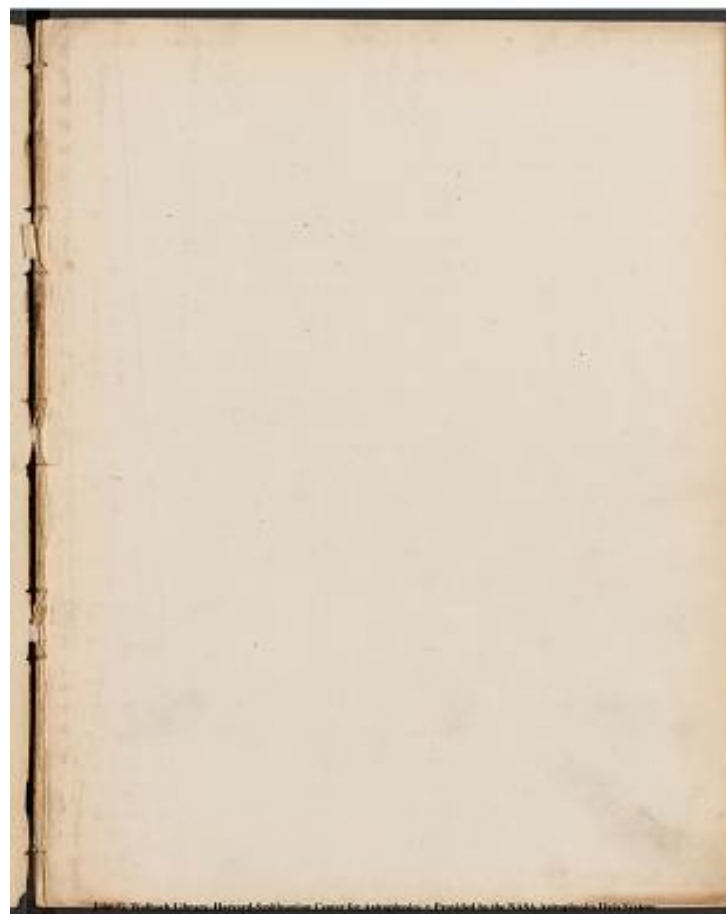
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[blank page]]



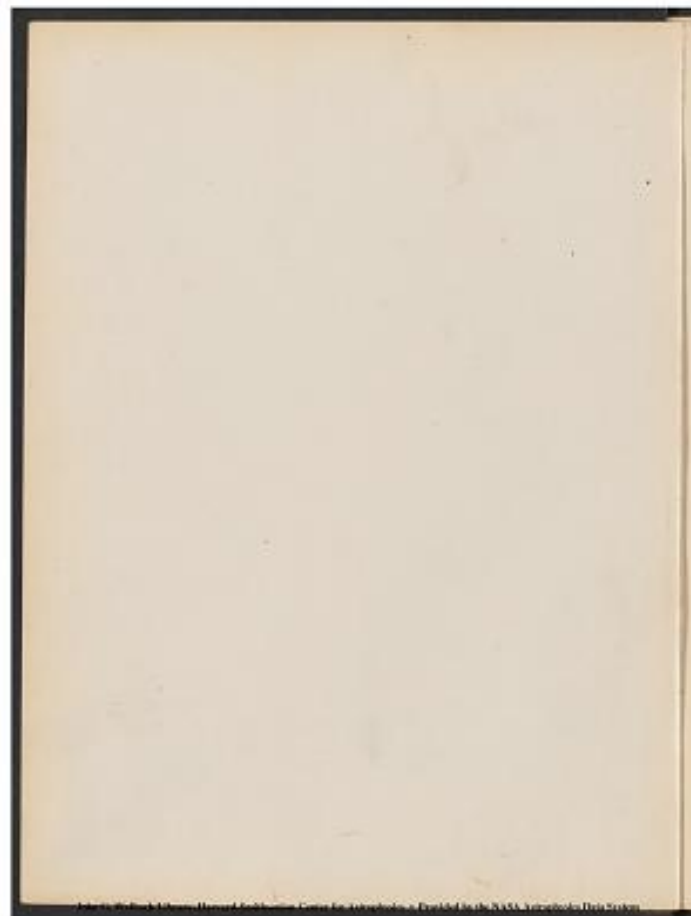
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[blank page]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[blank page]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]1[[/preprinted]]

[[/underline]]Index. [[/underline]]

[[4 columned table]]

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

|Plate|Page|Plate|Page|

| 1738|4|. 1455|178|

2137|6|. 6332|182|

971|10|. 6481|186|

1740|16|. 2906|192|

1098|20|. 337|198|

1082|30|. 2138|204|

1148|38|. 2139|212|

3211|46|. |

3225|56|. |

1149|62|. |

1206|70|. |

1379|72|. |

568|76|. |

1373|80|. |

1483|86|. |

3168|90|. |

698|98|. |

2957|100|. |

3071|104|. |

2147|112|. |

2961|112|. |

2227|~~220~~|120| |

1741|126|. |

2553|132|. |

2228|146|. |

1252|160|. |

1386|166|. |

1319|172|. |

1460|176|. |

[[end table]]

Plate	Page	Plate	Page
1738	4	1455	178
2137	6	6332	182
971	10	6481	186
1740	16	2906	192
1098	20	337	198
1082	30	2138	204
1148	38	2139	212
3211	46		
3225	56		
1149	62		
1206	70		
1379	72		
568	76		
1373	80		
1483	86		
3168	90		
698	98		
2957	100		
3071	104		
2147	112		
2961	112		
2227	<del>220</del>	120	
1741	126		
2553	132		
2228	146		
1252	160		
1386	166		
1319	172		
1460	176		

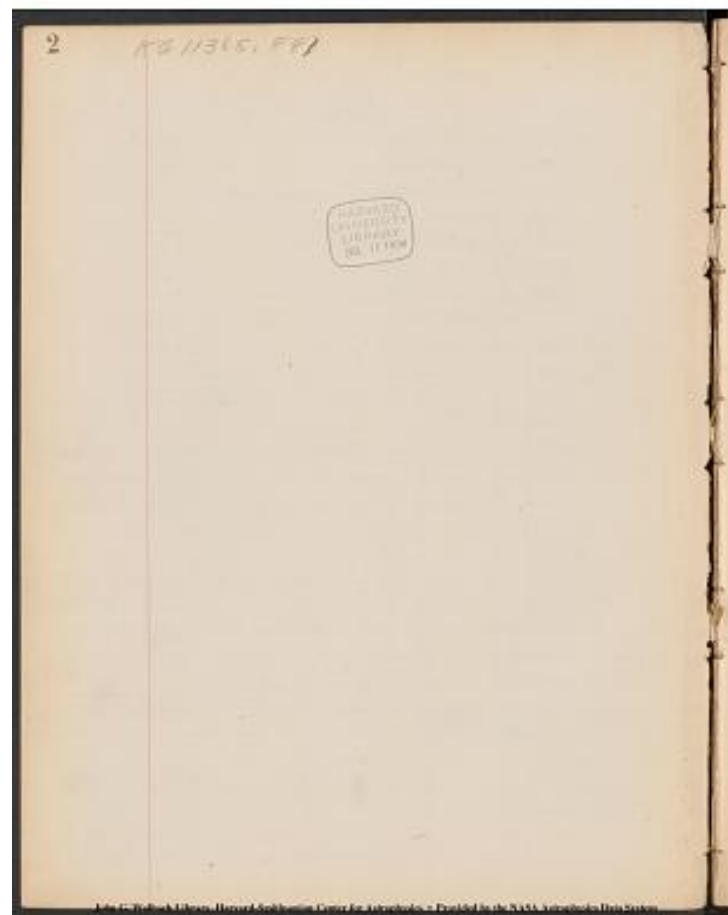
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



[[preprinted]]2[[/preprinted]]

KG 11365.881

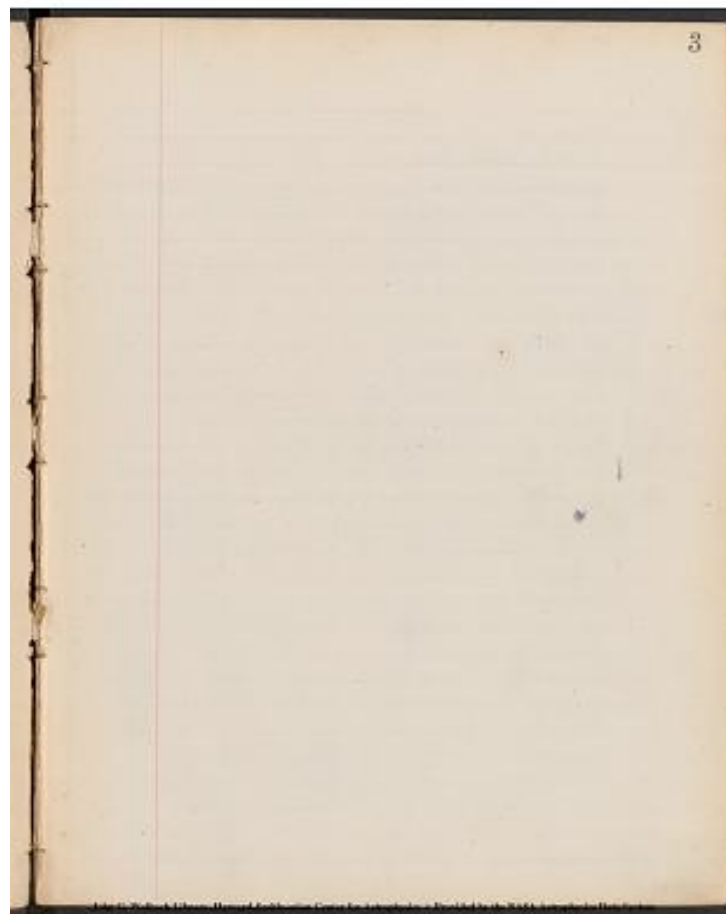
[[stamp]] Harvard University Library Jul 17 1956 [[/stamp]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]3[[/preprinted]]

[[blank page]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]4[[/preprinted]]

R.A. 1<sup>h</sup>58<sup>m</sup> Dec. +1.8  
June 27. 1893.

[[left margin]]  
23<sup>h</sup>30<sup>m</sup>[[h]] 30<sup>m</sup>[[w]]  
[[/left margin]]

[[right margin]]  
(0 beti)  
[[/right margin]]

Plate 1738

[[6 columned table]]

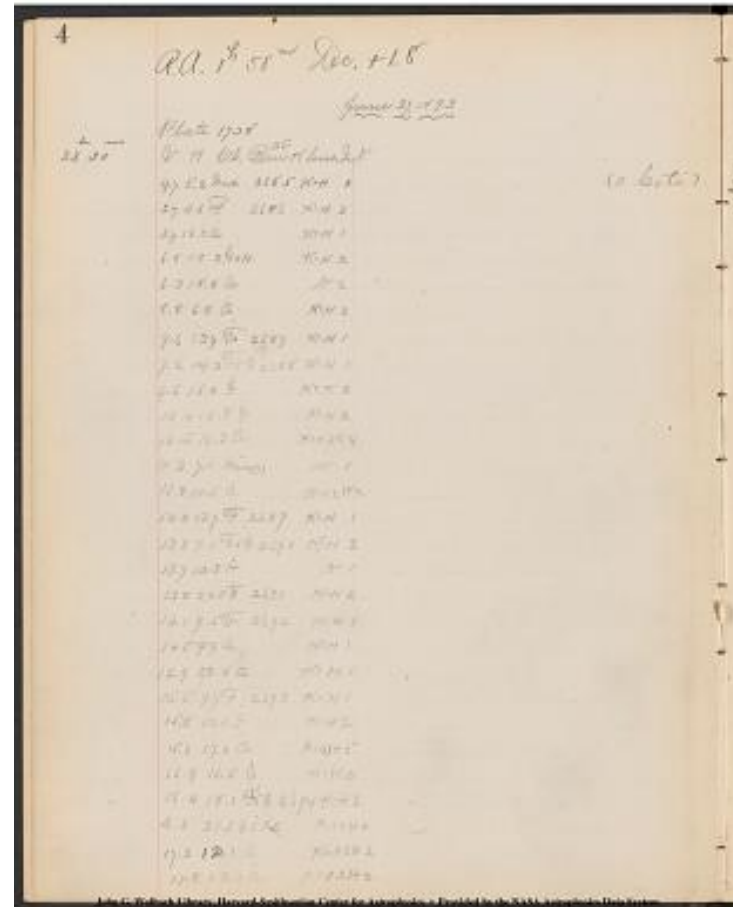
V|H|[[?]]|No.Rem.|K line|[[?]]

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

4.7	8.2	Ma	2685	K=H	3
5.7	11.6	F	2686	K=H	3
5.7	16.3	A		K=H	1
6.8	12.2	G3H		K=H	2
6.3	18.8	A		N	2
8.8	6.8	A		K=H	3
9.6	13.7	F	2687	K=H	1
9.2	14.2	F5G	2688	K=H	1
9.6	16.0	G		K=H	3
10.4	14.8	G		K=H	2
10.5	16.3	A		K=0.3H	4
11.2	7.1	Ma(?)		N	1
11.8	10.5	A		K=0.2H	2
12.3	13.7	F	2689	K=H	1
13.8	9.1	F5G	2690	K=H	2
13.7	10.8	H		N	1
13.8	20.0	F	2691	K=H	2
14.1	9.5	F	2692	K=H	1
14.5	9.9	A		K=H	1
12.9	23.4	A		K=H	1
15.5	9.7	F	2693	K=H	1
15.8	12.0	I		K=H	2
15.6	17.0	A		K=1.1H	5
16.9	16.5	E		K=H	2
16.4	18.0	F5G	2694	K=H	2
16.5	21.2	G5K		K=1.2H	4
17.2	12.3	A		K=0.2H	2
17.8	13.3	A		K=0.2H	2

[[end table]]

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]5[[/preprinted]]

1855.  
R.A. Dec.

[[11 columned table]]

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

No. BD|R.A. 1855|Dec. 1855|Magn.|R.A. 1900|Dec. 1900  
h|m|° | | |h|m|° | |  
2|12|-3.6|-3°|353|2|12.0|-3|38|var|  
2|5.5|-3.1|-3|335|2|5.4|-3|5|8.9|  
2|5.5|-3.1|-3|336|2|5.4|-3|4|5.9|  
1|55.6|-3.1|-3|304|1|55.5|-3|4|7.0|  
2|4.3|-2.5|-2|375|2|4.2|-2|30|6.3|  
1|50.8|-2.8|-2|330|1|50.6|-2|46|6.7|  
2|14.9|-1.6|-1°|322|2|14.8|-1|33|5.8|  
2|1.5|-1.1|-1|297|2|1.4|-1|7|7.8|  
2|0.3|-1.3|-1|293|2|0.2|-1|19|7.5|  
1|56.4|-1.0|-1|285|1|56.4|-1|2|7.3|  
1|59.2|-0.7|-0|318|1|59.1|-0|40|7.3|  
1|55.8|-0.6|-0|307|1|55.8|-0|34|6.0|  
2|14.5|-0.3|-0|355|2|14.6|-0|16|5.5|  
2|7.8|+0.10|+0|370|2|7.7|+0|3|7.2|  
2|1.3|+0.3|+0|356|2|1.3|+0|16|8.3|  
2|10.5|+1.1|+1|410|2|10.5|~~0~~|~~0~~|4|5.8|  
2|7.2|+1.0|+0|369|2|7.2|+0|59|7.5|  
1|48.4|+1.1|+1|347|1|48.4|+1|8|6.2|  
2|9.8|+1.2|+1|407|2|9.7|+1|12|7.7|  
2|9.0|+1.4|+1|404|2|9.0|+1|24|8.2|  
1|4|~~1.7~~|~~0.6~~|~~0~~|294|1|4.6|+0|37|8.0|  
2|9.4|+1.9|+1|406|2|9.3|+1|54|8.2|  
2|4.8|+2.1|+2|347|2|4.8|+2|5|7.3|  
1|54.6|+2.0|+2|317|1|54.6|+2|4|3.5|  
1|55.5|+2.7|+2|321|1|55.5|+2|39|8.0|  
1|~~53.5~~|~~52.5~~|+2.4|+2|311|1|52.6|+2|24|6.5|  
1|46.1|+2.5|+2|290|1|46.1|+2|29|4.5|  
2|4.3|+2.8|+2|346|2|4.2|+2|4|~~7.4~~|  
2|2.4|+3.1|+3|289|2|2.4|+3|4|7.1|  
[[end table]]

\*BD.-2° 379 superposed on 73.8. - 3° 336

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]6[[/preprinted]]

June 27, 1893  
Plate 1738

[[6 columned table]]

V|H|Gl.|No.Rem.|K line|Int.

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

17.5|23.8|G| |K=H|2

18.7|13.4|H| |N|1

20.3|~~11.5~~|~~2~~|~~11.5~~|A

| |N|1

21.5|14.4|A| |N|1

22.5|13.0|F|2695|K=H|1

22.2|13.6|F|2696|K=H|1

22.2|18.1|H| |N|1

23.1|2|~~0.5~~|~~0.5~~|A| |N|1

24.3|15.2|A| |K=H|1

[[/table]]

R.A. 2<sup>h</sup> 42<sup>m</sup> Dec. +1<sup>o</sup> 0.7

Plate 2137

[[6 columned table]]

4.9|13.6|A| |N|1

4.3|18.2|H| |K=H|1

5.9|9.5|A| |N|3

5.3|9.9|A| |N|3

5.7|17.4|H| |N|1

6.3|10.3|F|2697|K=H|1

6.6|19.5|A| |K=H|1

7.3|9.3|A| |K=H|1

7.5|12.5|H| |N|1

8.5|23.2|| |K=H|3

9.6|10.8|E| |K=H|1

9.4|13.3|A| |K=H|1

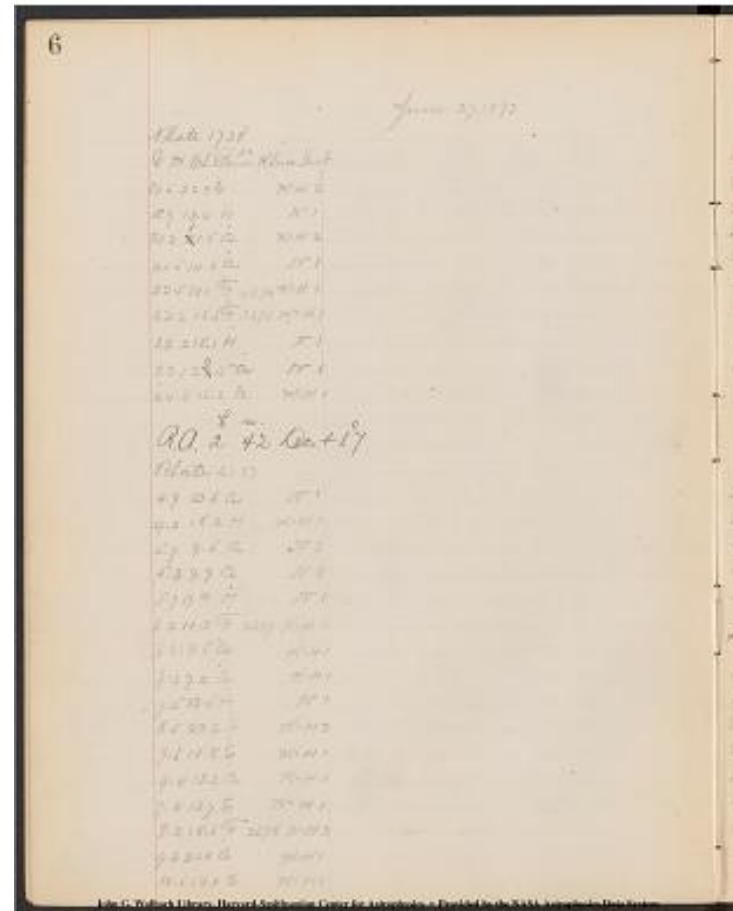
9.3|13.7|E| |K=H|1

9.2|18.6|F|2698|K=H|3

9.3|21.0|A| |K=H|1

10.5|12.0|E| |K=H|1

[[/table]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]7[[/preprinted]]

phi BD. -3° 452 superposed on BD. -3° 453

1855

R.A. Dec.[B.D.No]R.A.^[[1855]]Dec.[Magn.

[[11 columned table]]

R.A.[R.A.]Dec.[B.D. No]B.D. No[R.A.]R.A.]Dec.[Dec.]Magn. | |

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

1^[[h]]|41.0^[[m]]|+2.9^|+2.0^[[h]]|270^[[h]]|1^[[h]]|40.9^[[m]]|+2.0^[[h]]|57^[[1]]|

6.5^[[h]]|

2|2.1|+3.5|+3^[[h]]|288^[[h]]|2^[[h]]|2.1^[[h]]|+3^[[h]]|33^[[h]]|7.5^[[h]]|

2|6.0|+4.3|+4.1^[[h]]|367^[[h]]|2^[[h]]|5.9^[[h]]|+4^[[h]]|20^[[h]]|7.3^[[h]]|

2|0.1|+4.9|+4^[[h]]|354^[[h]]|2^[[h]]|0.1^[[h]]|+4^[[h]]|56^[[h]]|7.7^[[h]]|

2|3.0|+5.4|+5^[[h]]|293^[[h]]|2^[[h]]|3.0^[[h]]|+5^[[h]]|2.4^[[h]]|7.7^[[h]]|

2|1.9|+5.3|+5^[[h]]|289^[[h]]|2^[[h]]|1.8^[[h]]|+5^[[h]]|18^[[h]]|7.7^[[h]]|

1|52.4|+5.3|+5^[[h]]|274^[[h]]|1^[[h]]|52.4^[[h]]|+5^[[h]]|21^[[h]]|7.5^[[h]]|

1|47.7|+5.7|+5^[[h]]|262^[[h]]|1^[[h]]|47.7^[[h]]|+5^[[h]]|4[[/strikethrough]]3[[/strikethrough]]2^[[h]]|8.0^[[h]]|

1|58.2|+6.3|+6^[[h]]|324^[[h]]|1^[[h]]|58.2^[[h]]|+6^[[h]]|21^[[h]]|7.0^[[h]]|

2|44.1|-3.6|-3^[[h]]|453^[[h]]|2^[[h]]|44.1^[[h]]|-3^[[h]]|36^[[h]]|7.7^[[h]]|

2|34.4|-3.9|-3^[[h]]|421^[[h]]|2^[[h]]|34.5^[[h]]|-3^[[h]]|50^[[h]]|6.3^[[h]]|

2|52.5|-3.0|-3^[[h]]|475^[[h]]|2^[[h]]|52.4^[[h]]|-3^[[h]]|30^[[h]]|6.2^[[h]]|

2|51.3|-3.4|-3^[[h]]|470^[[h]]|2^[[h]]|51.4^[[h]]|-3^[[h]]|22^[[h]]|5.5^[[h]]|

2|36.2|-3.1|-3^[[h]]|426^[[h]]|2^[[h]]|36.2^[[h]]|-3^[[h]]|9^[[h]]|6.7^[[h]]|

2|50.7|-2.9|-2^[[h]]|526^[[h]]|2^[[h]]|50.7^[[h]]|-2^[[h]]|55^[[h]]|7.9^[[h]]|

2|32.0|-2.7|-

2^[[h]]|[[/strikethrough]]463[[/strikethrough]]462^[[h]]|2^[[h]]|[[/strikethrough]]32

0[[/strikethrough]]31.9^[[h]]|-

2^[[h]]|[[/strikethrough]]42[[/strikethrough]]32^[[h]]|[[/strikethrough]]7.8[[/strike

through]]8.0^[[h]]|

2|52.8|-2.4|-2^[[h]]|532^[[h]]|2^[[h]]|52.7^[[h]]|-2^[[h]]|23^[[h]]|7.8^[[h]]|

2|46.2|-2.2|-2^[[h]]|511^[[h]]|2^[[h]]|46.2^[[h]]|-2^[[h]]|14^[[h]]|7.8^[[h]]|

2|24.9|-[[/strikethrough]]2[[/strikethrough]]1.7|-

1^[[h]]|353^[[h]]|2^[[h]]|24.8^[[h]]|-1^[[h]]|40^[[h]]|5.6^[[h]]|

2|49.8|-1.2|-1^[[h]]|419^[[h]]|2^[[h]]|49.8^[[h]]|-1^[[h]]|9^[[h]]|7.5^[[h]]|

2|44.9|-1.2|-1^[[h]]|401^[[h]]|2^[[h]]|44.8^[[h]]|-1^[[h]]|14^[[h]]|8.0^[[h]]|

2|44.1|-1.3|-1^[[h]]|398^[[h]]|2^[[h]]|44.0^[[h]]|-1^[[h]]|16^[[h]]|8.0^[[h]]|

2|33.9|-1.3|-1^[[h]]|377^[[h]]|2^[[h]]|33.8^[[h]]|-1^[[h]]|19^[[h]]|6.2^[[h]]|

2|29.0|-1.3|-

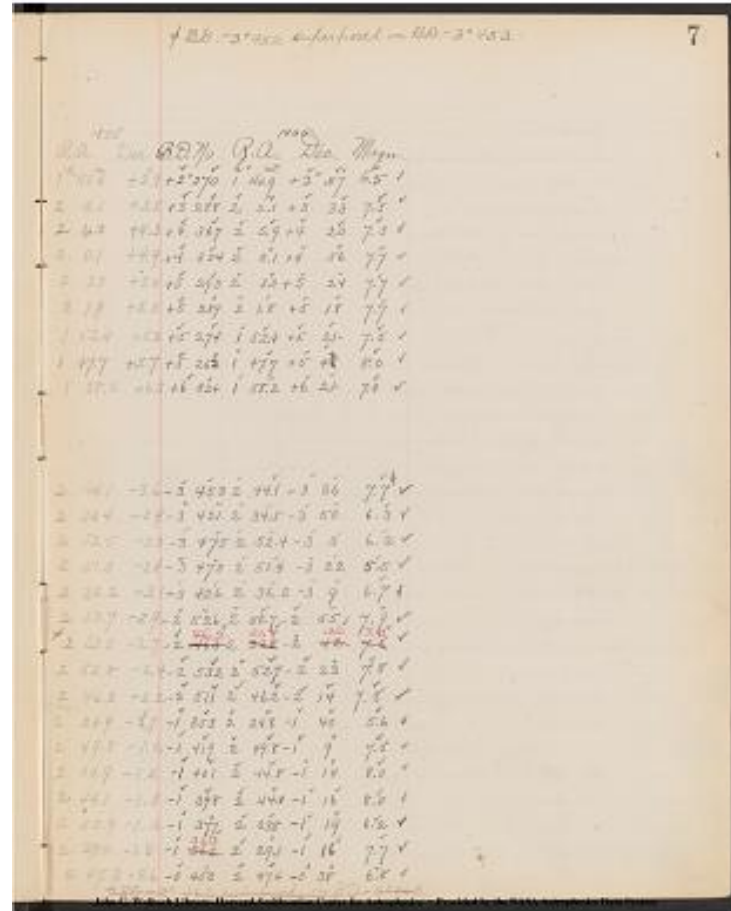
1^[[h]]|[[/strikethrough]]362[[/strikethrough]]363^[[h]]|2^[[h]]|29.1^[[h]]|-

1^[[h]]|16^[[h]]|7.7^[[h]]|

2|47.3|-0.6|-0^[[h]]|450^[[h]]|2^[[h]]|47.4^[[h]]|-0^[[h]]|38^[[h]]|6.8^[[h]]|

[[/strikethrough]]\*BD -2° 462 superposed on BD -2° 463. [[/strikethrough]]

[[end table]]



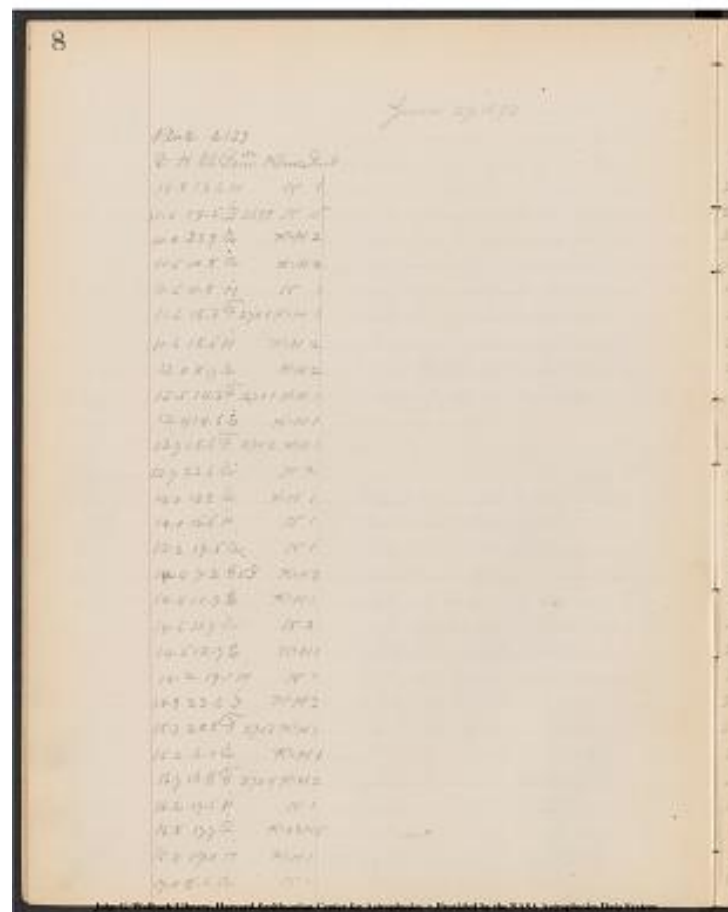
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]8[[/preprinted]]

June 27, 1893  
Plate 2137

[[5 columned table]]  
V H	Cl.	Rem. No.	K line	Int.
10.8|13.6|H|N|1|  
11.0|19.5|B 2699|N|5|  
11.0|23.9|A|K=H|2|  
11.5|10.8|A|K=H|2|  
11.5|11.8|H|N|1|  
11.6|18.3|F 2700|K=H|1|  
11.6|18.5|H|K=H|2|  
13.0|8.7|A|K=H|2|  
12.5|14.3|F 2701|K=H|1|  
12.4|14.6|E|K=H|1|  
12.7|15.6|F 2702|K=H|1|  
12.7|23.6|A|N|2|  
14.0|13.8|A|K=H|1|  
14.0|15.5|H|N|1|  
13.2|19.5|A|N|1|  
14.4|7.2|G5||K=H|3|  
14.4|10.9|E|K=H|1|  
14.6|11.7|A|N|3|  
14.5|12.7|E|K=H|1|  
14.2|19.1|H|N|1|  
14.9|23.6|||K=H|3|  
15.3|20.8|F 2703|K=H|1|  
16.2|6.1|A|K=H|1|  
16.7|13.8|F 2704|K=H|2|  
16.2|17.5|H|N|1|  
16.8|17.7|A|K=0.2H|5|  
16.3|19.0|H|K=H|1|  
17.0|8.6|A|N|1|  
[[end table]]

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]9[[/preprinted]]

1855

[[10 columned table]]

R.A. Dec. | BD. | [[?]] | R.A. | Dec. | Magm. |

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

244.1|-0.6|-0|443|2^h|44.1^m|-0|31|8.0|

23|~~44.1|-0.6|-0|443|2^h|44.1^m|-0|31|8.0|~~2.1|-0.3|-0|406|2|32.1|-0|18|3.7|

223.4|-0.4|-0|378|2|23.3|-0|23|6.5|

249.8|-0.1|-0|460|2|49.7|-0|8|7.5|

247.8|-0.2|-0|411|2|34.6|-0|4|7.7|

234.6|-0.1|-0|411|2|34.6|-0|4|8.1|

234.1|-0.1|-0|410|2|34.1|-0|4|7.3|

254.0|+0.6|+0|499|2|54.0|+0|35|8.0|

242.8|+0.4|+0|471|2|42.9|+0|22|8.0|

242.1|+0.3|+0|469|2|42.2|+0|19|7.3|

240.0|+0.4|+0|459|2|40.0|+0|28|8.3|

224.1|+0.4|+0|415|2|24.0|+0|28|7.5|

243.8|+1.1|+1|502|2|43.8|+1|6|8.2|

240.2|+1.1|+1|487|2|40.2|+1|6|8.2|

232.1|+0.7|+0|442|2|32.1|+0|44|8.5|

257.2|+1.3|+1|53.4|2|57.2|+1|19|6.5|

249.9|+1.3|+1|515|2|49.7|+1|19|7.8|

248.0|+1.4|+1|512|2|48.1|+1|27|7.8|

24|~~248.1|+1|27|7.8|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

233.2|+1.3|+1|464|2|33.0|+1|15|8.5|

224.1|+1.7|+1|438|2|24.0|+1|38|5.5|

229.6|+1.8|+1|455|2|29.7|+1|48|8.2|

259.1|+2.1|+2|478|2|59.3|+2|9|7.8|

243.9|~~243.9|+1.6|+1|503|2|43.9|+1|15|8.5|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

243.9|~~243.9|+1.6|+1|503|2|43.9|+1|15|8.5|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

243.9|~~243.9|+1.6|+1|503|2|43.9|+1|15|8.5|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

243.9|~~243.9|+1.6|+1|503|2|43.9|+1|15|8.5|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

243.9|~~243.9|+1.6|+1|503|2|43.9|+1|15|8.5|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

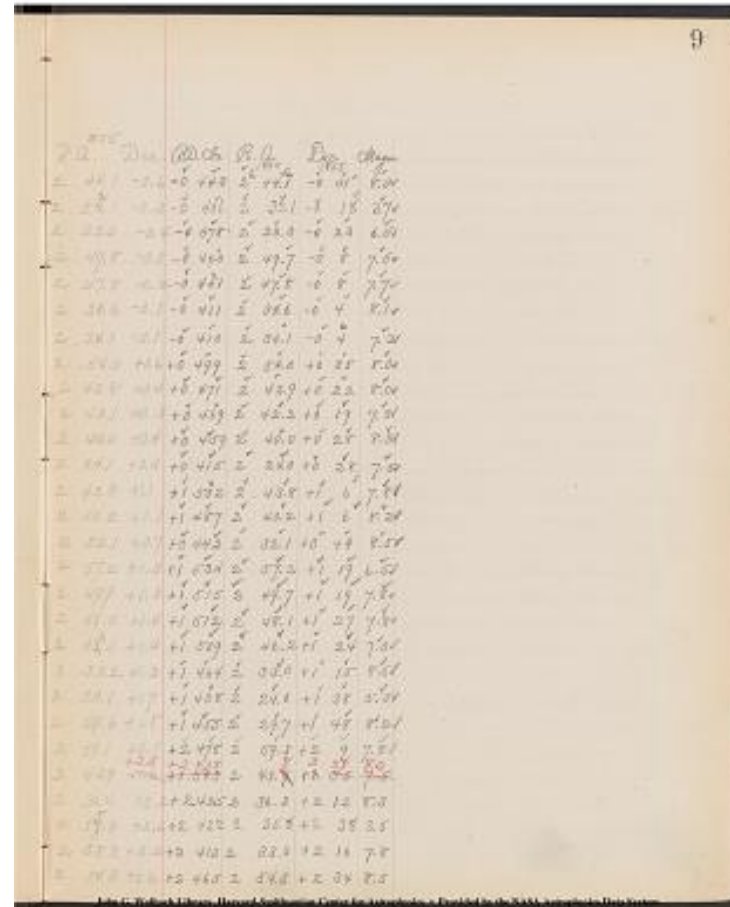
243.9|~~243.9|+1.6|+1|503|2|43.9|+1|15|8.5|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

243.9|~~243.9|+1.6|+1|503|2|43.9|+1|15|8.5|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

243.9|~~243.9|+1.6|+1|503|2|43.9|+1|15|8.5|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

243.9|~~243.9|+1.6|+1|503|2|43.9|+1|15|8.5|~~2|~~6.1|+1.4|+1|509|2|46.2|+1|24|7.0|~~

[[end table]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



[[preprinted]]10[[/preprinted]]

June 27, 1893

Plate 2137

[[6 columned table]]

VH|Cl.|Rem<sup>[[superscript]]</sup>No<sup>[[superscript]]</sup> Kline|Int.|

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

17.9|11.0|F|2705|K=H|1|

17.5|12.0|A| |K=H|2|

17.2|20.1|E| |K=H|2|

18.3|6.4|a| |n|1|

18.7|8.4|ma<sub>[[subscript]]</sub>(2)<sub>[[subscript]]</sub> | |K=H|4|

18.7|11.5|a| |n|2|

18.7|15.0|a| |n|1|

19.3|8.4|a| |n|3|

19.6|11.1|ma| |n|1|

19.8|16.7|a| |K=H|3|

19.3|18.7|a| |n|2|

21.0|8.3|a| |n|2|

20.6|12.5|a| |K=H|1|

20.1|19.0|a| |K=H|1|

21.3|8.7|H| |K=H|2|

21.5|21.5|g5K| |K=H|3|

22.9|7.8|F 2706| |K=H|1|

23.0|7.9|a| |K=H|1|

22.6|19.4|a| |K=H|2|

23.5|13.4|a| |n|2|

23.2|21.5|a| |K=H|1|

24.0|21.6|g| |K=H|2|

[[end table]]

|R.A.|4<sup>[[superscript]]</sup>h<sup>[[superscript]]</sup>00<sup>[[superscript]]</sup>m<sup>[[superscript]]</sup>Le  
o|+ 1.3|

Plate 971

[[6 column table]]

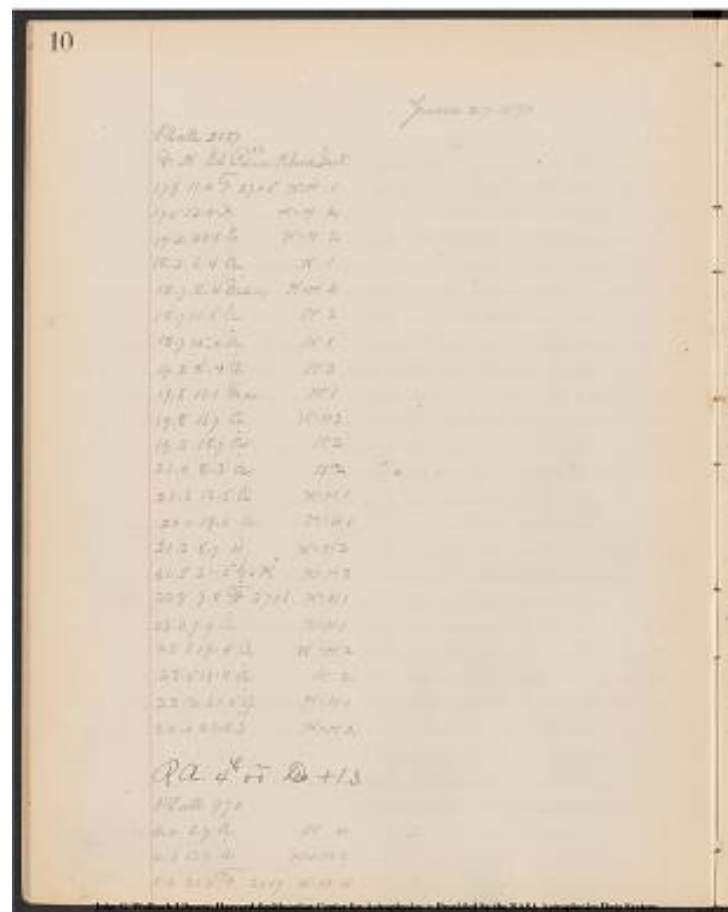
---|---|---|---|---|

4.0|6.7|a| |n|4|

4.3|13.7|a| |K=0.1H|2|

5.3|21.3|F|2707|K=H|4|

[[end table]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]11[[/preprinted]]

1855

[[5 column table]]

R.A. Dec. | B.D. No. | R.A. 1855 | Dec. 1855 | Magn. |

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

2 49.5 +3.1|+3° 411|2^[[h]]

49.6^[[m]]|+3°|~~[[h]]~~|~~[[m]]~~|7|~~[[h]]~~|

5|~~[[h]]~~|1|~~[[h]]~~|7.8|

2 47.4 +2.9|+2 450|2 47.6|+2 54|7.5|

2 31.0 +2.8|+2 406|2 31.1|+2 48|7.2|

2 58.9 +3.2|+3 431|2 58.8|+3 14|8.0|

2 54.7 +3.5|+3 419|2 54.7|+3 31|2.5|

2 49.5 +3.9|+3 410|2 49.5|+3 54|6.8|

2 41.4 +3.5|+3 387|2 41.4|+3 29|8.0|

2 |~~[[h]]~~|33|~~[[h]]~~|54.8 +3.8|+3 420|2 54.8|+3 46|7.3|

2 49.5 +3.9|+3 410|2 49.5|+3 54|6.8|

2 37.8 +4.1|+4 437|2 37.8|+4 6|7.2|

2 33.8 +3.8|+3 373|2 33.8|+3 48|7.2|

2 55.0 +4.6|+4 486|2 55.0|+4 37|8.0|

2 46.6 +4.4|+4 458|2 46.6|+4 28|7.8|

2 33.4 +4.2|+4 425|2 33.4|+4 14|7.8|

2 54.2 +4.8|+4 485|2 54.2|+4 46|7.0|

2 28.2 +4.9|+4 418|2 28.3|+4 57|5.3|

2 56.1 +5.6|+5 444|2 56.1|+5 34|8.0|

2 55.8 +5.6|+5 443|2 55.8|+5 40|7.2|

2 32.6 +5.5|+5 374|2 32.6|+5 30|7.0|

2 45.0 +5.9|+5 406|2 45.0|+5 52|7.9|

2 28.5 +5.8|+5 366|2 28.4|+5 48|8.3|

2 28.1 +6.2|+6 398|2 28.2|+6 10|6.5|

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

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

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

4 16.5 -4.1|-4 818|4 16.5|-4 5|5.5|

4 2.7 -3.9|-3 696|4 2.6|-3 57|6.5|

3 47.2 -3.4|-3 631|3 47.0|-3 23|5.0|

[[end table]]

R.A.	Dec.	B.D. No.	R.A.	Dec.	Magn.
2 49.5	+3.1		+3° 411	2^	
49.6					
5					
2 47.4	+2.9		+2 450	2 47.6	+2 54 7.5
2 31.0	+2.8		+2 406	2 31.1	+2 48 7.2
2 58.9	+3.2		+3 431	2 58.8	+3 14 8.0
2 54.7	+3.5		+3 419	2 54.7	+3 31 2.5
2 49.5	+3.9		+3 410	2 49.5	+3 54 6.8
2 41.4	+3.5		+3 387	2 41.4	+3 29 8.0
2					
2 49.5	+3.9		+3 410	2 49.5	+3 54 6.8
2 37.8	+4.1		+4 437	2 37.8	+4 6 7.2
2 33.8	+3.8		+3 373	2 33.8	+3 48 7.2
2 55.0	+4.6		+4 486	2 55.0	+4 37 8.0
2 46.6	+4.4		+4 458	2 46.6	+4 28 7.8
2 33.4	+4.2		+4 425	2 33.4	+4 14 7.8
2 54.2	+4.8		+4 485	2 54.2	+4 46 7.0
2 28.2	+4.9		+4 418	2 28.3	+4 57 5.3
2 56.1	+5.6		+5 444	2 56.1	+5 34 8.0
2 55.8	+5.6		+5 443	2 55.8	+5 40 7.2
2 32.6	+5.5		+5 374	2 32.6	+5 30 7.0
2 45.0	+5.9		+5 406	2 45.0	+5 52 7.9
2 28.5	+5.8		+5 366	2 28.4	+5 48 8.3
2 28.1	+6.2		+6 398	2 28.2	+6 10 6.5
4 16.5	-4.1		-4 818	4 16.5	-4 5 5.5
4 2.7	-3.9		-3 696	4 2.6	-3 57 6.5
3 47.2	-3.4		-3 631	3 47.0	-3 23 5.0

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]12[[/preprinted]]

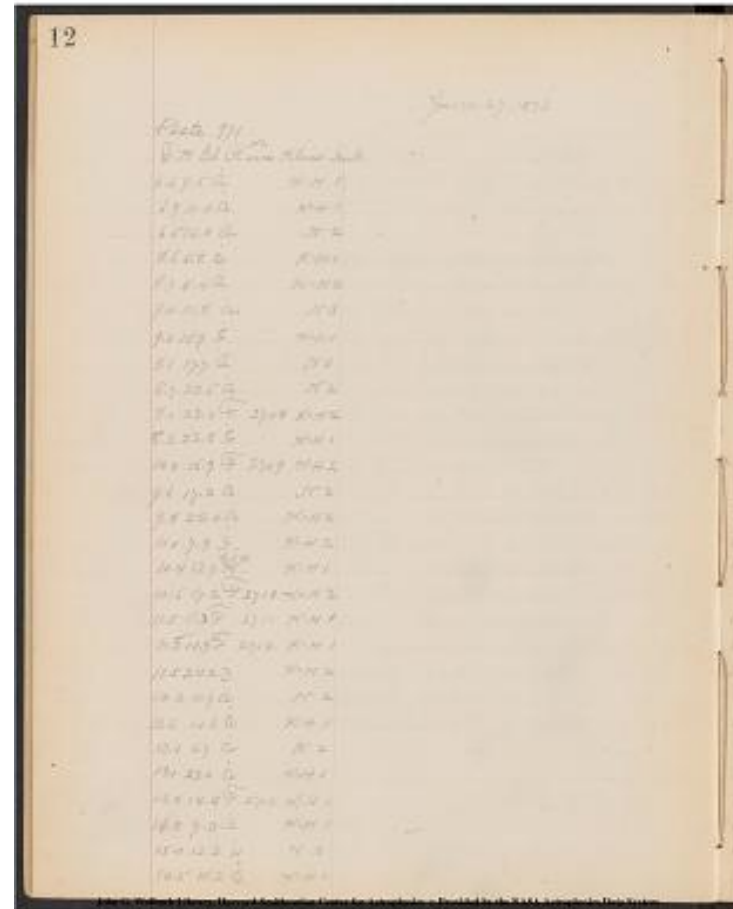
June 27, 1873

Plate 971

[[6 column table]]

[[H Cl Rem.^ No.]]	Kline Int.
6.6 9.5 Alpha	K = Eta 1
6.9 10.0 Alpha	K = Eta 1
6.5 16.0 Alpha	gamma 2
8.6 5.8 Epsilon	K = Eta 1
8.7 8.4 Alpha	K = Eta 2
9.0 11.8 Alpha	gamma 3
9.0 15.9 Epsilon	K = Eta 1
8.1 17.7 Alpha	gamma 4
8.9 22.5 Alpha	gamma 2
8.1 23.4 F 2708	K = Eta 2
8.3 23.8 Epsilon	K = Eta 1
10.0 15.9 F 2709	K = Eta 2
9.6 17.2 Alpha	gamma 2
9.8 22.4 Alpha	K = Eta 2
11.0 7.9 Iota	K = Eta 2
10.4 12.9  <del>Eta</del>	<del>Eta</del>  gamma 5 Eta   K = Eta 1
10.5 17.2 F 2710	K = Eta 3
11.5 8.3 F 2711	K = Eta 1
11.3 10.9 F 2712	K = Eta 1
11.5 24.2 Iota	K = Eta 2
12.2 10.7 Alpha	gamma 2
12.6 12.6 Epsilon	K = Eta 1
13.4 5.7 Alpha	gamma 2
13.1 23.0 Alpha	K = Eta 1
12.8 14.4 F 2713	K = Eta 1
14.8 9.3 Alpha	K = Eta 1
15.0 12.3 Eta	gamma 3
14.5 15.2 Epsilon	K = Eta 1

[[end table]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]13[[/preprinted]]

1855

[[6 column table]]

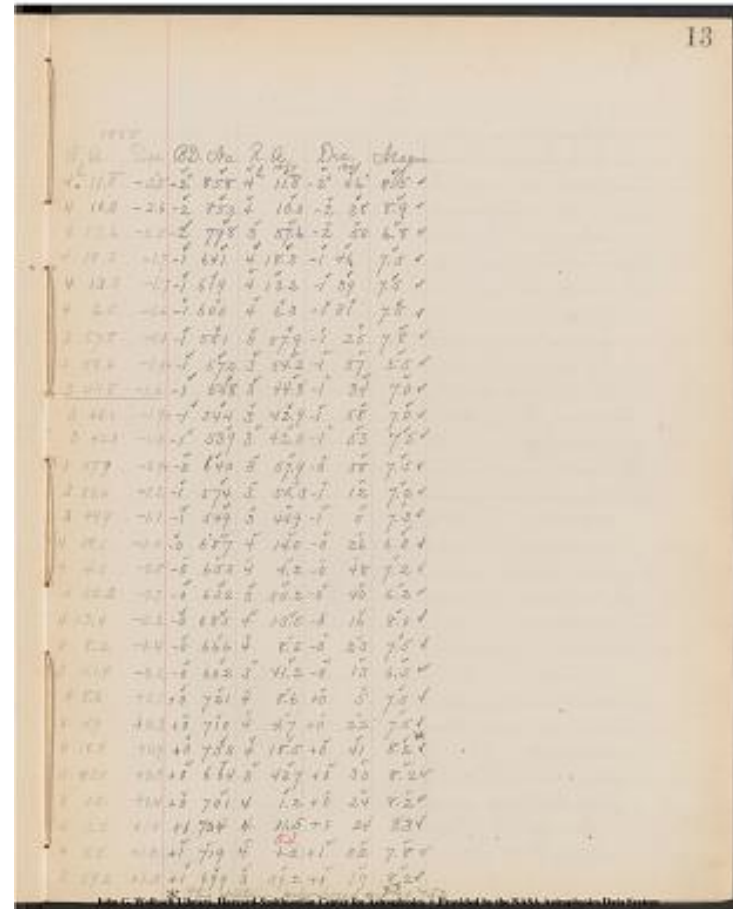
R.A.|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.|

4 <sup>h</sup> 11 <sup>m</sup>	11.0 <sup>m</sup>	11.0 <sup>m</sup>	-2.8°	-2° 58'	4 <sup>h</sup> 11 <sup>m</sup> 11.0 <sup>m</sup> -2° 46'	8.5
4 10.0	-2.6	-2 853	4 10.0	-2 38	8.9	
3 57.6	-2.8	-2 798	3 57.6	-2 50	6.8	
4 18.3	-1.7	-1 641	4 18.3	-1 46	7.5	
4 13.0	-1.7	-1 619	4 13.2	-1 39	7.5	
4 6.5	-1.6	-1 600	4 6.3	-1 31	7.5	
3 57.8	-1.4	-1 581	3 57.9	-1 25	7.8	
3 54.4	-1.9	-1 572	3 54.2	-1 57	5.5	
[[underlined]]3 44.8 -1.6[[/underlined]] -1 548 3 44.8 -1 34 7.0						
3 43.0	-1.9	-1 544	3 42.9	-1 58	7.0	
3 42.0	-1.9	-1 539	3 42.0	-1 53	7.5	
3 57.9	-0.9	-0 640	3 57.9	-0 58	7.5	
3 55.4	-1.2	-1 574	3 55.3	-1 12	7.2	
3 44.9	-1.1	-1 549	3 44.9	-1 5	7.3	
4 14.1	-0.4	-0 687	4 14.0	-0 26	6.3	
4 4.1	-0.8	-0 653	4 4.2	-0 48	7.2	
3 55.2	-0.7	-0 632	3 55.2	-0 40	6.2	
4 13.4	-0.3	-0 685	4 13.5	-0 16	8.0	
4 8.2	-0.4	-0 666	4 8.2	-0 23	7.5	
3 41.4	-0.2	-0 602	3 41.2	-0 13	6.5	
4 8.6	+0.1	+0 721	4 8.6	+0 5	7.5	
4 4.7	+0.3	+0 710	4 4.7	+0 22	7.5	
4 18.4	+0.7	+0 753	4 18.5	+0 41	8.2*	
3 43.8	+0.5	+0 664	3 43.7	+0 30	8.2	
4 1.2	+0.4	+0 701	4 1.2	+0 24	8.2	
4 11.5	+1.4	+1 734	4 11.5	+1 24	8.3	
4 5.5	+1.6	+1 719	4 <del>1.4</del>	<del>1.4</del>	<del>1.4</del>	32 7.8
3 59.2	+1.3	+1 699	3 59.2	+1 17	8.2	

[[end table]]

\*This spectrum superposed on B.D. +0° 752

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]] 14[[/preprinted]]

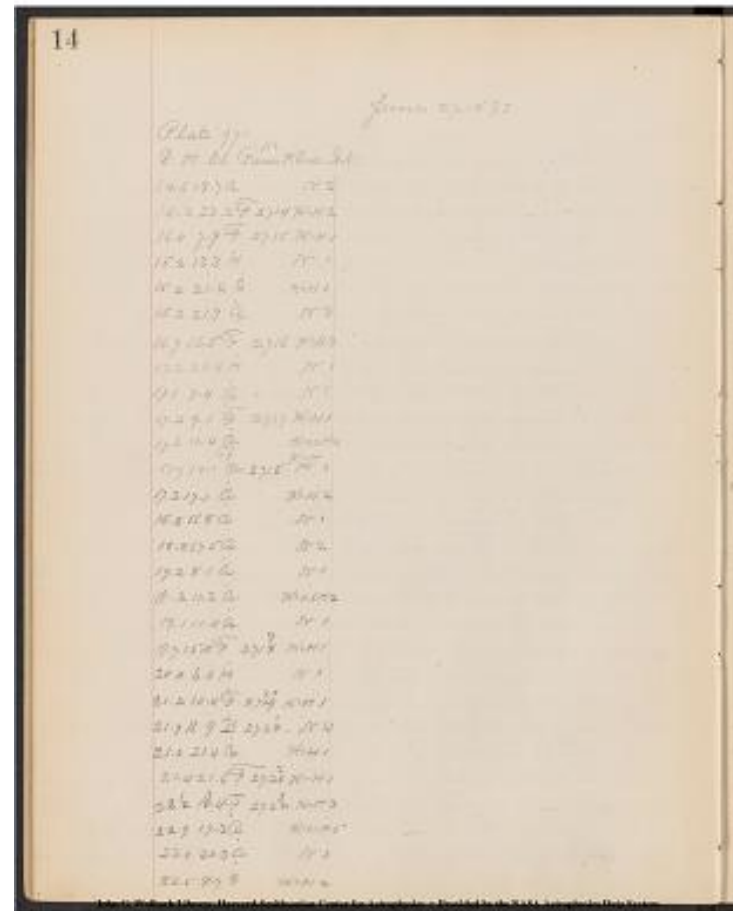
June 27, 1893  
Plate 971

[[6 column table]]

V H Cl. Rem. No. K line Int.

14.6	18.7	A		N		2
14.2	23.2	F		27		14 K=H 2
16.0	7.9	F		27		15 K=H 1
15.2	13.3	H		N		1
15.2	21.2	E		K=H		1
15.2	21.9	A		N		3
16.7	16.5	F		27		16 K=H 3
17.2	20.4	H		N		1
17.1	7.4	A		N		1
17.2	9.1	F		27		17 K=H 1
17.6	11.4	A		K=0.2H		2
17.7	14.1	<del>A</del>		<del>27</del>		<del>18 N</del>
17.2	17.1	A		K=H		2
18.8	16.8	A		N		1
18.8	17.5	A		N		2
19.2	8.1	A		N		1
19.2	11.2	A		K=0.5H		2
19.1	11.4	A		N		1
19.7	15.0	F		27		18 K=H 1
20.0	6.0	H		N		1
21.2	10.4	F		27		19 K=H 1
21.9	16.9	B		27		20 N 4
21.0	21.4	A		K=H		1
21.4	21.6	F		27		21 K=H 1
22.0	21.6	F		27		22 K=H 1
23.4	17.3	A		K=0.1H		5
23.0	20.3	A		N		3
23.5	8.7	G		K=H		2

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]15[[/preprinted]]

Ø Stan 13.D. +4° 600 superfired on 73D +4°600  
X Stan 73D. +4° 603 " " 73D. + 4°602

1855

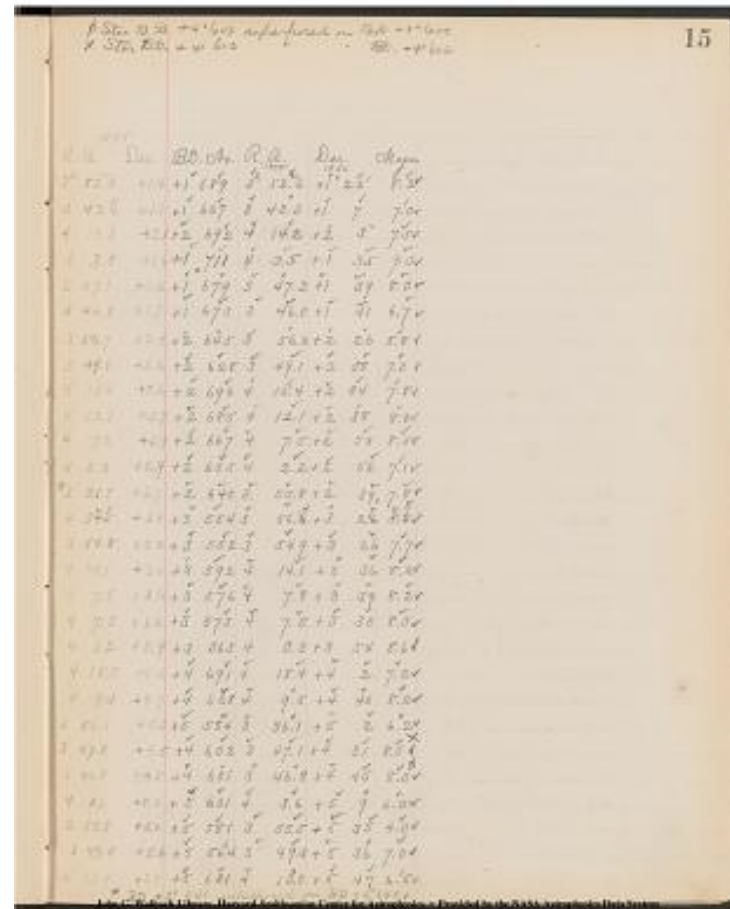
[[6 column table]]

R. A.	Dec.	BD. Ao.	R. A.	Dec.	Magn.
3 52.3	+1.4	+1 689	3 52.2	+1 22	8.2
3 43.3	+1.1	+1 667	3 43.3	+1 7	7.0
4 14.3	+2.1	+2 692	4 14.2	+2 3	7.5
4 3.5	+1.6	+1 711	4 3.5	+1 35	9.0
3 47.1	+1.6	+1 679	3 47.2	+1 39	8.0
3 46.0	+1.7	+1 673	3 46.0	+1 41	6.7
3 56.7	+2.4	+2 645	3 56.6	+2 26	5.8
3 49.0	+2.6	+2 628	3 49.1	+2 38	7.0
4 15.4	+2.6	+2 696	4 15.4	+2 34	7.8
4 13.1	+2.7	+2 685	4 12.1	+2 38	8.0
4 7.6	+2.9	+2 667	4 7.5	+2 53	8.5
4 2.3	+2.9	+2 655	4 2.2	+2 56	7.1
*3 55.6	+2.7	+2 640	3 55.8	+2 39	7.8
3 56.5	+3.4	+3 554	3 56.4	+3 27	8.7
3 54.8	+3.4	+3 552	3 54.9	+3 26	7.7
4 14.1	+3.6	+3 592	4 14.1	+3 36	8.2
4 7.8	+3.6	+3 576	4 7.8	+3 39	8.2
4 7.5	+3.6	+3 575	4 7.5	+3 35	8.5
4 0.2	+3.9	+3 563	4 0.3	+3 54	8.6
4 18.5	+4.0	+4 691	4 18.4	+4 2	7.2
4 9.4	+4.7	+4 668	4 9.5	+4 40	8.2
3 56.1	+5.0	+5 584	3 56.1	+5 2	6.2
3 47.0	+4.5	+4 602	3 47.1	+4 31	8.5
3 46.8	+4.8	+4 601	3 46.8	+4 45	8.0
4 3.6	+5.2	+5 601	4 3.6	+5 9	6.0
3 55.5	+5.6	+5 581	3 55.5	+5 35	4.0
3 49.4	+5.6	+5 564	3 49.3	+5 36	7.0
4 12.9	+5.7	+5 631	4 13.0	+5 47	6.5

\* BD +2° 641 superhosed on BD +2° 640

[[end table]]

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]16[[/preprinted]]

June 27, 1893

Plate 971

[[5 column table]]

V	H	Gl.	Run <sup>h</sup>	[No.]	[K]	lme	[Int.]
23.5	11.	F	2724		K=H	2	
24.5	14.3	A			N	2	
24.1	22.9	A			N	3	

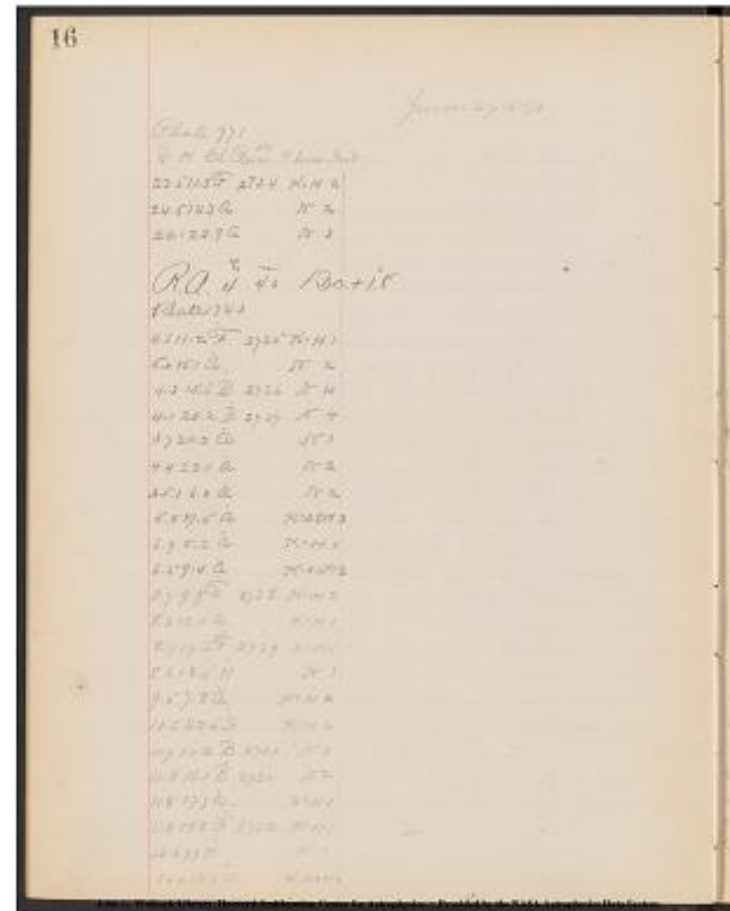
R.A 4<sup>h</sup>[[h]] 40<sup>m</sup>[[m]] Dec.+1.8

Plate 1740

[[5 column table]]

4.6	11.2	F	2725		K=H	1	
5.0	15.1	A			N	2	
4.3	15.6	B	2726		N	4	
4.1	20.2	B	2727		N	4	
3.7	20.3	A			N	1	
4.4	22.1	A			N	2	
*5.1	6.0	A			N	2	
5.8	19.5	A			K=0.51+	3	
6.9	8.2	A			K=1+1		
6.5	9.4	A			K=0.51+	2	
8.7	9.9	F	2728		K=H	2	
8.3	12.0	A			K=H1		
8.9	17.2	F	2729		K=H1		
8.6	18.5	H			N	1	
9.5	7.8	A			K=H2		
10.5	22.5	J			K=H2		
11.7	11.2	B	2730		N	3	
11.8	16.1	B	2731		N2		
11.8	17.7	A			K=H1		
11.8	19.8	F	2732		K=H1		
12.3	7.7	H			N	1	
13.0	13.3	A			K=0.2+12		

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



[[preprinted]]17[[/preprinted]]

1855

[[7 column table]]

-----

R.A. | Dec. | BD. No. | R.A. | Dec. | Magn.

4<sup>h</sup>[h] 7.7<sup>m</sup>[m] +5.8<sup>s</sup>[s] +5 613 4<sup>h</sup> 7.7 +5<sup>m</sup> 50' 8.5<sup>s</sup>[R]

4<sup>h</sup>[h] 7.7<sup>m</sup>[m] +5.8<sup>s</sup>[s] +5 614 4 7.8 +5 48 7.5

4 1.8 +6.3 +6 637 4 1.7 +6 21 7.2

4 47.1 -3.5 -3 928 4 47.2 -3 28 6.6

4 39.2 -3.2 -3 884 4 39.1 -3 13 7.2

4 38.2 -3.5 -3 876 4 38.2 -3 31 3.5

4 29.2 -3.7 -3 834 4 29.1 -3 39 3.5

[[star]] 4 28.8 -3.9 -3 830 4 28.8 -3 54 6.2[[star]]

4 25.4 -3.5 -3 809 4 25.4 -3 31 5.6

4 57.7 -3.2 -3 998 4 57.7 -3 14 6.0

4 30.3 -2.8 -2 963 4 30.3 -2 46 5.1

4 53.4 -2.2 -2 1095 4 53.3 -2 17 6.5

4 51.8 -2.4 -2 1083 4 51.8 -2 22 7.8

4 49.9 -1.2 -1 762 4 ~~49~~ /50.0 -1 18 7.3

4 45.8 -1.5 -1 743 4 45.8 -1 30 8.5

4 45.8 -1.5 744 4 45.8 -1 30 8.5

4 35.0 -1.2 -1 702 4 35.0 -1 13 7.5

4 32.5 -1.4 -1 689 4 32.5 -1 20 7.7

4 54.1 -0.9 -0 826 4 54.0 -0 54 7.8

4 24.5 -0.4 -0 713 4 24.5 -0 22 5.0

4 47.4 +0.2 +0<sup>s</sup> 893<sup>s</sup> 4<sup>h</sup> 47.4<sup>m</sup> +0<sup>s</sup> 14<sup>m</sup> 6.2<sup>s</sup>

4 37.3 +0.3 +0<sup>s</sup> 834<sup>s</sup> 4<sup>h</sup> 37.3<sup>m</sup> +0<sup>s</sup> 18<sup>m</sup> 6.8<sup>s</sup>

4 34.2 +0.3 +0 821 4 34.2 +0 16 8.2

^[[star]] 4 30.0 +0.3 +0 4 +0

4 54.4 +0.5 +0 923 4 54.4 +0 32 6.2

4 43.3 +0.9 +0 871 4 43.3 +0 54 7.3

[[end table]]

[[star]] BD -3° 831 Superposed on BD -3° 830/ v. BD +0° 800 and 801

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

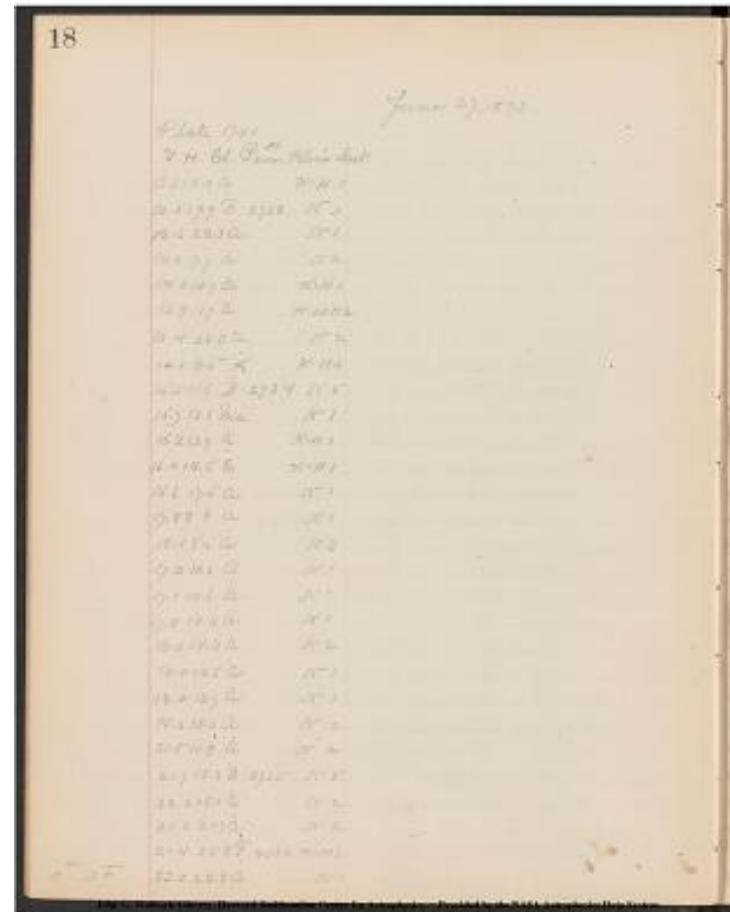


[[preprinted]]18[[/preprinted]]

June 27, 1893  
Plate 1740

[[6 column table]]  
VH	Cl.	Rem No.	K line	Int.
12.6|18.0|A| |K=H|1|  
12.5|19.9|B|2733|N|3|  
12.6|22.3|A| |N|1|  
14.0|7.7|A| |N|2|  
14.0|10.7|A| |K=H|1|  
13.9|11.7|A| |K=0.3H|2|  
13.4|24.3|A| |N|2|  
14.1|9.5|K| |K=H|3|  
15.5|11.6|B|2734|N|5|  
15.7|12.1|Ma| |N|1|  
15.2|13.9|A| |K=H|1|  
16.0|14.5|E| |K=H|1|  
16.6|17.5|A| |N|1|  
17.8|7.4|A| |N|1|  
18.0|8.5|A| |N|3|  
17.3|10.3|A| |N|1|  
17.1|10.6|A| |N|1|  
17.8|14.4|A| |N|1|  
18.0|14.3|A| |N|2|  
18.0|14.5|A| |N|1|  
18.0|13.7|A| |N|1|  
18.3|[[?]]8.3|A| |N|2|  
21.5|10.9|A| |N|2|  
21.7|13.3|B|2735|N|5|  
22.2|15.1|A| |N|2|  
21.6|21.7|A| |N|2|  
21.4|22.8|F|2736|K=H|1|  
[[end table]]

[[margin]]  
h m  
0 30  
22.0|22.8|A| |N|1|  
[[/margin]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]19[[/preprinted]]

1855

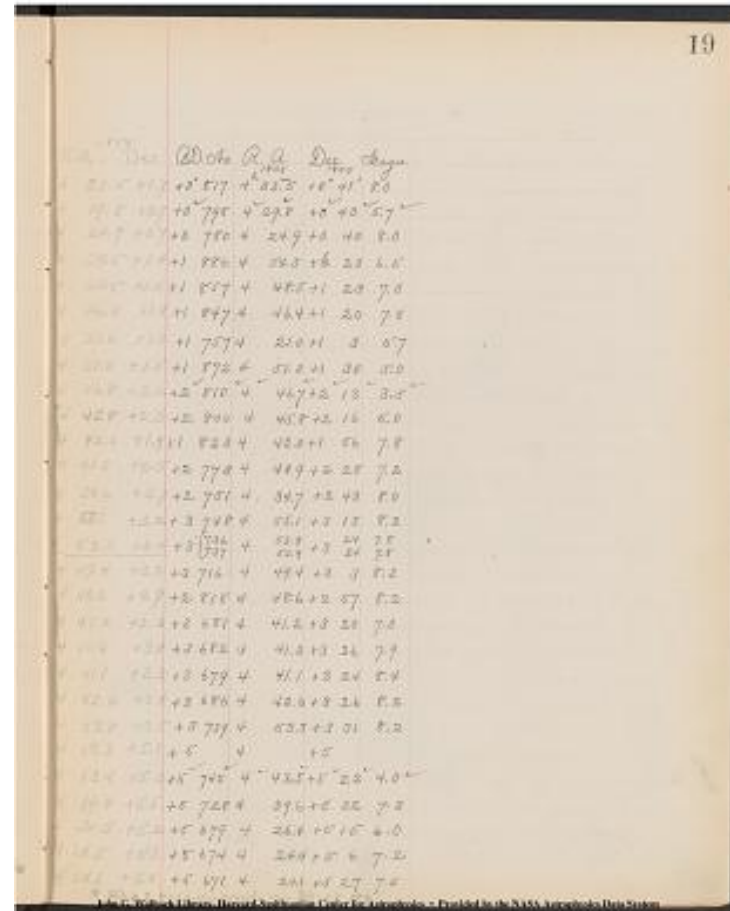
[[5 column table]]

R.A. Dec|BD. No.|R.A. 1855|Dec. 1855|Magn.|

4 33.5 +0.7	+0 <sup>h</sup> [ <sup>m</sup> ]	817	4 <sup>h</sup> [ <sup>m</sup> ]	33.5 <sup>m</sup> [ <sup>s</sup> ]	+0 <sup>h</sup> [ <sup>m</sup> ]	41 <sup>h</sup> [ <sup>m</sup> ]	8.0
4 29.8 +0.7	+0 798	4 29.8	+0 43	5.7			
4 24.9 +0.7	+0 780	4 24.9	+0 40	8.0			
4 54.5 +1.4	+1 886	4 54.5	+ <del>1 23</del>	6.5			
4 48.5 +1.4	+1 857	4 48.5	+1 23	7.5			
4 46.4 +1.4	+1 847	4 46.4	+1 20	7.5			
4 21.0 +1.0	+1 757	4 21.0	+1 3	5.7			
4 51.0 +1.5	+1 872	4 51.0	+1 30	5.0			
4 46.8 +2.2	+2 810	4 46.7	+2 13	3.5			
*4 45.8 +2.3	+2 800	4 45.8	+2 16	5.0			
4 42.0 +1.9	+1 823	4 42.0	+1 56	7.8			
4 41.0 +2.5	+2 773	4 40.9	+2 28	7.2			
4 34.6 +2.7	+2 751	4 34.7	+2 43	8.0			
4 55.1 +3.2	+3 748	4 55.1	+3 15	8.2			
[[underlined]]4 53.0	+3.4	[[underlined]]	+3{736/737	4 52.9/52.9	+3		
24/24	7.8/7.8						
4 49.4 +3.0	+3 716	4 49.4	+3 3	8.3			
4 48.6 +2.9	+2 818	4 48.6	+2 57	8.2			
4 41.2 +3.3	+3 681	4 41.2	+3 20	7.0			
4 41.4 +3.4	+3 682	4 41.3	+3 26	7.9			
4 41.1 +3.3	+3 679	4 41.1	+3 24	8.4			
4 42.6 +3.4	+3 686	4 42.6	+3 26	8.2			
4 53.5 +3.5	+3 739	4 53.5	+3 31	8.2			
4 58.3 +5.1	+5 4	+5 4					
4 43.4 +5.3	+5 745	4 43.5	+5 22	4.0			
4 39.4 +5.5	+5 728	4 39.6	+5 32	7.3			
4 26.5 +5.2	+5 679	4 26.4	+5 15	6.0			
4 24.5 +5.1	+5 674	4 24.4	+5 6	7.2			
4 24.1 +5.4	+5 671	4 24.1	+5 27	7.5			

[[end table]]

\*BD+2 801 superposed on BD. +2 800



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]20[[/preprinted]]

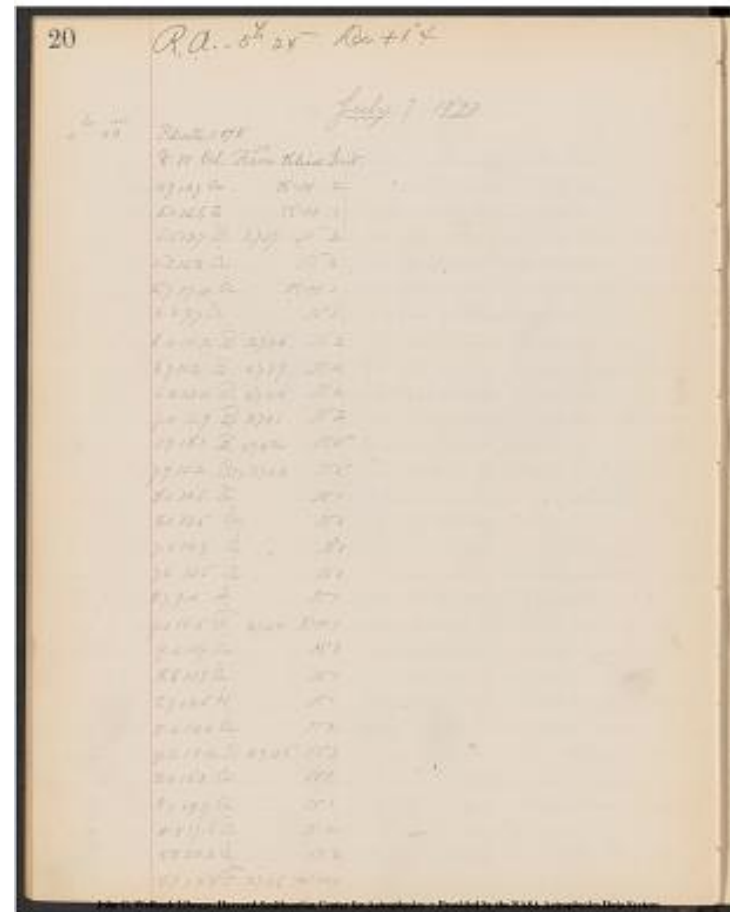
R.A. 5<sup>h</sup> 24<sup>m</sup> Dec. +1.4°

[[underlined]]July 7, 1893[[/underlined]]

^[[left margin]]  
0<sup>h</sup> 00<sup>m</sup>  
^[[left margin]]

Plate 1098

[[6 columned table]]					
V	H	Cl.	Rem No.	K line	Int.
4.9	10.7	A		K=H 2	
5.0	15.6	E		K=H 1	
5.5	12.7	B	2737	N 2	
5.3	5.8	A		N 2	
5.9	19.4	A		K=H 1	
6.3	9.9	A		N 1	
6.4	10.2	B	2738	N 2	
6.7	11.2	B	2739	N 4	
6.2	13.4	B	2740	N 2	
7.0	16.9	B	2741	N 2	
6.9	18.1	B	2742	N 5	
7.9	10.2	B(?)	2743	N 5	
8.0	10.6	A		N 1	
8.0	13.5	A		N 1	
7.8	14.9	A		N 1	
7.6	16.5	A		N 1	
8.7	9.0	H		N 1	
9.0	10.5	F	2744	K=H 1	
9.0	11.7	A		N 1	
8.6	11.9	A		N 1	
5.9	13.5	H		N 1	
8.4	14.0	A		N 2	
8.6	14.2	B	2745	N 3	
8.4	15.3	A		N 1	
8.7	19.7	A		N 1	
8.8	17.6	A		N 2	
8.8	20.6	A		N 2	
8.9	22.8	F	2746	K=H 1	
[[end table]]					



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]21[[/preprinted]]

1855

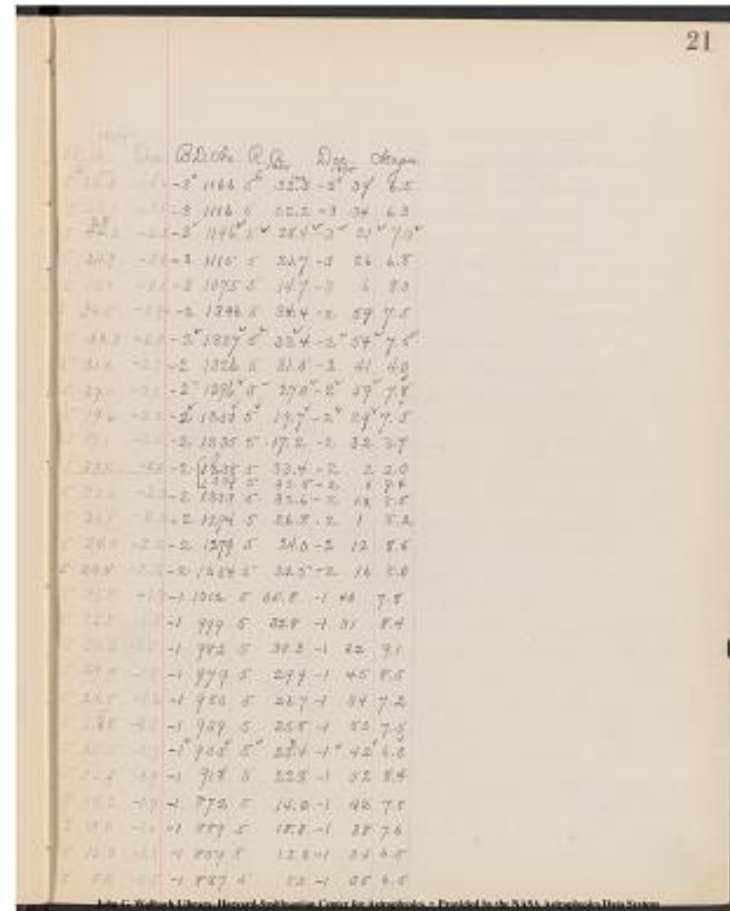
[[6 column table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

5^	[[h]]	32.3^	[[m]]	-3.6^	-3°	1166	5^	[[h]]	32.3^	[[m]]	-3°	39	6.5
5	22.1	-3.5	-3	1116	5	22.2	-3	34	6.3				
5	[[strikethrough]]	32	[[/strikethrough]]	28.3	-3.3	-3	1146	5	28.4	-3	21	7.0	
5	21.9	-3.4	-3	1115	5	21.7	-3	26	6.8				
5	15.0	-3.1	-3	1075	5	14.7	-3	6	8.0				
5	34.5	-2.9	-2	1346	5	34.4	-2	59	7.5				
5	33.3	-2.9	-2	1337	5	33.4	-2	54	7.5				
5	31.6	-2.7	-2	1326	5	31.5	-2	41	4.0				
5	27.0	-3.0	-2	1296	5	27.0	-2	59	7.8				
5	19.6	-2.5	-2	1250	5	19.7	-2	29	7.5				
5	17.1	-2.5	-2	1235	5	17.2	-2	32	3.7				
5	33.4	-2.0	-2	1133	5	33.5	-2	0	9.4				
5	32.6	-2.0	-2	1333	5	32.6	-2	1	8.5				
5	26.9	-2.0	-2	1294	5	26.8	-2	1	8.2				
5	24.0	-2.2	-2	1279	5	24.0	-2	12	8.5				
5	20.4	-2.2	-2	1254	5	20.5	-2	16	8.0				
5	35.8	-1.7	-1	1012	5	35.8	-1	40	7.8				
5	32.8	-1.5	-1	999	5	32.8	-1	31	8.4				
5	30.3	-1.5	-1	982	5	30.3	-1	32	9.1				
5	29.9	-1.8	-1	979	5	29.9	-1	45	8.5				
5	26.8	-1.6	-1	950	5	26.7	-1	34	7.2				
5	2	5.8	-1.8	-1	939	5	25.8	-1	50	7.5			
5	25.5	-1.7	-1	935	5	25.4	-1	42	6.0				
5	22.9	-1.9	-1	918	5	22.8	-1	52	8.4				
5	14.2	1.7	-1	872	5	14.2	-1	42	7.8				
5	18.4	-1.6	-1	889	5	18.3	-1	38	7.6				
5	12.3	-1.5	-1	859	5	12.3	-1	34	6.5				
5	8.0	-1.5	-1	837	5	8.0	-1	35	6.5				

[[end table]]

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]22[[/preprinted]]

July 7, 1893

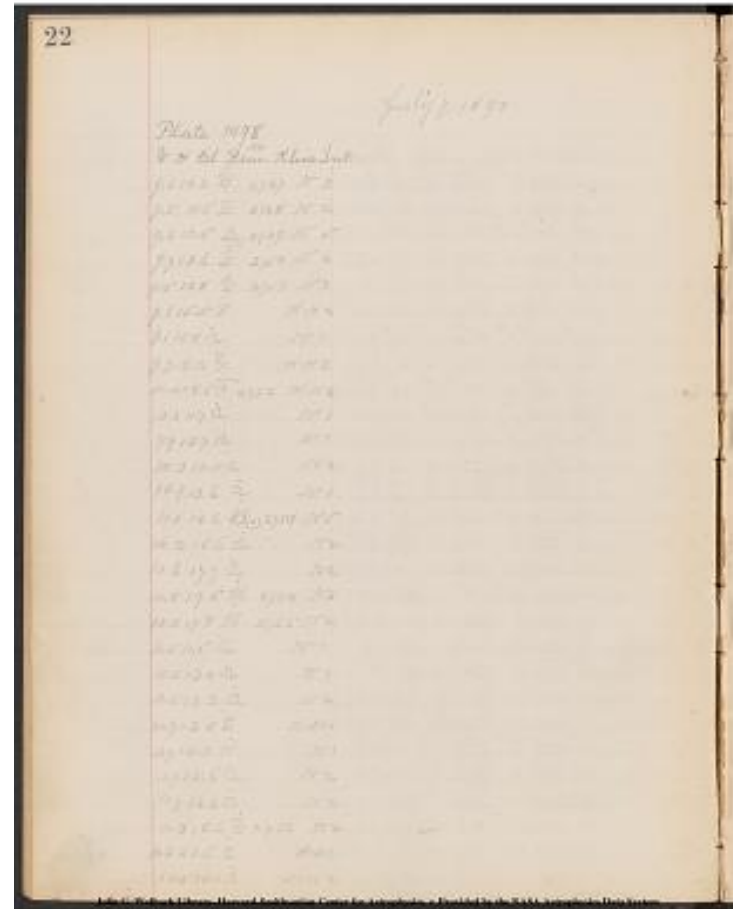
Plate 1098

[[6 column table]]

V | H | Cl. | No. Rem. | K line | Int. |

9.6	10.2	B	2747	N	3
9.5	11.5	B	2748	N	2
9.3	12.5	B	2749	N	5
9.7	13.6	B(?)	2750	N	2
9.5	13.8	B	2751	N	3
9.6	15.5	F		K=H	2
9.1	16.8	A		N	1
9.9	18.2	G		K=H	3
10.0	18.5	F	2752	K=H	2
10.3	11.7	A		N	1
9.9	12.7	A		N	1
10.3	13.0	A		N	2
10.9	13.6	A	s 1		
11.0	14.6	B(?)	2753	N	5
10.2	15.6	A		N	2
10.6	17.7	A		N	2
10.8	19.5	B	2754	N	3
10.8	19.8	B	2755	N	2
11.5	11.5	A		N	1
11.3	13.0	A		N	1
11.5	13.2	A		N	2
11.7	13.4	E		K=H	1
11.7	14.3	H		N	1
11.7	15.6	A		N	2
11.7	16.2	A		N	2
11.3	18.6	B	2756	N	2
11.6	21.5	E		K=H	1
12.5	10.1	A		K=H	2

[[end table]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]23[[/preprinted]]

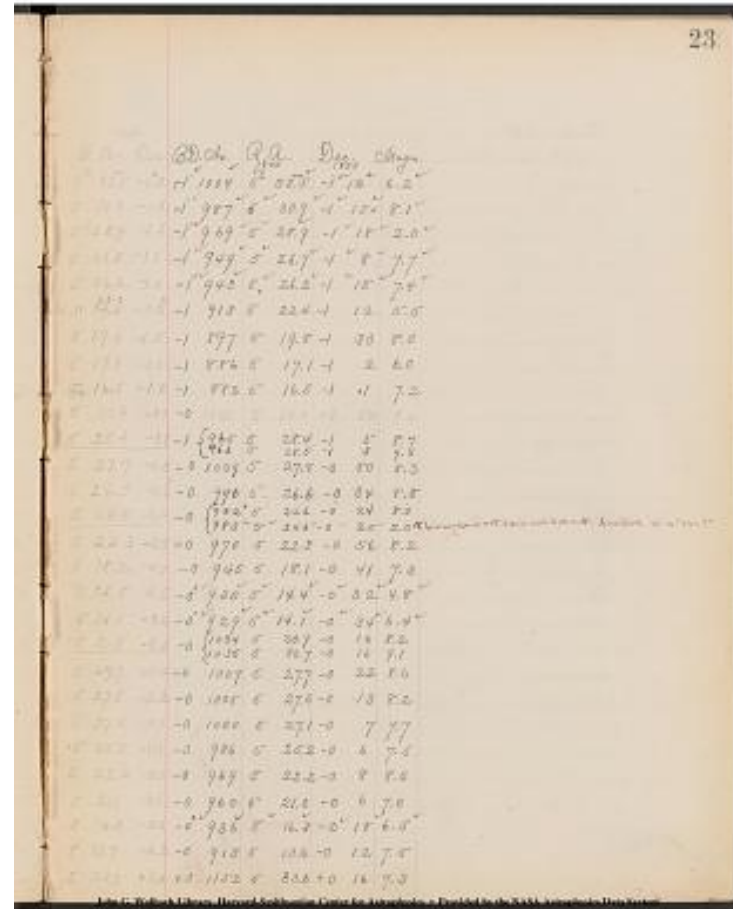
1855

[[6 column table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

5 <sup>h</sup> 33.5 <sup>m</sup> 33.5 <sup>s</sup> 1004	5 <sup>h</sup> 33.5 <sup>m</sup> 33.5 <sup>s</sup> 12	6.2
5 31.0 -1.3 -1° 987	5 30.9 -1 15	8.1
5 28.9 -1.3 -1° 969	5 28.9 -1 18	2.0
5 26.8 -1.1 -1° 949	5 26.7 -1 8	7.7
5 26.2 -1.2 -1° 943	5 26.2 -1 15	7.4
5 26.2 -1.2 -1° 943	5 26.2 -1 15	7.4
5 <del>19.8 -1.5 -1° 897</del>	5 <del>19.8 -1 30</del>	8.0
5 17.1 -1.0 -1° 886	5 17.1 -1 2	6.0
5 16.5 -1.0 -1° 882	5 16.5 -1 1	7.2
5 30.4 -0.9 -0° 1031	5 30.4 -0 52	9.0
5 28.4 -1.1	5 28.4 -1 5	8.7
5 28.5 -1 5	9.0	
5 27.7 -0.8 -0° 1009	5 27.8 -0 50	8.3
5 26.5 -0.6 -0° 996	5 26.6 -0 34	8.8
5 24.5 -0.4	5 24.6 -0 24	8.0
5 24.6 -0 25	2.0	[[his magn. is not 2.0 in new
5 22.3 -0.9 -0° 970	5 22.3 -0 56	8.2
5 18.2 -0.7 -0° 945	5 18.1 -0 41	7.3
5 14.5 -0.5 -0° 930	5 14.4 -0 32	4.8
5 14.1 -0.6 -0° 929	5 14.1 -0 34	6.4
5 30.8 -0.3	5 30.7 -0 16	8.2
5 30.7 -0 16	9.1	
5 27.7 -0.4 -0° 1007	5 27.7 -0 22	8.6
5 27.5 -0.2 -0° 1005	5 27.5 -0 13	8.2
5 27.0 -0.1 -0° 1000	5 27.1 -0 7	7.7
5 25.2 -0.1 -0° 986	5 25.2 -0 6	7.5
5 22.3 -0.1 -0° 969	5 22.2 -0 8	8.5
5 21.1 -0.1 -0° 960	5 21.0 -0 6	7.0
5 16.3 -0.3 -0° 936	5 16.3 -0 18	6.5
5 10.7 -0.2 -0° 913	5 10.6 -0 12	7.5
5 33.7 +0.3 +0° 1152	5 33.6 +0 16	7.3

[[end table]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]24[[/preprinted]]

July 7, 1893

Plate 1098

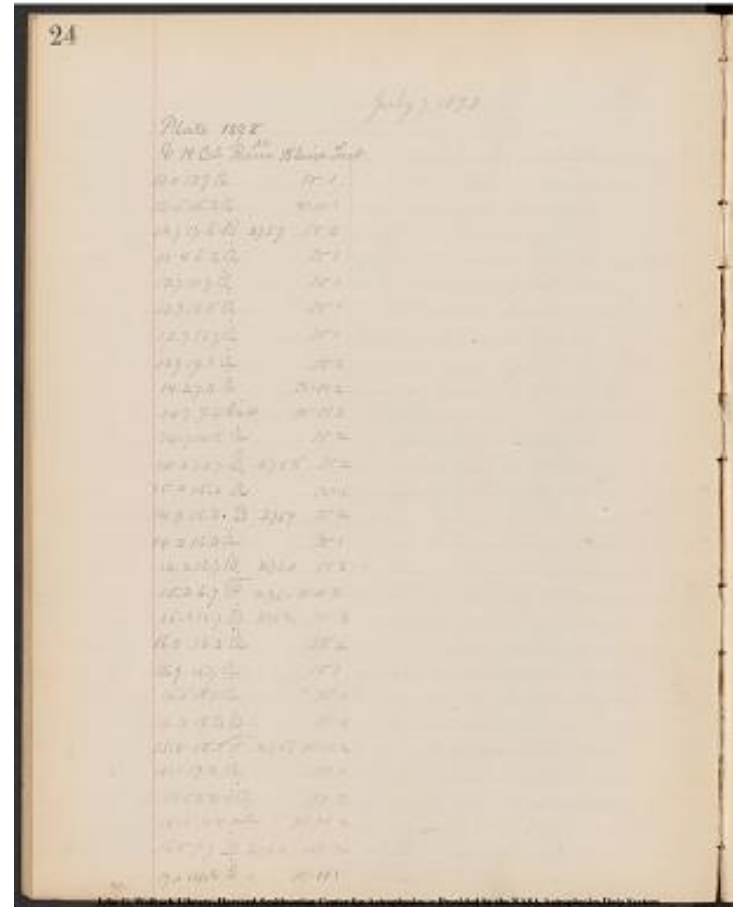
[[5 column table]]

V | H | Cl. | Rem. | [[No.]] | K line Int. |

13.0	13.9	A		S1	
12.5	15.2	A		K=H1	
12.7	17.6	B	2757	S3	
13.4	6.2	A		S1	
13.7	11.7	A		S1	
13.9	16.5	A		S1	
13.9	16.7	A		S1	
13.7	19.0	A		S2	
14.2	7.3	E		K=H2	
14.7	9.4	G2H		K=H3	
14.7	10.8	A		S2	
14.5	13.7	B	2758	S2	
15.0	15.0	A		S1	
14.9	16.3	B	2759	S2	
14.2	16.3	A		S1	
14.2	16.7	B	2760	S3	
15.2	6.7	F	2761	K=H2	
15.2	15.7	B	2762	S3	
16.0	16.3	A		S2	
15.9	15.7	A		S1	
15.5	18.1	A		S1	
15.3	18.3	B		S4	
15.8	18.8	F	2763	K=H2	
15.1	19.2	A		S1	
15.5	22.4	A		S3	
15.5	24.0	A		K=H2	
16.5	9.7	B	2764	S2	
17.0	14.6	E		K=H1	

[[end table]]

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



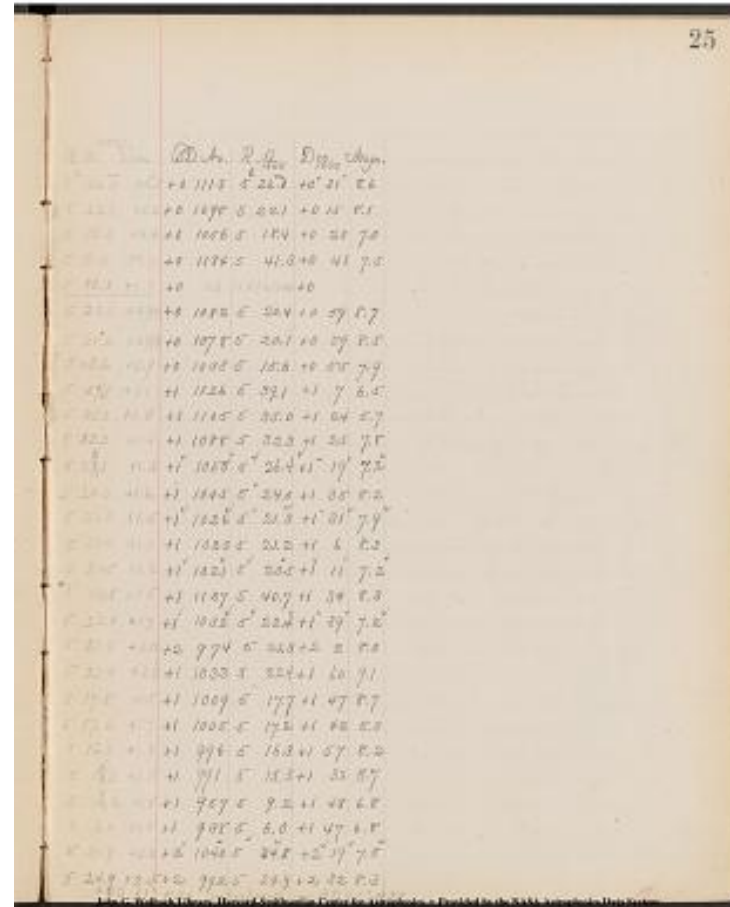
[[preprinted]]25[[/preprinted]]

[[5 column table]]

R.a.	Dec.	BD	Ro.	R.a.	Dec.	Magn.
5 <sup>h</sup> 26.0 <sup>m</sup> 1136	+0° 51'	1136	5 <sup>h</sup> 26 <sup>m</sup> 1136	5 <sup>h</sup> 26 <sup>m</sup> 1136	+0° 31'	1136
5 23.1 +0.2	+0 1098	5 23.1 +0 15	8.1			
5 18.3 +0.4	+0 1056	5 18.4 +0 23	7.0			
5 41.4 +0.7	+0 1184	5 41.3 +0 41	7.5			
5 30.5 +0.9	+0 1138	5 30.5 +0 11	8.1			
5 20.5 +0.9	+0 1082	5 20.4 +0 59	8.7			
5 20.2 +0.9	+0 1078	5 20.1 +0 59	8.5			
5 15.6 +0.9	+0 1035	5 15.6 +0 55	7.9			
5 39.1 +1.1	+1 1126	5 39.1 +1 7	6.5			
5 35.0 +1.4	+1 1105	5 35.0 +1 24	5.7			
5 32.3 +1.4	+1 1088	5 32.3 +1 25	7.8			
5 2 <del>1</del>	<del>1077</del>	5 24.0 +1 35	8.2			
5 24.0 +1.6	+1 1045	5 24.0 +1 35	8.2			
5 21.2 +1.5	+1 1026	5 21.3 +1 31	7.9			
5 21.0 +1.1	+1 1025	5 21.2 +1 6	8.3			
5 20.5 +1.2	+1 1021	5 20.5 +1 11	7.2			
5 40.8 +1.5	+1 1137	5 40.7 +1 34	8.3			
5 22.4 +1.7	+1 1032	5 22.4 +1 39	7.2			
5 21.2 +2.0	+2 974	5 21.3 +2 2	8.0			
5 22.4 +2.0	+1 1033	5 22.4 +1 60	9.1			
5 17.8 +1.8	+1 1009	5 17.7 +1 47	8.7			
5 17.2 +1.7	+1 1005	5 17.2 +1 42	5.0			
5 16.3 +1.9	+1 996	5 16.3 +1 57	8.2			
5 1 <del>1</del>	<del>1009</del>	5 15.5 +1 33	8.7			
5 9.2 +1.8	+1 957	5 9.2 +1 48	6.8			
5 6.0 +1.8	+1 938	5 6.0 +1 47	6.8			
5 34.7 +2.3	+2 1040	5 34.8 +2 19	7.8			
5 24.9 +2.5	+2 992	5 24.9 +2 32	8.3			

\*BD +1° 1136 superposed on BD +1° 1137

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



[[preprinted]]26[[/preprinted]]

July 7, 1893

Plate 1098

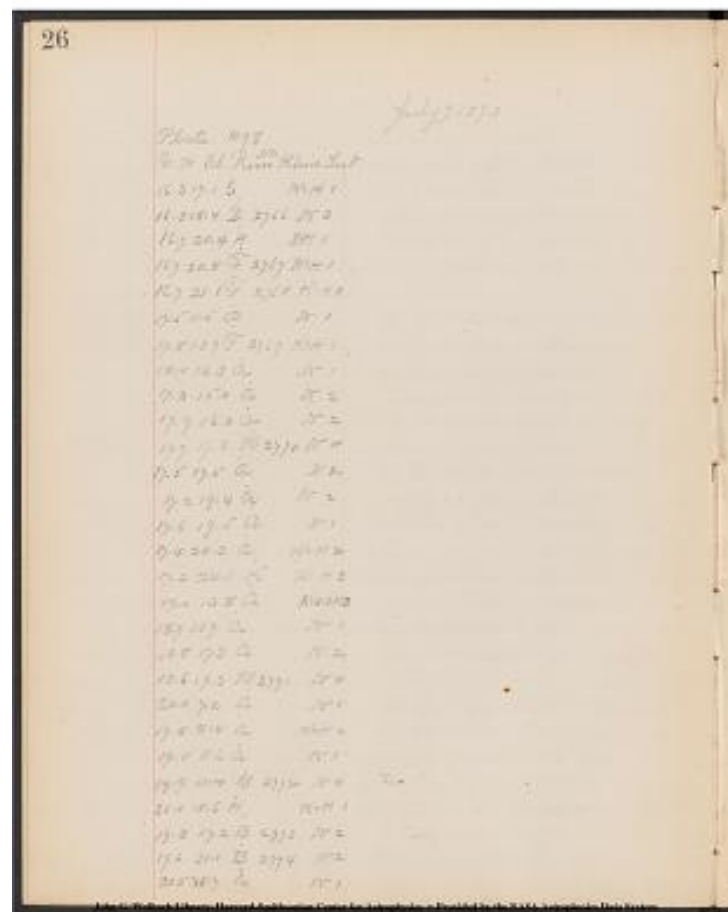
[[6 column table]]

|V|H|Cl.|Rem No.|Kline|Int.|

16.3	17.1	E	K=H 1
16.3	18.4	B	2766 N 3
16.7	20.4	H	K=H 1
16.7	20.8	F	2767 K=H 1
16.7	21.1	F	2768 K=H 3
17.5	11.5	A	N 1
17.8	13.9	F	2769 K=H 1
18.0	14.3	A	N 1
17.3	5.0	A	N 2
17.9	16.0	A	N 2
17.7	17.3	B	2770 N 4
17.5	17.5	A	N 2
17.2	19.4	A	N 2
17.6	19.5	A	N 1
17.4	20.3	A	K=H 2
17.2	24.1	K	K=H 3
19.0	13.8	A	K=0.2H 3
18.7	16.7	A	N 1
18.8	17.3	A	N 2
18.6	19.3	B	2771 N 4
20.0	7.2	A	N 1
19.8	8.4	A	K=H 2
19.5	8.6	A	N 1
19.9	11.4	B	2772 N 4
20.0	15.6	H	K=H 1
19.3	17.2	B	2773 N 2
19.6	20.1	B	2774 N 2
20.5	<del>11.1</del>	<del>11.1</del>	<del>8.9</del> A   N 1

[[end table]]

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



[[preprinted]]28[[/preprinted]]

Plate 1098

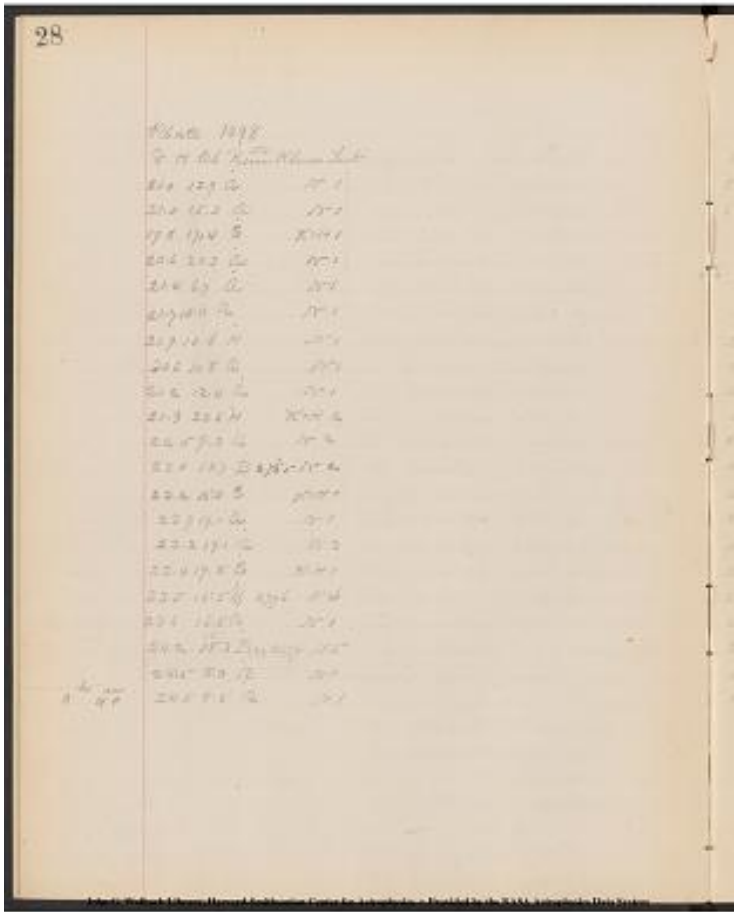
[[6 column table]]

V	H	Cl.	Rem No.	K line	Int.
21.0	12.9	A		N 1	
21.0	15.3	A		N 1	
19.8	17.4	E		K=H 1	
20.6	20.3	A		N 1	
21.4	6.9	A		N 1	
21.7	10.0	A		N 1	
21.9	10.6	H		N 1	
21.6	11.8	A		N 1	
21.2	12.4	A		N 1	
21.9	23.5	H		K=H 2	
22.5	9.3	A		N 2	
23.0	13.9	B	2775	N 2	
22.2	15.0	E		K=H 1	
22.9	19.1	A		N 1	
22.2	19.1	A		N 3	
22.4	19.8	E		K=H 1	
23.5	15.5	B	2776	N 4	
23.6	16.5	A		N 1	
24.2	18.3	B(2)	2777	N 5	
24.5	8.3	A		N 1	
24.5	8.5	A		N 1	

[[end table]]

[[margin]]  
h m  
0 40  
[[/margin]]

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]29[[/preprinted]]

1855

[[6 column table]]

R.A.|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.|

5^[[h]]	28.5^[[m]]	+4.5^°	5 28.5	+4 32	8.0
5 23.3	+4.5	+4 953	5 23.3	+4 33	8.5
5 19.0	+4.0	+ <del>4</del>	<del>4</del>	<del>3</del>	8.99
19.1	+ <del>2</del>	<del>2</del>	<del>3</del>	<del>5</del>	7.8
5 13.4	+4.3	+4 9.05	5 13.4	+4 20	8.7
5 40.6	+4.7	+4 1046	5 40.8	+4 39	7.9
5 34.1	+4.9	+4 1012	5 34.2	+4 54	8.2
5 33.2	+5.0	+4 1007	5 33.0	+4 60	7.6
5 30.4	+4.8	+4 995	5 30.6	+4 51	8.3
5 29.6	+4.7	+4 989	5 29.5	+4 40	8.0
5 7.2	+5.0	+4 877	5 7.0	+4 59	6.0
5 35.6	+5.3	+5 1001	5 35.7	+5 17	8.0
<del>5 27.0</del>	<del>5 34</del>	<del>5 7.3</del>	<del>5 27.0</del>	<del>5 34</del>	<del>7.3</del>
5 24.1	+5.2	+5 948	5 24.0	+5 12	8.0
5 19.7	+5.5	+5 926	5 19.8	+5 28	8.7
5 15.8	+5.2	+5 905	5 15.8	+5 10	7.0
5 14.4	+5.3	+5 899	5 14.5	+5 15	7.5
5 23.0	+5.8	+5 939	5 23.0	+5 50	5.5
5 21.0	+5.9	+5 932	5 21.1	+5 53	8.5
5 17.5	+6.2	+6 919	5 17.4	+6 13	2.0
5 37.8	+6.2	+6 1014	5 37.6	+6 13	7.4
5 37.3	+6.3	+6 1012	5 37.2	+6 16	7.3

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

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]30[[/preprinted]]

R.A. 6<sup>h</sup>[[h]] 00<sup>m</sup>[[m]] Dec. +1.4°  
[[underlined]]July 9, 1893[[/underlined]]

Plate 1082  
[[left margin]]  
23.40  
[[/left margin]]

[[6 columned table]]

V	H	Gl.	No.	Rem.	K line	Int.
4.5	11.9	E	K=H	1		
3.7	15.3	a	N	3		
3.7	21.4	a	N	2		
5.2	7.3	a	N	1		
5.5	7.3	a	N	2		
6.0	8.9	Ma	N	2		
5.2	15.2	a	N	2		
5.5	18.7	Sst	K=H	3		
6.2	6.1	a	N	2		
6.3	10.8	a	N	1		
6.9	12.5	a	N	2		
6.9	17.1	a	N	2		
7.0	22.6	F	2778	K=H	1	
7.9	8.8	a	N	1		
7.5	12.1	a	K=H	1		
8.0	13.4	a	N	1		
7.9	14.8	F	2779	K=H	1	
7.8	15.1	F	2780	K=H	1	
7.9	21.2	a	K=H	1		
9.0	5.6	a	N	3		
8.8	16.4	a	N	2		
8.8	19.0	a	N	2		
9.2	6.7	a	N	2		
9.5	8.3	a	N	1		
9.3	8.6	a	N	1		
9.3	8.7	a	N	1		
9.8	12.1	a	N	1		
9.3	12.6	a	N	1		

[[end table]]

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

30

Plate 1082

July 9, 1893

No.	Gl.	No.	Rem.	K line	Int.
4.5	11.9	E	K=H	1	
3.7	15.3	a	N	3	
3.7	21.4	a	N	2	
5.2	7.3	a	N	1	
5.5	7.3	a	N	2	
6.0	8.9	Ma	N	2	
5.2	15.2	a	N	2	
5.5	18.7	Sst	K=H	3	
6.2	6.1	a	N	2	
6.3	10.8	a	N	1	
6.9	12.5	a	N	2	
6.9	17.1	a	N	2	
7.0	22.6	F	2778	K=H	1
7.9	8.8	a	N	1	
7.5	12.1	a	K=H	1	
8.0	13.4	a	N	1	
7.9	14.8	F	2779	K=H	1
7.8	15.1	F	2780	K=H	1
7.9	21.2	a	K=H	1	
9.0	5.6	a	N	3	
8.8	16.4	a	N	2	
8.8	19.0	a	N	2	
9.2	6.7	a	N	2	
9.5	8.3	a	N	1	
9.3	8.6	a	N	1	
9.3	8.7	a	N	1	
9.8	12.1	a	N	1	
9.3	12.6	a	N	1	

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]31[[/preprinted]]

1855

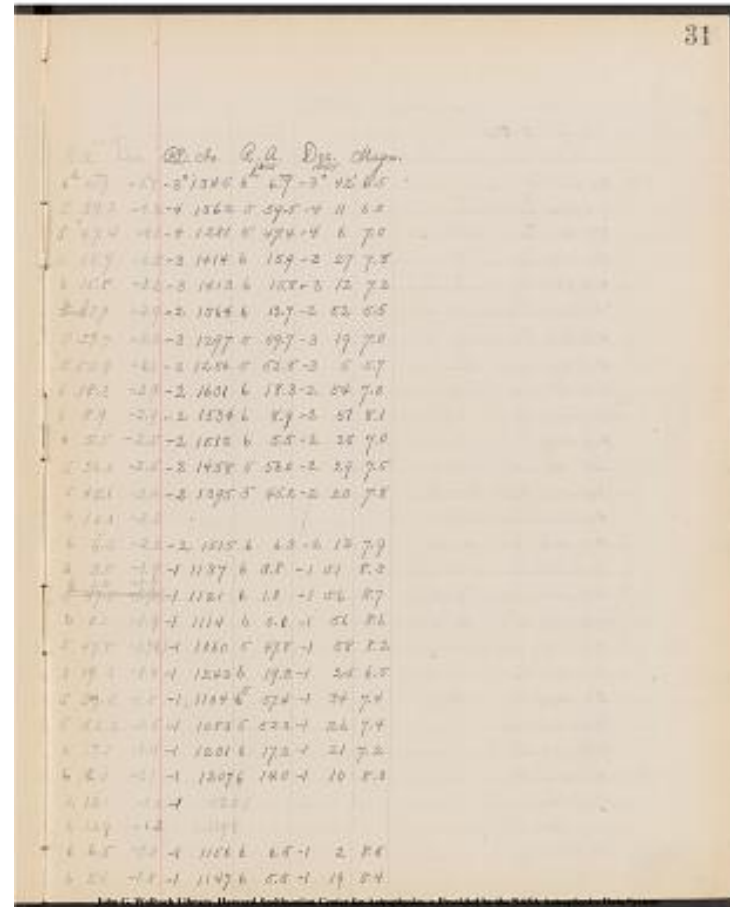
[[6 column table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

6 <sup>h</sup> [h]	6.9 <sup>m</sup> [m]	-3.7° -3°	1345	6 <sup>h</sup> [h]	6.7 <sup>m</sup> [m]	-3° 42'	6.5
5 59.3	-4.2	-4	1362	5 59.5	-4	11	6.0
5 47.4	-4.1	-4	1281	5 47.4	-4	6	7.0
6 15.9	-3.5	-3	1414	6 15.9	-3	27	7.8
6 15.8	-3.2	-3	1413	6 15.8	-3	12	7.2
6 12.9	-2.9	-2	1564	6 12.7	-2	52	5.5
5 59.7	-3.3	-3	1297	5 59.7	-3	19	7.0
5 52.9	-3.1	-3	1256	5 52.8	-3	5	5.7
6 18.3	-2.9	-2	1601	6 18.3	-2	54	7.0
6 8.9	-2.9	-2	1534	6 8.9	-2	51	8.1
6 5.5	-2.5	-2	1512	6 5.5	-2	28	7.0
5 56.0	-2.5	-2	1458	5 56.0	-2	29	7.5
5 45.1	-2.4	-2	1395	5 45.2	-2	20	7.8
6 13.0	-2.0						
6 6.3	-2.2	-2	1515	6 6.3	-2	13	7.9
6 3.8	-1.9	-1	1137	6 3.8	-1	51	8.3
6 1.0	-1.9	-1	1121	6 1.0	-1	56	8.7
6 0.1	-1.9	-1	1114	6 0.0	-1	56	8.6
5 47.8	-1.9(+)	-1	1060	5 47.8	-1	58	8.2
6 19.3	-1.4	-1	1242	6 19.3	-1	25	6.5
5 57.3	-1.5	-1	1104	5 57.4	-1	34	7.4
5 52.3	-1.5	-1	1083	5 52.3	-1	26	7.4
6 17.1	-1.4	-1	1231	6 17.2	-1	21	7.2
6 14.0	-1.1	-1	1207	6 14.0	-1	10	8.0
6 13.1	-1.3	-1	1701				
6 12.9	-1.2	v.	1198				
6 6.5	-1.0	-1	1156	6 6.5	-1	2	8.5
6 5.4	-1.3	-1	1147	6 5.3	-1	19	8.4

[[end table]]

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]32[[/preprinted]]

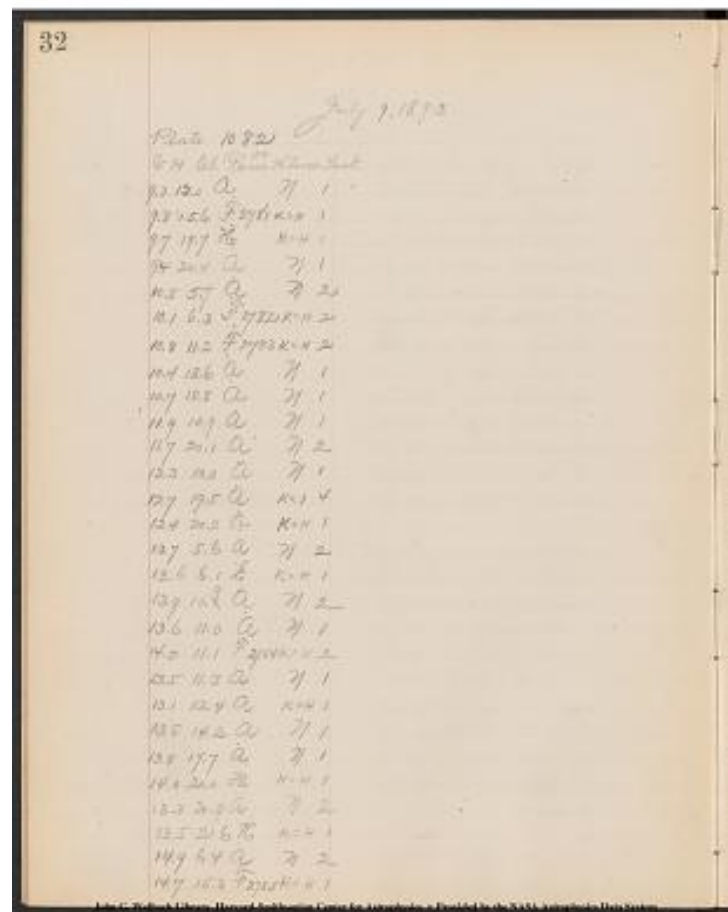
July 9, 1893  
Plate 1082

[[6 column table]]

|V|H|Cl.|Rem No.|Kline|Int.|

9.3	13.0	A		N	1		
9.8	15.6	F	2781	K=H	1		
9.9	19.7	H		K=H	1		
9.4	20.4	A		N	1		
10.5	5.7	A		N	2		
10.1	6.3	F	2782	K=H	2		
10.8	11.2	F	2783	K=H	2		
10.4	18.6	A		N	1		
10.7	18.8	A		N	1		
11.9	10.9	A		N	1		
11.7	20.1	A		N	2		
12.3	10.0	A		N	1		
12.7	19.5	A		K=1	4		
12.4	20.2	A		K=H	1		
13.7	5.6	A		N	2		
13.6	6.1	E		K=H	1		
13.9	10.	<del>[[/strikethrough]]</del>	<del>9</del>	1	A	N	2
13.6	11.0	A		N	1		
14.0	11.1	F	2784	K=H	2		
13.5	11.3	A		N	1		
13.1	12.4	A		K=H	1		
13.8	14.2	A		N	1		
13.8	17.7	A		N	1		
14.0	20.0	H		K=H	1		
13.3	20.9	A		N	2		
13.5	21.6	H		K=H	1		
14.9	6.4	A		N	2		
14.7	15.3	F	2785	K=H	1		

[[end table]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



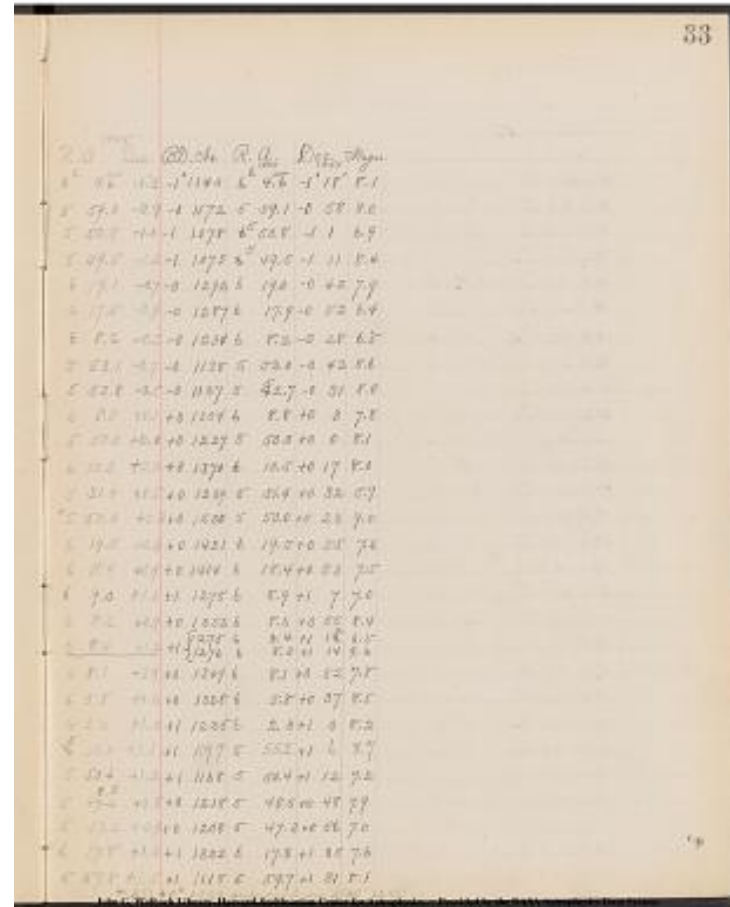
[[preprinted]]33[[/preprinted]]

1855

[[10 columned table]]

R.A.	Dec.	BD.	No.	R.A.	Dec.	Magn.
6 <sup>h</sup> 4.6 <sup>m</sup>	-1.°03'	-1°0'	1143	6 <sup>h</sup> 4.6 <sup>m</sup>	-1°0'	18 <sup>m</sup> 18.1
5 59.0 -0.9 -0 1172	5 59.1 -0 58	8.0				
5 50.8 -1.0 -1 1078	<del>6 </del>	<del>5 50.8 -1 1 </del>	6.9			
5 49.5 -1.2 -1 1073	<del>6 </del>	<del>5 49.5 -1 11 </del>	8.4			
6 19.1 -0.7 -0 1292	6 19.0 -0 42	7.9				
6 17.8 -0.9 -0 1287	6 17.9 -0 52	6.4				
6 8.2 -0.5 -0 1234	6 8.2 -0 28	6.5				
5 53.1 -0.7 -0 1138	5 53.0 -0 42	8.6				
5 52.8 -0.5 -0 1137	5	<del>4 </del>	52.7 -0 31	8.0		
6 8.8 +0.1 +0 1354	6 8.8 +0 3	7.8				
5 50.0 +0.0 +0 1227	5 50.0 +0 0	8.1				
6 10.5 +0.3 +0 1370	6 10.5 +0 17	8.0				
5 51.4 +0.5 +0 1239	5 51.4 +0 32	5.7				
5 50.0 +0.3 +0 1230	5 50.0 +0 23	9.0				
6 19.5 +0.9 +0 1421	6 19.5 +0 55	7.6				
6 18.4 +0.9 +0 1414	6 18.4 +0 53	7.5				
6 9.0 +1.1 +1 1278	6 8.9 +1 7	7.0				
6 8.6 +0.9 +0 1352	6 8.6 +0 55	8.4				
6 8.4 +1.2 +1	<del>1275</del>	1276	6 8.4	8.5 +1		
+1	<del>13</del>	<del>12</del>	14	6.2	9.8	
6 8.1 +0.9 +0 1349	6 8.1 +0 52	7.8				
6 5.8 +0.6 +0 1328	6 5.8 +0 37	8.5				
6 2.2 +1.0 +1 1235	6 2.3 +1 0	8.2				
<del>6 </del>	<del>5 55.0 +1.1 +1 1197 </del>	5 55.2 +1 6	8.7			
5 50.4 +1.2 +1 1168	5 50.4 +1 12	7.2				
5	<del>47.2 </del>	<del>48.5 +0.8 +0 1218 </del>	5 48.5 +0 48	7.9		
5 47.2 +0.9 +0 1208	5 47.3 +0 56	7.0				
6 17.8 +1.6 +1 1332	6 17.8 +1 35	7.6				
5 59.8 +1.5 +1 1118	5 59.7 +1 31	8.1				

\*BD +0°0' 1229 superposed on BD+0°0' 1230<sup>6</sup>.



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



[[preprinted]]34[[/preprinted]]

July, 9, 1893.

Plate 1082

[[6 columned table]]

V|H|Cl.|Rem. No.|K line|Int.|

14.9	17.8	A	N	3	
15.4	10.3	A	N	1	
16.0	15.5	A	N	2	
16.0	16.4	A	N	1	
15.8	16.8	A	N	1	
15.1	18.0	A	N	1	
15.6	18.5	A	N	1	
15.2	19.7	A	K=.8	3	
15.3	19.9	A	K=H	2	
15.2	22.8	G5	K=H	3	
15.6	23.7	F 2786	K=H	2	
16.5	6.2	A	N	2	
16.3	8.4	A	K=.5	2	
16.3	11.8	A	N	2	
16.9	12.1	A	N	1	
16.7	13.3	A	N	1	
16.6	14.7	A	K=.2	3	
18.0	11.1	A	N	1	
17.5	14.0	A	N	2	
17.4	14.2	E	K=H	1	
17.8	15.3	A	N	1	
17.3	17.0	A	N	2	
17.4	18.2	A	N	2	
18.0	18.2	A	N	2	
17.4	18.6	E	K=H	1	
18.0	21.9	H	K=H	1	
18.7	12.7	A	N	1	
18.3	14.1	H	N	1	

[[end table]]

34

July 7, 1892

Plate 1082

W. H. Fleming

14.9	17.8	A	N	3
15.4	10.3	A	N	1
16.0	15.5	A	N	2
16.0	16.4	A	N	1
15.8	16.8	A	N	1
15.1	18.0	A	N	1
15.6	18.5	A	N	1
15.2	19.7	A	K=.8	3
15.3	19.9	A	K=H	2
15.2	22.8	G5	K=H	3
15.6	23.7	F 2786	K=H	2
16.5	6.2	A	N	2
16.3	8.4	A	K=.5	2
16.3	11.8	A	N	2
16.9	12.1	A	N	1
16.7	13.3	A	N	1
16.6	14.7	A	K=.2	3
18.0	11.1	A	N	1
17.5	14.0	A	N	2
17.4	14.2	E	K=H	1
17.8	15.3	A	N	1
17.3	17.0	A	N	2
17.4	18.2	A	N	2
18.0	18.2	A	N	2
17.4	18.6	E	K=H	1
18.0	21.9	H	K=H	1
18.7	12.7	A	N	1
18.3	14.1	H	N	1

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

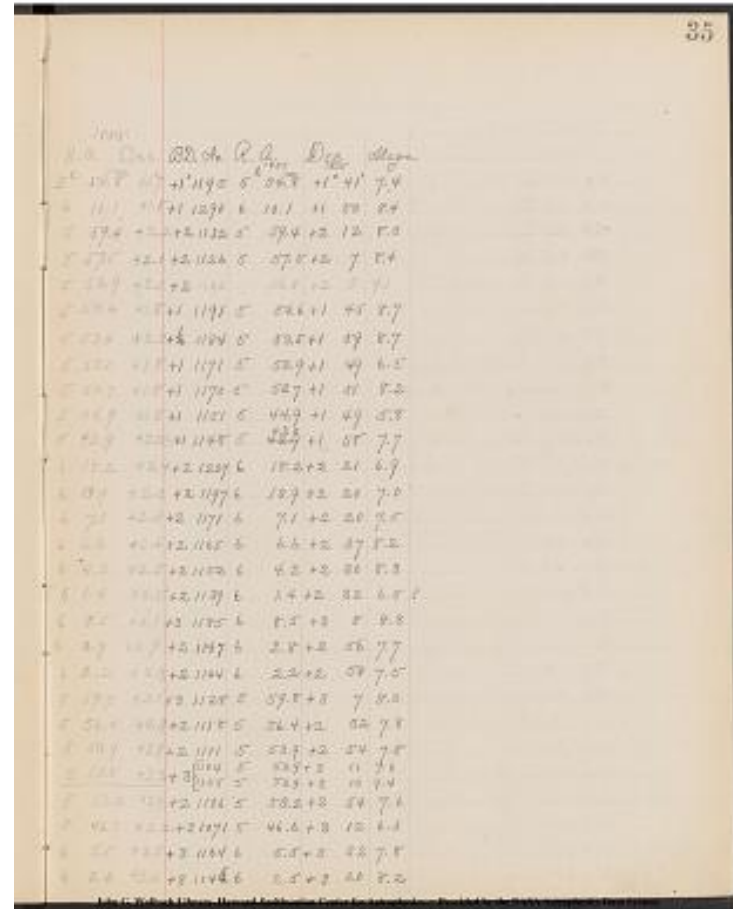
[[preprinted]]35[[/preprinted]]

1855.

[[10 columned table]]

R.A.	Dec.	BD.	No	R.A.	[[1855]]	Dec.	[[1855]]	Magn.					
5 <sup>h</sup> 54.8 <sup>m</sup>	+1.7 <sup>o</sup>	+1 <sup>o</sup> 0	1195	5 <sup>h</sup> 54.8 <sup>m</sup>	+1 <sup>o</sup> 0	41 <sup>m</sup>	17.4						
6	10.1	+1.8	+1	1290	6	10.1	+1	50	8.4				
5	59.4	+2.2	+2	1132	5	59.4	+2	12	8.0				
5	57.5	+2.1	+2	1126	5	57.5	+2	7	8.4				
5	56.9	+2.1	+2	1120	5	56.8	+2	5	9.1				
5	54.6	+1.8	+1	1191	5	54.6	+1	45	8.7				
5	53.4	+2.0	[[struck out]]	2	[[struck out]]	1	1184	5	53.5	+1	59	8.7	
5	51.0	+1.8	+1	1171	5	50.9	+1	49	6.5				
5	50.7	+1.8	+1	1170	5	50.7	+1	51	8.2				
5	44.9	+1.8	+1	1151	5	44.9	+1	49	5.8				
5	42.9	+2.0	(-)+1	1148	5	[[struck out]]	42.9	[[struck out]]	43.0	+1	58	7.7	
6	18.2	+2.4	+2	1227	6	18.2	+2	21	6.9				
6	13.9	+2.3	+2	1197	6	13.9	+2	20	7.0				
6	7.1	+2.3	+2	1171	6	7.1	+2	20	7.5				
6	6.6	+2.6	+2	1165	6	6.6	+2	37	8.2				
6	4.2	+2.5	+2	1152	6	4.2	+2	30	8.3				
6	1.4	+2.5	+2	1139	6	1.4	+2	32	6.5	?			
6	8.5	+3.1	+3	1185	6	8.5	+3	8	8.3				
6	2.7	+2.9	+2	1147	6	2.8	+2	56	7.7				
6	2.2	+2.9	+2	1144	6	2.2	+2	54	7.5				
5	59.7	+3.1	+3	1128	5	59.8	+3	7	8.0				
5	56.4	+2.9	+2	1118	5	56.4	+2	52	7.8				
5	53.9	+2.9	+2	1111	5	53.9	+2	54	7.8				
[[underlined]]	5	53.8	+3.2	[[underlined]]	[[underlined]]	5	53.9	+3	11	7.6			
[[underlined]]	5	53.8	+3.2	[[underlined]]	[[underlined]]	5	53.9	+3	10	9.4			
5	53.2	+2.9	+2	1106	5	53.2	+2	54	7.6				
5	46.7	+3.2	+3	1071	5	46.6	+3	12	6.3				
6	5.5	+3.5	+3	1164	6	5.5	+3	32	7.8				
6	2.6	+3.4	+3	114	[[struck out]]	4	[[struck out]]	5	6	2.5	+3	20	8.2

[[end table]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]36[[/preprinted]]

July, 9, 1893

Plate 1082

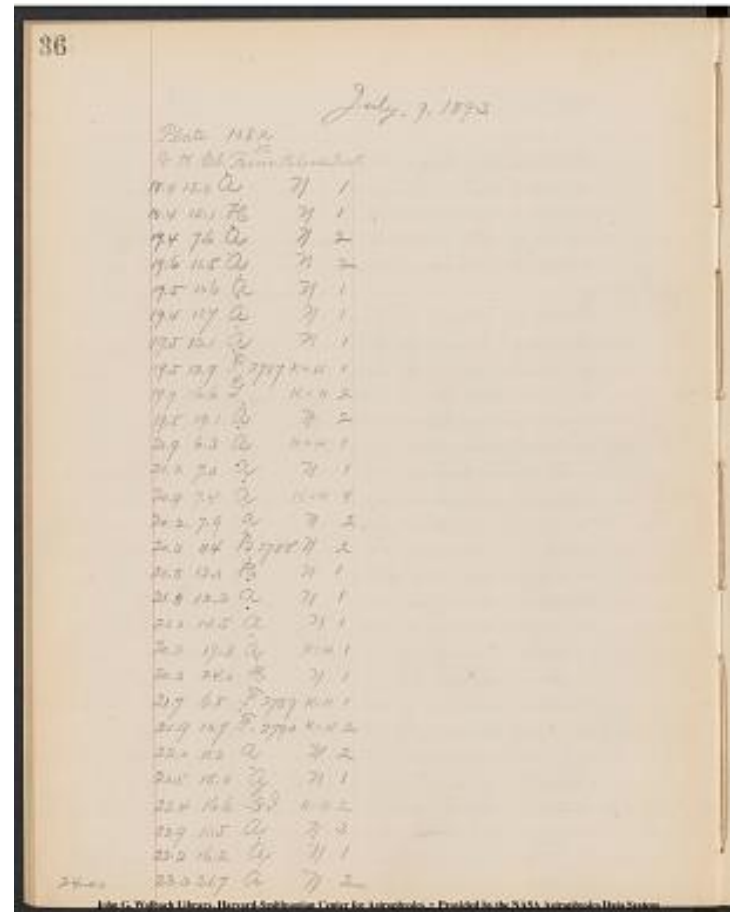
[[6 column table]]

[V|H|Cl.|Rem No.|K line|Int.]

18.4	15.0	A		N 1	
18.4	15.1	H		N 1	
19.4	7.6	A		N 2	
19.6	11.5	A		N 2	
19.5	11.6	A		N 2	
19.4	11.7	A		N 1	
19.5	12.1	A		N 1	
19.5	13.9	F	2787	K=H 1	
19.9	16.6	G		K=H 2	
19.5	19.1	A		N 2	
20.9	6.3	A		K=H 4	
20.3	7.0	A		N 1	
20.9	7.4	A		K=H 4	
20.2	7.9	A		N 2	
20.3	11.4	B	2788	N 2	
20.8	12.0	H		N 1	
21.0	13.2	A		N 1	
21.0	14.5	A		N 1	
20.2	17.3	A		K=H 1	
20.3	24.0	H		N 1	
21.7	6.8	F	2789	K=H 1	
21.9	10.7	F	2790	K=H 2	
22.0	11.2	A		N 2	
21.5	15.0	A		N 1	
22.4	16.6	G5		K=H 2	
23.9	11.5	A		N 3	
23.2	16.2	A		N 1	
23.3	21.7	A		N 2	

[[end table]]

[[striketthrough]]24.00[[/striketthrough]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]37[[/preprinted]]

1855

[[6 column table]]

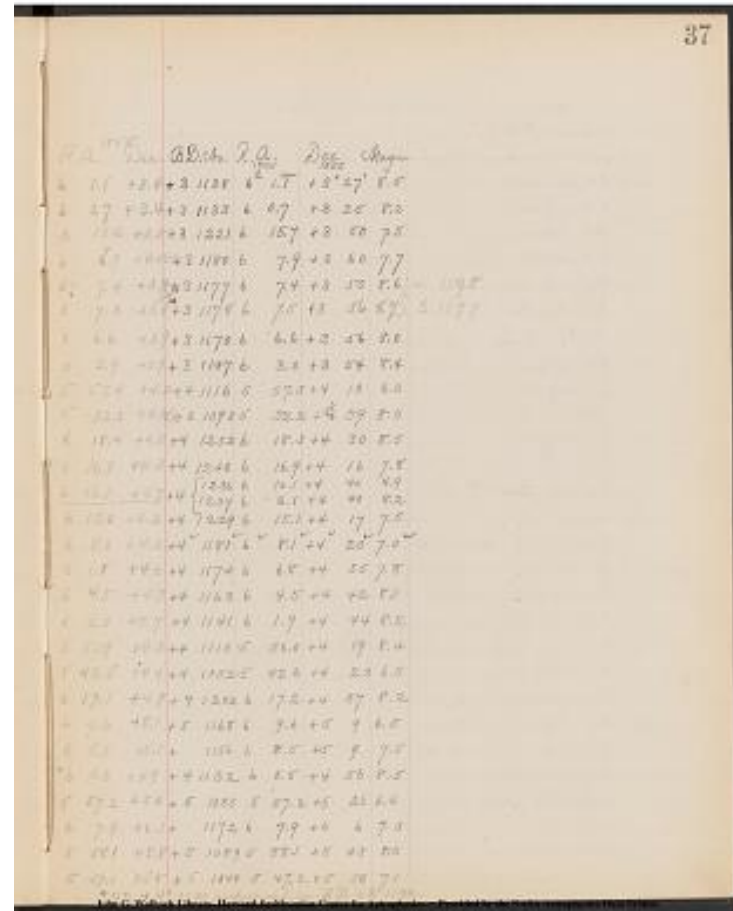
R.A.^1885|Dec.|BD.No.|R.A. 1855|Dec. 1855|Magn.|

6 1.1 +3.4 +3 1138 6^h 1.1^m +3^0 27^1 8.5
6 0.7 +3.4 +3 1133 6 0.7 +3 25 8.2
6 15.6 +3.8 +3 1221 6 15.7 +3 50 7.5
6 <del>[[strikethrough]]</del> 6 <del>[[/strikethrough]]</del> 7.9 +4.0(-) +3 1180 6 7.9 +3 60 7.7
6 7.4 +3.9 +3 <del>[[*]]</del> 1177 6 7.4 +3 50 8.6  <del>[[n.??]]</del>
11 <del>[[strikethrough]]</del> 6 <del>[[/strikethrough]]</del> 78
6 7.3 +3.8 +3 <del>[[*]]</del> 1178 6 7.5 +3 56 8.7  <del>[[phi??]]</del> 1177
6 6.6 +3.9 +3 1170 6 6.6 +3 56 8.0
6 2.9 +3.9 +3 1147 6 3.0 +3 54 8.4
5 57.4 +4.2 +4 1116 5 57.3 +4 10 6.0
5 52.3 +4.0(-) +3 1093 5 52.2 +3 59 8.0
6 18.4 +4.5 +4 1252 6 18.3 +4 30 8.5
6 16.9 +4.3 +4 1240 6 16.9 +4 16 7.8
6 16.1 +4.7 +4 1236 6 16.1 +4 40 4.9
6 16.1 +4.7 +4 1237 6 16.1 +4 40 8.2
6 15.0 +4.3 +4 1229 6 15.1 +4 17 7.5
6 8.0 +4.3 +4 1181 6 8.1 +4 20 7.0
6 6.8 +4.6 +4 1174 6 6.8 +4 35 7.8
6 4.5 +4.7 +4 1163 6 4.5 +4 42 8.1
6 2.0 +4.7 +4 1141 6 1.9 +4 44 8.2
5 55.9 +4.3 +4 1110 5 42.6 +4 23 6.0
6 17.1 +4.9 +4 1242 6 17.2 +4 57 8.2
6 9.6 +5.1 +5 1168 6 9.6 +5 9 6.5
6 8.5 +5.1 +5 1156 6 8.5 +5 9 7.5
*6 0.6 +4.9 +4 1132 6 0.5 +4 56 8.5
5 57.2 +5.4 +5 1085 5 57.2 +5 26 6.4
6 7.9 +6.1 +5 1172 6 7.9 +6 6 7.3
5 58.1 +5.8 +5 1089 5 58.1 +5 45 8.0
5 47.1 +5.8 +5 1044 5 47.2 +5 50 7.1

[[end table]]

\*BD +4° 1131 superhosed in BD +4° 1132.

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[preprinted]]38[[/preprinted]]

R.A. 6<sup>h</sup> 39<sup>m</sup> Dec. + 1.5  
July ~~10~~ 1893.  
~~00<sup>h</sup>~~

Plate 1148

[[6 columned table]]

|V|H|Cl.|Rem. No.|K line|Int.|

3.8	6.9	A		N	4
5.0	12.8	A		N	1
4.3	17.0	A		N	1
6.5	11.0	H		K=H	1
6.2	12.9	A		N	1
6.8	19.2	H		N	1
7.7	12.6	E		K=H	1
7.4	13.9	A		N	3
7.1	16.1	A		N	1
7.2	18.3	A		N	1
7.5	19.8	A		N	2
8.8	10.6	A		N	1
8.4	11.2	F	2791	K=H	2
8.1	12.8	A		N	1
9.3	7.6	H		K=H	1
9.4	9.8	A		N	1
9.6	11.3	A		K=3	4
9.3	13.7	A		N	1
9.2	14.4	A		K=H	3
9.1	15.6	A		N	1
9.9	15.8	A		N	1
9.2	16.6	A		N	2
9.1	18.5	H		N	1
9.7	20.5	A		K=H	1
9.3	21.6	B	2792	N	3
10.9	6.6	A		N	1
10.6	8.1	A		N	1
10.7	13.1	F	2793	K=H	3

38

RA 6<sup>h</sup> 39<sup>m</sup> Dec. + 1.5

July 4, 1893

Plate 1148

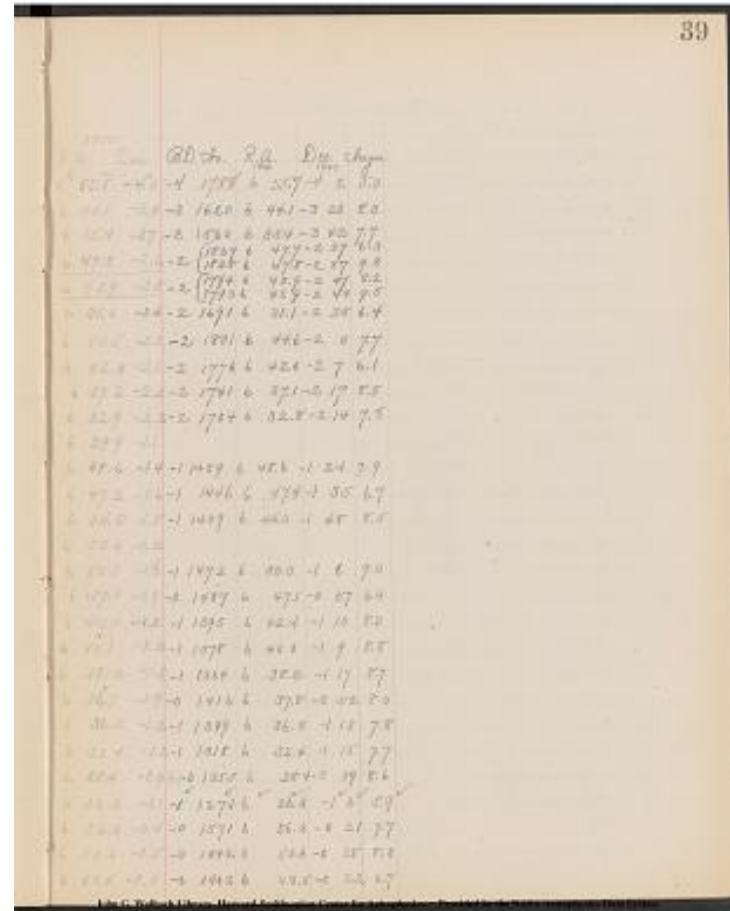
V	H	Cl.	Rem. No.	K line	Int.
3.8	6.9	A		N	4
5.0	12.8	A		N	1
4.3	17.0	A		N	1
6.5	11.0	H		K=H	1
6.2	12.9	A		N	1
6.8	19.2	H		N	1
7.7	12.6	E		K=H	1
7.4	13.9	A		N	3
7.1	16.1	A		N	1
7.2	18.3	A		N	1
7.5	19.8	A		N	2
8.8	10.6	A		N	1
8.4	11.2	F	2791	K=H	2
8.1	12.8	A		N	1
9.3	7.6	H		K=H	1
9.4	9.8	A		N	1
9.6	11.3	A		K=3	4
9.3	13.7	A		N	1
9.2	14.4	A		K=H	3
9.1	15.6	A		N	1
9.9	15.8	A		N	1
9.2	16.6	A		N	2
9.1	18.5	H		N	1
9.7	20.5	A		K=H	1
9.3	21.6	B	2792	N	3
10.9	6.6	A		N	1
10.6	8.1	A		N	1
10.7	13.1	F	2793	K=H	3

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[10 columned table]]

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

[R.A. 1855]	[Dec.]	[BD.]	[No.]	[R.A.]	[Dec.]	[Magn.]	
6^h55.8^m-4.00	-4	1788	6	55.7	-4	2 5.0	
644.1	-3.4	-3	1620	6	44.1	-3 20 8.0	
635.4	-3.7	-3	1560	6	35.4	-3 42 7.7	
647.8	-2.6	-2	1827	6	47.7	47.8 -2 -2 37 37 6.3 9.3	
643.9	-2.8	-2	1794	6	43.9	43.9 -2 -2 47 48 8.2 9.5	
631.0	-2.4	-2	1691	6	31.1	-2 25 6.4	
644.5	-2.0	-2	1801	6	44.6	-2 0 7.7	
642.0	-2.1	-2	1776	6	42.0	-2 7 6.1	
637.2	-2.3	-2	1741	6	37.1	-2 17 8.5	
632.9	-2.2	-2	1704	6	32.8	-2 14 7.8	
629.9	-1.1						
648.6	-1.4	-1	1459	6	48.6	-1 24 7.9	
647.2	-1.6	-1	1446	6	47.4	-1 35 6.7	
644.0	-1.8	-1	1409	6	44.0	-1 48 8.5	
652.4	-1.2						
650.0	[[struckthrough]]	-1.0	[[struckthrough]]	-1.1	-1 1472	6 50.0 -1 6 9.0	
647.0	-0.9	-0	1487	6	47.1	-0 57 6.4	
642.4	-1.2	-1	1395	6	42.4	-1 10 8.0	
640.1	-1.2	-1	1378	6	40.0	-1 9 8.8	
638.2	-1.3	-1	1364	6	38.2	-1 17 8.7	
6	[[struckthrough]]	36.7	[[struckthrough]]	37.7	-0.9	-0 1416	6 37.8 -0 52 8.0
636.3	-1.2	-1	1349	6	36.3	-1 13 7.8	
632.4	-1.2	-1	1318	6	32.4	-1 15 7.7	
628.4	-0.9	(+)-0	1355	6	28.4	-0 59 8.6	
626.3	-1.1	-1	1274	6	26.3	-1 6 5.9	
656.3	-0.4	-0	1571	6	56.3	-0 21 7.7	
653.6	-0.5	-0	1542	6	53.6	-0 28 8.3	
643.4	-0.4	-0	1462	6	43.5	-0 22 6.7	



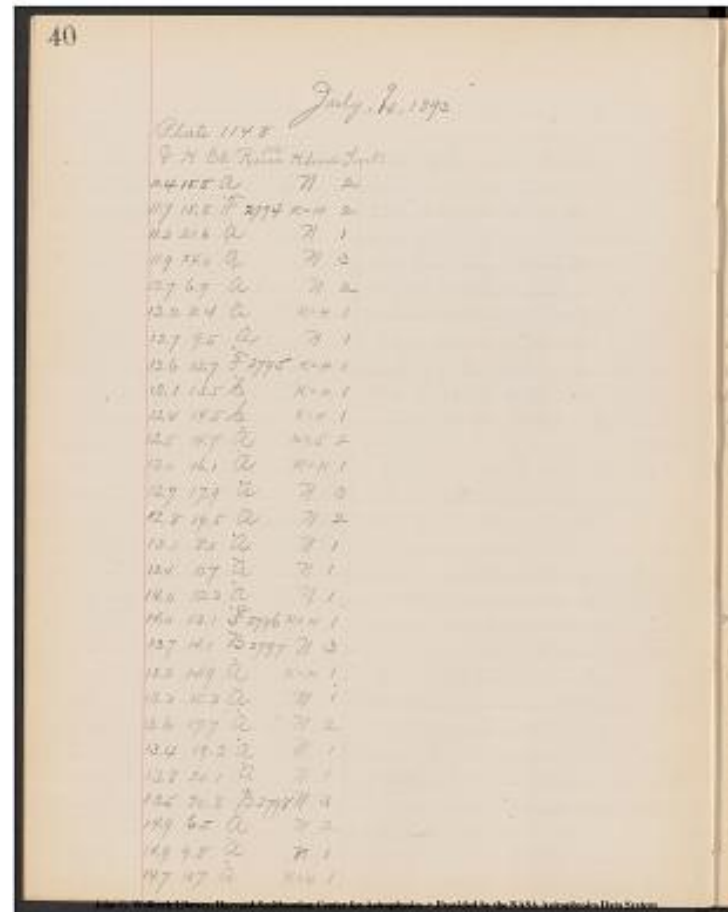
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

July, ~~10~~ ~~9~~, 1893  
Plate 1148

[[6 column table]]

V | H | Cl. | Rem.^[No.] | Kline | Int.

V	H	Cl.	Rem.	^[No.]	Kline	Int.
10.4	15.5	A	N	2		
11.7	15.8	F	2794	K=H	2	
11.2	21.6	A	N	1		
11.9	24.0	A	N	3		
12.7	6.9	A	N	2		
12.2	8.4	A	K=H	1		
12.7	9.5	A	N	1		
12.6	12.7	F	2795	K=H	1	
12.1	13.5	E	K=H	1		
12.4	14.5	E	K=H	1		
12.5	14.7	A	K=	5	2	
13.0	16.1	A	K=H	1		
12.7	17.9	A	N	3		
12.8	19.5	A	N	2		
13.1	18.0	A	N	1		
13.4	11.7	A	N	1		
14.0	12.3	A	N	1		
14.0	13.1	F	2796	K=H	1	
13.7	14.1	B	2797	N	3	
13.2	14.9	A	K=H	1		
13.3	15.3	A	N	1		
13.6	17.7	A	N	2		
13.4	19.2	A	N	1		
13.8	20.1	A	N	1		
13.5	20.8	B	2798	N	3	
14.9	6.5	A	N	2		
14.9	9.8	A	N	1		
14.7	11.7	A	K=H	1		

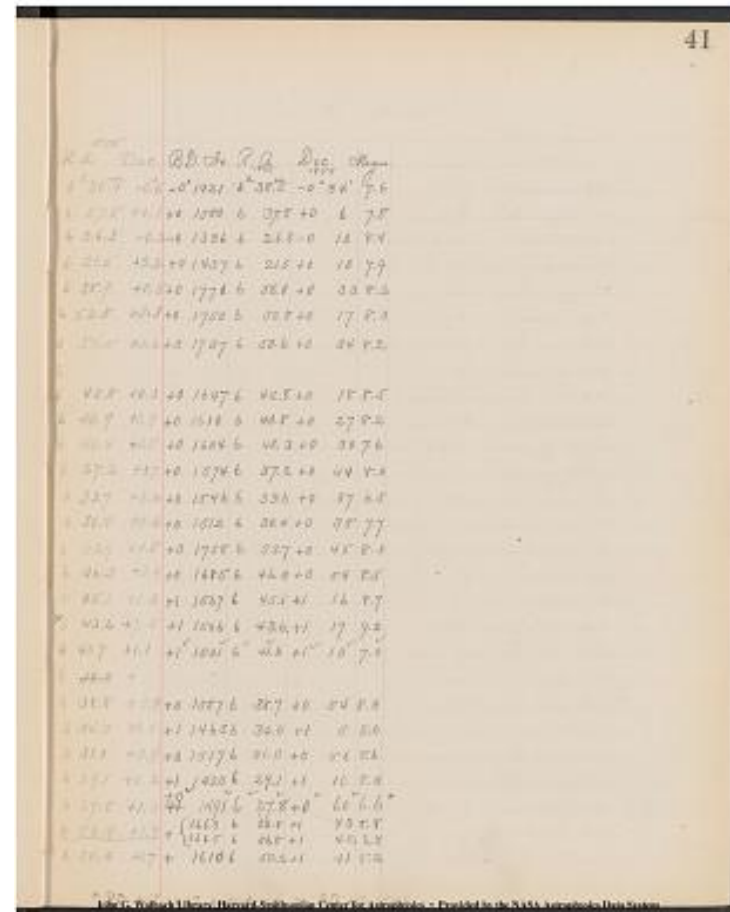


Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



[[6 column table]]

R.A. 1855	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
6 <sup>h</sup> 38.5 <sup>m</sup>	[[m]]	-0.6	-0 1421	6 38.5	-0 34   7.6
6 37.8	+0.1	+0 1580	6 37.8	+0 6	7.8
6 26.3	-0.2	-0 1336	6 26.3	-0 10	8.4
6 21.5	+0.2	+0 1437	6 21.5	+0 13	7.9
6 55.9	+0.5	+0 1776	6 56.0	+0 33	8.2
6 52.8	+0.3	+0 1750	6 52.8	+0 17	8.3
6 50.5	+0.6	+0 1737	6 50.6	+0 34	8.2
6					
6 42.8	+0.3	+0 1637	6 42.8	+0 18	8.5
6 40.9	+0.4	+0 1610	6 40.8	+0 27	8.2
6 40.4	+0.5	+0 1604	6 40.3	+0 30	7.6
6 37.2	+0.7	+0 1574	6 37.2	+0 44	8.0
6 33.7	+0.6	+0 1546	6 33.6	+0 37	6.5
6 30.4	+0.6	+0 1512	6 30.4	+0 38	7.7
6 53.7	+0.8	+0 1758	6 53.7	+0 45	8.3
6 46.3	+0.9	+0 1685	6 46.3	+0 54	8.5
6 45.1	+1.3	+1 1567	6 45.1	+1 16	8.7
*6 43.6	+1.3	+1 1546	6 43.6	+1 17	9.2
6 41.7	+1.1	+1 1531	6 41.6	+1 10	7.0
6 <del>[[striketthrough]]38.8</del>					
6 38.8	+0.9	+0 1587	6 38.7	+0 54	8.3
6 34.0	+1.1	+1 1465	6 34.0	+1 5	8.0
6 31.0	+0.9	+0 1517	6 31.0	+0 56	8.6
6 29.1	+1.2	+1 1420	6 29.1	+1 10	8.3
6 27.8	+1.0	+0 1491	6 27.8	+0 60	6.6
6 56.9	+1.7	+1 1663	6 56.8	+1 42	6.8
6 50.2	+1.7	+1 1610	6 50.2	+1 41	8.2



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



July, ~~10~~ 9, 1893

Plate 1148

[[6 columned table]]

|V|H|Cl.|No. Rem.|K line|Int|

14.9|19.1|a|2799|N|3

14.4|23.5|a|N|1

15.7|8.4|a|N|3

16.0|13.0|a|N|1

15.2|17.1|a|N|1

15.4|19.7|a|N|2

15.8|19.7|a|N|1

15.3|21.0|a|N|2

15.1|21.2|a|N|2

15.1|21.4|a|N|1

15.7|22.7|a|N|2

15.5|24.4|a|N|2

16.5|9.7|a|K=H|1

17.0|12.9|F|2800|K=H|1

16.5|14.8|K|K=H|4

16.7|15.6|a|N|1

16.8|18.3|a|N|1

16.2|19.6|a|N|2

16.9|24.0|H|N|1

17.6|9.9|a|K=H|1

17.8|12.9|a|K=.1|3

17.1|15.4|a|N|1

18.0|16.3|E|K=H|1

17.8|17.0|H|K=H|1

17.4|17.3|a|N|2

17.6|19.2|a|N|1

17.4|21.5|a|K=H|2

17.5|22.9|E|K=H|1

42

July, 9, 1893

Plate 1148

2 H dr. 2800

14.9	19.1	a	2799	N	3
14.4	23.5	a		N	1
15.7	8.4	a		N	3
16.0	13.0	a		N	1
15.2	17.1	a		N	1
15.4	19.7	a		N	2
15.8	19.7	a		N	1
15.3	21.0	a		N	2
15.1	21.2	a		N	2
15.1	21.4	a		N	1
15.7	22.7	a		N	2
15.5	24.4	a		N	2
16.5	9.7	a		K=H	1
17.0	12.9	F	2800	K=H	1
16.5	14.8	K		K=H	4
16.7	15.6	a		N	1
16.8	18.3	a		N	1
16.2	19.6	a		N	2
16.9	24.0	H		N	1
17.6	9.9	a		K=H	1
17.8	12.9	a		K=.1	3
17.1	15.4	a		N	1
18.0	16.3	E		K=H	1
17.8	17.0	H		K=H	1
17.4	17.3	a		N	2
17.6	19.2	a		N	1
17.4	21.5	a		K=H	2
17.5	22.9	E		K=H	1

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

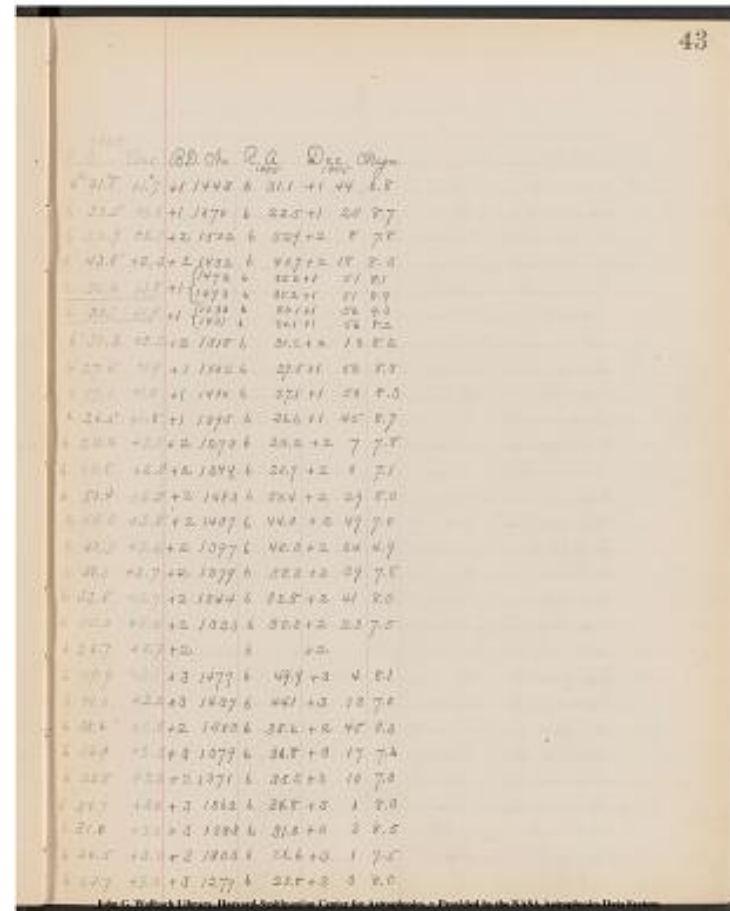
43

1855

[[10 columned table]]

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

[R.A. 1855]	[Dec. 1855]	[No. R.A. 1855]	[Dec. 1855]	[Magn.]
6^[[h]] 31.1^[[m]] +1.7^[[s]] +1 1443 6 31.1 +1 44 6.8				
6 22.5 +1.4 +1 1370 6 22.5 +1 25 8.7				
6 52.9 +2.1 +2 1502 6 52.9 +2 8 7.8				
6 43.8 +2.3 +2 1432 6 43.7 +2 18 8.3				
6 35.2 +1.8 +1 [[brace]]1472 1473 6 35.2 35.2 +1 +1 51 51 8.1 8.9				
6 30.1 +1.9 +1 [[brace]]1430 1431 6 30.1 30.1 +1 +1 56 56 9.3 8.2				
6 30.2 +2.2 +2 1318 6 30.2 +2 13 8.2				
6 27.5 +1.9 +1 1402 6 27.5 +1 56 8.3				
6 27.1 +1.8 +1 1400 6 27.1 +1 50 8.3				
6 26.5 +1.8 +1 1395 6 26.6 +1 45 8.7				
6 24.3 +2.1 +2 1273 6 24.2 +2 7 7.8				
6 20.8 +2.0 +2 1244 6 20.7 +2 0 7.1				
6 50.4 +2.5 +2 1483 6 50.4 +2 29 8.0				
6 44.0 +2.8 +2 1437 6 44.0 +2 49 7.0				
6 40.3 +2.6 +2 1397 6 40.3 +2 34 4.9				
6 38.3 +2.7 +2 1379 6 38.3 +2 39 7.8				
6 32.8 +2.7 +2 1344 6 32.8 +2 41 8.0				
6 30.3 +2.4 +2 1323 6 30.3 +2 23 7.5				
6 22.7 +2.7 +2 6 +2				
6 49.9 +3.1 +3 1477 6 49.9 +3 4 8.1				
6 44.0 +3.2 +3 1437 6 44.1 +3 13 7.0				
6 38.6 +2.8 +2 1380 6 38.6 +2 48 8.3				
6 36.9 +3.3 +3 1379 6 36.8 +3 17 7.6				
6 35.5 +3.2 +3 1371 6 35.5 +3 10 7.0				
6 34.7 +3.0 +3 1362 6 34.8 +3 18.0				
6 31.0 +3.0 +3 1333 6 31.0 +3 38.5				
6 26.5 +3.0 +3 1303 6 26.6 +3 17.5				
6 23.7 +3.0 +2 1279 6 23.8 +3 0 8.0				

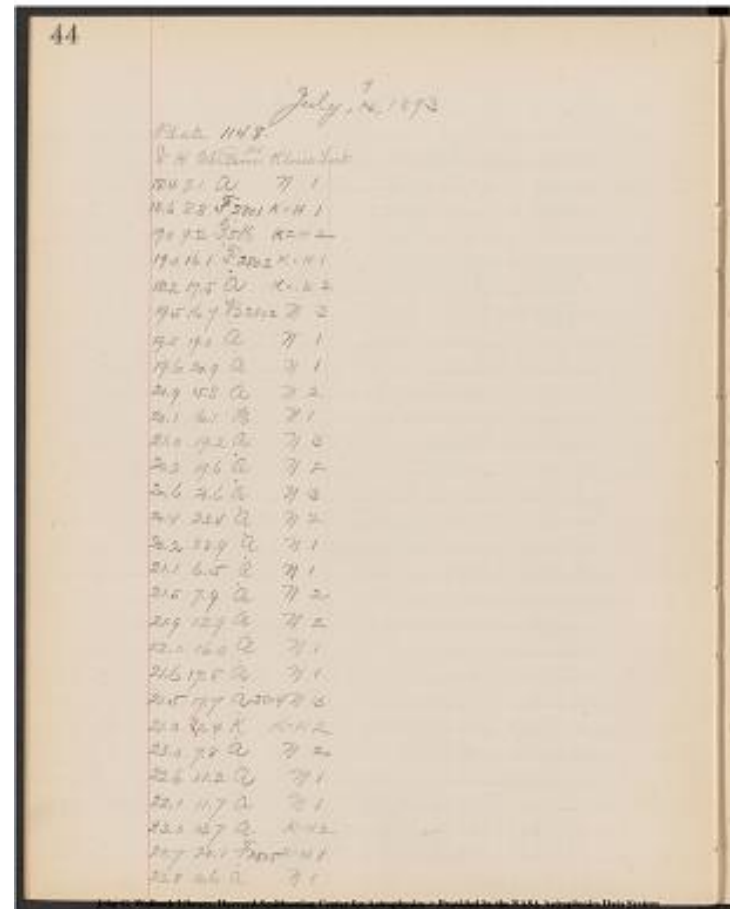


Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

July, ~~10~~ 9, 1893  
Plate 1148

[[table]]  
|V|H|C|Rem. No.|K line|Int|

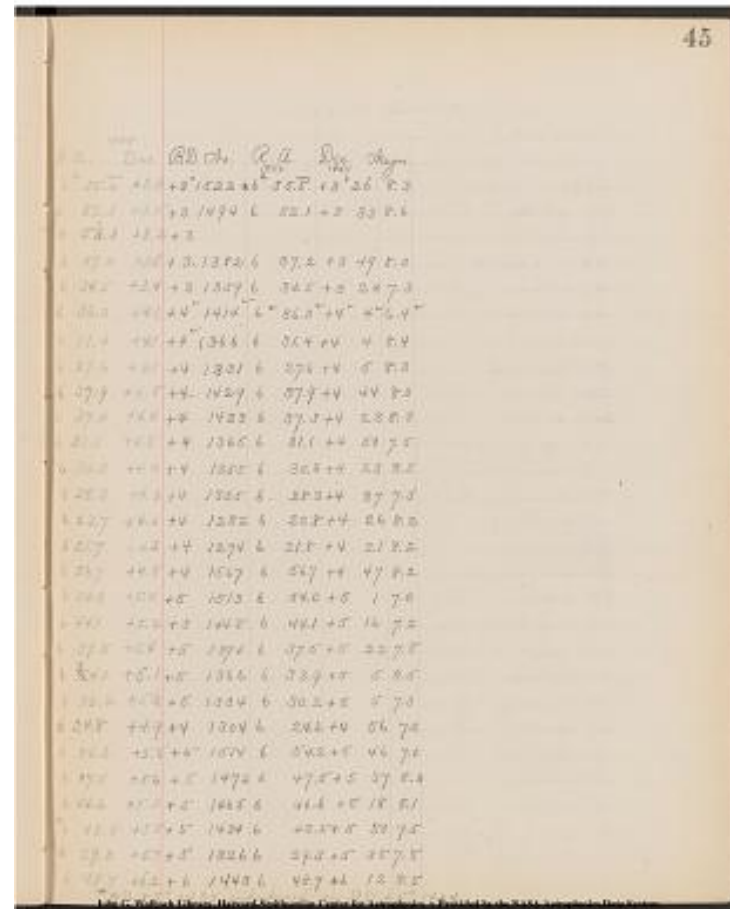
18.4	7.1	A	N	1		
18.6	8.8	F	2801	K=H	1	
19.0	9.2	G	5H	K=H	2	
19.0	16.1	F	2802	K=H	1	
18.2	17.5	A	K=2	2		
19.5	16.7	B	2803	N	3	
19.5	19.0	A	N	1		
19.6	20.9	A	N	1		
20.9	15.8	A	N	2		
20.1	16.1	H	N	1		
21.0	19.2	A	N	3		
20.2	19.6	A	N	2		
20.6	20.6	A	N	3		
20.4	23.4	A	N	2		
20.2	23.9	A	N	1		
21.1	6.5	A	N	1		
21.5	7.9	A	N	2		
21.9	12.9	A	N	2		
22.0	16.0	A	N	1		
21.6	17.8	A	N	1		
21.5	19.7	A	2804	N	3	
21.3	<del>1</del>	<del>1</del>	<del>22.4</del>	K	K=H	2
23.0	7.8	A	N	2		
22.6	11.2	A	N	1		
22.1	11.7	A	N	1		
23.0	13.7	A	K=H	2		
22.7	20.1	F	2805	K=H	1	
23.8	10.6	A	N	1		



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[10 columned table]]  
 [R.a. 1855] [Dec.] [BD.] [No.] [R.a. 1855] [Dec. 1855] [Magn.]  
 -----  
 6<sup>h</sup>[h]] 55.6<sup>m</sup>[m]] +3.4 +3<sup>0</sup>1522[[~~h~~]]+[[~~h~~]]6<sup>h</sup>h]5  
 5.5<sup>m</sup>+3<sup>0</sup>26<sup>m</sup>18.3  
 6|52.1|+3.5|+3|1494|6|52.1|+3|33|8.6  
 6|[[~~h~~]] 53.3|[[~~h~~]]51.3|+3.2|+3| || || |  
 6|37.8|+3.8|+3|1382|6|37.2|+3|49|8.0  
 6|34.5|+3.4|+3|1359|6|34.5|+3|23|7.3  
 6|36.0|+4.1|+4|1414|6|36.0|+4|4|6.4  
 6|31.4|+4.1|+4|1366|6|31.4|+4|4|8.4  
 6|27.6|+4.1|+4|1331|6|27.6|+4|5|8.3  
 6|37.9|+4.8|+4|1429|6|37.9|+4|44|8.0  
 6|37.4|+4.4|+4|1423|6|37.3|+4|23|8.3  
 6|31.1|+4.8|+4|1365|6|31.1|+4|50|7.5  
 6|30.3|+4.4|+4|1355|6|30.3|+4|37|8.5  
 6|28.3|+4.6|+4|1335|6|28.3|+4|37|7.5  
 6|22.7|+4.4|+4|1282|6|22.8|+4|26|8.2  
 6|21.7|+4.3|+4|1274|6|21.8|+4|21|8.2  
 6|56.7|+4.8|+4|1567|6|56.7|+4|47|8.2  
 6|54.0|+5.0|+5|1513|6|54.0|+5|1|7.0  
 6|44.1|+5.2|+5|1448|6|44.1|+5|16|7.2  
 6|37.5|+5.4|+5|1394|6|37.5|+5|22|7.8  
 6|[[~~h~~]] 54.0|[[~~h~~]]34.0|+5.1|+5|1366|6|33.9|+5|5|8.5  
 6|30.2|[[~~h~~]] +5.0|[[~~h~~]]+5.1|+5|1334|6|30.2|+5|5|7.0  
 6|24.8|+4.9|+4|1304|6|24.6|+4|56|7.0  
 6|54.2|+5.8|+5|1514|6|54.2|+5|46|7.0  
 6|47.5|+5.6|+5|1472|6|47.5|+5|37|8.3  
 6|46.6|+5.3|+5|1465|6|46.6|+5|18|8.1  
 6|42.5|+5.8|+5|1434|6|42.5|+5|50|7.5  
 6|29.3|+5.7|+5|1326|6|29.3|+5|38|7.8  
 6|48.7|+6.2|+6|1443|6|48.7|+6|12|8.5

\*BD +5<sup>0</sup> 1435 superposed on BD +5<sup>0</sup> 1434



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

July, ~~10~~ 9, 1893

Plate 1148

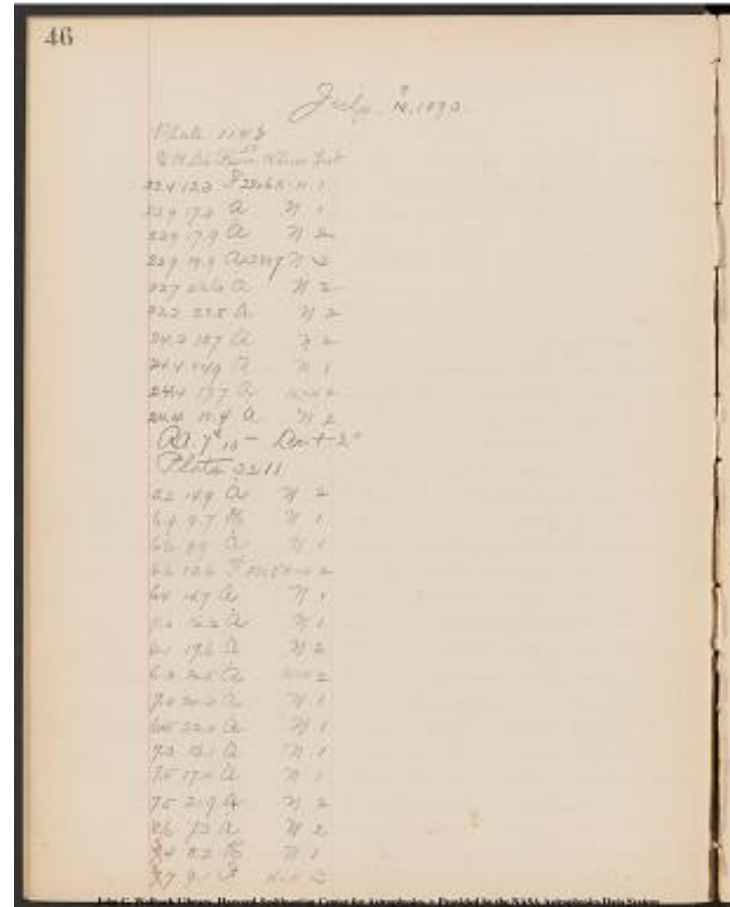
[[table]]  
|V|H|Gl.|No. Rem.|K line|Int.|

23.4	13.3	F	2806	K=H	1
23.9	17.0	a	N	1	
23.9	17.9	a	N	2	
23.9	19.9	a	2807	N	3
23.7	22.6	a	N	2	
23.2	22.8	a	N	2	
24.3	13.7	a	N	2	
24.4	14.9	a	N	1	
24.4	17.7	a	K=H	2	
24.4	18.4	a	N	2	

R.a. 7<sup>h</sup> 10<sup>m</sup> Dec. +2°  
Plate 3211

[[6 columned table]]

5.2	14.9	a	N	2	
6.9	9.7	H	N	1	
6.6	9.9	a	N	1	
6.6	12.6	F	2808	K=H	2
6.4	14.7	a	N	1	
7.0	16.2	a	N	1	
6.1	19.6	a	N	2	
6.3	20.5	a	K=H	2	
7.0	20.3	a	N	1	
6.5	22.0	a	N	1	
7.3	13.1	a	N	1	
7.5	17.4	a	N	1	
7.5	21.9	a	N	2	
8.6	7.3	a	N	2	
<del>7.4</del>	<del>8.2</del>	H	N	1	
<del>7.7</del>	<del>9.1</del>	K=H	3		

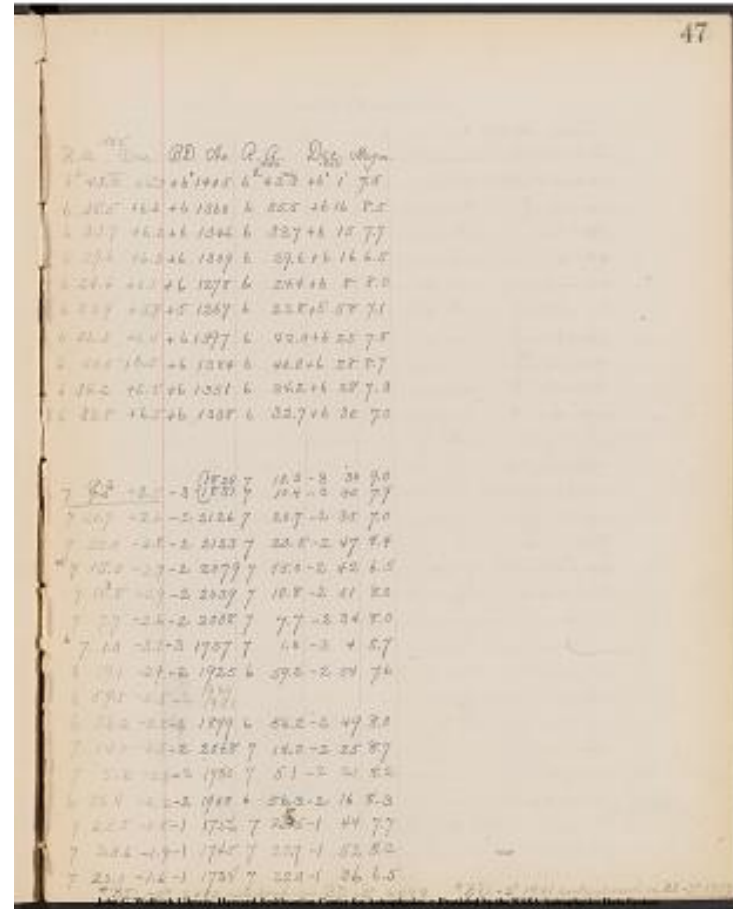


Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[7 columned table]]  
1855 R.A.	Dec.	BD.No.	R.A. 1855	Dec. 1855	Magn.
 h|m|o|o|h|m|o|1|[[blank]]  
 6 43.2 +6.0 +6 1405 6 43.3 +6 1 7.5  
 6 35.5 +6.3 +6 1360 6 35.5 +6 16 8.5  
 6 33.7 +6.2 +6 1346 6 33.7 +6 15 7.7  
 6 29.6 +6.3 +6 1309 6 29.6 +6 16 6.5  
 6 24.4 +6.1 +6 1278 6 24.4 +6 8 8.0  
 6 23.9 +5.9 +5 1267 6 23.8 +6 58 7.1  
 6 42.3 +6.4 +6 1397 6 42.3 +6 25 7.8  
 6 40.0 +6.5 +6 1384 6 40.0 +6 28 8.7  
 6 34.2 +6.5 +6 1351 6 34.2 +6 28 7.3  
 6 32.8 +6.5 +6 1338 6 32.7 +6 30 7.0  
 7 ~~9.5~~ 10.3 -3.5 -3 { 1829 7 10.3 -3  
 30 9.0 } 1831 7 10.4 -3 30 7.9  
 7 20.7 -2.6 -2 2126 7 20.7 -2 35 7.0  
 \* 7 20.4 -2.8 -2 2123 7 20.5 -2 47 8.4  
 7 15.0 -2.7 -2 2079 7 15.0 -2 42 6.5  
 7 10.8 -2.9 -2 2039 7 10.8 -2 51 8.0  
 7 7.7 -2.6 -2 2008 7 7.7 -2 34 8.0  
 [[symbol - down arrow]] 7.1.0 -3.1 -3 1757 7 1.0 -3 4 8.7  
 6 59.1 -2.9 -2 1925 6 59.2 -2 54 7.6  
 6 59.5 -2.5 -2 ^ 1929 1931  
 6 56.2 -2.8 -2 1899 6 56.2 -2 49 8.0  
 7 14.0 -2.5 -2 2068 7 14.0 -2 25 8.7  
 7 5.2 -2.3 -2 1980 7 5.1 -2 20 8.2  
 6 56.4 -2.2 -2 1900 6 56.3 -2 16 8.3  
 7 25.5 -1.8 -1 1756 7 25.5 -1 44 7.7  
 7 23.6 -1.9 -1 1745 7 23.7 -1 52 8.2  
 7 22.0 -1.6 -1 1738 7 22.0 -1 36 6.5

\*BD -2° 2080 superposed BD -2° 2079

[[symbol - down arrow]]BD -2° 1941 superposed on BD -3° 1757



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

July, ~~10~~, 1893

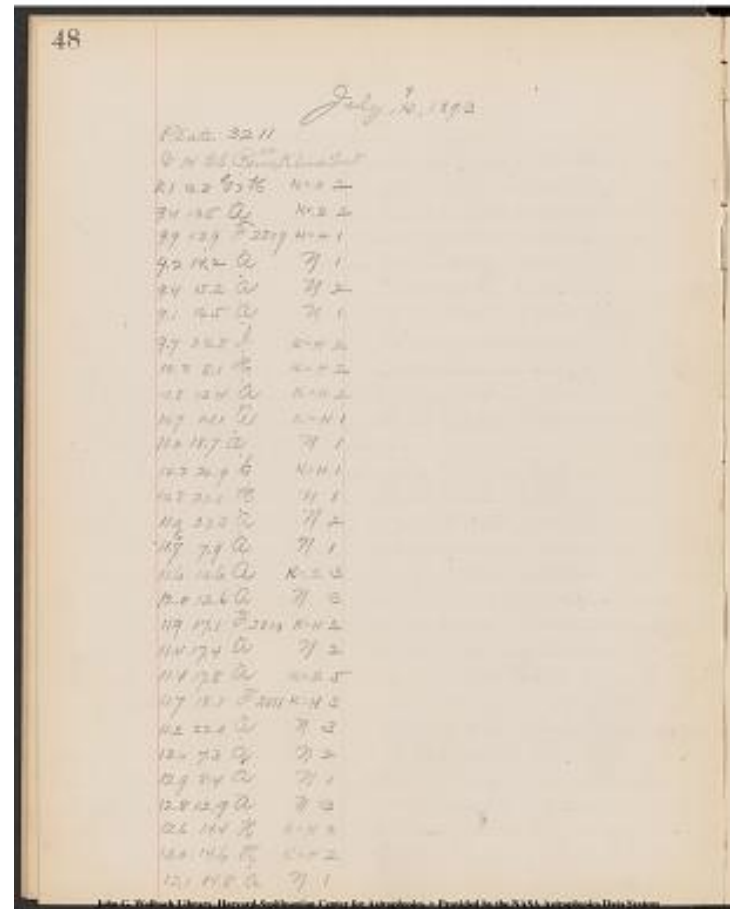
Plate 3211

[6 columned table]

V | H | [[GI?]] | No. Rem | Kline | [[Int?]] |

V	H	[[GI?]]	No. Rem	Kline	[[Int?]]
8.1	10.8	G3	H	K=H	2
9.4	13.5	A		K=2	2
9.9	13.9	F	2809	K=H	1
9.2	14.2	A		N	1
9.4	15.2	A		N	2
9.1	16.5	A		N	1
9.7	22.8			K=H	2
10.3	8.1	H		K=H	2
10.8	13.4	A		K=H	2
10.7	14.1	A		K=H	1
11.0	18.7	A		N	1
10.3	20.9	E		K=H	1
10.8	21.0	H		N	1
11.0	23.3	A		N	2
11.0	<del>23.3</del>	<del>A</del>	<del>7</del>	<del>7.9</del>	<del>A</del>   <del>N</del>   1
11.6	10.6	A		K=2	3
12.0	12.6	A		N	3
11.9	17.1	F	2810	K=H	2
11.4	17.4	A		N	2
11.4	17.8	A		K=2	5
11.7	18.1	F	2811	K=H	3
11.2	22.0	A		N	3
13.0	7.3	A		N	2
12.9	8.4	A		N	1
12.8	12.9	A		N	3
12.6	14.4	H		K=H	2
13.0	14.6	H		K=H	2
12.1	14.8	A		N	1

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



[10 Columned table]

[R. | A. 1855 | Dec. | BD. | No. | R.A. 1855 | Dec. 1855 | Mag. |

R.	A. 1855	Dec.	BD.	No.	R.A. 1855	Dec. 1855	Mag.			
7	13.3	-1.3	-1	1663	7	13.2	-1	20	8.2	
*	7	12.5	-1.2	-1	1658	7	12.5	-1	9	8.7
7	11.8	-1.4	-1	1653	7	11.8	-1	23	8.3	
[[symbol - arrow]]	7	9.7	-1.3	-1	1632	7	9.7	-1	20	8.3
7	7.1	-1.5	-1	1610	7	7.1	-1	32	8.5	
6	54.5	-1.1	-1	1509	6	54.5	-1	8	7.2	
7	23.9	-0.8	-0	1743	7	23.9	-0	49	7.5	
7	13.5	-0.7	-0	1683	7	13.4	-0	35	8.0	
7	12.3	-0.7	-0	1680	7	12.2	-0	39	8.7	
7	2.9	-0.5	-0	1627	7	2.8	-0	27	8.3	
6	58.5	-0.8	-0	1590	6	58.5	-0	48	8.0	
6	58.2	-0.5	-0	1587	6	58.2	-0	34	7.9	
6	53.6	-0.5	-0	1542	6	53.6	-0	28	8.3	
7	24.6	-0.2	-0	1746	7	24.5	-0	13	9.0	
7	19.2	-0.2	-0	1721	7	19.2	-0	11	8.0	
				1722	7	19.2	-0	11	9.3	
7	15.1	+0.0	+0	1918	7	15.1	+0	1	7.6	
7	5.9	-0.0	-0	1646	7	5.9	-0	3	8.0	
7	5.2	-0.3	-0	1640	7	5.2	-0	19	8.8	
7	4.4	-0.3	-0	1636	7	4.5	-0	15	4.2	
7	3.9	-0.1	-0	1634	7	[[strikethrough]]3.9	[[strikethrough]]4.0	-0		
4	6.4									
6	56.3	-0.3	-0	1571	6	56.3	-0	21	77	
7	25.9	+0.5	+0	1989	7	25.8	+0	29	8.5	
7	23.5	+0.5	+0	1971	7	23.5	+0	27	8.0	
7	14.6	+0.5	+0	1915	7	14.6	+0	27	7.0	
7	11.4	+0.4	+0	1897	7	11.5	+0	20	7.8	
7	11.1	+0.5	+0	1892	7	11.2	+0	32	8.0	
7	10.7	+0.1	+0	1891	7	10.8	+0	5	8.8	

7.7 | 13.3 | -1.3 | -1 | 1663 | 7 | 13.2 | -1 | 20 | 8.2 |

\*7 | 12.5 | -1.2 | -1 | 1658 | 7 | 12.5 | -1 | 9 | 8.7 |

7 | 11.8 | -1.4 | -1 | 1653 | 7 | 11.8 | -1 | 23 | 8.3 |

[[symbol - arrow]]7 | 9.7 | -1.3 | -1 | 1632 | 7 | 9.7 | -1 | 20 | 8.3 |

7 | 7.1 | -1.5 | -1 | 1610 | 7 | 7.1 | -1 | 32 | 8.5 |

6 | 54.5 | -1.1 | -1 | 1509 | 6 | 54.5 | -1 | 8 | 7.2 |

7 | 23.9 | -0.8 | -0 | 1743 | 7 | 23.9 | -0 | 49 | 7.5 |

7 | 13.5 | -0.7 | -0 | 1683 | 7 | 13.4 | -0 | 35 | 8.0 v. position in BD |

7 | 12.3 | -0.7 | -0 | 1680 | 7 | 12.2 | -0 | 39 | 8.7 |

7 | 2.9 | -0.5 | -0 | 1627 | 7 | 2.8 | -0 | 27 | 8.3 |

6 | 58.5 | -0.8 | -0 | 1590 | 6 | 58.5 | -0 | 48 | 8.0 |

6 | 58.2 | -0.5 | -0 | 1587 | 6 | 58.2 | -0 | 34 | 7.9 |

6 | 53.6 | -0.5 | -0 | 1542 | 6 | 53.6 | -0 | 28 | 8.3 |

7 | 24.6 | -0.2 | -0 | 1746 | 7 | 24.5 | -0 | 13 | 9.0 |

7 | 19.2 | -0.2 | -0 | 1721 | 7 | 19.2 | -0 | 11 | 8.0 |

{ 1722 | 7 | 19.2 | -0 | 11 | 9.3 |

7 | 15.1 | +0.0 | +0 | 1918 | 7 | 15.1 | +0 | 1 | 7.6 |

7 | 5.9 | -0.0 | -0 | 1646 | 7 | 5.9 | -0 | 3 | 8.0 |

7 | 5.2 | -0.3 | -0 | 1640 | 7 | 5.2 | -0 | 19 | 8.8 |

7 | 4.4 | -0.3 | -0 | 1636 | 7 | 4.5 | -0 | 15 | 4.2 |

7 | 3.9 | -0.1 | -0 | 1634 | 7 | [[strikethrough]]3.9 | [[strikethrough]]4.0 | -0 |

4 | 6.4 |

6 | 56.3 | -0.3 | -0 | 1571 | 6 | 56.3 | -0 | 21 | 77 | 7.7? |

7 | 25.9 | +0.5 | +0 | 1989 | 7 | 25.8 | +0 | 29 | 8.5 |

7 | 23.5 | +0.5 | +0 | 1971 | 7 | 23.5 | +0 | 27 | 8.0 |

7 | 14.6 | +0.5 | +0 | 1915 | 7 | 14.6 | +0 | 27 | 7.0 |

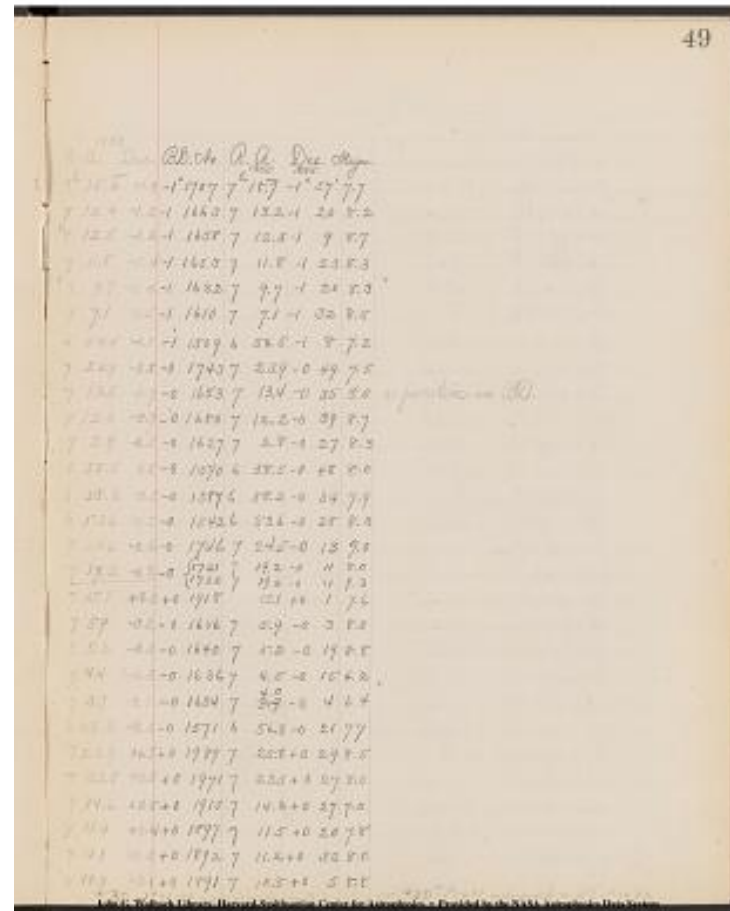
7 | 11.4 | +0.4 | +0 | 1897 | 7 | 11.5 | +0 | 20 | 7.8 |

7 | 11.1 | +0.5 | +0 | 1892 | 7 | 11.2 | +0 | 32 | 8.0 |

7 | 10.7 | +0.1 | +0 | 1891 | 7 | 10.8 | +0 | 5 | 8.8 |

\* BD -1°0 1659 superposed on BD -1°0 1658

[[symbol - arrow]] BD -1°0 1631 superposed on BD -1°0 1632



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

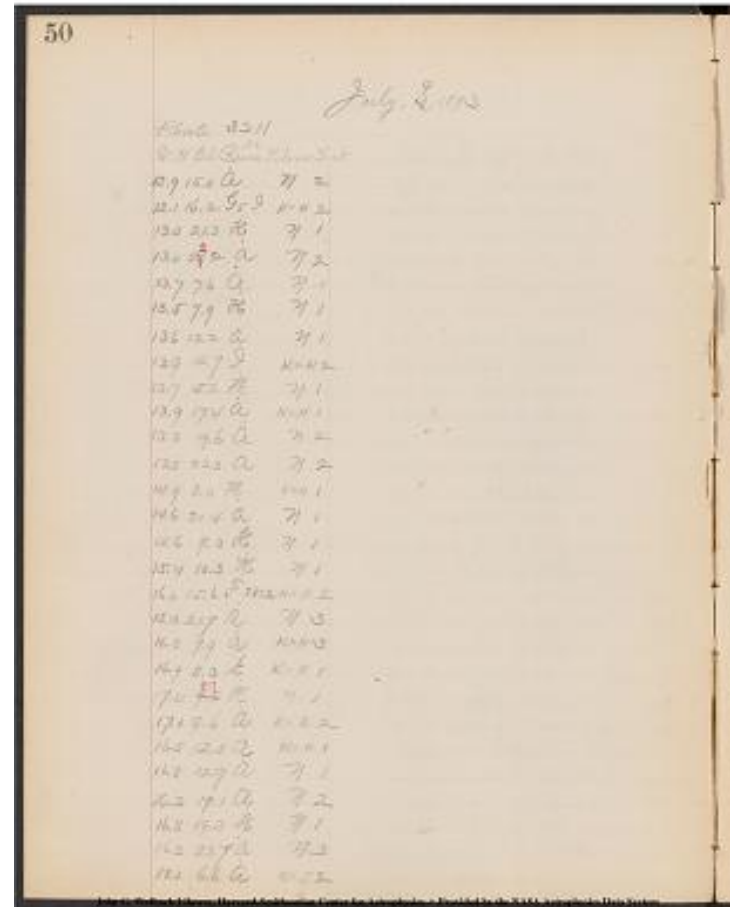


July ~~10~~, 1893

Plate 3211

|V|H|Cl.| Rem. No. |K line|Int|

12.9	15.0	A	N 2
12.1	16.2	AG5	K=H 2
13.0	21.3	H	N 1
13.0	2	<del>1</del>	N 2
13.7	7.6	A	N 1
13.5	7.9	H	N 1
13.6	12.2	A	N 1
13.9	12.7	I	K=H 2
13.7	15.2	H	N 1
13.9	17.4	A	K=H 1
13.3	19.6	A	N 2
13.5	23.3	A	N 2
14.9	8.0	H	K=H 1
14.6	21.4	A	N 1
15.6	9.3	H	N 1
15.4	10.3	H	N 1
16.0	15.6	F	2812 K=H 2
15.3	21.7	A	N 3
16.3	7.9	A	K=H 3
16.9	8.3	E	K=H 1
17.0	<del>9.8</del>	<del>9.8</del>	H   N 1
17.0	9.6	A	K=3 2
16.5	12.0	A	K=H 1
16.8	12.9	A	N 1
16.2	9.1	A	N 2
16.8	19.3	H	N 1
16.2	23.7	A	N 3
18.0	6.6	A	K=5 2



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

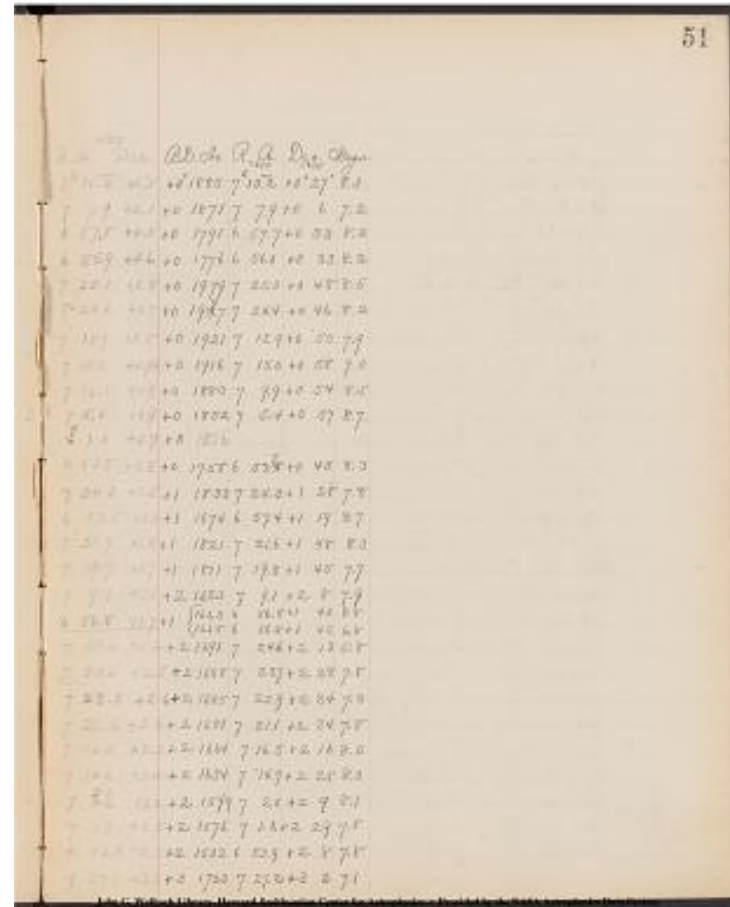
[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. | Dec. | Magn. |

| | | 1855 | 1855 | |

~~7~~<sup>h</sup> 10.2<sup>m</sup> +0.5<sup>s</sup> +0° 1885 7<sup>h</sup> 10.2<sup>m</sup> +0° 27' 8.3 |  
 7 7.9|+0.1|+0 1871|7 7.9|+0 6|7.2 |  
 6 57.8|+0.5|+0 1791|6 57.7|+0 33|8.2 |  
 6 55.9|+0.6|+0 1776|6 56.0|+0 33|8.2 |  
 7 25.1|+0.8|+0 1979|7 25.0|+0 48|8.5 |  
 7 24.4|+0.7|+0 19~~[[strikethrough]]~~3~~[[strikethrough]]~~77|7 24.4|+0 46|8.2 |  
 7 15.9|+0.8|+0 1921|7 15.9|+0 50|7.9 |  
 7 15.0|+0.9 (+)|+0 1916|7 15.0|+0 58|7.0 |  
 7 10.0|+0.9|+0 1883|7 9.9|+0 54|8.5 |  
 7 5.4|+0.9|+0 1852|7 5.4|+0 57|8.7 |  
~~[[strikethrough]]~~6~~[[strikethrough]]~~7|1.3|+0.7|+0 1816 | | |  
 6 53.8|+0.8|+0 1758|6 53.8~~[[strikethrough]]~~8~~[[strikethrough]]~~7|+0 45|8.3 |  
 7 24.3|+1.5|+1 1833|7 24.3|+1 28|7.8 |  
 6 57.5|+1.3|+1 1674|6 57.4|+1 19|8.7 |  
 7 21.7|+1.8|+1 1821|7 21.6|+1 48|8.3 |  
 7 19.7|+1.7|+1 1811|7 19.8|+1 45|7.7 |  
 7 9.1|+2.1|+2 1623|7 9.1|+2 8|7.9 |  
~~[[underlined]]~~6 56.8|+1.7~~[[underlined]]~~+1 {1663|6 56.8|+1 43|8.8 |  
 | | {1665|6 56.8|+1 42|6.8 |  
 7 24.6|+2.2|+2 1691|7 24.6|+2 13|5.8 |  
 7 23.6|+2.5|+2 1688|7 23.7|+2 28|7.8 |  
 7 23.0|+2.6|+2 1685|7 22.9|+2 34|7.3 |  
 7 21.2|+2.6|+2 1681|7 21.1|+2 34|7.8 |  
 7 16.5|+2.3|+2 1664|7 16.5|+2 16|8.0 |  
 7 14.6|+2.4|+2 1654|7 14.7|+2 25|8.0 |  
 7 ~~[[strikethrough]]~~6.2~~[[strikethrough]]~~2.0|+2.2|+2 1579|7 2.0|+2 9|8.1 |  
 7 1.7|+2.5|+2 1576|7 1.6|+2 29|7.8 |  
 6 52.9|+2.1|+2 1502|6 52.9|+2 8|7.8 |  
 7 27.1|+3.0|+3 1723|7 27.2|+3 2|7.1 |

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

June 27, 1893

Plate 1738

[[6 column table]]

[V|H|Gl.|No.Rem.|K line|Int.]

V	H	Gl.	No.	Rem.	K line	Int.
17.5	6.6	H	n	1		
18.0	8.0	a	n	3		
17.9	13.2	a	n	1		
17.4	14.0	a	K=H	2		
17.8	14.3	K	K=H	3		
17.1	22.1		K=H	1		
18.4	5.8	a	n	1		
18.8	11.8	H	n	1		
18.7	15.6	a	n	1		
18.5	15.7	a	K=H	1		
18.5	16.7	K	K=H	3		
18.2	17.5	a	n	1		
18.1	18.3	a	n	1		
18.7	18.4		K=H	2		
18.7	22.4	a	n	1		
19.0	24.1	F	2813	K=H	1	
19.1	6.5	H	K=H	2		
19.9	6.1	a	n	1		
19.3	6.9	a	n	3		
19.1	7.4	a	K=H	4		
19.1	8.8	H	n	1		
19.3	9.4	a	K=H	1		
19.2	13.1	a	n	1		
19.3	13.7	a	n	2		
19.5	13.7	B	2814	n	3	
19.8	17.5	H	n	1		
19.8	18.2	a	n	1		
19.1	19.2	a	n	1		

52

July 2, 1893

Plate 1738

17.5 6.6 H n 1

18.0 8.0 a n 3

17.9 13.2 a n 1

17.4 14.0 a K=H 2

17.8 14.3 K K=H 3

17.1 22.1 || K=H 1

18.4 5.8 a n 1

18.8 11.8 H n 1

18.7 15.6 a n 1

18.5 15.7 a K=H 1

18.5 16.7 K K=H 3

18.2 17.5 a n 1

18.1 18.3 a n 1

18.7 18.4 || K=H 2

18.7 22.4 a n 1

19.0 24.1 F 2813 K=H 1

19.1 6.5 H K=H 2

19.9 6.1 a n 1

19.3 6.9 a n 3

19.1 7.4 a K=H 4

19.1 8.8 H n 1

19.3 9.4 a K=H 1

19.2 13.1 a n 1

19.3 13.7 a n 2

19.5 13.7 B 2814 n 3

19.8 17.5 H n 1

19.8 18.2 a n 1

19.1 19.2 a n 1

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[10 columned table]]

[R.a. 1855] [Dec. BD.] [No. R.a. 1855] [Dec. 1855] [Magn.]

R.a. 1855	Dec. BD.	No. R.a. 1855	Dec. 1855	Magn.
7 <sup>h</sup> 27.2 <sup>m</sup> +2.7 <sup>s</sup> 0	+2 <sup>h</sup> 0	1703	7 <sup>h</sup> 27.2 <sup>m</sup> +2 <sup>h</sup> 0	45 <sup>s</sup> 18.0
7 <sup>h</sup> 24.5+3.0+3	1708	7 <sup>h</sup> 24.5+[[struckthrough]]2	[[struckthrough]]3	27.4
7 <sup>h</sup> 14.0+2.9+2	1652	7 <sup>h</sup> 14.1+2	57	8.3
7 <sup>h</sup> 12.5+2.7+2	1644	7 <sup>h</sup> 12.5+2	42	8.3
7 <sup>h</sup> 11.7+3.0+2	1640	7 <sup>h</sup> 11.8+2	59	6.5
6 <sup>h</sup> 56.0+2.7+2	1530	6 <sup>h</sup> 56.0+2	39	7.5
7 <sup>h</sup> 28.9+3.2+3	1735	7 <sup>h</sup> 28.9+3	12	8.2
7 <sup>h</sup> 16.8+3.5+3	1670	7 <sup>h</sup> 16.7+3	27	8.0
7 <sup>h</sup> 9.2+3.5+3	1625	7 <sup>h</sup> 9.1+3	27	8.6
7 <sup>h</sup> 9.0+3.3+3	1623	7 <sup>h</sup> 9.0+3	18	9.0
7 <sup>h</sup> 6.7+3.3+3	1609	7 <sup>h</sup> 6.7+3	21	6.0
7 <sup>h</sup> 5.4+3.2+3	1597	7 <sup>h</sup> 5.4+3	10	8.4
7 <sup>h</sup> 3.7+3.1+3	1586	7 <sup>h</sup> 3.8+3	7	8.3
7 <sup>h</sup> 3.6+3.5+3	1584	7 <sup>h</sup> 3.6+3	25	7.0
6 <sup>h</sup> 55.5+3.4+3	1522	6 <sup>h</sup> 55.5+3	26	8.3
6 <sup>h</sup> 52.1+3.6+3	[[struckthrough]]1594	[[struckthrough]]1494	6 <sup>h</sup> 52.1+3	33
8.6				
7 <sup>h</sup> 27.4+3.6+3	1725	7 <sup>h</sup> 27.4+3	36	8.0
7 <sup>h</sup> 28.2+3.9+3	1730	7 <sup>h</sup> 28.2+3	57	8.3
7 <sup>h</sup> 26.5+3.7+3	1719	7 <sup>h</sup> 26.7+3	41	7.1
7 <sup>h</sup> 25.5+3.6+3	1715	7 <sup>h</sup> 25.6+3	35	6.5
7 <sup>h</sup> 22.8+3.6+3	1701	7 <sup>h</sup> 22.9+3	35	8.0
7 <sup>h</sup> 21.8+3.7+3	1693	7 <sup>h</sup> 21.7+3	40	8.0
7 <sup>h</sup> 14.1+3.7+3				
*7 <sup>h</sup> 13.1+3.7+3	1650	7 <sup>h</sup> 13.1+3	38	9.0
7 <sup>h</sup> 13.1+3.8+3	1649	7 <sup>h</sup> 13.1+3	51	7.5
7 <sup>h</sup> 5.3+3.9+3	1596	7 <sup>h</sup> 5.3+3	59	8.2
7 <sup>h</sup> 3.8+3.9+3	1587	7 <sup>h</sup> 3.9+3	56	8.5
7 <sup>h</sup> 2.9+3.6+3				

\*BD +3<sup>h</sup>0 1651 superposed on BD +3<sup>h</sup>0 1650

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

54  
 July ~~10~~ 9, 1893  
 Plate 3211  
 [[5 column table]]  
V	H	CL	Rem	K line	Int
 19.1 | 19.9 | a | n | 1  
 19.9 | 22.5 | h | n | 1  
 20.6 | 6.3 | a | n | 2  
 20.5 | 14.8 | a | n | 1  
 20.6 | 19.7 | h | n | 1  
 20.1 | 21.7 | a | n | 1  
 20.4 | 21. | h | n | 1  
 21.4 | 6.5 | h | n | 1  
 21.3 | 11.2 | h | n | 1  
 21.9 | 16.5 | h | n | 1  
 21.5 | 17.0 | h | n | 1  
 22.0 | 20.4 | a | n | 4  
 21.4 | 21.8 | a | n | 2  
 21.9 | 23.2 | a | n | 3  
 22.7 | 7.7 | a | n | 1  
 23.0 | 8.8 | a | n | 2  
 22.9 | 16.7 | a | n | 1  
 23.2 | 6.6 | a | n | 2  
 23.6 | 11.1 | h | n | 1  
 24.0 | 16.0 | a | n | 2  
 23.2 | 18.0 | l | k=h | 2  
 23.5 | 18.1 | a | n | 3  
 23.4 | 23.1 | a | n | 2  
 24.5 | 18.8 | a | n | 1  
 24.3 | 16.0 | a | n | 1  
 24.9 | 13.7 | h | n | 1  
 24.3 | 59 | G | k=h | 2  
 Ol 50

54

July 9, 1893.

Plate 3211

W. H. Fleming

19.1 19.9	2	71.1
19.9 22.5	2	71.1
20.6 6.3	2	71.2
20.5 14.8	2	71.1
20.6 19.7	2	71.1
20.1 21.7	2	71.1
20.4 21.	2	71.1
21.4 6.5	2	71.1
21.3 11.2	2	71.1
21.9 16.5	2	71.1
21.5 17.0	2	71.1
22.0 20.4	2	71.1
21.4 21.8	2	71.1
21.9 23.2	2	71.1
22.7 7.7	2	71.1
23.0 8.8	2	71.2
22.9 16.7	2	71.2
23.2 6.6	2	71.2
23.6 11.1	2	71.1
24.0 16.0	2	71.2
23.2 18.0	2	71.2
23.5 18.1	2	71.1
23.4 23.1	2	71.2
24.5 18.8	2	71.1
24.3 16.0	2	71.2
24.9 13.7	2	71.1
24.3 59	2	71.2

Ol 50

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

[[10 columned table]]

[R.a. 1855] [Dec. BD.] [No. R.a. 1855] [Dec. 1855] [Magn.]

-----

7^h|[[struckthrough]]6.6|[[struckthrough]]0.6^m|+3.^06|+3|[[brace]]1560

1561|7 7|0.5 0.5|+3 +3|36 35|9.2 9.3

6|55.2|+3^09(+)|+3|1519|6|55.2|+3|60|7.9

7|27.9|+4.3|+4|1752|7|27.9|+[[struckthrough]]3|[[struckthrough]]4|18|8.0

7|10.8|+4.3|+4|1654|7|10.9|+4|19|8.2

7|1.0|+4.4|+4|1599|7|1.0|+4|24|7.8

6|57.0|+4.1|+4|1569|6|56.9|+4|4|8.4

6|56.8|+4.2|+4|1566|6|56.7|+4|14|8.0

7|27.3|+4.8|+4|1751|7|27.3|+4|45|7.3

7|18.2|+4.7|+4|1695|7|18.1|+4|44|8.0

7|7.2|+5.1|+5|1602|7|7.3|+5|3|8.1

7|6.4|+4.8|+4|1627|7|6.4|+4|49|8.1

6|59.4|+5.1|+5|[[struckthrough]]1567|[[struckthrough]]1543|6|59.4|+5|8|6.5

6|56.7|+4.8|+4|1567|6|56.7|+4|47|8.2

6|54.0|+5.0|+5|1513|6|54.0|+5|1|7.0

7|25.2|+5.4|+5|1703|7|25.2|+5|21|8.0

7|22.8|+5.5|+5|1688|7|22.9|+5|33|7.8

7|6.8|+5.5|+5|1597|7|6.9|+5|31|8.0

7|27.4|+5.6|+5|1713|7|27.3|+5|37|7.6

7|18.3|+5.9|+5|1658|7|18.4|+5|52|7.6

7|7.5|+6.1|+6|1585|7|7.5|+6|4|7.7

7|4.5|+5.7|+5|1580|7|4.4|+5|43|6.5

7|4.1|+5.9|+5|1577|7|4.1|+5|54|6.0

6|54.1|+5.8|+5|1514|6|54.2|+5|46|7.0

7|2.8|+6.3|+6|1548|7|2.7|+6|19|8.3

7|8.4|+6.2|+6|1589|7|8.3|+6|10|8.5

7|13.3|+6.5|+6|1621|7|13.2|+6|30|7.9

7|28.9|+6.2|+6|1729|7|28.9|+6|10|6.7

\*BD +5^0 1687 superposed on BD +5^0 1688

55

R.A.	Dec.	Magn.
7 7	0.5 0.5	+3 +3
6 55.2	+3^09(+)	+3
7 27.9	+4.3	+4
7 10.8	+4.3	+4
7 1.0	+4.4	+4
6 57.0	+4.1	+4
6 56.8	+4.2	+4
7 27.3	+4.8	+4
7 18.2	+4.7	+4
7 7.2	+5.1	+5
7 6.4	+4.8	+4
6 59.4	+5.1	+5
6 56.7	+4.8	+4
6 54.0	+5.0	+5
7 25.2	+5.4	+5
7 22.8	+5.5	+5
7 6.8	+5.5	+5
7 27.4	+5.6	+5
7 18.3	+5.9	+5
7 7.5	+6.1	+6
7 4.5	+5.7	+5
7 4.1	+5.9	+5
6 54.1	+5.8	+5
7 2.8	+6.3	+6
7 8.4	+6.2	+6
7 13.3	+6.5	+6
7 28.9	+6.2	+6

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

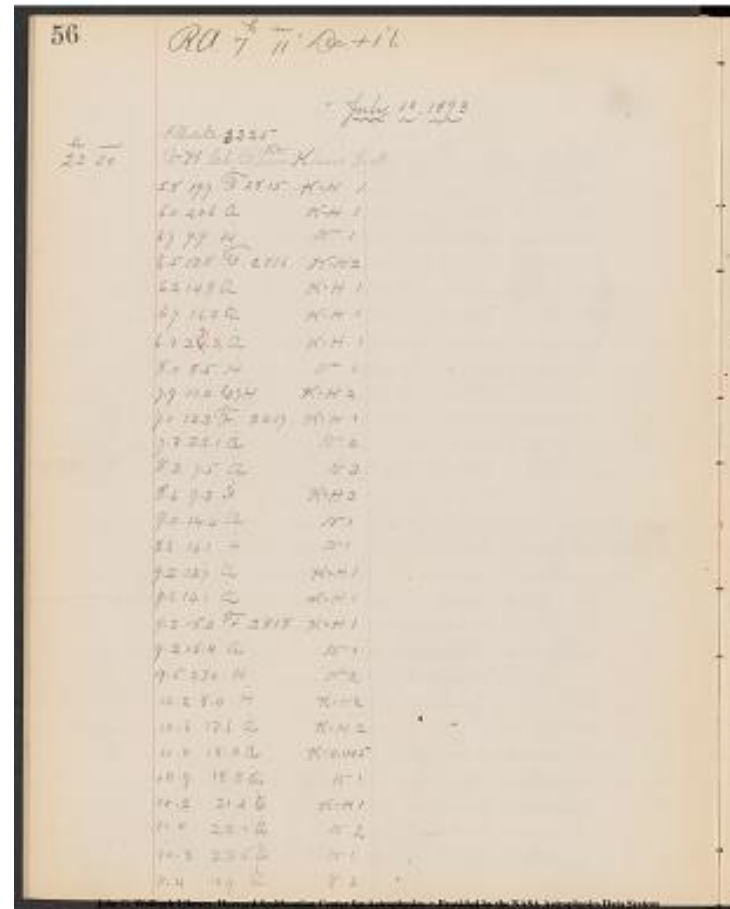
R.a. 7<sup>h</sup> 11<sup>m</sup> Dec. +1.6  
 23<sup>h</sup> 30<sup>m</sup>  
 July 10, 1893

Plate 3225

[[6 columned table]]

|V|H|G|No. Rem.|K line|Int.|

V	H	G	No. Rem.	K line	Int.
5.8	19.9	F	2815	K=H 1	
6.0	20.6	a		K=H 1	
6.9	9.9	H		N 1	
6.5	12.8	F	2816	K=H 2	
6.2	14.9	a		K=H 1	
6.9	16.3	a		K=H 1	
6.3	<del>24.2</del>				
8.0	8.5	H		N 1	
9.9	11.0	GSH		K=H 2	
9.1	13.3	F	2819	K=H 1	
9.3	22.1	a		N 2	
8.3	9.5	a		N 3	
8.6	9.3	I		K=H 3	
9.0	14.4	a		N 1	
8.6	16.1	H		N 1	
9.2	13.9	a		K=H 1	
9.6	14.1	a		K=H 1	
9.3	15.0	F	2818	K=H 1	
9.2	15.4	a		N 1	
9.5	23.0	H		N 2	
10.2	8.4	H		K=H 2	
10.6	13.6	a		K=H 2	
11.0	18.0	a		K=0.1H 5	
10.9	18.8	a		N 1	
10.2	21.0	E		K=H 1	
11.0	22.1	a		N 2	
10.8	23.5	a		N 1	
11.4	10.9	a		N 2	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

[[10 columned table]]

[R.a. 1855] [Dec. BD.] [No. R.a. 1855] [Dec. 1855] [Magn.]

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

7. ^h|1.0^m|-2.^09(+)|-2^0|1941|7^h|1.0^m|-2^0|58^1|8.4

6|59.1|-2.9|-2|1925|6|59.2|-2|54|7.6

7|20.8|-2.6|-2|2126|7|20.7|-2|35|7.0

\*7|15.0|-2.7|-2|2079|7|15.0|-2|42|6.5

7|10.8|-2.9|-2|2039|7|10.8|-2|51|8.0

7|7.8|-2.6|-2|2008|7|7.7|-2|34|8.0

6|56.1|-2.8|-2|1899|6|56.2|-2|49|8.0

7|23.7|-1.9|-1|1745|7|23.7|-1|52|8.2

7|18.7|-1.9(+)|-1|1707|7|18.7|-1|57|7.7

7|14.0|-2.4|-2|2068|7|14.0|-2|25|8.7

6|56.4|-2.2|-1|1111|11

7|25.5|-1.8|-1|1756|7|25.5|-1|44|7.7

7|22.0|-1.6|-1|1738|7|22.0|-1|36|6.5

7|11.8|-1.4|-1|1653|7|11.8|-1|23|8.3

7|8.2|-1.6|-1|1618|7|8.2|-1|36|8.0

7|13.2|-1.3|-1|1663|7|13.2|-1|20|8.2

7|12.5|-1.0|-1|1659|7|12.5|-1|3|8.5

7|10.5|-1.3|-1|1641|7|10.4|-1|17|8.7

[[symbol - arrow]]7|9.7|-1.3|-1|1632|7|9.7|-1|20|8.3

6|54.5|-1.1|-1|1509|6|54.5|-1|8|7.2

7|23.9|-0.8|-0|1743|7|23.9|-0|49|7.5|7|13.5|-0.7|-0|1683|7|13.4|-0|35|8.0

7|4.5|-0.3|-0|1636|7|4.5|-0|15|4.2

7|3.0|-0.5|-0|1111|11

6|58.5|-0.8|-0|1590|6|58.5|-0|48|8.0

6|56.3|-0.3|-0|1571|6|56.3|-0|21|7.7

6|53.6|-0.5|-0|1542|6|53.6|-0|28|8.3

|11|1721|7|19.2|-0|11|8.0

7|19.1|-0.2|-0|1722|7|19.2|-0|11|9.3

\*BD -2^0 2080 superposed on BD -2^0 2079

[[symbol - arrow]]BD -1^0 1631 superposed on BD -1^0 1632

Handwritten astronomical catalog page, likely a transcription of a spectrum plate. The page is numbered '57' in the top right corner. It contains a list of stars with their positions (Right Ascension and Declination) and magnitudes. The handwriting is in cursive and somewhat faded. The text is organized into columns, matching the structure of the typed transcription on the left.

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



July 10, 1893

Plate 3225

[[table]]

[V|H|Cl.] Rem. No. |K line| Int|

11.8	12.8	A	N	3	
11.6	14.4	H	N	1	
11.9	15.0	A	K=H	1	
11.9	16.3	G	K=H	2	
11.9	19.3	F	2819	K=H	2
11.5	18.2	F	2820	K=H	3
12.9	9.4	A	N	2	
12.9	8.6	A	K=H	1	
12.6	13.1	A	N	3	
13.0	13.8	A	N	2	
12.4	14.6	H	K=H	2	
12.7	14.8	A	K=H	2	
12.6	15.2	A	K=H	2	
13.0	19.7	A	N	1	
12.8	21.4	H	N	1	
12.8	22.3	A	N	2	
13.4	12.4	A	N	1	
13.6	12.9	I	K=H	3	
13.5	15.3	H	N	1	
14.6	8.2	H	N	1	
14.4	21.6	A	N	1	
15.0	21.8	A	N	3	
16.0	8.1	A	K=0.5H	4	
15.2	10.2	H	N	1	
15.9	15.7	G5H	K=H	1	
16.0	19.3	A	N	31	
15.9	23.8	A	N	3	
16.9	8.5	G5H	K=H	1	

58

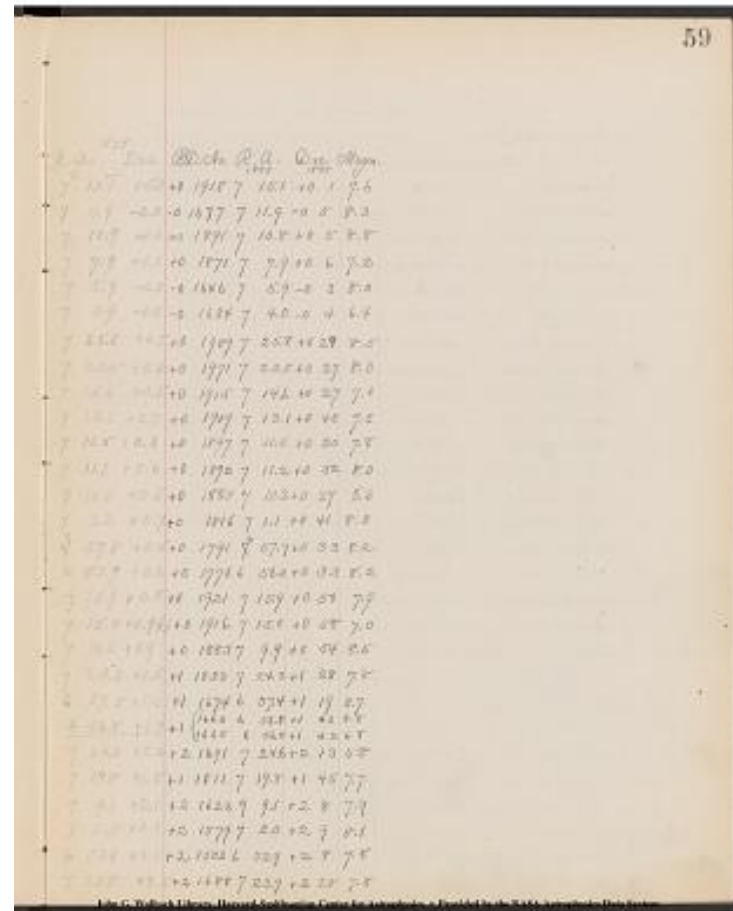
July 10, 1893

Plate 3225

11.8	12.8	A	N	3	
11.6	14.4	H	N	1	
11.9	15.0	A	K=H	1	
11.9	16.3	G	K=H	2	
11.9	19.3	F	2819	K=H	2
11.5	18.2	F	2820	K=H	3
12.9	9.4	A	N	2	
12.9	8.6	A	K=H	1	
12.6	13.1	A	N	3	
13.0	13.8	A	N	2	
12.4	14.6	H	K=H	2	
12.7	14.8	A	K=H	2	
12.6	15.2	A	K=H	2	
13.0	19.7	A	N	1	
12.8	21.4	H	N	1	
12.8	22.3	A	N	2	
13.4	12.4	A	N	1	
13.6	12.9	I	K=H	3	
13.5	15.3	H	N	1	
14.6	8.2	H	N	1	
14.4	21.6	A	N	1	
15.0	21.8	A	N	3	
16.0	8.1	A	K=0.5H	4	
15.2	10.2	H	N	1	
15.9	15.7	G5H	K=H	1	
16.0	19.3	A	N	31	
15.9	23.8	A	N	3	
16.9	8.5	G5H	K=H	1	

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[10 columned table]]  
 [R.a. 1855] [Dec. 1855] [No. 1855] [R.a. 1855] [Dec. 1855] [Magn.]  
 [7<sup>h</sup> 15.1<sup>m</sup> +0.00] +0.1918 7 15.1 +0.1 7.6  
 7 11.9 -0.0 -0.1677 7 11.9 -0.5 8.3  
 7 10.9 +0.0 =0.1891 7 10.8 +0.5 8.8  
 7 7.9 +0.1 +0.1871 7 7.9 +0.6 7.2  
 7 5.9 -0.0 -0.1646 7 5.9 -0.3 8.0  
 7 3.9 -0.0 -0.1634 7 4.0 -0.4 6.4  
 7 25.8 +0.5 +0.1989 7 25.8 +0.29 8.5  
 7 23.5 +0.4 +0.1971 7 23.5 +0.27 8.0  
 7 14.6 +0.5 +0.1915 7 14.6 +0.27 7.0  
 7 13.1 +0.7 +0.1909 7 13.1 +0.40 7.5  
 7 11.5 +0.3 +0.1897 7 11.5 +0.20 7.8  
 7 11.1 +0.6 +0.1892 7 11.2 +0.32 8.0  
 7 10.0 +0.5 +0.1885 7 10.2 +0.27 8.3  
 7 1.2 +0.7 +0.1816 7 1.1 +0.41 8.3  
~~7 57.8 +0.5 +0.1791~~ ~~[[struckthrough]]~~  
~~6 57.7 +0.33 8.2~~  
 6 55.9 +0.6 +0.1776 6 56.0 +0.33 8.2  
 7 15.9 +0.8 =0.1921 7 15.9 +0.50 7.9  
 7 15.0 +0.9 (+) +0.1916 7 15.0 +0.58 7.0  
 7 10.0 +0.9 +0.1883 7 9.9 +0.54 8.5  
 7 24.3 +1.5 +1.1833 7 24.3 +1.28 7.8  
 6 57.5 +1.3 +1.1674 6 57.4 +1.19 8.7  
 6 56.8 +1.7 +1.1663 6 56.8 +1.43 8.8  
 7 24.6 +2.2 +2.1691 7 24.6 +2.13 5.8  
 7 19.8 +1.8 +1.1811 7 19.8 +1.45 7.7  
 7 9.1 +2.1 +2.1623 7 9.1 +2.8 7.9  
 7 2.0 +2.1 +2.1579 7 2.0 +2.9 8.1  
 6 53.0 +2.1 +2.1502 6 52.9 +2.8 7.8  
 7 23.8 +2.5 +2.1688 7 23.7 +2.28 7.8



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

60

July 10, 1893

Plate 3225

[[6 columned table]]

V|H|Cl.|No. Rem.|Kline|Int|

16.8	8.9	H		N	1	
16.8	9.8	A		N	2	
16.2	12.1	A		K=H	1	
16.5	13.1	A		K=H	1	
19.0	14.2	A		K=H	2	
16.6	19.5	H		N	1	
16.9	22.2	G5H		K=H	1	
1	<del>7</del>	<del>8.0</del>	<del>6.0</del>	A	N	1
17.2	6.9	H		N	1	
17.9	6.9	A		N	3	
17.9	8.2	A		N	3	
19.9	13.3	A		K=H	1	
17.6	14.5	I		K=H	3	
17.9	18.4	A		N	1	
18.8	6.9	H		K=H	2	
19.0	9.1	A		N	3	
18.8	9.6	F	2821	K=H	3	
18.9	9.0	H		N	1	
19.0	9.6	A		K=H	1	
18.6	12.0	H		N	1	
19.0	13.8	A		N	1	
18.5	15.7	A		N	1	
18.3	15.8	A		N	1	
18.3	16.9	K		K=H	3	
18.4	18.5	H		K=H	2	
19.3	13.8	B	2822	N	3	
19.5	18.3	A		N	1	
20.3	6.4	A		N	2	

60

July 10, 1893

Plate 3225

W. H. Fleming

16.8 8.9 H N 1

16.8 9.8 A N 2

16.2 12.1 A K=H 1

16.5 13.1 A K=H 1

19.0 14.2 A K=H 2

16.6 19.5 H N 1

16.9 22.2 G5H K=H 1

1 7 8.0 6.0 A N 1

17.2 6.9 H N 1

17.9 6.9 A N 3

17.9 8.2 A N 3

19.9 13.3 A K=H 1

17.6 14.5 I K=H 3

17.9 18.4 A N 1

18.8 6.9 H K=H 2

19.0 9.1 A N 3

18.8 9.6 F 2821 K=H 3

18.9 9.0 H N 1

19.0 9.6 A K=H 1

18.6 12.0 H N 1

19.0 13.8 A N 1

18.5 15.7 A N 1

18.3 15.8 A N 1

18.3 16.9 K K=H 3

18.4 18.5 H K=H 2

19.3 13.8 B 2822 N 3

19.5 18.3 A N 1

20.3 6.4 A N 2

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[table]]  
 R.A. 1855 Dec|B.D. No.|R.A. 1855|Dec. 1855| Magn.]

7 22.9	+2.5	+2 1685	7 22.9	+2 35	7.3
7 21.2	+2.5	+2 1681	7 21.2	+2 34	7.8
7 16.6	+2.2	+2 1664	7 16.5	+2 16	8.0
7 14.6	+2.4	+2 1654	7 14.7	+2 25	8.0
7 12.5	+2.7	+2 1644	7 12.5	+2 42	8.3
7 1.6	+2.5	+2 1576	7 1.6	+2 29	7.8
6 56.0	+2.7	+2 1530	6 56.0	+2 39	7.5
7 29.0	+3.2	+3 1735	7 28.9	+3 12	8.2
7 27.1	+2.7	+2 1703	7 27.2	+2 45	8.0
7 27.1	+3.0	+3 1723	7 27.2	+3 2	7.1
7 24.5	+3.0	+3 1708	7 24.5	+3 2	7.4
7 14.1	+2.9	+2 1652	7 14.1	+2 57	8.3
7 13.8	+3.0	+2 1			
7 3.8	+3.1	+3 1586	7 3.8	+3 7	8.3
7 27.3	+3.6	+3 1724	7 27.3	+3 40	8.0
7 26.6	+3.7	+3 1719	7 26.7	+3 41	7.1
7 25.6	+3.6	+3 1715	7 25.6	+3 35	6.5
7 22.8	+3.6	+3 1701	7 22.9	+3 35	8.0
7 21.8	+3.7	+3 1693	7 21.7	+3 40	8.0
7 16.8	+3.4	+3 1670	7 16.7	+3 27	8.0
*7 13.2	+3.7	+3 1651	7 13.2	+3 40	8.7
7 9.1	+3.4	+3 1625	7 9.1	+3 27	8.6
7 9.0	+3.3	+3			
7 6.7	+3.3	+3 1609	7 6.7	+3 21	6.0
7 3.6	+3.4	+3 1584	7 3.6	+3 25	7.0
7 13.1	+3.9	+3 1649	7 13.1	+3 51	7.5
7 3.8	+3.9	+3 1587	7 3.9	+3 56	8.5
7 27.9	+4.3	+4 1752	7 27.9	+4 18	8.0

\*BD +3 1651 superposed on BD +3 1650



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

July 10, 1892

Plate 3225

|V|H|Cl.| Rem. No. |K line| Int|

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

20.2|15.0|A|N|1|

21.2|6.7|H|N|1|

21.2|6.9|H|N|1|

21.1|11.3|H|N|1|

21.8|20.6|A|N|3|

21.2|22.0|A|N|1|

21.7|23.3|A|N|2|

22.9|6.7|A|N|2|

22.4|7.8|A|N|1|

22.7|9.0|A|N|2|

22.6|16.9|A|N|1|

23.0|18.1|I|K=H|2|

24.0|6.0|F|2823|K=H|2|

23.4|11.2|H|N|1|

23.8|16.5|A|N|2|

23.4|18.2|A|K=0.1H|3|

24.3|19.0|A|N|1|

23.2|23.2|A|N|2|

R.A. 8<sup>h</sup>[[h]] 00<sup>m</sup>[[m]] Dec. +1.5

Plate 1149

4.8|5.9|A|N|4|

5.0|6.2|F|2824|K=H|2|

5.0|18.5|I|N|2|

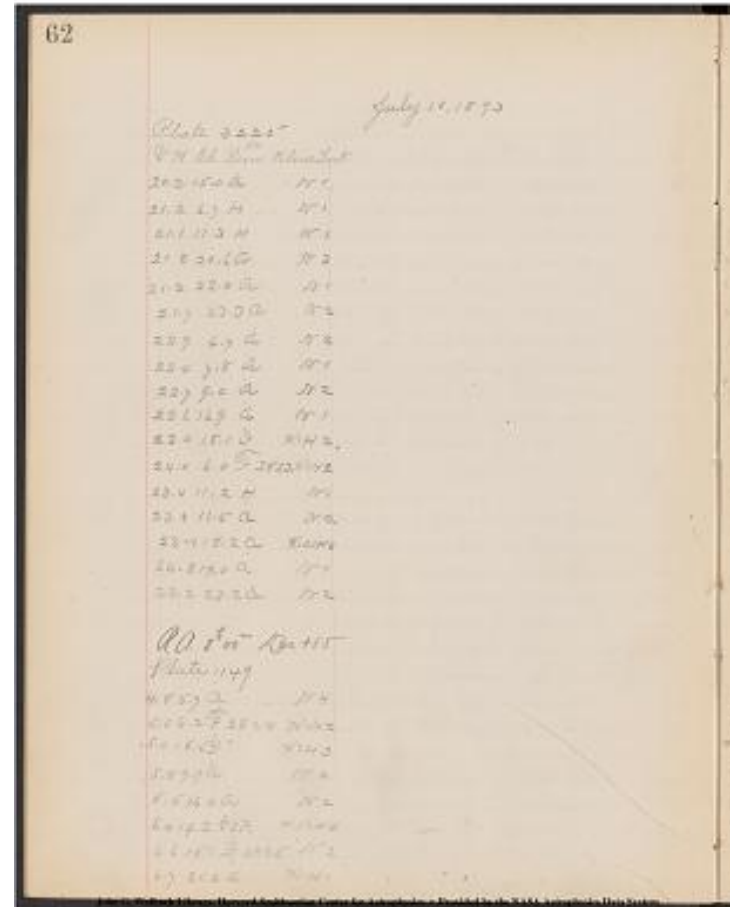
5.8|9.9|A|N|2|

5.5|16.0|A|N|2|

6.4|14.3|G3K|K=1.2H|4|

6.6|18.1|B|2825|N|2|

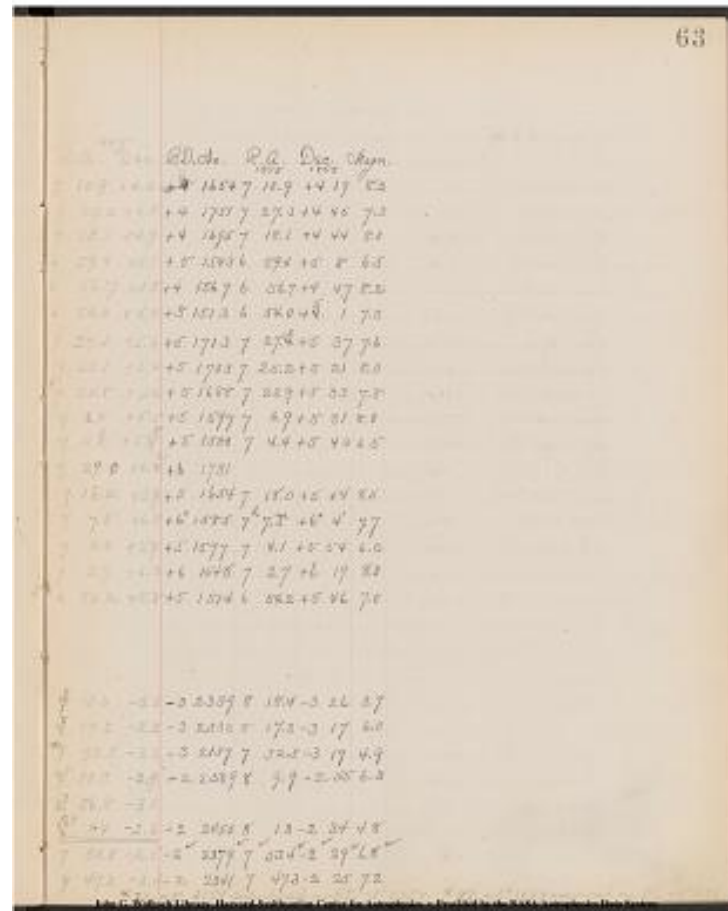
6.7|21.2|A|K=H|1|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

63  
1855  
R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
7 10.9 | +4.3 | +4 1654 | 7 10.9 | +4 19 | 8.2 |  
7 27.2 | +4.8 | +4 1751 | 7 27.3 | +4 45 | 7.3 |  
7 18.1 | +4.7 | +4 1695 | 7 18.1 | +4 44 | 8.0 |  
6 59.4 | +5.1 | +5 1543 | 6 59.4 | +5 8 | 6.5 |  
6 56.7 | +4.8 | +4 1567 | 6 56.7 | +4 47 | 8.2 |  
6 54.0 | +5.0 | +5 1513 | 6 54.0 | +~~4~~ | ~~5~~ 1 |  
7.0 |  
7 27.4 | +5.6 | +5 1713 | 7 27.~~4~~ | ~~4~~ | ~~3~~ | +5 37  
7.6 |  
7 25.1 | +5.4 | +5 1703 | 7 25.2 | +5 21 | 8.0 |  
7 22.8 | +5.6 | +5 1688 | 7 22.9 | +5 33 | 7.8 |  
7 6.8 | +5.5 | +5 1597 | 7 6.9 | +5 31 | 8.0 |  
7 4.~~4~~ | ~~0~~ | ~~4~~ |  
+5.~~4~~ | ~~4~~ | ~~8~~ | +5 1580 | 7 4.4 | +5 43 | 6.5 |  
7 29.0 | +6.~~4~~ | ~~4~~ | +6 1731 | | |  
7 18.2 | +5.9 | +5 1654 | 7 18.0 | +5 54 | 8.5 |  
7 7.5 | +6.0 | +6° 1585 | 7<sup>h</sup> 7.5<sup>m</sup> | +6° 4' | 7.7 |  
7 4.0 | +5.9 | +5 1577 | 7 4.1 | +5 54 | 6.0 |  
7 2.7 | +6.3 | +6 1548 | 7 2.7 | +6 19 | 8.3 |  
6 54.2 | +5.8 | +5 1514 | 6 54.2 | +5 46 | 7.0 |  
~~7~~ | ~~8~~ 18.6 | -3.5 | -3 2339 | 8 18.4 | -3 26 |  
3.7 |  
~~7~~ | ~~8~~ 17.3 | -3.3 | -3 2333 | 8 17.3 | -3 17 |  
6.0 |  
\*7 52.5 | -3.3 | -3 2157 | 7 52.5 | -3 17 | 4.9 |  
~~7~~ | ~~8~~ 10.0 | -2.9 | -2 2509 | 8 9.9 | -2 55 |  
6.3 |  
~~6~~ | ~~7~~ 56.8 | -3.1 | | |  
~~67~~ | ~~8~~ 1.4 | -2.6 | -2 2450 | 8 1.3 | -2 34 |  
4.8 |  
[[double line]]  
7 53.5 | -2.5 | -2<sup>h</sup> 2379 | 7 53.4 | <sup>h</sup> 2379 |  
[[symbol - check mark]]-2<sup>h</sup> 2379 | 6.8  
7 47.2 | -2.4 | -2 2341 | 7 47.3 | -2 25 | 7.2 |

\*BD -3° 2159 superposed on BD -3° 2157 \*BD +5° 1687 superposed on  
BD -5° 1688

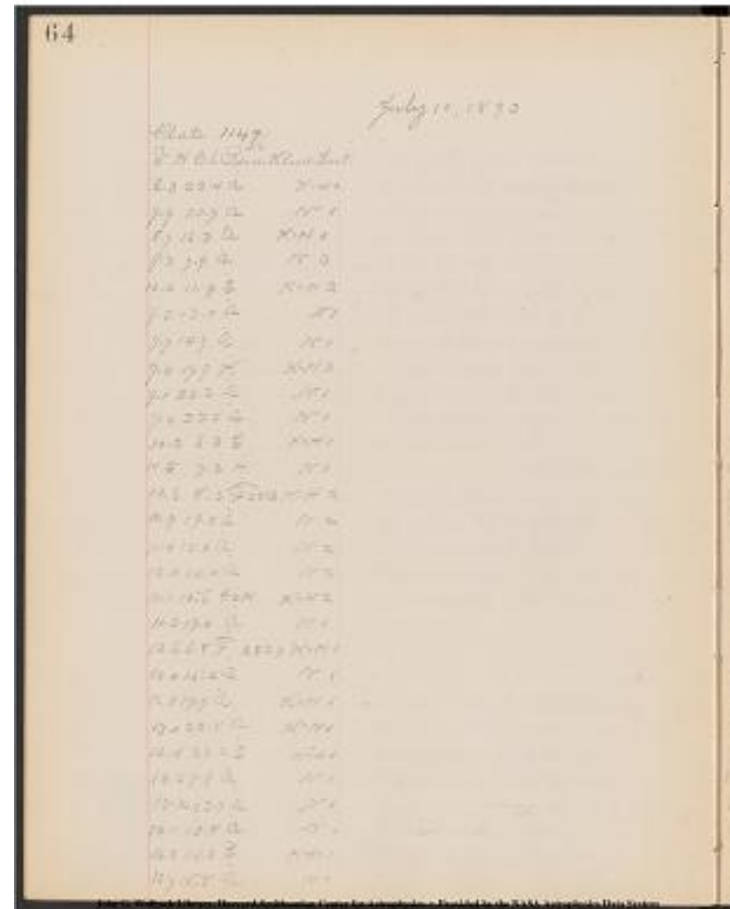


Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

July 10, 1893

[[table]]  
[V|H|Cl.] Rem. No. |K line| Int|

6.3	22.4	A	K=H 1
7.9	20.7	A	N 1
8.7	16.3	A	K=H 1
9.3	7.9	A	N 3
10.0	11.9	E	K=H 2
9.3	13.0	A	N 1
9.7	24.7	A	N 1
9.4	17.9	K	K=H 3
9.1	23.2	A	N 1
10.2	6.3	E	K=H 1
10.8	7.2	H	N 1
10.6	8.5	F	2826 K=H 2
10.9	19.8	A	N 1
11.4	14.0	A	N 2
12.0	14.0	A	N 2
11.1	15.6	G2H	K=H 2
11.3	19.0	A	N 1
12.6	6.8	F	2827 K=H 1
13.0	15.4	A	N 1
12.8	19.9	A	K=H 1
13.0	22.8	A	K=H 1
12.4	23.2	E	K=H 1
13.4	9.9	A	N 1
13.2	12.9	A	N 1
13.1	13.8	A	N 1
13.8	14.3	E	K=H 1
13.7	15.8	A	N 1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[table, 6 columns]]

R.A. 1855|Dec. 1855|BD.No.|R.A. 1855|Dec. 1855|Magn.]

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

7<sup>h</sup> 44.9<sup>m</sup>|-2.7<sup>s</sup>|-2 2322|7 44.9|-2 41|6.77 4~~[[/strikethrough]]~~2~~[[/strikethrough]]~~8.2|-1.8|-1 1890|7 48.2|-1 49|8.2

7 57.0|-14|-1 1939|7 56.9|-1 27|8.5

8 14.0|-1.1|-1 2017|8 14.0|-1 8|7.0

8 6.0|-0.8|-0 1938|8 6.0|-0 44|7.5

8 3.9|-1.1|-1 1976|8 3.9|-1 8|8.0

8 0.6|-0.9|-0 1913|8 0.6|-0 56|8.1

7 54.0|-1.0|-0 1882|7 53.8|-0 59|5.3

7 43.2|-1.2|-1 1853|7 43.2|-1 14|8.5

7 42.8|-1.1|-1 1849|7 42.9|-1 5|8.2

[[/strikethrough]]7[[/strikethrough]]8 17.1|-0.7|-0 1987|8 17.2|-0 40|7.5

8 15.4|-0.4|-0 1977|8 15.4|-0 24|7.8

8 12.8|-0.5|-0 1966|8 12.8|-0 27|7.2

[[/strikethrough]]8 2.0|-0.0[[/strikethrough]]7 50.0|-0.2|-0 1864|7 50.0|-0 14|7.5

8 2.0|-0.0|-0 1922 8 1.9|-0 1|8.0

8 2.0|+0.3|+0 2203|8 1.9|+0 18|8.3

7 58.4|-0.2|-0 1903|7 58.4|-0 9|6.8

7 51.6|-0.0|-0 1874|7 51.6|-0 3|8.0

8 16.3|+0.5|+0 2288|8 16.3|+0 32|7.5

7 58.4|+0.0[[/strikethrough]]3[[/strikethrough]]7|+0 2185|7 58.9|+0 41|8.5

7 50.3|+0.7|+0 2142|7 50.3|+0 41|8.3

7 44.1|+0.8|+0 2110|7 44.1|+0 45|8.7

7 43.4|+0.4|+0 2108|7 43.5|+0 26|6.5

8 10.2|+0.9|+0 2248|8 10.2|+0 56|8.0

8 4.6|+0.8|+0 2219|8 4.6|+0 50|8.5

8 2.3|+0.7|+0 2206|8 2.3|+0 46|8.5

8 1.4|+1.2|+1 2006|8 1.3|+1 11|8.0

7 58.1|+1.1|+1 1990|7 58.1|+1 4|8.7

65

7<sup>h</sup> 44.9<sup>m</sup>|-2.7<sup>s</sup>|-2 2322|7 44.9|-2 41|6.7

7 4~~[[/strikethrough]]~~2~~[[/strikethrough]]~~8.2|-1.8|-1 1890|7 48.2|-1 49|8.2

7 57.0|-14|-1 1939|7 56.9|-1 27|8.5

8 14.0|-1.1|-1 2017|8 14.0|-1 8|7.0

8 6.0|-0.8|-0 1938|8 6.0|-0 44|7.5

8 3.9|-1.1|-1 1976|8 3.9|-1 8|8.0

8 0.6|-0.9|-0 1913|8 0.6|-0 56|8.1

7 54.0|-1.0|-0 1882|7 53.8|-0 59|5.3

7 43.2|-1.2|-1 1853|7 43.2|-1 14|8.5

7 42.8|-1.1|-1 1849|7 42.9|-1 5|8.2

[[/strikethrough]]7[[/strikethrough]]8 17.1|-0.7|-0 1987|8 17.2|-0 40|7.5

8 15.4|-0.4|-0 1977|8 15.4|-0 24|7.8

8 12.8|-0.5|-0 1966|8 12.8|-0 27|7.2

[[/strikethrough]]8 2.0|-0.0[[/strikethrough]]7 50.0|-0.2|-0 1864|7 50.0|-0 14|7.5

8 2.0|-0.0|-0 1922 8 1.9|-0 1|8.0

8 2.0|+0.3|+0 2203|8 1.9|+0 18|8.3

7 58.4|-0.2|-0 1903|7 58.4|-0 9|6.8

7 51.6|-0.0|-0 1874|7 51.6|-0 3|8.0

8 16.3|+0.5|+0 2288|8 16.3|+0 32|7.5

7 58.4|+0.0[[/strikethrough]]3[[/strikethrough]]7|+0 2185|7 58.9|+0 41|8.5

7 50.3|+0.7|+0 2142|7 50.3|+0 41|8.3

7 44.1|+0.8|+0 2110|7 44.1|+0 45|8.7

7 43.4|+0.4|+0 2108|7 43.5|+0 26|6.5

8 10.2|+0.9|+0 2248|8 10.2|+0 56|8.0

8 4.6|+0.8|+0 2219|8 4.6|+0 50|8.5

8 2.3|+0.7|+0 2206|8 2.3|+0 46|8.5

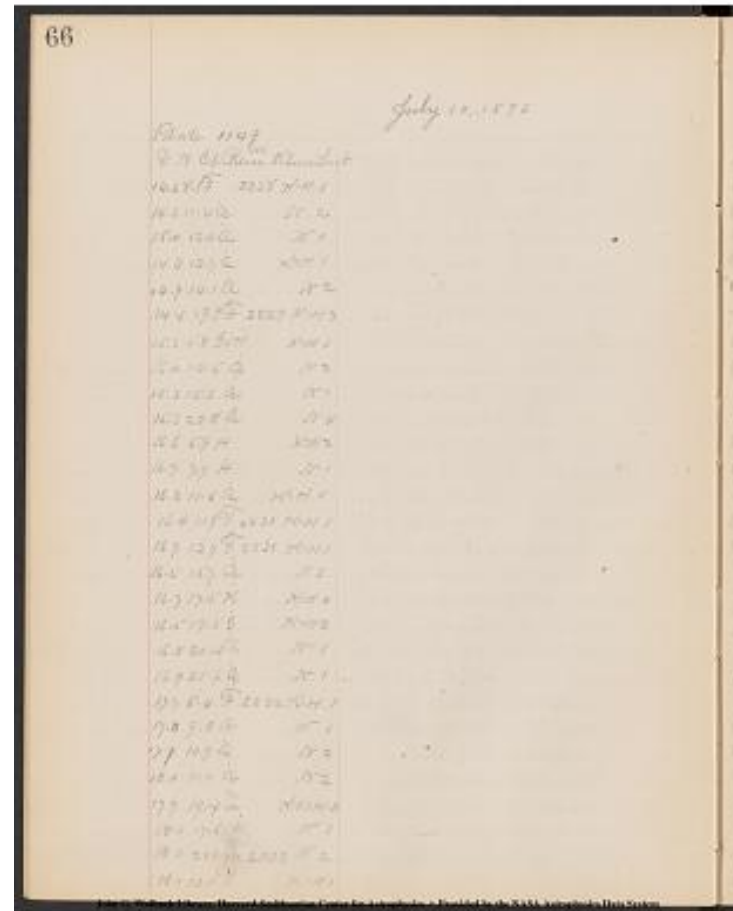
8 1.4|+1.2|+1 2006|8 1.3|+1 11|8.0

7 58.1|+1.1|+1 1990|7 58.1|+1 4|8.7

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



July 10, 1892  
 Plate 1149  
 [V|H|Cl.] Rem. No. [K line] Int|  
 |---|---|---|---|  
 14.6|8.|H|2828|K=H|1|  
 14.6|11.4|A|N|2|  
 15.0|12.0|A|N|1|  
 14.3|13.7|A|K=H|2|  
 14.9|14.1|A|N|2|  
 14.4|19.9|F|2829|K=H|3|  
 15.6|5.8|G5H|K=H|1|  
 16.0|14.5|A|N|2|  
 15.3|15.5|A|N|1|  
 15.6|22.8|A|N|4|  
 16.6|5.9|H|K=H|2|  
 16.9|7.7|H|N|1|  
 16.3|11.4|A|K=H|1|  
 16.4|11.9|F|2830|K=H|1|  
 16.9|12.7|F|2831|K=H|1|  
 16.5|15.7|A|N|3|  
 16.7|19.5|K|K=H|4|  
 16.5|19.5|G|K=H|3|  
 16.8|20.4|A|N|1|  
 16.9|21.6|A|N|1|  
 17.7|8.4|F|2832|K=H|1|  
 17.3|9.8|A|N|1|  
 17.9|10.9|A|N|2|  
 18.0|11.0|A|N|2|  
 17.9|19.4|A|K=0.2H|3|  
 18.0|17.6|H|N|1|  
 18.0|20.1|A|2833|N|2|  
 18.1|13.0|E|K=H|1|

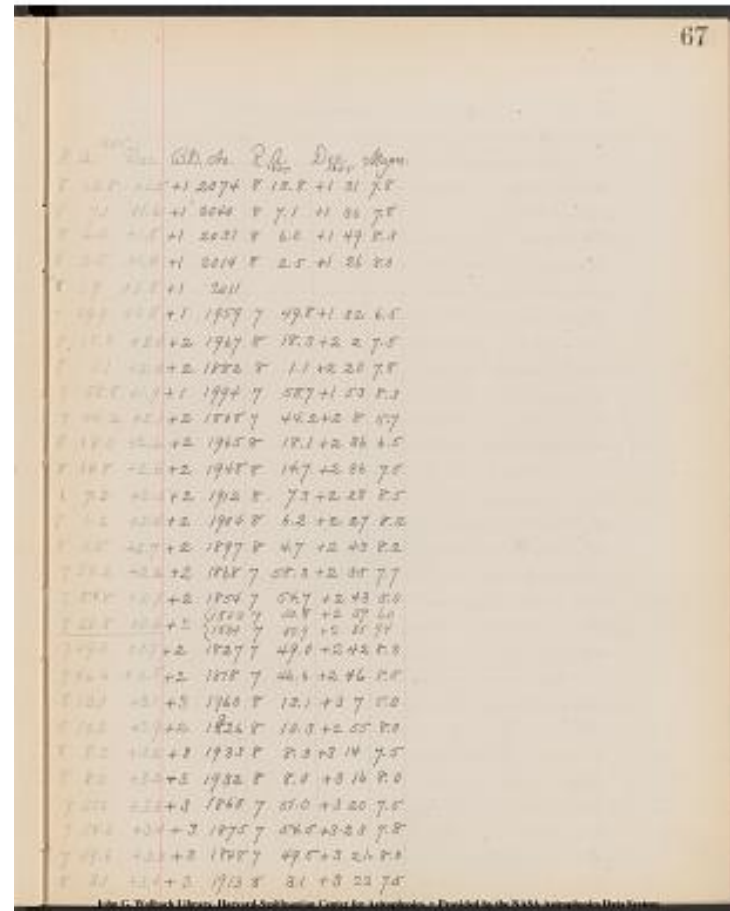


Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

[[9 column table]]

R. | A. | Dec. | BD. | Ao. | R. | A. 1855 | Dec. 1855 | Magn. |

8	13.8	+1.5	+1	2074	8	13.8	+1 31	7.8
8	7.1	+1.6	+1	2040	8	7.1	+1 36	7.8
8	6.0	+1.8	+1	2031	8	6.0	+1 49	8.3
8	2.5	+1.4	+1	2014	8	2.5	+1 26	8.0
8	1.9	+1.8	+1	2011				
7	49.9	+1.5	+1	1959	7	49.8	+1 32	6.5
8	18.3	+2.0	+2	1967	8	18.3	+2 2	7.5
8	1.1	+2.3	+2	1882	8	1.1	+2 20	7.8
7	58.8	+1.9	+1	1994	7	58.7	+1 53	8.3
7	44.2	+2.1	+2	1808	7	44.2	+2 8	5.7
8	18.0	+2.6	+2	1965	8	18.1	+2 36	6.5
8	14.8	+2.6	+2	1948	8	14.7	+2 36	7.5
8	7.2	+2.5	+2	1912	8	7.3	+2 28	8.5
8	6.2	+2.4	+2	1904	8	6.2	+2 27	8.2
8	4.8	+2.7	+2	1897	8	4.7	+2 43	8.2
7	58.2	+2.6	+2	1868	7	58.3	+2 35	7.7
7	54.8	+2.7	+2	1854	7	54.7	+2 43	5.0
7	50.8	+2.6	+2	1833	7	50.8	+2 37	6.0
			1834	7	50.9	+2 35	9.4	
7	49.0	+2.7	+2	1827	7	49.0	+2 42	8.3
7	46.6	+2.8	+2	1818	7	46.6	+2 46	8.5
8	13.1	+3.1	+3	1960	8	13.1	+3 7	8.0
8	10.3	+2.9	+2	[[/strikethrough]] 1826	[[/strikethrough]]	1926	8   10.3	
	+2 55	8.0						
8	8.3	+3.2	+3	1933	8	8.3	+3 14	7.5
8	8.0	+3.2	+3	1932	8	8.0	+3 16	8.0
7	51.0	+3.3	+3	1860	7	57.0	+3 20	7.5
7	54.6	+3.4	+3	1875	7	54.5	+3-23	7.8
7	49.6	+3.3	+3	1848	7	49.5	+3 21	8.0
8	3.0	+3.4	+3	1913	8	3.1	+3 22	7.5



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

July 10, 1893

Plate 1149

[[6 columned table]]

[V|H|Gl.|No.Rem.|Kline|Int.]

---	---	---	---	---	---
18.4	13.6	a	N 1		
18.2	14.5	a	N 1		
19.0	16.7	a	N 2		
18.7	18.5	F	2834 K=H 1		
18.9	22.4	a	N 2		
18.7	22.7	H	K=H 1		
18.6	23.3	E	K=H 1		
19.6	21.7	a	N 1		
19.9	22.6	a	N 1		
20.2	8.9	G	K=H 2		
20.7	10.2	F	2835 K=H 2		
20.9	12.9	E	K=H 1		
20.5	16.3	a	N 2		
20.6	20.5	a	N 2		
[[ <del>struckthrough</del> ]]0[[ <del>struckthrough</del> ]]1 20.6 E   K=H 2					
21.0	23.3	E	K=H 1		
22.0	12.5	a	N 2		
21.8	18.1	a	N 4		
22.8	10.8	a	N 1		
23.0	16.1	a	N 1		
22.6	17.9	a	K=H 1		
22.6	19.1	E	K=H 1		
22.1	19.7	F	2836 K=H 1		
23.8	16.1	a	N 2		
23.4	19.4	a	N 2		
23.2	21.5	a	N 1		
23.8	23.4	a	N 2		
23.7	23.7	a	N 1		

68

July 10, 1893

Plate 1149

18.4	13.6	a	N 1
18.2	14.5	a	N 1
19.0	16.7	a	N 2
18.7	18.5	F	2834 K=H 1
18.9	22.4	a	N 2
18.7	22.7	H	K=H 1
18.6	23.3	E	K=H 1
19.6	21.7	a	N 1
19.9	22.6	a	N 1
20.2	8.9	G	K=H 2
20.7	10.2	F	2835 K=H 2
20.9	12.9	E	K=H 1
20.5	16.3	a	N 2
20.6	20.5	a	N 2
[[ <del>struckthrough</del> ]]0[[ <del>struckthrough</del> ]]1 20.6 E   K=H 2			
21.0	23.3	E	K=H 1
22.0	12.5	a	N 2
21.8	18.1	a	N 4
22.8	10.8	a	N 1
23.0	16.1	a	N 1
22.6	17.9	a	K=H 1
22.6	19.1	E	K=H 1
22.1	19.7	F	2836 K=H 1
23.8	16.1	a	N 2
23.4	19.4	a	N 2
23.2	21.5	a	N 1
23.8	23.4	a	N 2
23.7	23.7	a	N 1

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

1855

[[9 columned table]]

R. | A. | Dec. | BD. | No. | R. | A. | 1855 | Dec. | 1855 | | Magn. |

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

8 | ~~[[strikethrough]]~~ | 3 | ~~[[strikethrough]]~~ | 2.9 | +3.4 | +3 | 1911 | 8 | 2.8 | +3 | 26 | 8.7 |

8 | 1.1 | +3.4 | +3 | 1900 | 8 | 1.1 | +3 | 23 | 8.5 |

7 | 56.3 | +3.8 | +3 | 1883 | 7 | 56.4 | +3 | 48 | 8.0 |

7 | 52.9 | +3.6 | +3 | 1864 | 7 | 52.8 | +3 | 39 | 8.2 |

7 | 45.1 | +3.8 | +3 | 1827 | 7 | 45.1 | +3 | 45 | 8.0 |

7 | 44.5 | +3.7 | +3 | 1824 | 7 | 44.5 | +3 | 39 | 7.5 |

7 | 43.0 | +3.7 | +3 | 1818 | 7 | 43.2 | +3 | 39 | 6.7 |

7 | 46.4 | +4.1 | +4 | 1849 | 7 | 46.4 | +4 | 7 | 8.5 |

7 | 44.8 | +4.2 | +4 | 1843 | 7 | 44.8 | +4 | 12 | 8.5 |

8 | 12.2 | +4.4 | +4 | 1954 | 8 | 12.2 | +4 | 23 | 6.7 |

8 | 9.7 | +4.7 | +4 | 1945 | 8 | 9.7 | +4 | 39 | 7.0 |

8 | 4.2 | +4.7 | +4 | 1932 | 8 | 4.2 | +4 | 42 | 8.0 |

7 | 57.3 | +4.5 | +4 | 1896 | 7 | 57.3 | +4 | 33 | 8.0 |

7 | 48.8 | +4.6 | +4 | 1859 | 7 | 48.7 | +4 | 38 | 8.2 |

7 | 48.9 | +4.9 | +4 | 1860 | 7 | 48.8 | +4 | 51 | 7.0 |

7 | 43.1 | +4.8 | +4 | 1833 | 7 | 43.2 | +4 | 49 | 7.1 |

8 | 5.2 | +5.4 | +5 | 1904 | 8 | 5.2 | +5 | 22 | 8.0 |

7 | 53.7 | +5.3 | +5 | 1857 | 7 | 53.6 | +5 | 16 | 6.5 |

8 | 2.5 | +5.7 | +5 | 1893 | 8 | 2.5 | +5 | 41 | 8.5 |

7 | 57.6 | +5.8 | +5 | 1869 | 7 | 5 | ~~[[struck out]]~~ | 0 | ~~[[\struck out]]~~ | 7.6 | +5 | 50 | 8.7 |

7 | 54.2 | +5.6 | +5 | 1859 | 7 | 54.1 | +5 | 36 | 8.3 |

7 | 51.5 | +5.6 | +5 | 1848 | 7 | 51.6 | +5 | 39 | 8.1 |

7 | 50.5 | +5.4 | +5 | 1845 | 7 | 50.4 | +5 | 24 | 8.2 |

7 | 57.8 | +6.2 | +6 | 1869 | 7 | 57.7 | +6 | 14 | 8.0 |

7 | 51.0 | +6.0 | +6 | 1840 | 7 | 51.1 | +6 | 1 | 7.4 |

7 | 46.8 | +5.9 | +5 | 1829 | 7 | 46.8 | +5 | 54 | 8.2 |

7 | 43. | ~~[[struck out]]~~ | 5 | ~~[[\struck out]]~~ | 0 | +6. | ~~[[struck out]]~~ | 4 | ~~[[\struck out]]~~ |

out | 3 | +6 | 1795 | 7 | 43.1 | +6 | 13 | 7.7 |

7 | 42.7 | +6.1 | +6 | 1792 | 7 | 42.7 | +6 | 6 | 8.0 |

R.A.	Dec.	R.A.	Dec.	Mag.
1911	8	2.8	+3	26.87
1900	8	1.1	+3	23.85
1883	7	56.4	+3	48.80
1864	7	52.8	+3	39.82
1827	7	45.1	+3	45.80
1824	7	44.5	+3	39.75
1818	7	43.2	+3	39.67
1849	7	46.4	+4	7.85
1843	7	44.8	+4	12.85
1954	8	12.2	+4	23.67
1945	8	9.7	+4	39.70
1932	8	4.2	+4	42.80
1896	7	57.3	+4	33.80
1859	7	48.7	+4	38.82
1860	7	48.8	+4	51.70
1833	7	43.2	+4	49.71
1904	8	5.2	+5	22.80
1857	7	53.6	+5	16.65
1893	8	2.5	+5	41.85
1869	7	5	<del>[[struck out]]</del>	0
1859	7	54.1	+5	36.83
1848	7	51.6	+5	39.81
1845	7	50.4	+5	24.82
1869	7	57.7	+6	14.80
1840	7	51.1	+6	1.74
1829	7	46.8	+5	54.82
1795	7	43.1	+6	13.77
1792	7	42.7	+6	6.80

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

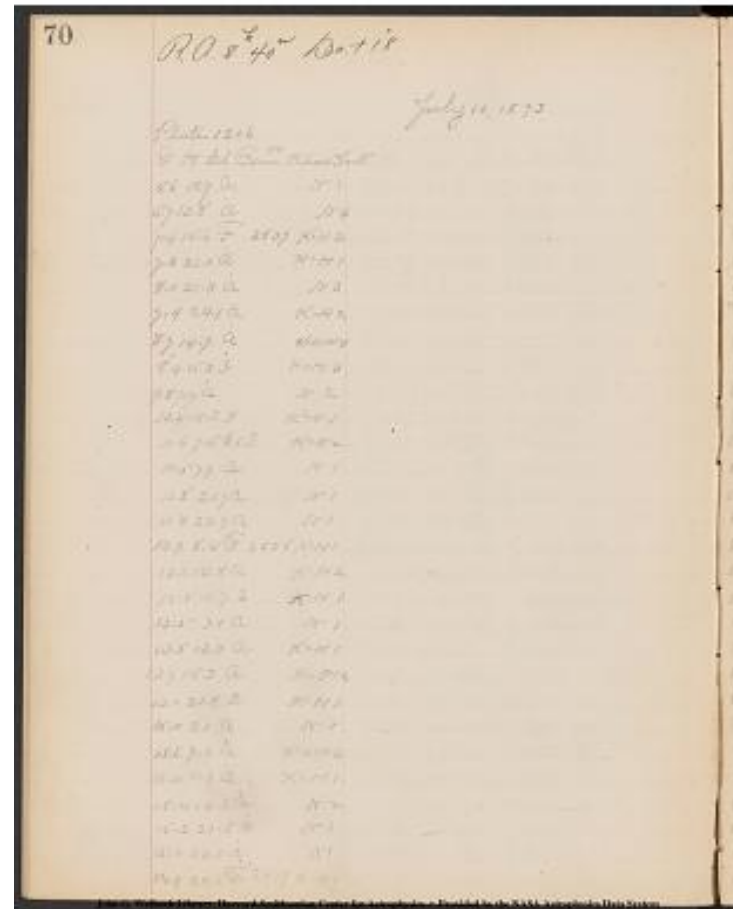
R.A.  $8^{\text{h}}40^{\text{m}}$  Dec.  $+1.8^{\circ}$ 

July 10, 1893

Plate 1206

|V|H|Cl|No. Rem.|K line|Int|

V	H	Cl	No.	Rem.	K line	Int
5.6	10.9	A	N	1		
5.7	13.8	A	N	4		
7.4	15.6	F	2837	K=H	2	
7.0	21.0	A	K=H	1		
8.0	21.3	A	N	3		
7.4	24.1	A	K=H	2		
8.7	14.9	A	K=0.1H	4		
8.4	15.3	[?]	K=H	3		
9.8	7.7	A	N	2		
10.4	14.2	[?]	K=H	1		
11.6	7.5	G5	[?]	K=H	2	
11.5	7.7	A	N	1		
11.8	21.7	A	N	1		
12.9	8.4	F	2838	K=H	1	
12.6	14.8	A	K=H	2		
12.8	15.7	E	K=H	1		
13.5	7.1	A	N	1		
13.7	13.0	A	K=H	1		
13.1	20.8	E	K=H	1		
15.0	8.1	A	N	1		
15.6	9.6	A	K=0.1H	3		
16.0	11.6	A	K=H	1		
15.4	10.8	A	N	2		
15.5	21.5	A	N	1		
15.0	23.0	A	N	1		
14.9	24.2	F	2839	K=H	1	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

[[6 Columned Table]]

[R.A. 1855|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.]

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

|8^h|[h]| 47.7^m|[m]|-3.0^s|[s]|-3^s|[s]| 2506|8^h|[h]| 47.7^m|[m]|-3^s|[s]|

0^s|[s]|6.6|

|8 42.0|-2.9|-2 2699|8 42.1|-2 55|5.7|

|8 38.0|-2.0|-2 2676|8 38.0|-2 5|6.9|

|8 27.2|-2.2|-| | | |

|8 26.5|-1.7|-1 2074|8 26.7|-1 39|6.5|

|\*8 21.0|-2.0|-2 2581|8 21.1|-2 3|7.0|

|8 39.9|-1.3|-1 2130|8 39.9|-1 22|6.0|

|8 38.6|-1.5|-1 2125|8 38.7|-1 31|7.0|

|8 54.2|-0.9|-0 2111|8 54.2|-0 54|7.7|

|8 41.3|-0.5|-0 2069|8 41.2|-0 31|7.3|

|8 54.6|+0.0|+0 2449|8 54.6|+0 5|6.2|

|8 54.3|+0.0|+0 2448|8 54.3|+0 3|8.8|

|8 26.0|+0.2|+0 2331|8 26.0|+0 11|8.0|

|8 21.8|+0.2|+0 2310|8 21.7|+0 12|7.7|

|8 53.1|+0.7|+0 2442|8 53.1|+0 43|8.2|

|8 40.1|+0.5|+0/+0 2392/2393|8/8 40.1/40.2|+0/+0 36/33|8.2/8.2|

|8 38.0|+0.7|+0 2379|8 38.0|+0 45|7.4|

|8 55.5|+0.9|+0 2451|8 55.4|+0 59|8.2|

|8 43.5|+1.0|+1 2183|8 43.6|+1 1|8.2|

|8 38.8|+1.2|+1 2163|8 38.9|+1 10|7.3|

|8 27.7|+0.9|+0 2335|8 27.7|+0 53|7.3|

|8 53.7|+1.8|+1 2220|8 53.6|+1 51|7.7|

|8 50.6|+2.1|+2 2112|8 50.7|+2 6|7.5|

|8 ~~[[strikethrough]]5~~[[/strikethrough]]~~46.4|+2.3|+2 2088|8 46.4|+2 22|7.8|~~

|8 42.1|+2.0|+2 2072|8 42.1|+2 1|7.5|

|8 26.4|+2.1|+2 2006|8 26.4|+2 5|7.8|

|8 23.5|+1.8|+1 2111|8 23.6|+1 50|8.0|

|8 21.1|+1.7|+1 2102|8 21.1|+1 44|7.4|

\*BD superposed on BD -2° 2581.

71

R.A. 1855	Dec. 1855	BD. No.	R.A. 1855	Dec. 1855	Magn.
47.7	-3.0	2506	47.7	-3.0	
42.0	-2.9	2699	42.1	-2.55	5.7
38.0	-2.0	2676	38.0	-2.5	6.9
27.2	-2.2				
26.5	-1.7	2074	26.7	-1.39	6.5
*21.0	-2.0	2581	21.1	-2.3	7.0
39.9	-1.3	2130	39.9	-1.22	6.0
38.6	-1.5	2125	38.7	-1.31	7.0
54.2	-0.9	2111	54.2	-0.54	7.7
41.3	-0.5	2069	41.2	-0.31	7.3
54.6	+0.0	2449	54.6	+0.5	6.2
54.3	+0.0	2448	54.3	+0.3	8.8
26.0	+0.2	2331	26.0	+0.11	8.0
21.8	+0.2	2310	21.7	+0.12	7.7
53.1	+0.7	2442	53.1	+0.43	8.2
40.1	+0.5	+0/+0 2392/2393	8/8 40.1/40.2	+0/+0 36/33	8.2/8.2
38.0	+0.7	+0 2379	38.0	+0.45	7.4
55.5	+0.9	+0 2451	55.4	+0.59	8.2
43.5	+1.0	+1 2183	43.6	+1.1	8.2
38.8	+1.2	+1 2163	38.9	+1.10	7.3
27.7	+0.9	+0 2335	27.7	+0.53	7.3
53.7	+1.8	+1 2220	53.6	+1.51	7.7
50.6	+2.1	+2 2112	50.7	+2.6	7.5
<del>[[strikethrough]]5<del>[[/strikethrough]]</del>46.4</del>	<del>+2.3</del>	<del>+2 2088</del>	<del>8 46.4</del>	<del>+2.22</del>	<del>7.8</del>
42.1	+2.0	+2 2072	42.1	+2.1	7.5
26.4	+2.1	+2 2006	26.4	+2.5	7.8
23.5	+1.8	+1 2111	23.6	+1.50	8.0
21.1	+1.7	+1 2102	21.1	+1.44	7.4

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

72

July 10, 1893  
Plate 1206

[[6 column table]]

| V | H | Cl. | Rem.^[No.] | Kline | Int. |

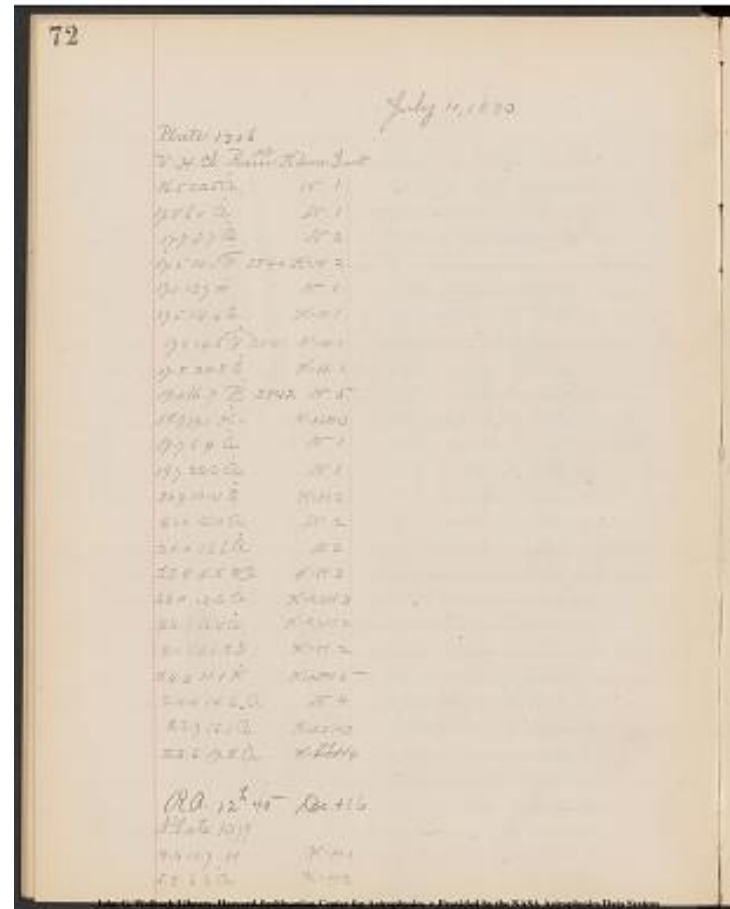
V	H	Cl.	Rem.	^[No.]	Kline	Int.
16.5	20.5	A		N	1	
17.5	6.0	A		N	1	
17.9	7.7	A		N	2	
19.5	10.1	F	2840	K=H	2	
17.1	13.9	H		N	1	
17.5	14.4	E		K=H	1	
17.6	14.6	F	2841	K=H	1	
17.8	20.8	C		K=H	1	
19.0	16.9	B	2842	N	5	
18.9	19.1	K		K=1.2H	3	
19.7	6.4	A		N	1	
19.7	22.3	A		N	1	
20.9	10.4	E		K=H	2	
21.0	15.0	A		N	2	
21.0	16.6	A		N	3	
22.8	5.8	<del>[[/del]]</del>	<del>[[/del]]</del>	<del>[[/del]]</del>	<del>[[/del]]</del>	K=H   3
23.0	12.6	A		K=0.2H	3	
22.9	16.4	A		K=0.2H	2	
21.8	21.8	I		K=H	2	
24.3	11.1	K		K=1.5H	5	
24.0	14.6	A		N	4	
23.7	16.1	A		K=0.3H	3	
23.6	19.8	A		K= <del>[[/del]]</del>	1.01 <del>[[/del]]</del>	0.1H   4

RA. 12^h 40^m Dec.+1.6

Plate 1379

4.6 | 11.7 | H | | K=H | 1

5.8 | 6.6 | A | | K=H | 2

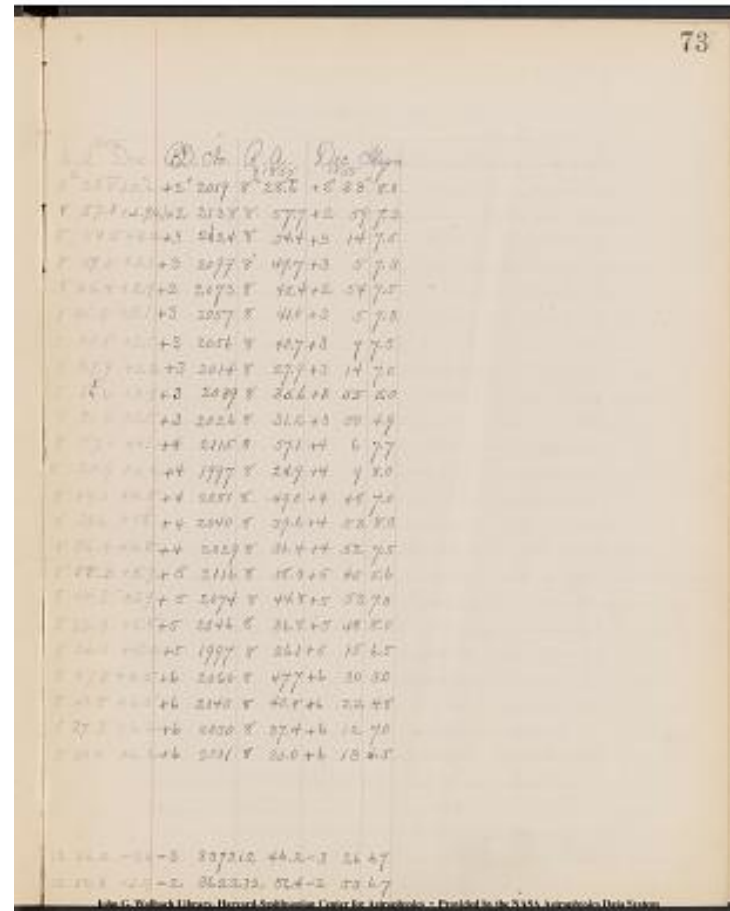


Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[9 column table]]

R. | A. ^[[1855]] | Dec. | BD. | Ch. | R. | A. ^[[1855]] | Dec. ^[[1855]] | Magn.

---	---	---	---	---	---	---	---	---
8	^[[h]]		28.5	^[[m]]		+2.6°		+2°
2019		8	^[[h]]		28.6	^[[m]]		+2° 33'
8.0								
8		57.8		+2.9		(+)+2		2138
8		57.7		+2.59		7.2		
8		54.5		+3.2		+3		2
8		54.4						124
8		54.4						124
8		49.8		+3.1		+3		2099
8		49.7		+3.5		7.3		
8		42.4		+2.9		+2		2073
8		42.4		+2.54		7.5		
8		41.0		+3.1		+3		2057
8		41.0		+3.5		7.3		
8		40.8		+3.1		+3		2056
8		40.7		+3.7		7.5		
8		27.9		+3.2		+3		2014
8		27.9		+3.14		7.0		
8		3						2039
8		35.6						35.6
8		31.2		+3.8		+3		2026
8		31.2		+3.50		4.9		
8		57.1		+4.1		+4		2115
8		57.1		+4.6		7.7		
8		24.9		+4.2		+4		1997
8		24.9		+4.9		8.0		
8		49.0		+4.8		+4		2081
8		49.0		+4.48		7.0		
8		39.6		+4.				2040
8		39.6						39.6
8		36.4		+4.8		+4		2029
8		36.4		+4.52		7.5		
8		58.3		+5.7		+5		2116
8		58.3		+5.40		5.6		
8		44.8		+5.9		+5		2074
8		44.8		+5.53		7.3		
8		36.9		+5.8		+5		2046
8		36.8		+5.48		8.0		
8		26.0		+5.2		+5		1997
8		26.1		+5.15		6.5		
8		47.8		+6.5		+6		2060
8		47.7		+6.30		3.0		
8		40.8		+6.5		+6		2040
8		40.8		+6.22		4.8		
8		37.3		+6.2		+6		2030
8		37.4		+6.12		7.0		
8		30.0		+6.2		+6		2001
8		30.0		+6.13		4.5		
12		46.2		-3.4		-3		3373
12		46.2		-3.26		6.7		
12		56.3		-2.9		-2		3622
12		56.4		-2.53		6.7		



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



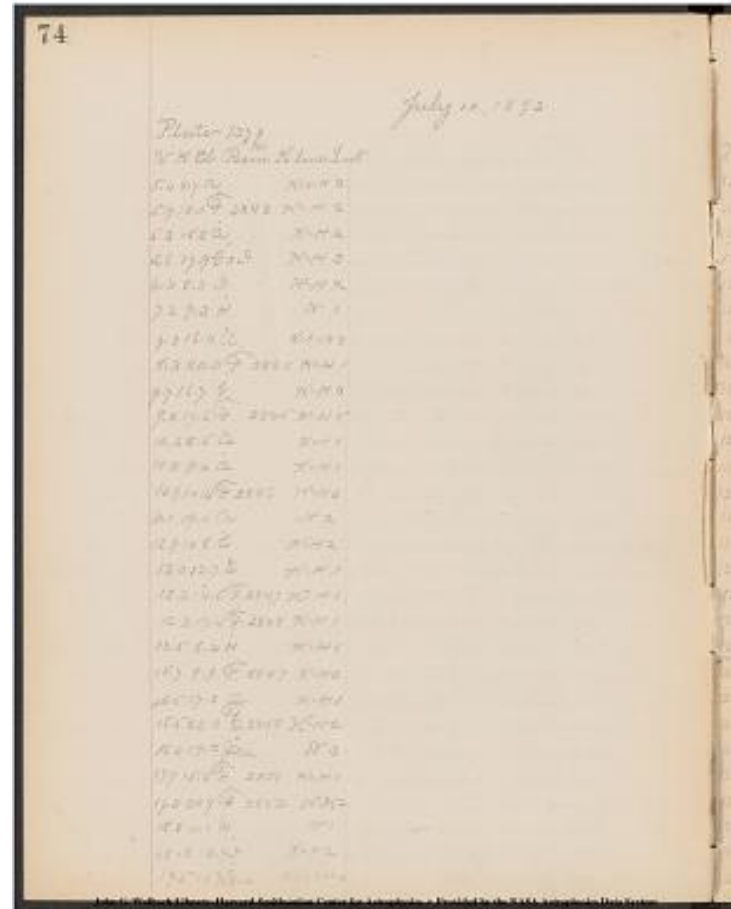
July 10, 1893

Plate 1379

[[6 column table]]

V|H|C|Rem^[[No.]]|K line|Int.|

5.4	8.7	A		K=0.1H 3
5.9	12.0	F		2843 K=H 2
5.3	15.8	A		K=H 2
5.6	17.9	G3		K=H 3
6.3	8.3	I		K=H 2
7.2	9.3	H		N 1
7.3	16.4	A		K=0.1H 3
8.3	20.0	F		2844 K=H 1
9.7	16.7	G		K=H 3
9.8	17.6	F		2845 K=H 5
10.6	8.5	A		K=H 1
10.8	9.4	A		K=H 1
10.9	10.4	F		2846 K=H 3
11.1	19.0	A		N 2
12.9	10.8	E		K=H 2
13.0	12.7	E		K=H 1
12.2	14.6	F		2847 K=H 1
12.2	17.4	F		2848 K=H 1
13.5	6.2	H		K=H 1
15.7	9.9	F		2849 K=H 3
15.5	17.3	A		K=H 1
15.5	23.0	<del>A</del>		<del>2850</del>  K=H 2
16.4	19.3	Ma		N 3
17.7	15.4	F		2851 K=H 1
17.3	20.9	F		2852 K=H 2
18.8	11.1	H		N 1
18.8	12.9	I		K=H 2
19.5	10.9	Ma		K=1.2H 4



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

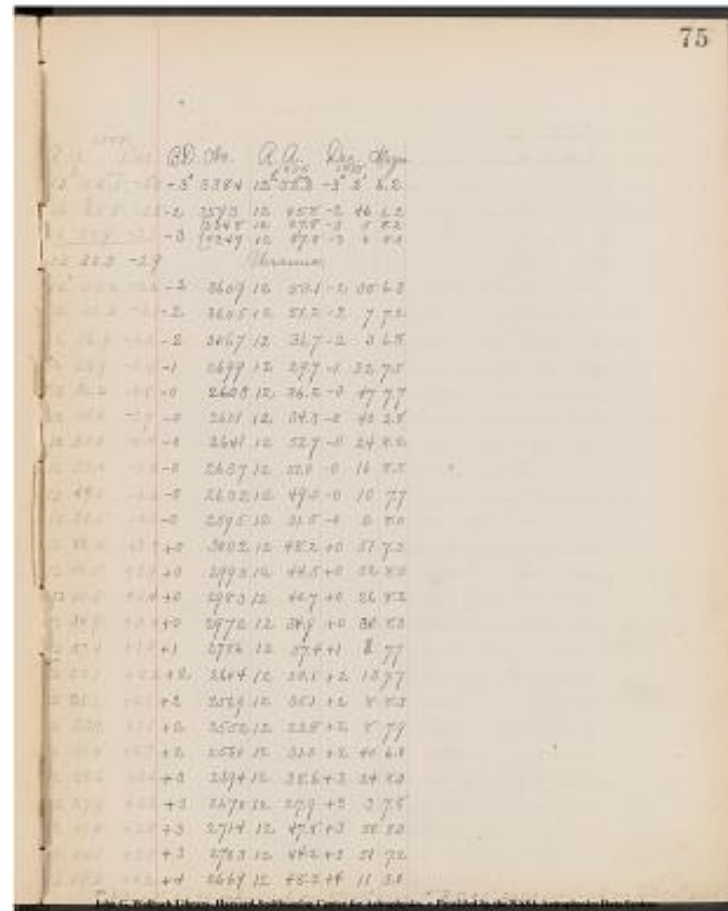
1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

R.A. 1855	Dec. 1855	BD. No.	R.A. 1855	Dec. 1855	Magn.
12 <sup>h</sup> 52.1 <sup>m</sup>	-3.0°	-3° 33' 84"	12 <sup>h</sup> 52.2 <sup>m</sup>	-3° 2' 6.2"	
<del>12 51.2</del>	<del>-2.1</del>	<del>-2 36' 05"</del>	<del>12 51.2</del>	<del>-2 7' 7.2"</del>	
<u>12 37.9</u>	<u>-3.1</u>	<u>-3 33' 48"</u>	<u>12 37.8</u>	<u>-3 5' 8.2"</u>	
12 33.5	-2.9	-2 36' 09"	12 53.1	-2 35' 6.3"	
12 51.2	-2.1	-2 36' 05"	12 51.2	-2 7' 7.2"	
12 36.9	-2.0	-2 35' 67"	12 36.7	-2 3' 6.8"	
12 29.7	-1.5	-1 26' 99"	12 29.7	-1 32' 7.5"	
*12 36.2	-0.8	-0 26' 03"	12 36.2	-0 47' 7.7"	
12 34.4	-0.7	-0 26' 01"	12 34.3	-0 40' 2.8"	
12 52.8	-0.4	-0 26' 41"	12 52.7	-0 24' 8.2"	
12 51.0	-0.3	-0 26' 37"	12 51.0	-0 16' 8.5"	
12 49.0	-0.2	-0 26' 32"	12 49.0	-0 10' 7.7"	
12 31.5	-0.1	-0 25' 95"	12 31.5	-0 2' 8.0"	
12 48.2	+0.9	+0 30' 02"	12 48.2	+0 51' 7.3"	
12 44.5	+0.9	+0 29' 93"	12 44.5	+0 52' 8.0"	
12 40.8	+0.4	+0 29' 83"	12 40.7	+0 26' 8.2"	
12 34.9	+0.4	+0 29' 72"	12 34.9	+0 30' 8.3"	
12 57.4	+1.0	+1 27' 86"	12 57.4	+1 0' 7.7"	
*12 50.1	+2.2	+2 26' 04"	12 50.1	+2 13' 7.7"	
12 35.1	+2.1	+2 25' 69"	12 35.1	+2 8' 8.3"	
12 23.9	+2.1	+2 25' 52"	12 23.8	+2 8' 7.9"	
12 31.0	+2.7	+2 25' 60"	12 31.0	+2 40' 6.0"	
12 38.6	+3.4	+3 26' 94"	12 38.6	+3 24' 8.0"	
12 27.9	+3.0	+3 26' 70"	12 27.9	+3 3' 7.8"	
12 47.8	+3.8	+3 27' 14"	12 47.8	+3 50' 8.0"	
12 44.1	+3.8	+3 27' 03"	12 44.2	+3 51' 7.2"	
12 48.2	+4.2	+4 26' 69"	12 48.3	+4 11' 3.0"	

\*BD - 0° 26' 04" superposed on B.D = 0° 26' 03" \*12 50.1 B.D. + 2° 26' 03" superposed on BD + 2° 26' 04"



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

76

July 10, 1893

Plate 1379

[[6 columned table]]

|V|H|Cl.| Rem.^[[No.]]|K line|Int|

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

19.7|14.6|A| |K=H|1|

19.9|14.8|Ma| |N|1|

19.3|19.5|A| |K=0.1H|3|

20.5|18.2|F|2853|K=H|1|

21.5|8.1|A| |N|2|

21.3|19.6|A| |N|2|

23.1|14.0|F|2854|K=H|1|

22.5|23.9|F|2855|K=H|1|

21.6|24.5|A| |N|2|

24.6|15.1|A| |N|3|

R.A. 16^[[h]] 41^[[m]] Dec.+2

Plate 568

5.0|10.4|F|2856|K=H|1|

5.5|13.2|A| |K=0.5H|2|

5.7|14.1|~~[[strikethrough]]a[[/strikethrough]]~~A|2857|K=H|2|

6.7|18.2|F|2858|K=H|1|

6.4|21.0|F|2859|K=H|3|

7.7|5.7|F|2860|K=H|3|

7.7|12.1|A8F(2)|2861|K=H|3|

9.0|18.5|A| |K=H|3|

9.1|6.4|B|2862|N|3|

9.8|16.9|A| |N|2|

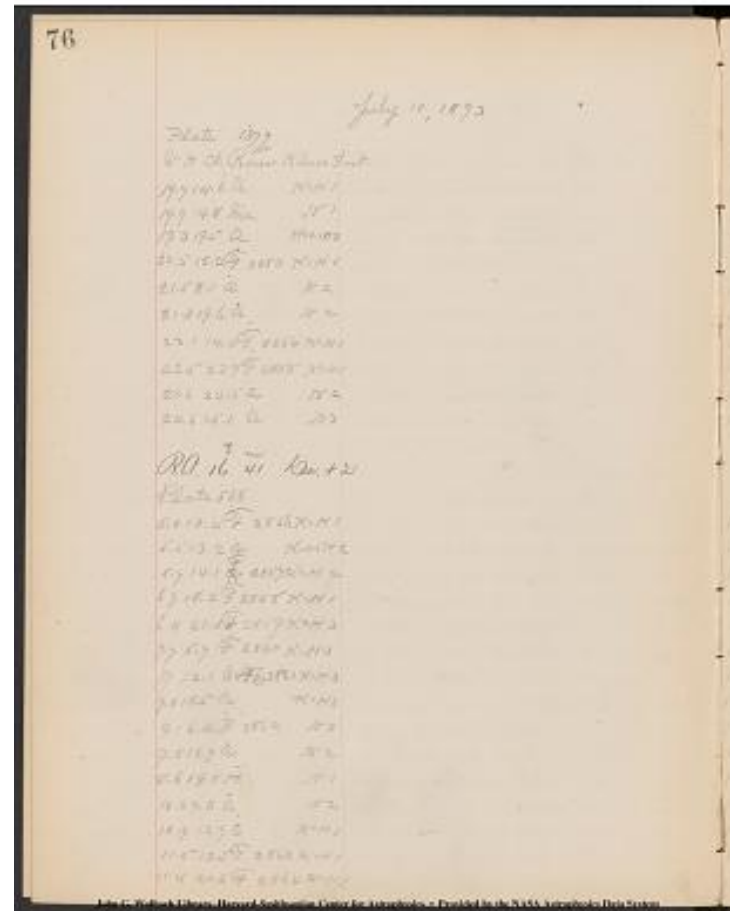
8.6|19.8|H| |N|1|

10.6|7.3|A| |N|2|

10.9|12.7|E| |K=H|1|

11.5|13.5|F|2863|K=H|1|

11.4|20.6|F|2864|K==H|1|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[7 column table]]

R.A. | Dec. | BD. | No. | R.A. 1855 | Dec. 1855 | Magn. |

R.A. 1855	Dec. 1855	Magn.
12 <sup>h</sup> 40.5 <sup>m</sup>	+4.3°	6.7
12 30.7	+4.3	6.5
12 33.5	+4.7	7.8
12 53.8	+5.1	7.3
12 30.5	+5.1	7.3
12 42.1	+5.9(+)	8.2
12 22.0	+5.6	7.5
12 20.9	+5.2	7.3
12 39.8	+6.7	6.7

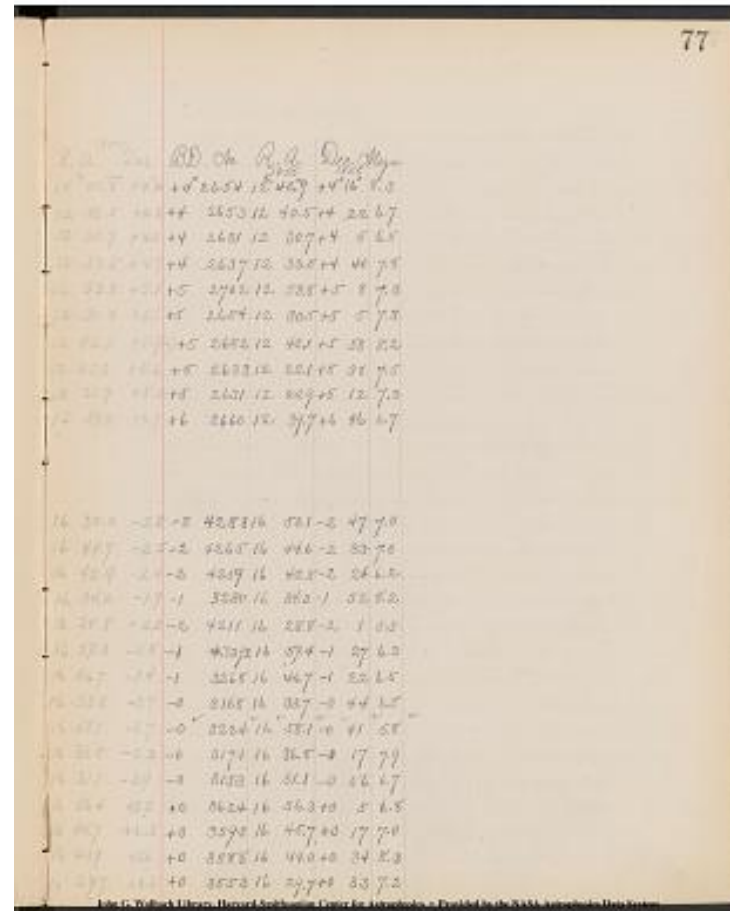
R.A. 1855	Dec. 1855	Magn.
2653	12 40.5	+4 22
2631	12 30.7	+4 5
2637	12 33.5	+4 40
2702	12 53.8	+5 8
2654	12 30.5	+5 5
2682	12 42.1	+5 58
2633	12 22.1	+5 38
2631	12 20.9	+5 12
2660	12 39.7	+6 46

R.A. 1855	Dec. 1855	Magn.
4283	16 50.1	-2 47
4265	16 44.6	-2 33
4259	16 42.8	-2 24
3230	16 34.3	-1 52
4211	16 28.8	-2 1
3292	16 59.4	-1

27 | 6.3 |

R.A. 1855	Dec. 1855	Magn.
3268	16 46.7	-1 22
3168	16 33.7	-0 44
3224 <sup>^</sup>	16 58.1	-0 <sup>^</sup>
58.1 <sup>^</sup>	16 58.1	-0 <sup>^</sup>
41 <sup>^</sup>	16 58.1	-0 <sup>^</sup>

R.A. 1855	Dec. 1855	Magn.
3174	16 36.8	-0 17
3153	16 31.1	-0 56
3624	16 56.3	+0 5
3593	16 45.7	+0 17
3588	16 44.0	+0 34
3553	16 29.7	+0 33



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

78

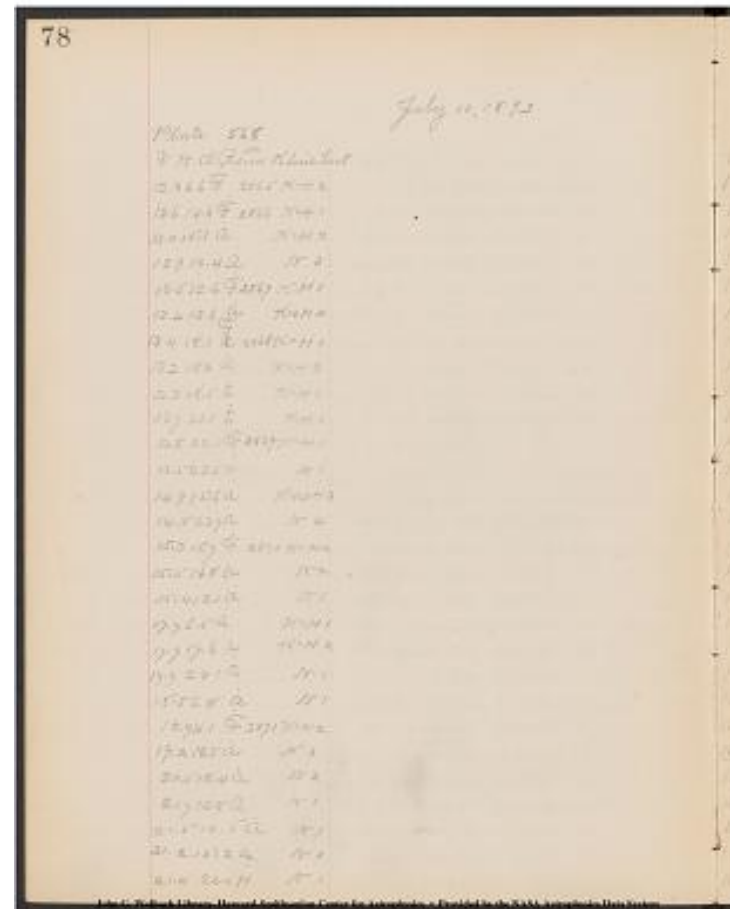
July 10, 1893

Plate 568

[[table]]

V |H|Cl.|Rem. No.|K line|Int|

12.3	6.6	F	2865	K=H 2
12.6	14.6	F	2866	K=H 1
13.0	15.1	A		K=H 2
12.9	16.4	A		N 3
13.5	12.6	F	2867	K=H 1
13.2	13.6	A		K=0.H 4
13.4	18.1	<del>[[strikethrough]]</del>	F[2868]	K=H 1
13.2	18.3	A		K=H 3
13.3	18.5	E		K=H 1
13.7	21.1	E		K=H 1
13.8	22.1	F	2869	K=H 1
13.5	23.5	H		N 1
14.9	15.6	A		K=0.3H 3
14.8	23.7	A		N 4
15.3	15.7	F	2870	K=H 2
15.5	16.8	A		N 2
15.4	18.1	A		N 1
17.7	6.5	A		K=H 1
17.7	17.6	A		K=H 2
17.7	23.1	A		N 1
18.5	6.8	A		N 1
18.9	16.1	F	2871	K=H 2
19.2	18.8	A		N 3
20.5	18.4	A		N 2
21.7	13.8	A		N 1
21.5	14.5	A		N 1
21.2	15.2	A		N 4
21.4	20.4	H		N 1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[10 columned table]]

R. | A. | Dec. | BD. | No. | R. | A. 1855 | Dec. 1855 | | Magn. |

16^	[[h]]	58.0^	[[m]]	+0.9°	+0	3629	16	57.9	+0	55	6.3
16	42.1	+1.2	+1	3313	16	42.1	+1	9	7.7		
16	41.0	+1.3	+1	3309	16	40.9	+1	20	8.0		
16	38.0	+1.3	+1	3298	16	38.2	+1	17	7.0		
16	46.0	+1.6	+1	3332	16	46.1	+1	36	8.2		
16	44.1	+1.4	+1	3323	16	44.1	+1	28	6.0		
16	34.8	+1.5	+1	3293	16	34.8	+1	31	8.6		
16	34.4	+1.4	+1	3290	16	34.4	+1	27	6.5		
16	33.8	+1.5	+1	3286	16	34.0	+1	30	7.3		
16	28.8	+1.7	+1	3263	16	28.7	+1	40	8.0		
16	26.6	+1.7	+1	3255	16	26.7	+1	44	8.5		
16	24.0	+1.6	+1	3246	16	24.0	+1	37	8.0		
16	39.9	+2.3	+2	3175	16	39.9	+2	20	6.6		
16	23.5	+2.3	+2	3118	16	23.6	+2	17	4.0		
16	39.5	+2.5	+2	3174	16	39.6	+2	30	7.5		
16	37.4	+2.6	+2	3166	16	37.4	+2	37	8.1		
16	34.8	+2.5	+2	3155	16	34.8	+2	33	8.1		
16	58.2	+3.7	+3	3338	16	58.2	+3	38	7.3		
16	35.7	+3.7	+3	3254	16	35.8	+3	44	7.8		
16	24.8	+3.7	+3	3213	16	24.8	+3	40	8.0		
16	57.7	+3.9(+)	+3	3335	16	57.7	+3	59	8.1		
16	38.7	+4.3	+4	3250	16	38.8	+4	18	7.0		
[[ <u>16</u> 33.5+4.5[[ <u>16</u> 33.4+4 28 7.5]]+4 3234 16 33.4+4 28 7.5]]											
				3235	16	33.5	+4	30	6.1		
16	34.3	+5.1	+5	3254	16	34.4					
+[[ <del>4</del> ]]5 9 7.2											
16	438	+5.8	+5	3282	16	43.9					
+[[ <del>4</del> ]]5 44 7.8											
16	42.4	+5.6	+5	3276	16	42.4	+5	38	8.2		
16	40.7	+5.5	+5	3272	16	40.6	+5	30	5.3		
16	30.4	+5.6	+5	3240	16	30.4	+5	35	6.8		

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

80

July 10, 1893

Plate 568

[[6 columned table]]

[V|H|Cl.|Rem. ^[[No.]]|Kline|Int.]

21.9|22.9|A| |N|3|

24.0|9.0|A| |N|2|

R.A. 17^[[h]] 21^[[m]] Dec. +1.6

Plate 1373

5.9|11.2|A| |N|1|

5.6|11.9|F|2872|K=H|1|

5.4|17.1|F|2873|K=H|1|

6.0|19.3|F|2874|K=H|2|

6.8|17.3|G| |K=H|3|

8.0|6.9|A| |K=H|1|

7.3|8.9|H| |K=H|1|

8.0|11.7|E| |K=H|1|

8.4|11.5|F|2875|K=H|1|

8.2|15.8|F|2876|K=H|3|

9.4|13.8|G| |K=1.2H|4|

9.6|15.5|A| |K=H|1|

10.0|22.7|F|2877|K=H|1|

10.0|23.7|A| |N|1|

10.38|8.1|A| |N|1|

10.2|9.0|A| |N|3|

10.5|29.5|K| |K=1.2H|4|

11.6|13.0|E| |K=H|2|

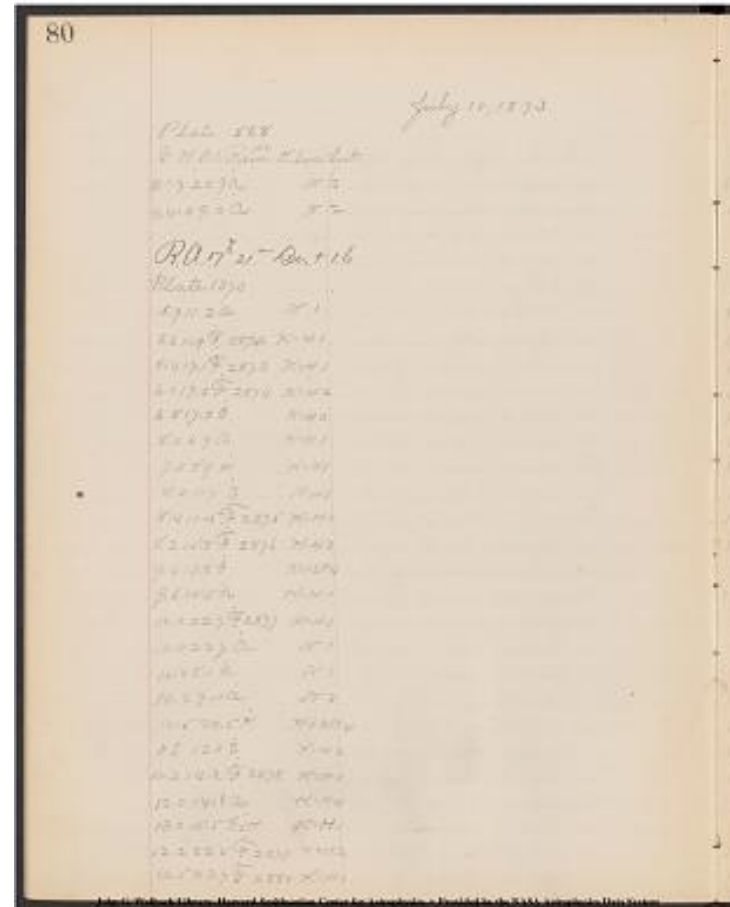
11.2|14.2|F|2878|K=H|1|

12.0|14.6|A| |K=H|4|

13.0|15.5|G5H| |K=H|1|

12.2|22.4|F|2879|K=H|2|

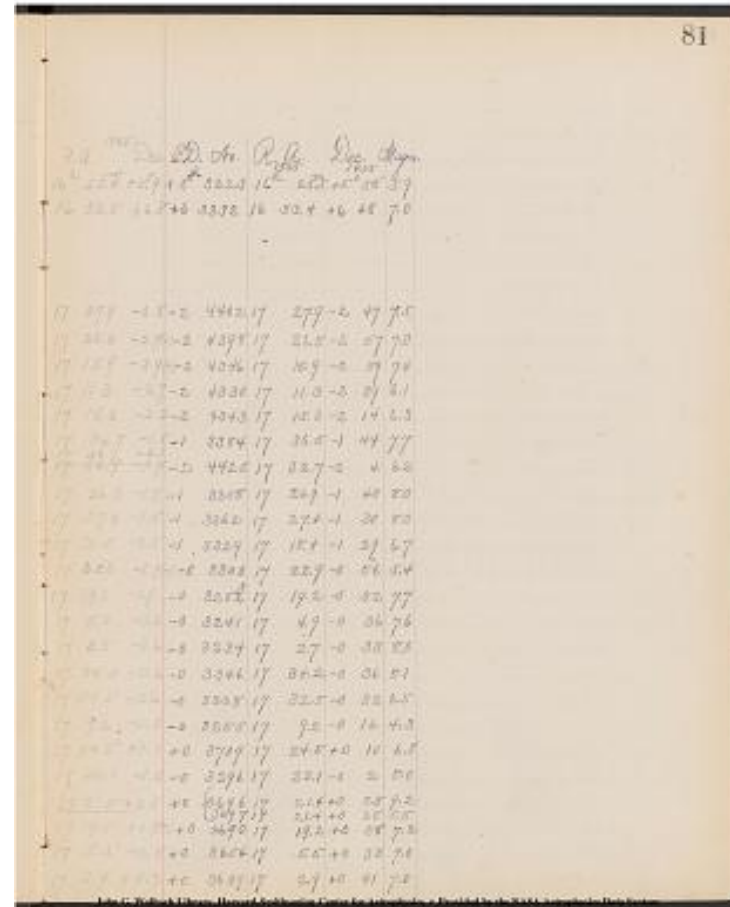
12.5|23.7|F|2880|K=H|1|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



[[6 column table]]  
R.A.^[1855]	Dec	B.D. No.	R.A.^[1855]	Dec.^[1855]	Magn.
16^[[h]] 25.4^[[m]]	+5°.9	+5°^[[~~h~~]] ~~h~~^[[~~m~~]] ~~h~~^[[~~m~~]]			
3223	16^[[h]] 25.5^[[m]]	+5° 50'	5.9		
16 53.5	+6.8	+6 3332	16 53.4	+6 48	7.0
17 27.9	-2.8	-2 4402	17 27.9	-2 47	7.5
17 26.6	-2.9(+)	-2 4398	17 26.5	-2 57	7.0
17 15.9	-2.9(+)	-2 4346	17 15.9	-2 59	7.4
17 11.3	-2.7	-2 4330	17 11.3	-2 39	6.1
17 15.3	-2.2	-2 4343	17 15.3	-2 14	6.3
17 36.5	-1.8	-1 3384	17 36.5	-1 44	7.7
~~17 26.9	-1.7	~~17 32.7	-2.1~~	-2~~	
4425	17 32.7	-2 4	6.2		
17 26.9	-1.7	-1 3358	17 26.9	-1 40	8.0
17 27.3	-1.5	-1 3362	17 27.4	-1 30	8.0
17 18.5	-1.5	-1 3329	17 18.4	-1 29	6.7
17 23.0	-0.9(+)	-0 3300	17 22.9	-0 56	5.4
17 19.1	-0.9	-0 328~~17 19.1	-0.9	-0 328~~ 2 ~~17 19.2	~~
-0 52	7.7				
17 5.0	-0.6	-0 3241	17 4.9	-0 36	7.6
17 2.8	-0.6	-0 3234	17 2.7	-0 33	8.0
17 34.3	-0.6	-0 3346	17 34.2	-0 36	8.1
17 32.5	-0.6	-0 3338	17 32.5	-0 32	6.5
17 9.2	-0.3	-0 3255	17 9.2	-0 16	4.3
17 24.5	+0.1	+0 3709	17 24.5	+0 10	6.8
17 22.1	-0.0	-0 3296	17 22.1	-0 2	8.0
17 21.5	+0.5	+0 3696 [[3697	17 21.4	+0 28	5.5]]
9.2					
 17 19.1 | +0.9(+) | +0 3690 | 17 19.2 | +0 58 | 7.2  
 17 5.5 | +0.5 | +0 3654 | 17 5.5 | +0 33 | 7.0  
 17 2.9 | +0.7 | +0 3649 | 17 2.9 | +0 41 | 7.0



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



July 10, 1893

Plate 1373

[[table]]

|V.|H.|Cl.|Rem. No.|K line|Int.|

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

13.6|5.8|H| |N|1

13.5|11.1|A| |N|2

13.7|13.6|F|2881|K=H|2

13|4|14.4|A| |N|1

13.9|20.5|B|2882|N|3

14.7|13.2|H| |N|1

14.6|13.6|E| |K=H|1

14.5|14.2|A| |N|1

14.3|18.2|G| |K=H|2

14.9|20.0|F|2883|K=H|2

15.5|~~11.1~~|~~11.1~~|9.4|G| |K=H|215.6|~~11.1~~|~~11.1~~|9.5|E| |K=H|2

15.7|18.9|E| |K=H|1

15.7|20.7|A| |K=0.1H|3

16.6|6.9|A| |N|3

16.8|9.5|F|2884|K=H|1

17.0|13.0|B|2885|N|2

16.8|13.3|<sup>[[F7]]</sup>G|<sup>[[circled]]</sup> |K=H|3

16.8|20.9|A| |N|1

17.5|14.2|A| |N|1

18.0|16.1|A| |K=0.3H|2

18.0|17.9|A| |K=H|1

17.7|19.8|F|2886|K=H|2

18.2|9.3|H| |K=H|1

18.5|9.4|G3H| |K=H|2

19.7|8.6|A| |N|1

19.6|15.5|K| |K=H|4

20.4|7.3|K| |K=1.5H|5

82

July 10, 1893

Star	V.	H.	Cl.	Rem. No.	K line	Int.
13.6	5.8	H			N	1
13.5	11.1	A			N	2
13.7	13.6	F	2881		K=H	2
13	4	14.4	A		N	1
13.9	20.5	B	2882		N	3
14.7	13.2	H			N	1
14.6	13.6	E			K=H	1
14.5	14.2	A			N	1
14.3	18.2	G			K=H	2
14.9	20.0	F	2883		K=H	2
15.5	<del>11.1</del>	<del>11.1</del>			9.4 G	K=H 2
15.6	<del>11.1</del>	<del>11.1</del>			9.5 E	K=H 2
15.7	18.9	E				K=H 1
15.7	20.7	A				K=0.1H 3
16.6	6.9	A				N 3
16.8	9.5	F	2884			K=H 1
17.0	13.0	B	2885			N 2
16.8	13.3	<sup>[[F7]]</sup> G			<sup>[[circled]]</sup>	K=H 3
16.8	20.9	A				N 1
17.5	14.2	A				N 1
18.0	16.1	A				K=0.3H 2
18.0	17.9	A				K=H 1
17.7	19.8	F	2886			K=H 2
18.2	9.3	H				K=H 1
18.5	9.4	G3H				K=H 2
19.7	8.6	A				N 1
19.6	15.5	K				K=H 4
20.4	7.3	K				K=1.5H 5

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
17 <sup>h</sup> 39.1 <sup>m</sup>	+1.1°	3501	17 <sup>h</sup> 39.0 <sup>m</sup>	+1.1°	7.6
17 28.5	+1.1	3463	17 28.5	+1.6	7.7
17 23.5	+1.2	3449	17 23.5	+1.5	7.5
17 21.8	+1.0	3440	17 21.8	+1.4	7.8
17 9.2	+1.4	3408	17 9.2	+1.2	5.5
17 24.1	+1.8	3450	17 24.2	+1.4	7.2
17 23.5	+1.7	3448	17 23.5	+1.4	8.2
17 22.3	+1.7	3443	17 22.3	+1.4	8.0
17 13.8	+1.6	3421	17 13.8	+1.3	7.2
17 10.3	+1.9	3411	17 10.3	+1.5	6.8
<del>17 12.4</del>	<del>17 12.4</del>	<del>17 12.4</del>	<del>17 12.4</del>	<del>17 12.4</del>	<del>17 12.4</del>
31.8	<del>2.3</del>	<del>2.3</del>	31.8	+2.1	3373
31.8	+2.7	6.7			
17 31.7	+2.1	2 3372	17 31.8	+2.9	8.5
17 12.4	+2.2	2 3296	17 12.5	+2.1	9.0
17 8.9	+2.3	2 3283	17 8.9	+2.2	6.5
<u>17 37.2</u>	<u>+2.7</u>	<u>2 3390</u>	17 37.3	+2.4	6.5
17 33.9	+2.4	6.5			
17 31.7	+2.8	2 3370	17 31.7	+2.4	7.8
17 24.8	+2.9	2 3341	17 24.8	+2.5	7.8
17 24.0	+2.9	2 3337	17 24.1	+2.5	5.5
17 8.6	+2.9	2 3281	17 8.6	+2.5	8.4
17 22.3	+3.1	3 3423	17 22.3	<del>17 22.3</del>	<del>17 22.3</del>
17 18.3	+3.4	3 3404	17 <del>17 18.3</del>	<del>17 18.3</del>	<del>17 18.3</del>
17 14.6	+3.4	3 3389	17 14.7	+3.2	8.5
17 10.8	+3.3	3 3379	17 10.8	+3.1	7.0
17 32.1	+3.5	3 3466	17 32.3	+3.2	7.2
17 32.0	+3.7	3 3465	17 32.1	+3.3	6.5
17 33.5	+4.2	4 3476	17 33.6	+4.1	7.8
17 19.4	+4.2	4 3422	17 19.3	+4.1	6.0
17 36.1	+4.6	4 3489	17 36.3	+3.8	3.0

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

84

July 10, 1893

Plate 1373

[[6 columned table]]

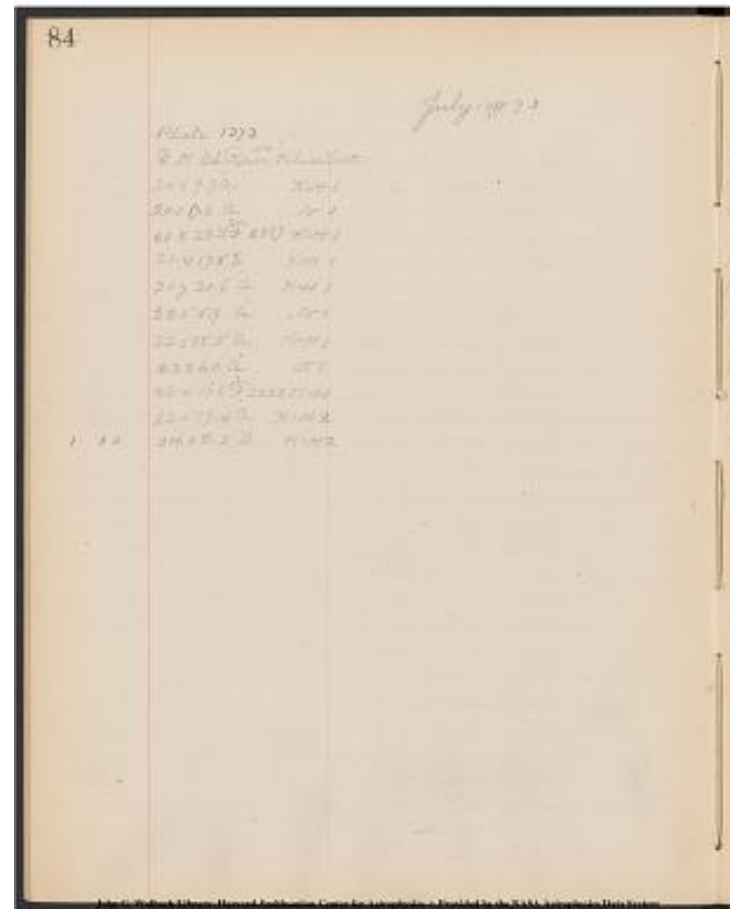
V|H|C|Rem. ^[[No.]]|Kline|Int.]

V	H	C	Rem.	^[[No.]]	Kline	Int.
20.4	9.9	A			K=H	1
20.1	17.6	A			N	1
20.8	23.2	F	2887		K=H	1
21.4	17.8	E			K=H	1
21.7	20.6	A			K=H	1
22.5	5.9	A			N	1
22.5	18.8	A			K=H	1
23.3	6.0	A			N	1
23.4	11.0	F	2888		K=H	1
23.5	19.4	A			K=H	2
24.0	8.2	I			K=H	2

[[left margin]]

1 00

[[left margin]]



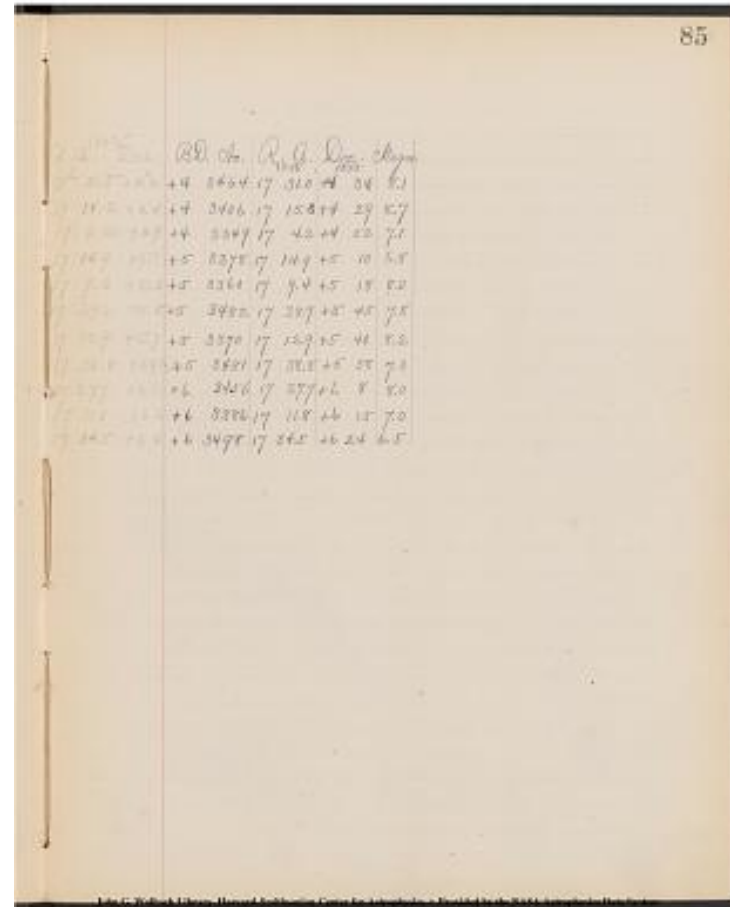
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

85

1855

[[6 columned table]]  
R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
 17<sup>h</sup> 31.0<sup>m</sup> +4.6° +4 3464 | 17  
 31.0 +4 ~~5~~ ~~5~~ 34 | 8.1 |  
 17 15.2 +4.4 +4 3406 | 17 15.3 +4 29 | 8.7 |  
 17 4.2 +4.9 +4 3349 | 17 4.2 +4 52 | 7.1 |  
 17 14.9 +5.1 +5 3378 | 17 14.9 +5 10 | 6.8 |  
 17 9.3 +5.3 +5 3360 | 17 9.4 +5 18 | 8.0 |  
 17 39.0 +5.8 +5 3482 | 17 38.9 +5 45 | 7.8 |  
 17 12.9 +5.7 +5 3370 | 17 12.9 +5 40 | 8.2 |  
 17 38.8 +5.9 (+) +5 3481 | 17 38.8 +5 58 | 7.3 |  
 17 27.7 +6.1 +6 3456 | 17 27.7 +6 8 | 8.0 |  
 17 11.8 +6.2 +6 3386 | 17 11.8 +6 15 | 7.0 |  
 17 34.5 +6.4 +6 3498 | 17 34.5 +6 24 | 6.5 |

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

86

R.A.  $18^{\text{h}}$   $2.0^{\text{m}}$  Dec.  $+1.7$

July 12 1893

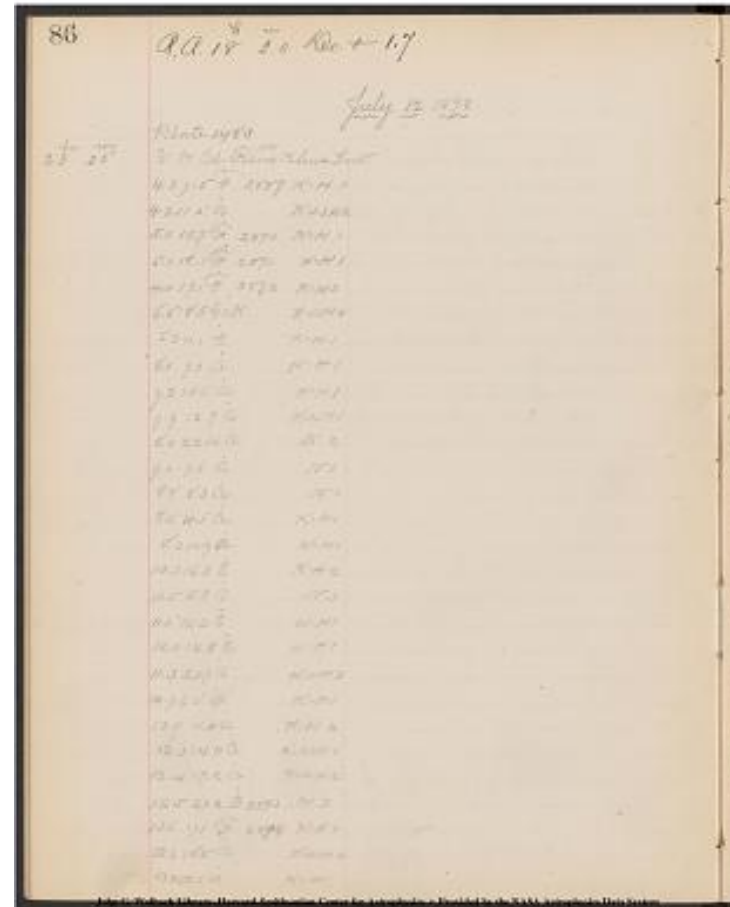
Plate 1483

$23^{\text{h}}$   $25^{\text{m}}$

[6 columned table]  
V|H|Cl.|Rem.^[[No.]]|Kline.|Int.]

4.3	7.5	F	2889	K=H	1
4.2	11.5	A		K=0.3H	2
5.0	15.9	F	2890	K=H	1
5.0	18.1	F	2891	K=H	1
4.0	19.1	F	2892	K=H	3
5.5	8.8	G3K		K=1.5H	4
5.3	11.1	C		K=H	1
8.0	7.0	A		K=H	1
7.3	10.5	A		K=H	1
7.9	12.9	A		K=0.5H	1
8.0	22.4	A		N	2
9.0	7.6	A		N	1
8.8	8.3	A		N	1
8.5	10.5	A		K=H	1
8.3	10.7	A		K=H	1
10.3	16.3	E		K=H	2
11.5	5.9	A		N	3
12.0	14.8	E		K=H	1
11.3	20.9	A		K=0.1H	3
12.7	6.5	A		K=H	1
13.0	11.0	A		K=H	2
12.3	14.3	A		K=0.2H	1
12.4	19.2	A		K=0.1H	2
12.5	21.2	B	2893	N	3
13.6	17.1	F	2894	K=H	1
13.6	18.5	A		K=0.1H	4
13.8	23.1	H		K=H	1

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A|Dec|BD. No.|R.A. 1855|Dec. 1855|Magn.|

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.	
18 8.4	-3.7	-3 4259	18 8.3	-3 39	6.6	
17 59.4	-3.3	-3 4237	17 59.3	-3 15	7.0	
17 54.9	-3.1	-3 4225	17 54.9	-3 9	6.5	
17 53.0	-3.7	-3 4217	17 52.8	-3 40	5.2	
18 13.8	-2.9	-2 4599	18 13.8	-2 56	3	
18 9.4	-3.1	-3 4263	18 9.3	-3 2	6.5	
18 17.5	-1.6	-1 3486	18 17.4	-1 39	6.5	
18 10.5	-2.1	-2 4588	18 10.5	-2 5	8.2	
18 5.7	-1.8	-1 3461	18 5.8	-1 45	7.3	
17 46.5	-1.6	-1 3416	17 46.6	-1 34	7.1	
18 16.4	-1.2	-1 3481	18 16.3	-1 12	7.6	
18 14.9	-1.3	-1 3476	18 10.6	-1 22	7.1	
18 10.5	-1.4	-1 3469	18 14.9	-1 16	7.6	
18 10.1	-1.5	-1 3468	18 10.2	-1 30	7.6	
17 58.7	-0.5	-0 3414	17 58.7	-0 27	6.5	
18 19.7	+0.1	+0 3936	18 19.8	+0 7	5.4	
18 7.0	+0.1	+0 3892	18 7.1	+0 9	7.5	
18 2.1	+0.4	+0 3865	18 2.1	+0 22	8.0	
17 49.5	+0.1	+0 3816	17 49.6	+0 6	6.2	
18 18.6	+0.7	+0 3931	18 18.7	+0 43	7.0	
18 9.7	+0.9	+0 3907	18 9.7	+0 31	7.9	
18 3.0	+0.5	+0 3870	18 3.0	+0 31	7.9	
17 52.9	+0.6	+0 3832	17 59.2	+0 38	7.1	
17 49.0	+0.7	+0 3813	17 <del>49.6</del>	<del>48.9</del>	+0 43	5.8
17 57.1	+1.2	+1 3576	17 57.2	+1 14	7.7	
17 54.4	+1.3	+1 3560	17 54.4	+1 19	4.5	
17 45.3	+1.3	+1 3528	17 45.3	+1 2	6.0	

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

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

88

July 12, 1893

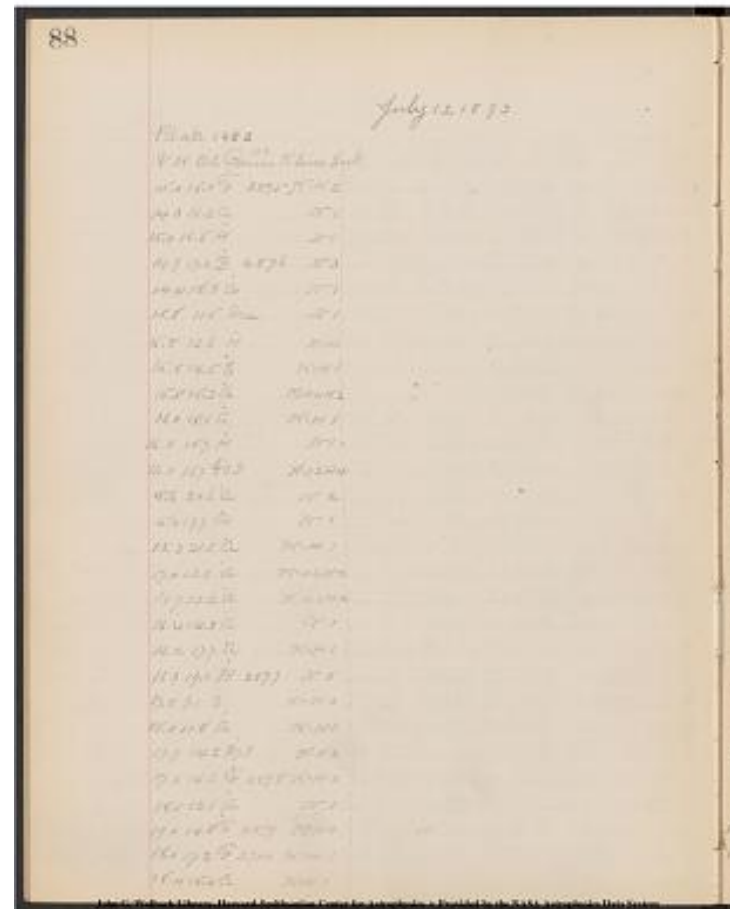
Plate 1483

[[6 columned table]]

V|H|Cl.|Rem. ^[[No.]]|Kline|Int.|

V	H	Cl.	Rem.	^[[No.]]	Kline	Int.
15.0	15.0	F		2895	K=H 2	
14.3	16.3	A			N 1	
15.0	16.5	H			N 1	
14.9	17.0	B		2896	N 3	
14.4	18.0	A			N 1	
15.8	11.5	Ma			N 1	
15.8	12.6	H			K=H 1	
15.8	14.5	E			K=H 1	
15.5	15.3	A			K=0.4H 2	
16.0	15.1	A			K=H 1	
16.0	15.7	H			N 1	
16.0	16.7	G3I			K=1.2H 4	
15.6	20.6	A			N 2	
15.8	19.7	A			N 1	
15.3	21.6	A			K=H 1	
17.0	13.0	A			K=0.2H 2	
16.7	13.2	A			K=0.2H 2	
16.4	14.8	A			N 1	
16.2	17.7	A			K=H 1	
16.9	19.1	B		2897	N 5	
17.8	9.1	G			K=H 3	
18.0	11.8	A			K=H 1	
17.7	14.2	G7I			K=H 2	
17.3	14.6	F		2898	K=H 3	
18.5	12.1	A			N 1	
19.0	14.8	F		2899	K=H 3	
18.0	17.2	F		2900	K=H 1	
18.4	15.4	A			K=H 1	

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

Ra. Dec. BD. No. R.A. 1855 Dec. 1855 Magn.

Ra.	Dec.	BD.	No.	R.A.	Dec.	BD.	No.	R.A.	Dec.	BD.	No.	R.A.	Dec.	BD.	No.	R.A.	Dec.	BD.	No.
18	58.7	+1.6	+1	3589	18	58.7	+1.6	+1	3589	18	58.7	+1.6	+1	3589	18	58.7	+1.6	+1	3589
17	58.4	+2.0			17	58.4	+2.0			17	58.4	+2.0			17	58.4	+2.0		
17	57.3	+1.9	+1	3578	17	57.3	+1.9	+1	3578	17	57.3	+1.9	+1	3578	17	57.3	+1.9	+1	3578
17	55.5	+1.6	+1	3566	17	55.5	+1.6	+1	3566	17	55.5	+1.6	+1	3566	17	55.5	+1.6	+1	3566
18	8.9	+2.3	+2	3547	18	8.9	+2.3	+2	3547	18	8.9	+2.3	+2	3547	18	8.9	+2.3	+2	3547
18	6.5	+2.3	+2	3537	18	6.5	+2.3	+2	3537	18	6.5	+2.3	+2	3537	18	6.5	+2.3	+2	3537
18	2.9	+2.3	+2	3514	18	2.9	+2.3	+2	3514	18	2.9	+2.3	+2	3514	18	2.9	+2.3	+2	3514
18	0.9	+2.2	+2	3498	18	0.9	+2.2	+2	3498	18	0.9	+2.2	+2	3498	18	0.9	+2.2	+2	3498
18	1.4	+2.4	+2	3503	18	1.4	+2.4	+2	3503	18	1.4	+2.4	+2	3503	18	1.4	+2.4	+2	3503
18	0.1	+2.5	+2	3493	18	0.1	+2.5	+2	3493	18	0.1	+2.5	+2	3493	18	0.1	+2.5	+2	3493
17	58.1	+2.5	+2	3482	17	58.1	+2.5	+2	3482	17	58.1	+2.5	+2	3482	17	58.1	+2.5	+2	3482
17	50.5	+2.3	+2	3436	17	50.5	+2.3	+2	3436	17	50.5	+2.3	+2	3436	17	50.5	+2.3	+2	3436
17	52.1	+2.3	+2	3447	17	52.1	+2.3	+2	3447	17	52.1	+2.3	+2	3447	17	52.1	+2.3	+2	3447
17	48.3	+2.1	+2	3427	17	48.3	+2.1	+2	3427	17	48.3	+2.1	+2	3427	17	48.3	+2.1	+2	3427
18	5.7	+2.9	+2	3532	18	5.7	+2.9	+2	3532	18	5.7	+2.9	+2	3532	18	5.7	+2.9	+2	3532
18	5.5	+2.8	+2	3528	18	5.5	+2.8	+2	3528	18	5.5	+2.8	+2	3528	18	5.5	+2.8	+2	3528
18	2.2	+2.6	+2	3510	18	2.2	+2.6	+2	3510	18	2.2	+2.6	+2	3510	18	2.2	+2.6	+2	3510
17	56.1	+2.5	+2	3473	17	56.1	+2.5	+2	3473	17	56.1	+2.5	+2	3473	17	56.1	+2.5	+2	3473
17	53.5	+2.9	+2	34586	17	53.5	+2.9	+2	34586	17	53.5	+2.9	+2	34586	17	53.5	+2.9	+2	34586
17	53.5	+2.9	+2	<del>3459</del>	17	53.5	+2.9	+2	<del>3459</del>	17	53.5	+2.9	+2	<del>3459</del>	17	53.5	+2.9	+2	<del>3459</del>
17	53.4	<del>[[/strickethrough]]</del>	<del>[[/strickethrough]]</del>	<del>[[/strickethrough]]</del>	17	53.4	<del>[[/strickethrough]]</del>	<del>[[/strickethrough]]</del>	<del>[[/strickethrough]]</del>	17	53.4	<del>[[/strickethrough]]</del>	<del>[[/strickethrough]]</del>	<del>[[/strickethrough]]</del>	17	53.4	<del>[[/strickethrough]]</del>	<del>[[/strickethrough]]</del>	<del>[[/strickethrough]]</del>
17	53.5	+2.9	+2	3680	17	53.5	+2.9	+2	3680	17	53.5	+2.9	+2	3680	17	53.5	+2.9	+2	3680
18	13.6	+3.3	+3	3680	18	13.6	+3.3	+3	3680	18	13.6	+3.3	+3	3680	18	13.6	+3.3	+3	3680
18	8.2	+3.5	+3	3647	18	8.2	+3.5	+3	3647	18	8.2	+3.5	+3	3647	18	8.2	+3.5	+3	3647
18	3.5	+3.3	+3	3620	18	3.5	+3.3	+3	3620	18	3.5	+3.3	+3	3620	18	3.5	+3.3	+3	3620
18	2.6	+3.1	+3	3613	18	2.6	+3.1	+3	3613	18	2.6	+3.1	+3	3613	18	2.6	+3.1	+3	3613
18	7.6	+3.6	+3	3643	18	7.6	+3.6	+3	3643	18	7.6	+3.6	+3	3643	18	7.6	+3.6	+3	3643
18	2.5	+3.9	+3	3610	18	2.5	+3.9	+3	3610	18	2.5	+3.9	+3	3610	18	2.5	+3.9	+3	3610
18	57.2	+3.5	+3	3578	18	57.2	+3.5	+3	3578	18	57.2	+3.5	+3	3578	18	57.2	+3.5	+3	3578
18	0.6	+3.7	+3	3597	18	0.6	+3.7	+3	3597	18	0.6	+3.7	+3	3597	18	0.6	+3.7	+3	3597



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



90

July 12, 1893

Plate 1483

[[6 columned table]]

V|H.|Cl.|Rem. ^[[No.]]|Kline|Int.

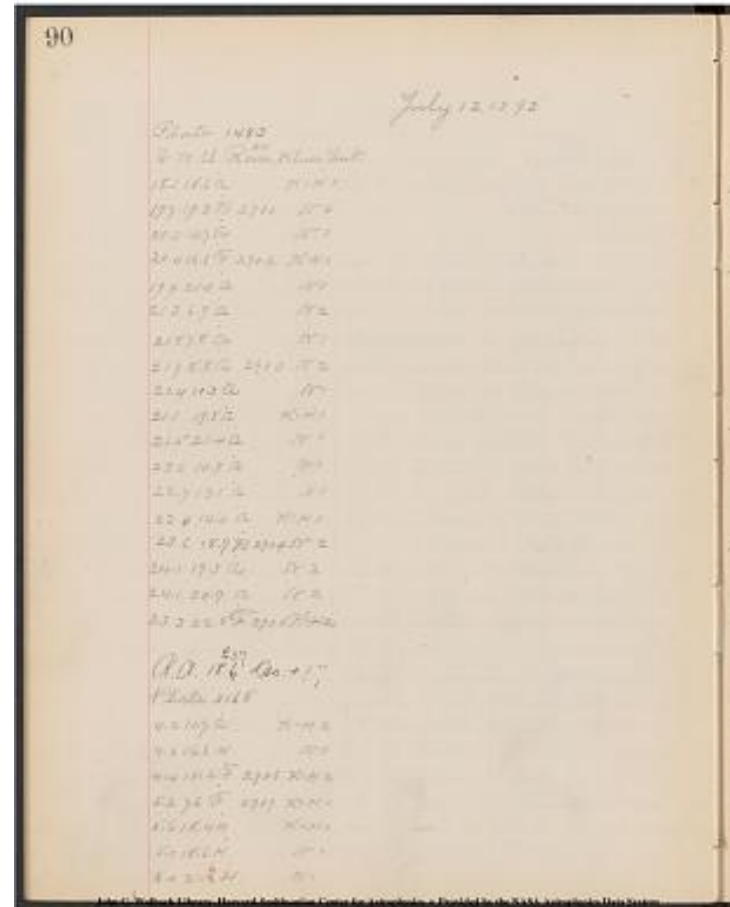
18.1	18.6	A	K=H 1
19.7	19.3	B	2901 N 4
20.3	14.7	A	N 1
20.4	16.6	F	2902 K=H 1
19.9	21.0	A	N 1
21.3	6.9	A	N 2
21.8	7.8	A	N 1
21.9	8.8	A	2903 N 2
21.4	10.3	A	N 1
21.1	19.8	A	K=H 1
21.5	21.4	A	N 1
22.6	10.9	A	N 1
22.7	13.1	A	N 1
22.4	14.0	A	K=H 1
23.6	18.9	B	2904 N 2
24.1	19.3	A	N 2
24.1	20.9	A	N 2
23.3	22.8	F	2905 K=H 2

R.A. 18.~~[[/strickethrough]]~~6~~[[/strickethrough]]~~37<sup>h</sup> Dec. +1.7

Plate 3168

[[6 columned table]]

4.2	11.7	A	K=H 2
4.6	16.6	H	N 1
4.4	18.2	F	2906 K=H 2
5.2	7.6	F	2907 K=H 1
5.6	18.4	H	K=H 1
5.0	18.6	H	N 1
6.0	21. <del>[[/strickethrough]]</del> 1 <del>[[/strickethrough]]</del> 6	H	N 1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.|

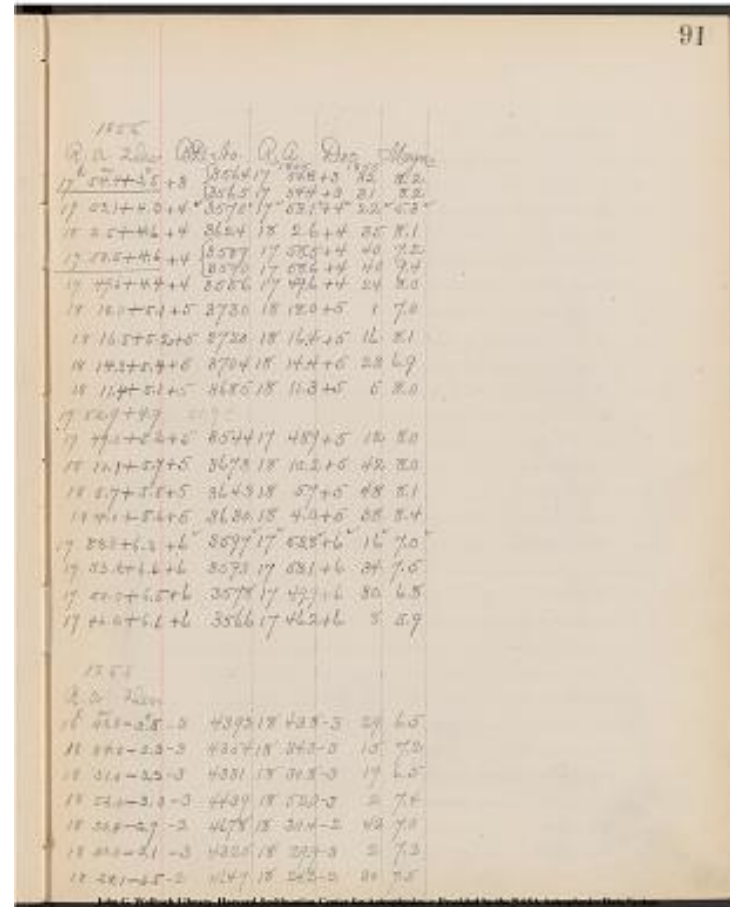
R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
17 <sup>h</sup> 54 <sup>m</sup> 4 <sup>s</sup>	+3 <sup>°</sup> 54'	3564	17 54.3	+3 32	8.2
+3 3565	17 54.4	+3 31	8.2		
17 53.1	+4.3	+4 3570	17 53.1	+4 22	5.3
18 2.5	+4.6	+4 3624	18 2.6	+4 35	8.1
17 58.5	+4.6	+4 3589	17 58.5	+4 40	7.2
+4 3590	17 58.6	+4 40	9.4		
17 49.6	+4.4	+4 3556	17 49.6	+4 24	8.0
18 18.0	+5.1	+5 3730	18 18.0	+5 17	7.0
18 16.5	+5.2	+5 3720	18 16.4	+5 16	8.1
18 14.3	+5.4	+5 3704	18 14.4	+5 23	6.9
18 11.4	+5.1	+5 3685	18 11.3	+5 5	8.0
17 52.9	+4.9	51.9?			
17 49.0	+5.2	+5 3544	17 48.9	+5 12	8.0
18 10.1	+5.7	+5 3673	18 10.2	+5 42	8.0
18 5.7	+5.8	+5 3643	18 5.7	+5 48	8.1
18 4.0	+5.6	+5 3630	18 4.0	+5 38	8.4
17 53.8	+6.3	+6 3597	17 53.8	+6 16	7.0
17 53.2	+6.6	+6 3593	17 53.1	+6 34	7.5
17 50.0	+6.5	+6 3578	17 49.9	+6 30	6.8
17 46.2	+6.1	+6 3566	17 46.2	+6 8	5.9

1855

[[6 columned table]]

R.A|Dec.| | | |

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
18 <sup>h</sup> 43 <sup>m</sup> 8 <sup>s</sup>	-3 <sup>°</sup> 53'	4392	18 43.8	-3 29	6.5
18 34.0	-3.3	-3 4354	18 34.0	-3 15	7.2
18 31.0	-3.3	-3 4331	18 30.8	-3 19	6.5
18 52.0	-3.0	-3 4439	18 52.0	-3 2	7.4
18 30.4	-2.7	-2 4678	18 30.4	-2 42	7.0
18 30.0	-3.1	-3 4325	18 29.9	-3 2	7.2
18 24.1	-2.5	-2 4647	18 24.2	-2 30	7.5



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

July 12, 1893

Plate 3168

[[6 columned table]]

V|H|Cl.|Rem.^|[No.]]|Kline|Int.|

7.0	9.2	A		N	3
6.2	9.6	F	2908	K=H	1
6.9	17.7	H		N	1
9.0	9.3	F	2909	K=H	1
8.8	12.8	A		N	1
8.7	14.2	A		K=0.1H	3
8.1	16.1	A		N	2
8.4	18.2	F	2910	K=H	2
7.9	20.8	A		N	1
8.7	21.4	A		N	3
9.9	15.0	A		N	2
10.0	18.5	A		N	3
9.7	21.7	A		K=H	2
10.3	11.4	F	2911	K=H	1
10.2	14.6	F	2912	K=H	1
10.2	15.4	A		K=H	1
10.9	17.5	H		N	1
11.0	23.8	A		N	3
11.0	23.5	A		N	1
11.8	5.7	H		N	1
11.0	15.0	H		N	1
11.7	16.6	H		N	1

[[margin]]no red ink dot on plate^[[?]]12.9|18.2|A| |N|2|

12.8|10.0|F|2913|K=H|2|

12.4|10.7|A| |K=H|1|

12.2|12.6|A| |N|3|

12.5|18.8|F|2914|K=H|2|

13.0|22.4|A| |K=H|1|

92

July 12, 1893

Plate 3168

no red ink dot on plate

7.0	9.2	A		N	3
6.2	9.6	F	2908	K=H	1
6.9	17.7	H		N	1
9.0	9.3	F	2909	K=H	1
8.8	12.8	A		N	1
8.7	14.2	A		K=0.1H	3
8.1	16.1	A		N	2
8.4	18.2	F	2910	K=H	2
7.9	20.8	A		N	1
8.7	21.4	A		N	3
9.9	15.0	A		N	2
10.0	18.5	A		N	3
9.7	21.7	A		K=H	2
10.3	11.4	F	2911	K=H	1
10.2	14.6	F	2912	K=H	1
10.2	15.4	A		K=H	1
10.9	17.5	H		N	1
11.0	23.8	A		N	3
11.0	23.5	A		N	1
11.8	5.7	H		N	1
11.0	15.0	H		N	1
11.7	16.6	H		N	1

no red ink dot on plate

12.9|18.2|A| |N|2|

12.8|10.0|F|2913|K=H|2|

12.4|10.7|A| |K=H|1|

12.2|12.6|A| |N|3|

12.5|18.8|F|2914|K=H|2|

13.0|22.4|A| |K=H|1|

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

93

1855

[[6 columned table]]

R.A. Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

18 48.9	-1.9	-1	3602	18 48.9	-1 58	6.5
18 48.0	-2.5	-2	4784	18 48.0	-2 29	8.0
18 31.6	-2.1	-2	4686	18 31.7	-2 4	7.5
18 48.9	-1.0	-0	3599	18 48.8	-0 59	8.1
18 41.7	-1.1	-1	3570	18 41.8	-1 8	8.0
18 39.0	-0.1	-1	3559	18 39.0	-1 7	6.1
18 35.0	-1.4	-1	3544	18 35.0	-1 26	8.2
18 30.7	-1.2	-1	3529	18 30.8	-1 14	6.7
18 25.6	-1.6	-1	3508	18 25.5	-1 33	8.2
18 24.5	-1.1	-1	3504	18 24.5	-1 6	6.7
18 37.5	-0.5	-0	3543	18 37.5	-0 31	7.2
18 30.1	-0.4	-0	3521	18 30.2	-0 26	5.5
18 23.9	-0.6	-0	3501	18 23.9	-0 35	7.0
18 44.7	-0.4	-0	3578	18 44.7	-0 24	8.1
18 38.2	-0.4	-0	3546	18 38.3	-0 25	8.3
18 36.5	-0.4	-0	3540	18 36.5	-0 21	8.0
18 32.4	+0.1	+0				
18 19.8	+0.1	+0	3936	18 19.8	+0 7	5.4
18 20.5	+0.1	+0	3940	18 20.4	+0 7	8.1
18 55.9	+0.4	+0	4088	18 55.9	+0 22	7.5
18 37.1	+0.0	+0	4005	18 37.2	+0 1	8.4
18 34.1	+0.4	+0	3993	18 34.0	+0 26	7.8

18 47.5	+0.9	+0	4051	18 47.5	+0 57	7.6
18 46.0	+0.7	+0	4045	18 46.1	+0 42	7.8
18 42.2	+0.7	+0	4027	18 42.2	+0 41	6.5
18 29.7	+0.8	+0	3975	18 29.8	+0 50	6.8
18 22.5	+1.1	+1	3689	18 22.6	+1 5	8.0

1855

R.A.	Dec.	BD. No.	R.A.	Dec.	Magn.
18 48.9	-1.9	-1	3602	18 48.9	-1 58 6.5
18 48.0	-2.5	-2	4784	18 48.0	-2 29 8.0
18 31.6	-2.1	-2	4686	18 31.7	-2 4 7.5
18 48.9	-1.0	-0	3599	18 48.8	-0 59 8.1
18 41.7	-1.1	-1	3570	18 41.8	-1 8 8.0
18 39.0	-0.1	-1	3559	18 39.0	-1 7 6.1
18 35.0	-1.4	-1	3544	18 35.0	-1 26 8.2
18 30.7	-1.2	-1	3529	18 30.8	-1 14 6.7
18 25.6	-1.6	-1	3508	18 25.5	-1 33 8.2
18 24.5	-1.1	-1	3504	18 24.5	-1 6 6.7
18 37.5	-0.5	-0	3543	18 37.5	-0 31 7.2
18 30.1	-0.4	-0	3521	18 30.2	-0 26 5.5
18 23.9	-0.6	-0	3501	18 23.9	-0 35 7.0
18 44.7	-0.4	-0	3578	18 44.7	-0 24 8.1
18 38.2	-0.4	-0	3546	18 38.3	-0 25 8.3
18 36.5	-0.4	-0	3540	18 36.5	-0 21 8.0
18 32.4	+0.1	+0			
18 19.8	+0.1	+0	3936	18 19.8	+0 7 5.4
18 20.5	+0.1	+0	3940	18 20.4	+0 7 8.1
18 55.9	+0.4	+0	4088	18 55.9	+0 22 7.5
18 37.1	+0.0	+0	4005	18 37.2	+0 1 8.4
18 34.1	+0.4	+0	3993	18 34.0	+0 26 7.8
18 47.5	+0.9	+0	4051	18 47.5	+0 57 7.6
18 46.0	+0.7	+0	4045	18 46.1	+0 42 7.8
18 42.2	+0.7	+0	4027	18 42.2	+0 41 6.5
18 29.7	+0.8	+0	3975	18 29.8	+0 50 6.8
18 22.5	+1.1	+1	3689	18 22.6	+1 5 8.0

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

94

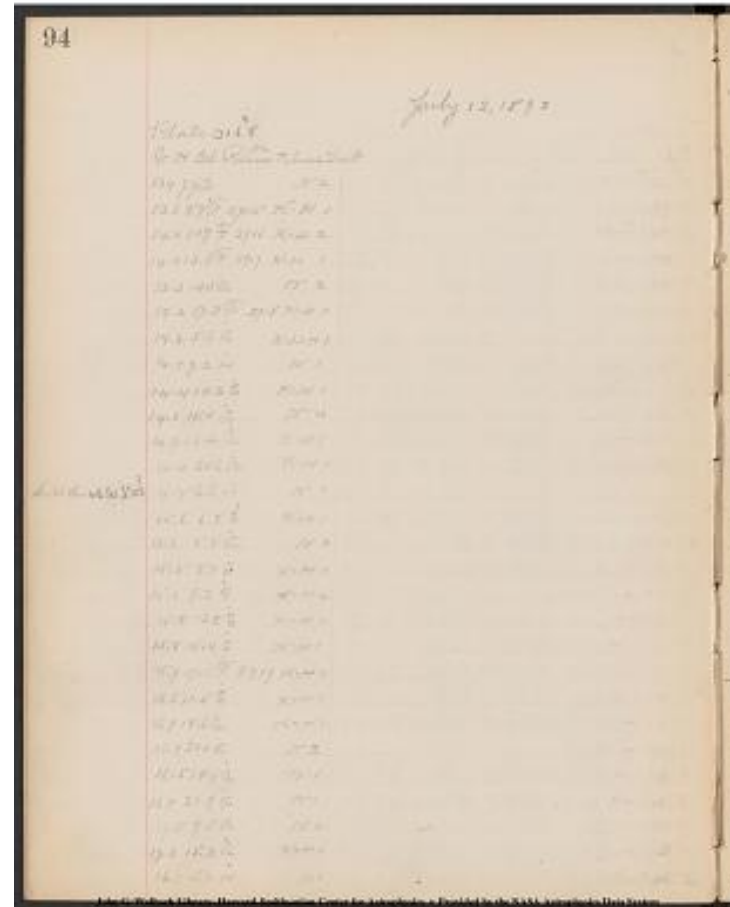
July 12, 1893

Plate 3168

[[6 columned table]]

[V|H|Cl.|Rem.^|[No]]|Kline|Int.]

V	H	Cl.	Rem.	^	[No]	Kline	Int.
13.4	7.7	A			N	2	
13.6	8.9	F			2915	K=H	1
14.0	10.9	F			2916	K=H	2
14.0	13.6	F			2917	K=H	1
13.3	14.5	A			N	2	
13.2	17.3	F			2918	K=H	1
14.2	5.6	A			K=0.3H	3	
14.1	7.2	H			N	1	
14.4	10.2	E			K=H	1	
14.6	15.0	A			N	4	
14.9	16.4	A			K=H	1	
14.4	20.6	A			K=H	1	
should this not be V. 15.8? 14.8 6.6 H  N 1							
15.6	6.8	E			K=H	1	
15.6	8.8	A			N	3	
15.5	8.9	E			K=H	1	
15.5	9.2	G			K=H	2	
15.8	13.8	E			K=H	1	
15.8	15.4	E			K=H	1	
15.9	17.1	F			2919	K=H	1
16.6	11.5	E			K=H	1	
16.9	18.6	A			K=H	1	
16.9	20.0	A			N	2	
16.5	18.7	A			N	1	
16.9	21.9	A			N	1	
17.5	9.5	A			N	2	
17.3	15.3	A			K=H	1	
16.7	15.0	H			N	1	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

95

[[table]]

R.A. 1855] | Dec. | BD. | No. | R.A. | 1855 | Dec. 1855. | | Magn. |

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

18|52.0|+1.2|+1|3843|18|52.0|+1|13|8.2| N.B. Magn. 8.2 Intensity 2

18|49.7|+1.3|+1|3827|18|49.7|+1|19|7.7|

18|45.7|+1.6|+1|3803|18|45.8|+1|35|7.8|

18|40.4|+1.6|+1|3783|18|40.3|+1|37|8.1|

18|38.5|+1.2|+1|3773|18|38.6|+1|10|7.7|

18|32.9|+1.2|+1|3743|18|32.7|+1|10|7.8|

18|56.1|+1.6|+1|386|~~18|56.2|+1|36|6.0~~

18|53.2|+1.5|+1|3848|18|53.1|+1|34|9.5|

18|47.1|+1.7|+1|3849 db|18|53.1|+1|33|8.1|

18|37.5|+1.9|+1|3766|18|37.5|+1|55|5.0|

18|34.5|+2.1|+2|3655|18|34.6|+2|4|8.2|

18|26.2|+1.8|+1|3712|18|26.2|+1|48|7.6|

18|54.0|+2.3|+2|3753|18|53.9|+2|17|7.3|

18|50.0|+2.3|+2|3738|18|50.0|+2|21|5.8|

18|49.7|+2.2|+2|3737|18|49.7|+2|16|8.2|

18|49.1|+2.3|+2|3730|18|49.1|+2|17|7.0|

18|39.9|+2.4|+2|3683|18|39.9|+2|27|8.7|

18|36.6|+2.5|+2|3668|18|36.6|+2|29|7.8|

18|33.4|+2.6|+2|3646|18|33.2|+2|34|7.9|

18|44.5|+2.9|+2|3648|18|33.3|+2|34|9.4|

18|30.2|+3.1|3699|18|44.5|+2|52|7.8|

18|27.2|+3.0|+3|3747|18|27.3|+3|2|7.5|

18|29.9|+2.8|+2|3626|18|29.9|+2|52|8.0|

18|23.5|+3.1|+3|3729|18|23.6|+3|4|7.8|

18|48.5|+3.2|+3|3836|18|48.5|+3|16|7.1|

18|36.8|+3.2|+3|db|

18|36.3|+3.0|+~~3~~|32|3666|18|36.3|+2|58|8.4

95

R.A.	Dec.	BD.	No.	R.A.	Dec.	Magn.
18 52.0	+1.2	+1	3843	18 52.0	+1 13 8.2	N.B. Magn. 8.2 Intensity 2
18 49.7	+1.3	+1	3827	18 49.7	+1 19 7.7	
18 45.7	+1.6	+1	3803	18 45.8	+1 35 7.8	
18 40.4	+1.6	+1	3783	18 40.3	+1 37 8.1	
18 38.5	+1.2	+1	3773	18 38.6	+1 10 7.7	
18 32.9	+1.2	+1	3743	18 32.7	+1 10 7.8	
18 56.1	+1.6	+1	386	<del>18 56.2</del>	<del>+1 36 6.0</del>	
18 53.2	+1.5	+1	3848	18 53.1	+1 34 9.5	
18 47.1	+1.7	+1	3849 db	18 53.1	+1 33 8.1	
18 37.5	+1.9	+1	3766	18 37.5	+1 55 5.0	
18 34.5	+2.1	+2	3655	18 34.6	+2 4 8.2	
18 26.2	+1.8	+1	3712	18 26.2	+1 48 7.6	
18 54.0	+2.3	+2	3753	18 53.9	+2 17 7.3	
18 50.0	+2.3	+2	3738	18 50.0	+2 21 5.8	
18 49.7	+2.2	+2	3737	18 49.7	+2 16 8.2	
18 49.1	+2.3	+2	3730	18 49.1	+2 17 7.0	
18 39.9	+2.4	+2	3683	18 39.9	+2 27 8.7	
18 36.6	+2.5	+2	3668	18 36.6	+2 29 7.8	
18 33.4	+2.6	+2	3646	18 33.2	+2 34 7.9	
18 44.5	+2.9	+2	3648	18 33.3	+2 34 9.4	
18 30.2	+3.1		3699	18 44.5	+2 52 7.8	
18 27.2	+3.0	+3	3747	18 27.3	+3 2 7.5	
18 29.9	+2.8	+2	3626	18 29.9	+2 52 8.0	
18 23.5	+3.1	+3	3729	18 23.6	+3 4 7.8	
18 48.5	+3.2	+3	3836	18 48.5	+3 16 7.1	
18 36.8	+3.2	+3	db			
18 36.3	+3.0	+ <del>3</del>	32 3666	18 36.3	+2 58 8.4	

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

96

July 12, 1893

Plate 3168

[[5 Columned Table]]

[V|H|Cl.|Rem. No.|Kline|Int.]

V	H	Cl.	Rem. No.	Kline	Int.
18.0	15.6	a		K=H2	
17.6	16.2	a		K=H1	
18.0	18.9	g		K=H2	
17.8	21.3	a		N3	
18.0	23.5	H		N2	
19.0	9.1	F	2920	K=H2	
18.9	9.3	a		K=0.2H4	
18.7	11.1	a		K=H1	
19.0	13.4	f		K=H2	
18.7	16.3	a		N1	
18.2	20.1	H		N1	
[[where is this star?]] 18.5 21.8 H  N1					
18.7	22.3	a		N3	
[[Magn?]] 19.8 7.4 a  N2					
19.6	16.7	a		K=H1	
19.6	22.0	a		N2	
20.8	14.3	a		N1	
21.0	17.5	g		K=H2	
20.2	18.0	H		K=H2	
20.4	19.1	H		N2	
20.4	19.5	a		N3	
21.5	14.7	a		K=0.2H3	
[[Magn?]] 22.2 18.4 a  N3					
21.8	20.5	a		N1	
22.1	21.8	a		K=H1	
23.0	8.2	F	2921	K=H2	
23.7	9.7	G5H		K=H2	
23.8	19.0	F	2922	K=H3	
23.0	23.4	a		N3	

96

July 12, 1893

Plate 3168

V	H	Cl.	Rem. No.	Kline	Int.
18.0	15.6	a		K=H2	
17.6	16.2	a		K=H1	
18.0	18.9	g		K=H2	
17.8	21.3	a		N3	
18.0	23.5	H		N2	
19.0	9.1	F	2920	K=H2	
18.9	9.3	a		K=0.2H4	
18.7	11.1	a		K=H1	
19.0	13.4	f		K=H2	
18.7	16.3	a		N1	
18.2	20.1	H		N1	
[[where is this star?]] 18.5 21.8 H  N1					
18.7	22.3	a		N3	
[[Magn?]] 19.8 7.4 a  N2					
19.6	16.7	a		K=H1	
19.6	22.0	a		N2	
20.8	14.3	a		N1	
21.0	17.5	g		K=H2	
20.2	18.0	H		K=H2	
20.4	19.1	H		N2	
20.4	19.5	a		N3	
21.5	14.7	a		K=0.2H3	
[[Magn?]] 22.2 18.4 a  N3					
21.8	20.5	a		N1	
22.1	21.8	a		K=H1	
23.0	8.2	F	2921	K=H2	
23.7	9.7	G5H		K=H2	
23.8	19.0	F	2922	K=H3	
23.0	23.4	a		N3	

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



97

1855

[[6 columned table]]

R.A|Dec.|BD. No.|R.A 1855|Dec. 1855|Magn.|

18^[[h]] 36.1^[[m]]+3.6^[[o]]+3 3784|18^[[1855]] 36.2|+3^[[1855]]  
39.7.9|

18 35.1|+3.3|+3 3778|18 35.2|+3 21|8.5|  
18 29.7|+3.7|+3 3755|18 29.7|+3 41|7.6|  
18 25.0|+3.6|+3 3737|18 24.9|+3 34|6.7|  
18 20.6|+3.6|+3 3716|18 20.6|+3 40|6.7|  
18 49.5|+41|+4 3919|18 49.4|+4 4|7.3|  
18 49.0|+4.0|db|  
18 45.5|+3.9|+3 3821|18 45.5|+3 53|8.1|  
18 41.0|+4.1|+4 3884|18 40.9|+4 5|6.5|  
18 34.4|+3.9|+3 3777|18 34.9|+3 54|8.1|  
18 27.1|+3.7|+3 3746|18 27.2|+3 44|8.1|

18 22.9|+3.9|+3 3727|18 22.9|+3 58|7.0|  
18 52.9|+4.4|+4 3939|18 52.8|+4 25|8.3|  
18 34.2|+4.4|+4 3838|18 34.2|+4 25|7.3|  
18 23.5|+4.4|+4 3774|18 23.5|+4 25|7.2|  
18 39.0|+5.0|+5 3948|18 39.2|+5 0|8.0|  
18 32.5|+5.1|+5 3891|18 32.5|+5 8|6.7|  
18 31.5|+4.7|+4 3813|18 31.5|+4 44|7.1|  
18 29.4|+4.8|+4 3806|18 29.3|+4 50|7.0|  
[[underlined]]18 28.5+4.8+4[[/underlined]]  
[[bracket]]3801|18 28.5|+4 50|7.0|  
[[bracket]]3802|18 28.5|+4 50|9.1|  
18 38.2|+5.3|+5 3941|18 38.3|+5 21|6.3|  
18 30.7|+5.8|+5 3846|18 30.7|+5 46|6.8|  
18 26.5|+5.5|+5 3786|18 26.5|+5 30|8.2|  
18 23.9|+5.7|+5 3772|18 23.9|+5 39|7.8|  
18 51.2|+6.1|+6 3989|18 51.3|+6 3|6.8|  
18 48.5|+6.4|+6 3978|18 48.4|+6 27|5.8|  
18 29.6|+6.6|+6 3855|18 29.6|+6 33|5.8|  
18 21.0|+6.1|+6 3790|18 20.9|+6 7|6.5|

97

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



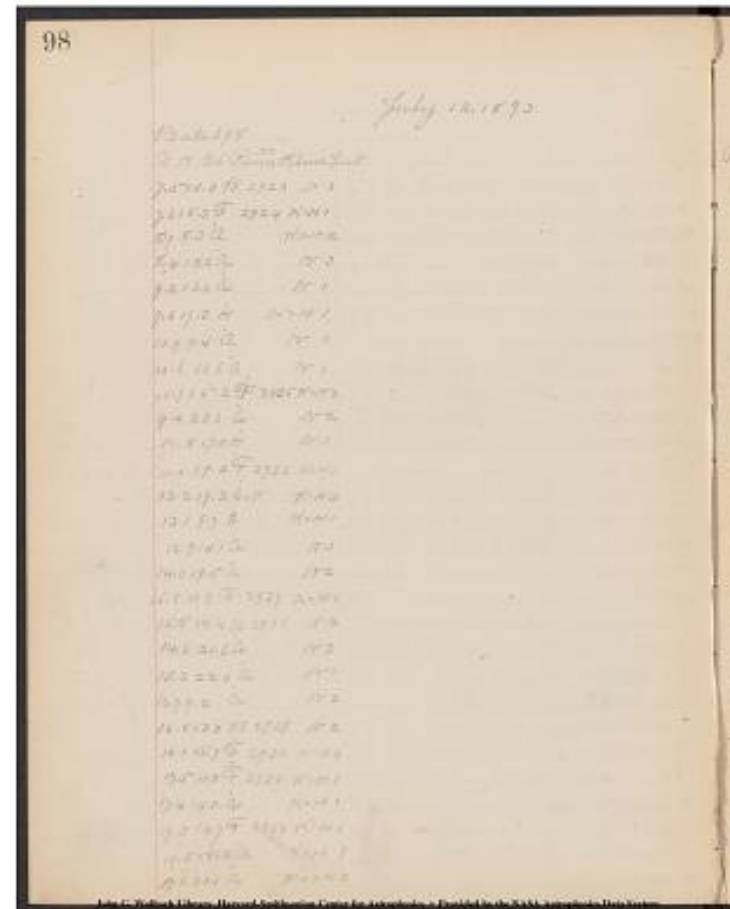
98

July 12, 1893

Plate 698

[[table]]  
[V	H	Cl.	Rem.^No.	K line	Int.]
7.5|10.3|B|2923|N|3|  
7.6|18.3|F|2924|K=H|1|  
8.9|8.3|A| |K=0.1H|2|  
8.4|18.2|A| |N|3|  
9.2|13.6|A| |N|1|  
9.6|19.3|H| |K=H|1|  
10.9|9.4|A| |N|1|  
10.6|10.6|A| |N|1|  
10.7|15.2|F|2925|K=H|3|  
8.4|23.6|A| |N|2|  
10.8|19.0|H| |N|1|  
11.0|19.2|F|2926|K=H|1|  
12.2|19.2|G5K| |K=H|3|  
13.1|9.9|E| |K=H|1|  
13.9|14.1|A| |N|3|  
14.0|19.5|A| |N|2|  
15.8|10.9|F|2927|K=H|1|  
15.8|14.4|B|2928|N|2|  
14.6|21.6|A| |N|3|  
15.3|22.4|A| |N|1|  
16.7|9.2|A| |N|2|  
16.2|13.3|B|2929|N|2|  
16.1|15.7|F|2930|K=H|4|  
17.5|11.8|F|2931|K=H|1|  
17.4|14.3|A| |K=H|1|  
19.3|14.7|F|2932|K=H|1|  
19.5|18.2|A| |K=H|1|  
19.6|20.1|A| |K=0.3H|3|

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A. Dec. BD. No. R.A. Dec. Magn.

R.A.	Dec.	BD.	No.	R.A.	Dec.	Magn.
19 29.2	-1.6	-1	3782	19 29.2	-1 36	4.2
19 13.0	-1.6	-1	3715	19 12.9	-1 34	7.0
19 33.2	-0.9	-0	3813	19 33.3	-0 57	5.8
19 13.2	-1.2	-1	3716	19 13.1	-1 9	5.3
19 22.9	-0.8	-0	3762	19 22.6	-0 45	7.2
19 14.9	-0.5	-0	3725	19 14.9	-0 33	5.0
19 30.9	+0.0	+0	4265	19 <del>30.9</del>	<del>31.0</del>	+0
19 28.5	-0.1	-0	3789	19 28.6	-0 4	7.2
19 19.0	+0.1	+0	4206	19 19.1	+0 2	5.0
19 2.4	-0.7	-0	3662	19 2.4	-0 39	7.0
19 11.4	+0.1	+0	4170	19 11.4	+0 5	7.0
19 11.0	+0.2	+0	4166	19 11.1	+0 10	7.0
19 11.0	+0.8	+0	4168	19 11.1	+0 50	5.0
19 30.5	+1.2	+1	4050	19 30.5	+1 11	7.6
19 21.6	+1.7	+1	4010	19 21.7	+1 40	6.3
19 10.5	+1.8	+1	3960	19 10.5	+1 47	6.5
19 28.1	+2.6	+2	3932	19 28.1	+2 36	7.2
19 21.1	+2.7	+2	3892	19 21.1	+2 38	7.0
19 6.4	+2.1	+2	3824	19 6.4	+2 3	5.6
19 4.4	+2.4	+2				
19 31.5	+3.1	+3	4097	19 31.6	+3 3	7.0
<u>19 23.1</u>	<u>+3.1</u>	<u>+3</u>	<u>4044</u>	<u>19 23.3</u>	<u>+3</u>	
<del>8</del>	<del>7.0</del>	<del>+3</del>	<del>19 23.4</del>	<del>+3</del>	<del>9</del>	<del>9.5</del>
19 18.2	+2.8	+2	3879	19 18.2	+2 50	3.2
19 26.4	+3.4	+3	4065	19 26.4	+3 28	7.4
19 21.5	+3.4	+3	4033	19 21.4	+3 25	8.1
19 20.5	+4.4	+4	4114	19 20.5	+4 26	6.7
19 13.1	+4.5	+4	4071	19 13.1	+4 31	6.8
19 9.4	+4.6	+4	4045	19 9.3	+4 35	5.7

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

100

July 12 1893

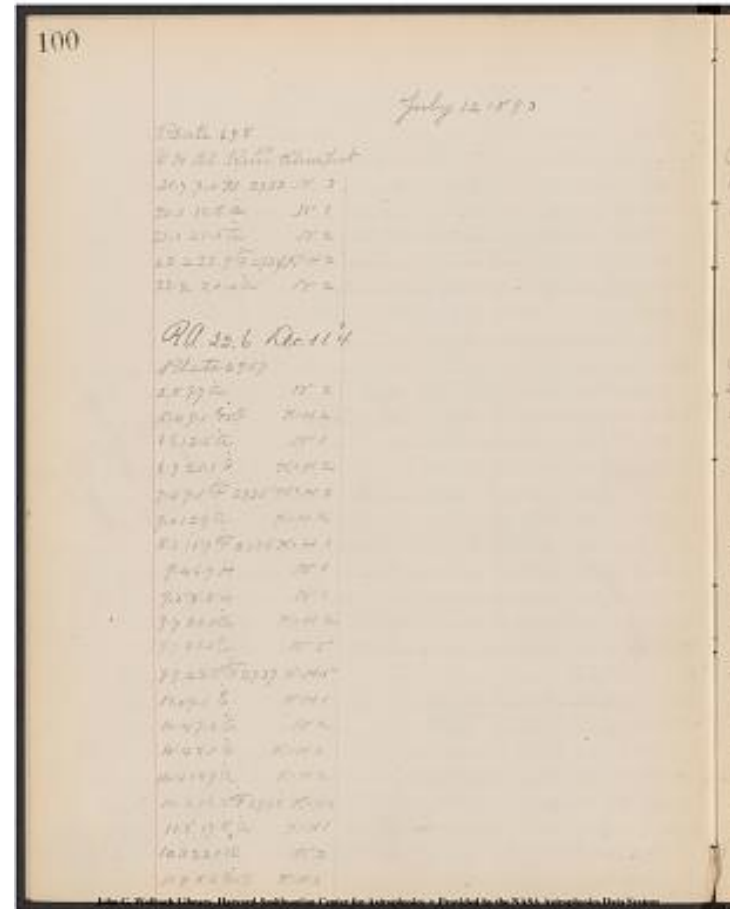
Plate 698

[[table]]  
V | H | Cl. Rem. ^[[No.]] | Kline | Int |

20.7 | 9.0 | B 2933 | N | 3 |  
20.1 | 12.8 | A | N | 1 |  
21.0 | 21.5 | A | N | 2 |  
22.2 | 23.9 | F 2934 | K=H | 2 |  
23.2 | 20.0 | A | N | 2 |  
R.A. 22.6 Dec. + 1.4°

Plate 2957

3.8 | 2.7 | A | N | 2 |  
5.4 | 9.1 | G5 | K=H | 2 |  
6.6 | 12.5 | A | N | 1 |  
6.9 | 21.1 | I | K=H | 2 |  
4.4 | 9.1 | F 2935 | K=H | 3 |  
9.0 | 12.9 | A | K=H | 2 |  
8.6 | 15.7 | F 2936 | K=H | 1 |  
9.4 | 6.7 | H | N | 1 |  
9.5 | 8.8 | H | N | 1 |  
9.7 | 20.0 | A | K=H | 2 |  
9.7 | 20.5 | A | N | 5 |  
9.9 | 23.8 | F 2937 | K=H | 5 |  
11.0 | 7.1 | E | K=H | 1 |  
10.4 | 7.6 | A | N | 2 |  
10.4 | 8.0 | G | K=H | 3 |  
10.4 | 16.7 | A | K=H | 2 |  
10.2 | 16.8 | F 2938 | K=H | 2 |  
10.3 | 23.1 | A | N | 2 |  
11.9 | 8.6 | G5 | K=H | 3 |



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

101

1855

[[6 columned table]]

R.A|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.|

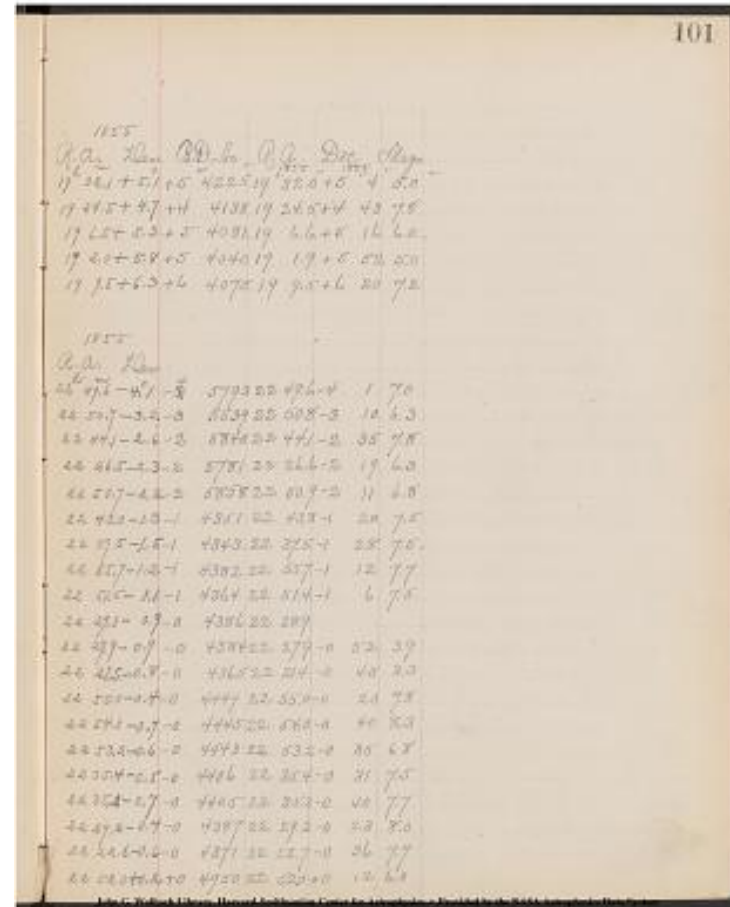
19 <sup>h</sup> 32.1 <sup>m</sup>	+5.1 <sup>s</sup>	4225	19 <sup>h</sup> 32.1 <sup>m</sup>	+5.1 <sup>s</sup>	4225
19 24.5	+4.7	4138	19 24.5	+4.7	4138
19 6.5	+5.3	4081	19 6.5	+5.3	4081
19 2.0	+5.8	4040	19 2.0	+5.8	4040
19 9.5	+6.3	4075	19 9.5	+6.3	4075

1855

[[6 columned table]]

R.A|Dec.|

22 <sup>h</sup> 49.6 <sup>m</sup>	-4.1 <sup>s</sup>	5793	22 <sup>h</sup> 49.6 <sup>m</sup>	-4.1 <sup>s</sup>	5793
22 50.7	-3.2	5539	22 50.7	-3.2	5539
22 44.1	-2.6	5840	22 44.1	-2.6	5840
22 26.5	-2.3	5781	22 26.5	-2.3	5781
22 50.7	-2.2	5858	22 50.7	-2.2	5858
22 43.0	-1.3	4351	22 43.0	-1.3	4351
22 37.5	-1.5	4343	22 37.5	-1.5	4343
22 55.7	-1.2	4382	22 55.7	-1.2	4382
22 51.5	-1.1	4364	22 51.5	-1.1	4364
22 29.0	-0.9	4386	22 29.0	-0.9	4386
22 27.9	-0.9	4384	22 27.9	-0.9	4384
22 21.5	-0.8	4365	22 21.5	-0.8	4365
22 55.0	-0.4	4449	22 55.0	-0.4	4449
22 54.0	-0.7	4445	22 54.0	-0.7	4445
22 53.2	-0.6	4443	22 53.2	-0.6	4443
22 35.4	-0.5	4406	22 35.4	-0.5	4406
22 35.2	-0.7	4405	22 35.2	-0.7	4405
22 29.2	-0.4	4387	22 29.2	-0.4	4387
22 22.6	-0.6	4371	22 22.6	-0.6	4371
22 52.0	+0.2	4950	22 52.0	+0.2	4950



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

102

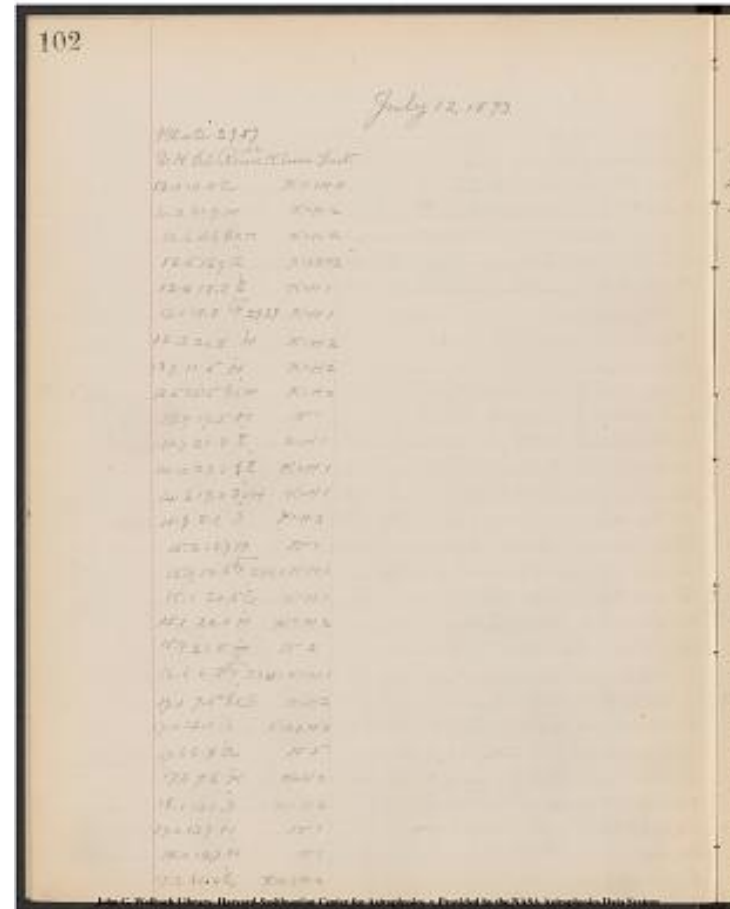
July 12, 1893

Plate 2957

[[6 columned table]]

V|H|Cl.|Rem.^{[No.]}|Kline|Int.|

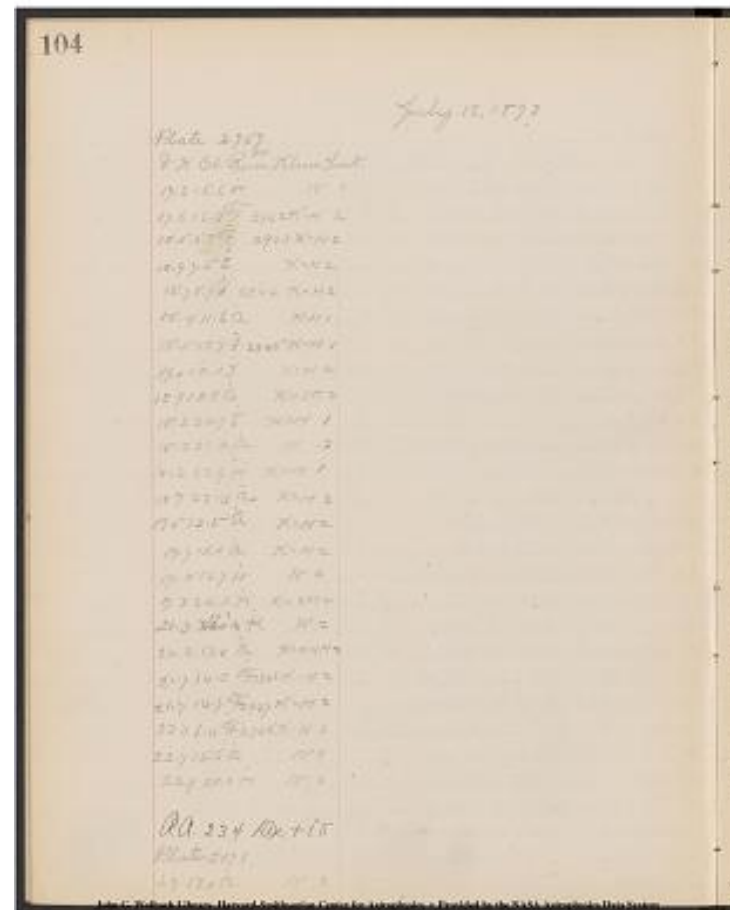
12.0	10.8	A	K=0.3H 3
11.2	20.9	H	K=H 2
12.6	5.6	G2H	K=H 2
12.5	16.7	A	K=0.8H 2
12.4	18.2	E	K=H 1
12.1	18.3	F 2939	K=H 1
12.2	21.8	H	K=H 2
13.7	11.5	H	K=H 2
13.5	15.5	G5H	K=H 2
13.9	19.5	H	N 1
13.7	21.3	E	K=H 1
14.0	23.1	<del>[[strikethrough]]G[[/strikethrough]]E</del>	K=H 1
14.6	19.0	G5H	K=H 1
15.9	8.0	I	K=H 3
15.2	13.7	H	N 1
15.7	14.6	F 2940	K=H 1
15.1	20.5	E	K=H 1
15.1	22.0	H	K=H 2
15.9	21.8	H	N 2
16.6	6.3	F 2941	K=H 1
17.0	7.5	G5I	K=H 2
17.0	12.1	A	K=0.3H 3
17.6	6.4	A	N 5
17.6	9.6	K	K=H 3
18.0	13.1	I	K=H 2
17.0	13.9	H	N 1
18.0	14.3	H	N 1
17.2	15.4	A	K=0.3H 2



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



104  
 July 12, 1893  
 Plate 2959  
 [[table]]  
 |V| H| Cl. |Rem. N.O. |Kline |Int.|  
 |---|---|---|---|---|  
 17.3|15.6|H| |N|1|  
 17.6|16.3|F|2942|K=H|2|  
 18.5|5.9|F|2943|K=H|2|  
 18.9|7.5|E| |K=H|2|  
 18.7|8.7|F|2944|K=H|2|  
 18.4|11.6|A| |K=H|1|  
 18.5|13.9|F|2945|K=H|1|  
 19.0|18.0|I| |K=H|2|  
 18.9|18.8|A| |K=0.3H|2|  
 18.2|20.7|E| |K=H|1|  
 18.3|21.0|A| |N|3|  
 18.6|22.9|H| |K=H|1|  
 18.7|23.3|A| |K=H|3|  
 19.5|12.5|A| |K=H|2|  
 19.7|15.0|A| |K=H|2|  
 19.8|16.7|H| |N|2|  
 19.3|24.3|K| |K=1.2H|4|  
 20.3|~~820.4~~17.1|K| |N|2|  
 20.2|17.0|A| |K=0.4H|2|  
 21.7|14.3|F|2946|K=H|2|  
 21.7|14.7|F|2947|K=H|2|  
 23.3|6.4|F|2948|K=H|3|  
 22.7|15.6|A| |N|1|  
 22.9|20.0|H| |N|1|  
 R.A. 234 Dec.+1[[0]].5  
 Plate 3071  
 3.9|13.0|A| |N|2|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



105

1855

[[6 columned table]]

R.A. Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

22 <sup>h</sup> 38.0 <sup>m</sup> +2.9°	+2 4555	22 38.0	+2 56	8.0
22 36.5 +3.1	+3 4763	22 36.5	+3 7	7.5
22 57.7 +3.4	+3 4822	22 57.6	+3 26	8.0
22 54.2 +3.7	+3 4814	22 54.3	+3 40	7.0
22 51.9 +3.6	+3 4805	22 52.0	+3 36	6.9
22 46.2 +3.4	+3 4791	22 46.3	+3 29	8.5
22 41.5 +3.5	+3 4776	22 41.6	+3 32	7.5
22 33.1 +3.8	+3 4751	22 33.1	+3 49	6.6
22 31.5 +3.8	+3 4745	22 31.5	+3 47	6.5
22 27.6 +3.4	+3 4732	22 27.6	+3 24	8.4
22 27.4 +3.5	+3 4730	22 27.2	+3 30	7.8
22 23.2 +3.6	+3 4716	22 23.3	+3 35	8.0
22 22.3 +3.7	+3 4713	22 22.7	+3 41	6.3
22 44.4 +4.0	+4 4916	22 44.4	+4 1	7.0
22 39.2 +4.1	+4 4903	22 39.4	+4 9	8.0
22 35.5 +4.2	+4 4896	22 35.6	+4 12	7.0
22 20.5 +3.9	+3 4710	22 20.6	+3 59	4.8
22 34.9 +4.4	+4 4894	22 35.0	+4 24	7.5
22 35.5 +4.2	+4 4896	22 35.6	+4 12	7.0
22 41.0 +5.1	+5 5079	22 40.8	+5 6	7.8
22 40.1 +5.1	+5 5077	22 40.2	+5 8	7.8
22 56.7 +5.8	+5 5123	22 56.7	+5 50	7.3
22 38.0 +5.6	+5 5069	22 37.9	+5 38	8.3
22 29.1 +5.7	+5 5042	22 29.2	+5 45	7.7

1855

R.A. Dec.

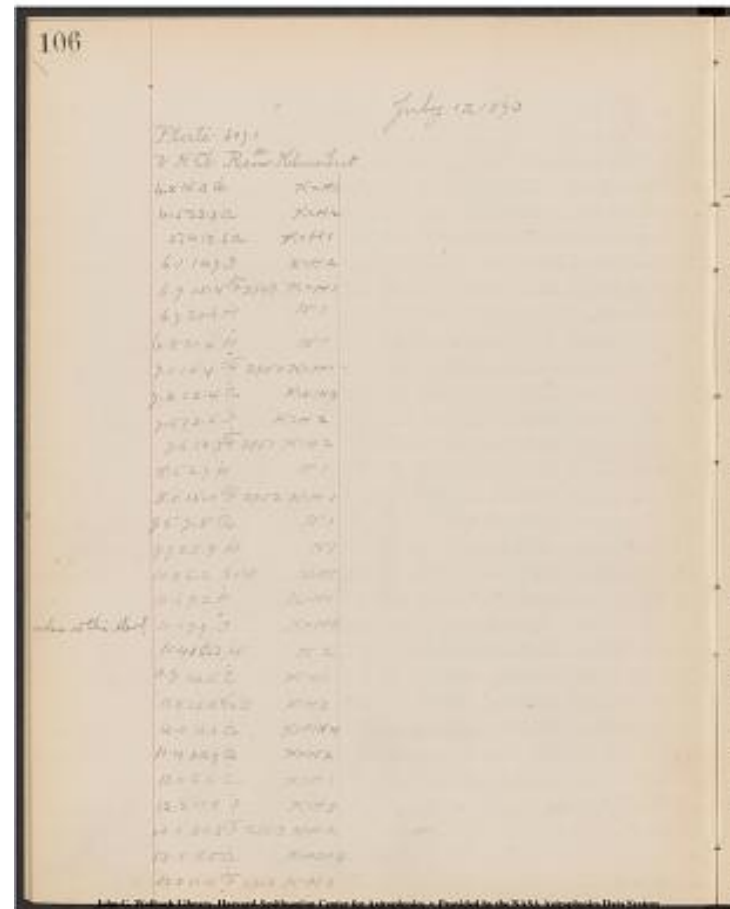
23<sup>h</sup> 25.5<sup>m</sup> -3.8° -3 5655 23 25.5-3 49 6.8

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



July 12, 1893  
Plate 3071

[[6 columned table]]  
[V	H	Cl.	Rem. No.	Kline.	Int.]
4.8|15.3|A| |K=H|1|  
4.5|22.3|A| |K=H|2|  
5.4|12.6|A| |K=H|1|  
6.1|14.7|I| |K=H|2|  
6.9|15.4|F|2949|K=H|1|  
6.7|20.6|H| |N|1|  
6.8|21.4|H| |N|1|  
7.1|10.4|F|2950|K=H|1|  
7.2|12.4|A| |K=0.1H|3|  
7.5|13.5|I| |K=H|2|  
7.6|14.7|F|2951|K=H|2|  
8.5|6.9|H| |N|1|  
8.1|15.0|F|2952|K=H|1|  
9.5|7.8|A| |N|1|  
9.7|22.9|H| |N|1|  
10.8|6.2|G5H| |K=H|1|  
10.6|9.2|H| |K=H|1|  
10.1|7.7|I| |K=H|2|  
11.4|14.2|H| |N|2|  
11.9|14.5|E| |K=H|1|  
11.8|15.8|G5I| |K=H|3|  
12.0|16.0|A| |K=0.1H|4|  
11.4|22.7|A| |K=H|2|  
13.0|6.0|A| |K=H|1|  
12.2|11.8|I| |K=H|3|  
12.1|21.6|F|2953|K=H|2|  
13.1|8.5|A| |K=0.3H|4|  
13.8|11.4|F|2954|K=H|3|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A. Dec. BD. No. R.A. 1855 Dec. 1855 Magn.

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
23 23.1	+0.1	+0	5009	23 23.3	+0 4 7.7
23 22.5	+0.4	+0	5008	23 22.5	+0 22 8.5
23 19.8	+0.3	+0	4999	23 19.8	+0 19 7.2
23 19.5	+0.4	+0	4998	23 19.5	+0 28 5.7
23 6.1	+0.1	+0	4978	23 6.0	+0 9 8.2
23 38.4	+0.9	+0	5042	23 38.4	+0 52 8.6
23 28.1	+0.5	+0	5018	23 28.1	+0 31 7.2
23 8.1	+0.5	+0	4982	23 8.2	+0 31 7.7
23 34.6	+0.9	+0	5037	23 34.7	+0 59 4.6
23 29.0	+1.3	+1	4744	23 29.0	+1 18 6.8
23 23.1	-3.2	-3	5642	23 20.6	-3 15 8.8
23 26.2	-3.1	-3	5661	23 26.3	-3 2 7.7
23 22.0	-2.6	-2	5973	23 22.0	-2 35 6.5
23 20.6	-2.3	-2	5965	23 20.6	-2 16 8.7
23 10.2	-2.3	-2	5920	23 10.1	-2 18 8.1
23 8.5	-2.2	-2	5914	23 8.5	-2 13 7.0
23 30.5	-2.2	-2	6000	23 30.7	-2 8 8.1
23 26.6	-2.1	-2	5986	23 26.7	-2 3 6.0
23 24.5	-1.9	-1	4450	23 24.6	-1 52 6.7
23 22.1	-1.9	-1	4443	23 22.1	-1 49 6.5
23 37.6	-1.5	-1	4485	23 37.6	-1 28 7.3
23 21.4	-1.8	-1	4450	23 21.3	-1 37 7.5
23 35.9	-1.0	-0	4560	23 35.9	-0 58 8.1
23 5.6	-0.8	-0	4483	23 5.6	-0 45 7.7
23 39.1	-0.3	-0	4566	23 39.2	-0 16 7.9
23 33.3	-0.4	-0	4547	23 33.3	-0 23 7.5

23 23.1	+0.1	+0	5009	23 23.3	+0 4 7.7
23 22.5	+0.4	+0	5008	23 22.5	+0 22 8.5
23 19.8	+0.3	+0	4999	23 19.8	+0 19 7.2
23 19.5	+0.4	+0	4998	23 19.5	+0 28 5.7
23 6.1	+0.1	+0	4978	23 6.0	+0 9 8.2
23 38.4	+0.9	+0	5042	23 38.4	+0 52 8.6
23 28.1	+0.5	+0	5018	23 28.1	+0 31 7.2
23 8.1	+0.5	+0	4982	23 8.2	+0 31 7.7
23 34.6	+0.9	+0	5037	23 34.7	+0 59 4.6
23 29.0	+1.3	+1	4744	23 29.0	+1 18 6.8

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

• Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

108

July 12. 1893

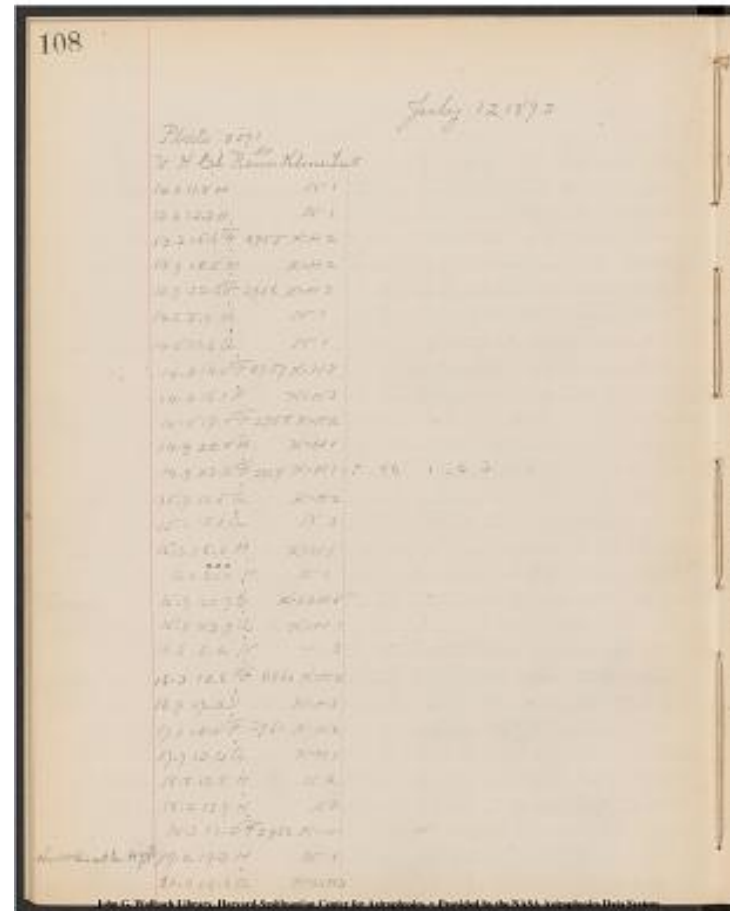
Plate 3071

[[6 columned table]]

V|H|Cl|Rem^|[[No.]]|Kline|Int.]

14.0	11.8	H		N	1
13.6	12.3	H		N	1
13.3	15.6	F	2955	K=H	2
13.9	18.8	H		K=H	2
13.9	22.6	F	2956	K=H	3
14.6	8.9	H		N	1
14.5	11.6	A		N	1
14.3	14.0	F	2957	K=H	3
14.4	16.1	I		K=H	3
14.5	19.0	F	2958	K=H	2
14.9	22.8	H		K=H	1
14.9	23.2	F	2959	K=H	1
15.9	11.5	A		K=H	2
15.1	18.0	A		N	3
15.6	18.6	H		K=H	1
16.0	21.0	[[20.0]]	H	N	1
15.9	20.9	G		K=1.2H	5
15.8	23.9	A		K=H	1
16.6	6.2	N		-3	
16.3	10.6	F	2960	K=H	2
16.9	17.2	I		K=H	3
17.0	18.0	F	2961	K=H	2
17.7	13.4	A		K=H	1
18.8	12.8	H		N	2
18.2	12.9	H		N	2
18.3	16.2	F	2962	K=H	1
should this not be H 9.3? 19.2 19.3 H  N 1					
20.0	14.2	A		K=0.5H	3

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

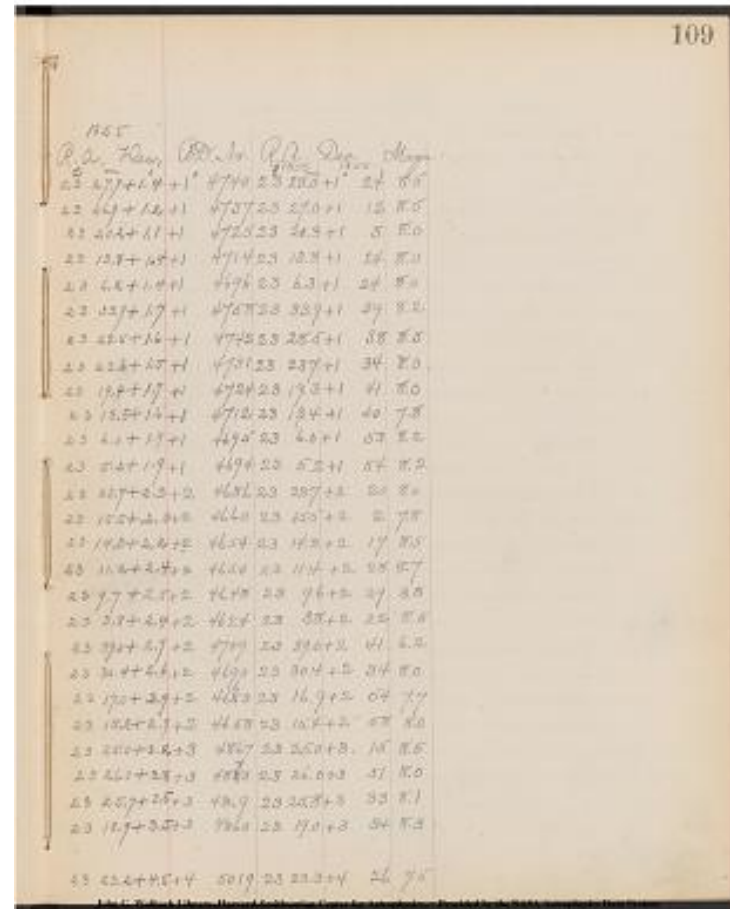
1855

[6 columned page]

R.A. | Tlec[?] | BD. No. | R.A. | Dec. | Magn. |

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

23	27.9 + 2.4	+1	4740	23 28.0	+1 24	8.5
23	26.9 + 1.2	+1	4737	23 27.0	+1 12	8.5
23	20.2 + 1.1	+1	4725	23 20.3	+1 5	8.0
23	13.8 + 1.4	+1	4714	23 13.8	+1 24	8.0
23	6.2 + 1.4	+1	4696	23 6.3	+1 24	8.0
23	33.9 + 1.7	+1	4758	23 33.9	+1 39	8.2
23	28.5 + 1.6	+1	4742	23 28.5	+1 38	8.5
23	23.6 + 1.5	+1	4731	23 23.7	+1 34	8.0
23	19.4 + 1.7	+1	4724	23 19.3	+1 41	8.0
23	13.5 + 1.6	+1	4712	23 13.4	+1 40	7.8
23	6.0 + 1.9	+1	4695	23 6.0	+1 53	8.2
23	5.2 + 1.9	+1	4694	23 5.2	+1 54	8.2
23	28.7 + 2.3	+2	4686	23 28.7	+2 20	8.0
23	15.5 + 2.0	+2	4660	23 15.5	+2 2	7.8
23	14.3 + 2.2	+2	4654	23 14.3	+2 17	8.5
23	11.2 + 2.4	+2	4650	23 11.4	+2 28	8.7
23	9.7 + 2.5	+2	4648	23 9.6	+2 29	3.8
23	3.8 + 2.4	+2	4624	23 3.8	+2 22	8.5
23	39.0 + 2.7	+2	4709	23 39.0	+2 41	6.2
23	30.4 + 2.6	+2	4690	23 30.4	+2 34	8.0
23	17.0 + 2.9	+2	46	<del>23 16.9</del>	<del>+2 54</del>	<del>7.7</del>
23	15.2 + 2.9	+2	4658	23 15.4	+2 58	8.0
23	25.0 + 3.2	+2	4867	23 25.0	+3 15	8.5
23	26.0 + 3.8	+3	48	<del>23 26.0</del>	<del>+3 51</del>	<del>8.0</del>
23	25.7 + 3.5	+3	48.9	23 25.8	+3 33	8.1
23	18.9 + 3.5	+3	4860	23 19.0	+3 34	8.3
23	23.2 + 4.5	+4	5019	23 23.3	+4 26	7.5



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

110

July 12, 1893

Plate 3071

[[6 column table]]

V H|Cl. |Rem.^[[No.]]|Kline|Int.|

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

19.5|14.4|H| |K=H|2|

19.4|17.4|F|2963|K=H|3|

19.9|17.7|H| |N|1|

19.5|22.4|A| |N|3|

19.5|23.8|Ma| |N|1|

20.8|9.6|F|2964|K=H|4|

20.4|12.3|A| |K=H|3|

20.2|19.3|K| |K=H|3|

21.9|10.0|A| |K=H|1|

21.7|15.3|~~[[strikethrough]]A[[/strikethrough]]~~^[[F]]|2965|K=H|2|

21.0|15.5|H| |N|1|

21.8|17.2|A| |K=0.2H|3|

22.1|8.9|F|2966|K=H|1|

22.3|14.3|A| |N|1|

22.2|15.4|K| |K=1.5H|4|

23.3|11.4|H| |N|1|

24.0|7.2|H| |N|1|

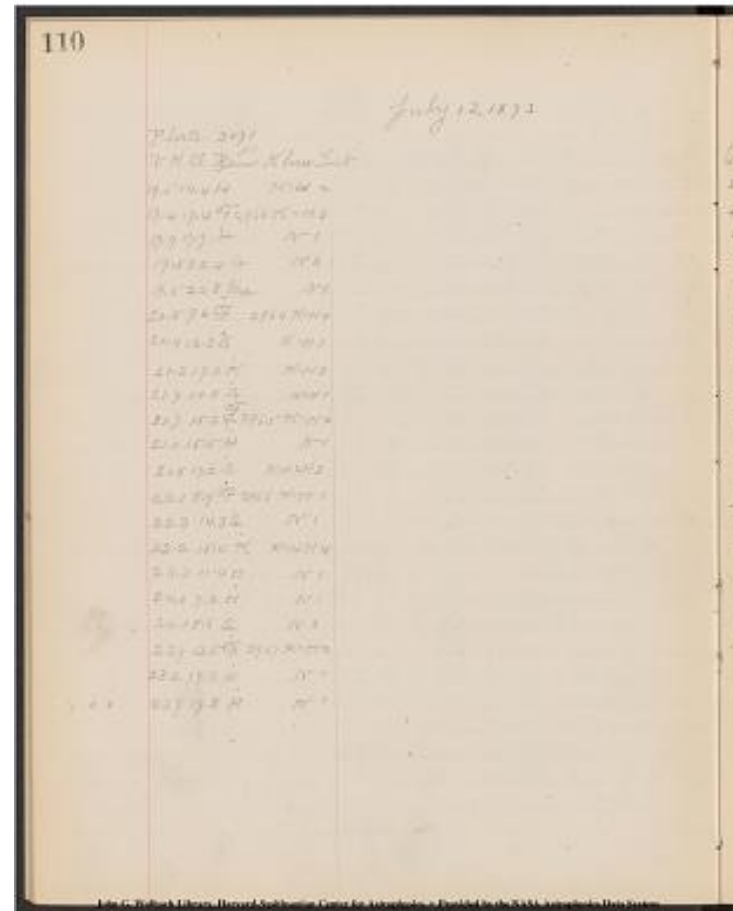
24.5|8.6|A| |N|3|

23.7|13.5|F|2967|K=H|2|

23.2|19.3|H| |N|1|

23.9|19.8|H| |N|1|

[[left margin]] 1 0 0 [[/left margin]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[6 columned page]

R.A. | Tlec[?] | BD. No. | R.A. | Dec. | Magn. |

R.A.	Tlec[?]	BD. No.	R.A.	Dec.	Magn.
23 22.7 + 4.2	+4	5016	23 22.8	+4 13	7.0
23 16.7 + 4.1	+4	5004	23 16.7	+4 8	8.3
23 16.0 + 4.4	+4	5003	23 16.0	+4 28	8.3
23 6.5 + 4.2	+4	4985	23 6.6	+4 12	7.0
23 3.9 + 4.2	+4	4975	23 3.9	+13	7.1
23 32.5 + 4.8	+4	5035	23 32.5	+4 51	4.2
23 27.0 + 4.7	+4	5029	23 27.0	+4 40	8.0
23 13.0 + 4.6	+4	4997	23 13.0	+4 35	5.5
23 31.6 + 5.4	+5	5204	23 31.8	+5 24	7.9
23 21.0 + 5.3	+5	5175	23 20.9	+5 17	8.2
23 20.4 + 4.9	+4	5013	23 20.4	+4 56	8.9
23 17.0 + 5.4	+5	5165	23 17.0	+5 24	7.8
23 33.8 + 5.4	+5	5208	23 33.8	+5 28	9.0
23 23.0 + 5.6	+5	5183	23 23.0	+5 38	7.8
23 20.6 + 5.6	+5	5173	23 20.6	+5 35	4.7
23 28.9 + 6.1	+6	5174	23 28.9	+6 4	7.8
23 37.5 + 6.4	+6	5197	23 37.4	+6 24	7.4
23 34.5 + 6.4	+6	5183	23 34.6	+6 27	6.5
23 24.9 + 6.3	+6	5168	23 24.8	+6 18	6.5
23 13.0 + 6.1	+6	5143	23 13.0	+6 4	7.8
23 11.9 + 6.4	+6	5141	23 12.0	+6 26	7.7

[[note?]]

[[note?]]

1855

R.A.	Tlec[?]	BD. No.	R.A.	Dec.	Magn.
23 22.7 + 4.2	+4	5016	23 22.8	+4 13	7.0
23 16.7 + 4.1	+4	5004	23 16.7	+4 8	8.3
23 16.0 + 4.4	+4	5003	23 16.0	+4 28	8.3
23 6.5 + 4.2	+4	4985	23 6.6	+4 12	7.0
23 3.9 + 4.2	+4	4975	23 3.9	+13	7.1
23 32.5 + 4.8	+4	5035	23 32.5	+4 51	4.2
23 27.0 + 4.7	+4	5029	23 27.0	+4 40	8.0
23 13.0 + 4.6	+4	4997	23 13.0	+4 35	5.5
23 31.6 + 5.4	+5	5204	23 31.8	+5 24	7.9
23 21.0 + 5.3	+5	5175	23 20.9	+5 17	8.2
23 20.4 + 4.9	+4	5013	23 20.4	+4 56	8.9
23 17.0 + 5.4	+5	5165	23 17.0	+5 24	7.8
23 33.8 + 5.4	+5	5208	23 33.8	+5 28	9.0
23 23.0 + 5.6	+5	5183	23 23.0	+5 38	7.8
23 20.6 + 5.6	+5	5173	23 20.6	+5 35	4.7
23 28.9 + 6.1	+6	5174	23 28.9	+6 4	7.8
23 37.5 + 6.4	+6	5197	23 37.4	+6 24	7.4
23 34.5 + 6.4	+6	5183	23 34.6	+6 27	6.5
23 24.9 + 6.3	+6	5168	23 24.8	+6 18	6.5
23 13.0 + 6.1	+6	5143	23 13.0	+6 4	7.8
23 11.9 + 6.4	+6	5141	23 12.0	+6 26	7.7

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

112

July 23, 1893

Plate 214~~9~~ R.A. 2.7 Dec. +11.5

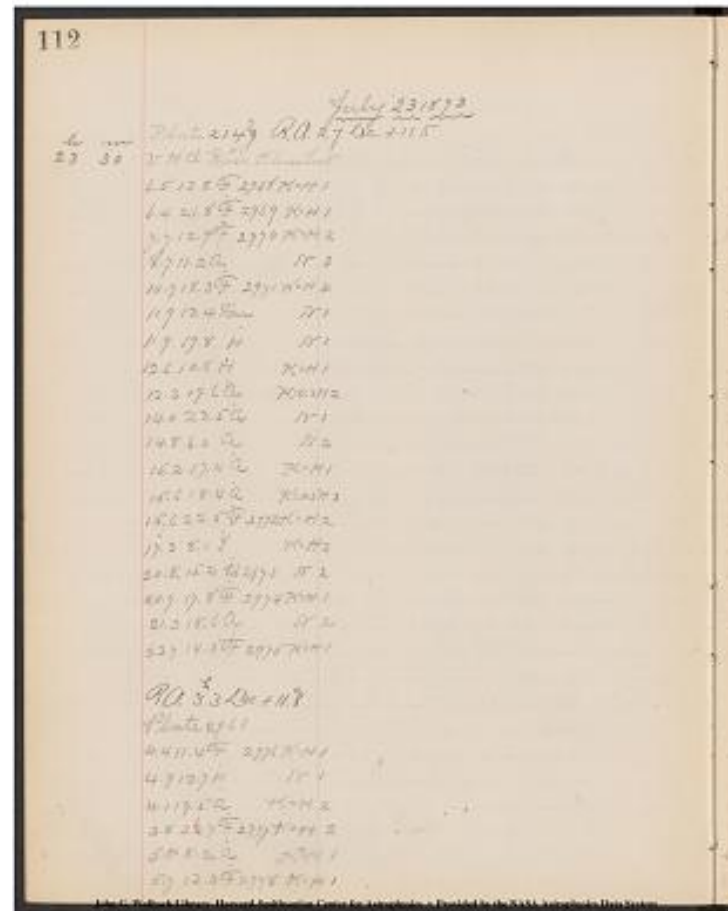
[[left margin]]  
23<sup>h</sup> 30<sup>m</sup>  
[[/left margin]]

[[6 columned table]]  
V	H	Cl	Rem.^[[No.]]	Kline	Int
6.5|13.8|F|2968|K=H|1|  
6.4|21.8|F|2969|K=H|1|  
7.7|12.9|F|2970|K=H|2|  
8.7|11.2|A| |N|3|  
10.9|18.3|F|2971|K=H|4|  
11.9|13.4|Ma| |N|1|  
11.9|19.8|H| |N|1|  
12.6|10.8|H| |K=H|1|  
12.3|19.6|A| |K=0.2H|2|  
14.0|23.5|A| |N|1|  
14.8|6.0|A| |N|2|  
15.2|17.4|A| |K=H|1|  
15.6|18.4|A| |K=0.5H|3|  
15.6|22.5|F|2972|K=H|2|  
17.3|8.1|J| |K=H|2|  
20.8|15.2|B|2973|N|2|  
20.7|17.8|F|2974|K=H|1|  
21.3|18.6|A| |N|2|  
23.7|14.5|F|2975|K=H|1|

R.A 3.3<sup>h</sup> Dec. +11.8°  
Plate 2961

[[6 columned table]]  
4.4|11.4|F|2976|K=H|1|  
4.9|12.7|H| |N|1|  
4.1|19.5|A| |K=H|2|  
3.8|2~~2~~|2~~2~~|1.9|F|2977|K=H|2|  
5.8|8.2|A| |K=H|1|  
5.7|12.3|F|2978|K=H|1|

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



113

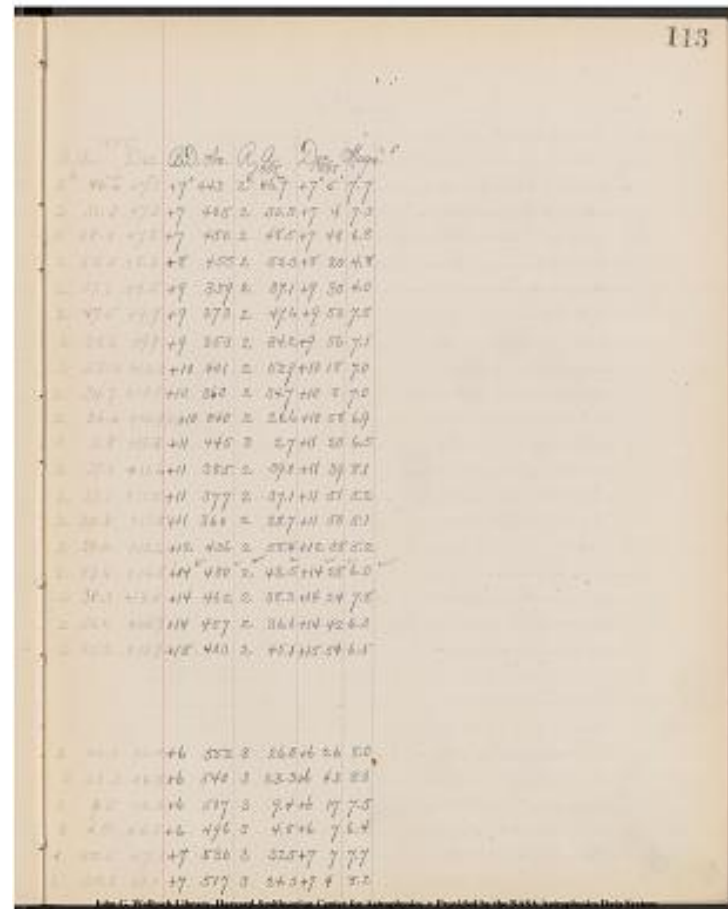
1855

[[6 columned table]]

R.A. DEC. BD. No. R.A. 1855 Dec. 1855 Magn.

2 <sup>h</sup> [h]	46 <sup>m</sup> [m]	6 <sup>s</sup> [s]	+7.1°	+7°	443	2 <sup>h</sup> [h]	46 <sup>m</sup> [m]	7 <sup>s</sup> [s]	+7°	5	7.7
2 30.3	+7.0	+7 405	2 30.3	+7 4	7.3						
2 48.4	+7.8	+7 450	2 48.5	+7 48	6.8						
2 52.0	+8.3	+8 455	2 52.0	+8 20	4.8						
2 37.1	+9.5	+9 359	2 37.1	+9 30	4.0						
2 47.5	+9.9	+9 373	2 47.6	+9 53	7.8						
2 34.2	+9.9	+9 353	2 34.2	+9 56	7.1						
2 53.0	+10.3	+10 401	2 52.9	+10 18	7.0						
2 34.7	+10.1	+10 360	2 34.7	+10 8	7.0						
2 26.6	+10.9	+10 340	2 26.6	+10 58	6.9						
3 2.8	+11.3	+11 445	3 2.7	+11 20	6.5						
2 39.0	+11.6	+11 385	2 39.0	+11 39	8.1						
2 37.1	+11.8	+11 377	2 37.1	+11 51	5.2						
2 28.8	+11.8	+11 360	2 28.7	+11 50	5.1						
2 58.6	+12.6	+12 436	2 58.4	+12 38	5.2						
2 43.4	+14.5	+14 <sup>h</sup> [h]	480 <sup>m</sup> [m]	2 <sup>h</sup> [h]	43.5 <sup>s</sup> [s]	+14 <sup>h</sup> [h]	28 <sup>m</sup> [m]	6.0 <sup>s</sup> [s]			
2 38.3	+14.4	+14 462	2 38.3	+14 24	7.8						
2 36.6	+14.7	+14 457	2 36.6	+14 42	6.0						
2 45.2	+15.9	+15 400	2 45.1	+15 54	6.5						
3 26.0	+6.4	+6 552	3 26.0	+6 26	8.0						
3 23.3	+6.7	+6 540	3 23/3	+6 43	8.0						
3 9.5	+6.3	+6 507	3 9.4	+6 17	7.5						
3 4.8	+6.1	+6 496	3 4.8	+6 7	6.4						
3 32.5	+7.1	+7 530	3 32.5	+7 7	7.7						
3 24.3	+7.0	+7 517	3 24.3	+7 4	8.2						

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



114

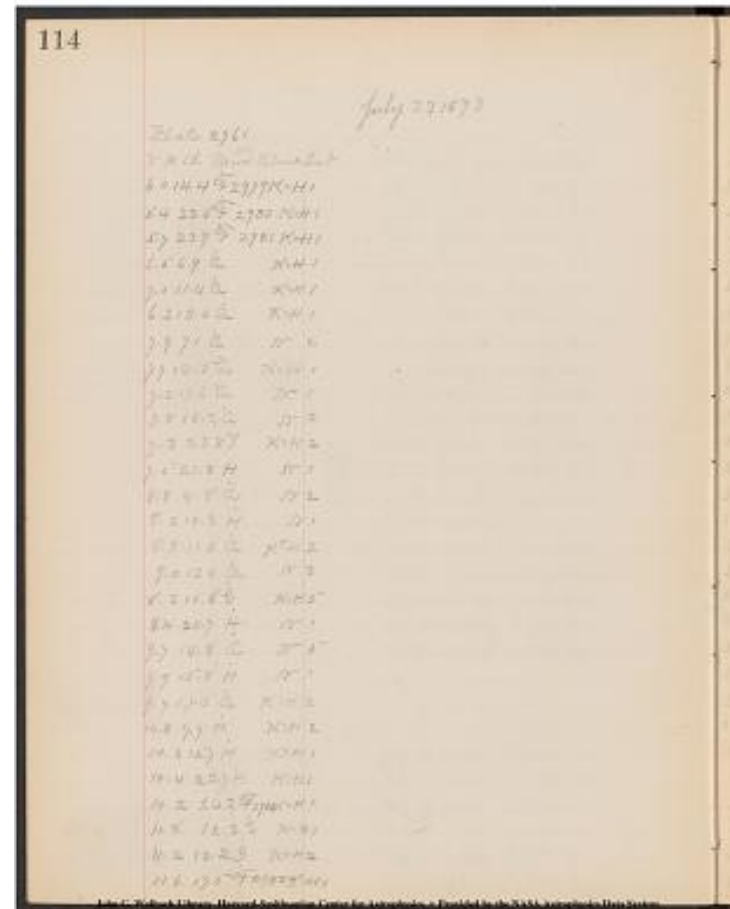
July 23, 1893

Plate 2961

[[6 columned table]]

[V|H|Cl.|Rem.^|[No.]]|Kline|Int.]

[V H Cl. Rem.^ [No.]]	Kline	Int.
6.0 14.4 F 2979 K=H 1		
5.4 23.5 F 2980 K=H 1		
5.7 23.9 F 2981 K=H 1		
6.5 6.9 A	K=H 1	
7.0 11.4 A	K=H 1	
6.2 12.4 A	K=H 1	
7.9 7.1 A	N 2	
7.9 14.5 A	K=H 1	
7.3 17.6 A	N 1	
7.8 18.2 A	N 2	
7.3 23.8 J	K=H 2	
7.5 21.8 H	N 1	
8.8 8.8 A	N 2	
8.3 10.2 H	N 1	
8.8 11.0 A	K=H 2	
9.0 12.1 A	N 3	
8.3 15.8 G	K=H 5	
8.4 20.7 H	N 1	
9.7 14.8 A	N 5	
9.9 15.8 H	N 1	
9.7 17.5 A	K=H 2	
10.6 7.7 H	K=H 2	
10.3 15.7 H	K=H 1	
10.4 22.7 H	K=H 1	
10.2 24.2 F 2982 K=H 1		
11.8 12.2 E	K=H 1	
11.2 13.2 I	K=H 2	
11.6 17.5 F 2983 K=H 1		



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A. Dec. BD. No. R.A. Dec. Magn.

R.A.	Dec.	BD.	No.	R.A.	Dec.	Magn.
3 19.9	+7.2	+7 511	3	19.9	+7 14	8.0
3 1.5	+6.9	+6 486	3	1.5	+6 54	8.3
3 0.9	+7.1	+7 477	3	0.8	+7 5	7.7
3 35.0	+7.4	+7 537	3	35.0	+7 26	8.3
3 26.0	+7.5	+7 521	3	26.0	+7 48	8.7
3 24.0	+7.3	+7 516	3	24.0	+7 19	8.3
3 34.8	+8.2	+8 553	3	34.8	+8 11	7.2
3 19.9	+8.3	+8 519	3	19.9	+8 16	8.0
3 13.2	+7.9	+7 500	3	13.3	+7 56	8.3
3 12.1	+8.2	+8 495	3	12.1	+8 11	7.7
3 1.0	+7.9	+7 478	3	0.9	+7 54	6.6
3 4.9	+8.0	+8 474	3	4.8	+8 3	8.0
3 31.2	+8.7	+8 542	3	31.3	+8 41	7.5
3 28.4	+8.4	+8 537	3	28.4	+8 24	8.0
3 27.0	+8.7	+8 532	3	26.9	+8 40	7.8
3 24.8	+8.9	+8 528	3	24.8	+8 53	6.2
3 17.2	+8.5	+8 511	3	17.0	+8 31	3.8
3 6.9	+8.5	+8 482	3	6.9	+8 27	7.8
3 19.3	+9.2	+9 439	3	19.3	+9 14	4.0
3 17.0	+9.3	+9 436	3	16.9	+9 18	8.0
3 13.5	+9.1	+9 427	3	13.5	+9 8	7.8
3 33.7	+9.6	+9 472	3	33.7	+9 37	6.8
3 17.2	+9.5	+9 437	3	17.1	+9 30	8.2
3 3.0	+9.5	+9 408	3	3.0	+9 28	7.0
3 0.0	+9.3	+9 397	3	0.0	+9 22	7.5
3 24.6	+10.2	+10 454	3	24.5	+10 15	8.8
3 22.5	+9.9	+9 447	3	22.6	+9 57	7.5
3 13.4	+10.	<del>432</del>	2	<del>13.4</del>	<del>+10 7</del>	8.2

BD +6° 486 superposed on BD -6° 487.

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

115

R.A.	Dec.	BD.	No.	R.A.	Dec.	Magn.
3 19.9	+7.2	+7 511	3	19.9	+7 14	8.0
3 1.5	+6.9	+6 486	3	1.5	+6 54	8.3
3 0.9	+7.1	+7 477	3	0.8	+7 5	7.7
3 35.0	+7.4	+7 537	3	35.0	+7 26	8.3
3 26.0	+7.5	+7 521	3	26.0	+7 48	8.7
3 24.0	+7.3	+7 516	3	24.0	+7 19	8.3
3 34.8	+8.2	+8 553	3	34.8	+8 11	7.2
3 19.9	+8.3	+8 519	3	19.9	+8 16	8.0
3 13.2	+7.9	+7 500	3	13.3	+7 56	8.3
3 12.1	+8.2	+8 495	3	12.1	+8 11	7.7
3 1.0	+7.9	+7 478	3	0.9	+7 54	6.6
3 4.9	+8.0	+8 474	3	4.8	+8 3	8.0
3 31.2	+8.7	+8 542	3	31.3	+8 41	7.5
3 28.4	+8.4	+8 537	3	28.4	+8 24	8.0
3 27.0	+8.7	+8 532	3	26.9	+8 40	7.8
3 24.8	+8.9	+8 528	3	24.8	+8 53	6.2
3 17.2	+8.5	+8 511	3	17.0	+8 31	3.8
3 6.9	+8.5	+8 482	3	6.9	+8 27	7.8
3 19.3	+9.2	+9 439	3	19.3	+9 14	4.0
3 17.0	+9.3	+9 436	3	16.9	+9 18	8.0
3 13.5	+9.1	+9 427	3	13.5	+9 8	7.8
3 33.7	+9.6	+9 472	3	33.7	+9 37	6.8
3 17.2	+9.5	+9 437	3	17.1	+9 30	8.2
3 3.0	+9.5	+9 408	3	3.0	+9 28	7.0
3 0.0	+9.3	+9 397	3	0.0	+9 22	7.5
3 24.6	+10.2	+10 454	3	24.5	+10 15	8.8
3 22.5	+9.9	+9 447	3	22.6	+9 57	7.5
3 13.4	+10.	<del>432</del>	2	<del>13.4</del>	<del>+10 7</del>	8.2

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

116

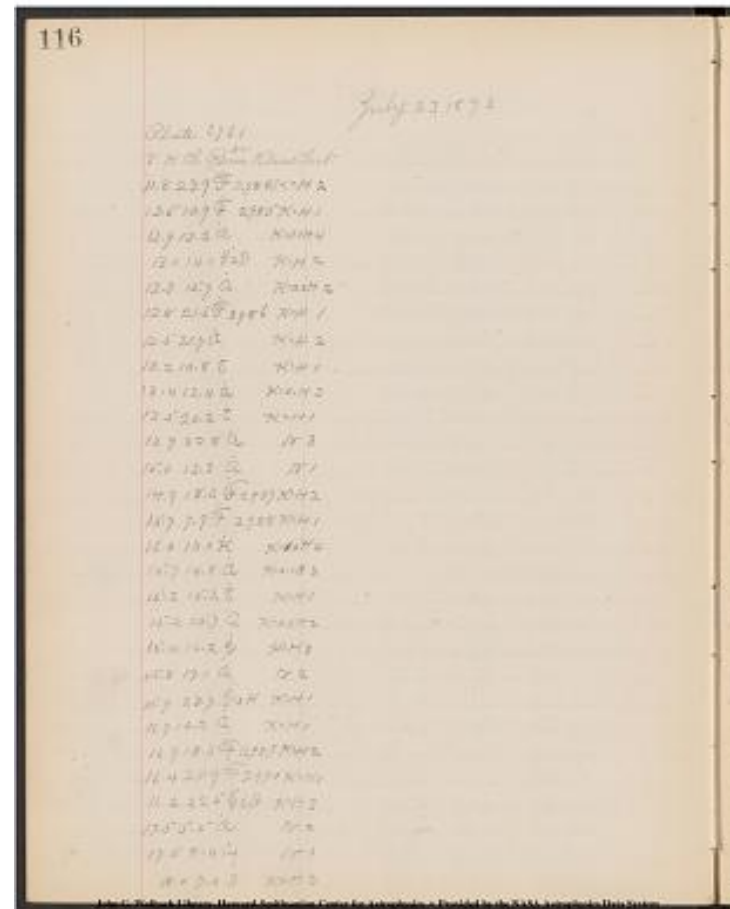
July 23, 1893

Plate 2961

[[6 columned page]]

V|H|C|I|Rem.^[[No.]]|Kline|Int.|

11.8	23.9	F	2984	K=H	2
12.5	10.9	F	2985	K=H	1
12.9	13.2	A		K=0.1H	4
13.0	14.1	G2I		K=H	2
12.3	15.7	A		K=0.2H	2
12.8	21.6	F	2986	K=H	1
12.5	21.7	A		K=H	2
13.2	10.8	E		K=H	1
13.4	12.4	A		K=0.1H	3
13.5	20.2	E		K=H	1
13.9	22.8	A		N	3
15.0	12.3	A		N	1
14.9	18.0	F	2987	K=H	2
15.7	7.9	F	2988	K=H	1
16.0	13.0	K		K=1.5H	4
15.7	14.8	A		K=0.1H	3
15.2	15.2	E		K=H	1
15.2	15.7	A		K=0.5H	2
15.4	16.2	G		K=H	3
15.8	19.1	A		N	2
15.9	23.7	G3H		K=H	1
16.9	10.2	A		K=H	1
16.9	18.3	F	2989	K=H	2
16.4	20.9	F	2990	K=H	1
16.2	22.5	G3I		K=H	3
17.5	5.5	A		N	2
17.5	8.4	H		N	1
18.0	9.0	I		K=H	3



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

117

1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

3 <sup>h</sup> [h]	0.6 <sup>m</sup> [m]	10.2 <sup>s</sup>	+10 418	3 0.6	+10 14	7.3
3 27.1	10.6	+10 460	3 27.1	+10 34	8.2	
3 22.5	10.8	+10 452	3 22.5	+10 50	5.3	
3 20.7	10.9	+10 444	3 20.7	+10 54	7.0	
3 17.2	10.5	+10 438	3 17.2	+10 28	8.0	
3 5.1	10.7	+10 427	3 5.2	+10 44	8.0	
3 5.0	10.6	+10 425	3 5.0	+10 36	7.8	
3 27.5	10.9	+10 461	3 27.4	+10 54	8.3	
3 24.3	11.0	+11 487	3 24.3	+11 3	7.3	
3 8.1	11.1	+11 456	3 8.1	+11 5	8.0	
3 2.8	11.3	+11 445	3 2.7	+11 20	6.5	
3 24.5	11.8	+11 488	3 24.4	+11 52	8.5	
3 12.6	11.8	+11 462	3 12.6	+11 49	7.5	
3 33.6	12.1	+12 503	3 33.5	+12 9	8.0	
3 23.0	12.5	+12 486	3 22.9	+12 28	4.0	
3 19.3	12.2	+12 477	3 19.3	+12 14	7.0	
3 18.2	19.4(+)	+11 474	3 18.2	+11 58	8.2	
3 17.2	11.9(+)	+11 469	3 17.2	+11 59	7.7	
3 16.1	12.1	+12 473	3 16.2	+12 7	6.0	
3 10.3	12.3	+12 460	3 10.3	+12 18	7.0	
3 1.1	12.3	+12 445	3 1.1	+12 18	6.8	
3 28.8	12.8	+12 493	3 11.9	+12 49	8.7	
3 11.9	12.9	+12 467	3 11.9	+12 51	7.3	
3 6.5	12.5	+12 453	3 6.5	+12 33	8.3	
3 3.4	12.5	+12 452	3 3.4	+12 30	6.3	
3 38.5	13.0	+13 594	3 38.4	+ <del>12</del>	<del>13 4</del>	7.0
3 32.6	13.0	+13 581	3 32.5	+13 6	8.0	
3 31.2	13.5	+13 579	3 31.2	+13 26	7.0	

117

Oct. 1855

418	415	2	0.6	110	14	7.3
418	466	9	27.1	110	34	8.2
418	452	3	22.5	110	50	5.3
418	444	3	20.7	110	54	7.0
418	425	3	17.2	110	28	8.0
418	427	3	5.2	110	44	8.0
418	425	3	5.0	110	36	7.8
418	425	3	27.4	110	54	8.3
418	461	3	24.3	111	3	7.3
418	456	3	8.1	111	5	8.0
418	445	3	2.7	111	20	6.5
418	488	3	24.4	111	52	8.5
418	462	3	12.6	111	49	7.5
418	503	3	33.5	112	9	8.0
418	486	3	22.9	112	28	4.0
418	477	3	19.3	112	14	7.0
418	474	3	18.2	111	58	8.2
418	469	3	17.2	111	59	7.7
418	473	3	16.2	112	7	6.0
418	460	3	10.3	112	18	7.0
418	445	3	1.1	112	18	6.8
418	493	3	11.9	112	49	8.7
418	467	3	11.9	112	51	7.3
418	453	3	6.5	112	33	8.3
418	452	3	3.4	112	30	6.3
418	594	3	38.4	+ <del>12</del>	<del>13 4</del>	7.0
418	581	3	32.5	+13	6	8.0
418	579	3	31.2	+13	26	7.0

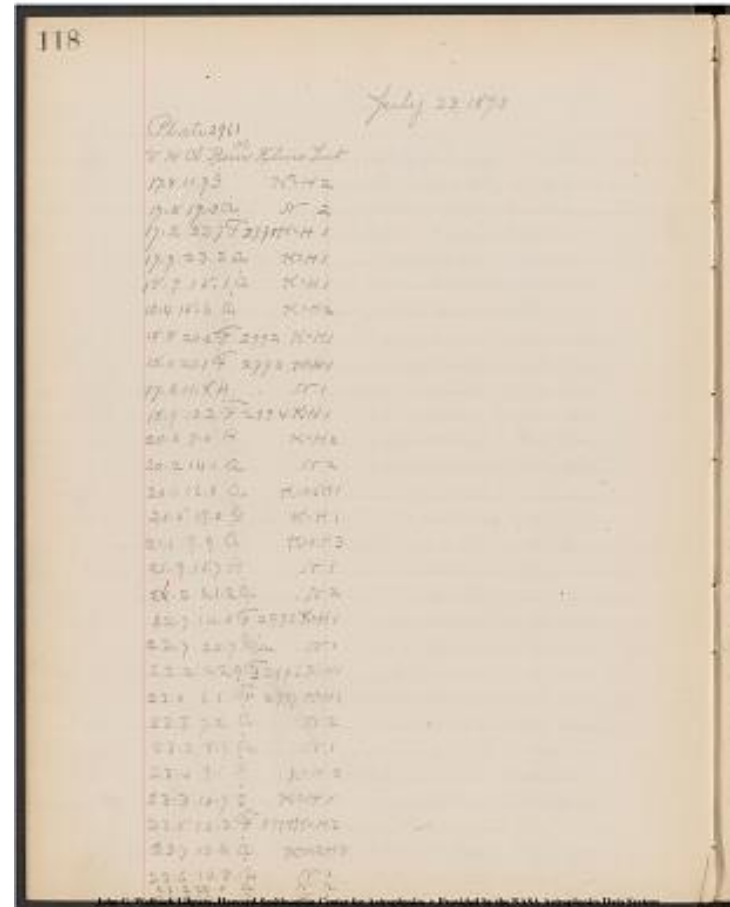
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

118

July 23, 1893

Plate 2961

[[6 columned table]]  
[V	H	Cl.	Rem. No.	K line	Int.]
 17.8|11.9|||K=H|2|  
 17.8|19.3|A||N|2|  
 17.2|22.7|F|2991|K=H|1|  
 17.7|23.2|A||K=H|1|  
 18.9|15.1|A||K=H|1|  
 18.4|15.6|A||K=H|2|  
 18.8|20.5|F|2992|K=H|1|  
 18.0|21.2|F|2993|K=H|1|  
 19.6|11.8|H||N|1|  
 18.9|13.2|F|2994|K=H|1|  
 20.6|9.5|H||K=H|2|  
 20.2|14.1|A||N|2|  
 20.1|16.0|A||K=0.5H|1|  
 20.5|19.0|G||K=H|1|  
 21.1|9.9|A||K=0.5H|3|  
 21.9|15.7|H||N|1|  
 22.7|14.0|F|2995|K=H|1|  
 22.7|20.7|Ma||N|1|  
 22.2|22.9|F|2996|K=H|1|  
 23.0|6.1|F|2997|K=H|1|  
 23.3|7.2|A||N|2|  
 23.2|8.8|A||N|1|  
 23.4|9.1|||K=H|3|  
 23.3|10.7|E||K=H|1|  
 23.5|12.2|F|2998|K=H|2|  
 23.7|13.8|A||K=0.2H|3|  
 23.6|14.8|A||N|1|  
 23.2|22.0|A||N|2|  
 23.2|22.1|A||N|1|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

1855

[6 columned table]

[R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn.]

3 25.3	+13.3	+13 568	3 25.3	+13 17	7.5
3 10.0	+13.3	+13 535	3 9.9	+13 19	7.0
3 3.0	+12.9	+12 450	3 3.0	+12 58	8.5
3 1.8	+13.2	+13 514	3 1.8	+13 15	8.3
3 18.4	+13.8	+13 550	3 18.4	+13 48	8.5
3 17.4	+13.6	+13 545	3 17.4	+13 34	8.0
3 7.2	+13.8	+13 529	3 7.3	+13 46	8.3
3 6.1	+13.3	+13 526	3 6.1	+13 22	8.8
3 25.5	+14.2	+14 575	3 25.5	+14 11	8.3
3 22.4	+13.8	+13 563	3 22.7	+13 48	8.5
3 30.3	+14.6	+14 588	3 30.3	+14 40	8.0
3 21.0	+14.5	+14 565	3 20.9	+14 29	7.3
3 16.7	+14.5	+14 559	3 16.7	+14 28	8.3
3 10.4	+14.7	+14 550	3 10.4	+14 39	7.3
3 29.7	+14.9	+14 586	3 29.7	+14 56	6.5
3 17.3	+15.3	+15 487	3 17.3	+15 18	8.0
3 6.0	+15.0	+15 450	3 6.1	+15 2	7.3
3 21.2	+15.7	+15 493	3 21.2	+15 42	8.0
3 7.0	+15.8	+15 452	3 7.0	+15 46	8.5
3 2.5	+15.4	+15 442	3 2.4	+15 26	8.0
3 37.5	+15.8	+15 529	3 37.4	+15 48	8.0
3 35.1	+15.9	+15 524	3 35.2	+15 56	7.9
3 31.8	+15.9	+15 516	3 31.8	+15 53	8.3
3 31.1	+16.0	+16 484	3 31.3	+15 46	0
3 28.0	+15.9	+15 507	3 27.9	+15 60	7.9
3 24.8	+16.1	+16 458	3 24.8	+16 6	7.3
3 21.5	+16.3	+16 450	3 21.5	+16 15	7.5
3 19.4	+16.1	+16 443	3 19.5	+16 9	8.3
3 4.2	+15.9	+15 447	3 4.3	+15 57	7.0
3 2.2	+16.3	+16 398	3 2.2	+16 15	8.0

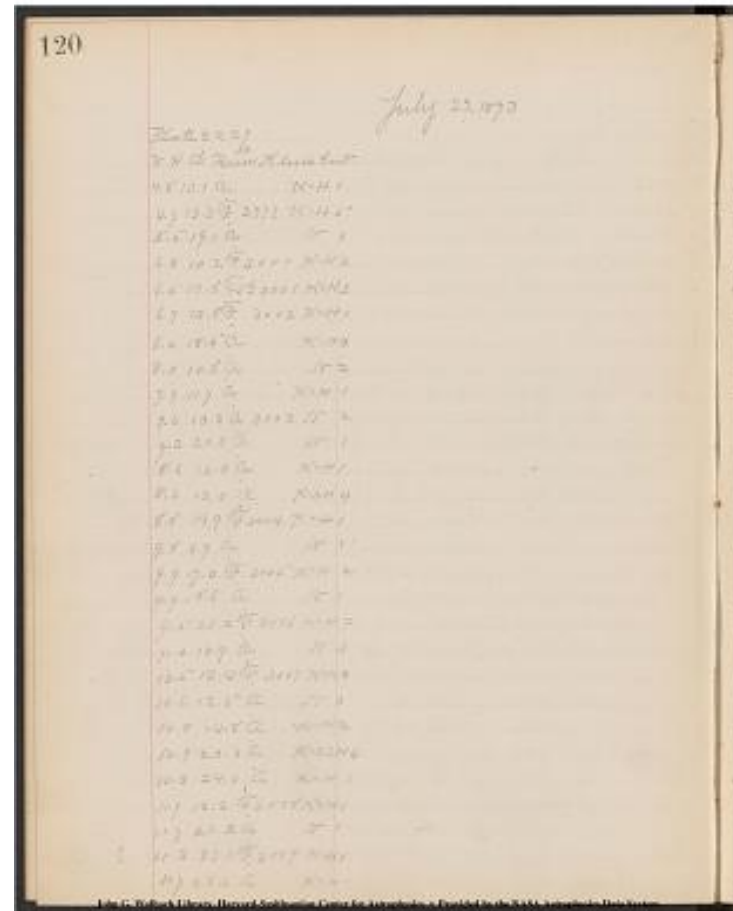
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

120

July 23, 1893

Plate 2227

[[6 columned table]]  
[V|H|C|Rem No. K line|Int.]  
---|---|---|---|---|---|  
4.8|13.1|A| |K=H|1|  
4.7|13.3|F|2999|K=H|5|  
5.5|19.1|A| |N|1|  
6.8|10.2|F|3000|K=H|2|  
6.5|10.8|F5G|3001|K=H|2|  
6.9|12.8|F|3002|K=H|1|  
6.4|18.5|A| |K=H|3|  
8.0|10.8|A| |N|2|  
7.9|11.7|A| |K=H|1|  
7.6|13.3|A|3003|N|2|  
7.3|20.0|A| |N|1|  
8.6|10.0|A| |K=H|1|  
8.6|13.0|A| |K=0.H|4|  
8.8|14.9|F|3004|K=H|1|  
9.8|6.9|A| |N|1|  
9.9|17.0|F|3005|K=H|2|  
9.9|18.6|A| |N|1|  
9.5|21.2|F|3006|K=H|2|  
11.0|10.9|A| |N|3|  
10.5|12.4|F|3007|K=H|2|  
10.6|12.5|A| |N|3|  
10.8|14.8|A| |K=H|2|  
10.9|20.3|A| |K=0.2H|4|  
10.8|24.0|A| |K=H|1|  
11.9|13.3|F|3008|K=H|1|  
11.9|21.2|A| |N|1|  
?11.2|33.1|F|3009|K=H|1|  
11.9|23.2|A| |K=H|1|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[6 columned table]

[R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn.]

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
4 <sup>h</sup> 42.5 <sup>m</sup> 42.5 <sup>s</sup> +6.7° +6.765 4 42.5 +6.43 8.0					
4 42.0 +6.7 +6.762 4 42.0 +6.42 3.3					
4 30.1 +7.0 +7.676 4 30.1 +7.1 7.0					
4 48.4 +7.7 +7.759 4 48.3 +7.40 6.8					
4 46.9 +7.5 +7.755 4 4 <del>6.9</del> 6 <del>7.5</del> 7.0 +7.33 5.7					
4 43.0 +7.7 +7.733 4 43.0 +7.45 7.5					
<u>4 31.2 +7.6</u> +7.680 4 31.2 +7.34 9.5					
<u>4 31.2 +7.6</u> +7.681 4 31.3 +7.35 5.8					
4 47.1 +8.3 +8.799 4 47.1 +8.22 7.3					
4 45.4 +8.3 +8.793 4 45.4 +8.19 8.0					
4 42.2 +8.1 +8.775 4 42.2 +8.10 8.0					
4 28.4 +7.9 +7.671 4 28.3 +7.56 8.2					
4 48.9 +8.6 +8.811 4 48.8 +8.36 7.6					
4 42.8 +8.7 +8.777 4 42.7 +8.40 5.0					
4 38.7 +8.7 +8.759 4 38.9 +8.45 7.5					
4 55.1 +9.2 +9.713 4 55.1 +9.10 8.0					
4 34.3 +9.4 +9.628 4 34.3 +9.22 7.3					
4 31.1 +9.3 +9.620 4 31.1 +9.22 9.0					
4 25.8 +9.1 +9.600 4 25.9 +9.6 6.8					
4 46.9 +9.9 +9.683 4 46.9 +9.56 5.3					
4 44.0 +9.6 +9.669 4 44.0 +9.38 7.8					
4 43.7 +9.7 +9.668 4 43.7 +9.44 6.2					
4 39.1 +9.8 +9.651 4 39.1 +9.47 7.5					
<u>4 27.7 +9.9</u> +9.606 4 27.6 +9.54 8.5					
<u>4 27.7 +9.9</u> +9.607 4 27.7 +9.53 4.3					
4 20.1 +9.7 +9.584 4 20.1 +9.44 7.8					
4 42.2 +10.3 +10.651 4 42.2 +10.21 8.2					
4 25.8 +10.2 +10.595 4 25.8 +10.13 8.2					
4 21.7 +10.2 +10.583 4 21.8 +10.12 7.0					



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



122

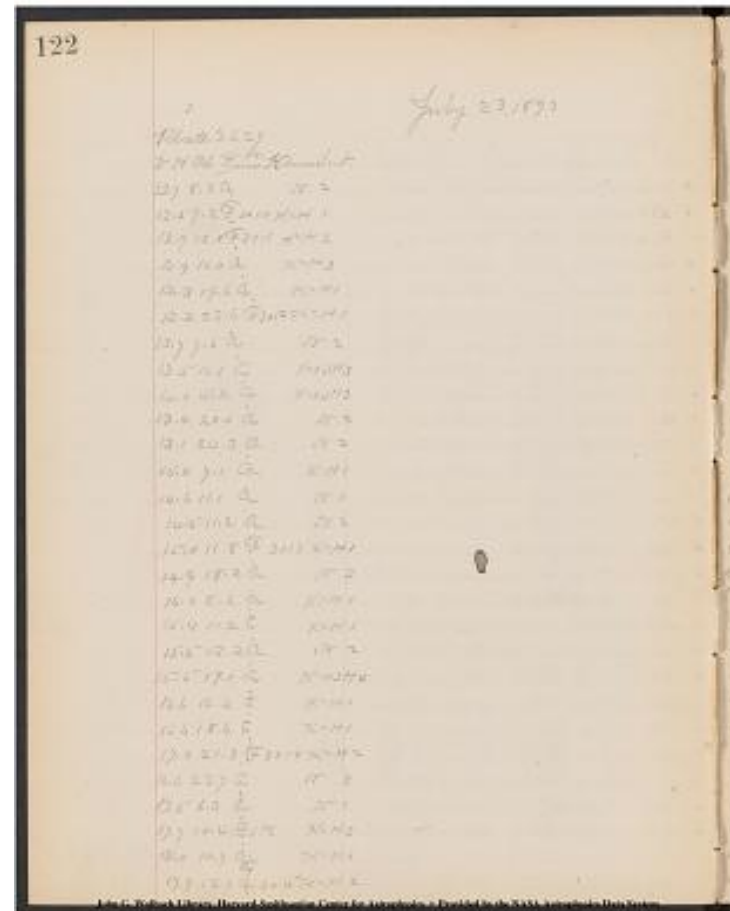
July 23, 1893

Plate 2227

[[6 columned table]]

[V|H|Cl.|Rem No.|K line|Int.]

12.4	8.2	A		N		2
12.5	9.2	F		3010		K = H 1
12.9	12.8	F		3011		K = H 2
12.9	16.0	A		K = H		3
12.3	19.6	A		K = H		1
12.2	22.6	F		3012		K = H 1
13.4	4.6	A		N		2
13.5	11.1	A		K = 0.3H		3
14.0	15.2	A		K = 0.3H		3
13.4	20.0	A		N		2
13.1	24.3	A		N		2
15.0	4.1	A		K = H		1
14.6	11.1	A		N		1
14.5	11.2	A		N		2
15.0	16.8	F		3013		K = H 1
14.9	18.2	A		N		3
16.0	8.2	A		K = H		1
15.4	11.2	E		K = H		1
15.5	12.2	A		N		2
15.5	19.1	A		K = 0.3H		4
16.6	16.2	E		K = H		1
16.6	18.6	E		K = H		1
17.0	21.3	F		3014		K = H 2
16.6	23.7	A		N		3
17.5	6.3	A		N		1
17.7	10.4	G5K		K = H		3
18.0	10.7	A		K = H		1
17.9	12.7	<del>[[A </del>		<del>[[F </del>		3015 K = H 2]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

123

1855

[6 columned table]

[R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn.]

----	----	----	----	----	----
4 52.8	+10.7	+10° 688	4 52.7	+10° 42'	7.5
4 49.3	+10.6	+10 676	4 49.2	+10 34	8.4
4 43.2	+10.8	+10 654	4 43.2	+10 49	7.5
4 36.5	+10.9	+10 621	4 36.4	+10 53	5.6
4 29.1	+10.5	+10 598	4 29.2	+10 33	8.3
4 22.9	+10.4	+10 588	4 23.0	+10 26	7.8
4 53.8	+11.2	+11 702	4 53.8	+11 11	7.5
4 46.8	+11.2	+11 675	4 46.8	+11 11	6.3
4 37.9	+11.4	+11 646	4 38.0	+11 26	5.7
4 28.4	+11.1	+11 632	4 28.3	+11 7	6.7
4 19.4	+10.9	+10 577	4 19.5	+10 53	6.4
4 54.9	+11.8	+11 704	4 54.9	+11 50	7.5
4 46.7	+11.7	+11 674	4 46.7	+11 42	8.5
4 46.5	+11.7	+11 672	4 46.6	+11 48	7.5
4 34.7	+11.9	+11 643	4 34.7	+11 55	7.8
4 32.0	+11.9	+11 639	4 32.0	+11 55	6.0
4 52.6	+12.4	+12 699	4 52.6	+12 25	8.3
4 46.5	+12.1	+12 673	4 46.6	+12 7	7.5
4 44.7	+12.1	+12 667	4 44.6	+12 9	7.2
4 30.1	+12.2	+12 618	4 30.1	+12 13	4.0
4 35.9	+12.7	+12 638	4 35.9	+12 43	8.0
4 31.0	+12.7	+12 620	4 31.0	+12 43	6.8
4 25.6	+12.9	+12 608	4 25.6	+12 56	7.0
4 20.7	+12.7	+12 598	4 20.7	+12 43	5.0
4 56.7	+13.1	+13 790	4 56.7	+13 6	7.7
4 48.2	+13.3	+13 740	4 48.2	+13 17	5.0
4 47.7	+13.4	+13 737	4 47.7	+13 26	8.5
4 43.5	+13.4	+13 728	4 43.7	+13 24	6.8

\* BD + 12° 700 superposed on BD + 12° 699.

123

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

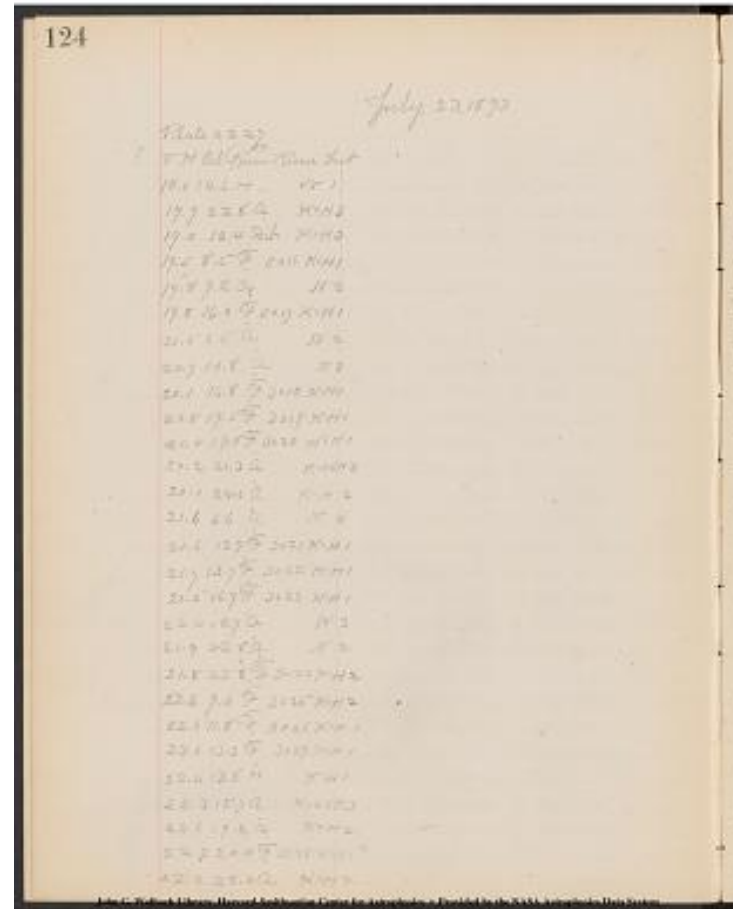
124

July 23, 1893

Plate 2227

[[6 columned table]]  
[V	H	Cl.	Rem No.	K line	Int.]
18.0|14.6|H| |N|1|  
17.9|22.8|A| |K=H|3|  
19.0|12.4|Mi.| |K=H|3|  
19.5|8.5|F|3016|K=H|1|  
19.8|9.2|A| |N|3|  
19.8|16.0|F|3017|K=H|1|  
20.5|6.5|A| |N|2|  
20.7|10.8|A| |N|3|  
20.1|16.8|F|3018|K=H|1|  
20.8|19.5|F|3019|K=H|1|  
21.0|19.8|F|3020|K=H|1|  
20.2|21.3|A| |K=0.5H|3|  
20.1|24.0|A| |K=H|2|  
21.6|6.6|A| |N|4|  
21.6|12.9|F|3021|K=H|1|  
21.9|13.9|F|3022|K=H|1|  
21.5|16.9|F|3023|K=H|1|  
22.0|18.7|A| |N|3|  
21.9|22.8|A| |N|2|  
21.8|23.8|F|3024|K=H|2|  
22.6|9.0|F|3025|K=H|1|  
22.6|11.8|F|3026|K=H|1|  
23.0|13.3|F|3027|K=H|1|  
22.4|13.8|H| |K=H|1|  
22.3|18.9|A| |K=0.5H|3|  
22.6|19.2|A| |K=H|2|  
22.3|20.0|F|3028|K=H|1|  
22.2|22.3|A| |K=H|2|

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

125

1855

[6 columned table]

[R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn.]

4 22.4	+13.4	+13 690	4 22.5	+13 25	5.7
4 44.4	+14.0	+14 777	4 44.3	+14 0	5.0
4 52.4	+14.1	+14 804	4 52.3	+14 10	6.7
4 50.7	+14.3	+14 795	4 50.8	+14 20	8.2
4 50.7	+14.3	+14 796	4 50.8	+14 20	6.5
4 36.6	+14.4	+14 745	4 36.5	+14 22	8.0
4 56.6	+14.7	+14 825	4 56.5	+14 40	7.2
4 47.4	+14.8	+14 787	4 47.6	+14 49	6.5
4 34.8	+14.6	+14 738	4 34.8	+14 32	6.7
4 29.3	+14.9	+14 728	4 29.3	+14 51	7.9
4 28.8	+14.9	+14 726	4 28.7	+14 58	7.5
4 25.6	+14.5	+14 720	4 25.7	+14 32	5.4
4 20.1	+14.4	+14 702	4 20.2	+14 24	6.5
4 56.3	+15.2	+15 732	4 56.3	+15 12	5.3
4 43.1	+15.2	+15 695	4 43.1	+15 12	8.0
4 41.8	+15.3	+15 689	4 41.7	+15 16	7.5
4 34.8	+15.2	+15 670	4 34.8	+15 13	7.5
4 30.9	+15.6	+15 665	4 30.9	+15 30	5.3
4 22.3	+15.4	+15 639	4 22.4	+15 23	5.5
4 22.0	+15.3	+15 636	4 21.9	+15 19	6.0
4 51.4	+15.7	+15 713	4 51.4	+15 42	7.0
4 45.6	+15.7	+15 699	4 45.6	+15 41	8.0
4 42.5	+15.9	+15 692	4 42.5	+15 58	7.5
4 41.5	+15.7	+15 687	4 41.4	+15 38	6.5
4 31.0	+15.7	+15 666	4 31.0	+15 38	5.3
4 29.9	+15.8	+15 661	4 29.9	+15 45	6.5
4 28.5	+15.6	+15 656	4 28.4	+15 34	7.0
4 23.4	+15.6	+15 645	4 23.6	+15 32	6.5

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

125

4 22.4 +13.4 +13 690 4 22.5 +13 25 5.7

4 44.4 +14.0 +14 777 4 44.3 +14 0 5.0

4 52.4 +14.1 +14 804 4 52.3 +14 10 6.7

4 50.7 +14.3 +14 795 4 50.8 +14 20 8.2

4 50.7 +14.3 +14 796 4 50.8 +14 20 6.5

4 36.6 +14.4 +14 745 4 36.5 +14 22 8.0

4 56.6 +14.7 +14 825 4 56.5 +14 40 7.2

4 47.4 +14.8 +14 787 4 47.6 +14 49 6.5

4 34.8 +14.6 +14 738 4 34.8 +14 32 6.7

4 29.3 +14.9 +14 728 4 29.3 +14 51 7.9

4 28.8 +14.9 +14 726 4 28.7 +14 58 7.5

4 25.6 +14.5 +14 720 4 25.7 +14 32 5.4

4 20.1 +14.4 +14 702 4 20.2 +14 24 6.5

4 56.3 +15.2 +15 732 4 56.3 +15 12 5.3

4 43.1 +15.2 +15 695 4 43.1 +15 12 8.0

4 41.8 +15.3 +15 689 4 41.7 +15 16 7.5

4 34.8 +15.2 +15 670 4 34.8 +15 13 7.5

4 30.9 +15.6 +15 665 4 30.9 +15 30 5.3

4 22.3 +15.4 +15 639 4 22.4 +15 23 5.5

4 22.0 +15.3 +15 636 4 21.9 +15 19 6.0

4 51.4 +15.7 +15 713 4 51.4 +15 42 7.0

4 45.6 +15.7 +15 699 4 45.6 +15 41 8.0

4 42.5 +15.9 +15 692 4 42.5 +15 58 7.5

4 41.5 +15.7 +15 687 4 41.4 +15 38 6.5

4 31.0 +15.7 +15 666 4 31.0 +15 38 5.3

4 29.9 +15.8 +15 661 4 29.9 +15 45 6.5

4 28.5 +15.6 +15 656 4 28.4 +15 34 7.0

4 23.4 +15.6 +15 645 4 23.6 +15 32 6.5

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

126

July 23, 1893

Plate 2227

[[6 columned table]]

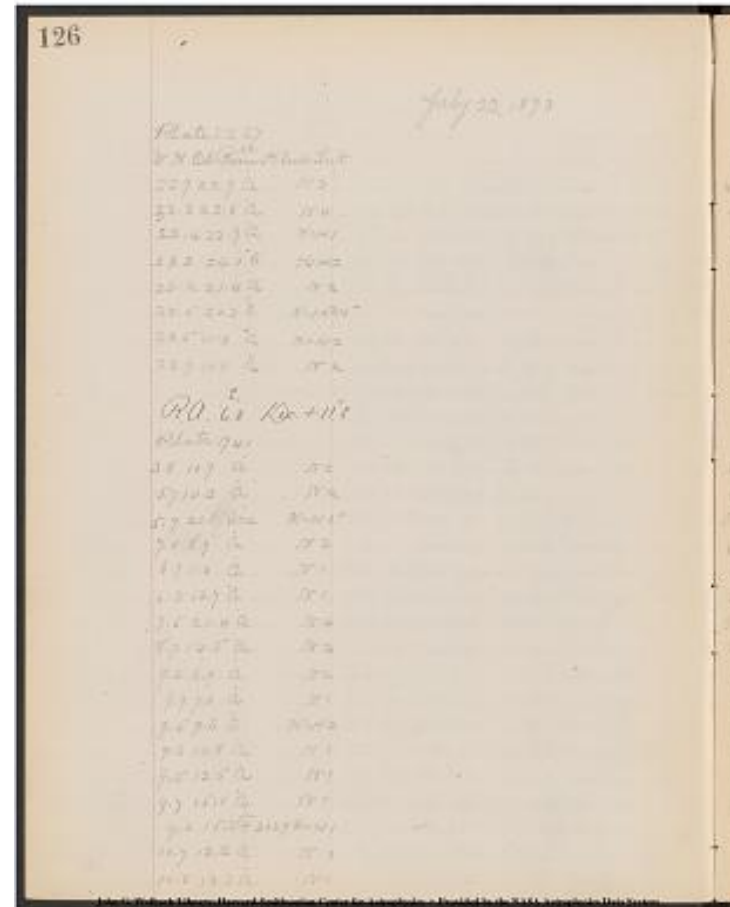
[V|H|Cl.|Rem No.|K line|Int.]

22.9	22.9	A		N	3
32.3	23.8	A		N	4
22.4	23.9	A		K=H	1
23.3	24.0	E		K=H	2
23.2	21.4	A		N	2
23.5	20.3	G		K=1.5H	5
23.5	11.3	A		K=H	2
23.9	11.1	A		N	2

R.A. 6.0<sup>h</sup>. Dec. +11.°8

Plate 1741

3.8	10.9	A		N	2
5.7	10.3	A		N	2
5.9	21.1	Ma		K=H	5
7.0	8.7	A		N	2
6.9	11.0	A		N	1
6.3	12.9	A		N	1
7.5	21.4	A		N	4
8.7	14.5	A		N	2
9.3	6.9	A		N	2
9.9	7.0	A		N	1
9.5	9.6	E		K=H	2
9.6	10.8	A		N	1
9.6	10.8	A		N	1
9.5	12.5	A		N	1
9.7	15.1	A		N	1
9.6	15.2	F	3029	K=H	1
10.7	12.2	A		N	1
10.6	12.3	A		N	1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[9 column table]

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

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

4|22.2|+15.9|637|4|22.3|+15|53|5.0  
 4|20.5|+15.5|632|4|20.4|+15|31|4.0  
 4|20.4|+15.6|631|4|20.3|+15|39|4.0  
 4|20.1|+16.1|605|4|20.2|+16|2|5.0  
 4|25.4|+16.0|621|4|25.3|+16|1|7.5  
 4|27.5|+16.2|629 630|4|27.6 27.7|+16 +16|13 14|1.1 9.5  
 4|46.6|+16.1|667|4|46.6|+16|8|7.5  
 4|47.0|+16.4|668|4|47.0|+16|24|7.0  
 6|7.9|+6.1|1172|6|7.9|+6|6|7.3  
 6|9.2|+7.1|1216|6|9.2|+7|6|7.5  
 5|47.3|+7.3|1055|5|47.3|+7|23|var ?  
 6|12.5|+7.8|1243|6|12.4|+7|47|7.2  
 6|7.7|+7.7|1207|6|7.8|+7|42|8.0  
 6|4.1|+7.4|1178|6|4.1|+7|26|7.4  
 5|46.5|+8.0|1107|5|46.6|+8|1|8.0  
 6|1.0|+8.7|1202|6|0.9|+8|42|7.5  
 6|16.1|+8.9|1313 1316|6|16.1 16.1|+8 +8|58 58|8.8 6.4  
 6|16.1|+9.2|1223|6|16.1|+9|14|7.5  
 6|10.7|+9.1|1184|6|10.7|+9|6|7.0  
 6|8.5|+9.1|1166|6|8.4|+9|4|8.1  
 6|5.0|+9.1|1134|6|5.0|+9|5|8.3  
 5|59.4|+9.2|1094|5|59.4|+9|12|8.2  
 5|59.2|+9.2|1092|5|59.2|+9|11|8.0  
 6|5.5|+9.7|1141|6|5.5|+9|39|7.9  
 6|5.3|+9.7|1138|6|5.3|+9|39|8.2

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

128

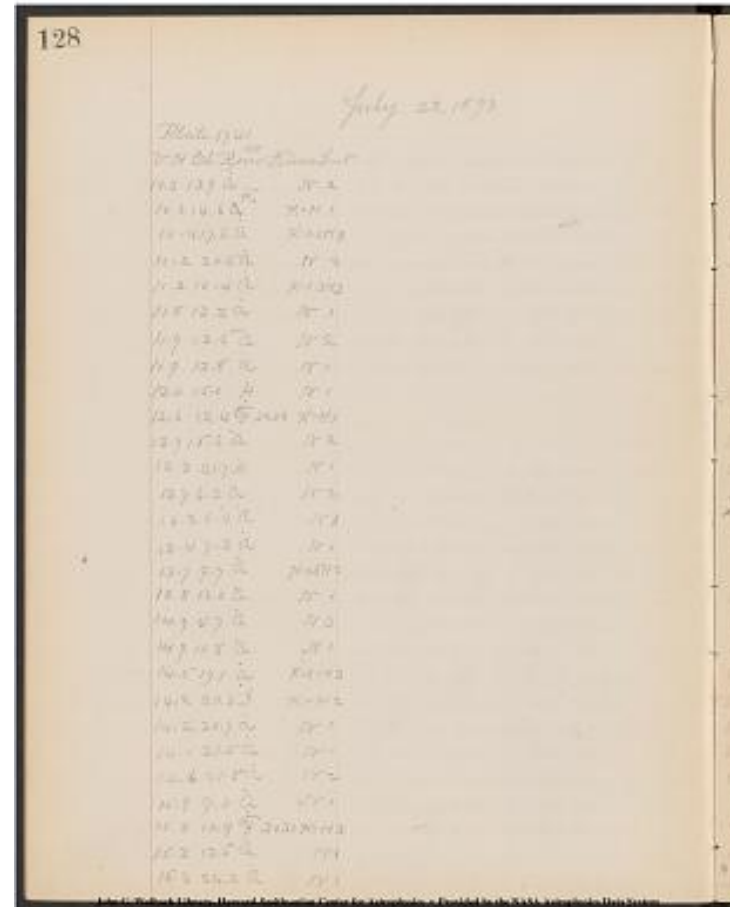
July 23, 1893

Plate 1741

[[table]]

[V|H|Cl.|Rem No.|K line|Int.]

10.3	13.9	A		N 2
10.6	14.6	<del>A</del>	<del>A</del>	<del>K</del>  K=H 1
10.4	17.6	A		K=0H 4
10.2	20.5	A		N 2
11.2	10.4	A		H=0H 3
11.8	12.2	A		N 1
11.9	12.5	A		N 2
11.9	12.8	A		N 1
12.0	15.0	H		N 1
12.6	12.4	F	3030	K=H 1
12.7	15.6	A		N 2
12.3	21.7	H		N 1
13.7	6.2	A		N 2
13.2	6.4	A		N 1
13.4	7.3	A		N 1
13.7	9.7	A		K=0H 2
13.8	10.0	A		N 1
14.9	8.7	A		N 3
14.9	11.8	A		N 1
14.5	17.1	A		K=0.1H 3
14.2	20.3	I		K=H 2
14.2	20.7	A		N 1
14.1	21.5	A		N 1
14.6	21.5	A		N 2
15.9	9.3	A		N 1
15.8	10.9	F	3031	K=H 3
15.3	13.5	A		N 1
15.2	24.2	A		N 1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

[R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn.]

6 2.0	+9.5	+9 1112	6 2.0	+9 29	8.0
6 0.7	+9.7	+9 1107	6 0.7	+9 39	8.4
5 54.4	+9.6	+9 1064	5 54.4	+9 39	5.0
5 48.5	+9.5	+9 1016	5 48.5	+9 29	6.5
6 9.1	+9.9	+9 1173	6 9.1	+9 59	6.3
6 5.5	+10.3	+10 1054	6 5.5	+10 17	8.1
6 5.0	+10.3	+10 1048	6 5.0	+10 20	6.9
6 4.4	+10.4	+10 1044	6 4.3	+10 22	7.5
5 59.5	+10.5	+10 1015	5 59.6	+10 28	7.3
6 5.2	+10.7	+10 1050	6 5.2	+10 40	6.5
5 58.4	+10.8	+10 1004	5 58.4	+10 45	7.6
5 46.1	+10.5	+10 927	5 46.2	+10 33	6.5
6 17.8	+11.2	+11 1169	5 17.8	+10 12	7.5
6 17.3	+10.9	+10 1131	6 17.3	+10 53	7.8
6 15.5	+11.0	+11 1151	6 15.6	+11 0	8.0
6 10.8	+11.2	+11 1110	6 10.8	+11 13	7.8
5 57.6	+11.2	+11 1022	5 57.6	+11 13	8.2
6 12.8	+11.8	+11 1128	6 12.8	+11 49	7.5
6 6.4	+11.8	+11 1076	6 6.4	+11 50	7.6
5 55.3	+11.7	+11 1009	5 55.3	+11 41	6.5
5 48.8	+11.5	+11 975	5 48.7	+11 30	6.5
5 48.0	+11.5	+11 971	5 48.0	+11 30	8.2
5 46.5	+11.5	+11 965	5 46.5	+11 28	7.9
5 46.5	+11.8	+11 964	5 46.4	+11 44	7.2
6 11.5	+12.3	+12 1110	6 11.6	+12 21	8.0
6 8.4	+12.3	+12 1084	6 8.3	+12 18	6.1
6 2.9	+12.0	+12 1049	6 2.9	+12 2	8.0
*5 40.8	+11.9	+11 945	5 40.7	+11 56	7.5

\*BD+12°908 superposed on BD +11°99999945. \*BD+10° 1130

superposed on BD+10° 1131.

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

• Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



July 23, 1893

Plate 1741

[[6 column table]]

V | H | Cl. | No Rim. | K line | Int.

16.2	7.7	A		N	1
16.5	7.9	A		K=H	2
17.0	8.3	H		N	1
16.8	9.6	A		N	2
16.8	9.7	A		N	1
16.4	11.3	A		N	3
16.3	11.8	A		N	1
16.2	15.9	A		N	1
16.4	17.2	A		N	1
16.5	17.6	A		N	1
16.4	18.7	A		N	2
16.7	19.3	F	3032	K=H	2
16.7	19.7	A		N	1
16.4	24.0	A		N	3
17.7	5.9	F	3033	K=H	1
17.4	18.1	A		N	1
18.2	9.5	F	3034	K=H	1
18.9	11.6	B	3035	N	3
18.6	13.0	A		N	1
18.4	13.4	A		K=0.3H	2
18.5	13.7	A		N	2
18.8	13.9	A		K=H	1
18.8	14.2	A		K=H	1
19.0	14.9	A		N	2
19.0	20.8	F	3036	K=H	1
20.0	10.2	A		K=0.3H	2
19.4	10.5	A		N	2
19.5	13.2	B	3037	N	4

130

July 23, 1893

Plate 1741

[[6 column table]]

V | H | Cl. | No Rim. | K line | Int.

16.2	7.7	A		N	1
16.5	7.9	A		K=H	2
17.0	8.3	H		N	1
16.8	9.6	A		N	2
16.8	9.7	A		N	1
16.4	11.3	A		N	3
16.3	11.8	A		N	1
16.2	15.9	A		N	1
16.4	17.2	A		N	1
16.5	17.6	A		N	1
16.4	18.7	A		N	2
16.7	19.3	F	3032	K=H	2
16.7	19.7	A		N	1
16.4	24.0	A		N	3
17.7	5.9	F	3033	K=H	1
17.4	18.1	A		N	1
18.2	9.5	F	3034	K=H	1
18.9	11.6	B	3035	N	3
18.6	13.0	A		N	1
18.4	13.4	A		K=0.3H	2
18.5	13.7	A		N	2
18.8	13.9	A		K=H	1
18.8	14.2	A		K=H	1
19.0	14.9	A		N	2
19.0	20.8	F	3036	K=H	1
20.0	10.2	A		K=0.3H	2
19.4	10.5	A		N	2
19.5	13.2	B	3037	N	4

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
6 <sup>h</sup> 14.7 <sup>m</sup> 14.7 <sup>s</sup> +12.4°	+12 1124	6 14.7	+12 27	8.5	
6 14.5	+12.7	+12 1123	6 14.5	+12 38	6.8
6 13.6	+12.9	+12 1119	6 13.6	+12 56	8.0
6 10.9	+12.8	+12 1105	6 11.0	+12 48	7.9
6 10.8	+12.8	+12 1103	6 10.8	+12 46	8.3
6 7.6	+12.6	+12 1081	6 7.6	+12 36	6.0
6 6.4	+12.5	+12 1074	6 6.5	+12 32	8.6
5 57.9	+12.5	+12 1013	5 57.9	+12 29	8.2
5 55.0	+12.6	+12 1000	5 55.1	+12 37	8.0
5 54.5	+12.7	+12 994	5 54.5	+12 40	8.2
5 52.2	+12.6	+12 980	5 52.1	+12 37	7.5
5 50.8	+12.8	+12 968	5 50.7	+12 47	6.5
5 50.0	+12.9	+12 963	5 49.9	+12 52	8.5
5 41.5	+12.6	+12 912	5 41.4	+12 36	5.1
6 18.5	+13.2	+13 1250	6 18.5	+13 11	7.0
5 53.3	+13.1	+13 1076	5 53.3	+13 6	7.8
<u>6 11.2</u>	<u>+13.5</u>	<u>+13 1199</u>	<u>6 11.2</u>	<u>+13 29</u>	<u>7.5</u>
<u>6 11.2</u>	<u>+13.5</u>	<u>+13 1200</u>	<u>6 11.3</u>	<u>+13 30</u>	<u>8.5</u>
6 6.9	+13.9	+13 11 <del>73</del>	6 6.9	+13 53	6.3
6 4.0	+13.7	+13 1158	6 4.0	+13 43	8.1
6 3.3	+13.7	+13 1151	6 3.3	+13 40	6.5
6 2.6	+13.7	+13 1147	6 2.6	+13 40	7.2
6 2.1	+13.8	+13 1139	6 2.1	+13 51	7.8
6 1.7	+13.8	+13 1135	6 1.6	+13 47	8.3
6 0.4	+13.9	+13 1224	6 0.3	+13 59	7.7
<u>5 47.7</u>	<u>+13.9</u>	<u>+13 1036</u>	<u>5 47.8</u>	<u>+13 55</u>	<u>7.0</u>
6 9.8	+14.4	+14 1235	6 9.8	+14 26	6.0
6 9.3	+14.1	+14 1233	6 9.3	+14 6	7.0
6 3.8	+14.2	+14 1187	6 3.7	+14 14	4.8

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

132

July 23, 1893

Plate 1741

[[6 columned table]]  
 [VH|Cl.|Rem No.|K line|Int.]

19.9	16.5	F	3038	K=H 1
19.4	22.6	A		N 3
20.0	23.4	A		N 4?
19.7	23.6	F		K=H 1
20.7	8.8	A		N 1
20.6	9.3	H		N 1
20.4	11.9	A		N 2
20.1	12.1	A		N 2
20.9	14.2	A		N 1
20.6	15.2	B	3039	N 4
23.0	10.8	A		N 1
22.1	16.4	A		N 1
23.4	9.6	F	3040	K=H 1
23.5	11.6	A		N 3
23.4	13.3	B	3041	N 3
23.9	20.5	A		N 1

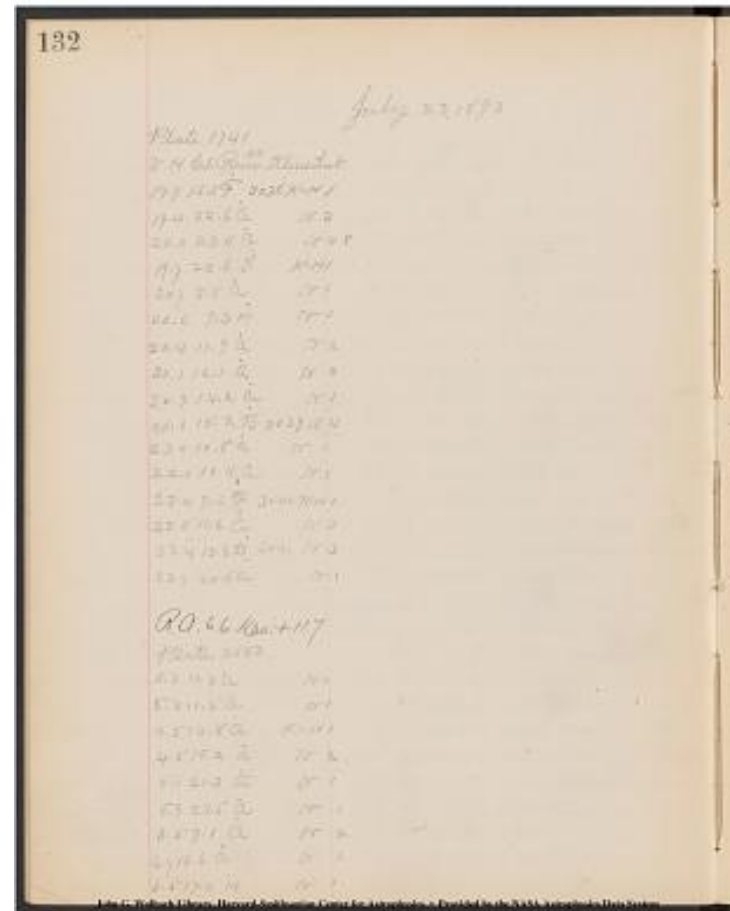
R.A. 66 Dec. +11.7

Plate 2553

[[6 columned table]]

5.3	11.3	A		S 1
5.3	11.5	A		S 1
4.5	14.8	A		K=H 1
4.5	18.2	A		S 2
5.1	21.3	A		S 1
5.9	23.5	A		S 1
6.5	9.1	A		S 2
6.7	16.6	A		S 1
6.5	17.4	H		S 1

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

133

1855

[[6 columned table]]

[R.A.|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.]

5<sup>h</sup>[[h]]56.8<sup>m</sup>[[m]]+14.4<sup>s</sup>+14 1136|5 56.7|+14 24|7.5

5 44.0|+14.1|+14 1060|5 44.1|+14 7|6.0

5

42.2[[~~5~~]]2[[~~5~~]]5|+14.2[[~~5~~]]3[[~~5~~]]4|+14 1047|5 42.6|+14 24|7.5

5 42.2|+14.3|+14 1041|5 42.2|+14 15|5.7

6 12.8|+14.8|+14 1254|6 12.7|+14 46|7.7

6 11.8|+14.7|+14 1247|6 11.8|+14 42|5.8

6 6.4|+14.6|+14 1213|6 6.4|+14 38|7.7

6 6.0|+14.5|+14 1211|6 6.0|+14 32|8.0

6 1.6|+14.9|+14 1170|6 1.6|+14 52|8.0

5 59.3|+14.8|+14 1152|5 59.3|+14 47|4.0

6 8.8|+15.9|+15 1139|6 8.8|+15 54|7.5

5 57.0|+15.5|+15 1054|5 56.9|+15 28|7.7

6 11.3|+16.0|+16 1091|6 11.3|+16 4|6.6

6 7.0|+16.2|+16 1060|6 7.1|+16 10|5.7

6 3.4|+16.1|+16 1035|6 3.7|+16 9|5.8

5 48.5|+16.4|+16 926|5 48.5|+16 20|7.5

6 46.8|6.9|+6 1432|6 46.9|+6 54|7.9

6 46.4|6.8|+6 ~~1384~~|6 46.4|+6 52|8.2

1428|6 46.4|+6 52|8.2

6 40.0|6.4|+6 1384|6 40.0|+6 28|8.7

6 32.8|6.5|+6 1338|6 32.7|+6 30|7.0

6 26.5|6.8|+6 1288|6 26.6|+6 48|8.0

6 22.0|7.2|+7 1312|6 22.0|+7 14|8.5

6 51.4|7.5|+7 1544|6 51.5|+7 31|7.0

6 36.1|7.7|+7 1425|6 36.1|+7 38|8.4

6 34.4|7.5|+7 1409|6 34.4|+7 32|7.3

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

• Provided by the NASA Astrophysics Data System

133

R.A.	Dec.	Mag.
5 <sup>h</sup> 56.8 <sup>m</sup> 14.4 <sup>s</sup>	1136	5.56.7
5 44.0	14.1	14 1060
5 44.1	14.7	6.0
42.2	14.3	14 1041
5 42.2	14.15	5.7
6 12.8	14.8	14 1254
6 12.7	14.46	7.7
6 11.8	14.7	14 1247
6 11.8	14.42	5.8
6 6.4	14.6	14 1213
6 6.4	14.38	7.7
6 6.0	14.5	14 1211
6 6.0	14.32	8.0
6 1.6	14.9	14 1170
6 1.6	14.52	8.0
5 59.3	14.8	14 1152
5 59.3	14.47	4.0
6 8.8	15.9	15 1139
6 8.8	15.54	7.5
5 57.0	15.5	15 1054
5 56.9	15.28	7.7
6 11.3	16.0	16 1091
6 11.3	16.4	6.6
6 7.0	16.2	16 1060
6 7.1	16.10	5.7
6 3.4	16.1	16 1035
6 3.7	16.9	5.8
5 48.5	16.4	16 926
5 48.5	16.20	7.5
6 46.8	6.9	6 1432
6 46.9	6.54	7.9
6 46.4	6.8	<del>1384</del>
6 46.4	6.52	8.2
6 40.0	6.4	6 1384
6 40.0	6.28	8.7
6 32.8	6.5	6 1338
6 32.7	6.30	7.0
6 26.5	6.8	6 1288
6 26.6	6.48	8.0
6 22.0	7.2	7 1312
6 22.0	7.14	8.5
6 51.4	7.5	7 1544
6 51.5	7.31	7.0
6 36.1	7.7	7 1425
6 36.1	7.38	8.4
6 34.4	7.5	7 1409
6 34.4	7.32	7.3

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

134

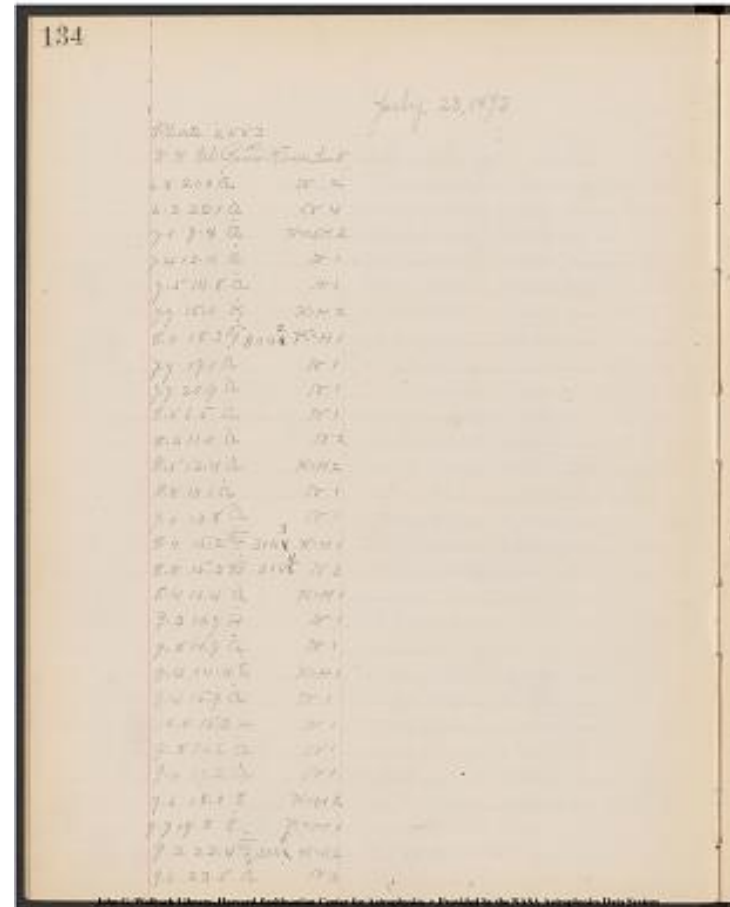
July 23, 1893

Plate 2553

[[6 columned table]]

[V|H|Cl.|Rem No.|K line|Int.]

V	H	Cl.	Rem No.	K line	Int.
6.8	21.0	A		N 2	
6.3	22.1	A		N 4	
7.1	19.4	A		K=O 2	
7.4	12.4	A		N 1	
7.5	14.8	A		N 1	
7.7	15.0	K		K=H 2	
8.0	18.3	F	304	<del>3</del> 2	K=H 1
7.7	19.1	A		N 1	
7.7	20.9	A		N 1	
8.5	6.5	A		N 1	
8.4	11.0	A		N 2	
8.5	12.4	A		K=H 2	
8.8	13.1	A		N 1	
9.0	13.8	A		N 1	
8.4	15.2	F	304	<del>4</del> 3	K=H 1
8.8	15.3	B	304	<del>5</del> 4	N 3
8.4	10.4	A		K=H 1	
9.3	10.7	H		N 1	
9.8	10.9	A		N 1	
9.4	10.4	E		K=H 1	
9.4	15.9	A		N 1	
10.0	15.3	H		N 1	
9.8	16.6	A		N 1	
9.4	17.2	A		N 1	
9.6	18.0	E		K=H 2	
9.9	19.8	E		K=H 1	
9.2	22.4	F	304	<del>6</del> 5	K=H 2
9.6	23.5	A		N 3	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855.

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

6 26.9	7.7	+7° 1357	6 <sup>h</sup> 26.9 <sup>m</sup>	+7° 41'	7.5
6 25.1	7.4	+7 1337	6 25.1	+7 26	5.0
6 50.8	7.8	+7 1539	6 50.8	+7 49	7.0
6 44.8	7.9(+)	+7 1493	6 44.8	+7 60	8.1
*6 39.9	8.	<del>2</del>	<del>0</del>	+8 1501	6
<del>3</del>	<del>40.0</del>	+8 2	8.1		
6 39.4	8.2	+8 1496	6 39.5	+8 11	5.3
6 32.5	8.2	+8 1438	6 32.5	+8 17	8.5
6 30.9	8.1	+8 1425	6 31.0	+8 5	8.3
6 27.4	8.1	+8 1406	6 27.4	+8 7	8.6
6 56.7	8.5	+8 1635	6 56.6	+8 28	8.2
6 47.7	8.5	+8 1562	6 47.7	+8 30	6.8
6 44.9	8.6	+8 1543	6 44.9	+8 33	6.2
6 43.4	8.7	+8 1531	6 43.4	+8 41	8.8
6 42.0	8.8	+8 1517	6 42.0	+8 48	8.0
6 38.8	8.5	+8 1487	6 38.8	+8 30	7.8
6 38.6	8.7	+8 1486	6 38.6	+8 44	6.0
6 36.6	8.4	+8 1469	6 36.5	+8 27	8.5
6 48.4	8.9	+8 1568	6 48.3	+8 55	7.5
6 47.7	9.2	+9 1439	6 47.8	+9 10	8.3
6 40.9	9.0	+9 1393	6 40.8	+9 1	7.5
6 37.4	8.9	+8 1477	6 37.4	+8 58	8.3
6 38.5	9.3	+9 1382	6 38.6	+9 21	7.7
<del>6 35.9</del>	<del>9.2</del>	<del>+9 1369</del>	<del>6 36.0</del>	<del>+9</del>	<del>12</del>
6 34.8	8.9(+)	+8 1459	6 34.8	+8 59	8.4
6 33.3	9.1	+9 1345	6 33.2	+9 7	7.0
6 29.6	9.3	+9 1306	6 29.6	+9 15	7.8
6 24.5	8.9	+8 1379	6 24.4	+8 55	7.5
6 22.1	9.1	+9 1259	6 22.2	+9 7	6.9

\*BD. +8° 1499 & 1500 superposed on BD. +8° 1501. BD. +8° 1488 superposed on BD +8° 1487. BD +9° 1368 & 1371 superposed on BD +9° 1369.

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

136

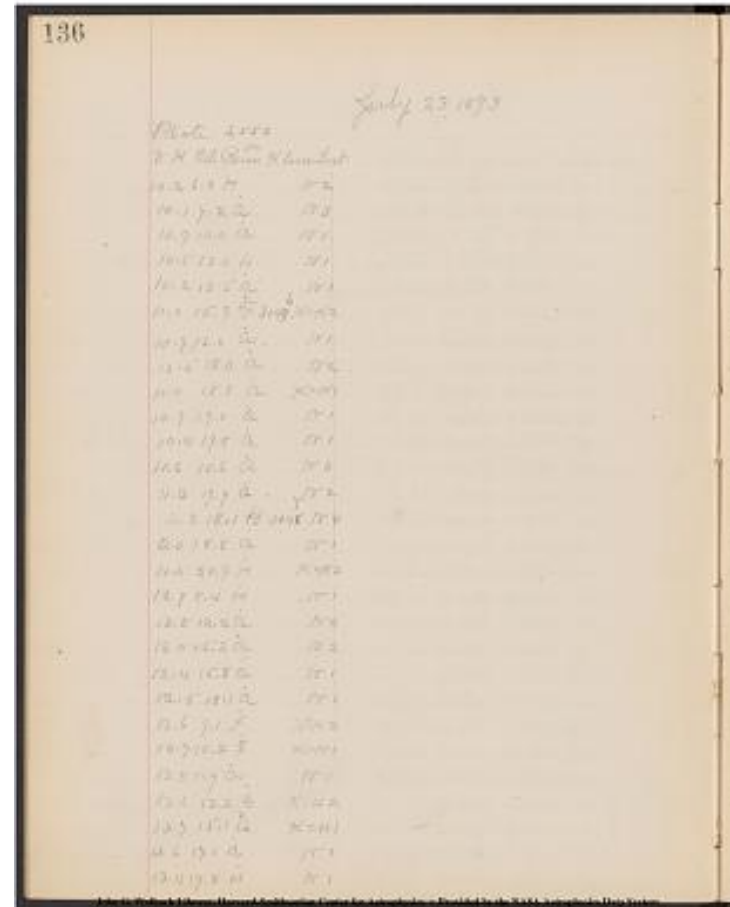
July 23, 1893

Plate 2553

[[6 columned table]]

[V|H|Cl.|Rem No.|K line|Int.]

V	H	Cl.	Rem No.	K line	Int.
10.2	6.0	H		N	2
10.1	7.2	A		N	3
10.9	10.0	A		N	1
10.5	13.0	H		N	1
10.2	13.5	A		N	1
11.0	15.9	F	304	<del>7</del>	<del>6</del> K=H
10.9	16.0	A		N	1
10.5	18.0	A		N	2
11.0	18.3	A		K=H	1
10.9	19.0	A		N	1
10.4	19.8	A		N	1
11.6	10.6	A		N	3
11.0	17.9	A		N	2
11.3	18.1	B	304	<del>8</del>	<del>7</del> N
12.0	18.8	A		N	1
11.5	20.9	H		K=H	2
12.9	8.4	H		N	1
12.8	12.2	A		N	2
13.0	15.2	A		N	2
12.4	15.8	A		N	1
12.5	15.1	A		N	1
13.6	7.1	F		K=H	2
13.7	10.2	E		K=H	1
13.8	11.7	A		N	1
13.6	12.2	G		K=H	2
13.7	15.1	A		K=H	1
13.6	17.1	A		N	1
13.4	17.8	H		N	1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



1855.

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

6	57.8	+9.4	+9°	1510	6 <sup>h</sup> 57.7 <sup>m</sup>	+9°24'6.6"
6	55.4	+9.3	+9	1496	6 55.4	+9 21 6.6
6	49.8	+9.8	+9	1456	6 49.8	+9 47 8.7
6	43.4	+9.7	+9	1414	6 43.6	+9 37 7.7
6	42.8	+9.4	+9	1404	6 42.7	+9 26 8.6
6	37.5	+9.9	+9	1376	6 37.5	+9 55 7.5
6	37.3	+9.8	+9	1374	6 37.3	+9 50 8.7
6	33.3	+9.6	+9	1344	6 33.2	+9 36 8.1
6	31.4	+9.9	+9	1324	6 31.6	+9 53 8.0
6	31.2	+9.8	+9	1322	6 31.2	+9 47 8.1
6	29.5	+9.5	+9	1303	6 29.4	+9 29 8.3
6	48.6	+10.1	+10	1335	6 48.4	+10 8 6.1
6	33.5	+9.9	+9	1350	6 33.5	+9 59 8.3
6	33.5	+9.9	+9	1351	6 33.5	+9 58 9.1
6	33.0	+10.0	+10	1220	6 33.0	+10 2 4.0
6	31.4	+10.4	+10	1211	6 31.6	+10 22 8.2
6	27.2	+10.1	+10	1186	6 27.3	+10 6 7.0
6	53.0	+10.8	+10	1370	6 53.0	+10 50 7.2
6	45.2	+10.8	+10	1310	6 45.2	+10 46 7.7
6	38.7	+10.9	+10	1262	6 38.8	+10 53 7.5
6	37.6	+10.5	+10	1257	6 37.5	+10 31 8.8
6	33.1	+10.6	+10	1221	6 33.0	+10 37 8.7
6	55.4	+11.2	+11	1428	6 55.6	+11 9 5.0
6	49.5	+11.1	+11	1377	6 49.4	+11 10 8.0
6	46.5	+11.2	+11	1355	6 46.4	+11 14 8.1
6	45.4	+11.2	+11	1344	6 45.3	+11 10 6.8
6	39.0	+11.2	+11	1302	6 39.0	+11 12 8.3
6	35.0	+11.2	+11	1281	6 35.0	+11 9 8.6
6	33.6	+11.0	+11	1275	6 33.6	+11 2 8.4

Handwritten astronomical catalog page, page 137, from the Southern Draper Catalogue. The page contains a table of star positions and magnitudes, transcribed from a 6-column format. The handwriting is in cursive, and the page shows signs of age and wear.

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



138

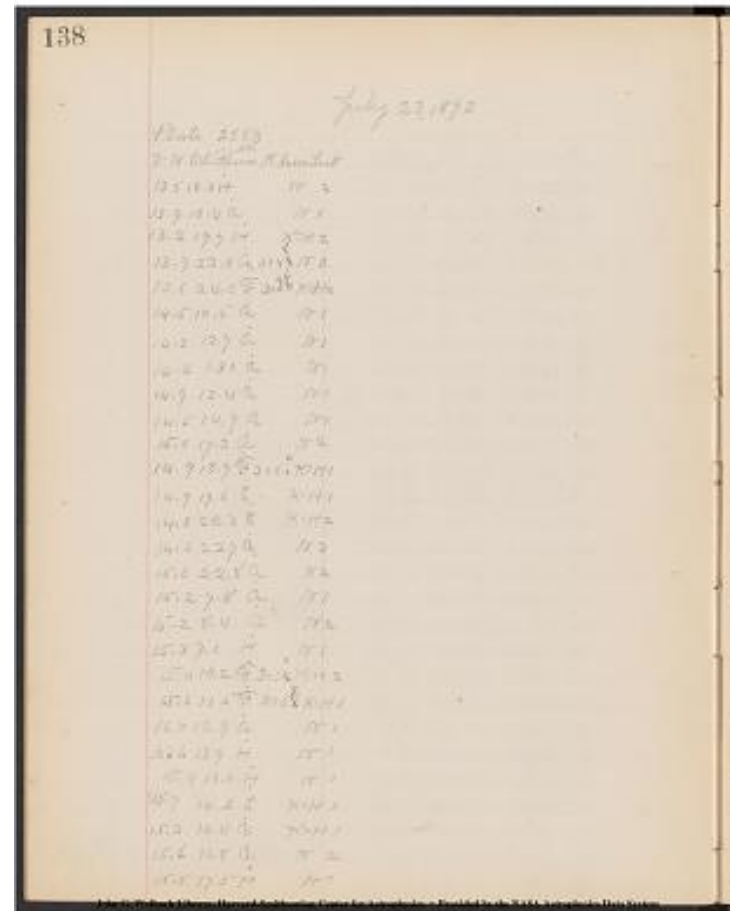
July 23, 1893

Plate 2553

[[6 columned table]]

[V|H|Cl.|Rem No.|K line|Int.]

13.5	18.0	H		N		2
13.9	18.4	A		N		1
13.2	19.7	H		K=H		2
13.9	23.0	A		304		9
13.6	24.0	F		30		50
14.5	10.5	A		N		1
14.3	12.9	A		N		1
14.4	13.0	A		N		1
14.9	13.4	A		N		1
14.5	14.9	A		N		1
15.0	14.3	A		N		1
14.9	18.7	F		305		1
14.9	19.6	E		K=H		1
14.8	22.3	E		K=H		2
14.6	22.9	A		N		3
15.0	22.8	A		N		2
15.2	4.5	A		N		1
15.2	8.4	A		N		2
15.3	9.0	H		N		1
15.4	10.2	F		305		2
15.6	11.5	F		305		3
16.0	12.9	A		N		1
15.6	13.9	H		N		1
15.4	14.0	H		N		1
15.4	14.2	E		K=H		1
15.3	16.4	A		K=H		1
15.6	16.8	A		N		2
15.5	17.5	H		N		1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855.

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
6 33.2	+11.1	1273	6 33.2	+11 8	6.9
6 32.3	+11.3	1267	6 32.3	+11 20	8.3
6 29.6	+10.9	1201	6 29.6	+10 58	7.1
6 23.0	+11.3	1204	6 23.1	+11 21	6.8
6 23.0	+11.3	1205	6 23.1	+11 21	9.2
6 21.0	+11.1	1193	6 21.0	+11 6	7.1
6 48.9	+11.5	1370	6 48.8	+11 35	8.0
6 44.4	+11.5	1333	6 44.3	+11 30	8.0
6 43.4	+11.6	1329	6 43.6	+11 35	8.5
6 42.8	+11.8	1327	6 42.8	+11 50	7.7
6 39.9	+11.6	1307	6 39.9	+11 38	8.2
6 34.6	+11.9	1280	6 34.9	+11 54	8.1
6 31.8	+11.8	1263	6 31.9	+11 49	8.1
6 30.0	+11.8	1252	6 29.9	+11 48	8.4
6 24.4	+11.8	1213	6 24.3	+11 47	7.0
6 23.7	+11.7	1209	6 23.7	+11 38	5.5
6 23.4	+11.9	1207	6 23.6	+11 54	7.1
6 54.8	+11.9	1421	6 54.9	+11 55	8.5
6 53.1	+11.9	1408	6 53.1	+11 58	7.0
6 51.6	+11.9	1398	6 51.8	+11 60	8.0
6 49.4	+12.1	1361	6 49.3	+11 55	7.0
6 46.8	+12.1	1344	6 46.8	+11 55	7.0
6 43.9	+12.4	1325	6 43.9	+12 25	9.0
6 42.0	+12.2	1310	6 42.0	+12 13	7.7
6 41.9	+12.0	1309	6 41.8	+12	
6 41.4	+12.2	1306	6 41.4	+12 15	8.1
6 36.6	+12.0	1261	6 36.4	+12 0	8.3
6 35.4	+12.2	1257	6 35.6	+12	
6 34.2	+12.1	1248	6 34.2	+12 9	8.5

139

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
6 33.2	+11.1	1273	6 33.2	+11 8	6.9
6 32.3	+11.3	1267	6 32.3	+11 20	8.3
6 29.6	+10.9	1201	6 29.6	+10 58	7.1
6 23.0	+11.3	1204	6 23.1	+11 21	6.8
6 23.0	+11.3	1205	6 23.1	+11 21	9.2
6 21.0	+11.1	1193	6 21.0	+11 6	7.1
6 48.9	+11.5	1370	6 48.8	+11 35	8.0
6 44.4	+11.5	1333	6 44.3	+11 30	8.0
6 43.4	+11.6	1329	6 43.6	+11 35	8.5
6 42.8	+11.8	1327	6 42.8	+11 50	7.7
6 39.9	+11.6	1307	6 39.9	+11 38	8.2
6 34.6	+11.9	1280	6 34.9	+11 54	8.1
6 31.8	+11.8	1263	6 31.9	+11 49	8.1
6 30.0	+11.8	1252	6 29.9	+11 48	8.4
6 24.4	+11.8	1213	6 24.3	+11 47	7.0
6 23.7	+11.7	1209	6 23.7	+11 38	5.5
6 23.4	+11.9	1207	6 23.6	+11 54	7.1
6 54.8	+11.9	1421	6 54.9	+11 55	8.5
6 53.1	+11.9	1408	6 53.1	+11 58	7.0
6 51.6	+11.9	1398	6 51.8	+11 60	8.0
6 49.4	+12.1	1361	6 49.3	+11 55	7.0
6 46.8	+12.1	1344	6 46.8	+11 55	7.0
6 43.9	+12.4	1325	6 43.9	+12 25	9.0
6 42.0	+12.2	1310	6 42.0	+12 13	7.7
6 41.9	+12.0	1309	6 41.8	+12	
6 41.4	+12.2	1306	6 41.4	+12 15	8.1
6 36.6	+12.0	1261	6 36.4	+12 0	8.3
6 35.4	+12.2	1257	6 35.6	+12	
6 34.2	+12.1	1248	6 34.2	+12 9	8.5

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

140

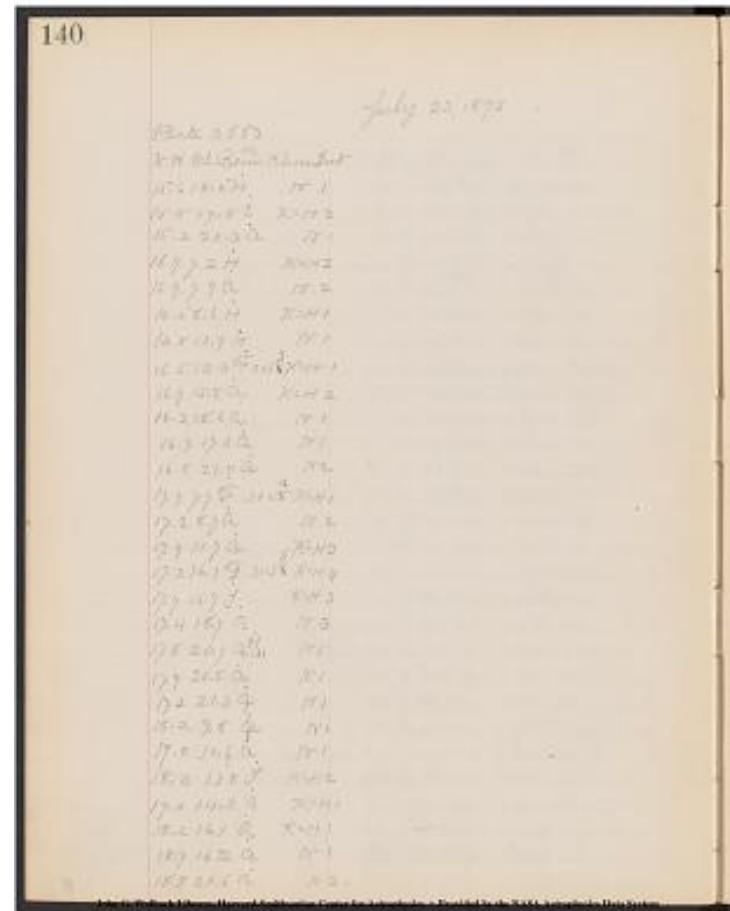
July 23, 1893

Plate 2553

[[6 columned table]]

[V|H|Cl.|No. Rem|K line|Int.]

V	H	Cl.	No.	Rem	K line	Int.
15.6	18.5	H			N 1	
15.8	19.8	E			K=H 2	
15.2	20.3	A			N 1	
16.9	7.2	H			K=H 2	
16.9	7.9	A			N 2	
16.5	8.6	H			N 1	
16.8	10.9	H			N 1	
16.5	13.3	F	305	<del>4</del>	K=H 1	
16.9	15.8	A			K=H 2	
16.2	18.6	A			N 1	
16.9	19.3	A			N 1	
16.8	21.0	A			N 2	
19.9	7.7	F	305	<del>5</del>	K=H 1	
17.2	8.7	A			N 2	
17.9	11.7	A			K=H 3	
17.2	16.1	F	305	<del>6</del>	K=H 4	
17.9	16.9	J			K=H 3	
17.4	18.9	A			N 3	
17.9	20.7	A			(H)(R)	N 1
17.9	20.8	A			N 1	
17.2	21.3	A			N 1	
18.2	9.8	A			N 1	
19.0	10.6	A			N 1	
18.3	13.8	F			K=H 2	
19.0	14.3	A			K=H 1	
18.2	16.1	A			K=H 1	
18.9	19.2	A			18 1	
18.8	20.6	A			N 2	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855.

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

-----

6<sup>h</sup>[[h]] [[~~31.9~~]] 32.1<sup>m</sup>[[m]] +12.1 +12°  
 [[~~1237~~]] 1239 [[~~6~~]] 6 [[~~32.0~~]] 32.2<sup>m</sup>[[m]] +12°  
 [[~~30~~]] 11<sup>h</sup> 8. [[~~6~~]] 6 [[~~5~~]] 5

6 29.5 +12.3 +12 1219 6 29.5 +12 19 7.9  
 6 28.6 +11.9 (+) 11 1243 6 28.5 +11 59 8.4  
 6 55.6 +12.8 +12 1406 6 55.7 +12 48 6.5  
 [[6 54.2 +12.8]] +12 1394 6 54.1 +12 47 9.2  
 [[6 54.2 +12.8]] +12 1395 6 54.2 +12 47 8.0  
 6 52.9 +12.7 +12 1384 6 52.8 +12 36 8.0  
 6 48.1 +12.8 +12 1354 6 48.1 +12 46 8.0  
 6 43.1 +12.6 +12 1319 6 43.1 +12 38 8.5  
 6 37.8 +12.8 +12 1275 6 37.8 +12 51 8.0  
 6 31.9 +12.5 +12 1237 6 32.0 +12 30 8.6  
 6 30.4 +12.9 +12 1230 6 30.4 +12 52 8.2  
 6 26.9 +12. [[~~5~~]] 7 +12 1205 6 27.0 +12 47 7.9

6 54.7 +13.3 +13 1531 6 54.7 +13 18 8.0  
 6 52.7 +12.9 +12 1381 6 52.5 +12 55 8.1  
 6 46.5 +13.3 +13 1462 6 46.5 +13 22 5.3  
 6 37.2 +13.0 +13 1396 6 37.2 +13 3 3.7  
 6 35.8 +13.4 +13 1390 6 35.8 +13 22 5.1  
 6 31.6 +13.1 +13 1356 6 31.7 +13 7 7.0  
 6 27.5 +13.3 +13 1327 6 27.7 +13 16 8.0  
 6 27.3 +13.3 +13 1321 6 27.3 +13 20 8.0  
 6 26.3 +12.9 +12 1198 6 26.4 +13 57 8.3  
 6 50.2 +13.4 +13 1495 6 50.1 +13 27 8.5  
 6 48.7 +13.8 +13 1482 6 48.7 +13 51 8.8

6 42.2 +13. [[~~9~~]] 9 [[~~13~~]] 13 1434 6 42.2 +13 34 6.6

6 41.3 +13.9 +13 1423 6 41.2 +13 54 8.5  
 6 37.1 +13.4 +13 1395 6 37.1 +13 29 8.5  
 5 37.0 +13.9 +13 1393 6 36.9 +13 53 8.8  
 6 27.9 +13.8 +13 1329 6 27.9 +13 49 7.5

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

142

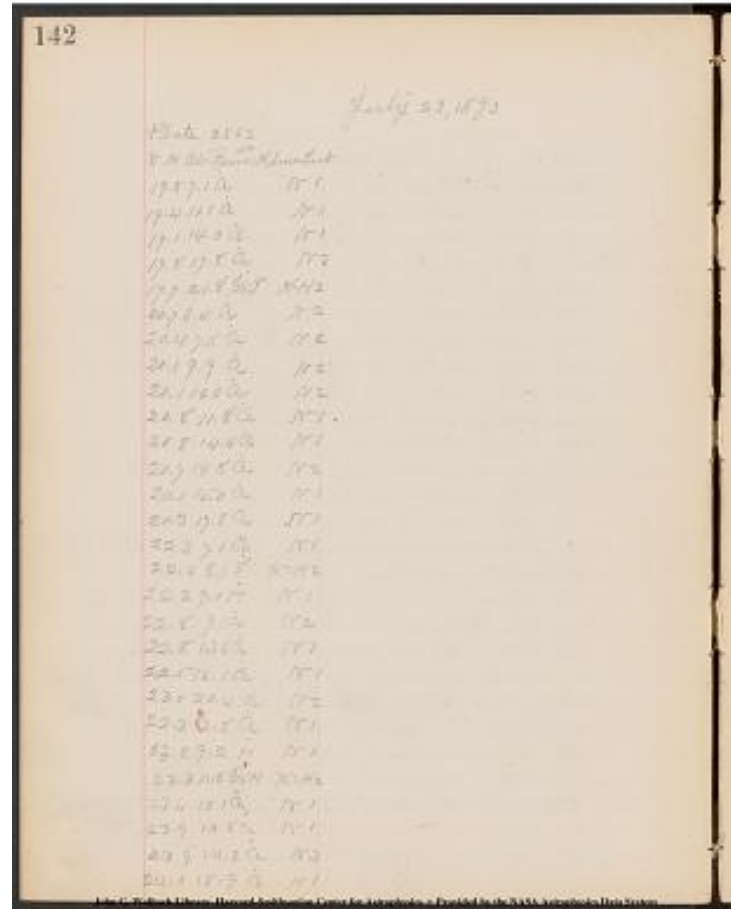
July 23, 1893

Plate 2553

[[6 columned table]]

V|H|Cl.|Rem No.|K line|Int.]

V	H	Cl.	Rem No.	K line	Int.
19.8	7.1	A		N	1
19.4	11.1	A		N	1
19.1	14.0	A		N	1
19.8	17.8	A		N	3
19.7	21.8	G5F		K=H	2
20.7	6.4	A		N	2
20.4	7.5	A		N	2
20.1	9.9	A		N	2
20.8	11.8	A		N	1
20.8	14.4	A		N	1
20.7	14.8	A		N	2
20.1	15.0	A		N	1
20.3	17.8	A		N	1
22.3	7.1	A		N	1
22.4	8.1	F		K=H	2
22.2	9.0	H		N	1
22.8	9.1	A		N	2
22.8	13.6	A		N	1
22.5	16.1	A		N	1
23.0	20.4	A		N	2
22.3	<del>11.8</del>	A		<del>N</del>	<del>1</del>
23.8	9.2	H		N	1
23.3	11.8	G5H		K=H	2
23.6	13.1	A		N	1
23.9	13.8	A		N	1
23.9	14.2	A		N	3
24.0	15.9	A		N	1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

143

1855

[[6 columned table]]

[R.A.|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.]

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

6 55.8+14.2+14° 1549|6<sup>h</sup>|55.8<sup>m</sup>|+14° 13'|8.5

6 47.4+14.1+14 1491|6 47.6+14 4|8.9

6 41.8+13.~~[[/strikethrough]]~~8~~[[/strikethrough]]~~9+13 1430|6 41.7+13 57|8.5

6 33.6+14.4+14 1395|6 33.6+14 21|6.7

6 25.4+14.2+14 1339|6 25.4+14 15|6.0

6 57.4+14.7+14 1558|6 57.3+14 41|6.9

6 55.0+14.5+14 1539|6 55.0+14 33|7.5

6 50.0+14.5+14 1513|6 50.0+14 27|7.6

6 49.8+14.5+14 1509|6 49.9+14 25|7.9

6 46.2+14.8+14 1481|6 46.2+14 48|8.1

6 41.0+14.8+14 1452|6 40.9+14 49|8.7

6 40.1+14.8+14 1445|6 40.0+14 45|7.9

6 39.7+14.4+14 1441|6 39.8+14 25|8.9

6 33.6+14.6+14 1394|6 33.6+14 33|7.5

6 56.1+15.4+15 1444|6 56.1+1~~[[/strikethrough]]~~4~~[[/strikethrough]]~~5 27|7.56 54.0+15.~~[[/strikethrough]]~~15 1431|6 54.0+15 32|6.0

6 52.1+15.5+15 1416|6 52.1+15 29|6.9

6 52.0+15.8+15 1412|6 52.0+15 44|7.5

6 42.6+15.8+15 1340|6 42.6+15 47|8.5

6 37.3+15.7+15 1309|6 37.2+15 37|8.3

6 28.1+15.9+15 1255|6 28.2+15 52|7.5

6 23.0+15.5+15 1224|6 23.2+15 31|7.9

6 52.0+15.8 v. above.

6 46.4+16.0+16 1326|6 46.3+16 1|7.1

6 43.5+16.2+16 1314|6 48.7+16 11|8.5

6 42.4+16.4+16 1303|6 42.3+16 23|8.8

6 41.5+16.4+16 1298|6 41.5+16 22|6.5

6 37.6+16.4+16 1271|6 37.6+16 26|8.4

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

. Provided by the NASA Astrophysics Data System

143

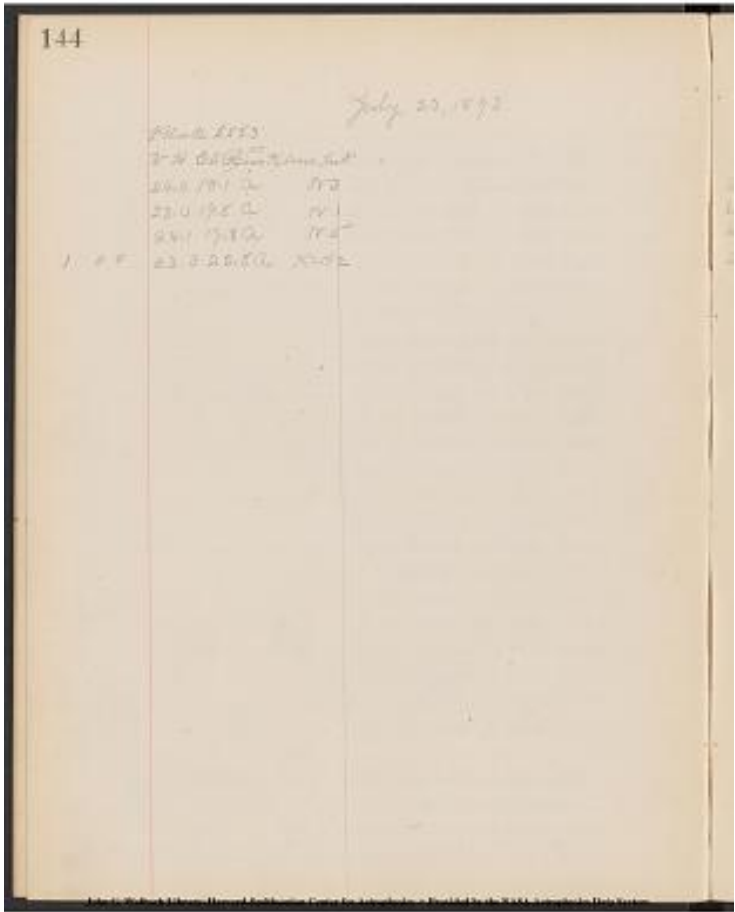
R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
6 55.8+14.2+14°	1549	6 <sup>h</sup> 55.8 <sup>m</sup>	+14° 13'	8.5	
6 47.4+14.1+14	1491	6 47.6+14 4		8.9	
6 41.8+13. <del>[[/strikethrough]]</del> 8 <del>[[/strikethrough]]</del> 9	+13 1430	6 41.7+13 57		8.5	
6 33.6+14.4+14	1395	6 33.6+14 21		6.7	
6 25.4+14.2+14	1339	6 25.4+14 15		6.0	
6 57.4+14.7+14	1558	6 57.3+14 41		6.9	
6 55.0+14.5+14	1539	6 55.0+14 33		7.5	
6 50.0+14.5+14	1513	6 50.0+14 27		7.6	
6 49.8+14.5+14	1509	6 49.9+14 25		7.9	
6 46.2+14.8+14	1481	6 46.2+14 48		8.1	
6 41.0+14.8+14	1452	6 40.9+14 49		8.7	
6 40.1+14.8+14	1445	6 40.0+14 45		7.9	
6 39.7+14.4+14	1441	6 39.8+14 25		8.9	
6 33.6+14.6+14	1394	6 33.6+14 33		7.5	
6 56.1+15.4+15	1444	6 56.1+1 <del>[[/strikethrough]]</del> 4 <del>[[/strikethrough]]</del> 5		27 7.5	
6 54.0+15. <del>[[/strikethrough]]</del> 15	1431	6 54.0+15 32		6.0	
6 52.1+15.5+15	1416	6 52.1+15 29		6.9	
6 52.0+15.8+15	1412	6 52.0+15 44		7.5	
6 42.6+15.8+15	1340	6 42.6+15 47		8.5	
6 37.3+15.7+15	1309	6 37.2+15 37		8.3	
6 28.1+15.9+15	1255	6 28.2+15 52		7.5	
6 23.0+15.5+15	1224	6 23.2+15 31		7.9	
6 52.0+15.8 v. above.					
6 46.4+16.0+16	1326	6 46.3+16 1		7.1	
6 43.5+16.2+16	1314	6 48.7+16 11		8.5	
6 42.4+16.4+16	1303	6 42.3+16 23		8.8	
6 41.5+16.4+16	1298	6 41.5+16 22		6.5	
6 37.6+16.4+16	1271	6 37.6+16 26		8.4	

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

144  
July 23, 1893  
Plate 2553

[[6 columned table]]

V	H	Cl.	Rem No.	K line	Int.
24.0	18.1	a	N	3	
23.4	19.8	a	N	1	
24.1	19.8	a	N	5	
[[1 0 0]]	23.3	22.8	a		K=H 2



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

145

1855

[[7 columned table]]  
R.A.	Dec.	BD.	No.	R.A. 1855	Dec. 1855	Magn.
 6 33.0|16.5|+16|1242|6 33.0|+16 32|7.3|  
 6 29.6|16.1|+16|1226|6 29.6|+16 6|8.6|  
 6 29.4|16.5|+16|1223|6 29.4|+16 31|2.1|  
 6 23.0|16.0|+16|1178|6 23.3|+16 0|6.6|

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



146

R.A.7.4<sup>h</sup> Dec. +11.7

July 25, 1893

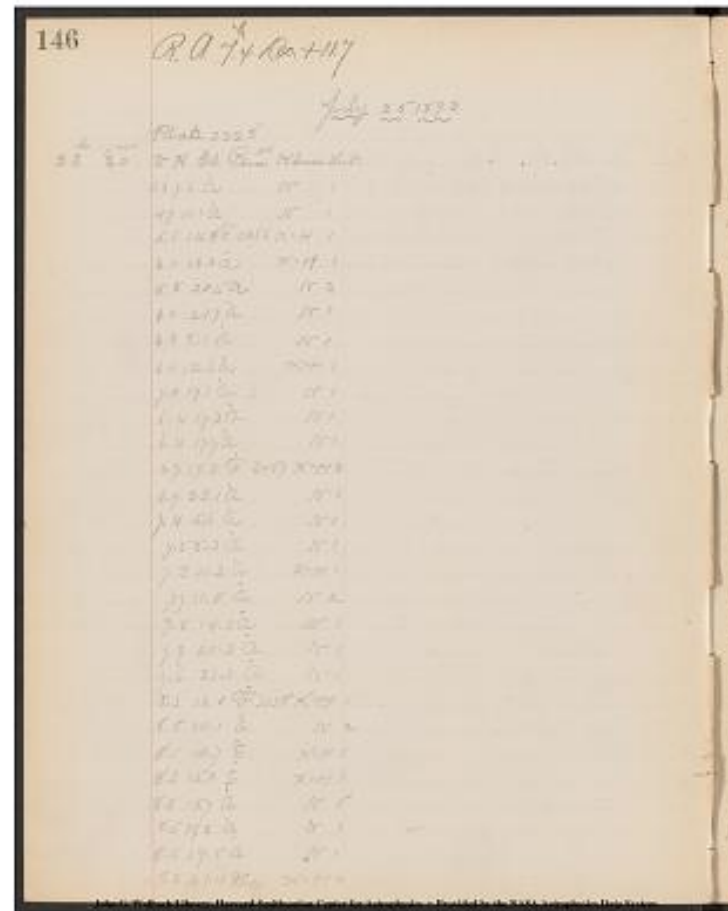
Plate 2228

23<sup>h</sup> 30<sup>m</sup>

[[6 columned table]]

V | H | Cl. | No. Rem. | K line | Int. |

5.3	14.6	A		N	1
4.9	11.1	A		N	1
5.6	14.8	F	3056	K=H	1
6.0	16.3	A		K=H	1
5.8	20.5	A		N	3
6.0	21.4	A		N	1
6.8	8.1	A		N	1
6.0	12.6	A		K=H	1
9.0	14.1	A		N	1
6.4	19.3	A		N	1
6.4	19.9	A		N	1
6.9	19.3	F	3054	K=H	3
6.9	22.1	A		N	1
9.4	5.6	A		N	1
9.5	8.3	A		N	1
9.3	11.2	A		K=H	1
9.9	11.8	A		N	2
9.8	14.3	A		N	1
9.9	20.3	A		N	1
9.6	21.3	A		N	1
8.3	10.0	F	3058	K=H	1
8.5	10.1	A		N	2
8.1	14.9	E		K=H	1
8.3	15.0	E		K=H	1
8.8	15.9	A		N	5
8.5	19.2	A		N	1
8.6	19.5	A		N	1
8.3	21.4	Ma		K=H	2



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
7 35.9	16.7	1768	7 35.9	16 37	8.3
7 29.1	16.4	1731	7 29.1	16 24	8.2
7 21.6	16.9	1688	7 21.5	16 52	7.2
7 18.0	16.9	1663	7 18.1	16 60	8.0
7 9.5	16.9	1594	7 9.5	16 56	6.9
7 7.2	16.9	1583	7 7.2	16 58	8.4
35.0	17.4	1818	7 35.0	17 25	8.5
7 25.9	16.9	1714	7 25.9	16 58	8.0
7 16.6	17.6	1711	7 16.0	17 13	8.5
7 16.1	17.2	1711	7 16.0	17 13	8.5
7 15.3	17.3	1709	7 15.3	17 14	8.5
7 11.9	17.4	1684	7 12.0	17 24	7.5
7 6.4	17.4	1646	7 6.4	17 28	8.0
7 4	17.4	1646	7 4	17 28	8.0
7 34.7	17.8	1816	7 34.7	17 48	9.0
7 28.8	17.7	1780	7 28.7	17 39	8.0
7 27.4	17.9	1773	7 27.6	17 52	7.3
7 22.6	18.0	1789	7 22.6	18 1	8.0
7 10.0	18.0	1723	7 9.9	18 3	8.5
7 7.9	17.9	1655	7 7.9	17 51	8.9
7 31.2	18.2	1837	7 31.3	18 10	8.3
7 31.0	18.3	1831	7 31.0	18 18	7.8
7 21.8	18.2	1785	7 21.8	18 8	8.0
7 21.0	18.2	1781	7 20.9	18 13	8.2
7 19.2	18.6	1774	7 19.3	18 35	3.0
7 12.2	18.3	1740	7 12.2	18 16	8.5
7 11.4	18.3	1739	7 11.5	18 19	8.8
7 7.8	18.2	1712	7 7.8	18 14	6.8

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

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

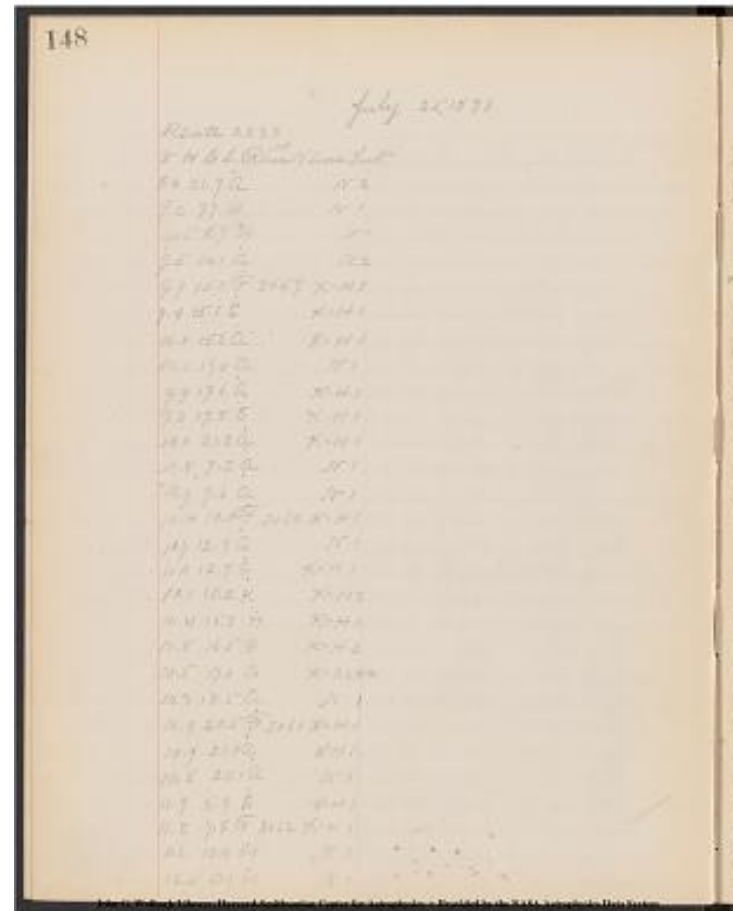
148

July 25 1893

Plate 2228

[[6 columned table]]  
[V	H	Cl.	Rem No.	K line	Int.]
8.4|21.9|A| |N 2|  
9.2|7.7|H| |N 1|  
9.5|8.9|H| |N 1|  
9.5|14.1|A| |N 2|  
9.9|15.0|F|3059|K=H 1|  
9.4|15.1|E| |K=H 1|  
10.0|15.6|A| |K=H 1|  
10.0|19.0|A| |N 1|  
9.9|19.6|A| |K=H 1|  
9.3|19.8|E| |K=H 1|  
10.0|21.8|A| |K=H 1|  
10.8|9.2|A| |N 1|  
10.9|9.6|A| |N 1|  
10.4|10.0|F|3060|K=H 1|  
10.7|12.9|A| |N 1|  
11.0|12.9|E| |K=H 1|  
10.1|15.2|K| |K=H 3|  
10.4|15.8|H| |K=H 1|  
10.8|16.5|G| |K=H 3|  
10.5|17.0|A| |K=0.5H 2|  
10.2|18.5|A| |N 1|  
10.9|20.5|F|3061|K=H 1|  
10.9|21.0|A| |K=H 1|  
10.8|23.1|A| |N 1|  
11.9|5.9|E| |K=H 1|  
11.8|7.8|F|3062|K=H 1|  
11.6|10.4|H| |N 1|  
12.0|13.7|H| |N 1|

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

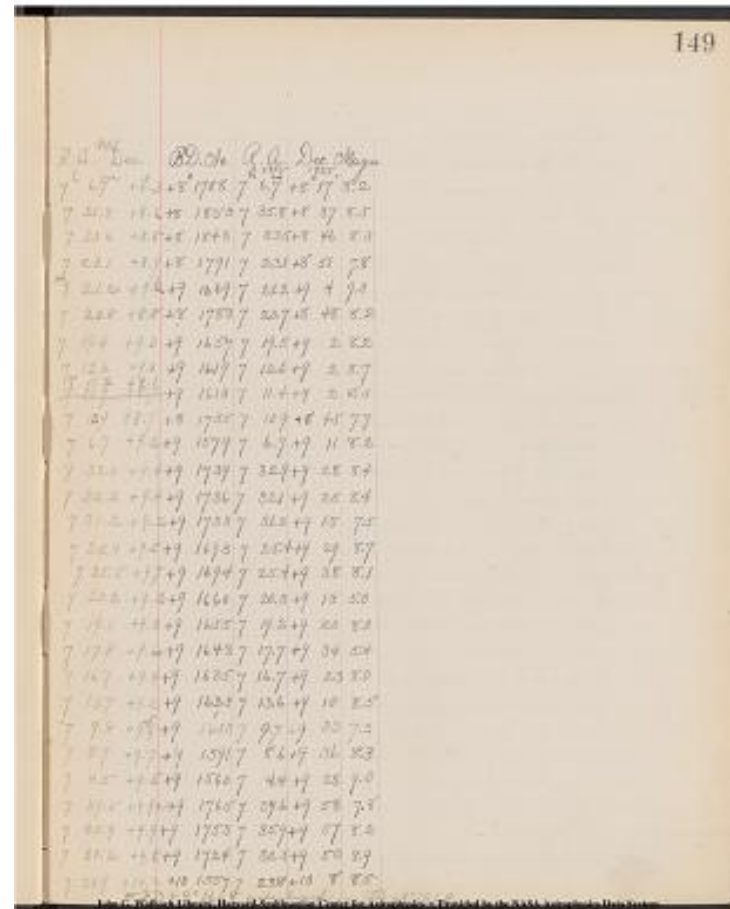
1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
7 <sup>h</sup> 35.8 <sup>m</sup> +8.6 <sup>s</sup>	1853	7 35.8 +8 37	8.5		
7 33.6 +8.8 +8 1848	7 33.5 +8 46	8.3			
7 23.1 +8.9 +8 1791	7 23.1 +8 51	7.8			
*7 21.2 +9.0	<del>7 21.2 +9 4</del>	9.0			
7 20.8 +8.8 +8 1780	7 20.7 +8 48	8.2			
7 19.4 +9.0 +9 1657	7 19.5 +9 2	8.2			
7 12.6 +9.0 +9 1619	7 12.6 +9 2	8.7			
<del>7 11.9 +8.7</del>	<del>7 11.9 +8 3</del>				
11.2 +8.7	11.2 +8 3				
7 10.9 +8.7 +8 1735	7 10.9 +8 45	7.7			
7 6.7 +9.2 +9 1579	7 6.7 +9 11	8.2			
7 33.0 +9.4 +9 1739	7 32.9 +9 28	8.4			
7 32.2 +9.4 +9 1736	7 32.1 +9 25	8.4			
7 31.2 +9.2 +9 1733	7 31.2 +9 15	7.5			
7 25.4 +9.5 +9 1693	7 25.4 +9 29	8.7			
7 25.5 +9.7 +9 1694	7 25.4 +9 38	8.1			
7 20.2 +9.2 +9 1660	7 20.3 +9 13	5.0			
7 19.1 +9.3 +9 1655	7 19.2 +9 20	8.0			
7 17.8 +9.6 +9 1643	7 17.7 +9 34	5.4			
7 16.7 +9.4 +9 1635	7 16.7 +9 23	8.0			
7 13.7 +9.2 +9 1623	7 13.6 +9 10	8.5			
7 9.8 +9.0	<del>7 9.8 +9 33</del>	7.3			
7 8.7 +9.7 +9 1591	7 8.6 +9 36	8.3			
7 4.5 +9.5 +9 1560	7 4.4 +9 28	9.0			
7 39.5 +9.9 (+)	7 39.6 +9 58	7.8			
7 35.9 +9.9 +9 1753	7 35.9 +9 57	8.2			
7 30.2 +9.8 +9 1724	7 30.3 +9 50	8.9			
7 23.9 +10.2 +10 1557	7 23.8 +10 8	8.5			

\*BD +9° 1668 superposed on BD° +9 1669.



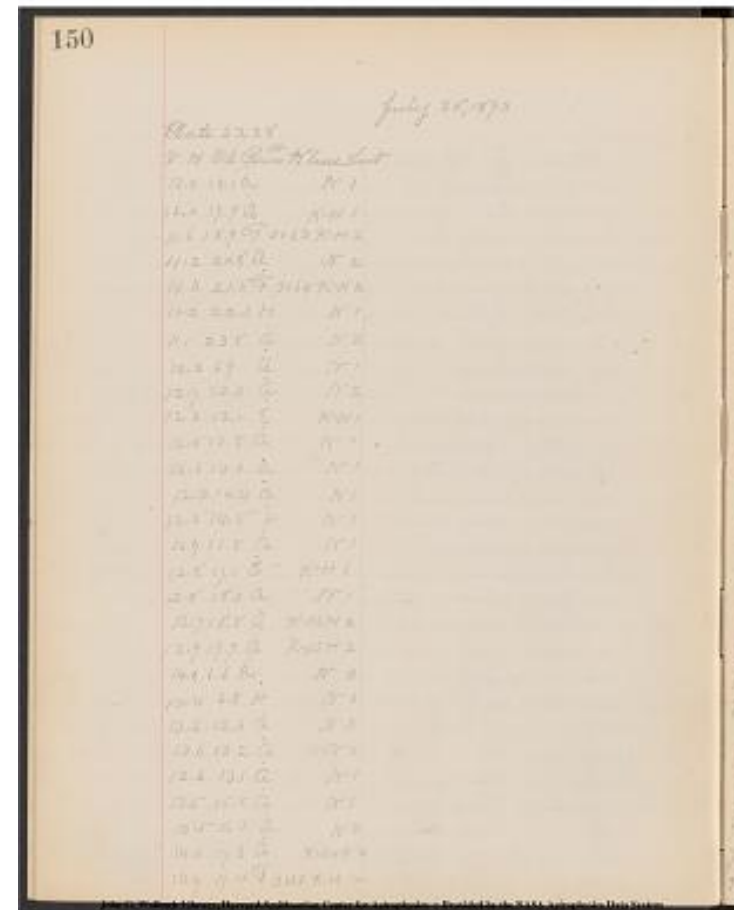
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

150

July 25, 1893

Plate 2228

[[6 columned table]]  
[V	H	Cl.	Rem No.	K line	Int.]
 12.0|14.1|A| |N|1|  
 12.0|17.9|A| |K=H|1|  
 11.6|18.9|F|3063|K=H|2|  
 11.2|20.8|A| |N|2|  
 11.3|21.5|F|3064|K=H|2|  
 11.2|22.3|H| |N|1|  
 11.1|23.8|A| |N|2|  
 12.3|6.9|A| |N|1|  
 12.7|12.0|A| |N|2|  
 12.3|12.1|E| |K=H|1|  
 12.5|13.8|A| |N|1|  
 12.6|14.0|A| |N|1|  
 12.2|14.4|A| |N|1|  
 12.5|14.5|H| |N|1|  
 12.7|16.8|A| |N|1|  
 12.8|17.1|E| |K=H|1|  
 12.8|18.0|A| |N|1|  
 12.7|18.8|A| |K=0.5H|2|  
 12.9|19.7|A| |K=0.5H|2|  
 14.0|6.6|A| |N|3|  
 13.4|6.8|H| |N|1|  
 13.5|12.6|A| |N|3|  
 13.6|13.2|A| |N|1|  
 13.3|13.1|A| |N|1|  
 13.5|15.8|A| |N|1|  
 13.5|16.1|A| |N|2|  
 14.0|17.3|A| |K=0.4H|2|  
 13.7|17.4|F|3065|K=H|2|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

7 <sup>h</sup> 14.9	+10.1	+10 1516	7 14.8	+10 7	9.0
7 13.0	+9.9	+9 1620	7 13.1	+9 43	7.8
7 9.1	+9.7	+9 1597	7 9.1	+9 43	7.8
7 7.5	+9.7	+9 1583	7 7.6	+9 45	7.7
7 6.0	+9.7	+9 1571	7 5.9	+9 43	8.0
7 37.8	+10.2	+10 1619	7 37.7	+10 12	9.0
7 27.2	+10.4	+10 1569	7 27.3	+10 26	8.5
7 27.0	+10.3	+10 1567	7 27.0	+10 17	8.5
7 23.7	+10.4	+10 1556	7 23.7	+10 23	8.3
7 23.1	+10.4	+10 1554	7 23.2	+10 24	8.7
7 22.4	+10.2	+10 1549	7 22.4	+10 11	9.0
7 22.1	+10.3	+10 1547	7 22.1	+10 21	8.0
7 17.2	+10.4	+10 1526	7 17.1	+10 26	8.7
7 16.6	+10.6	+10 1525	7 16.4	+10 31	7.5
7 14.5	+10.5	+10 1513	7 14.5	+10 32	8.5
7 13.1	+10.4	+10 1505	7 13.0	+10 28	7.8
7 11.1	+10.6	+10 1490	7 11.1	+10 34	7.0
7 11.1	+10.6	+10 1491	7 11.1	+10 36	9.3
7 38.3	+11.1	+11 1670	7 38.3	+11 8	5.0
7 37.8	+10.8	+10 1620	7 37.8	+10 44	8.5
7 26.1	+10.9	+10 1563	7 26.1	+10 53	7.0
7 25.0	+10.9	+10 1561	7 24.9	+10 53	8.8
7 24.8	+10.7	+10 1559	7 24.7	+10 44	9.2
7 19.1	+10.9	+10 1534	7 19.1	+10 53	8.8
7 18.4	+10.9	+10 1532	7 18.5	+10 54	7.0
7 16.0	+11.2	+11 1574	7 16.0	+11 11	7.7
7 15.8	+10.9	+10 1521	7 15.8	+10 59	8.2

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

152

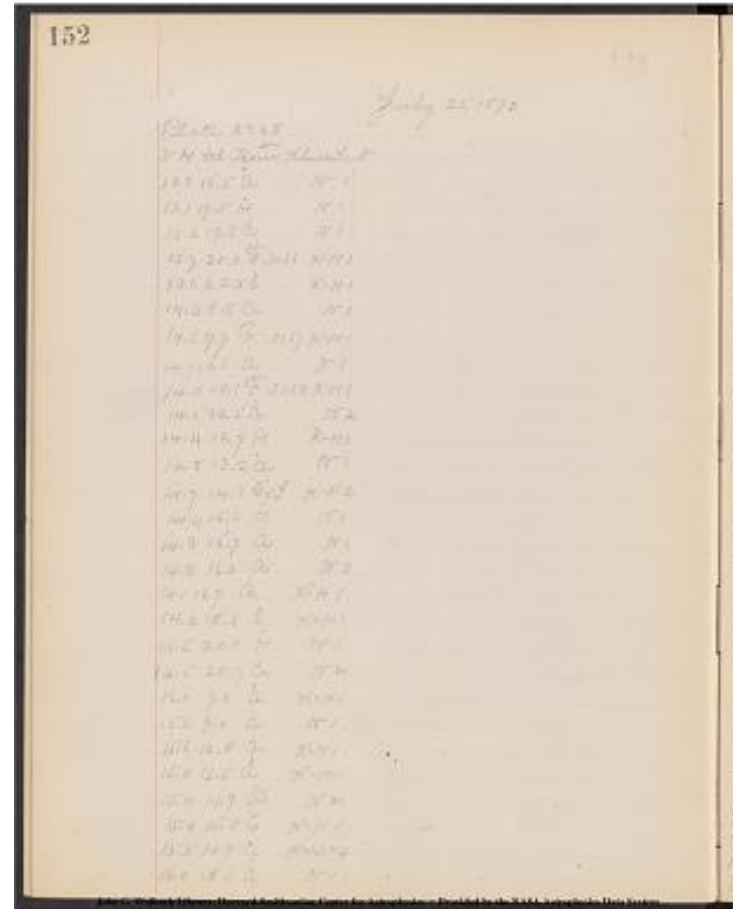
July 25, 1893

Plate 2228

[[6 columned table]]

[V|H|Cl.|Rem No.|K line|Int.]

V	H	Cl.	Rem No.	K line	Int.
13.8	18.5	A		N 1	
13.1	19.5	H		N 1	
13.2	19.6	A		N 1	
13.7	20.0	F	3066	K=H 1	
13.6	22.3	E		K=H 1	
14.3	8.8	A		N 1	
14.6	9.7	F	3067	K=H 1	
14.7	10.6	A		N 1	
14.0	10.1	F	3068	K=H 1	
14.1	12.5	A		N 2	
14.4	12.9	H		K=H 1	
14.8	13.2	A		N 1	
14.7	14.1	G5F		K=H 2	
14.4	15.0	H		N 1	
14.3	15.7	A		N 1	
14.3	16.0	A		N 3	
14.1	16.7	A		K=H 1	
14.3	18.6	E		K=H 1	
14.5	20.0	H		N 1	
14.5	20.7	A		N 2	
16.0	7.0	A		K=H 1	
15.6	9.0	A		N 1	
15.6	12.4	A		K=H 1	
15.4	12.5	A		K=H 1	
15.4	14.9	A		N 2	
15.4	15.0	E		K=H 1	
15.5	16.9	A		K=0.3H 4	
16.0	18.1	A		N 1	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

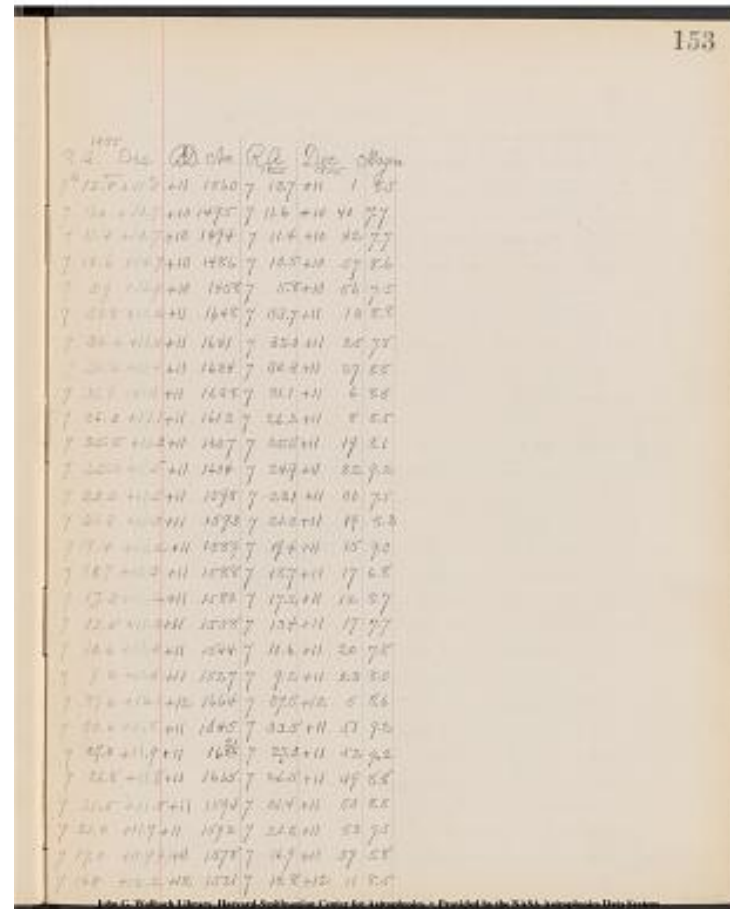
153

1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

---	---	---	---	---	---	
7 <sup>h</sup> 13.8 <sup>m</sup>	+11.0 <sup>s</sup>	+11	1560	7 13.7	+11 1 8.5	
7 11.6	+10.7	+10	1495	7 11.6	+10 40 7.7	
7 11.4	+10.7	+10	1494	7 11.4	+10 42 7.7	
7 10.6	+10.9	+10	1486	7 10.5	+10 57 8.6	
7 5.9	+10.9	+10	1458	7 5.8	+10 56 7.5	
7 33.8	+11.2	+11	1648	7 33.7	+11 13 8.8	
7 32.0	+11.4	+11	1641	7 32.0	+11 25 7.8	
7 30.2	+11.4	+11	1634	7 30.3	+11 27 8.5	
7 31.1	+11.1	+11	1638	7 31.1	+11 6 8.5	
7 26.3	+11.1	+11	1613	7 26.2	+11 8 8.5	
7 25.5	+11.3	+11	1607	7 25.5	+11 19 8.1	
7 25.0	+11.5	+11	1604	7 24.9	+11 32 9.2	
7 23.0	+11.5	+11	1598	7 23.1	+11 30 7.5	
7 21.3	+11.3	+11	1593	7 21.3	+11 19 8.3	
7 19.4	+11.2	+11	1589	7 19.4	+11 15 9.0	
7 18.7	+11.3	+11	1588	7 18.7	+11 17 6.8	
7 17.3	+11.2	+11	1580	7 17.2	+11 12 8.7	
7 13.5	+11.3	+11	1558	7 13.4	+11 17 7.7	
7 10.6	+11.3	+11	1544	7 10.6	+11 20 7.8	
7 9.2	+11.4	+11	1527	7 9.2	+11 23 8.0	
7 37.6	+12.1	+12	1664	7 37.5	+12 5 8.6	
7 33.6	+11.8	+11	1645	7 33.5	+11 51 9.2	
7 27.0	+11.9	+11	16 <del>[[strikethrough]]</del>	15 <del>[[/strikethrough]]</del>	7 27.0	+11 52 9.2
7 26.8	+11.8	+11	1615	7 26.5	+11 49 8.8	
7 21.5	+11.8	+11	1594	7 21.4	+11 50 8.5	
7 21.0	+11.9	+11	1592	7 21.2	+11 53 7.5	
7 17.0	+11.9	+11	1578	7 16.9	+11 57 5.8	
7 14.8	+12.2	+12	1521	7 14.8	+12 11 8.5	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



154

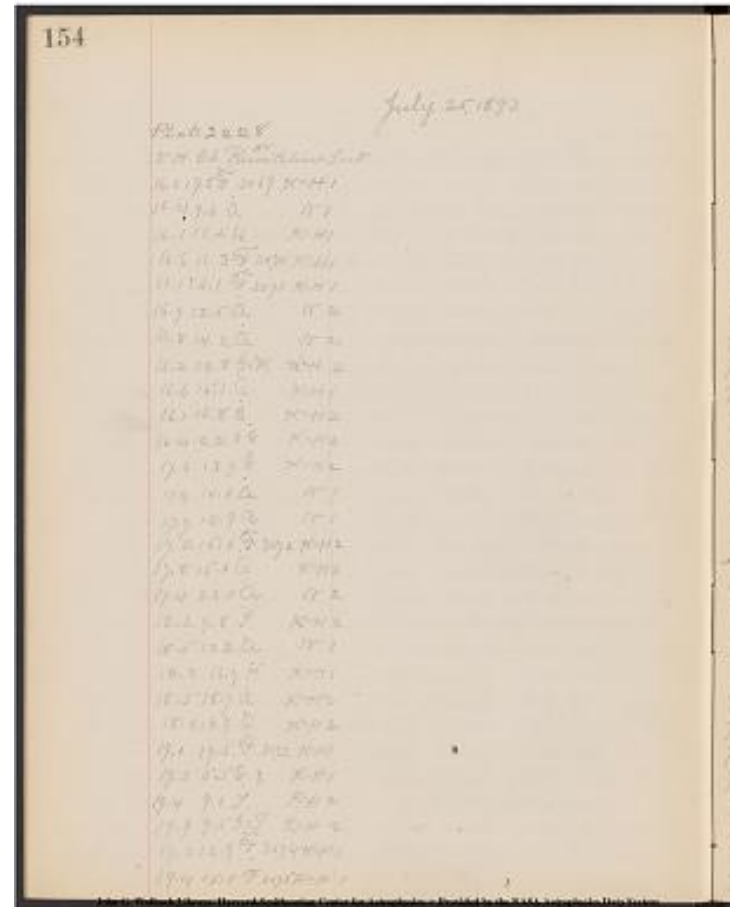
July 25, 1893

Plate 3228

[[6 columned table]]

[V|H|Cl.|Rem No.|K line|Int.]

16.0	19.8	F	3069	K=H	1	
16.4	9.6	A		N	1	
16.1	10.2	H		K=H	1	
16.6	11.3	F	3070	K=H	1	
16.1	12.1	F	3071	K=H	1	
16.9	12.5	A		N	2	
16.8	14.2	A		N	2	
16.2	14.8	G5K		K=H	4	
16.6	15.1	A		K=H	1	
16.1	15.8	E		K=H	2	
16.4	22.0	G		K=H	3	
17.6	13.7	G		K=H	2	
17.9	14.0	A		N	1	
17.7	14.9	A		N	1	
17.2	15.0	F	3072	K=H	2	
17.8	15.0	A		K=H	3	
17.4	23.0	A		N	2	
18.2	7.8	J		K=H	2	
18.5	13.2	A		N	1	
18.3	16.7	H		K=H	1	
18.5	18.7	A		K=H	2	
18.4	18.9	A		K=H	2	
19.0	19.5	F	3073	K=H	1	
19.3	5.56	[[strikethrough]]			K=H	1
19.4	9.0	J		K=H	2	
19.9	9.5	G5F		K=H	2	
19.2	12.9	F	3074	K=H	1	
19.4	15.0	F	3075	K=H	1	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[table]]

R.A.^1855|Dec.|BD.No.|R.A. 1855|Dec. 1855|Magn.]

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

7	10.9	+12.1	+12	1495	7	10.9	+12	6	8.2	
7	32.5	+12.3	+12	1630	7	32.2	+12	19	8.5	
7	31.0	+12.2	+12	1626	7	31.0	+12	12	7.8	
7	28.8	+12.4	+12	1615	7	28.8	+12	24	8.2	
7	27.2	+12.2	+12	1605	7	27.3	+12	10	8.3	
7	26.4	+12.6	+12	1596	7	26.5	+12	37	7.7	
7	23.0	+12.6	+12	1574	7	23.0	+12	33	8.7	
7	21.8	+12.3	+12	1567	7	21.7	+12	18	5.0	
7	20.8	+12.4	+12	1562	7	20.7	+12	26	8.5	
7	19.1	+12.2	+12	1548	7	19.1	+12	14	7.5	
7	6.5	+12.4	+12	1469	7	6.5	+12	22	6.5	
<del>7 23.2</del> +13.0 <del>7 23.9</del> +12.9(+)+12 1582										
<del>23.9</del> +12 587.5										
7	23.2	+13.0	+13	1695	7	23.2	+1	<del>2</del>	4	8.7
7	21.7	+12.9(+)	+12	1566	7	21.6	+12	58	8.8	
7	21.2	+12.7	+12	1564	7	21.2	+12	44	8.0	
*7 21.2										
+13.0										
+13 1683										
7 21.1										
+13 3										
7.1										
7	4.5	+12.8	+12	1463	7	4.4	+12	46	8.2	
7	36.1	+13.2	+13	1750	7	36.2	+13	13	7.0	
7	25.0	+13.5	+13	1699	7	24.9	+13	29	9.1	
7	17.5	+13.4	+13	1663	7	17.4	+13	22	8.0	
7	13.2	+13.4	+13	1641	7	13.2	+13	26	7.8	
7	13.0	+13.3	+13	1637	7	12.9	+13	21	8.0	
7	11.5	+13.7	+13	1634	7	11.7	+13	38	8.5	
7	41.0	+13.8	+13	1772	7	40.9	+13	44	6.5	
7	33.8	+13.8	+13	1737	7	33.8	+13	50	6.5	
7	32.7	+14.1	+14	1721	7	32.6	+14	5	6.5	
7	25.6	+13.7	+13	1702	7	25.7	+13	43	8.3	
7	20.2	+13.8	+13	1678	7	20.1	+13	54	8.9	

[[/table]]

\*BD +13° 1682 superposed on BD +13° 1683



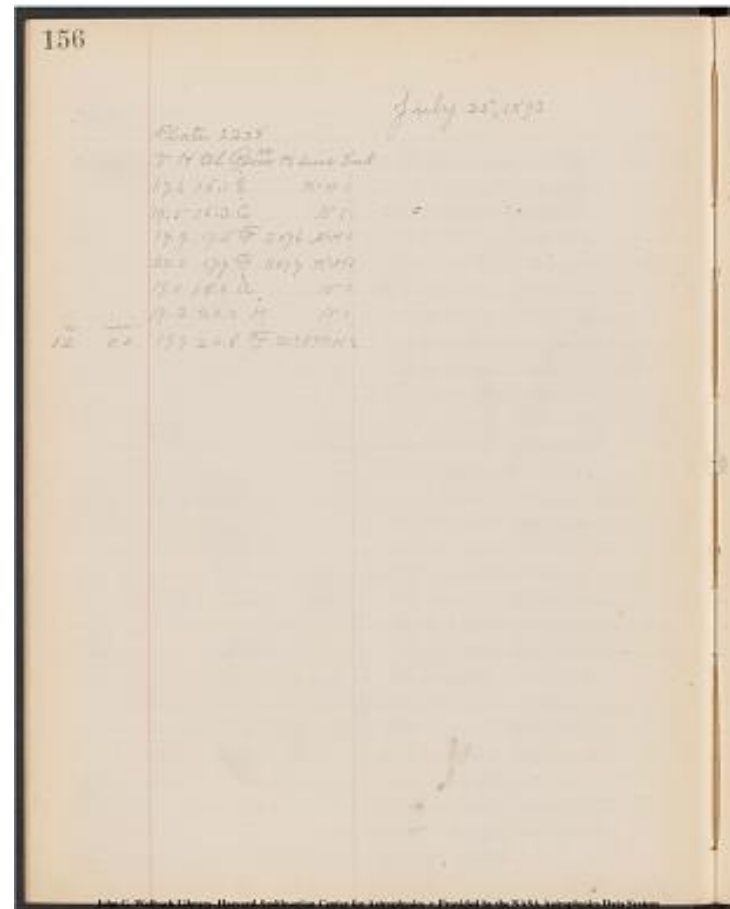
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

156

July 25, 1893

Plate 2228

[[table]]					
V	H Cl.	Rem No.	Kline	Int.	
19.6	15.1	E	K=H	1	
19.5	15.3	A	N	1	
19.9	17.5	F	3076	K=H	1
20.0	17.7	F	3077	K=H	1
19.0	18.0	A	N	1	
19.3	20.0	H	N	1	
12 <sup>h</sup> [[h]]	00 <sup>m</sup> [[m]]	19.9	20.8	F 3078	K=H 2



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

157

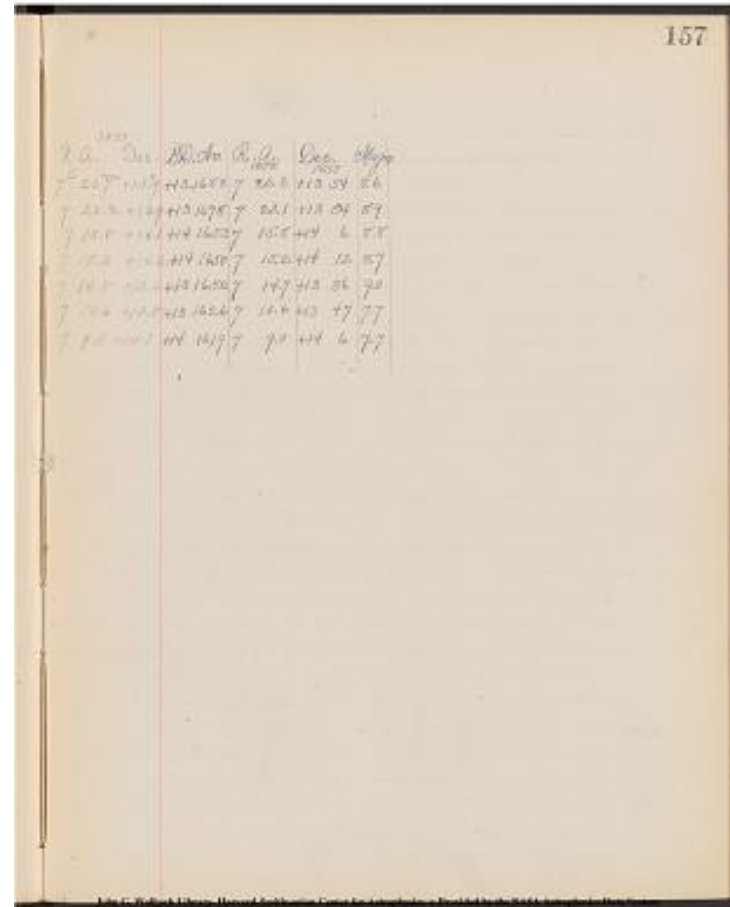
1855

[[6 columned table]]

R.A|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.|

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
7 20.2	+13.9	+13 1678	7 20.1	+13 54	8.9
7 15.8	+14.1	+14 1653	7 15.8	+14 6	8.8
7 15.2	+14.2	+14 1650	7 15.2	+14 12	8.7
7 14.8	+13.6	+13 1652	7 14.7	+13 36	9.0
7 10.6	+13.8	+13 1626	7 10.6	+13 47	7.7
7 9.0	+14.1	+14 1619	7 9.0	+14 6	7.7

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

July 26, 1893

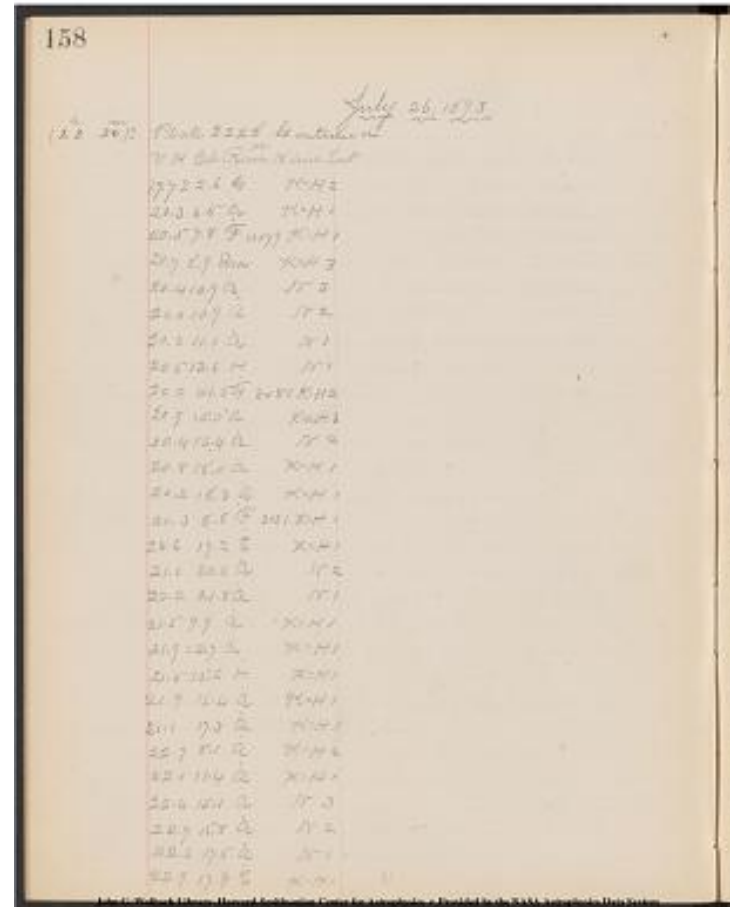
[[left margin]]  
(23<sup>h</sup>[[h]] 30<sup>m</sup>[[m]])?  
[[/left margin]]

Plate 2228 Continued

[[6 columned table]]

V|H|Cl|Rem<sup>^</sup>[[No.]]|K line|Int.]

V	H	Cl	Rem <sup>^</sup>	No.	K line	Int.
19.7	22.6	G			K=H 2	
20.3	6.5	A			K=H 1	
20.5	7.8	F	3079		K=H 1	
20.7	8.9	Ma			K=H 3	
20.4	10.9	A			N 3	
21.0	10.9	A			N 2	
20.3	11.1	A			N 1	
20.5	12.6	H			N 1	
20.0	14.5	F	3080		K=H 2	
20.9	15.0	A			K=0.3H 3	
20.4	16.4	A			N 2	
20.8	18.0	A			K=H 1	
20.2	18.3	A			K=H 1	
20.3	8.8	F	3081		K=H 1	
20.6	19.2	E			K=H 1	
21.0	20.0	A			N 2	
20.2	21.8	A			N 1	
21.5	9.9	A			K=H 1	
21.9	12.7	A			K=H 1	
21.5	15.6	H			K=H 1	
21.9	16.4	A			K=H 1	
21.1	17.3	A			K=H 1	
22.9	8.1	A			K=H 2	
22.4	15.8	A			N 2	
22.6	17.5	A			N 1	
22.9	17.9	E			K=H 1	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

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

7 5.3 | +14.0 | +14 1600 | 7 5.2 | +14 0 | 6.5 |

7 38. | ~~14.3~~ | ~~14 1753~~ | 7 38.8 | +14 14 | 8.4 |

7 35.9 | +14.5 | +14 1738 | 7 36.0 | +14 31 | 7.9 |

7 33.9 | +14.6 | +14 1729 | 7 33.9 | +14 32 | 6.0 |

7 29.7 | +14.3 | +14 1713 | 7 29.7 | +14 23 | 6.5 |

7 29.7 | +14.7 | +14 1712 | 7 29.7 | +14 40 | 6.5 |

7 29.3 | +14.3 | +14 1711 | 7 29.3 | +14 18 | 8.7 |

7 26.2 | +14.4 | +14 1699 | 7 26.2 | +14 25 | 8.0 |

7 22.2 | +14.2 | +14 1681 | 7 22.3 | +14 10 | 7.8 |

[[7 21.1 | +14.7 | 14 1676 | 7 21.0 | +14 40 | 8.9 |[[7 21.1 | +14.7 | 14 1677 | 7 21.0 | +14 39 | 7.5 |

7 17.9 | +14.4 | +14 1665 | 7 17.8 | +14 23 | 8.0 |

7 14.6 | +14.6 | +14 1649 | 7 14.6 | +14 33 | 8.5 |

7 1 | ~~14.2~~ | ~~14 1650~~ | 7 15.2 | +14 12 | 8.7 |

7 33.9 | +14.6 | +14 1729 | 7 33.9 | +14 32 | 6.0 |

7 12.1 | +14.5 | +14 1640 | 7 12.1 | +14 29 | 9.0 |

7 10.4 | +14.6 | +14 1628 | 7 10.5 | +14 37 | 8.0 |

7 6.8 | +14.2 | +14 1608 | 7 6.7 | +14 15 | 8.5 |

7 31.6 | +14.9 | +14 1720 | 7 31.7 | +14 52 | 9.0 |

7 26.0 | +15.0 | +15 1602 | 7 26.1 | +15 4 | 8.6 |

7 19.4 | +14.9 | +14 1671 | 7 19.5 | +14 58 | 7.8 |

7 18.0 | +15.1 | +15 1571 | 7 17.9 | +15 8 | 8.5 |

7 15.9 | +14.8 | +14 1654 | 7 16.0 | +14 45 | 9.2 |

7 35.5 | +15.6 | +15 1642 | 7 35.7 | +15 36 | 7.7 |

7 28.8 | +15.2 | +15 1611 | 7 28.8 | +15 13 | 8.8 |

7 20.6 | +15.4 | +15 1579 | 7 20.6 | +15 25 | 7.0 |

7 19.2 | +15.7 | +15 1574 | 7 19.2 | +15 35 | 7.3 |

7 15.5 | +15.4 | +15 1811 | 7 15.8 | +15 29 | 9.1 |

7 14.8 | +15.7 | +15 1554 | 7 14.8 | +15 38 | 6.9 |

John G. Wolbach Library, Harvard Smithsonian Center for Astrophysics

\* Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

160

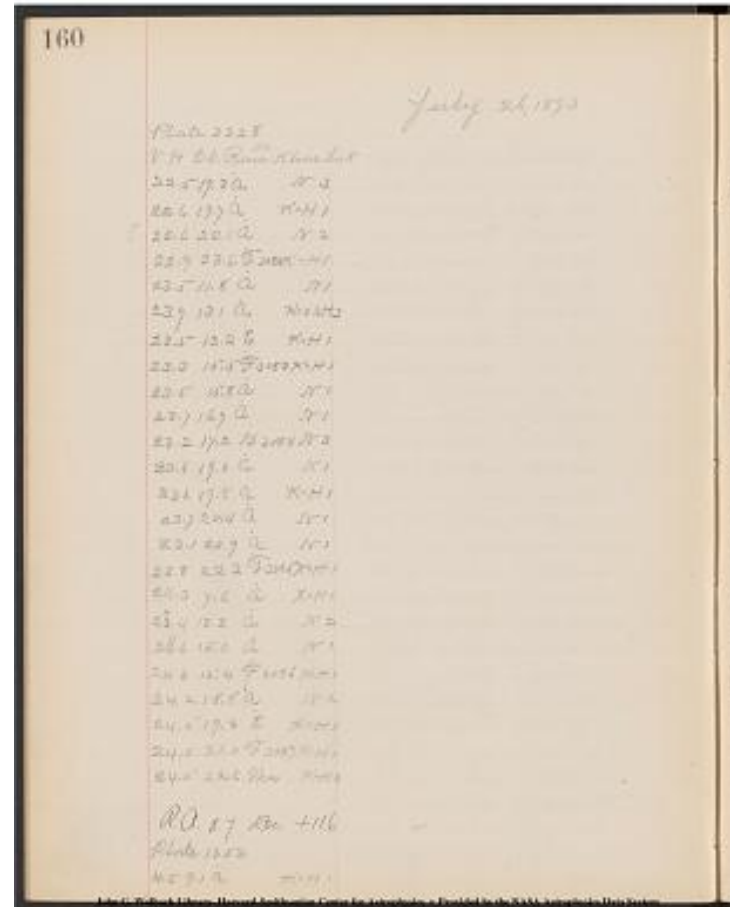
July 26, 1893

Plate 2228

[[6 columned table]]

H|Cl.|Rem ^[[No]].|Kline|Int|

H	Cl.	Rem	^[[No]]	Kline	Int
22.5	19.3	A		N	3
22.6	19.4	A		K=H	1
22.6	22.1	A		N	2
22.9	23.6	F	3082	K=H	1
23.5	11.8	A		N	1
23.9	13.1	A		K=0.2H	3
23.5	13.2	E		K=H	1
23.3	15.5	F	3083	K=H	1
23.5	15.8	A		N	1
23.7	16.4	A		N	1
23.3	14.2	B	3084	N	3
23.6	19.0	A		N	1
23.6	19.8	A		K=H	1
23.7	20.4	A		N	1
23.1	20.9	A		N	1
23.8	22.2	F	3085	K=H	1
24.3	7.6	A		K=H	1
2	<del>3</del>	<del>3</del>	<del>4.4</del>	<del>13.3</del>	<del>A</del>
2	<del>3</del>	<del>3</del>	<del>4.6</del>	<del>15.0</del>	<del>A</del>
24.3	15.4	F	3086	K=H	1
24.2	18.8	A		N	2
24.5	19.3	E		K=H	1
24.5	21.0	F	3087	K=H	1
24.5	22.6	Ma		K=H	3
R.A. 8.7 Dec +11.6					
Plate 1252					
4.5	9.1	A		K=H	1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855.

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. | Dec. | Magn. |

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

7<sup>h</sup> [h] 11.9<sup>m</sup> [m] +15.3 +15° [h] [h] [h] [h] [h] [h]1541 | 7<sup>h</sup> [h] 11.9<sup>m</sup> [m] +15° 26' 16.8 |

7 11.1 | +15.4 | +15 1537 | 7 11.2 | +15 27 | 8.5 |

7 3.0 | +15.6 | +15 1494 | 7 3.0 | +15 34 | 7.3 |

7 28.0 | +15.9 | +15 1609 | 7 28.0 | +15 55 | 9.1 |

7 25.3 | +16.1 | +16 1510 | 7 25.3 | +16 8 | 5.7 |

7 25.1 | +15.9 (+) | +15 1598 | 7 24.2 | +15 56 | 7.5 |

7 19.8 | +15.8 | +15 1577 | 7 19.9 | +15 49 | 8.5 |

7 19.1 | +15.9 | +15 1573 | 7 19.1 | +15 57 | 9.0 |

7 17.3 | +15.9 (+) | +15 1568 | 7 17.3 | +15 60 | 8.9 |

7 16.1 | +15.8 | +15 [ ] 1564 [ ] 7<sup>h</sup> [ ] 16.2<sup>m</sup> [ ] +15 [ ] 48 [ ] 7.0 [ ] [ ]

7 12.6 | +15.9 | +15 1545 | 7 12.5 | +15 56 | 9.0 |

7 10.9 | +15.9 | +15 1536 | 7 11.0 | +15 55 | 9.0 |

7 9.9 | +16.0 | +16 1442 | 7 9.7 | +16 0 | 8.4 |

7 8.6 | +15.7 | +15 1525 | 7 8.6 | +15 41 | 8.8 |

7 6.0 | +16.0 | +16 1422 | 7 6.0 | +16 1 | 8.5 |

7 36.8 | +16.2 | +16 1549 | 7 36.7 | +16 14 | 8.0 |

7 24.8 | +16.3 | +16 1506 | 7 24.8 | +16 17 | 8.0 |

7 2 [ ] [ ] [ ] 0 [ ] [ ] [ ] 1.2 | +16.5 | +16 1490 | 7 21.2 | +16

28 | 8.1 |

7 20.1 | +16.3 | +16 1485 | 7 20.0 | +16 16 | 9.2 |

7 13.0 | +16.3 | +16 1453 | 7 13.0 | +16 15 | 8.5 |

7 11.9 | +16.4 | +16 1448 | 7 11.9 | +16 24 | 8.0 |

7 8.6 | +16.4 | +16 1433 | 7 8.4 | +16 22 | 7.5 |

7 5.1 | +16.4 | +16 1417 | 7 5.1 | +16 25 | 5.5 |

8 54.1 | +6.2 | +6 2089 | 7 54.2 | +16 14 | 8.0 |

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



162

July 26, 1893

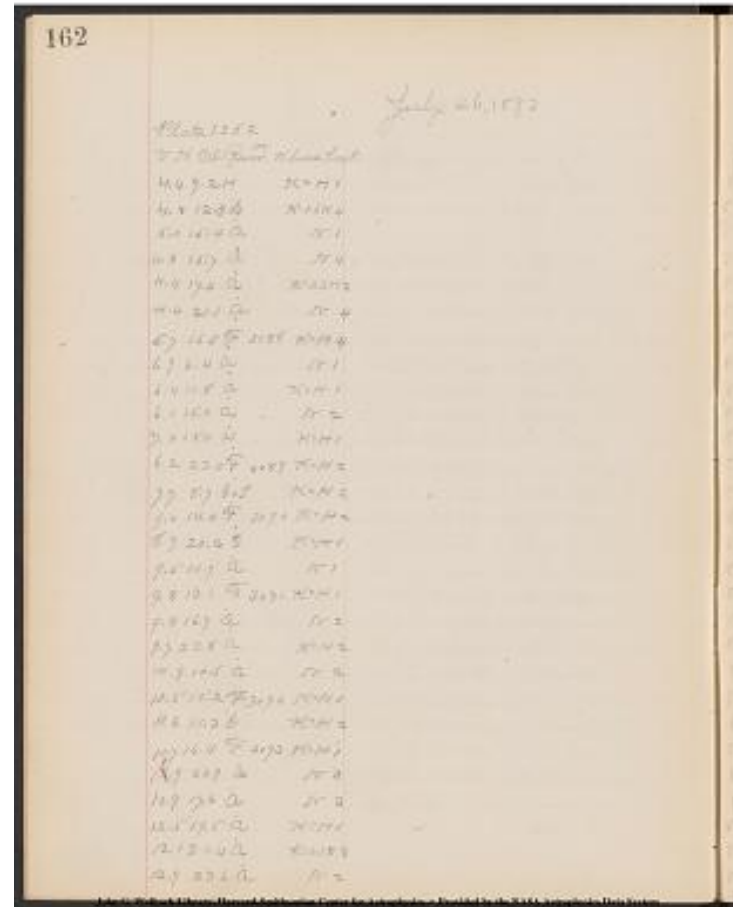
Plate 1252

[[6 columned table]]

[V|H|Cl.|Rem ^{[No]}.|K line|Int|

V	H	Cl.	Rem	^{[No]}	K line	Int
4.4	9.2	H			K=H 1	
4.8	12.3	L			K=1.5H 4	
5.0	15.4	A			N 1	
4.0	15.7	A			N 4	
4.4	17.4	A			K=0.3H 2	
4.4	21.1	A			N 4	
5.7	16.5	F	3088		K=H 4	
5.9	6.4	A			N 1	
6.4	11.8	A			K=H 1	
6.1	15.0	A			N 2	
7.0	15.0	H			K=H 1	
6.2	22.0	[[6+?]]	3089		K=H 2	
7.7	8.7	G5T			K=H 2	
9.0	14.0	F	3090		K=H 2	
8.9	20.2	E			K=H 1	
9.5	10.7	A			N 1	
9.8	13.1	F	3091		K=H 1	
9.8	16.7	A			N 2	
9.7	22.8	A			K=H 2	
10.9	10.5	A			N 2	
10.5	15.2	F	3092		K=H 1	
11.6	11.3	G			K=H 2	
11.7	16.4	F	3093		K=H 1	
1	[[strikethrough]]2	[[/strikethrough]]	1.9	20.9	A	N 3
12.9	17.6	A			N 3	
12.5	19.5	A			K=H 1	
12.1	21.4	A			K=0.1H 3	
12.9	23.6	A			N 2	

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A.|Dec.|BD. No.|R.A.|Dec.|Magn.]

R.A.	Dec.	BD. No.	R.A.	Dec.	Magn.
8 <sup>h</sup> 47.8 <sup>m</sup>	+6.5 <sup>s</sup>	2060	8 47.7	+6 30	3.0
*8 41.7	+6.6	2044	8 41.7	+6 36	8.8
8 40.8	+6.5	2040	8 40.8	+6 22	4.8
8 37.3	+6.2	2030	8 37.4	+6 12	7.0
8 30.0	+6.2	2001	8 30.0	+6 13	4.5
8 39.0	+6.9(+)	2036	8 39.1	+6 57	3.5
8 59.7	+7.4	2078	8 59.7	+7 25	8.0
8 49.0	+7.2	2049	8 48.8	+7 12	8.5
8 42.0	+7.1	2037	8 42.2	+7 5	7.7
8 42.0	+7.6	2036	8 42.1	+7 33	7.5
8 28.1	+7.1	1997	8 28.1	+7 7	6.0
8 55.0	+7.9	2066	8 55.0	+7 53	6.5
8 44.4	+8.6	2134	8 44.5	+8 36	6.8
8 31.5	+8.5	2099	8 31.7	+8 31	7.5
8 51.0	+8.8	2148	8 51.0	+8 48	8.3
8 46.1	+8.9(+)	2138	8 46.2	+8 57	7.7
8 38.8	+9.0	2047	8 38.7	+9 0	7.5
8 26.3	+8.9(+)	2077	8 26.4	+8 56	7.0
8 51.5	+9.6	2099	8 51.5	+9 32	7.5
8 41.7	+9.4	2063	8 41.7	+9 24	7.8
8 49.9	+9.9(+)	2093	8 49.9	+9 56	6.0
8 39.3	+9.9	2053	8 39.4	+9 55	8.8
8 30.2	+10.1	1840	8 30.3	+10 5	7.4
8 37.0	+10.6	1864	8 36.9	+10 36	6.0
8 33.0	+10.3	1848	8 33.0	+10 20	7.8
8 29.2	+10.1	1837	8 29.2	+10 10	6.0
8 24.7	+10.6	1818	8 24.8	+10 35	6.8

\* v. Chart

163

R.A.	Dec.	BD. No.	R.A.	Dec.	Magn.
8 47.8	+6.5	2060	8 47.7	+6 30	3.0
*8 41.7	+6.6	2044	8 41.7	+6 36	8.8
8 40.8	+6.5	2040	8 40.8	+6 22	4.8
8 37.3	+6.2	2030	8 37.4	+6 12	7.0
8 30.0	+6.2	2001	8 30.0	+6 13	4.5
8 39.0	+6.9(+)	2036	8 39.1	+6 57	3.5
8 59.7	+7.4	2078	8 59.7	+7 25	8.0
8 49.0	+7.2	2049	8 48.8	+7 12	8.5
8 42.0	+7.1	2037	8 42.2	+7 5	7.7
8 42.0	+7.6	2036	8 42.1	+7 33	7.5
8 28.1	+7.1	1997	8 28.1	+7 7	6.0
8 55.0	+7.9	2066	8 55.0	+7 53	6.5
8 44.4	+8.6	2134	8 44.5	+8 36	6.8
8 31.5	+8.5	2099	8 31.7	+8 31	7.5
8 51.0	+8.8	2148	8 51.0	+8 48	8.3
8 46.1	+8.9(+)	2138	8 46.2	+8 57	7.7
8 38.8	+9.0	2047	8 38.7	+9 0	7.5
8 26.3	+8.9(+)	2077	8 26.4	+8 56	7.0
8 51.5	+9.6	2099	8 51.5	+9 32	7.5
8 41.7	+9.4	2063	8 41.7	+9 24	7.8
8 49.9	+9.9(+)	2093	8 49.9	+9 56	6.0
8 39.3	+9.9	2053	8 39.4	+9 55	8.8
8 30.2	+10.1	1840	8 30.3	+10 5	7.4
8 37.0	+10.6	1864	8 36.9	+10 36	6.0
8 33.0	+10.3	1848	8 33.0	+10 20	7.8
8 29.2	+10.1	1837	8 29.2	+10 10	6.0
8 24.7	+10.6	1818	8 24.8	+10 35	6.8

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

164

July 26, 1893

Plate 1252

[[7 columned table]]

[V|H|Cl.|No. Rem.|K line|Int.]

12.4	24.0	A		N	2
13.6	15.9	H		N	1
14.0	16.8	F	3094	K=H	1
13.9	23.0	A		K=H	1
14.3	6.4	A		N	1
14.5	11.3	A		N	1
15.0	16.4	A		N	1
14.8	19.3	A		N	2
14.5	19.9	H		K=H	1

Ex. on Sept. 4, 1903,

W.P.F|16.0|12.3|L|5|~~[[/strickethrough]]~~H|~~[[/strickethrough]]~~M

~~[[/strickethrough]]~~?|~~[[/strickethrough]]~~|K=H|2|

15.8	20.1	F	3095	K=H	1				
15.9	21.0	A		N	1				
15.4	22.4	F	3096	K=H	1				
16.1	5.4	F	3097	K=H	2				
16.4	11.1	A		K=0.3H	4				
16.5	14.3	H		N	1				
17.0	14.5	F	3098	K=H	1				
16.9	16.6	A		K=0.1H	3				
16.1	21.9	A		N	1				
18.0	10.0	A		N	1				
19.1	15.3	F	3099	K=H	1				
17.8	15.8	H		N	1				
18.0	18.4	A		K=0.3H	3				
19.0	10.6	H		N	1				
19.2	<del>[[/strickethrough]]</del>		17.6	<del>[[/strickethrough]]</del>	17.2	A		K=H	1
19.2	23.1	I		K=H	2				
19.7	22.1	A		N	1				
20.4	13.5	A		K=0.3H	2				

164

July 26, 1893

Plate 1252

W.P.F. 16.0 12.3 L 5 ~~[[/strickethrough]]~~ H ~~[[/strickethrough]]~~ M

~~[[/strickethrough]]~~? ~~[[/strickethrough]]~~ K=H 2

15.8 20.1 F 3095 K=H 1

15.9 21.0 A N 1

15.4 22.4 F 3096 K=H 1

16.1 5.4 F 3097 K=H 2

16.4 11.1 A K=0.3H 4

16.5 14.3 H N 1

17.0 14.5 F 3098 K=H 1

16.9 16.6 A K=0.1H 3

16.1 21.9 A N 1

18.0 10.0 A N 1

19.1 15.3 F 3099 K=H 1

17.8 15.8 H N 1

18.0 18.4 A K=0.3H 3

19.0 10.6 H N 1

19.2 ~~[[/strickethrough]]~~ 17.6 ~~[[/strickethrough]]~~ 17.2 A K=H 1

19.2 23.1 I K=H 2

19.7 22.1 A N 1

20.4 13.5 A K=0.3H 2

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.|

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
8 <sup>h</sup> 40.8 <sup>m</sup> 10.9 <sup>s</sup>	10 18 7.5	1855	8 40.8	10 18 7.5	7.5
8 40.8	10 18 7.5	1855	8 40.8	10 18 7.5	7.5
8 38.5	11.1	1908	8 38.5	11 6 7.7	7.7
8 26.0	11.0	1870	8 26.1	11 4 7.8	7.8
8 59.9	11.2	1984	8 59.9	11 14 5.5	5.5
8 50.0	11.4	1950	8 50.0	11 23 8.2	8.2
8 39.2	11.7	1913	8 39.9	11 41 7.8	7.8
8 33.4	11.6	1894	8 33.4	11 34 7.5	7.5
8 32.6	11.4	1892	8 32.6	11 26 7.2	7.2
8 48.0	12.2	1941	8 48.0	12 11 5.8	5.8
8 31.9	12.0	1888	8 31.9	12 2 8.1	8.1
8 30.0	11.9	1885	8 30.0	11 57 8.1	8.1
8 27.0	11.8	1874	8 27.1	11 47 7.5	7.5
9 2.0	12.1	1979	9 1.9	12 10 7.0	7.0
8 50.5	12.4	1948	8 50.6	12 26 4.3	4.3
8 43.9	12.4	1927	8 43.9	12 25 8.0	8.0
8 43.4	12.7	1925	8 43.5	12 39 8.0	8.0
8 39.0	12.7	1904	8 39.0	12 38 6.2	6.2
8 28.6	12.2	1872	8 28.6	12 12 8.5	8.5
8 53.0	13.1	2028	8 52.9	13 8 8.1	8.1
8 41.6	12.7	1914	8 41.6	12 42 8.5	8.5
*8 40.7	13.1	1994	8 40.7	13 5 7.2	7.2
8 35.2	13.2	1972	8 35.2	13 12 6.0	6.0
8 51.3	13.6	2021	8 51.5	13 39 7.5	7.5
8 38.0	13.8	1981	8 38.0	13 47 8.7	8.7
8 25.8	13.8	1940	8 25.7	13 45 6.8	6.8
8 27.7	14.0	1927	8 27.7	14 2 8.2	8.2
8 45.8	14.3	1989	8 45.7	14 24 6.8	6.8

\*BD +13° 1995 superposed on BD. +13° 1994.

165

W. Fleming

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
8 40.8	10 18 7.5	1855	8 40.8	10 18 7.5	7.5
8 38.5	11.1	1908	8 38.5	11 6 7.7	7.7
8 26.0	11.0	1870	8 26.1	11 4 7.8	7.8
8 59.9	11.2	1984	8 59.9	11 14 5.5	5.5
8 50.0	11.4	1950	8 50.0	11 23 8.2	8.2
8 39.2	11.7	1913	8 39.9	11 41 7.8	7.8
8 33.4	11.6	1894	8 33.4	11 34 7.5	7.5
8 32.6	11.4	1892	8 32.6	11 26 7.2	7.2
8 48.0	12.2	1941	8 48.0	12 11 5.8	5.8
8 31.9	12.0	1888	8 31.9	12 2 8.1	8.1
8 30.0	11.9	1885	8 30.0	11 57 8.1	8.1
8 27.0	11.8	1874	8 27.1	11 47 7.5	7.5
9 2.0	12.1	1979	9 1.9	12 10 7.0	7.0
8 50.5	12.4	1948	8 50.6	12 26 4.3	4.3
8 43.9	12.4	1927	8 43.9	12 25 8.0	8.0
8 43.4	12.7	1925	8 43.5	12 39 8.0	8.0
8 39.0	12.7	1904	8 39.0	12 38 6.2	6.2
8 28.6	12.2	1872	8 28.6	12 12 8.5	8.5
8 53.0	13.1	2028	8 52.9	13 8 8.1	8.1
8 41.6	12.7	1914	8 41.6	12 42 8.5	8.5
*8 40.7	13.1	1994	8 40.7	13 5 7.2	7.2
8 35.2	13.2	1972	8 35.2	13 12 6.0	6.0
8 51.3	13.6	2021	8 51.5	13 39 7.5	7.5
8 38.0	13.8	1981	8 38.0	13 47 8.7	8.7
8 25.8	13.8	1940	8 25.7	13 45 6.8	6.8
8 27.7	14.0	1927	8 27.7	14 2 8.2	8.2
8 45.8	14.3	1989	8 45.7	14 24 6.8	6.8

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

166

July 26, 1893

Plate 1252

[[6 columned table]]

V|H|Cl.|Rem^[[No.]]|Kline|Int.|

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

20.8|17.|[~~8~~]|1|A| |N|1|

20.2|21.9|A| |N|2|

21.6|13.5|A| |N|1|

21.4|19.8|A| |K=H|1|

22.3|15.2|F|3|~~0~~|100|K=H|1|

23.9|11.7|A| |K=0.4H|2|

23.4|11.8|A| |K=0.3H|3|

23.4|14.8|E| |K=H|2|

23.4|16.5|A| |K=H|1|

23.3|22.0|A| |K=H|2|

R.A. 12.7 Dec. H1.8

Plate 1386

[[6 columned table]]

4.5|15.0|A| |N|3|

6.1|17.6|A| |K=0.1H|4|

7.8|15.8|A| |K=0.5H|4|

7.7|16.7|F|3101|K=H|1|

7.9|18.3|E| |K=H|1|

7.5|21.0|F|3102|K=H|1|

8.0|21.3|G3J| |K=H|2|

7.9|21.8|G| |K=H|2|

7.8|22.9|K| |K=H|2|

8.4|12.8|E| |K=H|1|

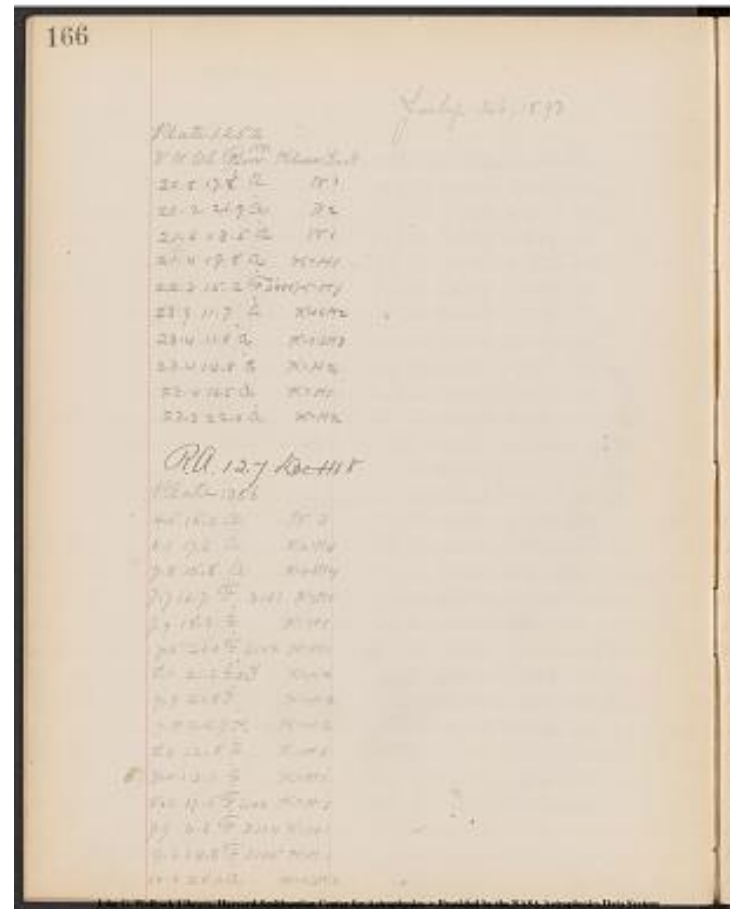
9.0|13.1|E| |K=H|1|

8.6|17.5|F|3103|K=H|1|

9.9|6.6|F|3104|K=H|1|

9.6|14.8|F|3105|K=H|1|

10.0|20.0|A| |K=0.3H|3|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

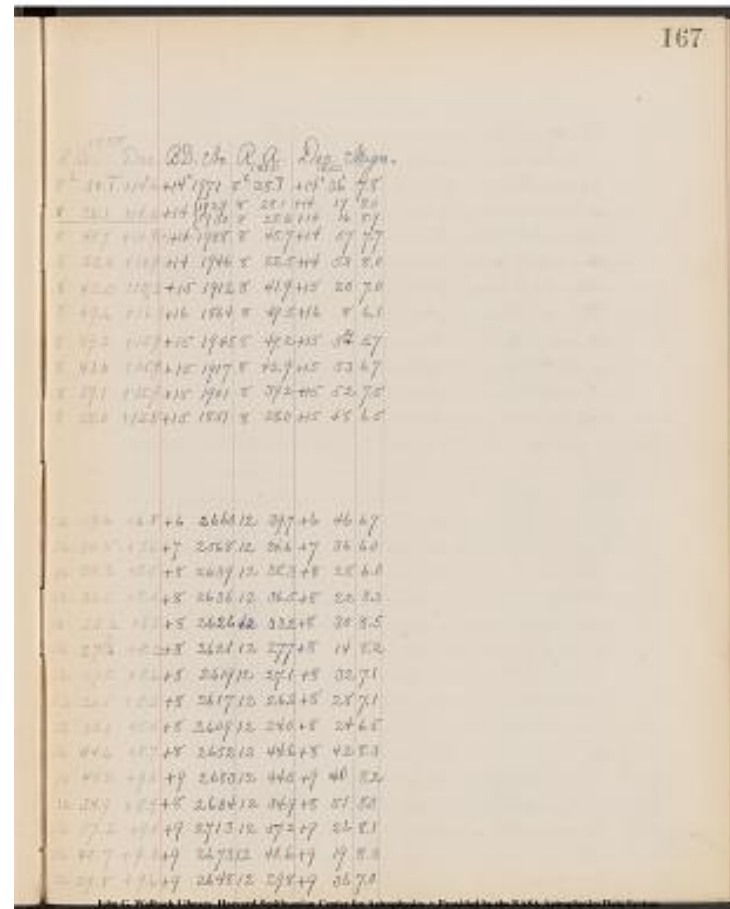
1855

[[6 columned table]]

R.A|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.|

R.A.	Dec.	BD. No.	R.A. 1855	Dec. 1855	Magn.
8 <sup>h</sup> 38.1 <sup>m</sup>	+14.6°	1971	8 <sup>h</sup> 38.1 <sup>m</sup>	+14° 36'	7.8
8 28.1	+14.2	1929	8 28.1	+14 17	8.0
8 28.1	+14.2	1930	8 28.2	+14 16	8.9
8 45.7	+14.9	1988	8 45.7	+15 57	7.7
8 32.6	+14.9	1946	8 32.5	+14 53	8.0
8 42.0	+15.3	1912	8 41.9	+15 23	7.0
8 49.6	+16.1	1864	8 49.5	+16 8	6.1
8 49.2	+15.9	1945	8 49.2	+15	
5 <del>4</del>					
8 43.0	+15.9	1917	8 42.9	+15 53	6.7
8 39.1	+15.9	1901	8 39.2	+15 52	7.5
8 28.0	+15.8	1851	8 28.0	+15 48	6.5

12 29.6	+6.8	2660	12 29.7	+6 46	6.7
12 34.5	+7.6	2568	12 34.6	+7 36	6.0
12 38.3	+8.5	2639	12 38.3	+8 28	6.0
12 36.5	+8.4	2636	12 36.5	+8 22	8.3
12 33.2	+8.5	2626	12 33.2	+8 30	8.5
12 27.6	+8.2	2621	12 27.7	+8 14	8.2
12 27.0	+8.6	2619	12 27.1	+8 32	7.1
12 26.1	+8.5	2617	12 26.2	+8 28	7.1
12 24.0	+8.4	2609	12 24.0	+8 24	6.5
12 44.6	+8.7	2652	12 44.6	+8 43	8.3
12 44.0	+9.0	2683	12 44.0	+9 40	8.2
12 34.9	+8.9	2634	12 34.9	+8 51	8.0
12 57.2	+9.4	2713	12 57.2	+9 26	8.1
12 40.7	+9.3	2673	12 40.6	+9 19	8.3
12 29.8	+9.6	2658	12 29.8	+9 36	7.0



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

168

July 26, 1893

Plate 1386

[[table]]

|V|H|Gl.|No. Rem.|K line|Int.

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

10.9|14.6|F|~~3006~~|~~3106~~|K=H|2

10.5|15.1|I| |K=H|2

11.0|15.4|F|3109|K=H|2

10.1|18.2|F|3108|K=H|2

11.6|9.0|G| |K=H|2

11.2|9.9|a| |N|3

11.2|10.5|E| |K=H|1

11.2|14.0|E| |K=H|1

11.5|15.5|G| |K=H|3

11.9|19.5|E| |K=H|1

12.0|23.3|F|3109|K=H|2

12.6|9.3|F|3110|K=H|1

12.6|19.0|H| |K=H|1

12.2|19.9|F|3111|K=H|3

12.8|19.9|a| |K=0.1H|4

13.0|22.0|G| |K=H|2

13.9|9.2|H| |N|1

13.5|10.5|a| |N|1

13.2|17.8|a| |K=0.3H|3

13.6|19.8|H| |K=H|1

13.9|20.3|F|3112|K=H|1

15.0|6.9|E| |K=H|1

14.3|7.8|G| |K=1.5H|5

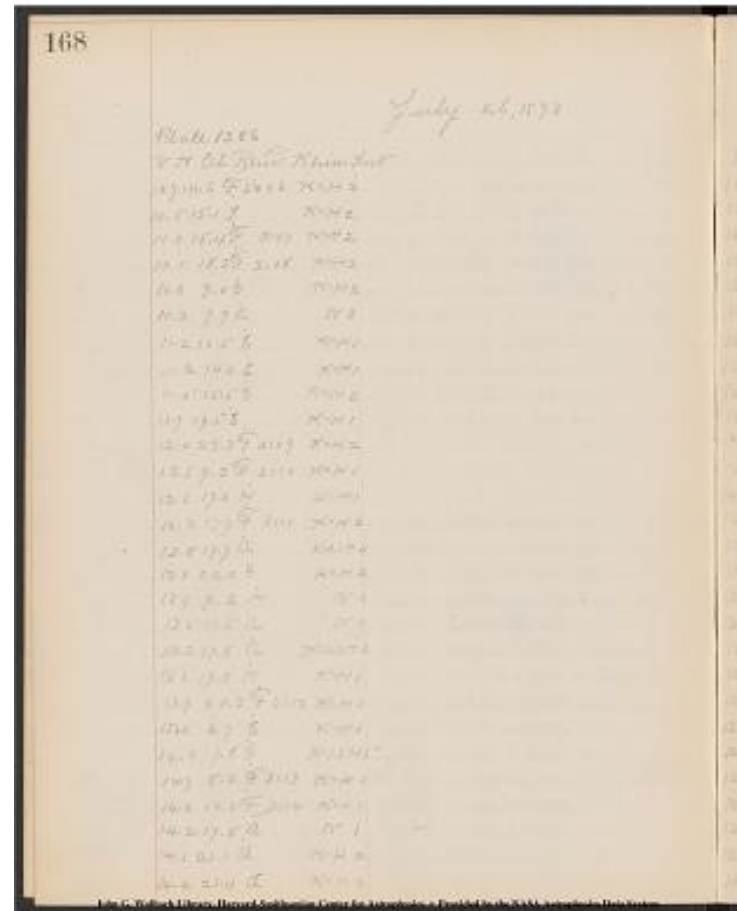
14.9|8.2|F|3113|K=H|1

14.2|16.6|F|3114|K=H|1

14.2|19.5|a| |N|1

14.1|21.1|a| |K=H|2

14.2|21.4|a| |K=H|2



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08







170

July 26, 1893

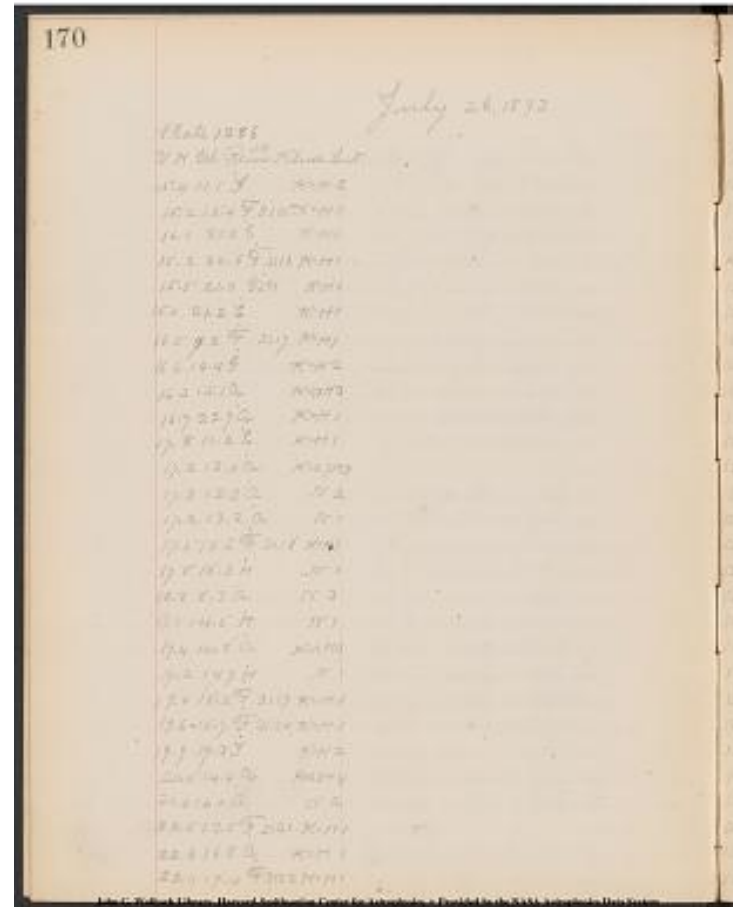
Plate 1386

[[6 columned table]]

[V|H|Cl.|Rem. ^[[No.]]|Kline|Int.]

15.4	11.1	I			K=H 2
15.2	15.4	F	3115		K=H 1
16.0	20.0	E			K=H 1
15.2	20.6	F	3116		K=H 1
15.5	21.0	G5H			K=H 1
15.0	21.2	E			K=H 1
16.5	7.2	F	3117		K=H 1
16.6	14.4	G			K=H 2
16.3	15.1	A			K=0.3H 3
16.7	22.7	A			K=H 1
17.8	11.2	E			K=H 1
17.2	12.0	A			K=0.7H 3
17.3	12.3	A			N 2
17.2	13.2	A			N 1
17.5	13.1	F	3118		K=H 1
17.8	18.3	H			N 1
18.8	8.3	A			N 3
19.0	14.5	H			N 1
19.4	14.8	A			K=0.5H 3
19.2	14.9	H			N 1
19.6	15.2	F	3119		K=H 1
19.6	15.7	F	3120		K=H 1
19.9	19.3	I			K=H 2
20.5	14.4	A			K=0.3H 4
21.0	16.0	A			N 2
22.5	12.5	F	3121		K=H 1
22.6	16.8	A			K=H 1
22.1	19.4	F	3122		K=H 1

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

171

1855

[[6 columned table]]

R.A|Dec.|BD.|No.|R.A. 1855|Dec. 1855|Magn.]

h m ° '	h m ° '				
12 48.2 +12.2 +12 2529 12 48.2 +12 17 7.3					
12 39.2 +12.2 +12 2511 12 39.3 +12 10 8.6					
12  <del>30.4</del>  +12.2 +12 2495 12 29.9 +12 37 7.8					
12 28.7 +12.2 +12 2492 12 28.7 +12 12 8.3					
12 27.9 +12.3 +12 2489 12 27.9 +12 20 7.3					
12 27.2 +12.1 +12 2488 12 27.3 +12 6 7.8					
12 56.1 +12.8 +12 2544 12 56.2 +12 46 8.3					
12 41.5 +12.9 +12 2518 12 41.6 +12 53 7.3					
12 40.0 +12.8 +12 2512 12 39.9 +12 45 6.5					
12 24.3 +12.9 +12 2484 12 24.3 +12 56 7.3					
12 48.1 +13.5 +13 2607 12 48.2 +13 29 8.2					
12 46.5 +13.2 +13 2602 12 46.6 +13 12 6.0					
12 45.9 +13.2 +13 2599 12 45.9 +13 16 7.8					
12 44.1 +13.1 +13 2596 12 44.1 +13 10 8.3					
12 4  <del>3</del>  +13.3 +13 2594 12 43.3 +13 21 8.3					
12 33.5 +13.5 +13 2569 12 33.5 +13 4 13 30 8.2					
12 33.5 +13.9 +13 2619 12 54.2 +13 57 8.0					
12 41.5 +14.1 +14 2547 12 41.5 +14 6 8.2					
12 41.0 +14.3 +14 2546 12 41.0 +14 21 6.5					
12 40.6 +14.2 +14 2545 12 40.6 +14 12 8.1					
12 39.8 +14.4 +14 2544 12 39.8 +14 25 7.5					
12 38.6 +14.4 +14 2539 12 38.7 +14 21 8.2					
12 31.2 +14.6 +14 2523 12 31.3 +14 36 6.5					
12 41.7 +14.9 +14 2549 12 41.6 +14 55 5.9					
12 38.1 +15.1 +15 2515 12 45.7 +15 49 8.2					
12 36.6 +15.9 +15 2500 12 36.6 +15 55 8.7					
12 31.0 +15.7 +15 2488 12 31.2 +15 40 7.7					



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

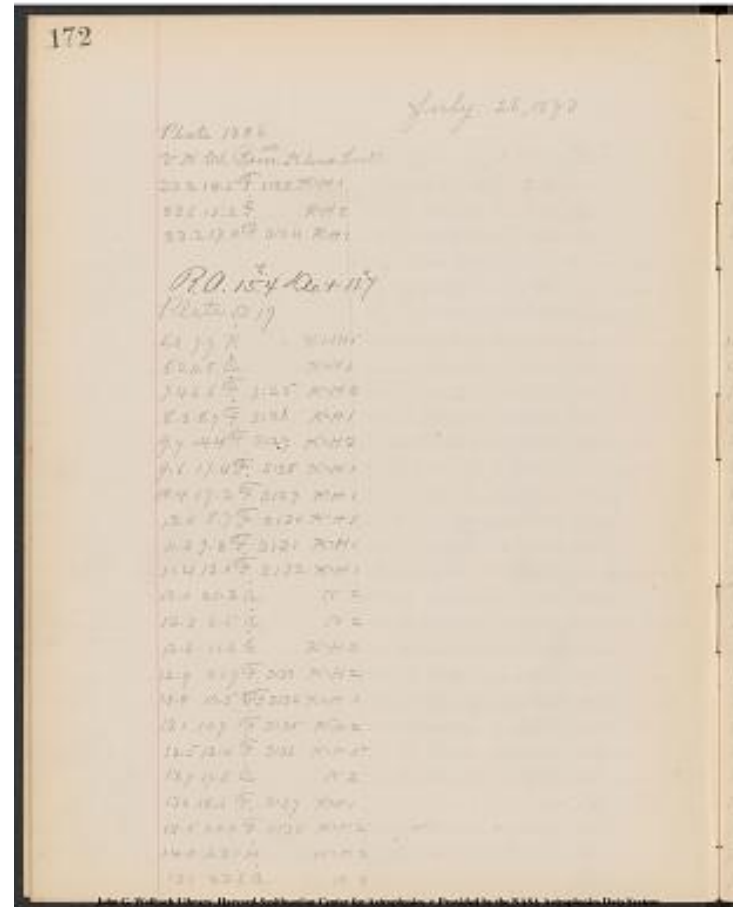
172

July 26, 1893

Plate 1386

[[6 columned table]]  
[V]H[Cl].[Rem No.][K line][Int.]  
---|---|---|---|---|---  
23.2|14.5|F|3123|K=H|1|  
23.6|15.2|G| |K=H|2|  
23.2|17.0|F|3124|K=H|1|  
R.A. 15.4<sup>h</sup>[[h]] Dec. + 11.7  
Plate 13 19  
5.6|7.7|K| |K=1.5H|5|  
5.2|11.8|A| |K=H|1|  
7.4|6.6|F|3125|K=H|3|  
8.3|8.7|F|3126|K=H|1|  
9.7|14.4|F|3127|K=H|2|  
9.6|17.4|F|3128|K=H|1|  
10.4|19.2|F|3129|K=H|1|  
12.0|8.7|F|3130|K=H|1|  
11.3|9.3|F|3131|K=H|1|  
11.4|13.0|F|3132|K=H|1|  
12.0|21.2|A| |N|2|  
12.3|6.5|A| |N|2|  
12.6|11.6|G| |K=H|3|  
12.9|21.7|F|3133|K=H|2|  
13.8|10.5|F|3134|K=H|1|  
13.1|10.9|F|3135|K=H|2|  
13.5|12.4|F|3136|K=H|5|  
13.7|17.5|A| |N|2|  
13.6|18.6|F|3137|K=H|1|  
13.5|20.2|F|3138|K=H|2|  
14.0|23.1|H| |K=H|2|  
13.1|23.6|A| |N|3|

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

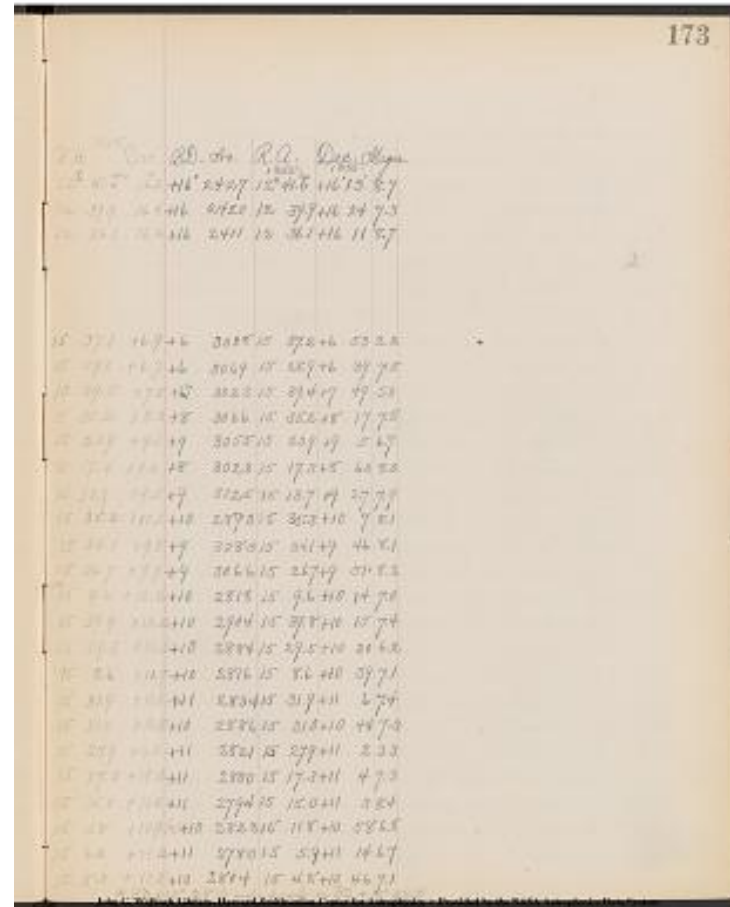
1855

[[6 columned table]]

R.A. Dec. BD. No. R.A. 1855 Dec. 1855 Magn.

R.A.	Dec.	BD.	No.	R.A.	Dec.	BD.	No.	R.A.	Dec.	BD.	No.	R.A.	Dec.	BD.	No.	R.A.	Dec.	BD.	No.
12 <sup>h</sup> 41.6 <sup>m</sup>	16.2°	+16°	2427	12 <sup>h</sup> 41.6 <sup>m</sup>	16°	13'	8.7												
12 39.9	16.4	+16	2420	12 39.9	16	24	7.3												
12 36.1	16.2	+16	2411	12 36.1	16	11	8.7												
15 37.1	+6.9	+6	3088	15 37.2	+6	53	2.2												
15 29.0	+6.7	+6	3069	15 28.9	+6	39	7.5												
15 39.5	+7.8	[[/strikethrough]]	6	[[/strikethrough]]	6														
49	5.0																		
15 35.2	+8.3	+8	3066	15 35.2	+8	17	7.5												
15 23.9	+9.1	+9	3055	15 23.9	+9	5	6.7												
15 17.4	+9.0	+8	3023	15 17.3	+8	60	8.0												
15 13.7	+9.5	+9	3025	15 13.7	+9	27	7.9												
15 35.2	+10.1	+10	2893	15 35.3	+10	7	8.1												
15 34.1	+9.8	+9	3083	15 34.1	+9	46	8.1												
15 26.7	+9.9	+9	3066	15 26.7	+9	51	8.2												
* 15 9.6	+10.2	+10	2818	15 9.6	+10	14	7.0												
15 39.9	+10.2	+10	2904	15 39.8	+10	15	7.4												
15 29.5	+10.5	+10	2884	15 29.5	+10	30	6.2												
15 8.6	+10.7	+10	2816	15 8.6	+10	39	7.1												
15 31.9	+11.1	+11	2834	15 31.9	+11	6	7.4												
15 31.0	+10.8	+10	2886	15 31.0	+10	44	7.3												
15 27.9	+11.0	+11	2821	15 27.9	+11	2	3.3												
15 17.3	+11.0	+11	2800	15 17.3	+11	4	7.3												
15 15.0	+11.0	+11	2794	15 15.0	+11	3	8.4												
15 11.8	+10.9	+10	2823	15 11.8	+10	58	6.8												
15 6.0	+11.2	+11	2780	15 5.9	+11	14	6.7												
15 5.0	+10.8	+10	2804	15 4.8	+10	46	7.1												

\* BD + 10° 2819 superposed on BD + 10° 2818



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

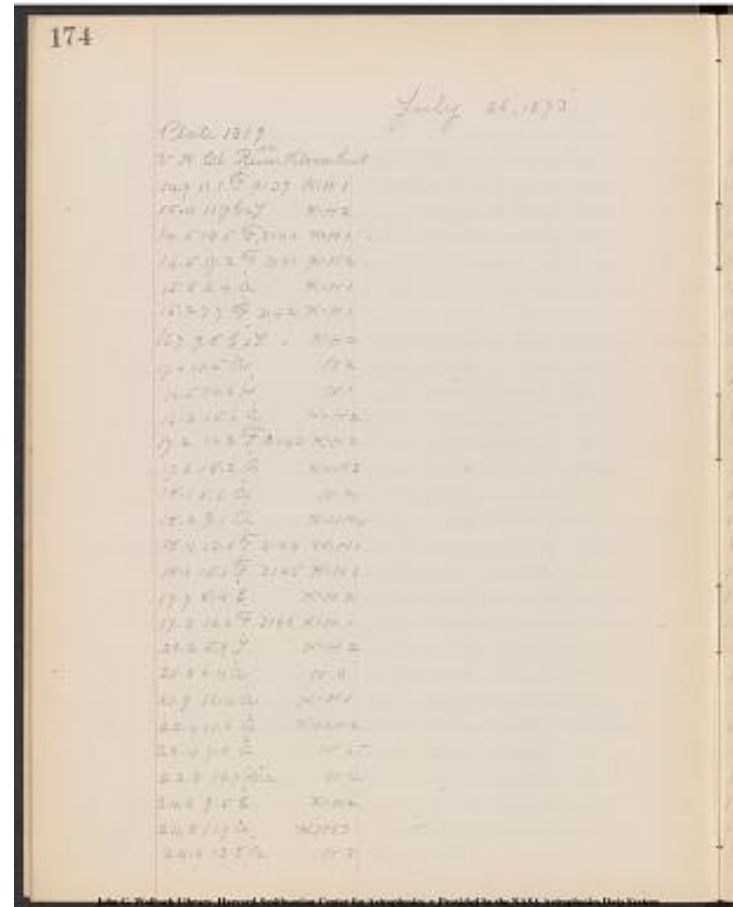
174

July 26, 1893

Plate 1319

[[table]]

V	H	Cl.	Rem.	[[No.]]	K line	Int.
14.9	11.1	F		3139	K = H   1	
15.0	11.9	G2J			K = H   2	
14.5	13.5	F		3140	K = H   1	
14.5	17.2	F		3141	K = H   2	
15.8	6.4	A			K = H   1	
15.2	7.7	F		3142	K = H   1	
16.7	9.8	G2J			K = H   2	
17.0	10.5	A			[[?]]   2	
16.5	14.6	H			[[?]]   1	
16.3	15.6	A			K = H   2	
17.2	11.2	F		3143	K = H   2	
17.6	18.3	A			K = 01H   3	
18.1	5.6	A			N   2	
18.2	9.1	A			K = 0.1H   4	
18.4	12.0	F		3144	K = H   1	
18.6	15.1	F		3145	K = H   1	
19.9	8.4	E			K = H   2	
19.3	16.0	F		3146	K = H   1	
20.2	5.9	I			K = H   2	
20.8	6.4	A			N   3	
21.9	16.4	A			K = H   1	
22.4	11.6	A			K = 0.2H   2	
23.4	7.0	A			N   5	
23.3	16.7	Ma			N   2	
24.6	9.5	E			K = H   2	
24.8	11.7	A			K = H   3	
24.6	13.8	A			N   3	



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[6 columned table]]

1855

|R.A|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.|

15h 30.7m	+11° 6'	+11° 2833	15h 30.7m	+11° 37'	7.5
15 29.0	+11.8	+11 2826	15 29.0	+11	44 6.3
15 26.0	+11.4	+11 2816	15 25.8	+11	28 7.2
15 18.0	+11.5	+11 2801	15 17.9	+11	30 7.3
15 40.2	+11.9	(+)+11 2864	15 40.2	+11	59 7.5
15 37.7	+11.8	+11 2853	15 37.7	+11	45 7.5
15 33.3	+12.5	+12 2875	15 33.3	+12	32 6.5
15 31.9	+12.8	+12 2870	15 31.9	+12	45 7.2
*15 23.5	+12.5	+12 2844	15 23.5	+12	29 7.5
15 21.3	+12.4	+12 2838	15 21.2	+12	22 7.0
15 30.5	+12.8	+12 2863	15 30.6	+12	47 7.0
15 15.4	+13.0	+13 2928	15 15.5	+13	6 6.4
15 42.1	+13.1	+13 3012	15 42.0	+13	10 7.0
15 34.9	+13.3	+13 2982	15 35.0	+13	18 5.5
15 29.0	+13.4	+13 2969	15 29.0	+13	25 7.5
15 22.2	+13.5	+13 2953	15 22.3	+13	33 6.8
15 36.5	+14.1	+14 2922	15 36.4	+14	8 6.8
15 20.4	+13.9	+13 2946	15 20.4	+13	54 7.2
15 41.5	+14.2	+14 2940	15 41.5	+14	15 7.0
15 40.7	+14.6	+14 2939	15 40.5	+14	34 6.0
15 19.5	+15.2	+15 2862	15 19.6	+15	13 8.0
15 30.0	+15.4	+15 2891	15 30.0	+15	24 7.0
15 39.5	+15.9	+15 2911	15 39.5	+15	53 3.3
15 19.0	+15.9	+15 2858	15 19.1	+15	56 4.8
15 34.4	+16.5	+16 2816	15 34.4	+16	31 6.0
15 29.9	+16.6	+16 2807	15 29.8	+16	36 6.0
15 25.4	+16.6	+16 2797	15 25.5	+16	33 6.2

175

15h 30.7m +11° 6' +11° 2833 15h 30.7m +11° 37' 7.5

15 29.0 +11.8 +11 2826 15 29.0 +11 44|6.3

15 26.0 +11.4 +11 2816 15 25.8 +11 28|7.2

15 18.0 +11.5 +11 2801 15 17.9 +11 30|7.3

15 40.2 +11.9 (+)+11 2864 15 40.2 +11 59|7.5

15 37.7 +11.8 +11 2853 15 37.7 +11 45|7.5

15 33.3 +12.5 +12 2875 15 33.3 +12 32|6.5

15 31.9 +12.8 +12 2870 15 31.9 +12 45|7.2

\*15 23.5 +12.5 +12 2844 15 23.5 +12 29|7.5

15 21.3 +12.4 +12 2838 15 21.2 +12 22|7.0

15 30.5 +12.8 +12 2863 15 30.6 +12 47|7.0

15 15.4 +13.0 +13 2928 15 15.5 +13 6|6.4

15 42.1 +13.1 +13 3012 15 42.0 +13 10|7.0

15 34.9 +13.3 +13 2982 15 35.0 +13 18|5.5

15 29.0 +13.4 +13 2969 15 29.0 +13 25|7.5

15 22.2 +13.5 +13 2953 15 22.3 +13 33|6.8

15 36.5 +14.1 +14 2922 15 36.4 +14 8|6.8

15 20.4 +13.9 +13 2946 15 20.4 +13 54|7.2

15 41.5 +14.2 +14 2940 15 41.5 +14 15|7.0

15 40.7 +14.6 +14 2939 15 40.5 +14 34|6.0

15 19.5 +15.2 +15 2862 15 19.6 +15 13|8.0

15 30.0 +15.4 +15 2891 15 30.0 +15 24|7.0

15 39.5 +15.9 +15 2911 15 39.5 +15 53|3.3

15 19.0 +15.9 +15 2858 15 19.1 +15 56|4.8

15 34.4 +16.5 +16 2816 15 34.4 +16 31|6.0

15 29.9 +16.6 +16 2807 15 29.8 +16 36|6.0

15 25.4 +16.6 +16 2797 15 25.5 +16 33|6.2

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

176

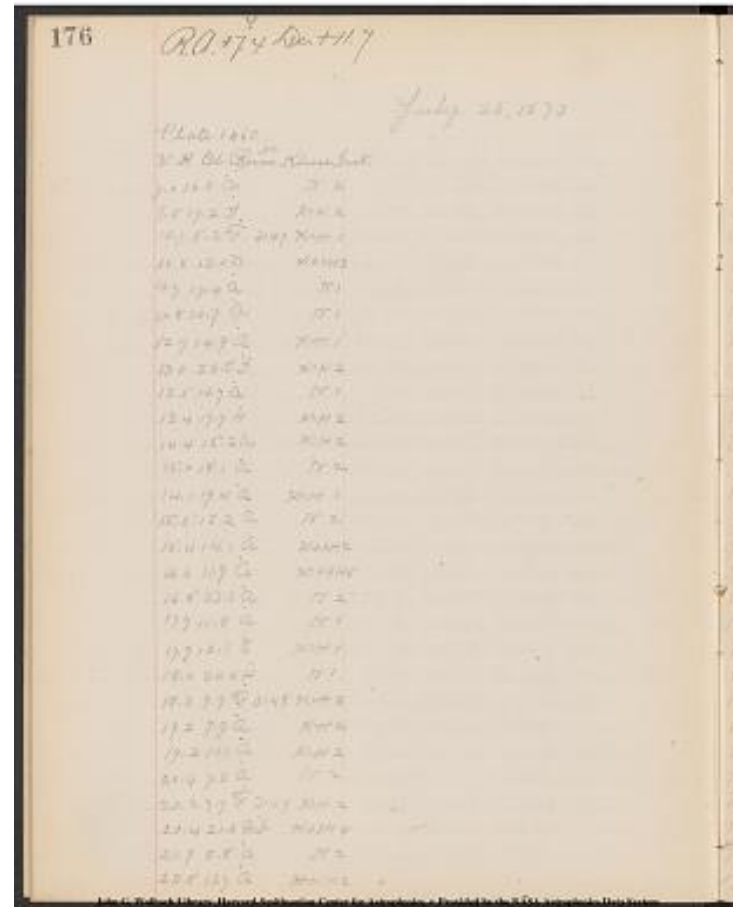
R.A. 17.4^[h] Dec. +11.7

July 26, 1893

Plate 1460

[6 columned table]  
[V|H|Cl.|Rem No.|Kline|Int.]

7.0	16.0	A		N	2
9.5	17.2	J		K=H	2
10.8	8.2	F	3147	K=H	1
10.8	12.0	A		K=0.2H	3
10.7	17.4	A		N	1
11.8	10.9	A		N	1
12.4	14.9	A		K=H	1
13.0	22.8	F		K=H	2
13.5	14.7	A		N	1
13.4	19.4	H		K=H	2
14.4	15.2	A		K=H	2
15.0	18.1	A		N	2
14.1	19.4	A		K=H	1
15.5	13.2	A		N	2
15.4	14.1	A		K=0.2H	2
16.6	11.9	A		K=0.4H	5
16.8	23.6	A		N	2
17.9	11.8	A		N	1
17.9	12.1	E		K=H	1
18.0	20.4	H		N	1
18.3	9.9	F	3148	K=H	2
19.2	7.3	A		K=H	2
19.2	11.1	A		K=H	2
20.4	7.3	A		N	2
20.2	7.7	F	3149	K=H	2
20.4	21.6	Mb		K=1.3H	4
21.9	8.8	A		N	2
22.8	16.9	A		K=0.1H	2



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

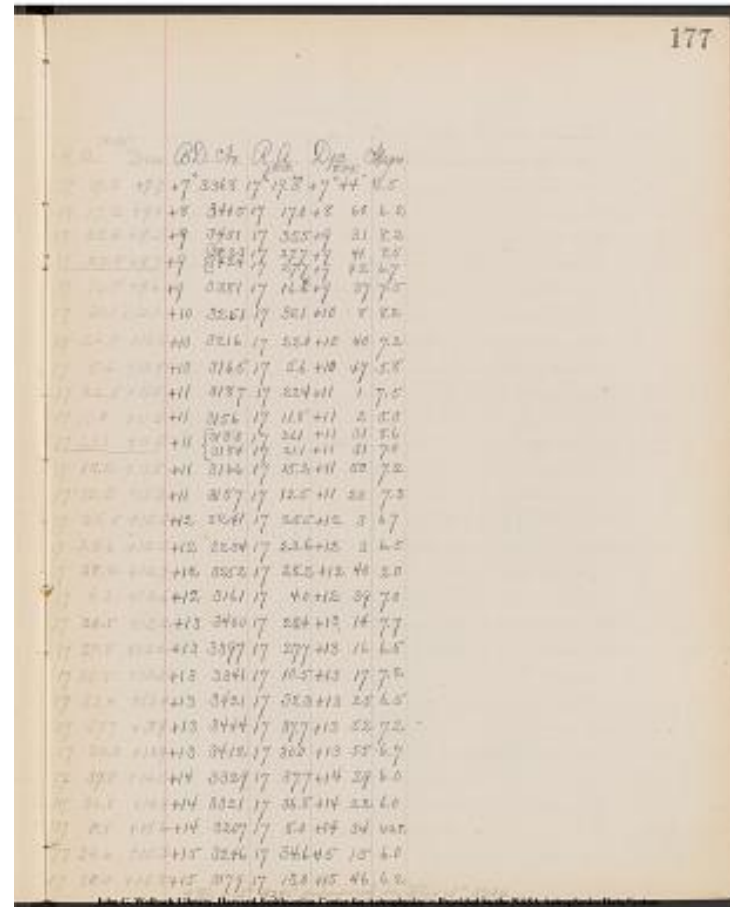
1855

[[6 columned page]]

R.A. Dec. BD. No. R.A. Dec. Magn.

17 19.3 + 7.7 +7	3368	17 19.3 +7	44	6.5
17 17.2 + 9.0 +8	3405	17 17.0 +8	60	6.2
17 35.4 + 9.5 +9	3451	17 35.5 +9	31	8.2
17 27.8 + 9.7 +9	3423	17 27.7 +9	41	8.5
" " + " " 3424	" "	+9 42	6.7	
17 16.5 + 9.6 +9	3381	17 16.4 +9	37	7.5
17 30.1 + 10.1 +10	3251	17 30.1 +10	8	8.2
17 22.0 + 10.6 +10	3216	17 22.0 +10	40	7.2
17 5.6 + 10.8 +10	3165	17 5.6 +10	47	5.8
17 22.5 + 11.0 +11	3187	17 22.4 +11	1	7.5
17 11.8 + 11.0 +11	3156	17 11.8 +11	2	5.0
17 21.2 + 11.5 +11	3183	17 21.1 +11	31	8.6
" " + " " 3184	17 21.1	+11 31	7.0	
17 15.2 + 11.8 +11	3166	17 15.2 +11	50	7.2
17 12.5 + 11.3 +11	3157	17 12.5 +11	20	7.3
17 25.5 + 12.0 +12	3241	17 25.5 +12	3	6.7
17 23.6 + 12.0 +12	3234	17 23.6 +12	3	6.5
17 28.2 + 12.7 +12	3252	17 28.2 +12	40	2.0
17 4.0 + 12.6 +12	3161	17 4.0 +12	39	7.0
17 28.5 + 13.2 +13	3400	17 28.4 +13	14	7.7
17 27.8 + 13.2 +13	3397	17 27.7 +13	16	6.5
17 10.5 + 13.3 +13	3341	17 10.5 +13	17	7.2
17 32.4 + 13.4 +13	3421	17 32.3 +13	25	6.5
17 37.7 + 13.9 +13	3444	17 37.7 +13	52	7.2
17 30.0 + 13.9 +13	3412	17 30.0 +13	55	6.7
17 37.8 + 14.5 +14	3329	17 37.7 +14	29	6.0
17 36.8 + 14.4 +14	3321	17 36.8 +14	22	6.0
17 8.1 + 14.6 +14	3207	17 8.0 +14	34	var.
17 34.6 + 15.3 +15	3246	17 34.6 +15	15	6.0
17 18.0 + 15.8 +15	3179	17 18.0 +15	46	6.2

\*BD +15 3245 [[?]] in BD +15 3245



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



178

July 26, 1893

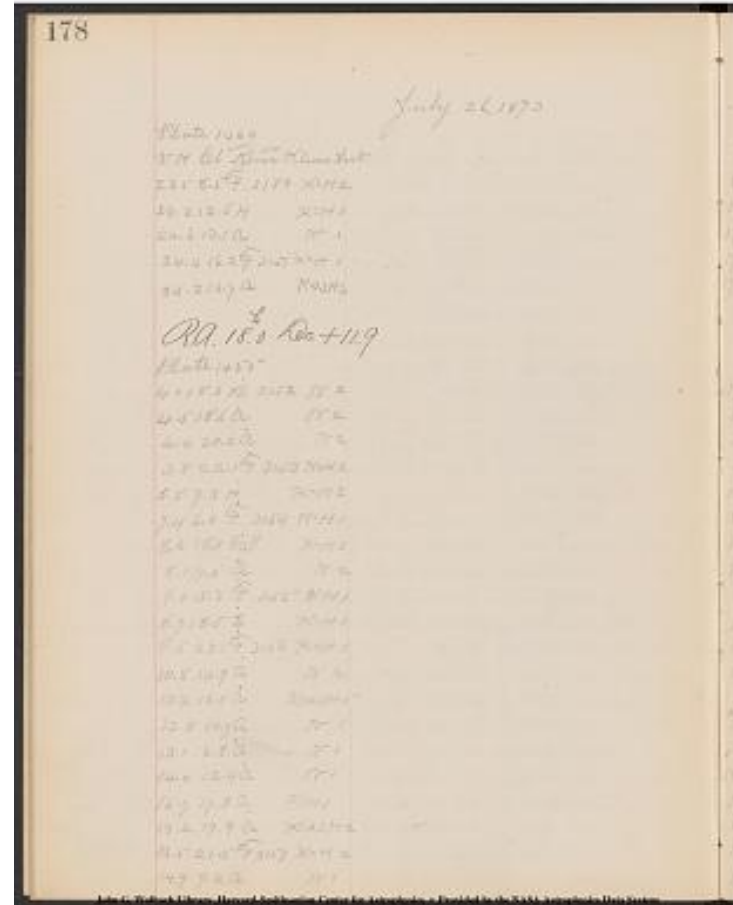
Plate 1460

V|H|Cl.|Rem|K line|Int|

23.5|8.5|F|3150|K=H|2|  
 24.2|12.5|H| |K=H|1|  
 24.6|12.1|A| |N|1|  
 24.4|16.2|F|3151|K=H|1|  
 24.2|16.7|A| |K=0.3H|3|  
 R.A. 18.0<sup>h</sup> Dec. +11.9

Plate 1455

4.0|18.3|B|3152|N|2|  
 4.5|18.6|A| |N|2|  
 4.4|20.2|A| |N|2|  
 3.8|22.1|F|3153|K=H|2|  
 5.8|9.3|H| |K=H|2|  
 7.4|6.0|F|3154|K=H|1|  
 8.6|15.0|[[?]]| |K=H|3|  
 8.1|17.0|A| |N|2|  
 9.0|15.3|F|3155|K=H|1|  
 8.9|18.5|[[?]]| |K=H|1|  
 8.5|23.1|F|3156|K=H|1|  
 10.8|14.9|A| |N|2|  
 10.2|15.0|A| |K=0.4H|5|  
 12.8|10.7|A| |N|1|  
 13.1|6.8|A| |N|1|  
 14.0|12.4|A| |N|1|  
 13.7|17.8|A| |K=H|1|  
 13.2|19.9|A| |K=0.3H|2|  
 13.5|21.5|F|3157|K=H|2|  
 14.9|9.2|A| |N|1|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

[[table]]  
 R.A.|1855|Dec.|BD.|No.|R.A.|1855|Dec.|1855|Magn.|  
 -----  
 17|35.4|+16.0|+16|3256|17|35.5|+16|3|5.1|  
 17|27.0|+16.5|+16|3218|17|27.2|+16|27|5.0|  
 17|28.0|+16.6|+16|3220|17|28.0|+16|27|6.8|  
 17|19.0|+16.5|+16|3183|17|19.2|+16|32|6.5|  
 17|18.0|+16.5|+16|3174|17|18.0|+16|28|5.5|  
 17|53.8|+6.3|+6|3597|17|53.8|+6|16|7.0|  
 17|5|~~struck out~~|2|~~struck out~~|3.1|+6.6|+6|3593|17|53.1|+6|34|7.5|  
 17|50.0|+6.5|+6|3578|17|49.9|+6|30|6.8|  
 17|46.2|+6.1|+6|3566|17|46.2|+6|8|5.9|  
 18|12.0|+7.2|+7|3629|18|12.2|+7|12|5.8|  
 18|18.7|+7.9(+)|+7|3682|18|18.7|+7|57|5.8|  
 18|0.4|+8.7|+8|3582|18|0.4|+8|43|5.0|  
 17|56.4|+8.4|+8|3567|17|56.4|+8|25|7.9|  
 17|59.9|+8.9|+8|3581|17|59.9|+8|52|7.8|  
17|53.2|+8.9|+8|3555|17|53.3|+8|52|7.0|  
 17|44.0|+8.6|+8|3511|17|44.1|+8|35|7.0|  
 18|1.0|+9.9|+9|3567|18|0.9|+9|50|7.1|  
 18|0.5|+9.5|+9|3564|18|0.5|+9|33|3.3|  
 \*18|9.6|+10.8|+10|3452|18|9.6|+10|47|8.0|  
 18|17.4|+10.9|+10|3498|18|17.3|+10|53|7.3|  
 18|6.2|+11.4|+11|3377|18|6.2|+11|25|7.7|  
 17|54.8|+11.3|+11|3315|17|54.8|+11|18|7.5|  
 17|50.6|+11.1|+11|3299|17|50.7|+11|5|6.5|  
 17|47.4|+11.2|+11|3283|17|47.5|+11|11|6.5|  
 18|12.8|+11.8|+11|3427|18|12.8|+11|49|7.3|

\*BD +10° 3452 [[?]] on BD +10° 3452

179

2d. Zone BD Ch. R.A. Dec. Magn.						
17 35.4	+16.0	+16	3255	17 35.5	+16 3	5.1
17 27.0	+16.5	+16	3218	17 27.2	+16 27	5.0
17 28.0	+16.6	+16	3220	17 28.0	+16 27	6.8
17 19.0	+16.5	+16	3183	17 19.2	+16 32	6.5
17 18.0	+16.5	+16	3174	17 18.0	+16 28	5.5
17 53.8	+6.3	+6	3597	17 53.8	+6 16	7.0
17 50.0	+6.5	+6	3593	17 50.1	+6 34	7.5
17 50.0	+6.5	+6	3578	17 49.9	+6 30	6.8
17 46.2	+6.1	+6	3566	17 46.2	+6 8	5.9
18 12.0	+7.2	+7	3629	18 12.2	+7 12	5.8
18 18.7	+7.9(+)	+7	3682	18 18.7	+7 57	5.8
18 0.4	+8.7	+8	3582	18 0.4	+8 43	5.0
17 56.4	+8.4	+8	3567	17 56.4	+8 25	7.9
17 59.9	+8.9	+8	3581	17 59.9	+8 52	7.8
<u>17 53.2</u>	<u>+8.9</u>	<u>+8</u>	<u>3555</u>	<u>17 53.3</u>	<u>+8 52</u>	<u>7.0</u>
17 44.0	+8.6	+8	3511	17 44.1	+8 35	7.0
18 1.0	+9.9	+9	3567	18 0.9	+9 50	7.1
18 0.5	+9.5	+9	3564	18 0.5	+9 33	3.3
*18 9.6	+10.8	+10	3452	18 9.6	+10 47	8.0
18 17.4	+10.9	+10	3498	18 17.3	+10 53	7.3
18 6.2	+11.4	+11	3377	18 6.2	+11 25	7.7
17 54.8	+11.3	+11	3315	17 54.8	+11 18	7.5
17 50.6	+11.1	+11	3299	17 50.7	+11 5	6.5
17 47.4	+11.2	+11	3283	17 47.5	+11 11	6.5
18 12.8	+11.8	+11	3427	18 12.8	+11 49	7.3

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

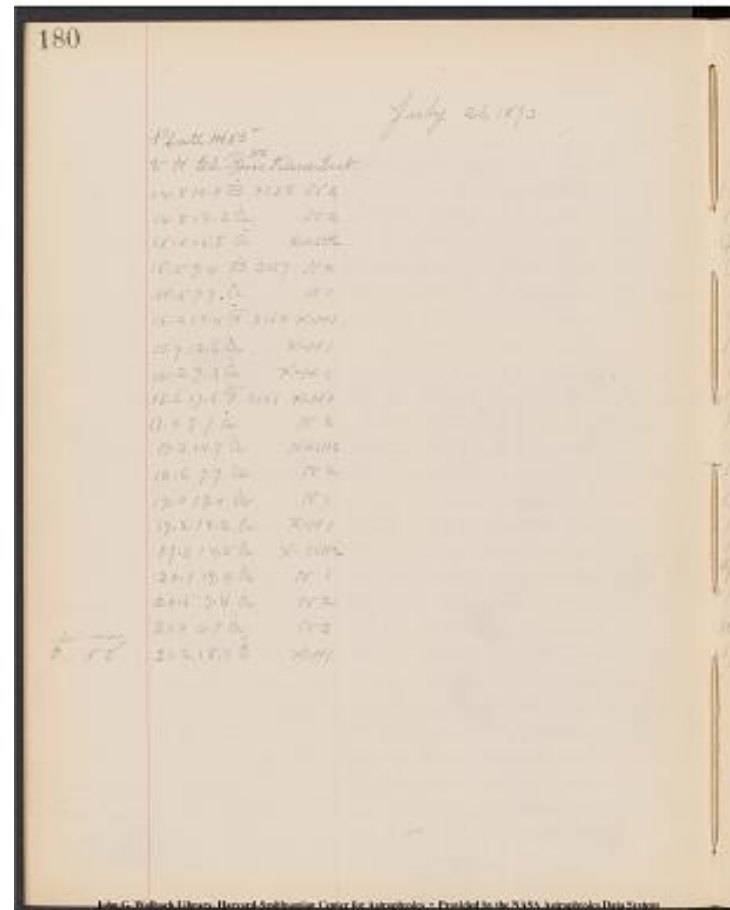
180

July 26, 1893

Plate 1455

[[table]]  
|V|H|Cl|Rem. No|K line|Int|

14.8	10.0	B	3158	N	2
14.8	12.2	A		N	2
15.0	15.8	A		K=0.5H	2
15.5	9.4	B	3159	N	2
15.5	9.9	A		N	1
15.2	10.4	F	3160	K=H	1
15.9	12.6	A		K=H	1
16.2	9.3	A		K=H	1
16.6	17.6	F	3161	K=H	1
17.0	9.7	A		N	2
17.2	14.9	A		K=0.3H	3
18.6	9.9	A		N	2
19.0	19.0	A		N	1
19.2	14.2	A		K=H	1
19.6	14.5	A		K=0.5H	2
20.1	19.4	A		N	1
20.5	7.4	A		N	2
21.0	6.1	A		N	3
0	58	21.2	18.1	E	
				K=H	1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

181

1855

[[6 columned table]]

[R.A|Dec.|BD. No.|R.A. 1855|Dec. 1855|Magn.]

-----

18^h 11.0^m|+11.8°|+11° 3415|18^h 11.1^m|+11° 1855 50|7.1|

18 6.7|+11.9|+11 3379|18 6.7|+11 51|6.9|

17 59.0|+11.9(+)|+12 3382|17 58.9|+12 1|7.6|

3383|17 59.0|+12 1|7.5|

18 12.5|+12.1|+12 3467|18 12.4|+12 8|6.8|

18 11.3|+12.1|+12 3456|18 11.3|+12 9|7.5|

18 10.1|+12.0|+12 3446|18 10.2|+12 1|6.9|

18 5.9|+12.4|+12 3422|18 5.9|+12 22|7.1|

18 12.6|+12.5|+12 3469|18 12.5|+12 29|7.3|

17 55.2|+12.8|+12 3362|17 55.3|+12 46|7.8|

18 11.7|+12.9|+12 3461|18 11.7|+12 56|6.7|

18 1.1|+13.0|+13 3529|18 1.1|+13 4|6.7|

18 11.3|+13.7|+13 3593|18 11.4|+13 44|6.1|

17 52.4|+13.9|+13

18 2.5|+14.0|+14 3436|18 2.6|+14 0|7.9|

18 2.0|+14.2|+14 3427|18 2.0|+14 16|6.5|

\*17 51.7|+14.5|+14 3374|17 51.8|+14 32|6.5|

18 16.7|+14.7|+14 3511|18 16.7|+14 38|6.3|

18 19.3|+14.9|+14 3533|18 19.4|+14 54|6.5|

17 54.4|+15.1|+15 3327|17 54.4|+15 7|6.5|

\*BD +14° 3375 superhosed on BD +14° 3374

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

• Provided by the NASA Astrophysics Data System

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

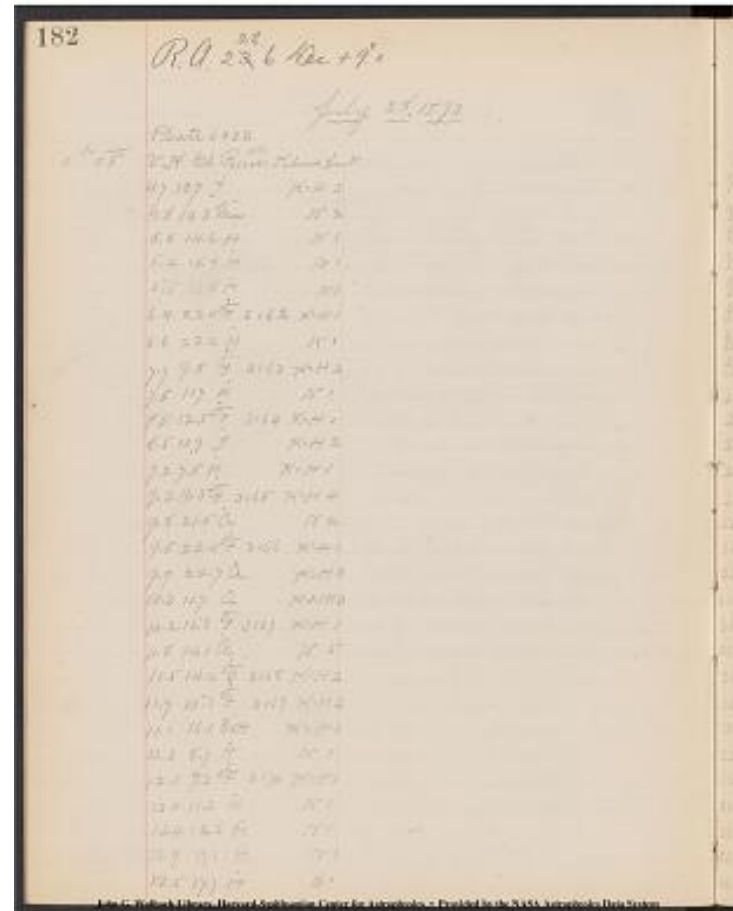
182

R.A. 2~~[[/strikethrough]]~~3~~[[/strikethrough]]~~2h 6 Dec. +9°

July 28, 1893

Plate 6332

[[6 columned table]]					
V	H	Cl.	Rem. No.	Kline	Int.
4.7	13.7	F		K=H	3
4.8	14.3	Ma		N	2
5.8	14.6	H		N	1
5.2	15.4	H		N	1
5.5	16.8	H		N	1
6.4	22.0	F	3162	K=H	1
6.6	23.2	H		N	1
7.7	9.8	F	3163	K=H	2
7.5	11.7	H		N	1
7.5	12.5	F	3164	K=H	1
8.5	11.9			K=H	2
9.2	7.5	H		K=H	1
9.2	16.5	F	3165	K=H	4
9.8	21.5	A		N	2
9.5	22.4	F	3166	K=H	1
9.9	22.7	A		K=H	3
10.3	11.7	A		K=0.1H	3
10.2	15.8	F	3167	K=H	1
11.8	14.1	A		N	5
11.5	14.4	F	3168	K=H	2
11.7	15.1	F	3169	K=H	2
11.1	16.1	G5H		K=H	1
12.3	8.7	H		N	1
12.1	9.3	F	3170	K=H	1
13.0	11.3	H		N	1
12.4	12.6	H		N	1
12.9	17.1	H		N	1
12.5	17.7	H		N	1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

183

[5 column table]

R.A. 1855 Dec | BD. No. | R.A. | Dec. 1855 | Magn. |

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

12 33.7+13.8 | +13° 4971 | 22 <sup>h</sup> 33.7 | 13° 47' 5.8<sup>h</sup> 33.7 | 13° 47' 5.8

22 34.9+123.8 | +13 4974 | 22 34.8 | +13 46 | 6.2

22 35.5+13.2 | +13 4977 | 22 35.5 | +13 17 | 8.0

22 37.3+13.5 | +13 4983 | 22 37.3 | +13 32 | 7.5

22 40.2+13.3 | +13 4989 | 22 40.2 | +13 24 | 7.0

22 50.8+12.8 | +12 4919 | 22 50.7 | +12 51 | 7.8

22 53.4+12.7 | +12 4928 | 22 53.3 | +12 41 | 7.7

22 25.5+12.3 | +12 4838 | 22 25.5 | +12 18 | 7.0

22 29.5+12.4 | +12 4850 | 22 29.6 | +12 25 | 7.2

22 31.1+12.4 | +12 4862 | 22 31.1 | +12 24 | 8.2

22 30.0+11.8 | +11 4838 | 22 39.9 | +11 50 | 6.8

22 21.0+11.5 | +11 4804 | 22 21.0 | +11 31 | 7.5

22 39.4+11.4 | +11 4875 | 22 39.5 | +11 26 | 4.8

22 49.5+11.1 | +11 4904 | 22 49.6 | +11 4 | 6.9

22 51.2+11.2 | +11 | |

22 51.9+10.9(+) | +10 4859 | 22 51.9 | +10 57 | 6.1

22 29.4+10.9 | +10 4781 | 22 29.4 | +10 58 | 7.2

22 37.9+10.9 | +10 4811 | 22 38.0 | +10 56 | 7.9

22 34.1+10.0 | +10 4797 | 22 34.3 | +10 5 | 3.5

22 34.9+10.3 | +10 4800 | 22 34.9 | +10 20 | 7.8

22 36.5+10.2 | +10 4805 | 22 36.5 | +10 12 | 7.3

22 38.6+10.4 | +10 4815 | 22 38.7 | +10 26 | 7.7

22 23.1+9.9 | +9 5055 | 22 23.2 | +9 57 | 7.8

22 24.6+10.0 | +10 4769 | 10 24.6 | +10 2 | 7.8

22 28.5+9.6 | +9 5068 | 22 28.4 | +9 36 | 7.7

22 31.1+9.9 | +9 5075 | 22 31.2 | +9 51 | 8.1

22 40.6+9.6 | +9 5104 | 22 40.5 | +9 35 | 8.3

22 41.7+9.8 | +9 5109 | 22 41.7 | +9 46 | 8.2

183

R.A. 1855 Dec	BD. No.	R.A.	Dec.	Magn.
12 33.7+13.8	+13° 4971	22 <sup>h</sup> 33.7	13° 47' 5.8	
22 34.9+123.8	+13 4974	22 34.8	+13 46	6.2
22 35.5+13.2	+13 4977	22 35.5	+13 17	8.0
22 37.3+13.5	+13 4983	22 37.3	+13 32	7.5
22 40.2+13.3	+13 4989	22 40.2	+13 24	7.0
22 50.8+12.8	+12 4919	22 50.7	+12 51	7.8
22 53.4+12.7	+12 4928	22 53.3	+12 41	7.7
22 25.5+12.3	+12 4838	22 25.5	+12 18	7.0
22 29.5+12.4	+12 4850	22 29.6	+12 25	7.2
22 31.1+12.4	+12 4862	22 31.1	+12 24	8.2
22 30.0+11.8	+11 4838	22 39.9	+11 50	6.8
22 21.0+11.5	+11 4804	22 21.0	+11 31	7.5
22 39.4+11.4	+11 4875	22 39.5	+11 26	4.8
22 49.5+11.1	+11 4904	22 49.6	+11 4	6.9
22 51.2+11.2	+11			
22 51.9+10.9(+)	+10 4859	22 51.9	+10 57	6.1
22 29.4+10.9	+10 4781	22 29.4	+10 58	7.2
22 37.9+10.9	+10 4811	22 38.0	+10 56	7.9
22 34.1+10.0	+10 4797	22 34.3	+10 5	3.5
22 34.9+10.3	+10 4800	22 34.9	+10 20	7.8
22 36.5+10.2	+10 4805	22 36.5	+10 12	7.3
22 38.6+10.4	+10 4815	22 38.7	+10 26	7.7
22 23.1+9.9	+9 5055	22 23.2	+9 57	7.8
22 24.6+10.0	+10 4769	10 24.6	+10 2	7.8
22 28.5+9.6	+9 5068	22 28.4	+9 36	7.7
22 31.1+9.9	+9 5075	22 31.2	+9 51	8.1
22 40.6+9.6	+9 5104	22 40.5	+9 35	8.3
22 41.7+9.8	+9 5109	22 41.7	+9 46	8.2

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

July 28, 1893

Plate 6332

[[5 columned table]]

[V] H | Cl. Rem. No. | K line | Int.]

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

12.5 | 18.0 | A | K=0.8H | 2

12.6 | 19.3 | F | ~~3171~~ | K=H | 2

13.0 | 19.5 | F 3172 | K=H | 1

14.0 | 5.9 | H | N | 1

13.8 | 19.3 | F 3173 | K=H | 3

13.8 | 22.4 | F 3174 | K=H | 1

14.9 | 9.1 | F 3175 | K=H | 2

14.8 | 10.5 | F 3176 | K=H | 1

15.0 | 12.7 | H | N | 1

14.5 | 20.8 | H | N | 1

14.6 | 22.5 | F 3177 | K=H | 2

15.9 | 7.1 | F 3178 | K=H | 1

15.3 | 8.0 | G | K=H | 3

15.2 | 10.4 | F 3179 | K=H | 1

15.7 | 20.8 | A | N | 4

15.8 | 22.6 | F 3180 | K=H | 1

16.2 | 5.9 | H | K=H | 1

16.8 | 9.0 | H | N | 1

16.8 | 12.9 | F 3181 | K=H | 1

17.8 | 6.7 | F 3182 | K=H | 1

17.6 | 8.3 | A | N | 1

18.0 | 9.4 | A | K=H | 1

18.0 | 11.9 | F 3183 | K=H | 1

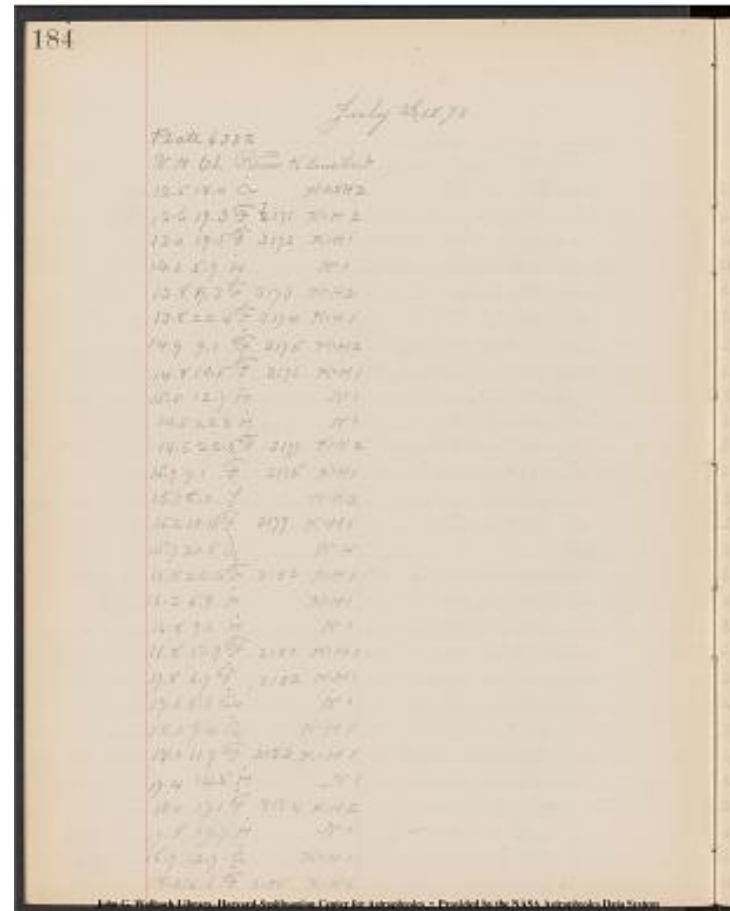
17.4 | 14.8 | H | N | 1

18.0 | 17.1 | F 3184 | K=H | 2

17.8 | 17.7 | H | N | 1

18.7 | 12.7 | A | K=H | 1

18.3 | 16.6 | F 3185 | K=H | 2



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

[[6 columned table]]

R.A. ^[[1855]] | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn.

---	---	---	---	---	---
22 ^[[h]]	42.2 ^[[m]]	+9.7°	+9° 51'11"	22 ^[[h]]	42.3 ^[[m]]   +9° 44'   6.8
22 45.1	+9.7	+9 5123	22 45.1	+9 38	7.5
22 45.3	+9.4	+9 5125	22 45.3	+9 27	7.5
22 17.5	+9.0	+9 5040	22 17.5	+9 5	7.7
22 45.1	+9.0	+9 5122	22 45.1	+9 5	5.0
22 51.2	+9.0	+9 5140	22 51.2	+9 3	7.7
22 23.9	+8.6	+8 4880	22 23.9	+8 34	7.7
22 26.9	+8.7	+8 4892	22 26.9	+8 41	8.0
22 31.1	+8.5	+8 4906	22 31.2	+8 30	7.3
22 47.8	+8.7	+8 4960	22 47.9	+8 42	8.0
22 51.1	+8.6	+8 4973	22 51.2	+8 35	6.8
22 20.0	+8.2	+8 4870	22 20.0	+8 11	7.8
22 21.9	+8.4	+8 4874	22 21.9	+8 23	5.8
22 26.7	+8.4	+8 4890	22 26.7	+8 27	8.0
22 47.9	+8.0	+8 4961	22 47.0	+8 3	4.7
22 51.2	+8.0	+8 4974	22 51.2	+8 1	8.4
22 17.6	+8.0	+8 4863	22 17.6	+8 1	7.9
22 23.7	+7.7	+7 4883	22 23.7	+7 41	7.9
22 31.5	+7.7	+7 4904	22 31.6	+7 37	8.3
22 19.1	+7.1	+7 4873	22 19.1	+7 10	8.0
22 22.2	+7.2	+7 4880	22 22.3	+7 16	8.2
22 24.6	+7.0	+7 4886	22 24.5	+7 3	7.9
22 29.6	+7.0	+7 4898	22 29.6	+7 2	7.6
22 34.8	+7.3	+7 4913	22 34.9	+7 19	7.8
22 40.2	+6.9	+6 5064	22 40.2	+6 57	7.6
22 41.4	+7.1	+7 4931	22 41.4	+7 5	7.8
22 31.0	+6.7	+6 5043	22 31.1	+6 42	8.2
22 39.1	+6.8	+6 5060	22 39.2	+6 50	7.0

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



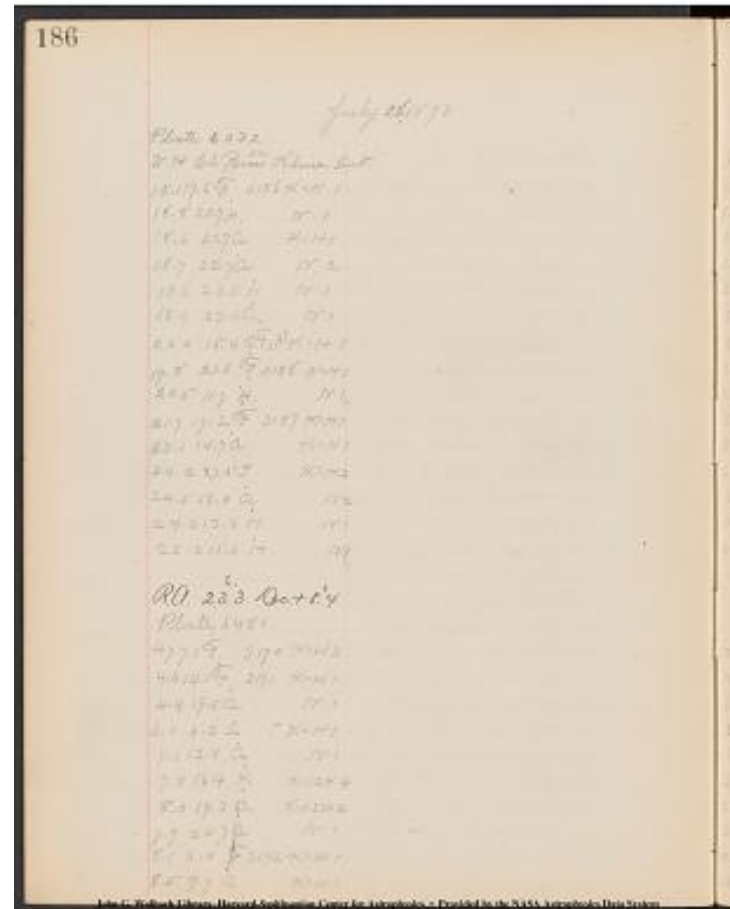
July 28, 1893

Plate 6332

[[5 columned table]]

V | H | Cl. Rem. ^[[No.]] | K line | Int.

18.1	19.6	F 3186	K=H	1
18.8	20.7	H	N	1
18.6	20.9	A	K=H	1
18.7	22.7	A	N	2
18.6	23.3	H	N	1
18.6	23.4	A	N	1
20.0	15.4	<del>[[strikethrough]] A</del> <del>[[/strikethrough]] F 3187</del>	K=H	1
19.8	21.6	F 3188	K=H	1
20.5	11.7	H	N	1
21.7	17.2	F 3189	K=H	1
23.1	14.7	A	K=H	1
24.2	<del>[[strikethrough]] 1</del> <del>[[/strikethrough]] 7.5</del>	T	K=H	3
24.5	13.0	A	N	2
24.3	13.8	H	N	1
23.5	15.0	H	N	1
R.A. 23.3 ^[[h]] Dec. +8.4°				
Plate 6481				
4.7	7.1	F 3190	K=H	2
4.6	14.1	F 3191	K=H	1
4.4	19.5	A	N	1
6.0	6.3	A	K=H	1
7.1	12.8	A	N	1
7.8	16.4	K	K=1.2 H	4
8.0	19.3	A	K=0.5H	2
7.9	22.7	A	N	1
8.1	6.0	F 3192	K=H	1
8.5	9.7	A	K=H	1

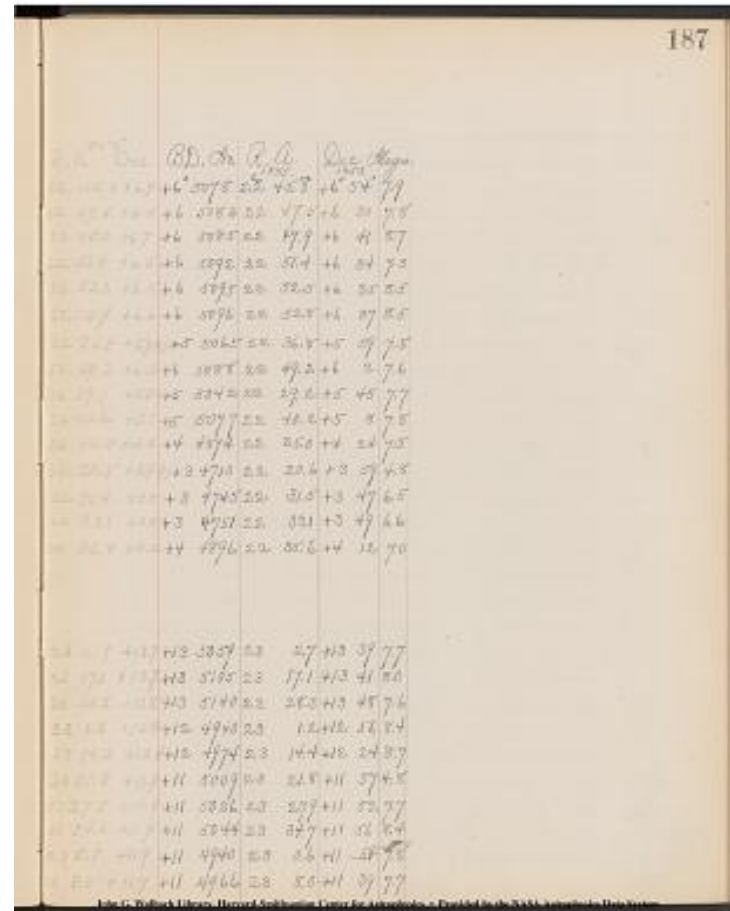


Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

[[6 columned table]]

R.A. ^[[1855]] | Dec | BD. No. | R.A. 1855 | Dec. 1855 | Magn.

---	---	---	---	---	---
22 45.3	+6.9	+6° 5078	22 45.3	+6° 54'	7.9
22 47.4	+6.4	+6 5083	22 47.5	+6 30	7.8
22 48.0	+6.7	+6 5085	22 47.9	+6 41	8.7
22 51.4	+6.5	+6 5092	22 51.4	+6 34	7.3
22 52.6	+6.5	+6 5095	22 52.5	+6 35	8.5
22 52.9	+6.6	+6 5096	22 52.8	+6 37	8.5
22 36.8	+5.9 (+)	+5 5065	22 36.8	+5 59	7.5
22 49.2	+6.0	+6 5088	22 49.2	+6 2	7.6
22 29.1	+5.8	+5 5042	22 29.2	+5 45	7.7
22 40.2	+5.1	+5 5077	22 40.2	+5 8	7.8
22 35.0	+4.4	+4 4894	22 35.0	+4 24	7.5
22 20.5	+3.9 (+)	+3 4710	22 20.6	+3 59	4.8
22 31.4	+3.8	+3 4745	22 31.5	+3 47	6.5
22 33.1	+3.8	+3 4751	22 33.1	+3 49	6.6
22 35.4	+4.2	+4 4896	22 35.6	+4 12	7.0
23 2.7	+13.7	+13 5059	23 2.7	+13 39	7.7
23 17.1	+13.7	+13 5105	23 17.1	+13 41	8.0
23 28.3	+13.8	+13 5140	23 28.3	+13 48	7.6
23 1.2	+12.9	+12 4940	23 1.2	+12 56	8.4
23 14.3	+12.4	+12 4974	23 14.4	+12 24	8.7
23 21.8	+11.9	+11 5009	23 21.8	+11 57	4.8
23 27.8	+11.9	+11 5026	23 27.9	+11 52	7.7
23 34.6	+11.9	+11 5044	23 34.7	+11 56	8.4
23 0.7	+11.9	+11 4940	23 0.6	+11 54	7.8
23 8.0	+11.7	+11 4966	23 8.0	+11 39	7.7



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

188

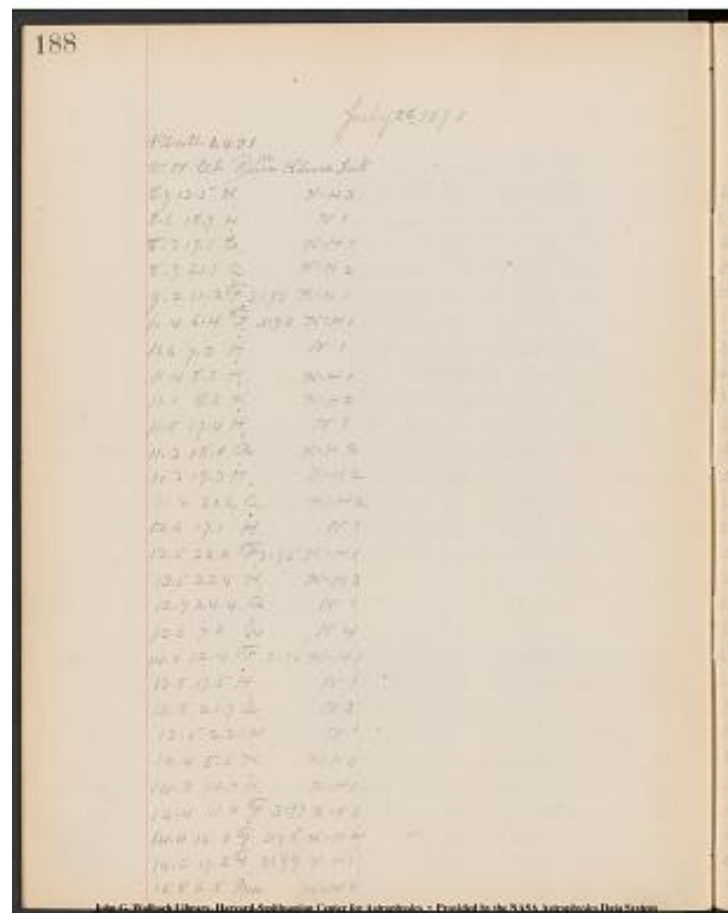
July 28, 1893

Plate 6481

[[5 columned table]]

V | H | Cl. Rem. ^[[No.]] | K line| Int.

8.7	13.5	K	K=H	3
8.6	18.9	H	N	1
8.3	19.1	C	K=H	1
8.9	21.1	A	K=H	2
9.2	11.2	F 3193	K=H	1
11.4	6.4	F 3194	K=H	1
11.6	7.3	H	N	1
11.4	8.3	H	K=H	1
11.1	8.6	K	K=H	3
11.5	17.4	H	N	1
11.3	18.0	A	K=H	2
11.3	19.3	H	K=H	2
11.2	20.2	A	K=H	2
12.6	17.1	H	N	1
12.5	22.0	F 3195	K=H	1
12.5	23.4	K	K=H	3
12.9	24.4	A	N	1
13.6	7.0	A	N	4
14.0	12.4	F 3196	K=H	1
13.8	17.5	H	N	1
13.8	21.7	A	N	3
13.5	23.1	H	N	1
14.4	5.5	K	K=H	3
14.3	10.9	H	K=H	1
14.4	11.4	F 3197	K=H	1
14.4	16.0	F 3198	K=H	2
14.3	17.2	F 3199	K=H	1
15.8	6.8	Ma	K=H	3



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[6 columned table]]

R.A. ^[[1855]] | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn.

---	---	---	---	---	---
23 15.9	+11.5	+11° 4993	23 15.9	+11° 31'	5.3
23 27.0	+11.6	+11 5020	23 27.0	+11 33	8.2
23 27.4	+11.7	+11 5022	23 27.4	+11 44	8.6
23 31.5	+11.4	+11 5038	23 31.6	+11 24	7.8
23 11.0	+11.3	+11 4977	23 11.1	+11 20	8.7
23 1.6	+10.1	+10 4887	23 1.5	+10 10	7.0
23 3.1	+10.0	+10 4894	23 3.2	+10 2	7.7
23 5.3	+10.1	+10 4899	23 5.3	+10 10	8.1
23 6.2	+10.3	+10 4902	23 6.2	+10 17	6.2
23 24.0	+10.1	+10 4945	23 24.0	+10 6	8.4
23 25.2	+10.2	+10 4949	23 25.2	+10 11	8.0
23 27.9	+10.1	+10 4958	23 27.9	+10 9	7.5
23 29.6	+10.2	+10 4963	23 29.6	+10 12	7.8
23 23.3	+9.5	+9 5226	23 23.4	+9 33	8.3
23 33.1	+9.6	+9 5258	23 33.2	+9 35	7.1
23 36.0	+9.5	+9 5268	23 36.0	+9 31	5.0
23 38.0	+9.4	+9 5277	23 38.0	+9 23	6.5
23 2.8	+9.0	+9 5170	23 2.7	+9 3	5.5
23 13.6	+8.9	+8 5048	23 13.7	+8 51	8.6
23 24.0	+8.9	+8 5072	23 24.0	+8 57	7.9
23 32.6	+8.9	+8 5095	23 32.5	+8 52	6.0
23 35.5	+9.0				
22 59.8	+8.6	+8 4997	22 59.7	+8 37	5.2
23 10.6	+8.7	+8 5039	23 10. <del>[[[strikethrough]]]</del>	<del>6</del> <del>[[[strikethrough]]]</del>	<del>7</del>
+8 <del>[[[strikethrough]]]</del>	<del>18</del> <del>[[[strikethrough]]]</del>	<del>43</del> <del>[[[strikethrough]]]</del>			
23 11.4	+8.6	+8 5041	23 11.6	+8 38	8.6
23 21.2	+8.6	+8 5066	23 21.2	+8 38	7.8
23 23.4	+8.7	+8 5071	23 23.6	+8 41	8.2
23 2.3	+7.9	+7 4981	23 2.2	+7 54	5.3

189

R.A. Dec. Mag.

23 15.9 +11.5 +11° 4993 23 15.9 +11° 31' 5.3

23 27.0 +11.6 +11 5020 23 27.0 +11 33 8.2

23 27.4 +11.7 +11 5022 23 27.4 +11 44 8.6

23 31.5 +11.4 +11 5038 23 31.6 +11 24 7.8

23 11.0 +11.3 +11 4977 23 11.1 +11 20 8.7

23 1.6 +10.1 +10 4887 23 1.5 +10 10 7.0

23 3.1 +10.0 +10 4894 23 3.2 +10 2 7.7

23 5.3 +10.1 +10 4899 23 5.3 +10 10 8.1

23 6.2 +10.3 +10 4902 23 6.2 +10 17 6.2

23 24.0 +10.1 +10 4945 23 24.0 +10 6 8.4

23 25.2 +10.2 +10 4949 23 25.2 +10 11 8.0

23 27.9 +10.1 +10 4958 23 27.9 +10 9 7.5

23 29.6 +10.2 +10 4963 23 29.6 +10 12 7.8

23 23.3 +9.5 +9 5226 23 23.4 +9 33 8.3

23 33.1 +9.6 +9 5258 23 33.2 +9 35 7.1

23 36.0 +9.5 +9 5268 23 36.0 +9 31 5.0

23 38.0 +9.4 +9 5277 23 38.0 +9 23 6.5

23 2.8 +9.0 +9 5170 23 2.7 +9 3 5.5

23 13.6 +8.9 +8 5048 23 13.7 +8 51 8.6

23 24.0 +8.9 +8 5072 23 24.0 +8 57 7.9

23 32.6 +8.9 +8 5095 23 32.5 +8 52 6.0

23 35.5 +9.0

22 59.8 +8.6 +8 4997 22 59.7 +8 37 5.2

23 10.6 +8.7 +8 5039 23 10. ~~[[[strikethrough]]]~~ ~~6~~ ~~[[[strikethrough]]]~~ ~~7~~

+8 ~~[[[strikethrough]]]~~ ~~18~~ ~~[[[strikethrough]]]~~ ~~43~~ ~~[[[strikethrough]]]~~

23 11.4 +8.6 +8 5041 23 11.6 +8 38 8.6

23 21.2 +8.6 +8 5066 23 21.2 +8 38 7.8

23 23.4 +8.7 +8 5071 23 23.6 +8 41 8.2

23 2.3 +7.9 +7 4981 23 2.2 +7 54 5.3

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

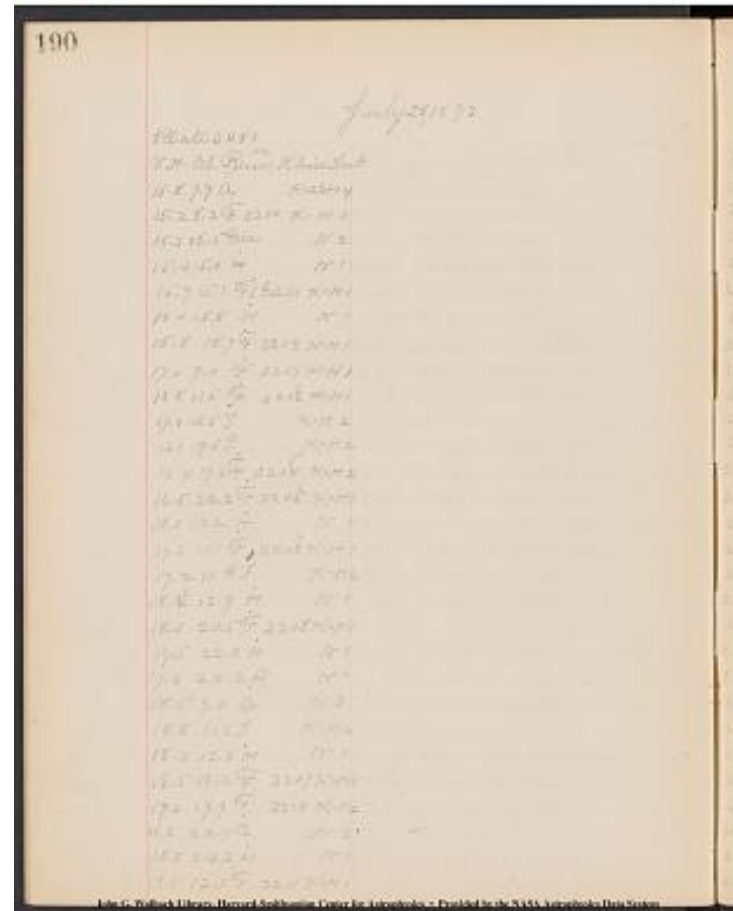
July 28, 1893

Plate 6481

[[5 columned table]]

V | H | Cl. Rem. No. | K line | Int.

15.8	7.9	A	K=0.2H	4
15.2	8.2	F 3200	K=H	1
15.3	x 8.5	Ma	N	2
15.4	15.0	H	N	1
15.9	15.1	F5 G3201	K=H	1
16.0	15.8	H	N	1
15.8	18.9	F 3202	K=H	1
17.0	9.0	F 3203	K=H	1
16.8	11.5	F 320	<del>3</del>	K=H   1
17.0	15.5	T	K=H	2
16.1	19.5	T	K=H	2
16.4	19.6	F 320	<del>4</del>	K=H   2
16.5	22.2	F 320	<del>5</del>	K=H   1
18.0	10.2	H	N	1
17.6	11.1	F 320	<del>6</del>	K=H   1
17.2	11.8	T	K=H	2
18.	<del>2</del>	<del>0</del>	12.9	H   N   1
18.0	20.5	F 3208	K=H	1
17.5	22.0	H	N	1
17.3	22.2	H	N	1
18.5	9.0	A	N	3
18.8	11.6	T	K=H	2
18.3	13.2	H	N	1
18.5	16.2	F 3209	K=H	1
19.0	17.9	F 3210	K=H	2
18.6	22.7	A	N	3
18.8	24.2	H	N	2
19.5	12.1	F 3211	K=H	1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

191

R.a. Dec. 1855|BD. No.|R.a. 1855|Dec. 1855|Magn.|

h m ° | h m ° |

23 4.5 +7.9|+7 4991|23 4.4|+7 56|6.0|  
 23 5.0 +8.2|+8 5018|23 5.1|+8 15|8.5|  
 23 5.8 +8.2|+8 5020|23 5.8|+8 10|7.7|  
 23 ~~19.1~~|~~19.1~~|~~19.1~~|~~19.1~~|~~19.1~~|  
 +~~7.9~~|~~7.9~~|~~7.9~~|~~7.9~~|~~7.9~~|+8 5058|23 18.8|+8 8|7.3|  
 23 19.1 +7.9|+7 5030|23 19.1|+7 52|7.1|  
 23 20.8 +7.8|+7 5033|23 20.7|+7 50|7.9|  
 23 27.0 +7.9|+7 5055|23 26.9|+7 55|8.5|  
 23 6.8 +7.3|+7 4996|23 6.7|+7 21|8.7|  
 23 11.8 +7.4|+7 5007|23 11.8|+7 27|8.8|  
 23 20.0 +7.2|+7 5032|23 20.0|+7 16|7.7|  
 23 28.1 +7.7|+7 5059|23 28.1|+7 43|6.5|  
 23 28.3 +7.6|+7 5060|23 28.2|+7 35|7.2|  
 23 33.5 +7.0|+7 5075|23 33.4|+7 32|8.3|  
 23 9.3 +6.8|+6 5137|23 9.2|+6 48|8.1|  
 23 10.9 +7.0|+7 5004|23 11.0|+7 3|8.1|  
 23 12.6 +7.2|+7 5009|23 12.5|+7 12|7.3|  
 23 14.5 +6.8|+6 5147|23 14.6|+6 50|8.3|  
 23 ~~3.0~~|~~3.0~~|~~3.0~~|~~3.0~~|~~3.0~~|+6.8|+6|  
 23 33.2 +7.0|  
 23 33.4 +7.1|  
 23 2.7 +6.5|+6 5124|23 2.8|+6 35|7.5|  
 23 11.9 +6.4|+6 5141|23 12.0|+6 26|7.7|  
 23 15.1 +6.7|+6 5148|23 15.2|+6 43|8.3|  
 23 21.5 +6.6|+6 5160|23 21.3|+6 34|8.6|  
 23 24.8 +6.3|+6 5168|23 24.8|+6 18|6.5|  
 23 34.6 +6.4|+6 5183|23 34.6|+6 27|6.5|  
 23 37.5 +6.3|+6 5197|23 37.4|+6 24|7.4|  
 23 13.0 +6.0|+6 5143|23 13.0|+6 4|7.8|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

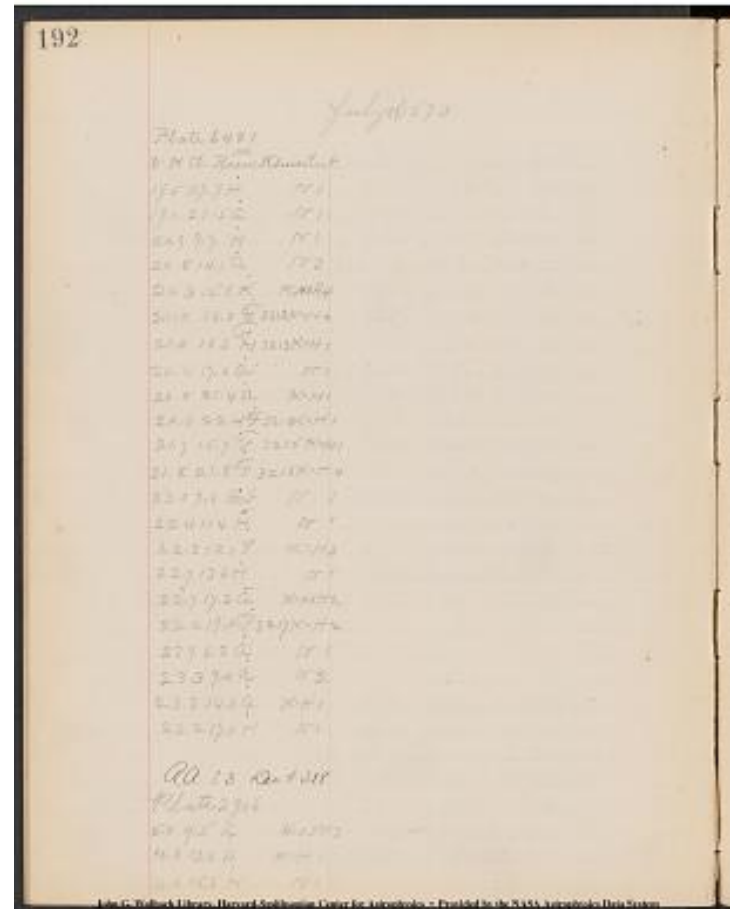
July 28, 1893

Plate 6481

[[5 columned table]]

V | H | Cl. Rem. ^[[No.]] | K line | Int.

19.5	19.9	H	N	1
19.1	21.5	A	N	1
20.9	9.7	H	N	1
20.8	14.1	A	N	3
20.3	15.8	K	K.105H	4
21.0	16.0	F	3212	K=H   2
21.0	16.6	<del>[[strikethrough]]</del>	H <del>[[/strikethrough]]</del>	F 3213   K=H   1
20.4	17.0	A	N	1
20.8	21.4	A	K=H	1
20.6	22.4	F	3214	K=H   1
21.7	15.7	F	3215	K=H   1
21.8	21.8	F	3216	K=H   4
23.0	7.6	Mb	N	1
22.4	11.4	H	N	1
22.3	12.1	G	K=H	3
22.7	13.6	H	N	1
22.7	17.2	A	K=0.5H	2
22.2	19.0	F	3217	K=H   2
23.9	6.2	A	N	1
23.3	9.0	A	N	2
23.3	14.0	A	K=H	1
23.2	17.0	H	N	1
R.A. 1.3 Dc.+21.8				
Plate 2906				
5.0	9.5	A	K=0.5H	3
4.3	13.0	H	K=H	1
4.6	15.6	H	N	1



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08





July 28, 1893

Plate 2906

[[5 columned table]]

[V|H | Cl. | Rem. No. | K line | Int.]

V	H	Cl.	Rem. No.	K line	Int.
5.7	15.1	F	3218	K=H	1

7.0	10.0	G		N	2
-----	------	---	--	---	---

6.8	12.4	A		K=0.3H	3
-----	------	---	--	--------	---

7.5	6.8	A		N	1
-----	-----	---	--	---	---

7.3	15.9	F	3219	K=H	1
-----	------	---	------	-----	---

9.0	7.2	A		K=H	1
-----	-----	---	--	-----	---

8.4	13.9	K		K=H	1
-----	------	---	--	-----	---

8.3	14.1	F	3220	K=H	3
-----	------	---	------	-----	---

10.0	14.1	L5N		K=H	2
------	------	-----	--	-----	---

9.2	21.8	G		K=H	
-----	------	---	--	-----	--

10.7	6.5	F		K=H	3
------	-----	---	--	-----	---

10.4	10.2	F		K=H	2
------	------	---	--	-----	---

10.6	14.6	A		N	1
------	------	---	--	---	---

10.8	15.4	H		N	2
------	------	---	--	---	---

10.9	18.9	H		N	1
------	------	---	--	---	---

10.7	19.1	A		N	2
------	------	---	--	---	---

10.3	23.1	H		N	1
------	------	---	--	---	---

12.0	18.4	F	3221	K=H	2
------	------	---	------	-----	---

11.9	21.0	K		K=1.5H	3
------	------	---	--	--------	---

11.4	22.7	A		K=0.1H	3
------	------	---	--	--------	---

12.8	8.4	H		N	1
------	-----	---	--	---	---

12.6	8.8	A		N	1
------	-----	---	--	---	---

12.8	23.7	A		N	4
------	------	---	--	---	---

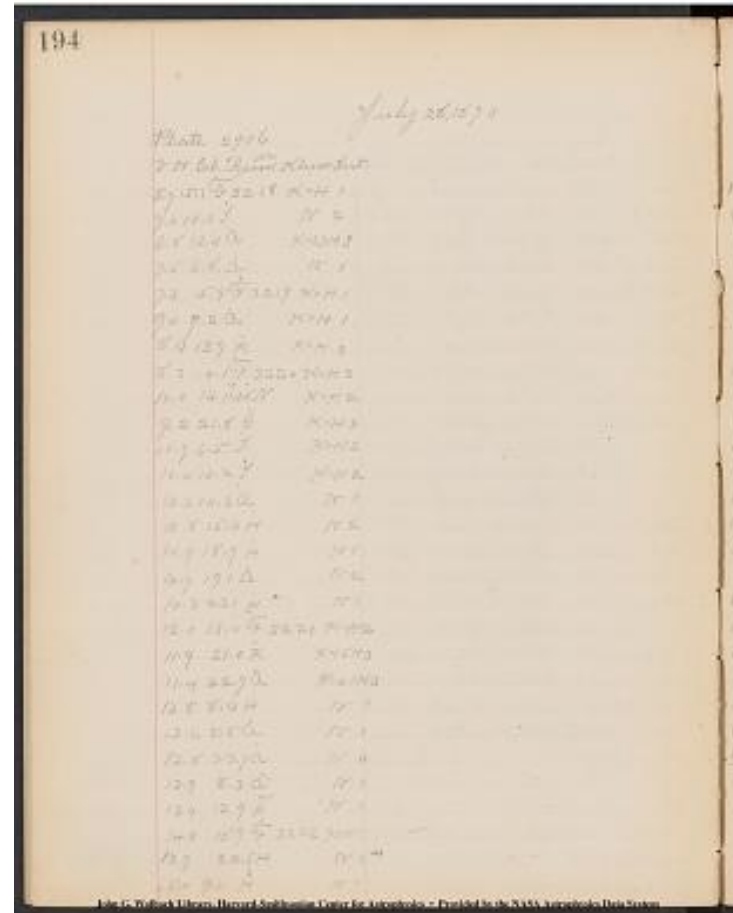
13.9	8.3	A		N	1
------	-----	---	--	---	---

13.4	12.9	H		N	1
------	------	---	--	---	---

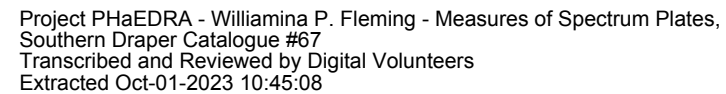
14.0	15.9	F	3222	K=H	1
------	------	---	------	-----	---

13.9	22.5	H		N	1
------	------	---	--	---	---

15.0	9.0	H		N	1
------	-----	---	--	---	---



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



196

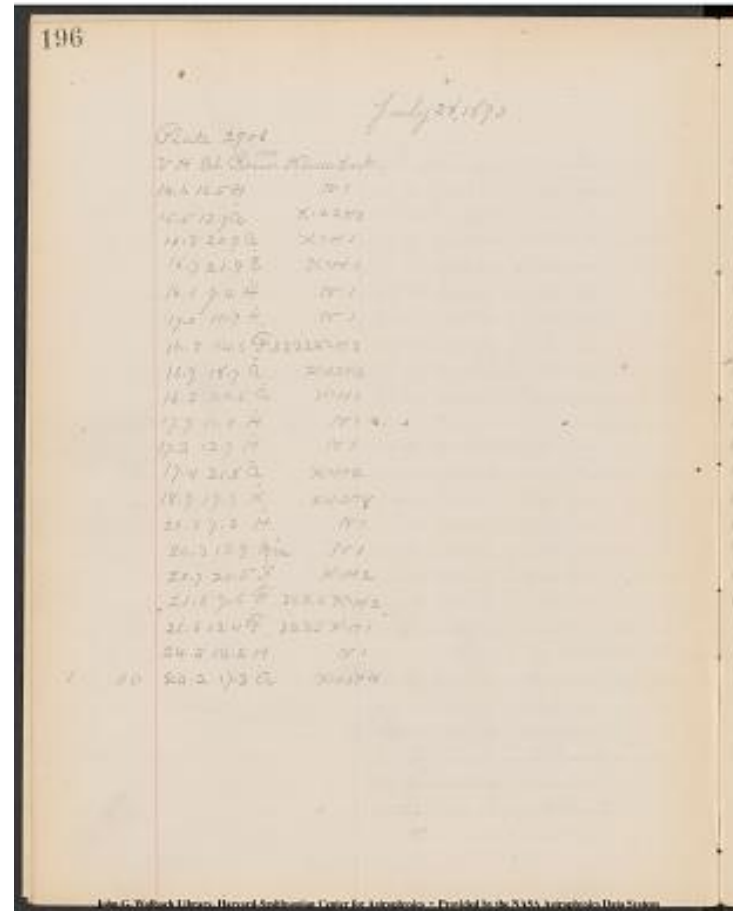
July 28, 1893

Plate 2906

[[6 columned table]]

V|H|Cl.|Rem.^|[No.]]|K line|Int.|

14.6	16.5	H		N	1
15.5	12.7	A		K=0.2H	3
15.3	20.9	A		K=H	1
15.7	21.9	E		K=H	1
16.1	7.4	H		N	1
17.0	10.9	H		N	1
16.8	14.6	F	3223	K=H	3
16.9	18.7	A		K=0.2H	3
16.3	20.5	A		K=h	1
17.9	11.0	H		N	1
17.3	12.7	H		N	1
17.4	21.8	A		K=H	2
18.9	19.9	K		K=1.3H	4
20.3	9.3	H		N	1
20.7	12.9	Ma		N	1
20.7	21.5	J		K=H	2
21.5	7.6	F	3224	K=H	2
21.6	12.4	F	3225	K=H	1
24.3	14.2	H		N	1
24.2	17.3	A		K=0.2H	4



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[6 columned table]]

R.A.^[1855] | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

1 13.4	+21.6	+21 178	1 13.4	+21 36	7.0
1 21.8	+22.1	+2 <del>[[strikethrough]]</del> 1 <del>[[strikethrough]]</del> ^[[2]] 236	1 21.8	+22.4	6.5
1 3.9	+21.9	+21 161	1 3.9	+21 57	7.5
1 1.8	+22.2	+22 182	1 1.6	+22 9	7.5
1 33.1	+22.3	+22 257	1 33.2	+22 18	7.0
1 25.4	+22.8	+22 246	1 25.6	+22 51	7.4
1 17.6	+22.8	+22 226	1 17.7	+22 46	6.5
*1 8.6	+22.8	+22 204	1 8.6	+22 48	7.0
1 4.7	+22.5	+22 192	1 4.6	+22 29	7.5
1 25.3	+23.3	+23 204	1 25.4	+23 13	7.3
1 22.0	+22.9	+22 238	1 21.9	+22 56	7.5
1 1.9	+23.0	+23 150	1 1.9	+23 2	6.8
1 6.0	+23.8	+22 158	1 5.9	+23 48	4.6
1 29.5	+24.4	+24 239	1 29.5	+24 26	7.3
1 21.5	+24.5	+24 222	1 21.4	+24 32	6.5
1 2.6	+24.7	+24 186	1 2.5	+24 42	6.0
1 33.2	+25.0	+25 276	1 33.2	+25 0	6.0
1 22.8	+25.1	+25 258	1 22.7	+25 9	7.0
1 18.8	+26.5	+26 239	1 18.7	+26 29	6.8
1 11.6	+26.5	+26 220	1 11.5	+26 30	4.7

\* BD +2 ~~[[strikethrough]]~~ [[2 ?]] ~~[[strikethrough]]~~^[[3]]° 167 superposed  
on BD +22° 204.

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

198  
R.A. 3.6<sup>h</sup> Dec.+23.0

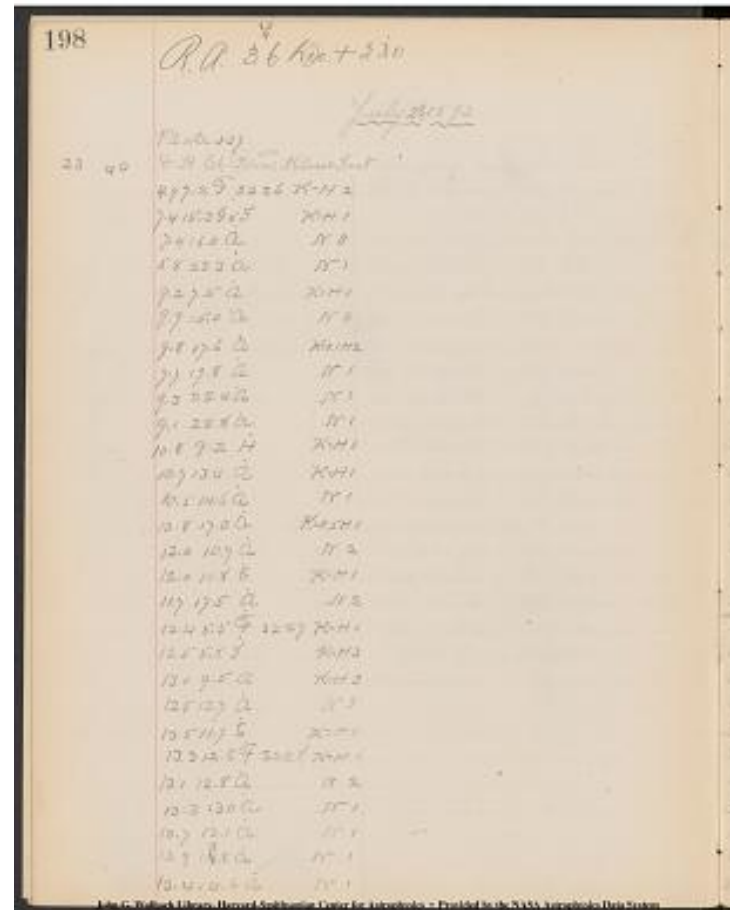
July 28, 1893

Plate 337  
[[written in margin]]  
23 40

[[6 columned table]]  
|V|H|Cl.|Rem.^|[No.]]|Kline|Int.|

4.9	7.2	F	3226	K=H	2
7.4	15.3	G5F		K=H	1
7.4	16.0	A		N	3
5.8	23.3	A		N	1
9.2	7.5	A		K=H	1
9.9	15.0	A		N	3
9.8	17.6	A		K=0.1H	2
7.7	19.8	A		N	1
9.3	22.4	A		N	1
9.1	22.8	A		N	1
10.8	9.2	H		K=H	1
10.7	13.4	A		K=H	1
10.5	14.6	A		N	1
10.8	17.0	A		K=0.5H	1
12.0	10.7	A		N	2
12.0	11.8	E		K=H	1
11.7	17.5	A		N	2
12.4	5.5	F	3227	K=H	1
12.5	5.5	J		K=H	3
13.0	9.5	A		K=H	3
12.5	12.7	A		N	3
13.5	11.7	E		K=H	1
13.3	12.6	F	3228	K=H	1
13.1	12.8	A		N	2
13.3	13.0	A		N	1
13.7	13.1	A		N	1
13.9	13.8	A		N	1
13.4	14.6	A		N	1

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

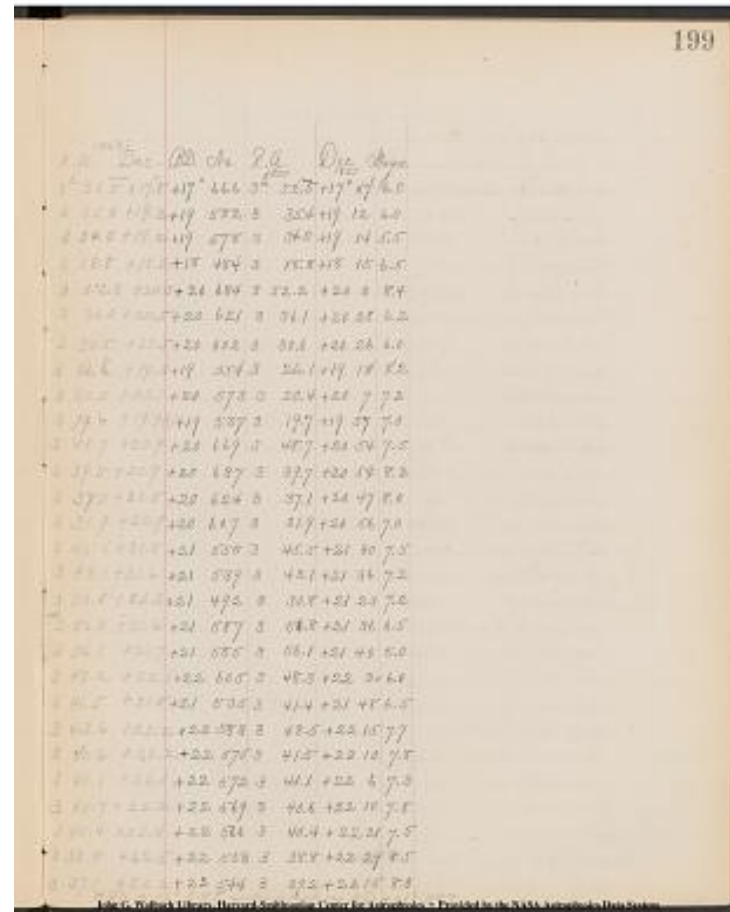
[[6 columned table]]

R.A.1855|Dec.|BD.No.|R.A.1855|Dec.1855|Magn.]

R.A.1855	Dec.	BD.No.	R.A.1855	Dec.1855	Magn.
3 <sup>h</sup> 52.5 <sup>m</sup> +17.8 <sup>s</sup> +17 <sup>h</sup> 00 <sup>m</sup> 666 <sup>s</sup> 3 <sup>h</sup> 52.5 <sup>m</sup> +17 <sup>h</sup> 00 <sup>m</sup> 47 <sup>s</sup> 6.0					
3 35.4 +19.2 +19 582 3 35.4 +19 12 6.0					
3 34.0 +19.2 +19 578 3 34.0 +19 14 5.5					
3 18.8 +18.2 +18 484 3 18.8 +18 15 6.5					
3 52.3 +20.0 +20 684 3 52.2 +20 0 8.4					
3 36.0 +20.5 +20 621 3 36.1 +20 28 6.2					
3 30.5 +20.5 +20 602 3 30.6 +20 26 6.0					
3 26.0 +20.5 +20 597 3 26.1 +20 26 6.0					
3 26.0 +20.5 +20 597 3 26.1 +20 26 6.0					
3 20.5 +20.1 +20 573 3 20.4 +20 7 7.2					
3 19.6 +19.9 (+) +19 537 3 19.7 +19 57 7.0					
3 48.7 +20.9 +20 669 3 48.7 +20 54 7.5					
3 39.8 +20.9 +20 637 3 39.7 +20 54 8.2					
3 37.0 +20.8 +20 624 3 37.1 +20 47 8.0					
3 31.9 +20.9 +20 607 3 31.9 +20 56 7.0					
3 45.5 +21.5 +21 550 3 45.5 +21 30 7.5					
3 43.1 +21.6 +21 539 3 43.1 +21 36 7.2					
3 30.8 +21.3 +21 492 3 30.8 +21 23 7.2					
* 3 56.8 +21.6 +21 587 3 56.8 +21 36 6.5					
3 56.1 +21.7 +21 585 3 56.1 +21 40 5.0					
3 48.2 +22.1 +22 605 3 48.3 +22 3 6.0					
3 41.5 +21.8 +21 535 3 41.4 +21 48 6.5					
3 43.6 +22.2 +22 583 3 43.5 +22 15 7.7					
3 41.6 +22.2 +22 575 3 41.5 +22 10 7.8					
3 41.1 +22.1 +22 572 3 41.1 +22 6 7.3					
3 40.7 +22.2 +22 569 3 40.6 +22 10 7.8					
3 40.4 +22.4 +22 566 3 40.4 +22 21 7.5					
3 38.8 +22.5 +22 556 3 38.8 +22 29 8.5					
3 37.1 +22.2 +22 544 3 37.2 +22 15 8.0					

\*BD +21° 588 superposed on BD +21° 587

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

200

July 28, 1893

Plate 337

[[6 columned table]]

[V|H|Cl.|Rem.^{[No.]]|Kline|Int.]

13.5	16.2	F	3229	K=H 1
13.6	17.4	A		N 1
13.2	17.8	A		N 3
13.6	22.5	E		K=H 1
14.6	7.6	A		N 2
14.5	9.7	A		N 3
14.5	10.5	A		N 1
14.7	12.8	A		N 1
14.8	13.4	A		N 3
14.2	14.6	A		N 2
14.3	18.6	A		N 2
14.6	22.2	A		N 2
15.9	12.3	A		K=0.2H 2
15.7	12.7	A		K=0.1H 2
15.4	12.8	A		N 3
16.0	13.1	A		N 5
15.6	13.2	F	3230	K=H 2
16.0	13.8	A		N 5
15.3	13.8	A		N 1
15.6	13.9	A		N 2
15.5	13.9	F(?)	3231	K=H 1
16.0	13.9	A		N 3
15.9	14.0	A		N 1
15.2	14.3	A		N 1
15.7	14.3	A		N 5
16.0	14.6	A		N 1
16.0	14.8	A		N 1

200

July 28, 1893

Plate 337

7. 24. 18. 20. 22. 24. 26. 28. 30. 32. 34. 36. 38. 40. 42. 44. 46. 48. 50. 52. 54. 56. 58. 60. 62. 64. 66. 68. 70. 72. 74. 76. 78. 80. 82. 84. 86. 88. 90. 92. 94. 96. 98. 100.

13.5 16.2 F 3229 K=H|1

13.6 17.4 A N|1

13.2 17.8 A N|3

13.6 22.5 E K=H|1

14.6 7.6 A N|2

14.5 9.7 A N|3

14.5 10.5 A N|1

14.7 12.8 A N|1

14.8 13.4 A N|3

14.2 14.6 A N|2

14.3 18.6 A N|2

14.6 22.2 A N|2

15.9 12.3 A K=0.2H|2

15.7 12.7 A K=0.1H|2

15.4 12.8 A N|3

16.0 13.1 A N|5

15.6 13.2 F 3230 K=H|2

16.0 13.8 A N|5

15.3 13.8 A N|1

15.6 13.9 A N|2

15.5 13.9 F(?) 3231 K=H|1

16.0 13.9 A N|3

15.9 14.0 A N|1

15.2 14.3 A N|1

15.7 14.3 A N|5

16.0 14.6 A N|1

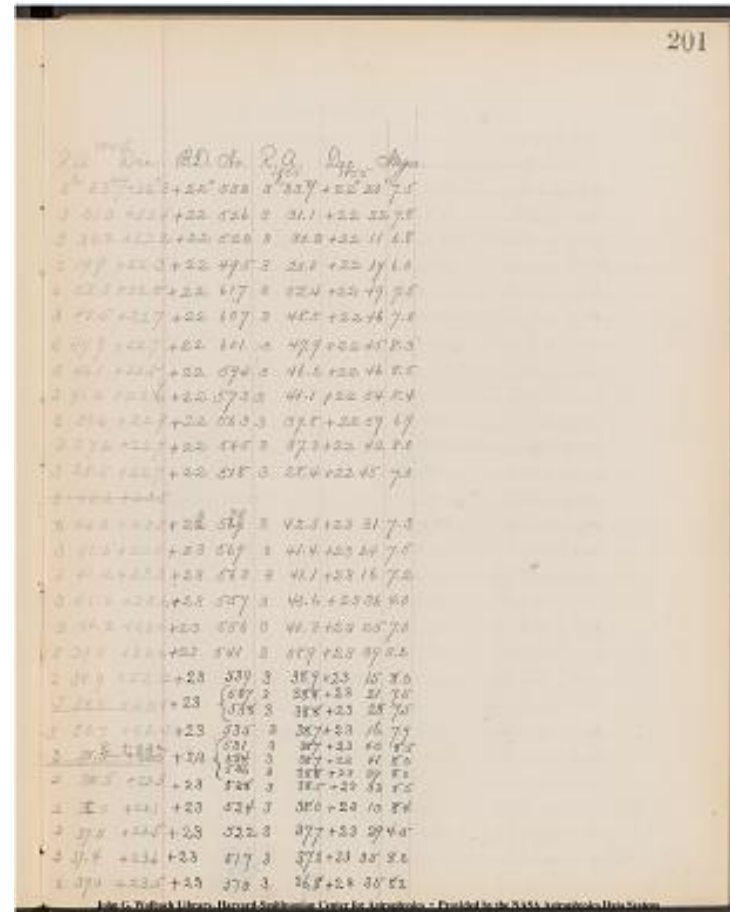
16.0 14.8 A N|1

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



[6 columned table]

| R.A. ^[[1855]]  | Dec.                           | BD. No.   | R.A. 1855 | Dec. 1855 | Magn. |
|---|--------------------------------|---|-----------|-----------|-------|
| ---   | ---                            | ---   | ---       | ---       | ---   |
| 3 <sup>h</sup> 33.7 <sup>m</sup> 33.7 <sup>s</sup> +22.3°                     | +22° 532                       | 3 <sup>h</sup> 33.7 <sup>m</sup> 33.7 <sup>s</sup> +22° 20' | 7.5       |           |       |
| 3 31.0 +22.4 +22 526  | 3 31.1 +22 22                  | 7.8   |           |           |       |
| 3 30.2 +22.2 +22 523  | 3 30.2 +22 11                  | 6.8   |           |           |       |
| 3 19.9 +22.3 +22 495  | 3 20.0 +22 19                  | 6.0   |           |           |       |
| 3 52.3 +22.8 +22 617  | 3 52.4 +22 49                  | 7.5   |           |           |       |
| 3 48.5 +22.7 +22 607  | 3 48.5 +22 46                  | 7.0   |           |           |       |
| 3 47.9 +22.7 +22 601  | 3 47.9 +22 45                  | 8.3   |           |           |       |
| 3 46.1 +22.8 +22 594  | 3 46.2 +22 46                  | 8.5   |           |           |       |
| 3 41.2 +22. [[ <del>537</del> ]] 6 [[ <del>537</del> ]] 9                     | +22 573                        | 3 41.1  |           |           |       |
| +22 54  | 8.4                            |   |           |           |       |
| 3 39.6 +22.9 +22 563  | 3 39.8 +22 59                  | 6.9   |           |           |       |
| 3 37.2 +22.7 +22 545  | 3 37.3 +22 42                  | 8.0   |           |           |       |
| 3 28.5 +22.7 +22 518  | 3 28.4 +22 45                  | 7.0   |           |           |       |
| [[ <del>537</del> ]] 3 42.3 +23.5 [[ <del>537</del> ]]                        |                                |   |           |           |       |
| 3 42.3 +23.5 +2 [[ <del>537</del> ]] 2 [[ <del>537</del> ]] ^[[3]] 5          |                                |   |           |           |       |
| [[ <del>537</del> ]] 69 [[ <del>537</del> ]] ^[[70]]                          | 3 42.3 +23 31                  | 7.3   |           |           |       |
| 3 41.5 +23.4 +23 569  | 3 41.4 +23 31                  | 7.3   |           |           |       |
| 3 41.2 +23.3 +23 563  | 3 41.1 +23 16                  | 7.2   |           |           |       |
| 3 40.6 +23.6 +23 557  | 3 40.6 +23 36                  | 4.0   |           |           |       |
| 3 40.3 +23.4 +23 556  | 3 40.3 +23 25                  | 7.0   |           |           |       |
| 3 39.0 +23.6 +23 541  | 3 38.9 +23 39                  | 3.2   |           |           |       |
| 3 38.9 +23.2 +23 539  | 3 38.9 +23 15                  | 8.0   |           |           |       |
| [[ <del>537</del> ]] 3 38.8 +23.4 [[ <del>537</del> ]]                        | +23 {^[[537]] 538              | ^[[3 38.8]]   |           |           |       |
| 3 38.8 +^[[+23 21]] +23 28  | ^[[7.5]] 7.5                   |   |           |           |       |
| 3 38.7 +23.3 +23 535  | 3 38.7 +23 16                  | 7.9   |           |           |       |
| [[ <del>537</del> ]] 3 38. [[ <del>537</del> ]] 8 [[ <del>537</del> ]] ^[[9]] |                                |   |           |           |       |
| [[ <del>537</del> ]] +23.5 [[ <del>537</del> ]] ^[[+23.6]]                    | [[ <del>537</del> ]] +23       |   |           |           |       |
| ^[[^[[531]] 534]] 536   | ^[[^[[3 38.7]] 3 38.7]] 3 38.8 | ^[[^[[+23 40]] +23  |           |           |       |
| 41]] +23 39   | ^[[^[[8.5]] 8.0]] 8.0          |   |           |           |       |
| 3 38.5 +23.5 +23 528  | 3 38.5 +23 33                  | 8.5   |           |           |       |
| 3 38.0 +23.1 +23 524  | 3 38.0 +23 10                  | 8.4   |           |           |       |
| 3 37.8 +23.5 +23 522  | 3 37.7 +23 29                  | 4.5   |           |           |       |
| 3 37.4 +23.6 +23 517  | 3 37.2 +23 35                  | 8.2   |           |           |       |
| 3 37.0 +23.5 +23 510  | 3 36.8 +23 35                  | 8.2   |           |           |       |



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



```

16.0|15.0|a|N|5
15.2|15.5|a|N|1
16.5|6.1|F|3222|K=H|2
16.3|8.9|a|N|2
17.0|9.4|J||K=H|2
16.9|12.5|a|K=0.8H|2
16.6|12.7|a|K=0.2H|2
16.5|13.0|a|N|1
16.7|13.0|a|N|2
16.9|13.1|a|N|1
16.3|13.1|a(?)|3223|N|3
16.7|13.4|a|K=8.2H|2
16.7|13.8|a|N|2
17.0|14.1|a|K=0.8H|2
16.5|14.4|a|N|1
16.4|14.5|a|N|1
17.0|14.6|a|N|2
17.0|13.|[strikethrough]]6/[strikethrough]]7|a|N|2
16.4|14.7|a|N|5
16.6|14.8|a|N|2
16.8|15.0|a|N|4
16.4|15.1|a|N|3
16.7|15.2|a|N|1
17.0|15.4|a|N|1
16.7|15.5|a|N|1
16.8|19.8|a|N|3
16.4|20.0|a|N|1
17.9|13.6|H||N|1

```

[illegible]

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[6 columned table]

R.A.^1855|Dec.|BD. No.|R.A.^1855|Dec.^1855|Magn.]

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

3^h 36.2^m|+23.7°|+23 507|3 36.3|+23 39|4.7|

3 35.2|+23.2|+23 496|3 35.1|+23 12|8.4|

3 55.8|+23.7|+23 609|3 55.7|+23 43|6.0|

3 49.8|+23.7|+23 594|3 49.7|+23 40|7.3|

3 48.8|+24.0|+24 599|3 48.8|+24 4|6.8|

3 42.0|+24.0|+24 578|3 41.8|+24 3|7.7|

3 41.2|+23.9|+23 567|3 41.3|+23 54|7.9|

3 41.0|+23.8|+23 565| | | |

[[underline]]3 41.0|+23.9|[[/underline]]+23 562| | | |

|564| | | |

[[~~3 40.6|+23.6|+23 557|3 40.6|+23 36|4.0|~~]] | | | |

3 40.6|+23.6|+23 557|3 40.6|+23 36|4.0|

3 39.9|+23.9|+23 553|3 39.9|+23 54|7.8|

3 38.8|+23.8|+23 540|3 38.9|+23 51|7.0|

3 38.4|+24.1|+24 562|3 38.4|+24 4|7.5|

3 37.9|+23.8|+23 523|3 37.8|+23 48|8.0|

[[underline]]3 37.8|+23.7|[[/underline]] | | | |

3 36.3|+24.1| | | |

3 36.2|+24.1| | | |

3 37.2|+23.9|+23 516|3 37.2|+23 55|4.8|

3 37.1|+23.9|+23 512|3 37.0|+23 53|8.1|

3 36.6|+24.0|+24 547|3 36.6|+24 1|5.0|

3 36.1|+23.9|+23 505|3 36.2|+23 50|6.5|

3 35.8|+23.9|+23 504|3 35.8|+23 56|8.7|

3 34.4|+24.1| | | |

3 35.0|+23.9|+23 495|3 35.1|+23 55|8.3|

3 25.9|+23.9|+23 473|3 25.9|+23 59|6.2|

3 25.2|+23.7|+23 470|3 25.3|+23 45|7.8|

3 39.4|+24.5|+24 571|3 39.5|+24 32|7.0|

| R.A.   | Dec.  | M.  | R.A.   | Dec.   | M.  |
|--------|-------|-----|--------|--------|-----|
| 3 36.2 | +23.7 | 4.7 | 3 36.3 | +23 39 | 4.7 |
| 3 35.2 | +23.2 | 8.4 | 3 35.1 | +23 12 | 8.4 |
| 3 55.8 | +23.7 | 6.0 | 3 55.7 | +23 43 | 6.0 |
| 3 49.8 | +23.7 | 7.3 | 3 49.7 | +23 40 | 7.3 |
| 3 48.8 | +24.0 | 6.8 | 3 48.8 | +24 4  | 6.8 |
| 3 42.0 | +24.0 | 7.7 | 3 41.8 | +24 3  | 7.7 |
| 3 41.2 | +23.9 | 7.9 | 3 41.3 | +23 54 | 7.9 |
| 3 41.0 | +23.8 |     |        |        |     |
| 3 41.0 | +23.9 |     |        |        |     |
| 3 40.6 | +23.6 |     |        |        |     |
| 3 40.6 | +23.6 |     |        |        |     |
| 3 39.9 | +23.9 | 7.8 | 3 39.9 | +23 54 | 7.8 |
| 3 38.8 | +23.8 | 7.0 | 3 38.9 | +23 51 | 7.0 |
| 3 38.4 | +24.1 | 7.5 | 3 38.4 | +24 4  | 7.5 |
| 3 37.9 | +23.8 | 8.0 | 3 37.8 | +23 48 | 8.0 |
| 3 37.8 | +23.7 |     |        |        |     |
| 3 36.3 | +24.1 |     |        |        |     |
| 3 36.2 | +24.1 |     |        |        |     |
| 3 37.2 | +23.9 | 4.8 | 3 37.2 | +23 55 | 4.8 |
| 3 37.1 | +23.9 | 8.1 | 3 37.0 | +23 53 | 8.1 |
| 3 36.6 | +24.0 | 5.0 | 3 36.6 | +24 1  | 5.0 |
| 3 36.1 | +23.9 | 6.5 | 3 36.2 | +23 50 | 6.5 |
| 3 35.8 | +23.9 | 8.7 | 3 35.8 | +23 56 | 8.7 |
| 3 34.4 | +24.1 |     |        |        |     |
| 3 35.0 | +23.9 | 8.3 | 3 35.1 | +23 55 | 8.3 |
| 3 25.9 | +23.9 | 6.2 | 3 25.9 | +23 59 | 6.2 |
| 3 25.2 | +23.7 | 7.8 | 3 25.3 | +23 45 | 7.8 |
| 3 39.4 | +24.5 | 7.0 | 3 39.5 | +24 32 | 7.0 |

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

204

July 28, 1893

Plate 337

[[table]]  
[V|H|Cl|Rem. No.|K line Int|

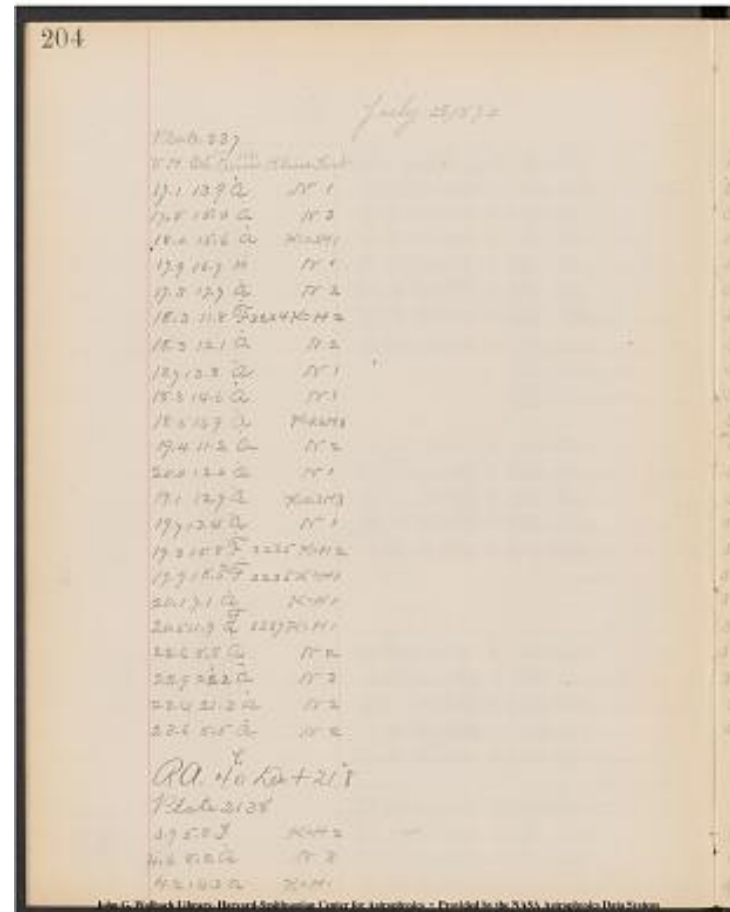
|      |      |              |                        |
|------|------|--------------|------------------------|
| 17.1 | 13.9 | a            | N1                     |
| 17.5 | 15.0 | a            | N3                     |
| 18.0 | 15.6 | a            | K=0.5H1                |
| 17.9 | 16.7 | H            | N1                     |
| 17.3 | 17.7 | a            | N2                     |
| 18.3 | 11.8 | F            | 3234 K=H2              |
| 18.3 | 12.1 | a            | N2                     |
| 18.7 | 13.8 | a            | N1                     |
| 18.8 | 14.6 | a            | N1                     |
| 18.5 | 16.9 | a            | K=0.2H3                |
| 19.4 | 11.2 | a            | N2                     |
| 20.0 | 12.0 | a            | N1                     |
| 19.1 | 12.7 | a            | K=0.3H3                |
| 19.7 | 13.4 | a            | N1                     |
| 19.3 | 15.8 | F            | 3235 K=H2              |
| 19.9 | 18.5 | F            | 3236 K=H1              |
| 20.1 | 7.1  | a            | K=H1                   |
| 20.5 | 11.9 | <del>a</del> | <del>F3237 K=H1 </del> |
| 22.6 | 8.8  | a            | N2                     |
| 22.9 | 2    | <del>2</del> | <del>1.2</del>  a   N3 |
| 23.4 | 21.3 | a            | N2                     |
| 23.6 | 5.5  | a            | N2                     |

R.A 4.0<sup>h</sup> Dec. +21.<sup>o</sup>8

Plate 2138

[[4 Column Table]]

|     |      |        |
|-----|------|--------|
| 3.9 | 5.8  | K=H2   |
| 4.6 | 8.2  | a N3   |
| 4.2 | 14.2 | a K=H1 |



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[6 columned table]]

R.A. ^[[1855]] | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn.

| ---      | ---         | ---                                | ---                            | ---                             | ---                         |
|----------|-------------|------------------------------------|--------------------------------|---------------------------------|-----------------------------|
| 3 ^[[h]] | 38.9 ^[[m]] | +24.1°                             | +24° 566                       | 3 ^[[h]]                        | 38.8 ^[[m]]   +24° 8'   8.0 |
| 3 36.5   | +24.4       | +24 546                            | 3 36.5                         | +24 23                          | 6.3                         |
| 3 35.1   | +24.6       | +24 537                            | 3 35.1                         | +24 36                          | 7.3                         |
| 3 32.8   | +24.5       | +24 533                            | 3 32.7                         | +24 32                          | 8.2                         |
| 3 30.5   | +24.2       | +24 527                            | 3 30.5                         | +24 14                          | 7.7                         |
| 3 43.6   | +24.7       | +24 5 <del>[[strikethrough]]</del> | 7 <del>[[strikethrough]]</del> | 87                              | 3 43.5                      |
| +24 45   | 7.5         |                                    |                                |                                 |                             |
| 3 42.8   | +24.7       | +24 583                            | 3 42.7                         | +24 44                          | 7.7                         |
| 3 39.1   | +24.9       | +24 568                            | 3 39.1                         | +24 56                          | 8.4                         |
| 3 37.1   | +24.9       |                                    |                                |                                 |                             |
| 3 32.1   | +24.9       | +24 529                            | 3 32.1                         | +24 51                          | 6.7                         |
| *3 44.9  | +25.2       | +25 641                            | 3 44.8                         | +25 15                          | 6.6                         |
| 3 43.1   | +25.5       |                                    |                                |                                 |                             |
| 3 41.6   | +25.1       | +25 624                            | 3 41.6                         | +25 9                           | 6.0                         |
| 3 39.9   | +25.4       | +25 620                            | 3 41.0                         | +25 21                          | 8.5                         |
| 3 34.4   | +25.2       | +25 593                            | 3 34.4                         | +25 12                          | 7.0                         |
| 3 28.5   | +25.5       | +25 580                            | 3 28.5                         | +25 31                          | 8.0                         |
| 3 54.0   | +25.5       | +25 664                            | 3 <del>[[strikethrough]]</del> | 54 <del>[[strikethrough]]</del> | 53.9                        |
| +25 31   | 8.1         |                                    |                                |                                 |                             |
| 3 43.4   | +25.8       | +25 632                            | 633   3 3                      | 43.4 -43.5                      | +25 +25 48 48   8.1 9.1     |
| 3 50.3   | +26.8       | +26 655                            | 3 50.3                         | +26 47                          | 6.8                         |
| 3 22.8   | +27.1       | +27 515                            | 3 22.6                         | +27 4                           | 5.7                         |
| 3 22.4   | +27.2       | +27 513                            | 514   3 3                      | 22.2 22.3                       | +27 +27 13 13   8.0 8.0     |
| 3 57.7   | +27.2       | +27 633                            | 3 57.7                         | +27 14                          | 5.1                         |
| 4 21.0   | +16.0       |                                    |                                |                                 |                             |
| 4 15.0   | +16.4       |                                    |                                |                                 |                             |
| 4 2.9    | +16.2       |                                    |                                |                                 |                             |

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

July 28, 1893

Plate 2138

[[5 column table]]

[V|H|Cl Rem. No.|K line|Int]

|      |      |        |        |   |
|------|------|--------|--------|---|
| 5.2  | 7.8  | F 3238 | K=H    | 1 |
| 5.9  | 8.0  | A      | K=0.2H | 4 |
| 6.0  | 8.6  | K      | K=1.5H | 4 |
| 5.4  | 13.5 | I      | K=H    | 1 |
| 5.4  | 15.2 | A      | K=H    | 1 |
| 5.4  | 15.6 | H      | K=H    | 1 |
| 5.3  | 19.1 | A      | N      | 2 |
| 5.4  | 22.7 | F 3239 | K=H    | 2 |
| 6.9  | 7.4  | A      | N      | 4 |
| 7.0  | 19.0 | F 3240 | K=H    | 2 |
| 7.5  | 6.7  | A      | N      | 2 |
| 7.7  | 9.3  | F 3241 | K=H    | 1 |
| 7.5  | 9.4  | A      | N      | 1 |
| 7.6  | 14.4 | F 3242 | K=H    | 2 |
| 9.0  | 7.7  | F 3243 | K=H    | 2 |
| 8.8  | 7.8  | A      | K=H    | 1 |
| 8.4  | 9.9  | F 3244 | K=H    | 2 |
| 9.3  | 6.0  | K      | K=1.5H | 4 |
| 9.3  | 10.0 | F 3245 | K=H    | 1 |
| 9.9  | 13.5 | A      | K=H    | 1 |
| 9.8  | 15.2 | G51    | K=H    | 3 |
| 9.0  | 16.3 | F 3246 | K=H    | 1 |
| 10.7 | 6.8  | F 3247 | K=H    | 1 |
| 10.6 | 10.4 | F 3248 | K=H    | 1 |
| 10.1 | 11.5 | F 3249 | K=H    | 1 |
| 10.2 | 15.5 | A      | K=H    | 1 |
| 10.4 | 18.5 | F 3250 | K=H    | 1 |
| 10.9 | 18.9 | E      | K=H    | 1 |

206

July 28, 1893

Plate 2138

5.2 7.8 F 3238 K=H 1

5.9 8.0 A K=0.2H 4

6.0 8.6 K K=1.5H 4

5.4 13.5 I K=H 1

5.4 15.2 A K=H 1

5.4 15.6 H K=H 1

5.3 19.1 A N 2

5.4 22.7 F 3239 K=H 2

6.9 7.4 A N 4

7.0 19.0 F 3240 K=H 2

7.5 6.7 A N 2

7.7 9.3 F 3241 K=H 1

7.5 9.4 A N 1

7.6 14.4 F 3242 K=H 2

9.0 7.7 F 3243 K=H 2

8.8 7.8 A K=H 1

8.4 9.9 F 3244 K=H 2

9.3 6.0 K K=1.5H 4

9.3 10.0 F 3245 K=H 1

9.9 13.5 A K=H 1

9.8 15.2 G51 K=H 3

9.0 16.3 F 3246 K=H 1

10.7 6.8 F 3247 K=H 1

10.6 10.4 F 3248 K=H 1

10.1 11.5 F 3249 K=H 1

10.2 15.5 A K=H 1

10.4 18.5 F 3250 K=H 1

10.9 18.9 E K=H 1

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

207

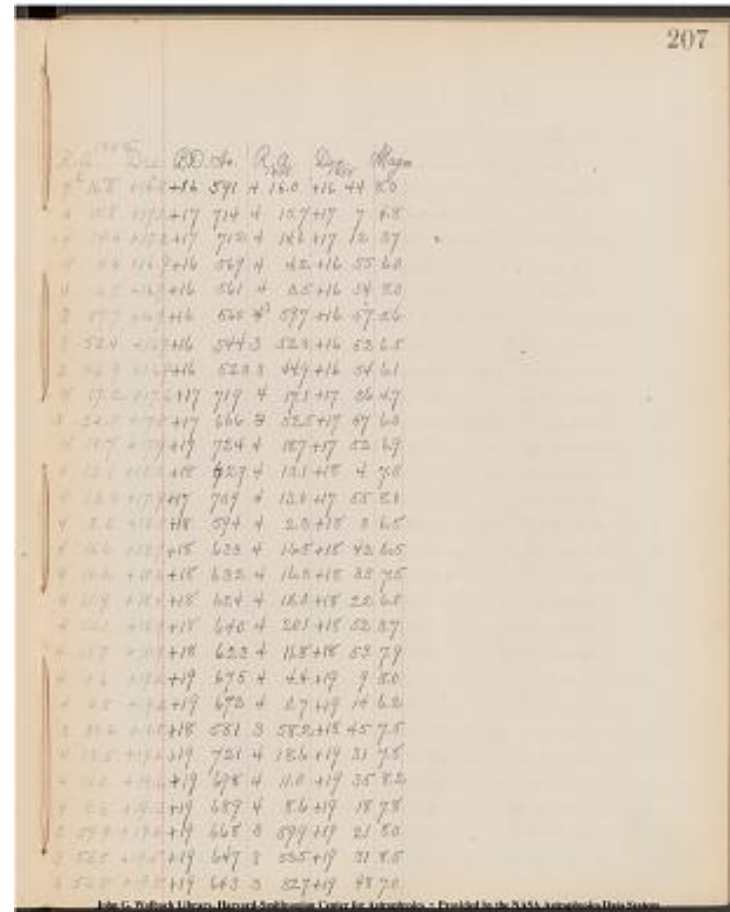
1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

| R.A.                | Dec.  | BD. No.           | R.A. 1855 | Dec. 1855 | Magn. |
|---------------------|-------|-------------------|-----------|-----------|-------|
| 4 <sup>h</sup> 15.8 | +17.1 | 16.0 <sup>m</sup> | 4 15.7    | +17.1     | 4.8   |
| 4 14.6              | +17.2 |                   | 4 14.6    | +17.2     | 3.7   |
| 4 4.2               | +16.9 |                   | 4 4.2     | +16.9     | 6.0   |
| 4 0.5               | +16.9 |                   | 4 0.5     | +16.9     | 8.0   |
| 3 59.7              | +16.9 |                   | 3 59.7    | +16.9     | 5.6   |
| 3 52.4              | +16.9 |                   | 3 52.4    | +16.9     | 6.5   |
| 3 44.9              | +16.9 |                   | 3 44.9    | +16.9     | 6.1   |
| 4 17.2              | +17.6 |                   | 4 17.2    | +17.6     | 4.7   |
| 3 52.5              | +17.8 |                   | 3 52.5    | +17.8     | 4.7   |
| 3 52.5              | +17.8 |                   | 3 52.5    | +17.8     | 6.0   |
| 4 18.7              | +17.9 |                   | 4 18.7    | +17.9     | 6.9   |
| 4 13.1              | +18.0 |                   | 4 13.1    | +18.0     | 7.0   |
| 4 13.0              | +17.9 |                   | 4 13.0    | +17.9     | 8.0   |
| 4 2.3               | +18.0 |                   | 4 2.3     | +18.0     | 6.5   |
| 4 16.6              | +18.7 |                   | 4 16.6    | +18.7     | 6.5   |
| 4 16.2              | +18.6 |                   | 4 16.2    | +18.6     | 7.5   |
| 4 11.9              | +18.4 |                   | 4 11.9    | +18.4     | 6.0   |
| 4 20.1              | +18.9 |                   | 4 20.1    | +18.9     | 3.7   |
| 4 11.7              | +18.9 |                   | 4 11.7    | +18.9     | 7.9   |
| 4 4.6               | +19.2 |                   | 4 4.6     | +19.2     | 8.0   |
| 4 0.8               | +19.2 |                   | 4 0.8     | +19.2     | 6.2   |
| 3 58.2              | +18.8 |                   | 3 58.2    | +18.8     | 7.5   |
| 4 18.5              | +19.6 |                   | 4 18.5    | +19.6     | 7.8   |
| 4 11.0              | +19.6 |                   | 4 11.0    | +19.6     | 8.2   |
| 4 8.6               | +19.3 |                   | 4 8.6     | +19.3     | 7.8   |
| 3 59.9              | +19.4 |                   | 3 59.9    | +19.4     | 8.0   |
| 3 53.5              | +19.5 |                   | 3 53.5    | +19.5     | 8.5   |
| 3 52.8              | +19.8 |                   | 3 52.8    | +19.8     | 7.0   |

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

208

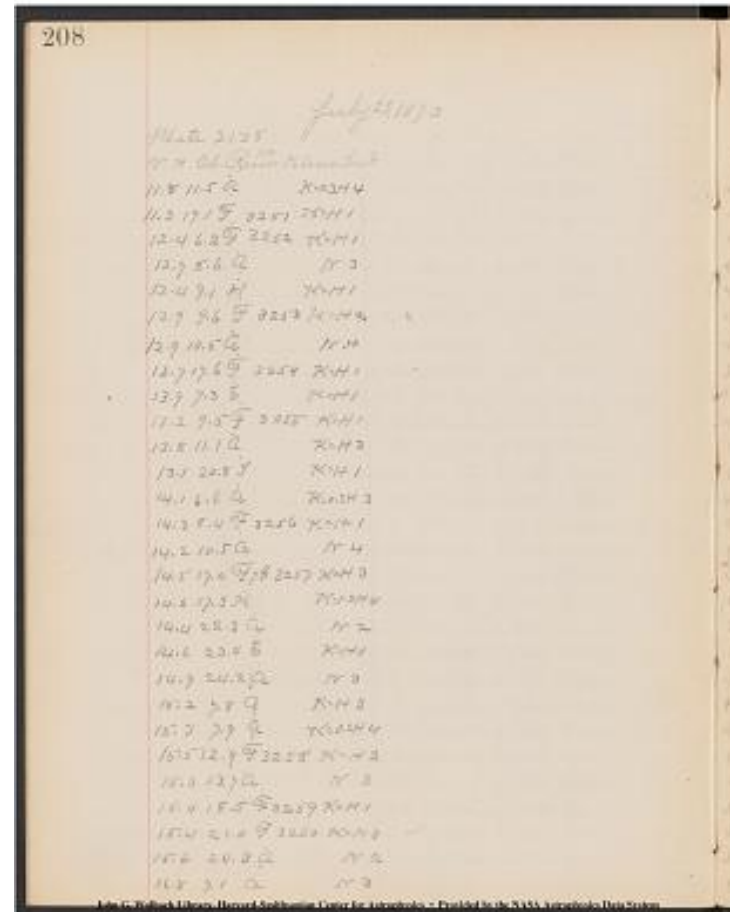
July 28, 1893

Plate 2138

[[6 columned table]]

[V|H|Cl.|Rem No.|Kline|Int.]

| V    | H    | Cl. | Rem No. | Kline  | Int. |
|------|------|-----|---------|--------|------|
| 11.8 | 11.5 | A   |         | K=0.5H | 4    |
| 11.3 | 19.1 | F   | 3251    | K=H    | 1    |
| 12.4 | 6.2  | F   | 3252    | K=H    | 1    |
| 12.7 | 8.6  | A   |         | N      | 3    |
| 12.4 | 9.1  | H   |         | K=H    | 1    |
| 12.9 | 9.6  | F   | 3253    | K=H    | 2    |
| 12.9 | 10.5 | A   |         | N      | 4    |
| 12.7 | 17.6 | F   | 3254    | K=H    | 1    |
| 13.9 | 7.3  | E   |         | K=H    | 1    |
| 13.2 | 9.5  | F   | 3255    | K=H    | 1    |
| 13.8 | 11.1 | A   |         | K=H    | 3    |
| 13.1 | 20.8 | F   |         | K=H    | 1    |
| 14.1 | 6.6  | A   |         | K=0.3H | 3    |
| 14.3 | 8.4  | F   | 3256    | K=H    | 1    |
| 14.2 | 10.5 | A   |         | N      | 4    |
| 14.5 | 17.0 | F   | 3257    | K=H    | 3    |
| 14.6 | 17.3 | K   |         | K=1.2H | 4    |
| 14.1 | 22.3 | A   |         | N      | 2    |
| 14.6 | 23.4 | E   |         | K=H    | 1    |
| 14.9 | 24.2 | A   |         | N      | 3    |
| 15.2 | 7.8  | A   |         | K=H    | 3    |
| 15.3 | 7.9  | A   |         | K=0.2H | 4    |
| 15.5 | 12.9 | F   | 3258    | K=H    | 2    |
| 15.3 | 13.7 | A   |         | N      | 3    |
| 15.4 | 18.5 | F   | 3259    | K=H    | 1    |
| 15.4 | 21.0 | F   | 3260    | K=H    | 3    |
| 15.6 | 24.3 | A   |         | N      | 2    |
| 16.8 | 7.1  | A   |         | N      | 3    |



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

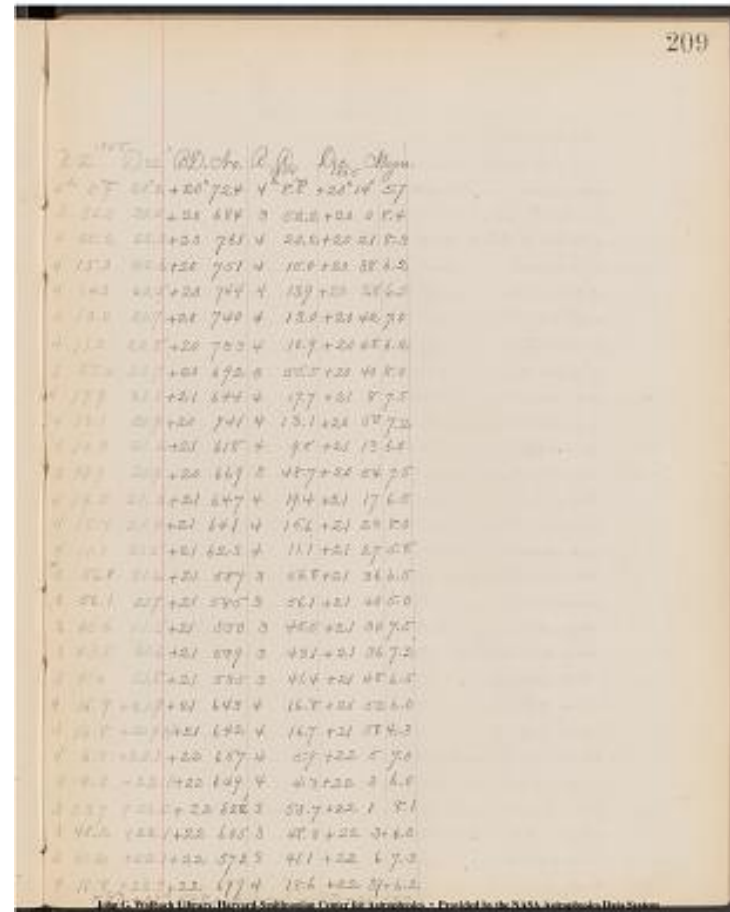


[[6 columned table]]

R.A. 1855|Dec. 1855|BD. No.|R.A. 1855|Dec. 1855|Magn.

| RA      | Dec   | BD No   | RA     | Dec    | Magn |
|---------|-------|---------|--------|--------|------|
| 4 11.1  | 21.5  | +21 623 | 4 11.1 | +21 27 | 5.8  |
| 4 16.9  | +21.9 | +21 643 | 4 16.8 | +21 52 | 6.0  |
| 4 16.8  | +21.9 | +21 642 | 4 16.7 | +21 58 | 4.3  |
| 4 6.0   | +22.1 | +22 657 | 4 5.9  | +22 5  | 7.0  |
| 4 4.3   | +22.0 | +22 649 | 4 4.3  | +22 -3 | 6.0  |
| 3 53.7  | +22.0 | +22 62  | 3 53.7 | +22 1  | 8.1  |
| 3 48.2  | +22.1 | +22 6-5 | 3 48.3 | +22 3  | 6.0  |
| 3 41.2  | +22.1 | +22 572 | 3 41.1 | +22 6  | 7.3  |
| 4 18.8  | +22.7 | +22 699 | 4 18.6 | +22 39 | 6.2  |
| 4 17.9  | 21.1  | +21 644 | 4 17.7 | +21 8  | 7.5  |
| 4 13.1  | 20.9  | +20 741 | 4 13.1 | +20 50 | 7.2  |
| 4 10.0  | 21.2  | +21 618 | 4 9.8  | +21 13 | 6.0  |
| 3 48.9  | 20.9  | +20 669 | 3 48.7 | +20 54 | 7.5  |
| 4 19.5  | 21.3  | +21 647 | 4 19.4 | +21 17 | 6.5  |
| 4 15.7  | 21.4  | +21 641 | 4 15.6 | +21 23 | 8.0  |
| 4 11.1  | 21.5  | +21 623 | 4 11.1 | +21 27 | 5.8  |
| *3 56.8 | 21.6  | +21 587 | 3 56.8 | +21 36 | 6.5  |
| 3 56.1  | 21.7  | +21 585 | 3 56.1 | +21 40 | 5.0  |
| 3 45.6  | 21.5  | +21 550 | 3 45.5 | +21 30 | 7.5  |
| 3 43.0  | 21.6  | +21 539 | 3 43.1 | +21 36 | 7.2  |
| 3 41.6  | 21.8  | +21 535 | 3 41.4 | +21 48 | 6.5  |
| 4 16.9  | +21.9 | +21 643 | 4 16.8 | +21 52 | 6.0  |
| 4 16.8  | +21.9 | +21 642 | 4 16.7 | +21 58 | 4.3  |
| 4 6.0   | +22.1 | +22 657 | 4 5.9  | +22 5  | 7.0  |
| 4 4.3   | +22.0 | +22 649 | 4 4.3  | +22 -3 | 6.0  |
| 3 53.7  | +22.0 | +22 62  | 3 53.7 | +22 1  | 8.1  |
| 3 48.2  | +22.1 | +22 6-5 | 3 48.3 | +22 3  | 6.0  |
| 3 41.2  | +22.1 | +22 572 | 3 41.1 | +22 6  | 7.3  |
| 4 18.8  | +22.7 | +22 699 | 4 18.6 | +22 39 | 6.2  |

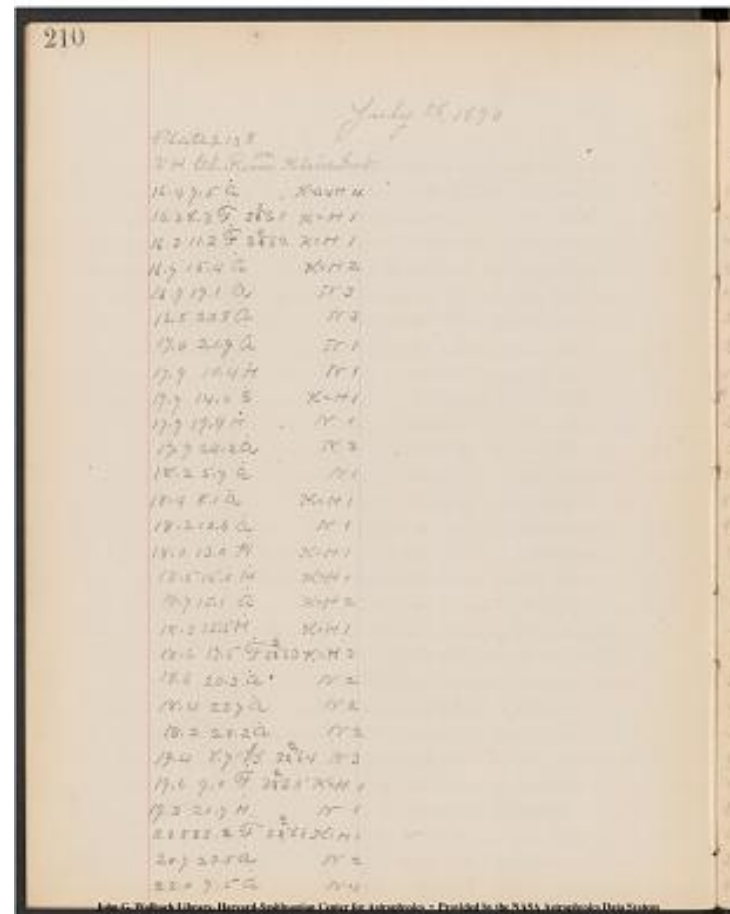
\*BD +21° 588 superposed on BD +21° 587



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



July 28, 1893  
 Plate 2138  
 [V|H|C|I|Rem. No.|K line|Int|  
 [---|---|---|---|---|---|---|  
 16.4|7.5|A| |K = 0.4 H|4|  
 16.3|8.3|F|3261|K = H|1|  
 16.3|11.2|F|3262|K = H|1|  
 16.7|15.4|A| |K = H|2|  
 16.9|19.1|A| |N|3|  
 16.8|20.8|A| |N|3|  
 17.0|21.9|A| |N|3|  
 17.9|10.4|H| |N|1|  
 17.7|14.0|E| |K = H|1|  
 17.7|19.9|H| |N|1|  
 17.9|24.2|A| |N|3|  
 18.2|5.7|A| |N|1|  
 18.4|8.1|A| |K = H|1|  
 18.2|10.6|A| |N|1|  
 18.0|13.0|H| |K = H|1|  
 18.5|15.0|H| |K = H|1|  
 18.7|15.1|A| |K = H|2|  
 18.3|15.5|H| |K = H|1|  
 18.6|17.5|F|3263|K = H|3|  
 18.6|20.3|A| |N|2|  
 18.4|23.7|A| |N|2|  
 18.2|24.2|A| |N|2|  
 19.4|8.7|B|3264|N|2|  
 19.6|9.0|F|3265|K = H|1|  
 19.3|20.7|H| |N|1|  
 20.8|23.2|F|3266|K = H|1|  
 20.7|23.5|A| |N|2|  
 22.0|9.5|A| |N|4|



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

1855

[[7 columned table]]

R.A. Dec. B.D. No. R.A. 1855 Dec. 1855 Magn. |

| R.A.   | Dec.                               | B.D. No. | R.A.                               | Dec.    | 1855 | Magn. |
|--|------------------------------------|----------|------------------------------------|---------|------|-------|
| 4 17.6   | 22.5                               | +22° 696 | 4 17.6                             | 22° 28' | 4.5  |       |
| 4 15.9   | 22.4                               | +22 688  | 4 15.8                             | +22 25  | 8.0  |       |
| 4 9.5  | 22.4                               | +22 670  | 4 9.6                              | +22 27  | 7.5  |       |
| 4 0.2  | 22.7                               | +22 637  | 4 0.3                              | +22 44  | 7.0  |       |
| 3 52.3   | +22.8                              | +22 617  | 3 52.4                             | +22 49  | 7.5  |       |
| 3 48.5   | +22.7                              | +22 607  | 3 48.5                             | +22 46  | 7.0  |       |
| 3 46.0   | +22.8                              | +22 594  | 3 46.2                             | +22 46  | 8.5  |       |
| 4 11.4   | +23.2                              | +23 675  | 4 11.4                             | +23 14  | 7.5  |       |
| [[ <u>4 3.8</u> +23.2]] +23  |                                    |          |                                    |         |      |       |
| 641  | [[ <del>43</del> ]] 3.8 +23 14 9.5 |          |                                    |         |      |       |
| [[ <u>4 3.8</u> +23.2]] +23 642 4 3.8 +23 13 7.5   |                                    |          |                                    |         |      |       |
| 3 50.4   | +23.2                              | +23 600  | 3 50.4                             | +23 12  | 8.0  |       |
| 3 41.1   | +23.3                              | +23 563  | 3 41.1                             | +23 16  | 7.2  |       |
| 4 21.7   | +23.2                              | +23 701  | 4 21.7                             | +23 16  | 7.0  |       |
| 4 16.6   | +23.4                              | +23 688  | 4 16.6                             | +23 27  | 8.6  |       |
| [[ <u>4 11.1</u> +23.4]] +23 ~672 -3   |                                    |          |                                    |         |      |       |
| 4 6.0  | +23.3                              |          |                                    |         |      |       |
| 4 1.7  | +23.6                              | +23 632  | 4 1.6                              | +23 35  | 7.5  |       |
| 4 1.1  | +23.7                              | +23 627  | 4 1.0                              | +23 41  | 7.5  |       |
| 4 0.2  | +23.4                              | +23 624  | 4 0.2                              | +23 32  | 7.2  |       |
| 3 55.8   | +23.7                              | +23 609  | 3 55.7                             | +23 43  | 6.0  |       |
| 3 49.8   | +23.7                              | +23 594  | 3 49.7                             | +23 40  | 7.3  |       |
| 3 42.4   | +23.5                              | +23 570  | 3 42.3                             | +23 31  | 7.3  |       |
| 3 41.5   | +23.4                              | +23 569  | 3 41.4                             | +23 24  | 7.5  |       |
| 4 15.2   | +23.9                              | +23 683  | 4 15.2                             | +23     |      |       |
| 58 8.5 Superposed chart plate B 339 on this. Mrs. F. says that the fainter star does not affect spectrum brighter which is Class B |                                    |          |                                    |         |      |       |
| 4 15.2   | +23.9                              | +23 684  | 4 15.3                             | +23 58  | 6.5  |       |
| 4 14.9   | +24.0                              | +24 654  | 4 14.8                             | +24 4   | 7.3  |       |
| 3 48.8   | +24.0                              | +24 599  | [[ <del>4 48.8</del> ]] 3 48.8 +24 |         |      |       |
| 4 6.8  | ?                                  |          |                                    |         |      |       |
| 3 43.5   | +24.7                              | +24 587  | 3 43.5                             | +24 45  | 7.5  |       |
| 3 42.9   | +24.7                              | +24 583  | 3 42.7                             | +24 44  | 7.7  |       |
| 4 13.8   | +25.2                              | +25 707  | 4 13.8                             | +25 17  | 5.7  |       |

\*BD +23° 641 superposed on BD +23° 642

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

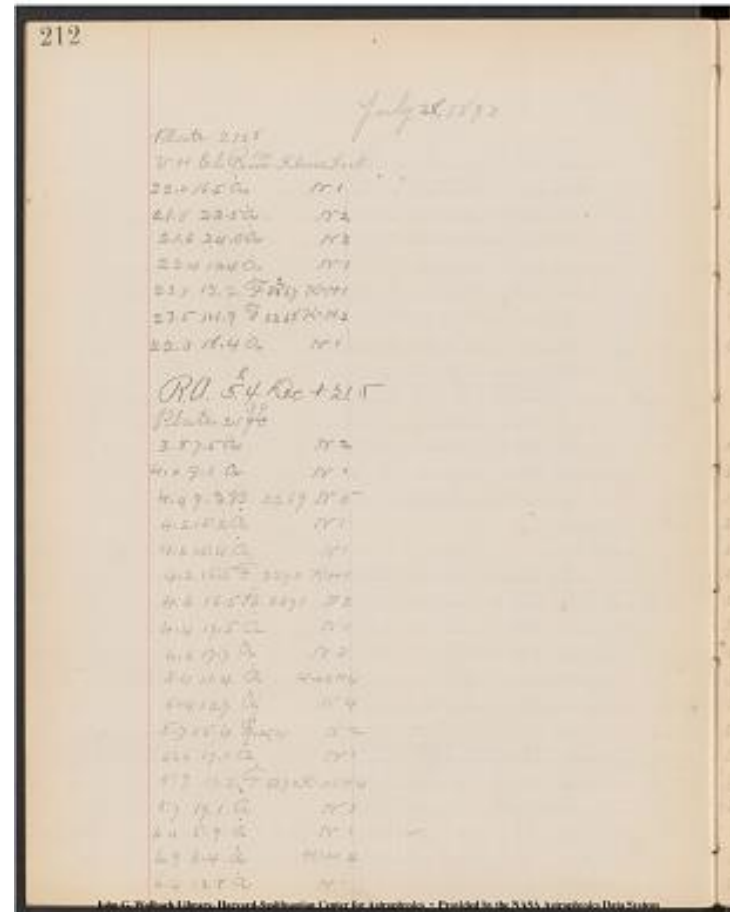
July 28, 1893

Plate 2138

[[6 columned table]]

[V|H|Cl.|Rem No.|Kline|Int.]

|                                  |      |       |  |        |  |        |
|----------------------------------|------|-------|--|--------|--|--------|
| 22.0                             | 16.5 | A     |  | N      |  | 1      |
| 21.8                             | 22.5 | A     |  | N      |  | 2      |
| 21.6                             | 24.0 | A     |  | N      |  | 3      |
| 22.4                             | 10.4 | A     |  | N      |  | 1      |
| 23.1                             | 13.2 | F     |  | 3      |  | 267    |
| 23.5                             | 14.9 | F     |  | 3268   |  | K=H    |
| 22.3                             | 18.4 | A     |  | N      |  | 1      |
| R.A. 5.4 <sup>h</sup> Dec. +21.5 |      |       |  |        |  |        |
| Plate 21 <del>93</del>           |      |       |  |        |  |        |
| 3.8                              | 7.5  | A     |  | N      |  | 2      |
| 4.0                              | 9.1  | A     |  | N      |  | 1      |
| 4.4                              | 9.3  | B     |  | 3269   |  | N      |
| 4.2                              | 15.2 | A     |  | N      |  | 1      |
| 4.6                              | 15.4 | A     |  | N      |  | 1      |
| 4.2                              | 15.5 | F     |  | 3270   |  | K=H    |
| 4.6                              | 16.5 | B     |  | 3271   |  | N      |
| 4.4                              | 17.5 | A     |  | N      |  | 1      |
| 4.6                              | 17.7 | A     |  | N      |  | 3      |
| 5.4                              | 11.4 | A     |  | K=0.4H |  | 4      |
| 5.4                              | 13.7 | A     |  | N      |  | 4      |
| 5.7                              | 15.6 | Ma(2) |  | N      |  | 2      |
| 5.6                              | 17.1 | A     |  | N      |  | 1      |
| 5.9                              | 17.3 | F     |  | 3272   |  | K=1.5H |
| 5.7                              | 19.1 | A     |  | N      |  | 1      |
| 6.4                              | 5.9  | A     |  | N      |  | 1      |
| 6.9                              | 6.4  | A     |  | K=H    |  | 4      |
| 6.4                              | 13.8 | A     |  | N      |  | 1      |



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

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

3 58.0 | 25.3 | +25° | ~~57.9~~ | ~~67.7~~ | 3<sup>h</sup> |57.9 | ~~67.7~~ | +25° 20' | 8.2 |3 45.0 | 25.2 | +25 641 | 3 4 | ~~5~~ | 4.8 | +25  
15 | 6.6 |

3 41.6 | 25.1 | +25 624 | 3 41.6 | +25 9 | 6.0 |

4 11.7 | 25.4 | +25 703 | 3 11.7 | +25 29 | 7.8 |

4 5.9 | 25.9 | +25 685 | 4 5.7 | +25 53 | 7.6 |

3 2.2 | 26.1 | +22 686 | 4 2.0 | +26 5 | 5.8 |

3 53.9 | 25.5 | +25 664 | 3 53.9 | +25 31 | 8.1 |

5 36.6 | +16.0 | +16 855 | 5 36.5 | +16 1 | 6.9 |

5 33.4 | +16.2 | +16 842 | 5 33.3 | +16 9 | 8.5 |

5 33.0 | +16.5 | +16 841 | 5 32.9 | +16 28 | 5.5 |

5 20.5 | +16.3 | +16 786 | 5 20.5 | +16 17 | 8.0 |

5 20.0 | +16.5 | +16 783 | 5 20.0 | +16 29 | 8.2 |

5 19.8 | +16.3 | +16 782 | 5 19.8 | +16 20 | 6.9 |

5 17.8 | +16.6 | +16 775 | 5 17.7 | +16 33 | 7.0 |

5 15.8 | +16.4 | +16 767 | 5 15.8 | +16 26 | 8.4 |

\*5 1 | ~~3~~ | 5.3 | +16.6 | +16 765 | 5 15.3 | +16  
33 | 6.8 |

5 28.7 | +16.9 | +16 822 | 5 28.7 | +16 55 | 6.2 |

5 23.8 | +16.9 | +16 794 | 5 23.9 | +16 56 | 6.1 |

5 19.5 | +17.1 | +17 931 | 5 19.6 | +17 7 | 6.5 |

5 16.5 | +17.0 | +17 923 | 5 16.4 | +17 4 | 8.2 |

[[5 | 15.9 | +17.2 | 17 920 | 5 16.0 | +17 15 |  
5.5 |

5 12.4 | +17.1 | +17 901 | 5 12.3 | +17 6 | 8.0 |

5 40.1 | +17.4 | +17 1013 | 5 40.0 | +17 22 | 7.8 |

5 38.9 | +17.7 | +17 1004 | 5 3 | ~~8~~ | ~~9.0~~ | +17  
40 | 6.1 |

5 23.4 | +17.4 | +17 945 | 5 23.6 | +17 26 | 8.2 |

\*BD +16° 764 superposed on BD +16° 765

| R.A.   | Dec.  | BD. No.  | Magn. |
|--------|-------|----------|-------|
| 3 58.0 | 25.3  | +25°     | 8.2   |
| 3 45.0 | 25.2  | +25 641  | 4.8   |
| 3 41.6 | 25.1  | +25 624  | 6.0   |
| 4 11.7 | 25.4  | +25 703  | 7.8   |
| 4 5.9  | 25.9  | +25 685  | 7.6   |
| 3 2.2  | 26.1  | +22 686  | 5.8   |
| 3 53.9 | 25.5  | +25 664  | 8.1   |
| 5 36.6 | +16.0 | +16 855  | 6.9   |
| 5 33.4 | +16.2 | +16 842  | 8.5   |
| 5 33.0 | +16.5 | +16 841  | 5.5   |
| 5 20.5 | +16.3 | +16 786  | 8.0   |
| 5 20.0 | +16.5 | +16 783  | 8.2   |
| 5 19.8 | +16.3 | +16 782  | 6.9   |
| 5 17.8 | +16.6 | +16 775  | 7.0   |
| 5 15.8 | +16.4 | +16 767  | 8.4   |
| *5 1   |       |          |       |
| 5 28.7 | +16.9 | +16 822  | 6.2   |
| 5 23.8 | +16.9 | +16 794  | 6.1   |
| 5 19.5 | +17.1 | +17 931  | 6.5   |
| 5 16.5 | +17.0 | +17 923  | 8.2   |
| 5      | 15.9  | +17.2    |       |
| 5 12.4 | +17.1 | +17 901  | 8.0   |
| 5 40.1 | +17.4 | +17 1013 | 7.8   |
| 5 38.9 | +17.7 | +17 1004 |       |
| 5 23.4 | +17.4 | +17 945  | 8.2   |

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

214

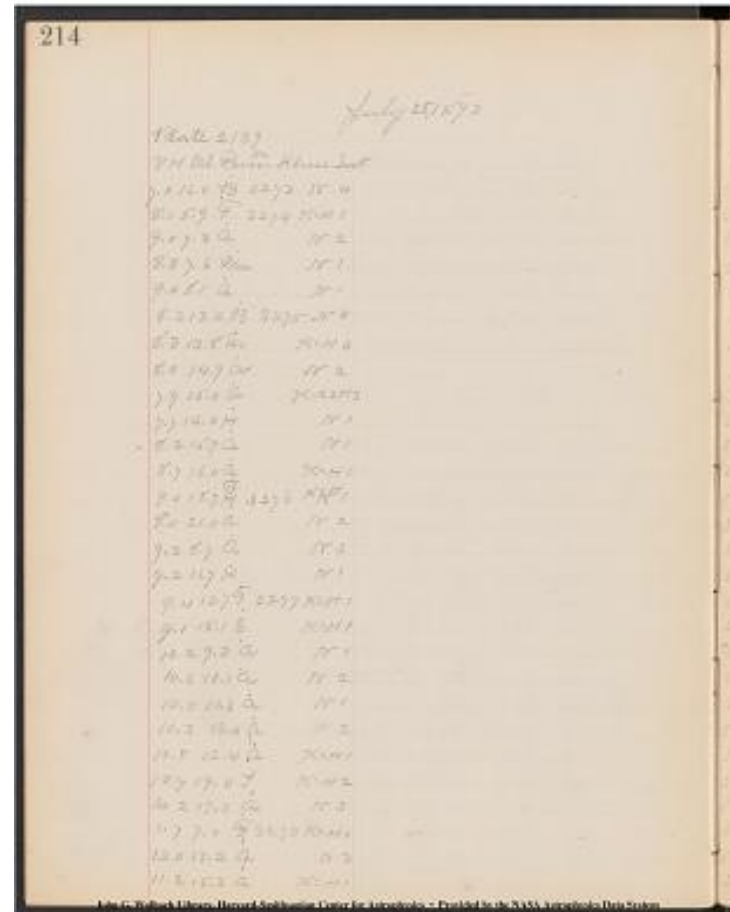
July 28, 1893

Plate 2139

[[6 columned table]]

V|H|Cl.|Rem. No.|K line|Int.|

|      |      |                              |              |                              |   |
|------|------|------------------------------|--------------|------------------------------|---|
| 7.0  | 16.0 | B                            | 3273         | N                            | 4   |
| 8.1  | 5.9  | F                            | 3274         | K=H                          | 1   |
| 9.0  | 7.3  | A                            |              | N                            | 2   |
| 8.8  | 7.6  | Ma                           |              | N                            | 1   |
| 9.0  | 8.1  | A                            |              | N                            | 1   |
| 8.2  | 13.2 | B                            | 3275         | N                            | 4   |
| 8.3  | 13.8 | M                            |              | K=H                          | 3   |
| 8.0  | 14.9 | A                            |              | N                            | 2   |
| 7.9  | 15.0 | A                            |              | K=0.2H                       | 3   |
| 7.7  | 14.0 | H                            |              | N                            | 1   |
| 8.2  | 15.9 | A                            |              | N                            | 1   |
| 8.7  | 16.0 | A                            |              | K=H                          | 1   |
| 9.0  | 18.7 | <del>[[strikethrough]]</del> | <del>H</del> | <del>[[strikethrough]]</del> | <del>F</del> 3276 <del>K</del> <del>[[strikethrough]]</del> <del>N</del> <del>[[strikethrough]]</del> <del>H</del> <del>[[strikethrough]]</del> |
| 8.0  | 21.0 | A                            |              | N                            | 2   |
| 9.3  | 8.7  | A                            |              | N                            | 3   |
| 9.2  | 11.7 | H                            |              | N                            | 1   |
| 9.4  | 13.7 | F                            | 3277         | K=H                          | 1   |
| 9.1  | 18.1 | E                            |              | K=H                          | 1   |
| 10.2 | 9.3  | A                            |              | N                            | 1   |
| 10.6 | 10.1 | A                            |              | N                            | 2   |
| 10.8 | 11.3 | A                            |              | N                            | 1   |
| 10.3 | 12.0 | A                            |              | N                            | 2   |
| 10.8 | 12.4 | A                            |              | K=H                          | 1   |
| 10.7 | 19.0 | S                            |              | K=H                          | 2   |
| 10.2 | 19.3 | A                            |              | N                            | 3   |
| 11.7 | 7.0  | F                            | 3278         | K=H                          | 1   |
| 12.0 | 13.2 | A                            |              | N                            | 3   |
| 11.2 | 15.2 | A                            |              | K=H                          | 1   |



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

215

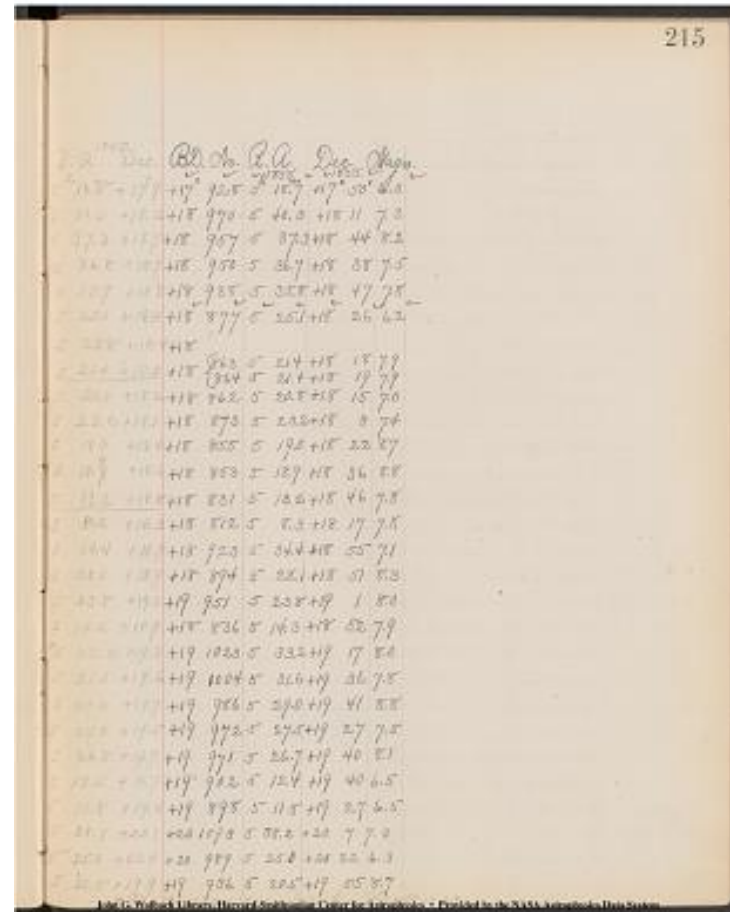
1855

[[6 columned table]]

R.A. | Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |

| R.A.                               | Dec.                         | BD. No.      | R.A. 1855                    | Dec. 1855                    | Magn.        |
|------------------------------------|------------------------------|--------------|------------------------------|------------------------------|--------------|
| 5 <sup>h</sup> 18.8                | +17.9                        | +17° 928     | 5 <sup>h</sup> 18.7          | +17° 50'                     | 6.0          |
| 5 40.4                             | +18.2                        | +18 970      | 5 40.3                       | +18 11                       | 7.3          |
| 5 37.3                             | +18.7                        | +18 957      | 5 37.3                       | +18 44                       | 8.2          |
| 5 36.8                             | +18.7                        | +18 950      | 5 36.7                       | +18 38                       | 7.5          |
| 5 35.7                             | +18.8                        | +18 938      | 5 35.8                       | +18 47                       | 7.8          |
| 5 25.0                             | +18.4                        | +18 877      | 5 25.1                       | +18 26                       | 6.2          |
| 5 23.8                             | +18.4                        | +18          |                              |                              |              |
| 5 21.4                             | +18.3                        | +18 863/864  | 5/5 21.4/21.4                | +18/+18 18/19                | 7.9/7.9      |
| 5 21.0                             | +18.2                        | +18 862      | 5 20.8                       | +18 15                       | 7.0          |
| 5 23.2                             | +18.1                        | +18 873      | 5 23.2                       | +18 8                        | 7.4          |
| 5 18.9                             | +18.4                        | +18 855      | 5 19.0                       | +18 22                       | 8.7          |
| 5 18. <del>[[strikethrough]]</del> | <del>[[strikethrough]]</del> | <del>9</del> | <del>[[strikethrough]]</del> | <del>[[strikethrough]]</del> | <del>8</del> |
| 36                                 | 8.8                          |              | +18.6                        | +18 853                      | 5 18.9       |
| 5 13.2                             | +18.8                        | +18 831      | 5 13.2                       | +18 46                       | 7.8          |
| 5 8.2                              | +18.3                        | +18 812      | 5 8.3                        | +18 17                       | 7.8          |
| 5 34.4                             | +18.9                        | +18 923      | 5 34.4                       | +18 55                       | 7.1          |
| 5 28.1                             | +18.9                        | +18 894      | 5 28.1                       | +18 51                       | 8.3          |
| 5 23.8                             | +19.0                        | +19 951      | 5 23.8                       | +19 1                        | 8.0          |
| 5 14.2                             | +18.9                        | +18 836      | 5 14.3                       | +18 52                       | 7.9          |
| *5 33.2                            | +19.3                        | +19 1023     | 5 33.2                       | +19 17                       | 8.0          |
| 5 31.4                             | +19.6                        | +19 1004     | 5 31.6                       | +19 36                       | 7.8          |
| 5 29.0                             | +19.7                        | +19 986      | 5 29.0                       | +19 41                       | 8.8          |
| 5 27.3                             | +19.5                        | +19 972      | 5 27.5                       | +19 27                       | 7.5          |
| 5 26.8                             | +19.7                        | +19 971      | 5 26.7                       | +19 40                       | 8.1          |
| 5 12.5                             | +19.7                        | +19 902      | 5 12.4                       | +19 40                       | 6.5          |
| 5 11.8                             | +19.4                        | +19 898      | 5 11.8                       | +19 27                       | 6.5          |
| 5 38.1                             | +20.1                        | +20 1093     | 5 38.2                       | +20 7                        | 7.3          |
| 5 25.0                             | +20.4                        | +20 989      | 5 25.0                       | +20 22                       | 6.3          |
| 5 20.5                             | +19.9                        | +19 936      | 5 20.5                       | +19 55                       | 8.7          |

\*BD +19° 1022 &amp; 1024 superposed on BD +19° 1023



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

[[preprinted]] 216 [[/preprinted]]

July 28, 1893

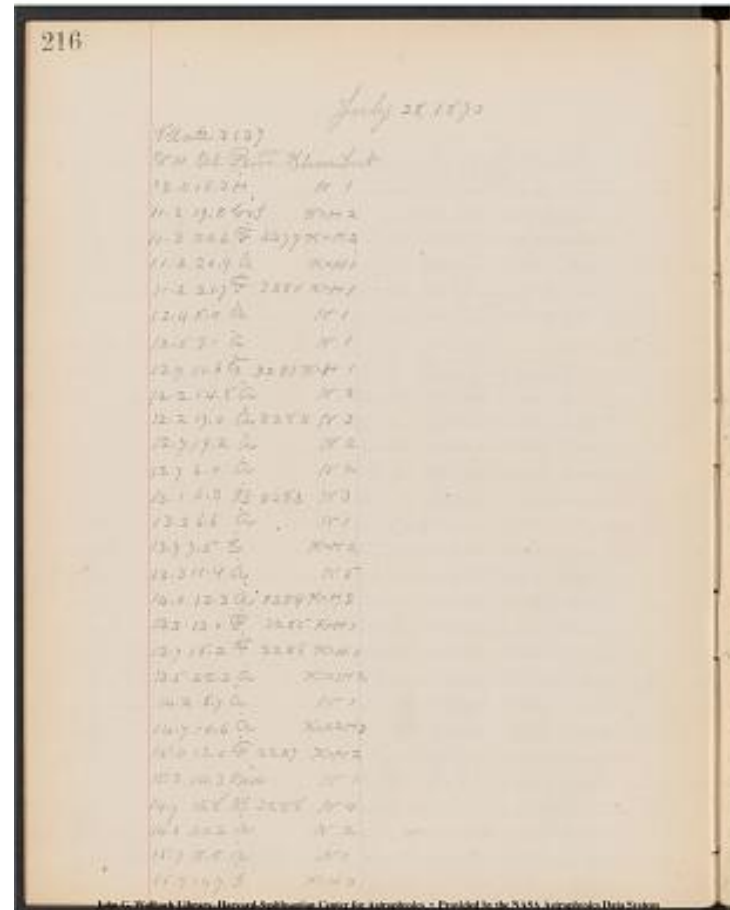
Plate 2139

[6 columned table]

|V|H|Cl.|Rem.^{[No.]}|Kline|Int.|

|          |      |      |      |        |   |
|----------|------|------|------|--------|---|
| 12.0     | 15.2 | H    |      | N      | 1 |
| 11.3     | 19.8 | G3F  |      | K=H    | 2 |
| 11.320.6 | F    | 3279 |      | K=H    | 2 |
| 11.3     | 20.9 | A    |      | K=H    | 1 |
| 11.2     | 21.9 | F    | 3280 | K=H    | 1 |
| 12.4     | 8.0  | A    |      | N      | 1 |
| 12.5     | 9.1  | A    |      | N      | 1 |
| 12.7     | 11.6 | F    | 3281 | K=H    | 1 |
| 12.2     | 14.8 | A    |      | N      | 3 |
| 12.2     | 17.0 | A    | 3282 | N      | 3 |
| 12.9     | 19.2 | A    |      | N      | 2 |
| 13.9     | 6.0  | A    |      | N      | 2 |
| 13.1     | 6.3  | B    | 3283 | N      | 3 |
| 13.3     | 6.6  | A    |      | N      | 1 |
| 13.9     | 9.5  | E    |      | K=H    | 2 |
| 13.3     | 11.4 | A    |      | N      | 5 |
| 14.0     | 12.3 | A    | 3284 | K=H    | 2 |
| 13.3     | 13.0 | F    | 3285 | K=H    | 1 |
| 13.7     | 15.2 | F    | 3286 | K=H    | 1 |
| 13.5     | 22.2 | A    |      | K=0.3H | 2 |
| 14.2     | 8.7  | A    |      | N      | 1 |
| 14.7     | 10.6 | A    |      | K=0.2H | 3 |
| 15.0     | 12.0 | F    | 3287 | K=H    | 2 |
| 14.7     | 15.8 | B    | 3288 | N      | 4 |
| 14.6     | 20.2 | A    |      | N      | 2 |
| 15.7     | 8.8  | A    |      | N      | 1 |
| 15.9     | 14.7 | F    |      | K=H    | 3 |

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



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08



[[5 columned table]]  
 R.A. 1855 Dec. | BD. No. | R.A. 1855 | Dec. 1855 | Magn. |  
 ---|---|---|---|---|  
 5<sup>A</sup>[[h]] 20.4 +20[[degree-symbol]].3 +20[[degree-symbol]]  
 961|5<sup>A</sup>[[h]] +20[[degree-symbol]] 19|7.5|  
 5 10.8 +19.9|+ +19 893|5 10.7 +19 58|6.5|  
 5 9.0 +199|+ +19 886|5 8.9 +19 58|6.8|  
 5 8.2 +19.9|+ +19 884|5 8.3 +19 57|7.2|  
 5 6.6 +19.9|+19 876|5 6.6 +19 53|7.5|  
 5 36.1 +20.5 +20 1073|5 36.2 +20 29|8.2|  
 5 33.9 +20.5 +20 1054|5 338 +20 32|8.3|  
 5 28.5 +20.7 +20 1018|5 28.4 +20 38|8.5|  
 5 21.6 +20.4 +20 969|5 21.6 +20 26|7.5|  
 5 16.6 +20.4 +20 948|5 16.6 +20 27|7.5|  
 \*5 12.0 +20.7 +20 929|5 12.0 +20 41|8.6|  
 5 40.6 +21.1| 5 3| | |  
 |{1106| | | |  
 5 39.8 +20.8 +20 {1105[[checkmark]]} 5[[checkmark]]  
 39.7[[checkmark]] +20[[checkmark]] 49[[checkmark]] 7.3[[checkmark]]  
 -|[[strikethrough]]1106|5 39.8 +20 47|8.5|[[strikethrough]]  
 5 39.0 +20.9 +20 1100|5 39.0 +20 53|8.0|  
 5 37.2 +21.2 +21 978|5 37.3 +21 15|8.0|  
 5 29.0 +21.0 +21 908|5 29.0 +21 3|3.1|  
 5 27.0 +21.3 +21 899|5 27.0 +21 18|7.8|  
 5 20.6 +21.2 +21 857|5 20.6 +21 11|8.4|  
 5 20.8 +21.2 +21| | | |  
 5 5.4 +21.0 +21 796|5 5.5 +21 3|7.7|  
 5 34.8 +21.3 +21 946|5 34.7 +21 21|8.3|  
 5 30.8 +21.7 +21 918|5 30.8 +21 40|7.0|  
 5 27.7 +21.9 +21 902|5 27.7 +21 54|7.4|  
 5 22.8 +22.1| | | |  
 5 18.9 +21.8 +21 847|5 18.9 +21 48|5.8|  
 5 9.9 +21.7 +21 813|5 9.8 +21 39|7.8|  
 5 34.8 +22.1 +22 1007|5 34.6 +22 8|8.7|  
 5 22.0 +22.4 +22 925|5 22.0 +22 21|7.5|  
 [[/5 columned table]]

[[Note to the right of table]]

The 8.0 mahn stan does not affect the thought the. Which is clean B.  
 This F. says she supposed that ph. B22834 on it.

[[/Note to the right of table]]

\*BD 120[[degree-symbol]] 928 [[?]] BD +20[[degree-symbol]] 929

217

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08



218

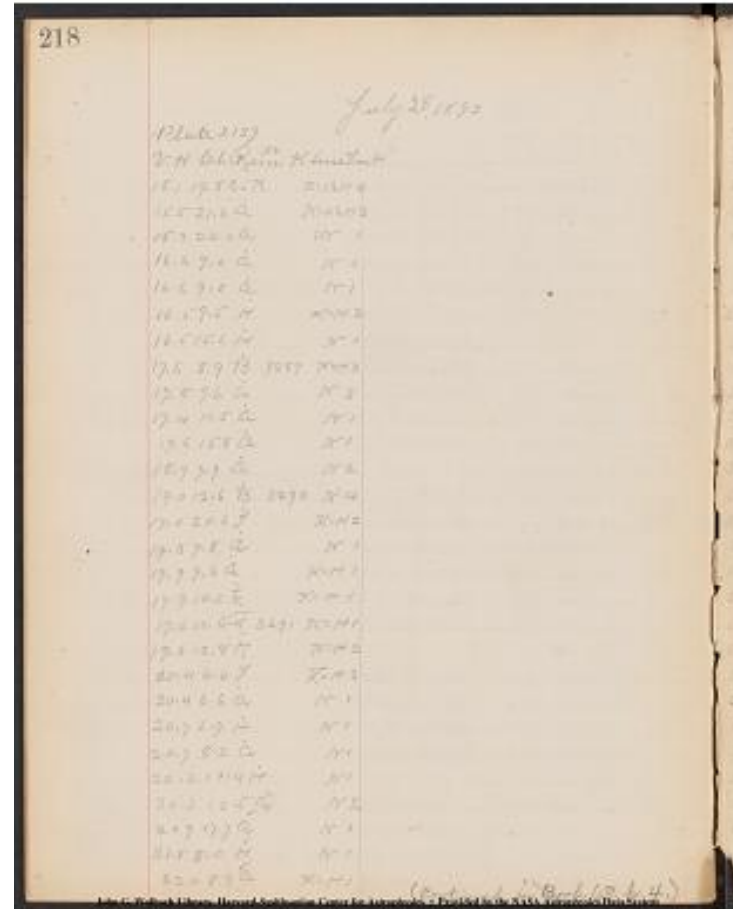
July 28, 1893

Plate 2139

V|H|Cl.|Rem.No.|K line Int.|

|      |      |     |      |          |
|------|------|-----|------|----------|
| 15.1 | 19.8 | G5K |      | K=1.2 H4 |
| 15.5 | 21.6 | A   |      | K=0.2 H3 |
| 15.3 | 24.0 | A   |      | N 1      |
| 16.2 | 9.0  | A   |      | N 1      |
| 16.6 | 9.0  | A   |      | N 1      |
| 16.5 | 9.5  | H   |      | K=H 2    |
| 16.5 | 15.6 | H   |      | N 1      |
| 17.6 | 8.9  | B   | 3289 | K=H3     |
| 17.8 | 9.6  | A   |      | N 3      |
| 17.4 | 11.5 | A   |      | N 1      |
| 17.6 | 15.8 | A   |      | N 1      |
| 18.9 | 7.9  | A   |      | N 2      |
| 19.0 | 12.6 | B   | 3290 | N 4      |
| 19.0 | 20.6 | F   |      | K=H2     |
| 19.3 | 7.8  | A   |      | N 1      |
| 19.9 | 9.6  | A   |      | K=H 1    |
| 19.9 | 10.0 | E   |      | K=H 1    |
| 19.6 | 10.6 | F   | 3291 | K=H 1    |
| 19.6 | 12.8 | H   |      | K=H 2    |
| 20.4 | 6.4  | F   |      | K=H 3    |
| 20.4 | 6.6  | A   |      | N 1      |
| 20.7 | 6.9  | H   |      | N 1      |
| 20.7 | 8.2  | A   |      | N 1      |
| 20.2 | 10.4 | H   |      | N 1      |
| 20.3 | 13.5 | A   |      | N 2      |
| 20.9 | 17.7 | A   |      | N 1      |
| 21.5 | 8.0  | H   |      | N 1      |
| 22.0 | 8.9  | A   |      | K=H 1    |

(Continued in Book 68 P.4.)



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Extracted Oct-01-2023 10:45:08

[[5 columned table]]

R. A. 1855 Dec. | BD. Tho. | R.A. 1855 | Dec. 1855 | Magn. |

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

5<sup>A</sup>[[h]] 10.7 +21[[degree-symbol]].9|+21 816|5

10.6|+2[[/strikethrough]]2[[/strikethrough]]1 57|5.5|

5 6.9 +22.1|+22 864|5 6.8|+22 7|6.8|

5 34.3 +22.4|

5 33.5 +22.6|+22 996|5 33.3|+22 35|6.8|

5 19.7 +22.6|+22 914|5 19.7|+22 37|7.7|

5 34.7 +23.1|+23[[checkmark]] 1015[[checkmark]]|5[[checkmark]]|

34.5[[checkmark]]|+23[[checkmark]] 8[[checkmark]]|6.3[[checkmark]]|

5 33.1 +23.3|+23 1007|5 33.1|+23 14|6.8|

5 28.9 +23.0|+23 973|5 28.8|+23 3|8.8|

-|(974|5 28.8|+23 3|8.8|

5 19.1 +23.1|+23 916|5 19.1|+23 10|7.8|

5 37.1 +23.7|+23 1036|5 27.1|+23 41|7.8|

5 26.6 +23.9|+23 954|5 26.6|+23 56|5.9|

5 8.8 +23.9|+23 888|5 8.7|+23 53|6.8|

5 37.1 +24.1|+24 950|5 37.1|+24 10|8.0|

5 33.2 +24.2|+24 920|5 33.1|+24 14|7.8|

5 32.2 +24.2|+24 918|5 32.2|+24 16|8.2|

5 31.0 +24.1|+24 909|5 31.0|+24 8|7.0|

5 26.2 +24.2|+24 868|5 26.2|+24 11|7.8|

5 40.0 +24.5|+24 970|5 40.1|+24 31|5.3|

5 39.8 +24.5|+24 968|5 39.7|+24 29|8.5|

5 39.0 +24.6|+24 963|5 39.0|+24 38|7.0|

5 36.3 +24.6|+24 942|4 36.3|+24 37|8.0|

5 31.4 +24.4|+24 913|5 31.4|+24 27|7.2|

5 24.6 +24.5|+24 854|5 24.6|+24 31|7.0|

5 15.1 +24.8|+24 826|5 15.1|+24 49|8.2|

5 36.6 +25.0|+25 961|5 36.6|+25 3|8.0|

5 34.8 +25.4|+25 941|5 34.7|+25 22|6.8|?

219

219

R. A. 1855 Dec. | BD. Tho. | R.A. 1855 | Dec. 1855 | Magn. |

5<sup>A</sup>[[h]] 10.7 +21[[degree-symbol]].9|+21 816|5

10.6|+2[[/strikethrough]]2[[/strikethrough]]1 57|5.5|

5 6.9 +22.1|+22 864|5 6.8|+22 7|6.8|

5 34.3 +22.4|

5 33.5 +22.6|+22 996|5 33.3|+22 35|6.8|

5 19.7 +22.6|+22 914|5 19.7|+22 37|7.7|

5 34.7 +23.1|+23[[checkmark]] 1015[[checkmark]]|5[[checkmark]]|

34.5[[checkmark]]|+23[[checkmark]] 8[[checkmark]]|6.3[[checkmark]]|

5 33.1 +23.3|+23 1007|5 33.1|+23 14|6.8|

5 28.9 +23.0|+23 973|5 28.8|+23 3|8.8|

-(974|5 28.8|+23 3|8.8|

5 19.1 +23.1|+23 916|5 19.1|+23 10|7.8|

5 37.1 +23.7|+23 1036|5 27.1|+23 41|7.8|

5 26.6 +23.9|+23 954|5 26.6|+23 56|5.9|

5 8.8 +23.9|+23 888|5 8.7|+23 53|6.8|

5 37.1 +24.1|+24 950|5 37.1|+24 10|8.0|

5 33.2 +24.2|+24 920|5 33.1|+24 14|7.8|

5 32.2 +24.2|+24 918|5 32.2|+24 16|8.2|

5 31.0 +24.1|+24 909|5 31.0|+24 8|7.0|

5 26.2 +24.2|+24 868|5 26.2|+24 11|7.8|

5 40.0 +24.5|+24 970|5 40.1|+24 31|5.3|

5 39.8 +24.5|+24 968|5 39.7|+24 29|8.5|

5 39.0 +24.6|+24 963|5 39.0|+24 38|7.0|

5 36.3 +24.6|+24 942|4 36.3|+24 37|8.0|

5 31.4 +24.4|+24 913|5 31.4|+24 27|7.2|

5 24.6 +24.5|+24 854|5 24.6|+24 31|7.0|

5 15.1 +24.8|+24 826|5 15.1|+24 49|8.2|

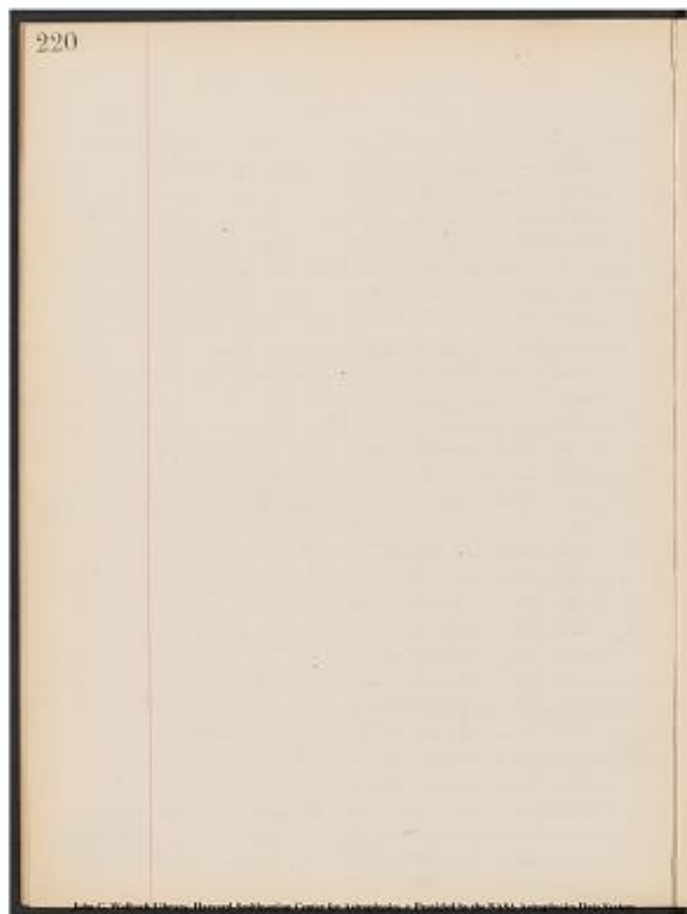
5 36.6 +25.0|+25 961|5 36.6|+25 3|8.0|

5 34.8 +25.4|+25 941|5 34.7|+25 22|6.8|?

Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
 Southern Draper Catalogue #67  
 Transcribed and Reviewed by Digital Volunteers  
 Extracted Oct-01-2023 10:45:08

[[preprinted]]220[[/preprinted]]

[[blank page]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

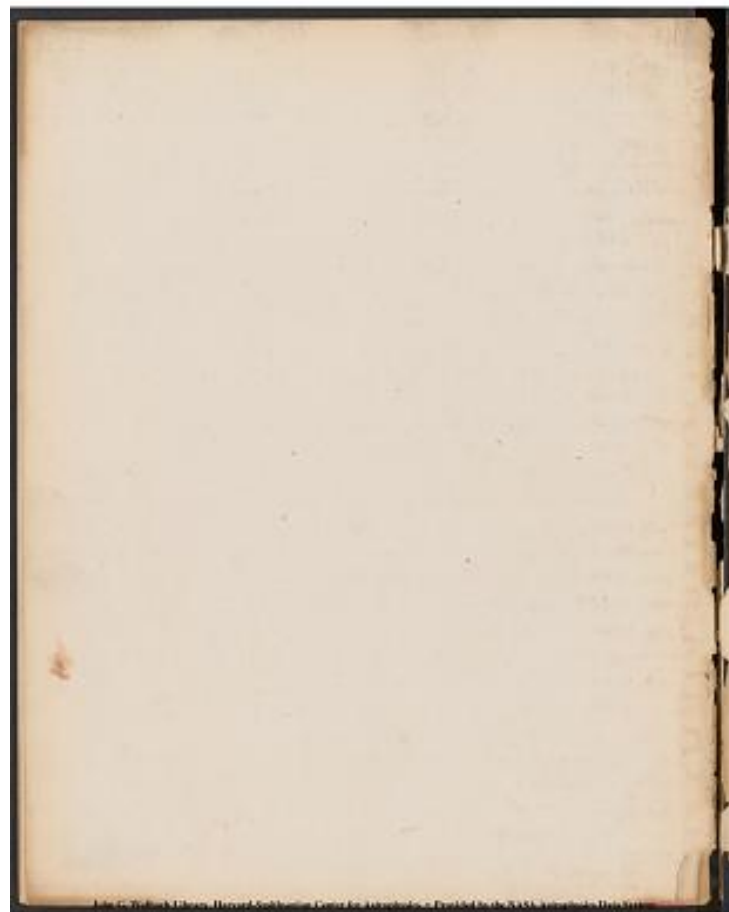
[[preprinted]]221[[/preprinted]]

[[blank page]]



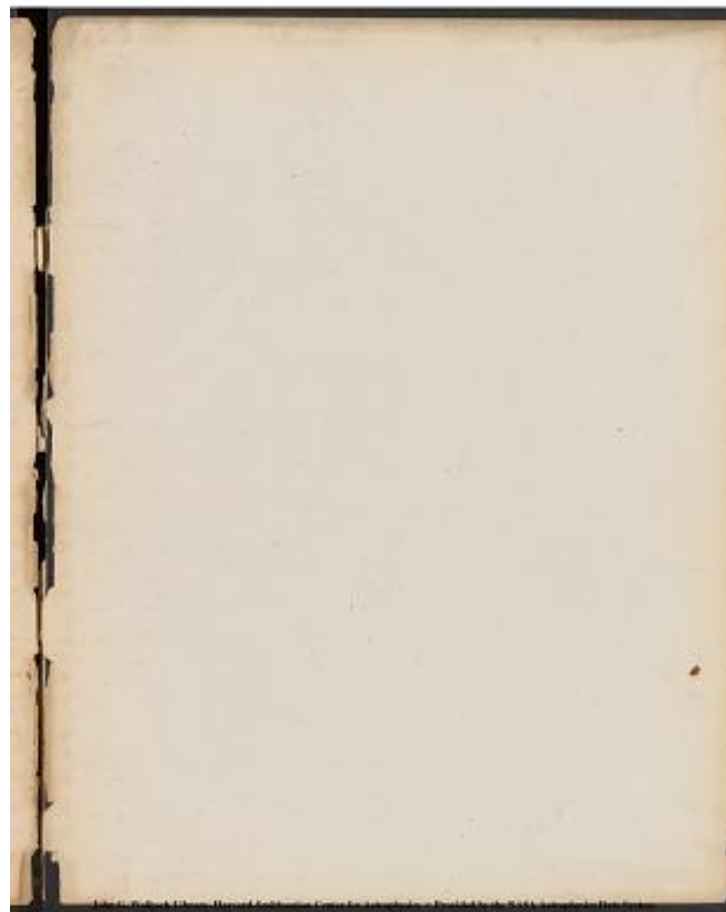
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[blank page]]



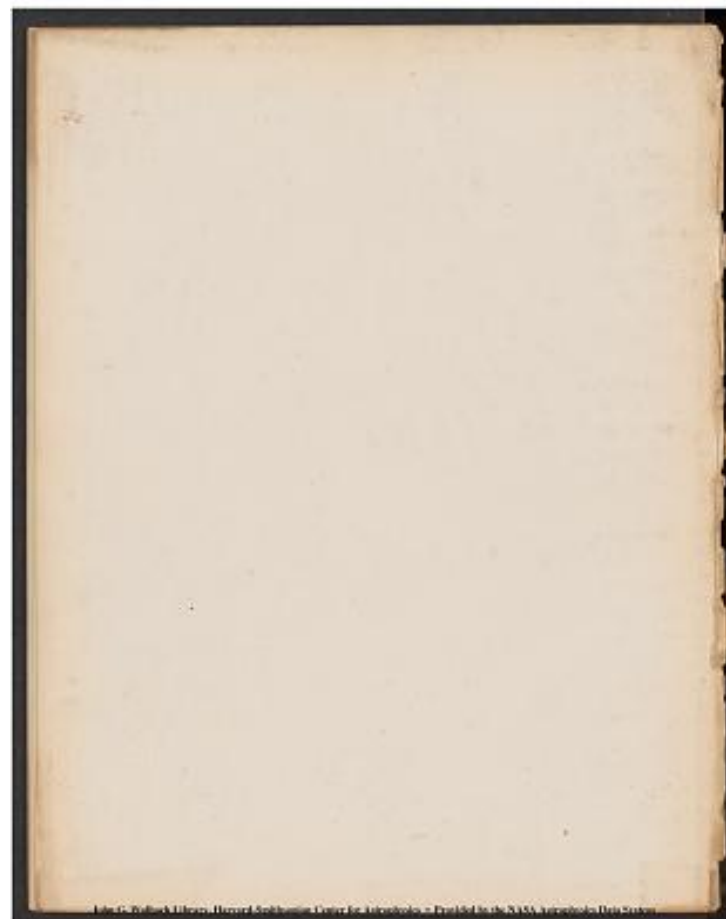
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[blank page]]



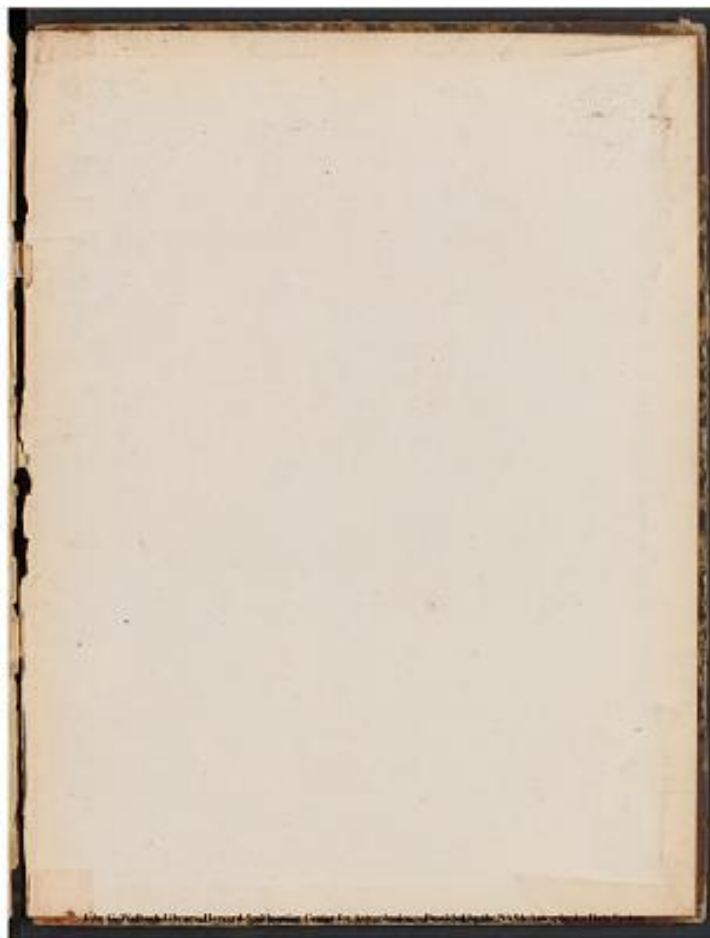
Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[blank page]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08

[[blank page]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



[[blank back cover]]



Project PHaEDRA - Williamina P. Fleming - Measures of Spectrum Plates,  
Southern Draper Catalogue #67  
Transcribed and Reviewed by Digital Volunteers  
Approved by Smithsonian Staff  
Extracted Oct-01-2023 10:45:08



## 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](http://www.si.edu)

On Facebook: <https://www.facebook.com/Smithsonian>

On Twitter: [@smithsonian](https://twitter.com/smithsonian)