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## **Project PHaEDRA - Williamina P. Fleming - Spectral Classification; Miscellaneous Observations #19**

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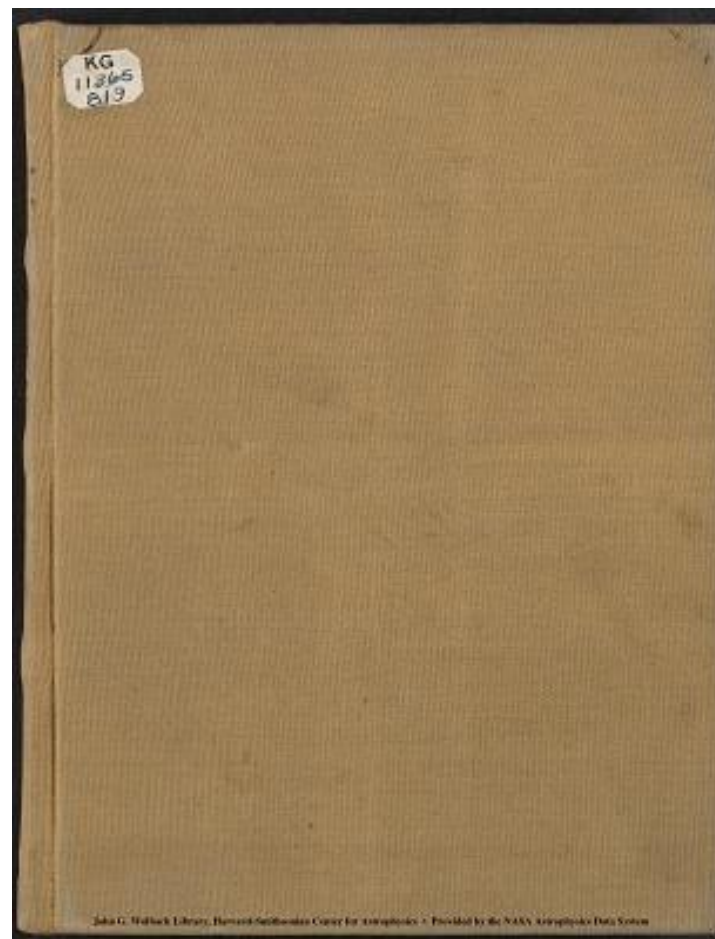
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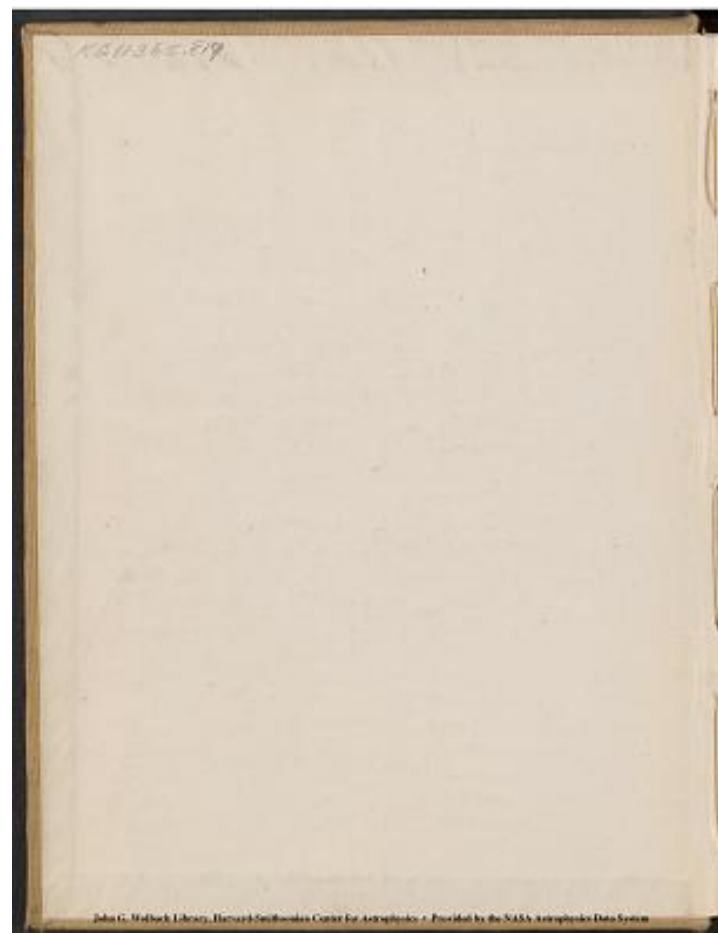
[[front cover]]

[[label]]  
KG  
11365  
819  
[[/label]]



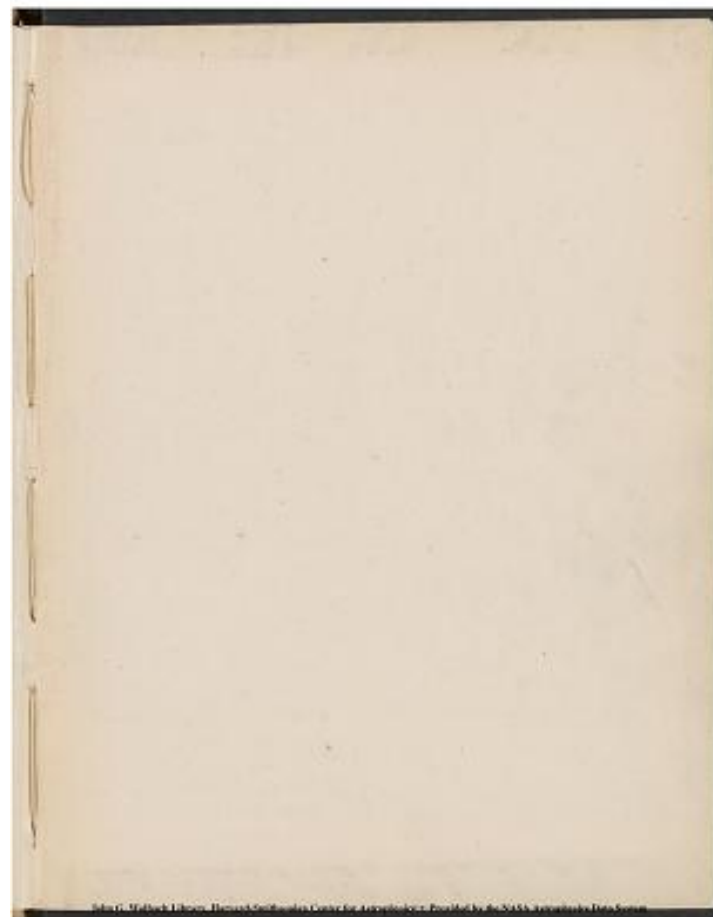
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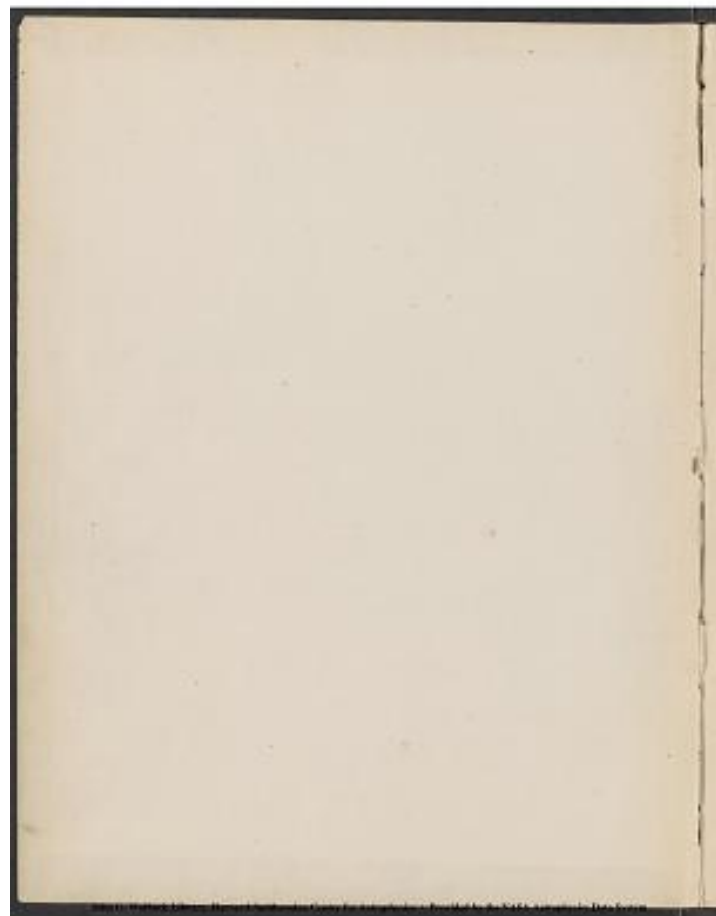
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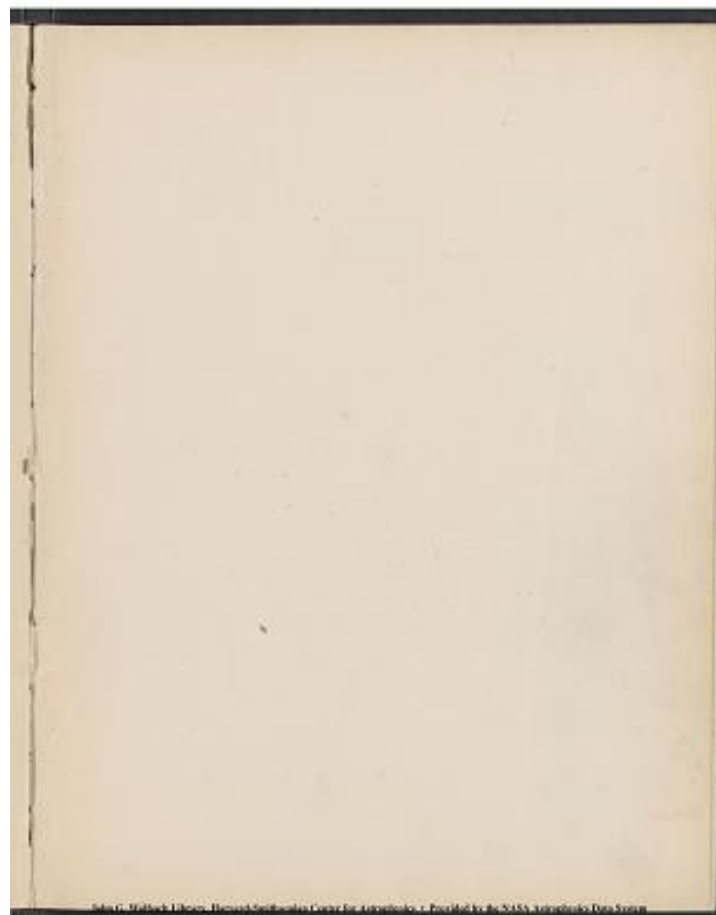
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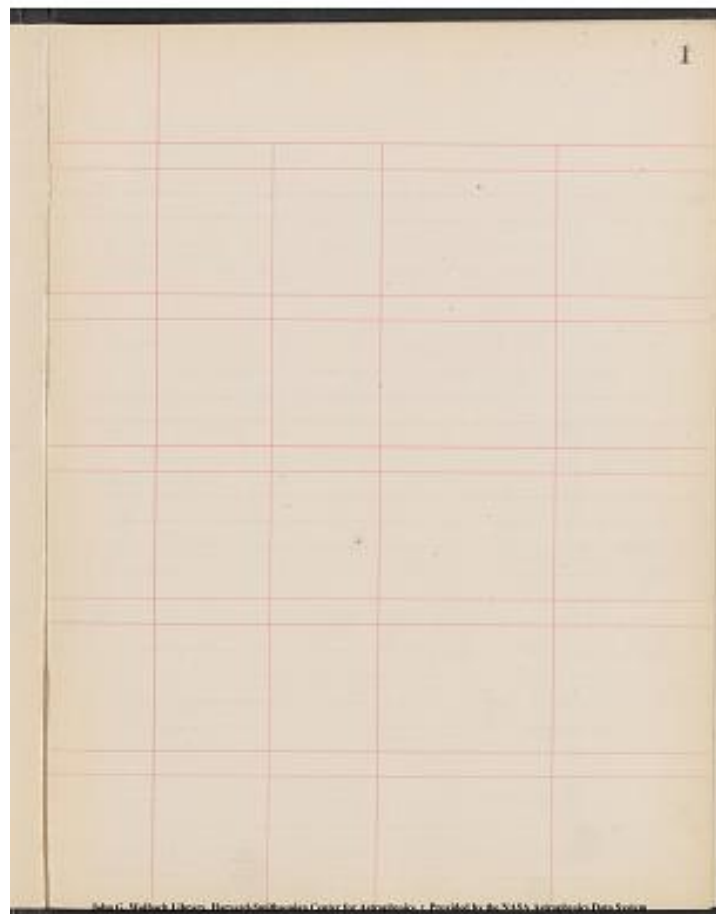
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1

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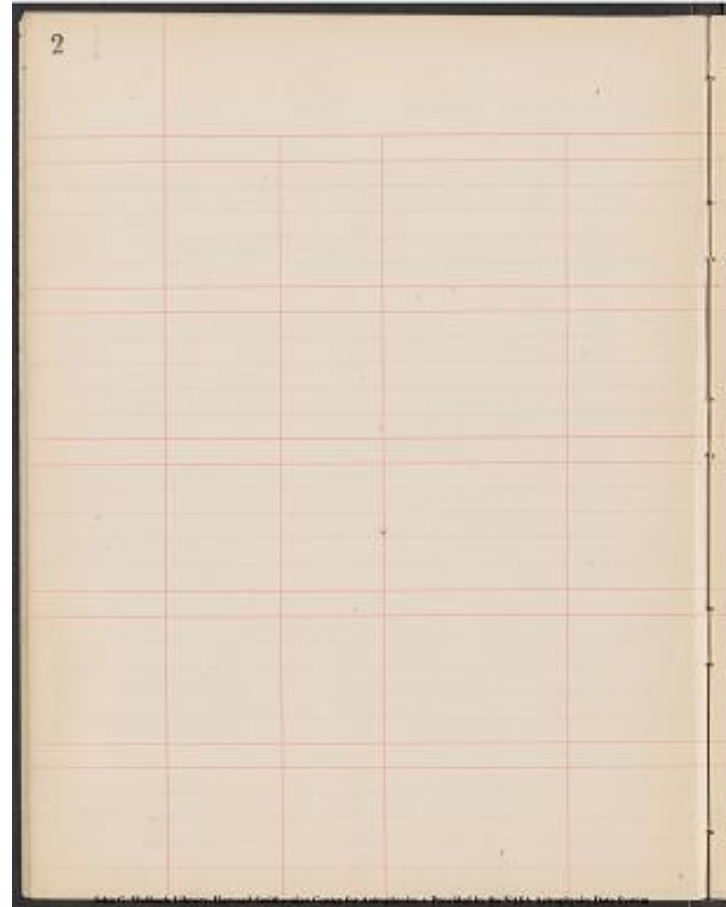


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2

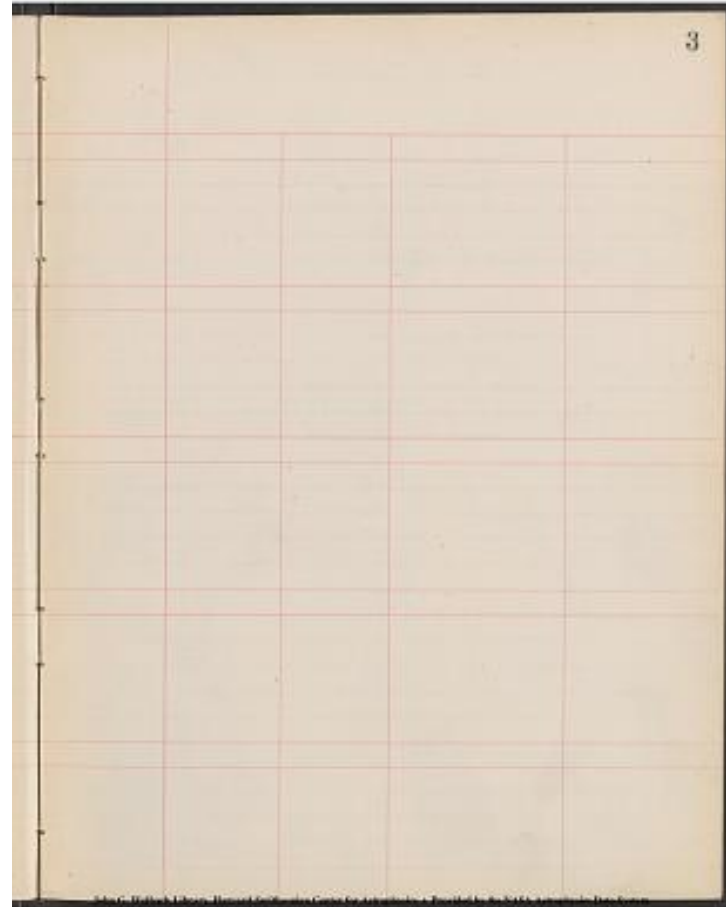
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Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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3

[[no entries]]



Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
Miscellaneous Observations #19  
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October 7, 1908.

Exam of Spectra of Comparison Stars for  
Variables. Design. & ident. is that given in ~~[[?]]~~  
~~[[?]]~~ 47. Part I.

[[6 column table]]

Object (Var.)|Des.|Cat. No.| Photog. Magn.|Sp.|Plate|

|---|---|---|---|---|---|  
|-22° 9.95| | |

050022. 24. T Leporis |a|-21  
1067|6.9|~~[[?]]~~|~~[[?]]~~|a|B12370

|b|-21 1065|7.59|G5| |

|c|-21 1061|8.04|G| |

|d|-21 1068|8.49|K| |

|e|-22 996|8.97|A?| | plate not very good.

062808.

31. Z Monocer. |a|-8 1471|8.80|F|B 20803

|b|-8 1473|9.08|A| |

|c|-8 1474|9.40|A| |

|d|-8 1476|9.70|F5| |

|~~[[?]]~~|~~[[?]]~~|~~[[?]]~~|~~[[?]]~~|~~[[?]]~~|~~[[?]]~~

070/09.

<sup>^</sup>33. Ursae Minoris |a|+9|1510|7.99|K|I 13735|I 19832|

|b|+8 1640|8.57|A|I 13735|I 19832|

|c|+9 1519|8.99|A|I 13735|I 19832|

|d|+9 1517|9.37|A|I 19832|

|e|+9 1520|9.72|A|I 19832|

|f|+9 1522|10.07|A5|I 19832|

|g|+9 1521|10.47|A|I 19832|

|h|...|1079|A5|I 19832|

065208

32 chi Monocer.

|a|-8 1639|7.50|B5|B20895 B20679|

|b|-9 1765|8.08|A|B20895 B20679|

|c|-8 1633|8.43|F|B20895 B20679|

|d|-8 1650|8.83|Ma|B20895 B20679|

|e|-8 1647|9.23|A| |B20679|

|f|...|9.75|A2| |B20679|

|\*g|...| |A| |B20679|

|h|...| |K| |B20679|

|k|...| |K| |B20679|

see next page.

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October 7, 1908.

Exam. of Spectra of Comparison Stars for  
Variables. Design & ident. is that given in Vol. 47. Part I.

Object (No.)	Des.	Cat. No.	Photog. Magn.	Sp.	Plate
050022 24. T Leporis	a	-21 1067	6.97		B12370
	b	-21 1065	7.59	G5	
	c	-21 1061	8.04	G	
	d	-21 1068	8.49	K	
	e	-22 996	8.97	A?	
062808 31. Z Monocer.	a	-8 1471	8.80	F	B 20803
	b	-8 1473	9.08	A	
	c	-8 1474	9.40	A	
	d	-8 1476	9.70	F5	
	e	-8 1477	9.80	F5	
	f	-8 1478	9.90	F5	
	g	-8 1479	10.00	F5	
	h	-8 1480	10.10	F5	
	i	-8 1481	10.20	F5	
	j	-8 1482	10.30	F5	
	k	-8 1483	10.40	F5	
	l	-8 1484	10.50	F5	
	m	-8 1485	10.60	F5	
	n	-8 1486	10.70	F5	
	o	-8 1487	10.80	F5	
	p	-8 1488	10.90	F5	
	q	-8 1489	11.00	F5	
	r	-8 1490	11.10	F5	
	s	-8 1491	11.20	F5	
	t	-8 1492	11.30	F5	
	u	-8 1493	11.40	F5	
	v	-8 1494	11.50	F5	
	w	-8 1495	11.60	F5	
	x	-8 1496	11.70	F5	
	y	-8 1497	11.80	F5	
	z	-8 1498	11.90	F5	
	aa	-8 1499	12.00	F5	
	ab	-8 1500	12.10	F5	
	ac	-8 1501	12.20	F5	
	ad	-8 1502	12.30	F5	
	ae	-8 1503	12.40	F5	
	af	-8 1504	12.50	F5	
	ag	-8 1505	12.60	F5	
	ah	-8 1506	12.70	F5	
	ai	-8 1507	12.80	F5	
	aj	-8 1508	12.90	F5	
	ak	-8 1509	13.00	F5	
	al	-8 1510	13.10	F5	
	am	-8 1511	13.20	F5	
	an	-8 1512	13.30	F5	
	ao	-8 1513	13.40	F5	
	ap	-8 1514	13.50	F5	
	aq	-8 1515	13.60	F5	
	ar	-8 1516	13.70	F5	
	as	-8 1517	13.80	F5	
	at	-8 1518	13.90	F5	
	au	-8 1519	14.00	F5	
	av	-8 1520	14.10	F5	
	aw	-8 1521	14.20	F5	
	ax	-8 1522	14.30	F5	
	ay	-8 1523	14.40	F5	
	az	-8 1524	14.50	F5	
	ba	-8 1525	14.60	F5	
	bb	-8 1526	14.70	F5	
	bc	-8 1527	14.80	F5	
	bd	-8 1528	14.90	F5	
	be	-8 1529	15.00	F5	
	bf	-8 1530	15.10	F5	
	bg	-8 1531	15.20	F5	
	bh	-8 1532	15.30	F5	
	bi	-8 1533	15.40	F5	
	bj	-8 1534	15.50	F5	
	bk	-8 1535	15.60	F5	
	bl	-8 1536	15.70	F5	
	bm	-8 1537	15.80	F5	
	bn	-8 1538	15.90	F5	
	bo	-8 1539	16.00	F5	
	bp	-8 1540	16.10	F5	
	bq	-8 1541	16.20	F5	
	br	-8 1542	16.30	F5	
	bs	-8 1543	16.40	F5	
	bt	-8 1544	16.50	F5	
	bu	-8 1545	16.60	F5	
	bv	-8 1546	16.70	F5	
	bw	-8 1547	16.80	F5	
	bx	-8 1548	16.90	F5	
	by	-8 1549	17.00	F5	
	bz	-8 1550	17.10	F5	
	ca	-8 1551	17.20	F5	
	cb	-8 1552	17.30	F5	
	cc	-8 1553	17.40	F5	
	cd	-8 1554	17.50	F5	
	ce	-8 1555	17.60	F5	
	cf	-8 1556	17.70	F5	
	cg	-8 1557	17.80	F5	
	ch	-8 1558	17.90	F5	
	ci	-8 1559	18.00	F5	
	cj	-8 1560	18.10	F5	
	ck	-8 1561	18.20	F5	
	cl	-8 1562	18.30	F5	
	cm	-8 1563	18.40	F5	
	cn	-8 1564	18.50	F5	
	co	-8 1565	18.60	F5	
	cp	-8 1566	18.70	F5	
	cq	-8 1567	18.80	F5	
	cr	-8 1568	18.90	F5	
	cs	-8 1569	19.00	F5	
	ct	-8 1570	19.10	F5	
	cu	-8 1571	19.20	F5	
	cv	-8 1572	19.30	F5	
	cw	-8 1573	19.40	F5	
	cx	-8 1574	19.50	F5	
	cy	-8 1575	19.60	F5	
	cz	-8 1576	19.70	F5	
	da	-8 1577	19.80	F5	
	db	-8 1578	19.90	F5	
	dc	-8 1579	20.00	F5	
	dd	-8 1580	20.10	F5	
	de	-8 1581	20.20	F5	
	df	-8 1582	20.30	F5	
	dg	-8 1583	20.40	F5	
	dh	-8 1584	20.50	F5	
	di	-8 1585	20.60	F5	
	dj	-8 1586	20.70	F5	
	dk	-8 1587	20.80	F5	
	dl	-8 1588	20.90	F5	
	dm	-8 1589	21.00	F5	
	dn	-8 1590	21.10	F5	
	do	-8 1591	21.20	F5	
	dp	-8 1592	21.30	F5	
	dq	-8 1593	21.40	F5	
	dr	-8 1594	21.50	F5	
	ds	-8 1595	21.60	F5	
	dt	-8 1596	21.70	F5	
	du	-8 1597	21.80	F5	
	dv	-8 1598	21.90	F5	
	du	-8 1599	22.00	F5	
	dv	-8 1600	22.10	F5	
	dw	-8 1601	22.20	F5	
	dx	-8 1602	22.30	F5	
	dy	-8 1603	22.40	F5	
	dz	-8 1604	22.50	F5	
	ea	-8 1605	22.60	F5	
	eb	-8 1606	22.70	F5	
	ec	-8 1607	22.80	F5	
	ed	-8 1608	22.90	F5	
	ee	-8 1609	23.00	F5	
	ef	-8 1610	23.10	F5	
	eg	-8 1611	23.20	F5	
	eh	-8 1612	23.30	F5	
	ei	-8 1613	23.40	F5	
	ej	-8 1614	23.50	F5	
	ek	-8 1615	23.60	F5	
	el	-8 1616	23.70	F5	
	em	-8 1617	23.80	F5	
	en	-8 1618	23.90	F5	
	eo	-8 1619	24.00	F5	
	ep	-8 1620	24.10	F5	
	eq	-8 1621	24.20	F5	
	er	-8 1622	24.30	F5	
	es	-8 1623	24.40	F5	
	et	-8 1624	24.50	F5	
	eu	-8 1625	24.60	F5	
	ev	-8 1626	24.70	F5	
	ew	-8 1627	24.80	F5	
	ex	-8 1628	24.90	F5	
	ey	-8 1629	25.00	F5	
	ez	-8 1630	25.10	F5	
	fa	-8 1631	25.20	F5	
	fb	-8 1632	25.30	F5	
	fc	-8 1633	25.40	F5	
	fd	-8 1634	25.50	F5	
	fe	-8 1635	25.60	F5	
	ff	-8 1636	25.70	F5	
	fg	-8 1637	25.80	F5	
	fh	-8 1638	25.90	F5	
	fi	-8 1639	26.00	F5	
	fj	-8 1640	26.10	F5	
	fk	-8 1641	26.20	F5	
	fl	-8 1642	26.30	F5	
	fm	-8 1643	26.40	F5	
	fn	-8 1644	26.50	F5	
	fo	-8 1645	26.60	F5	
	fp	-8 1646	26.70	F5	
	fq	-8 1647	26.80	F5	
	fr	-8 1648	26.90	F5	
	fs	-8 1649	27.00	F5	
	ft	-8 1650	27.10	F5	

October 7, 1908.

Exam of Spectra of Comparison Stars cont.

[[7 column table]]

Object | Des. | Lat. | No. | Photog. Magn. | Sp. | Plate |

X. Monocer. | g | .. | .. | 10.10 | A | B20679 |

h | -8° | 1643 | 10.55 | K | B20679 |

k | .. | .. | 10.83 | K | B20679 | ([[??]] not drawn as far as this)

October 8, 1908

[[underline]] 070311

35 | Canis Majoris | a | -11° | 1812 | 7.43 | B8 | B20801

[[~~strickethrough~~]] B20680 [[~~strickethrough~~]]

b | -11° | 1830 | 7.78 | G5 | B20801 |

c | -12° | 1790 | 8.43 | A | B20801 |

d | -11° | 1801 | 8.63 | A | B20801 |

e | -12° | 1813 | 8.85 | A | B20801 |

f | -11° | 1804 | 9.45 | A2 | [[~~strickethrough~~]] B20801 [[~~strickethrough~~]] |

B20680

g | -11° | 1811 | 9.75 | A5 | B20680 |

h | -11° | 1810 | 9.97 | A | B20680 |

k | .. | .. | 10.32 | A | B20680 |

l | -11° | 1814 | 10.62 | G | B20680 |

074305

39 | Canis Minoris | a | +5° | 1802 | 8.85 | K5 | B15244 | Another plate

b | +5° | 1794 | 9.30 | K | |

c | +5° | 1798 | 9.62 | G5 | |

d | +5° | 1795 | 10.02 | F? too poor | |

e | .. | .. | 10.30 | too poor | |

5

October 7, 1908.

Exam of Spectra of Comparison Stars cont.

Object	Des.	Lat.	No.	Photog. Magn.	Sp.	Plate
X. Monocer.	g	..	..	10.10	A	B20679
	h	-8°	1643	10.55	K	"
	k	..	..	10.83	K	" (Analogous not drawn as far as this)

October 8, 1908.

35

Canis Majoris	a	-11°	1812	7.43	B8	B20801	B20801
	b	-11°	1830	7.78	G5	"	"
	c	-12°	1790	8.43	A	"	"
	d	-11°	1801	8.63	A	"	"
	e	-12°	1813	8.85	A	"	"
	f	-11°	1804	9.45	A2	"	B20680
	g	-11°	1811	9.75	A5	"	"
	h	-11°	1810	9.97	A	"	"
	k	..	..	10.32	A	"	"
	l	-11°	1814	10.62	G	"	"

39

Canis Minoris	a	+5°	1802	8.85	K5	B15244	Ant. Plate
	b	+5°	1794	9.30	K		
	c	+5°	1798	9.62	G5		
	d	+5°	1795	10.02	F?	too poor	
	e	..	..	10.30	too poor		

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Miscellaneous Observations #19  
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October 8, 1908

Exam. of Spectra of Comparison Stars for Variables cont.

[[7 column table]]

Object | Des. | Lat. | No. | Photog. Magn. | Sp. | Plate |

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

[[underlined]]080322

41 - R.U Puppis | a | -22° | 2152 | [[O]] | 8.36 | A | B15158 |

| b | -22° | 2161 | 8.68 | A | |

| c | -22° | 2150 | 8.98 | A | |

| d | -22° | 2153 | 9.26 | G5 | |

| e | -22° | 2145 | 9.54 | A | |

| f | -22° | 2156 | 9.76 | F? | |

| g | -22° | 2149 | 10.04 | K | |

[[underlined]]081908

42 - Hydrae | a | -8° | 2352 | 7.18 | G5 | B21394 |

| b | -7° | 2463 | 7.70 | A2 | |

| c | -8° | 2339 | 7.92 | A2 | |

| d | -8° | 2353 | 8.10 | G5 | |

| e | -7° | 2466 | 8.32 | F | |

| f | -7° | 2460 | 9.12 | A | |

| g | -7° | 2468 | 9.40 | F | |

| h | .. | .. | 9.72 | A | |

| k | -8° | 2346 | 10.00 | F? | |

[[underlined]]034601

18 - Eridani | a | -1° | 539 | 7.24 | Gp | B23816 |

| b | -2° | 747 | 7.94 | F | |

| c | -2° | 739 | 8.16 | F | |

| d | -1° | 551 | 8.41 | A2 | |

| e | -1° | 550 | 9.01 | F | |

| f | -1° | 541 | 9.36 | F? | |

| g | -1° | 553 | 9.66 | K | |

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Oct 9, 1908

Exam. of Spectra of Comparison Stars for Variables cont.

Object	Des.	Lat.	No.	Photog.	Magn.	Sp.	Plate
41 - R.U Puppis	a	-22°	2152		8.36	A	B15158
	b	-22°	2161		8.68	A	
	c	-22°	2150		8.98	A	
	d	-22°	2153		9.26	G5	
	e	-22°	2145		9.54	A	
	f	-22°	2156		9.76	F?	
	g	-22°	2149		10.04	K	
42 - Hydrae	a	-8°	2352		7.18	G5	B21394
	b	-7°	2463		7.70	A2	
	c	-8°	2339		7.92	A2	
	d	-8°	2353		8.10	G5	
	e	-7°	2466		8.32	F	
	f	-7°	2460		9.12	A	
	g	-7°	2468		9.40	F	
	h	..	..		9.72	A	
	k	-8°	2346		10.00	F?	
18 - Eridani	a	-1°	539		7.24	Gp	B23816
	b	-2°	747		7.94	F	
	c	-2°	739		8.16	F	
	d	-1°	551		8.41	A2	
	e	-1°	550		9.01	F	
	f	-1°	541		9.36	F?	
	g	-1°	553		9.66	K	

Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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[page 7]  
 October 8, 1902  
 Exam of Spectra of Comparison Stars for Variables cont.  
 [6 column chart]  
 Object| Dis.| Cat. No.| Photog Magn.| Sp.| Plate|

040725 21 W Eridani?| a| AGC 4665| 7.14| F5| B12654 4 10-275|  
b	AGC 4651	7.62	K	
c	AGC 4662	7.87	F2	
d	AGC 4634	8.32	K	
e	-25° 1781	8.67	A?	
035916 20 V Eridani	a	-16° 767	8.01	F2
b	-16° 775	8.43	F	
c	-16° 779	8.88	too poor	
d	-16° 774	9.30	too poor	
035124 19 T Eridani	a	-24° 2001	6.70	A
b	-23° 1642	7.65	G	
c	-23° 1641	8.35	K	
031401 15 X Ceti	a	-1° 477	8.75	G
b	-0° 532	9.25	G5	
c	-1° 473	9.82	F?	
d	-1° 474	10.19	G?	
e	-1° 471	10.59	G	

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October 8, 1902

*Exam of Spectra of Comparison Stars for Variables cont.*

Object	Dis.	Cat. No.	Photog Magn.	Sp.	Plate
21 W Eridani?	a	AGC 4665	7.14	F5	B12654
	b	AGC 4651	7.62	K	
	c	AGC 4662	7.87	F2	
	d	AGC 4634	8.32	K	
	e	-25° 1781	8.67	A?	
20 V Eridani	a	-16° 767	8.01	F2	B12752 another plate
	b	-16° 775	8.43	F	
	c	-16° 779	8.88	too poor	
	d	-16° 774	9.30	too poor	
19 T Eridani	a	-24° 2001	6.70	A	B10587
	b	-23° 1642	7.65	G	
	c	-23° 1641	8.35	K	
15 X Ceti	a	-1° 477	8.75	G	I14259
	b	-0° 532	9.25	G5	
	c	-1° 473	9.82	F?	
	d	-1° 474	10.19	G?	
	e	-1° 471	10.59	G	

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October 8, 1908

Exam. of Spectra of Comparison Stars for Variables cont.

[[7 column table]]

| Object | Des. | Lat. | No. | Photog. Magn. | Sp. | Plate |

023133

11. | R Trianguli | a | +33° | 454 | 6.97 | K | I35195 |

| b | +33° | 458 | 7.19 | A | I35195 |

| c | +33° | 476 | 7.69 | G | I35195 |

| d | +33° | 465 | 8.04 | A5 | I35195 |

| e | +34° | 472 | 8.69 | A | I35195 |

| f | +33° | 468 | 9.91 | K | I35195 |

[[bracket]]

015556

7. | V Persei | a | +56° | 416 | 8.63 | A | I33407 another plate |

| b | +56° | 417 | 9.03 | G | I33407 |

| c | +55° | 486 | 9.55 | G | I33407 |

| d | .. | .. | 9.90 | F? | I33407 |

| e | +56° | 403 | 10.10 | G5 | I33407 |

| f | +56° | 404 | 10.78 | too poor | I33407 |

| f | +56° | 404 | 10.78 | too poor | I33407 |

015354

6. | V Persei | a | +53° | 440 | 8.48 | G | I33407 |

| b | +54° | 439 | 9.30 | G | I33407 |

| c | +54° | 438 | 9.62 | K | I33407 |

| d | +54° | 435 | 9.92 | too ft. | I33407 |

[[/bracket]]

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October 8, 1908

Exam. of Spectra of Comparison Stars for Variables cont.

Object	Des.	Lat.	No.	Photog.	Magn.	Sp.	Plate
11. R Trianguli	a	+33°	454	6.97	K	I35195	
	b	+33°	458	7.19	A	I35195	
	c	+33°	476	7.69	G	I35195	
	d	+33°	465	8.04	A5	I35195	
	e	+34°	472	8.69	A	I35195	
	f	+33°	468	9.91	K	I35195	
[[bracket]]							
015556							
7. V Persei	a	+56°	416	8.63	A	I33407	another plate
	b	+56°	417	9.03	G	I33407	
	c	+55°	486	9.55	G	I33407	
	d	..	..	9.90	F?	I33407	
	e	+56°	403	10.10	G5	I33407	
	f	+56°	404	10.78	too poor	I33407	
	f	+56°	404	10.78	too poor	I33407	
015354							
6. V Persei	a	+53°	440	8.48	G	I33407	
	b	+54°	439	9.30	G	I33407	
	c	+54°	438	9.62	K	I33407	
	d	+54°	435	9.92	too ft.	I33407	

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October 29, 1908.

Note on exam of plates for object (faint comet?) near Morehouse Comet, in answer to letter of taken on Oct. 27, 1908 Ex. 51m

Plate I 35629 examined by E.C.P on Oct 28, 1908, shows an object which may be that mentioned [assumed to be defect by E.C.P Oct 30, 1908].

Plate ~~I~~ A.C. 9838 Oct 21, 1908. shows a faint ~~object~~ of ~~object~~ object which is probably a defect.

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October 29, 1908.

Note on exam. of plates for object (faint comet?) near Morehouse Comet. in answer to letter <sup>taken in Oct. 27, 1908 Ex. 51m</sup>

Plate I 35629 examined by E.C.P. on Oct. 28, 1908 shows an object which may be that mentioned. [assumed to be defect by E.C.P. Oct. 30, 1908]

Plate ~~I~~ A.C. 9838 Oct 21, 1908. Shows a faint object which is probably a defect.

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January 12, 1910

Examination of Spectra of Comparison Stars for Variables. Design & ident is that given in Vol. 47, Part I

Object (Var.) | Des. | Cat.No. | Photog.Magn. | Sp. | Plate.  
000339 U Sculptoris | a | -39 4 | 7.04 | |  
 B24023

b	-40 15	7.62
c	-39 27	8.02
d	-39 10	8.32
e	-40 11	8.82
f	-39 31	9.34
g	-39 17	9.69
h	-39 6	10.07
k	-39 8	10.57

001032 S Sculptoris | a | ~~167~~ | 6.29 | | B10582

b	183	6.87
c	148	7.39
d	110	8.04
e	-33° 64	8.34
f	-32° 71	9.02
g	-32° 78	9.70
h	-32° 76	10.15
k	-32° 65	10.70

001862 S Tucanae | a | 0h 430 | 8.14 | | B23767

b	0h 382	8.52
c	0h 537	8.92
d	-62° 30	9.24
e	0h 368	9.40

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*January 12, 1910*

*Examination of Spectra of Comparison Stars for Variables Design & Ident. is that given in Vol. 47, Part I*

Object (Var.)	Des.	Cat. No.	Photog. Magn.	Sp.	Plate
<u>000339</u> <u>U Sculptoris</u>	a	-39 4	7.04		B24023
	b	-40 15	7.62		
	c	-39 27	8.02		
	d	-39 10	8.32		
	e	-40 11	8.82		
	f	-39 31	9.34		
	g	-39 17	9.69		
	h	-39 6	10.07		
	k	-39 8	10.57		
<u>001032</u> <u>S Sculptoris</u>	a	183	6.87		B10582
	b	148	7.39		
	c	110	8.04		
	d	-33° 64	8.34		
	e	-32° 71	9.02		
	f	-32° 78	9.70		
	g	-32° 76	10.15		
	k	-32° 65	10.70		
<u>001862</u> <u>S Tucanae</u>	a	0h 430	8.14		B23767
	b	0h 382	8.52		
	c	0h 537	8.92		
	d	-62° 30	9.24		
	e	0h 368	9.40		

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[page 11]

Exam of Spectra of Comp. Stars (cont.)

[6 column table]

Object (Var.) | Des. | Cat. No. | Photog. Magn. | Sp. | Plate |

[underlined]002546 Tau Phoenicis | a | 0<sup>h</sup> 637 | 8.75 | | A2088 |

- | b | 0<sup>h</sup> 638 | 9.25 | - |

- | c | -46° 141 | 9.73 | - |

- | d | ... | 10.11 | - |

- | e | -47° 134 | 10.36 | - |

- | f | -46° 130 | 10.66 | - |

- | g | -47° 141 | 10.94 | - |

- | h | -47° 128 | 11.19 | - |

[underlined]005475 - Tucanae | a | 869 | 7.63 | | B38135 B23808 |

- | b | 833 | 8.03 | - |

- | c | 0<sup>h</sup> 1365 | 8.45 | - |

- | d | 0<sup>h</sup> 1252 | 8.87 | - |

- | e | 0<sup>h</sup> 1462 | 9.52 | - |

- | f | -75° 67 | 9.94 | - |

- | g | -75° 71 | 10.39 | - |

~~[[~~015354 U Persei | q | +53° 440 | 8.48 | See page 8

| b | +54° 439 | 9.30 | }

| c | +54° 438 | 9.62 | }

| d | +54° 435 | 9.92 | }

~~[[~~

11

Exam of Spectra of Comp. Stars (cont.)

Object (Var.)	Des.	Cat. No.	Photog. Magn.	Sp.	Plate
002546 Tau Phoenicis	a	0 <sup>h</sup> 637	8.75		
	b	0 <sup>h</sup> 638	9.25		
	c	-46° 141	9.73		
	d	...	10.11		
	e	-47° 134	10.36		
	f	-46° 130	10.66		
	g	-47° 141	10.94		
	h	-47° 128	11.19		
005475 - Tucanae	a	869	7.63		
	b	833	8.03		
	c	0 <sup>h</sup> 1365	8.45		
	d	0 <sup>h</sup> 1252	8.87		
	e	0 <sup>h</sup> 1462	9.52		
	f	-75° 67	9.94		
	g	-75° 71	10.39		
015354 U Persei	q	+53° 440	8.48		
	b	+54° 439	9.30		
	c	+54° 438	9.62		
	d	+54° 435	9.92		

See page 8

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January 22, 1910

Exam. of Spectra of ~~Comp.~~ variables for Stars (cont.)

[[7 column table]]

Object (Var) | Des. | Cat. No. | Photog. | Magn. | Sp. | Plate |

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

RT Sculptoris | 003126 | 179 | 9.6 | 10.5 | F | B20456 |

SV Centauri | 114360 | 3809 | 8.8 | 9.8 | A | B23016 |

RZ Draconis | 182158 | 3809 | 9.7 | 10.4 | Ap | I33150 | Hydrogen lines hazy

SX Cassiop | 000554 | X7 | | Nov. 16, 1908 | Ap | I35673 | June 29, 1905 Cl Apec. hydrogen lines narrow

SX Cassiop | 000554 | | | Dec. 21, 1908 | Cont | I35749 | Cont. No lines visible

SX Cassiop | 000554 | | | Nov. 2, 1901 | Cont? | I27916 | Cont? No lines visible. Might be called G, owing to change slight in density

~~SX Cassiop~~ in different parts of spectra~~SX Cassiop~~~~000554~~ | | | Cont? | I27916 |~~SX Cassiop~~~~000554~~ | | | | |~~SX Cassiop~~ | 000554 | | | Dec. 19, 1908 | A5? | I35744 | A5? Faint trace of hydrogen lines; Also Hand K suspected. Class unknown [??] Looked for on these plates but not visible

TT Cassiop | 000454 | ... | 9.4 | &lt;13.0 | -... | |

R Sagittae | 200916 | 4197 | 8.5 | 10.4 | G | I34351 | Nov. 13, 1906

R Sagittae | 200916 | | | G | I16463 | Nov. 16, 1896 H &amp; K well marked.

WZ Cygni | 204938 | 4262 | 9.8 | 10.8 | A | I31134 | Nov. 12, 1903 H beta, H gamma, H delta visible.

N Pegasi | 235215 | 4915 | 9.3 | 9.9 | F? | I32266 | Nov. 5, 1904 H gamma, H delta faint, H &amp; K seen

N Pegasi | 235215 | | | F? | I23378 | Aug. 17, 1899

~~psi~~ H gamma & H delta faint. H & K seen?

January 27, 1910

S.Y. Andromeda | 000843 | 28 | 10.7 | 12.2 | A? | I7929 | Jan. 21, 1893 very ft. hydrogen lines narrow

S.Y. Andromeda | 000843 | | | A? | I7669 | Dec. 15, 1892 very ft. hydrogen lines narrow

- Cassiop | 023765 | 289 | 8.2 | 9.0 | A | I3074 | Feb. 14, 1891

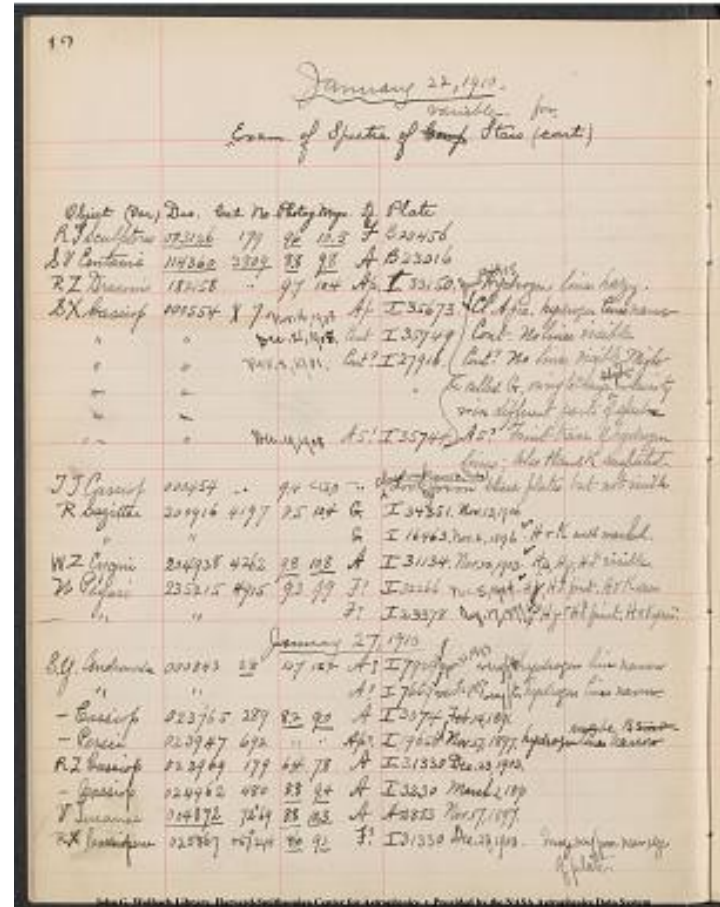
- Persei | 023947 | 692 | ... | Ap? | I19650 | Nov. 27, 1897 hydrogen lines narrow maybe B~~5~~ or 8~~5~~

RZ Cassiop | 023969 | 179 | 6.4 | 7.8 | A | I31330 | Dec. 23, 1903

- Cassiop | 024462 | 480 | 8.8 | 9.4 | A | I3230 | March 2, 1891

V Lucanae | 004872 | 72°69 | 8.8 | 10.3 | A | A2883 | Nov. 17, 1897

RX Cassioperae | 025867 | +67°244 | 8.6 | 9.1 | F? | I31330 | Dec. 23, 1903. Image very poor. Near edge of plate.



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Exam. of Spectra of ~~[[[strikethrough]]]~~ Comp. ~~[[[strikethrough]]]~~ variable stars. (cont.)

[[7 column table]]

Object (Var.) | Des. | Cat. No. | Photog. | Magn. | Sp. | Plate

- ~~[[[strikethrough]]]~~ Phoenixis ~~[[[strikethrough]]]~~ Fornacis | 024738 | -38° 233 | 9.3 | 10.0 | A | B 12277 | Sept. 27, 1894.  
ST Persei | 025338 | +38° 606 | 8.5 | 10.5 | A | I 26324 | Dec. 26, 1900.  
RT Persei | 031646 } + ~~[[[strikethrough]]]~~ 4 ~~[[[strikethrough]]]~~ 62° 740 | 9.5 | 11.0 | F? | I 19656 | Nov. 29, 1897 very faint  
RT Persei | 031646 | +62° 740 | | | F | I 32320 | Nov. 14, 1904. Faint. H & K visible?  
-Eridani | 035015 | -15° 686 | 9.0 | 9.8 | Ap? | B 12752 | Dec. 17, 1894  
Faint. Hydrogen lines narrow  
RV Persei | 040433 | +33° 805 | 9.5 | 11.0 | A | I 35136 | Jan. 27, 1908  
Faint  
RW Persei | 040342 | +42° 851 | 8.8 | 11.0 | A? | I 35842 | Feb. 17, 1907  
Faint  
RW Persei | 040342 | +42° 851 | | | A | I 28553 | March 3, 1902 Sp. well defined  
TT Aurigae | 050239 | +39° 1192 | 8.0 | 9.4 | A | I 49 ~~[[[strikethrough]]]~~ 4  
~~[[[strikethrough]]]~~ 3 | Jan. 14, 1890 Near edge of plate  
SX Aurigae | 050442 | +42° 1101 | 7.4 | 8.0 | A | I 2816 | Jan. 13, 1891  
RY Aurigae | 051138 | +42° 1101 | 10.7 | 11.7 | A | I 35708 | Dec. 1, 1908  
~~[[[strikethrough]]]~~ Z Orionis | 055013 | +13° 103 ~~[[[strikethrough]]]~~ SV Tauri  
| 054528 | +28° 921 | 9.4 | 11.0 | A | I 20041 | Jan. 16, 1898 Image well defined  
Z Orionis | 055013 | +13° 1034 | 9.7 | 10.7 | A | I 2324 | Nov. 21, 1890  
Z Orionis | 055013 | +13° 1034 | 9.7 | 10.7 | A? | I 31435 | Feb. 5, 1904  
-Geminorum | 055424 | +24° 1056 | 9.3 | 10.3 | A | I 28561 | March 6, 1902  
RW Geminorum | 055523 | +23° 1151 | 9.6 | 11.0 | A | I 28561 | March 6, 1902  
U Columbae | 061133 | -33° 2825 | 9.2 | 10.0 | A | B 10682 | Nov. 18, 1893 very faint  
U Columbae | 061133 | -33° 2825 | 9.2 | 10.0 | A | B 20527 | Sept. 27, 1897 very faint  
RS Cephei | 044880 | | 9.5 | 12 | A | I 3294 | March 16, 1891  
RW Monocerotis | 062908 | +8° 1402 | 9.8 | 10.0 | A | I 31449 | Feb. 9, 1904 ~~[[[strikethrough]]]~~ H beta ~~[[[strikethrough]]]~~ H gamma & delta = 0.8  
RW Monocerotis | 062908 | +8° 1402 | 9.8 | 10.0 | A | B 12670 | Nov. 28, 1894 Normal

February 1, 1910

RX Geminorum | 064 ~~[[[strikethrough]]]~~ 6 ~~[[[strikethrough]]]~~ 333 | +33° 1415 | 8.8 | 9.6 | A | I 32370 | Nov. 28, 1904  
RU Monocerotis | 064907 | -7° 1623 | 9.8 | 10.5 | A | B 20895 | Dec. 1, 1897  
RY Geminorum | -72115 | +15° 1573 | 9.0 | 10.5 | A | I 2475 | Dec. 12, 1890

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*variable*  
Exam. of Spectra of Comp. Stars (cont.)

Object (Var.)	Des.	Cat. No.	Photog.	Magn.	Sp.	Plate
<del>Phoenixis</del>	024738	-38° 233	9.3	10.0	A	B 12277 Sept. 27, 1894.
ST Persei	025338	+38° 606	8.5	10.5	A	I 26324 Dec. 26, 1900.
RT Persei	031646	+62° 740	9.5	11.0	F?	I 19656 Nov. 29, 1897 very faint
"	"	"	"	"	"	I 32320 Nov. 14, 1904. Faint. H & K visible?
-Eridani	035015	-15° 686	9.0	9.8	Ap?	B 12752 Dec. 17, 1894.
RV Persei	040433	+33° 805	9.5	11.0	A	I 35136 Jan. 27, 1908. Faint
RW Persei	040342	+42° 851	8.8	11.0	A?	I 35842 Feb. 17, 1907. Faint
"	"	"	"	"	"	I 28553 March 3, 1902. Sp. well defined
TT Aurigae	050239	+39° 1192	8.0	9.4	A	I 49 Jan. 14, 1890. Near edge of plate
SX Aurigae	050442	+42° 1101	7.4	8.0	A	I 2816 Jan. 13, 1891.
RY Aurigae	051138	+42° 1101	10.7	11.7	A	I 35708 Dec. 1, 1908
<del>[[[strikethrough]]]</del> Z Orionis	055013	+13° 103	9.7	10.7	A	I 2324 Nov. 21, 1890
SV Tauri	054528	+28° 921	9.4	11.0	A	I 20041 Jan. 16, 1898. Image well defined
Z Orionis	055013	+13° 1034	9.7	10.7	A	I 31435 Feb. 5, 1904
-Geminorum	055424	+24° 1056	9.3	10.3	A	I 28561 March 6, 1902
RW Geminorum	055523	+23° 1151	9.6	11.0	A	I 28561 March 6, 1902
U Columbae	061133	-33° 2825	9.2	10.0	A	B 10682 Nov. 18, 1893 very faint
U Columbae	061133	-33° 2825	9.2	10.0	A	B 20527 Sept. 27, 1897 very faint
RS Cephei	044880		9.5	12	A	I 3294 March 16, 1891
RW Monocerotis	062908	+8° 1402	9.8	10.0	A	I 31449 Feb. 9, 1904 <del>[[[strikethrough]]]</del> H beta <del>[[[strikethrough]]]</del> H gamma & delta = 0.8
RW Monocerotis	062908	+8° 1402	9.8	10.0	A	B 12670 Nov. 28, 1894 Normal
RX Geminorum	064	+33° 1415	8.8	9.6	A	I 32370 Nov. 28, 1904
RU Monocerotis	064907	-7° 1623	9.8	10.5	A	B 20895 Dec. 1, 1897
RY Geminorum	-72115	+15° 1573	9.0	10.5	A	I 2475 Dec. 12, 1890

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February 2, 1910.

Exam. of plates for Spectra of variable stars.

[[9 column table]]

Object | Design. | DM. No. | Photo | Magn. | Plate | Date | Rem.

-Geminorum | 062220 | 9.6 | 10.5 | A? | I 19793 | Dec. 18, 1897. | Sp.  
superposed on that of brighter star (+20° 1432) north foll. the var.  
Probably both are of Class A since two sets of hydrogen lines are seen  
faintly on I 19793

RR Puppis | 074341 | -41° 3380 | 9.4 | 10.7 | A? | B 12659 | Nov. 24,  
1894 | Images very faint  
RR Velorum | 101741 | -41° 5804 | 10.1 | 10.9 | A | B 39922 | March 20,  
1909 |

-Hydrae | 09007 | -7° 2715 | 9.0 | 11.5 | A | B 19231 | May 28, 1897 |  
Y Leonis | 093126 | +26° 1981 | 9.3 | 11.2 | A | I 31717 | May 16, 1904 |  
-Leonis Minoris | 094233 | +26° 1981 | 9.5 | 11.5 | A | I 35845 | Feb. 17,  
1909 |

-Carinae | 101259 | -59° 2007 | 9.2 | 10.3 | A | B 17025 | July 30, 1896 |

February 4, 1910

-Centauri | 110647 | -47° 4810 | 8.7 | 9.6 | F2 | B 38416 | Feb. 5, 1908 |

-Centauri | 121249 | -49° 5046 | 8.8 | 11.4 | A | B 19023 | May 6, 1897 |

-Centauri | 130763 | -63° 2632 | 8.8 | 10.2 | A | B 39228 | June 22, 1908 |

-Centauri | 133561 | -61° 3912 | 9.8 | 10.8 | Ap | B 37583 | June 5, 1907 |  
Hydrogen lines narrow

-Circini | 133664 | -64° 2524 | 10.0 | 10.0 | A | B 19892 | July 21, 1897 |

-Circini | 133664 | -64° 2524 | 10.0 | 10.0 | Ap | B 9456 | May 16, 1893 |  
hydrogen lines narrow

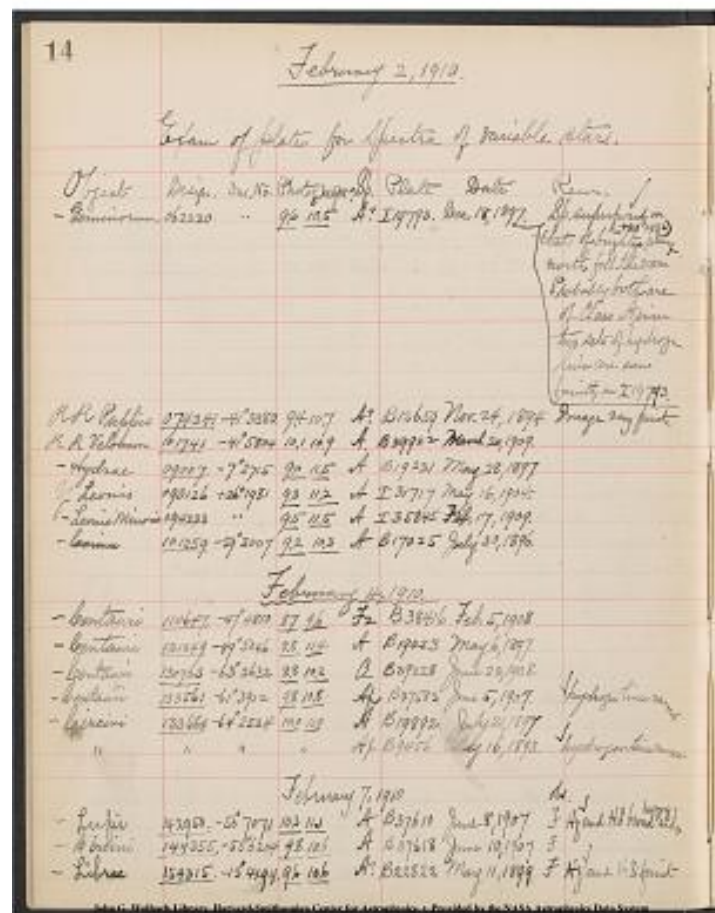
February 7, 1910

-Lupi | 142950 | -50° 7071 | 10.3 | 11.1 | A | B 37610 | June 8, 1907 | F  
obs. | H gamma and H delta broad and hazy

-Circini | 144355 | -55° 6204 | 9.8 | 10.6 | A | B 37618 | June 10, 1907 | F  
obs. |

-Librae | 154315 | -15° 4194 | 9.6 | 10.6 | A? | B 22822 | May 11, 1899 |  
F obs. | H gamma and H delta faint

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[[10 column table]]

Object | Design | DM No | Photo | Magn. | Sp | Plate | Date | Obs. |  
Rem |

[[~~155746~~]]-Normal | 155746 | -46°7780 |  
8.6 | 10.0 | Ap | B20157 | Aug. 26, 1897 | F | Hgamma & Hdelta faint and  
narrow  
Hepsilon, Hxi & Hzeta, normal. |  
SW Ophiuchi | 161106 | -6°4393 | 9.2 | 10.0 | A | B11377 | June 6,  
1894 | F | |  
-Scorpii | 164132 | -32°4244 | 10.3 | <11.5 | F? | B13766 | June 14,  
1895 | F | Image faint |  
-Scorpii | 164836 | -36°7072 | 8.7 | 10.0 | G | B38109 | Sept. 1, 1907 | F |  
-Scorpii | 164836 | | | G | B9597 | | F | |  
-Ophiuchi | 165125 | -25°5896 | 10.2 | <11.6 | A | B13843 | June 28,  
1895 | | |

February 8, 1910

[[9 column table]]

RR Vulpeculae | 205027 | +27°3914 | 9.0 | 10.2 | A | I32272 | Nov. 7,  
1904 | Image well defined. |  
-Aquarii | 221507 | -7°5753 | 9.2 | 9.9 | A | B12041 | Aug. 30, 1894 | |  
-Aquarii | 224613 | -13°6289 | 9.8 | 10.7 | A2 | B20559 | Oct. 2, 1897 |  
H lines normal. K = 0.4 |

February 9, 1910

-Draconis | 153264 | +64°1077 | .. | .. | A | I3735 | June 15,  
189[[~~189~~]]9[[~~189~~]]1 | |  
W Serpentis | 180415 | -15°4842 | 8.5 | 10.0 | P.e.c. | B24213 | Sept.  
27, 1899 | Sp. of two Cl A stars  
superposed? hydrogen lines bright  
on edge of shorter lambda |  
[Cont on p. 16]

February 18, 1910

110551 | -Centauri | -51°3909 | 9.8 | 10.7 | F? | B38409 | Jan. 30, 1908  
[[~~110551~~]]F?[[~~110551~~]]F |  
041528 | RW Camelopardalis | +58°663 | 9.0 | 10.0 | K5 | I13384 |  
Sept. 24, 1905 | [[~~041528~~]]K5[[~~041528~~]]F |  
041528 | RY Tauri | +28°645 | 9.6 | 10.6 | G? | I36384 | Dec. 10, 1909  
[[~~041528~~]]G?[[~~041528~~]]F very faint |  
[[~~041528~~]]1[[~~041528~~]]041903 | SW Tauri | +3°601 | 8.5 | 9.5  
F | B10593 | [[~~041528~~]]F[[~~041528~~]]F |  
044242 | SU Persei | +42°1064 | 8.5 | 9.8 | F8 |  
[[~~044242~~]]B10593[[~~044242~~]]I31003 | Oct. 18, 1903  
[[~~044242~~]]F8[[~~044242~~]]F |  
050542 | SY Aurigae | +42°1201 | 9.0 | 9.7 | G5 | I31003 | Oct. 18,  
1903 | [[~~050542~~]]G5[[~~050542~~]]F |  
044515 | -Eridani | -15°872 | 8.8 | 9.6 | F5 | B12628 | Nov. 19, 1894  
[[~~044515~~]]F5[[~~044515~~]]F |  
094627 | Z Leonis | +27°1818 | 9.8 | 10.4 | MG | I31717 | May 16, 1904  
[[~~094627~~]]MG[[~~094627~~]]F |  
[Continued on p. 17]

Object	Design	DM No	Photo	Magn.	Sp	Plate	Date	Obs.
155746	Normal	155746	-46°7780	8.6	10.0	Ap	B20157	Aug. 26, 1897
161106	SW Ophiuchi	161106	-6°4393	9.2	10.0	A	B11377	June 6, 1894
164132	-Scorpii	164132	-32°4244	10.3	<11.5	F?	B13766	June 14, 1895
164836	-Scorpii	164836	-36°7072	8.7	10.0	G	B38109	Sept. 1, 1907
164836	-Scorpii	164836				G	B9597	
165125	-Ophiuchi	165125	-25°5896	10.2	<11.6	A	B13843	June 28, 1895
205027	RR Vulpeculae	205027	+27°3914	9.0	10.2	A	I32272	Nov. 7, 1904
221507	-Aquarii	221507	-7°5753	9.2	9.9	A	B12041	Aug. 30, 1894
224613	-Aquarii	224613	-13°6289	9.8	10.7	A2	B20559	Oct. 2, 1897
153264	-Draconis	153264	+64°1077	..	..	A	I3735	June 15, 1899
180415	W Serpentis	180415	-15°4842	8.5	10.0	P.e.c.	B24213	Sept. 27, 1899
110551	-Centauri	110551	-51°3909	9.8	10.7	F?	B38409	Jan. 30, 1908
041528	RW Camelopardalis	041528	+58°663	9.0	10.0	K5	I13384	Sept. 24, 1905
041528	RY Tauri	041528	+28°645	9.6	10.6	G?	I36384	Dec. 10, 1909
041903	SW Tauri	041903	+3°601	8.5	9.5	F	B10593	
044242	SU Persei	044242	+42°1064	8.5	9.8	F8		
050542	SY Aurigae	050542	+42°1201	9.0	9.7	G5	I31003	Oct. 18, 1903
044515	-Eridani	044515	-15°872	8.8	9.6	F5	B12628	Nov. 19, 1894
094627	Z Leonis	094627	+27°1818	9.8	10.4	MG	I31717	May 16, 1904

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Exam. of Plates for spectra of variable stars.

Cont. from p. 15

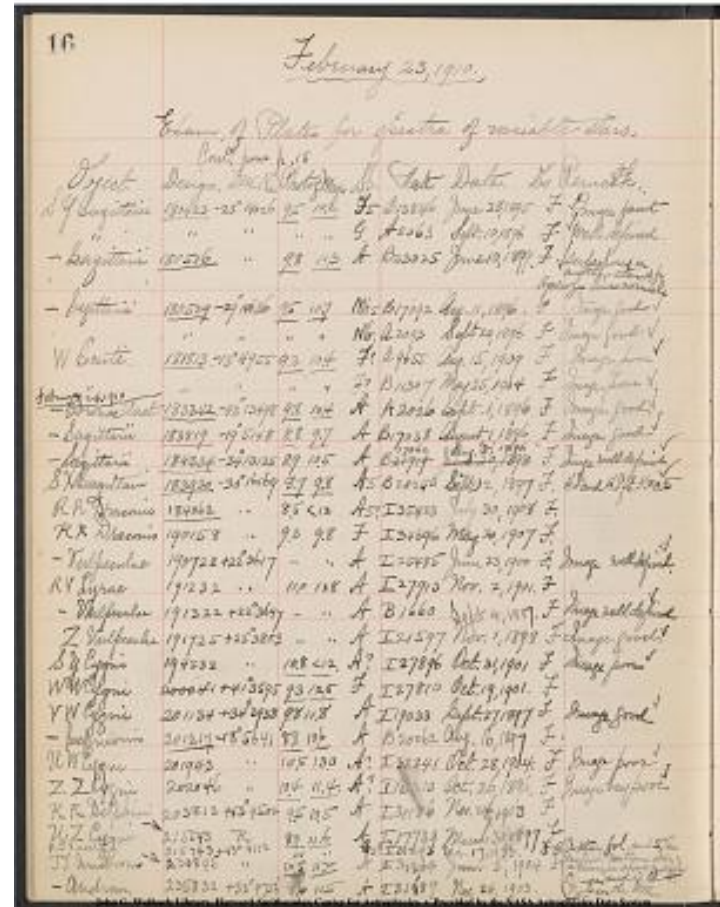
[[10 column table]]

Object | Design. | DM. No. | Photog. | Magn. | Sp. | Plate | Date | Obs |  
Remark |

SY Sagittarii	180423	-23°14026	9.5	10.2	F5	B13846	June 28, 1895	F	Image faint
SY Sagittarii	180423	-23°14026	9.5	10.2	G	A2063	Sept. 10, 1896	F	Well defined
Sagittarii	180516	-23°14026	9.8	11.3	A	B23025	June 10, 1899	F	superposed on another star P.f.
Hydrogen lines normal.									
-Sagittarii	180529	-29°14636	9.5	10.7	MG5	B17092	Aug. 11, 1896	F	Image good
-Sagittarii	180529	-29°14636	9.5	10.7	MG	A2093	Sept. 24, 1896	F	Image good
W Scuti	181813	-13°4955	9.3	10.4	F?	A9655	Aug. 15, 1909	F	Image poor
W Scuti	181813	-13°4955	9.3	10.4	F?	B11307	May 25, 1904	F	Image poor

[[underline]] February 24, 1910 [[/underline]]

-Coronae Aust.	183342	-42°13498	9.8	10.4	A	A 2026	Sept. 1, 1896	F	Image good
-Sagittarii	183819	-19°5148	8.8	9.7	A	B 17038	August 1, 1896	F	Image good
-Sagittarii	184334	-34°13135	8.9	10.5	A	B <del>17062</del>	June 20, 1898	F	Image well defined
SX Sagittarii	183930	-30°16169	8.7	9.8	A	B 20243	Sept. 2, 1897	F	H delta and H delta ft. K = 0.5
RR Draconis	184062	-30°16169	8.5	<12	A5?	I 35423	July 30, 1908	F	
RX Draconis	190158	-30°16169	9.3	9.8	F	I 34696	May 20, 1907	F	
-Vulpeculae	190722	+22°3617	9.3	9.8	A	I 25485	June 23, 1900	F	Image well defined
RV Lyrae	191232	+22°3617	11.0	12.8	A	I 27913	Nov. 2, 1901	F	
-Vulpeculae	190722	+22°3647	11.0	12.8	A	B 1660	Sept. 4, 1887	F	Image well defined
Z Vulpeculae	191725	+25°3803	11.0	12.8	A	I 21597	Nov. 1, 1898	F	Image good
SY Cygni	194232	+25°3803	10.8	<12	A?	I 279896	Oct. 31, 1901	F	Image poor
WW Cygni	200041	+41°3595	9.3	12.5	F	I 27810	Oct. 19, 1901	F	
VW Cygni	201134	+34°3938	9.8	11.8	A	I 19033	Sept. 27, 1897	F	Image good
-Capricorni	201217	-18°5641	8.8	10.6	A	B 20062	Aug. 16, 1897	F	
UW Cygni	201942	-18°5641	10.5	13.0	A?	I 32241	Oct. 28,		





1904 | F | Image poor  
 |ZZ Cygni | 202046 | -18° 5641 | 10.4 | 11.4 | A? | I 16310 | Oct. 26,  
 1896 | F | Image very poor  
 |RR Delphini | 203813 | +13° 4502 | 9.5 | 10.5 | A | I 31186 | Nov. 24,  
 1903 | F | |  
 |UZ Cygni | 215543 | R | 8.9 | 11.6 | A | I 17739 | March 31, 1897 | F | |  
 |RT lacertae | 215743 | +43° 4112 | 8.9 | 11.6 | G5? | I 37293 | Dec. 17,  
 1903 | F | A star fol. and S, the central southern star in a triangle shows  
 a slight change and is Class A. Not in the DM  
 |TT Androm | 230845 | +43° 4112 | 10.5 | 11.2 | A | I 31364 | Jan. 5,  
 1904 | F | |  
 |-Androm | 235832 | +32° 4756 | 8.6 | 11.5 | A | I 31 ~~4~~  
~~187~~ | Nov. 24, 1903 | |

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Continued from pg.13

[[10 Columned Table]]

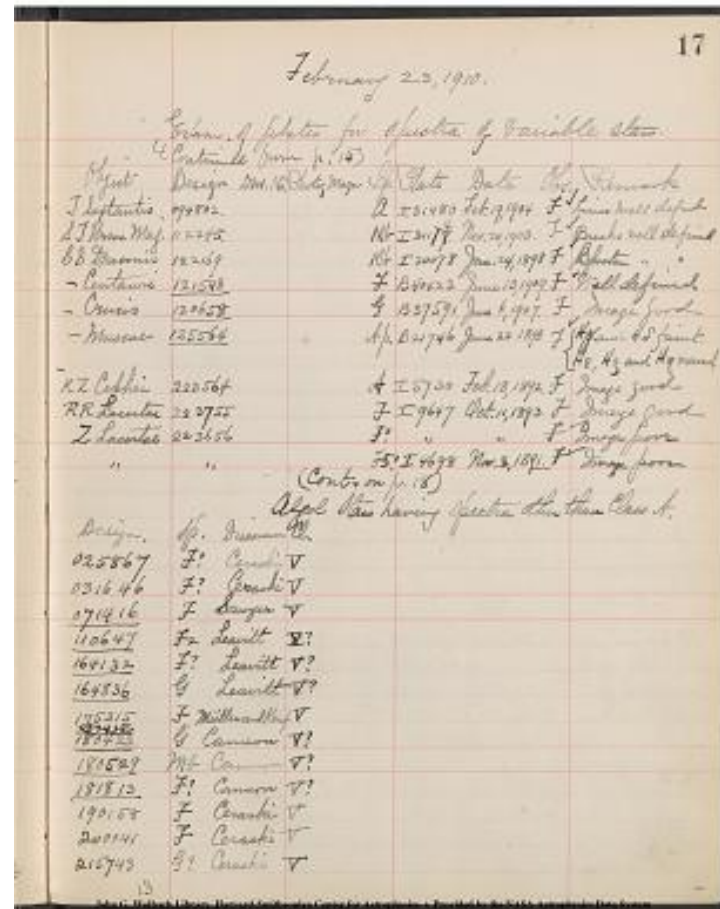
Object	Design	DM.	No.	Photo	Magn	Sp.	Plate	Date	Obj.	Remark
T Sextantis	094802				A	I	31480	Feb. 19, 1904	F	Lines well defined
SJ Ursae Maj.	112245				Mb	I	3117	<del>[[strikethrough]]</del> 7		
<del>[[strikethrough]]</del> 4	Nov. 20, 1903				F					Breaks well defined
SS Draconis	122169				Mb	I	20078	Jan. 24, 1898	F	Spectra well defined
-Centauri	<u>121548</u>				F	B	40423	June 12, 1909	F	Well defined
-Crucis	120658				G	B	37591	June 6, 1907	F	Image good
-Muscae	125564				Ap	B	21746	June 22, 1898	F	H gamma and H delta faint. H epsilon, H zeta, and H eta normal
-RZ Cephei	223564				A	I	5730	Feb. 18, 1892	F	Image good
RR Lacerta	223755				F	I	9647	Oct. 11, 1893	F	Image good
Z Lacerta	223656				F	I	9647	Oct. 11, 1893	F	Image poor
Z Lacerta	223656				F	5	4698	Nov. 3, 1891	F	Image poor

(Cont. on p. 18)

Algol Stars having Spectra other than Class A

[[4 column table]]

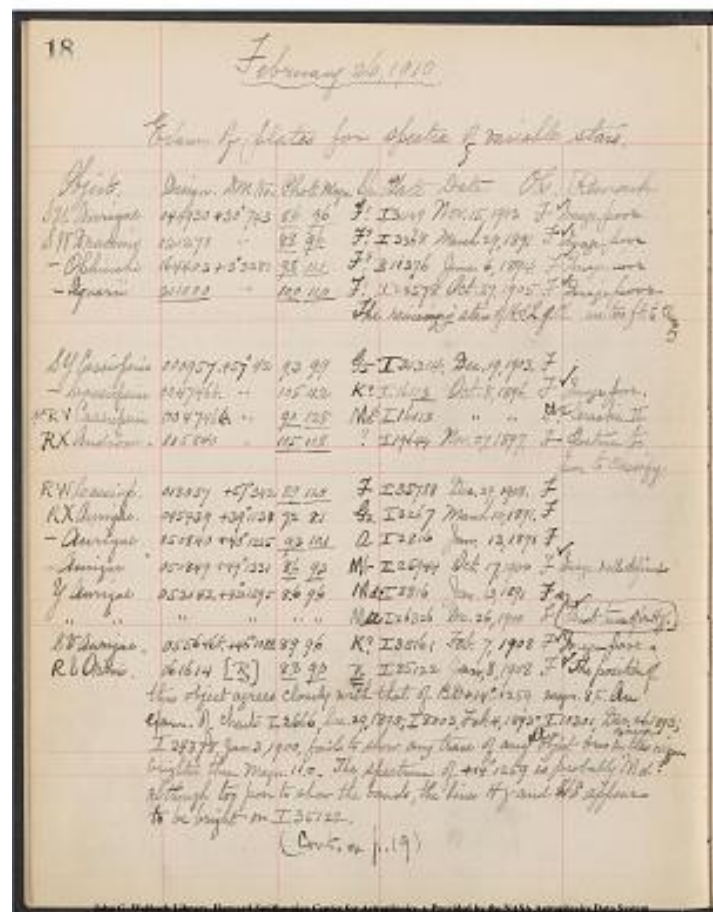
Design.	Sp.	Discoverer	Cl.
025867	F?	Ceraski	V
031646	F?	Ceraski	V
0171416	F	Sawyer	V
110647	F2	Leavitt	V?
164132	F?	Leavitt	V?
164836	G	Leavitt	V?
175315	F	Muller and Kerf.	V
<del>180415</del>	<del>[[strikethrough]]</del>	<del>[[strikethrough]]</del>	<del>[[strikethrough]]</del>
180423	G	Cannon	V?
180529	Mb	Cannon	V?
181813	F?	Cannon	V?
190158	F	Ceraski	V?
200041	F	Ceraski	V
215743	G?	Ceraski	V



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Object. |Design. DM No.|Photo Magn. Sp.|Plate Date Obj.|Remark|  
 SU Aurigae|044930 +30° 743|[[u]]8.6 9.6|[[u]]  
 F?|I31149 Nov. 15 1903 F|Image poor. |  
 SW Draconis|121270 ..|[[u]]8.6 9.6|[[u]] F?|I3368  
 March 29, 1891 F|Image poor|  
 - Ophinch|164403 +3° 3281|[[u]]9.8 11.1|[[u]]  
 F?|B11376 June 6, 1894. F|Image poor|  
 - Aguarii |[[u]]211000|[[u]] ..|[[u]]10.0  
 11.0|[[u]] F?|I33578 Oct. 27, 1905 F|Image poor|  
 The [[?]] stars of H.S.L. of Cl. are too fo. to classy

SY Cassiopeiae|000957. +57° 42|9.3 9.9 G5|I31314. Dec. 19, 1903. F|  
 \_\_ Cassiopeiae|0047466. ..|10.5 11.2 K?|I16113 Oct. 8, 1896. F|Image  
 poor.  
 \*RV Cassiopeiae|004746 ..|[[10.5]]9.0 12.5|[[11.2]]  
 Md5|I16113 " " " |I|Ceraski. II|  
 RX Androm. |005840 " |[[10.5]]10.5 11.8|[[11.8]] ?|I19644  
 Nov. 27, 1897. F.|Spectrum too  
 poor to classify.  
 RW Cassio. |013057 +57° 342|[[8.9]]11.0|[[11.0]]  
 F|I35788 Dec. 29, 1908. F|  
 RX Aurigae. |045439 +39° 1138|7.2 8.1 G2|I3267 March 10, 1891. F|  
 -- Aurigae |050840 +40° 1225|[[9.3]]10.1|[[10.1]] A|I2816  
 Jan. 13, 1891 F|  
 -- Aurigae |050849 +49° 1331|[[8.6]]9.3|[[9.3]]  
 Mb|I25944 Oct. 17, 1900 F|Image well defined  
 y Aurigae |052142. +42° 1295|8.6 9.6 Md?|I2816 Jan. 13, 1891 F|  
 y Aurigae |052142. +42° 1295|Mdc|I26326 Dec. 26, 1900  
 F|[[boxed]]Faint trace of br H. |[[boxed]]  
 SV Aurigae. |055646b. +46° 1088.|8.9 9.6 K?|I35161 Feb. 7, 1908  
 F|Image poor|  
 R S Orionis. |061614 [R] |[[8.3]]9.0|[[9.0]] |[[12.5]]  
 twice|R|[[12.5]] twice|I35122 Jan. 8, 1908 F|The position of this  
 object agrees closely with that of BD +14° 1259 magn. 8.5 An exam.  
 of charts I2666, Dec. 29, 1890; I8003, Feb. 4, 1893 & I 10301, Dec. 26  
 1893, I 24278, Jan. 3, 1900, fails to show any trace of any other object  
 in or near this region brighter than magn. 11.0. The spectrum of +14°  
 1259 is probably Md? although too poor to show the bands, the lines H  
 and H appear. to be bright on I 35122.  
 (Cont. on p.19)



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| |  
-Sagittarii | 184420 | -20° 5283 | 7.6 | 8.6 | Ap | B 40442 | June 17, 1909  
| F | gamma, sigma, delta = 0.7, epsilon & zeta & eta normal  
-Sagittarii | 184420 | -20° 5283 | 7.6 | 8.6 | Ap | B 19912 | July 23, 1897 |  
F | epsilon, omicron, & zeta = 0.7; H gamma & delta = 0.7, epsilon &  
zeta normal  
-Sagittarii | 184420 | -20° 5283 | 7.6 | 8.6 | Ap | B 38105 | Aug. 31, 1907 |  
F | H gamma and delta = 0.7. epsilon and zeta normal  
Continued on p. 31

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[[January 28, 1910]]

Exam of Plates for spectra of stars having proper motion for Kappeyn.

[[11 column table]]

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

Design|RA 1900|Dec1900|Magn|mu|Plate|Date|Sp.|Obs.|RA 1875|Dec|

+45° 4408 0<sup>h</sup> 0.4<sup>m</sup> | +45° 15' | 8.62 | 6.88 | I | 23971 | Nov 4, 1899 | K5 | F |

| | | | | | | | | | | | |

-1° 306 | 2 9.5 | -1 39 | 9.22 | 97 | I | 32460 | Dec 28, 1904 | F5 | F | | |

+17° 4519 | 21 7.4 | +17 20 | 7.32 | 91 | I | 32247 | Oct 31, 1904 | G5 | F | | |

+61° 513 | 2 55.9 | +61 19 | 6.67 | 101 | I | 33485 | Oct 6, 1905 | G5 | F | | |

+34° 796 | 3 565 | +35 0 | 8.62 | 219 | I | 35136 | Jan 27, 1908 | G | F | | |

+29° 1664 | 7 54.3 | +29 31 | 6.94 | 119 | I | 24945 | March 24, 1900 | G | F | | |

| | | | | | | | | | | | |

+50° 1725 | 10 5.3 | +49 57 | 6.82 | | I | 34621 | April 3, 1907 | K | F | | |

+36° 2147 | 10 57.8 | +36 38 | 7.60 | | I | 35149 | Feb 2, 1908 | Ma | F | | |

-26° 8883 | 11 53.0 | -27 8 | 7.16 | | B | 13325 | May 13, 1895 | K | F | | |

-0° 2944 | 15 8.8 | -0 87 | 6.66 | | B | 11334 | May 31, 1894 | G | F | | |

-10° 4149 | 15 37.7 | -10 36 | 7.31 | | B | 13366 | May 16, 1895 | F5 | F | | |

+4° 3195 | 16 256 | +4 53 | 7.45 | | B | 11376 | June 6, 1894 | F5 | F | | |

-4° 4225 | 16 59.8 | -4 53 | 7.90 | | B | 23382 | July 10, 1899 | K5 | F | | |

+0° 3593 | 16 47.9 | +0 10 | 6.78 | | B | 11376 | June 6, 1894 | F5 | F | | |

-26° 12036 | 17 10.1 | -26 24 | 6.66 | | B | 17036 | Aug 1, 1896 | K | F | | |

+59° 1915 | 18 41.7 | +59 28 | 8.76 | | I | 35423 | July 30, 1908 | K | F | | |

+22° 3908 | 19 59.7 | +23 5 | 7.20 | | I | 27920 | Nov 3, 1901 | G2 | F | | |

-44° 14214 | 20 51.1 | -44 29 | 6.64 | | B | 11683 | July 25, 1894 | G | F | | |

-39° 14192 | 21 11.4 | -39 15 | 6.65 | | B | 17181 | Aug 15, 1896 | K5 | F | | |

-36° 15693 | 22 59.4 | -36 25 | 7.44 | B | 14592 | Sept 11, 1895 | Ma | F | | |

[Assumed -23° 693] | 1 48.0 | -22 55 | 7.44 | 92 | B1 2366 | Oct 24, 1894 |

K | 1<sup>h</sup> 46<sup>m</sup> 50.1<sup>s</sup> | -23° 2.7'

| | | | | | | | | | | | |

+39° 154 | 0 35.3 | +39 39 | 7.52 | 82 | I | 7654 | Dec. 11, 1892 | K | F | | |

| | | | | | | | | | | | |

+32° 1695 | 8 5.4 | +32 46 | 6.95 | 82 | I | 5493 | Jan. 31, 1892 | K5 | F | | |

| | | | | | | | | | | | |

-4° 3049 | 11 13.2 | -4 31 | 7.34 | | B | 19228 | May 27, 1897 | K | F | | |

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January 28, 1910

Exam. of Plates for Spectra of stars having Proper Motion for Kappeyn.

Design	RA	Dec	Magn	1 <sup>st</sup> Plate	Date	Sp.	Obs.
+45° 4408	0 <sup>h</sup> 0.4 <sup>m</sup>	+45° 15'	8.62	689	Dec 27, 1899	K5	F
-1° 306	2 9.5	-1 39	9.22	47	Dec 28, 1904	F5	F
+17° 4519	21 7.4	+17 20	7.32	48	Oct 31, 1904	G5	F
+61° 513	2 55.9	+61 19	6.67	101	Oct 6, 1905	G5	F
+34° 796	3 565	+35 0	8.62	219	Jan 27, 1908	G	F
+29° 1664	7 54.3	+29 31	6.94	119	March 24, 1900	G	F
+50° 1725	10 5.3	+49 57	6.82		April 3, 1907	K	F
+36° 2147	10 57.8	+36 38	7.60		Feb 2, 1908	Ma	F
-26° 8883	11 53.0	-27 8	7.16		May 13, 1895	K	F
-0° 2944	15 8.8	-0 87	6.66		May 31, 1894	G	F
-10° 4149	15 37.7	-10 36	7.31		May 16, 1895	F5	F
+4° 3195	16 256	+4 53	7.45		June 6, 1894	F5	F
-4° 4225	16 59.8	-4 53	7.90		July 10, 1899	K5	F
+0° 3593	16 47.9	+0 10	6.78		June 6, 1894	F5	F
-26° 12036	17 10.1	-26 24	6.66		Aug 1, 1896	K	F
+59° 1915	18 41.7	+59 28	8.76		July 30, 1908	K	F
+22° 3908	19 59.7	+23 5	7.20		Nov 3, 1901	G2	F
-44° 14214	20 51.1	-44 29	6.64		July 25, 1894	G	F
-39° 14192	21 11.4	-39 15	6.65		Aug 15, 1896	K5	F
-36° 15693	22 59.4	-36 25	7.44		Sept 11, 1895	Ma	F
[Assumed -23° 693]	1 48.0	-22 55	7.44	92	B1 2366	Oct 24, 1894	
K   1 <sup>h</sup> 46 <sup>m</sup> 50.1 <sup>s</sup>		-23° 2.7'					

January 31, 1910

+2° 84	0 35.3	+2 34	7.41	82	Dec 11, 1892	K	F
+32° 1695	8 5.4	+32 46	6.95	82	Jan 31, 1892	K5	F
-4° 3049	11 13.2	-4 31	7.34		May 27, 1897	K	F

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[[10 columned table]]

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

Design. | R.A. | Dec. 1900 | Magn. | Plate | Date | Sp. | Obs. | R.A. Dec. 1875 |

-1° 2832 | 13 266 | -1° 48 | 7.31 | B 11366 | June 4, 1894. | G | F. |  
 +47° 2420 | 16 59.8 | +47 11 | 6.74 | 37104 | June 9, 1891 | Gp | F | H gamma  
 & H delta = 0.3. |  
 +12° 47.97 | 22 12.3 | +12 23 | 6.94 | I 31312 | Dec. 19, 1903 | G | F. |  
 -42° 16457 | 23 4102 | -42 6 | 7.51 | B 12091 | Sept. 6, 1894 | A | F. Check  
 ident. Ident. checked by Miss [[?]]

February 15, 1910

[[10 columned table]]

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

Design. | Assumed DM. Magn. | R.A. | Dec. 1900 | Magn. | Plate | Date |

Sp. | Obs. |

+31° 1781 | 8.3 | 8 11 59 | +20° 56.0 | | I 35908 | March 20, 1909 | K | F |  
 -17° 3723 | 8.2 | 12 47 56 | -17 57.4 | | B 13138 | April 29, 1895 | F8 | F |  
 +35° 2436 | 9.6 | 13 14 54 | +35 39.4 | | I 34650 | April 17, 1907 | K | F |  
 +25° 2874 | 9.2 | 15 3 7 | +25 18.4 | | I 31720 | May 16, 1904 | K5 | F |  
 -23° 17699 | 7.6 | 22 55 0 | -23 3.8 | | B 17400 | Sept. 9, 1896 | K5? | F |  
 +25° 495 | 7.9 | 3 2 32 | +26 58.2 | 90 | I 21690^I 21709 | Nov. 12,  
 1898^Nov. 15, 1898 | F5^F2? | F^F | maybe F5?  
 -5° 642 | 7.9 | 3 20 4 | -5 41.7 | 86 | B 24104 | Sept. 9, 1899 | K5 | F |  
 -3° 1110 | 8.5 | 5 23 29 | -3 33.6 | | B 14699 | Sept. 21, 1895 | K |  
 [[/strikethrough]] 5 [[/strikethrough]] F [[/strikethrough]] Maybe  
 [[/strikethrough]]  
 +43° 1953 | 8.0 | 9 37 7 | +43 10.2 | | I 31718 | May 16, 1904 | K? | F |  
 Maybe K5  
 +14° 2151 | 8.2 | 9 43 28 | +14 13.8 | | I 35185 | Feb. 29, 1908 |  
 [[/strikethrough]] K [[/strikethrough]] F [[/strikethrough]] Maybe K5  
 [[/strikethrough]]  
 +4° 4510 | 8.4 | 20 34 33 | +4 37.0 | | I 31120 | Nov. 9, 1903 | K | F |  
 +43° 44 | 8.1 | 0 12 40 | +43 27.4 | | I 7929 | Jan. 21, 1893 | Ma | F |  
 +41° 750^750a | 8.2^8.6 | 3 40 12 | +41 8.9 | | I 24124 | Nov. 25, 1899 |  
 G5 | F |  
 -3° 1123 | 8.7 | 5 26 24 | -3 41.7 | | I 17010 | Jan. 7, 1897 | Ma | F |  
 +31° 1684 | 8.2 | 7 47 9 | +30 54.8 | | I 28613 | March 31, 1902 | G? | F |  
 Image poor  
 +71° 481 | 8.7 | 8 45 59 | +71 10.9 | | I 31624 | April 16, 1904 | K | F |  
 +53° 1320 | 8.0 | 9 7 34 | +53 7.0 | | I 3160^I 31443 | April 12,  
 1904^Feb. 8, 1904 | Ma^Ma | F |  
 -11° 2741 | 9.3 | 9 46 10 | -11 49.3 | | B 24587 | Nov. 28, 1899 | K | F |  
 +44° 2051 | 8.5 | 11 0 30 | +44 2.4 | | I 24965 | March 27, 1900 | Ma | F |  
 +66° 717 | 9.0 | | | [[/strikethrough]] G5 [[/strikethrough]] F |  
 +15° 2620 | 8.5 | 13 40 40 | +26 0.0 | | I 24623 | April 3, 1907 | K | F |

Design.	R.A.	Dec.	Magn.	Plate	Date	Sp.	Obs.	R.A.	Dec.
-1° 2832	13 266	-1° 48	7.31	B11366	June 4, 1894	G	F		
+47° 2420	16 59.8	+47 11	6.74	37104	June 9, 1891	Gp	F		
+12° 47.97	22 12.3	+12 23	6.94	I 31312	Dec. 19, 1903	G	F		
-42° 16457	23 4102	-42 6	7.51	B 12091	Sept. 6, 1894	A	F		
February 15, 1910									
+31° 1781	8.3	8 11 59	+20° 56.0	I 35908	March 20, 1909	K	F		
-17° 3723	8.2	12 47 56	-17 57.4	B 13138	April 29, 1895	F8	F		
+35° 2436	9.6	13 14 54	+35 39.4	I 34650	April 17, 1907	K	F		
+25° 2874	9.2	15 3 7	+25 18.4	I 31720	May 16, 1904	K5	F		
-23° 17699	7.6	22 55 0	-23 3.8	B 17400	Sept. 9, 1896	K5?	F		
+25° 495	7.9	3 2 32	+26 58.2	I 21690^I 21709	Nov. 12, 1898^Nov. 15, 1898	F5^F2?	F^F	maybe F5?	
-5° 642	7.9	3 20 4	-5 41.7	B 24104	Sept. 9, 1899	K5	F		
-3° 1110	8.5	5 23 29	-3 33.6	B 14699	Sept. 21, 1895	K			
[[/strikethrough]] 5 [[/strikethrough]]				[[/strikethrough]] F [[/strikethrough]]	Maybe				
+43° 1953	8.0	9 37 7	+43 10.2	I 31718	May 16, 1904	K?	F		
Maybe K5									
+14° 2151	8.2	9 43 28	+14 13.8	I 35185	Feb. 29, 1908				
[[/strikethrough]] K [[/strikethrough]]				[[/strikethrough]] F [[/strikethrough]]	Maybe K5				
[[/strikethrough]]									
+4° 4510	8.4	20 34 33	+4 37.0	I 31120	Nov. 9, 1903	K	F		
+43° 44	8.1	0 12 40	+43 27.4	I 7929	Jan. 21, 1893	Ma	F		
+41° 750^750a	8.2^8.6	3 40 12	+41 8.9	I 24124	Nov. 25, 1899				
G5									
-3° 1123	8.7	5 26 24	-3 41.7	I 17010	Jan. 7, 1897	Ma	F		
+31° 1684	8.2	7 47 9	+30 54.8	I 28613	March 31, 1902	G?	F		
Image poor									
+71° 481	8.7	8 45 59	+71 10.9	I 31624	April 16, 1904	K	F		
+53° 1320	8.0	9 7 34	+53 7.0	I 3160^I 31443	April 12, 1904^Feb. 8, 1904	Ma^Ma	F		
-11° 2741	9.3	9 46 10	-11 49.3	B 24587	Nov. 28, 1899	K	F		
+44° 2051	8.5	11 0 30	+44 2.4	I 24965	March 27, 1900	Ma	F		
+66° 717	9.0			[[/strikethrough]] G5 [[/strikethrough]]	F				
+15° 2620	8.5	13 40 40	+26 0.0	I 24623	April 3, 1907	K	F		

[[10 columned table]]

Assumed

^Design|Magn.|R.A. 1900|Dec. 1900|Magn.|Plate|Date|Sp.|Dos.|Rem.|  
 -23° 11940|7.6|14<sup>h</sup> 45<sup>m</sup> 59<sup>s</sup>|-23° 52.8| |B 11303|May 25,  
 1894.|G5|F| |  
 +54 1716|7.7|14 52 20 |+54 4.3| |I 22641|April 1, 1899|G?|F|Image  
 poor  
 -15° 4041|9.2|15 4 44 |-15 59.1| |I 36147|Aug 12, 1909|G5|F| |  
 -15° 4041|9.2|15 4 44 |-15 59.1| |A 8664|April 25, 1908|K5|F| |  
 -15° 4042|9.0|15 4 44 |-15 54.1| |A 8664|April 25, 1908|G|F| |  
 -8° 4352|8.8|16 50 8 |-8 9.1| |{B 23751|Aug. 1, 1899|K?|F|F  
 Image poor  
 -8° 4352|8.8|16 50 8 |-8 8.1| |{B 40102|April 24, 1909|K|F| |  
 +2° 3312|8.0|17 20 47 |+2 14.0| see p. 58 |I 35241|April 2, 1908|  
 Ma|F| |  
 +68° 947|7.9|17 37 0 |+68 25.8| |I 35911|March 20, 1909|F|F|F|  
 |  
 +68° 947| | | |{should be 946 Sp. G5K pec. | |[[~~strickethrough~~]] I 35  
 [[~~strickethrough~~]] | |[[~~strickethrough~~]] F [[~~strickethrough~~]]  
 +5° 3993|9.3|18 53 7 |+5 48.5| |I 32913|March 14, 1905|  
 [[~~strickethrough~~]] A [[~~strickethrough~~]] Ma? |F| [[~~strickethrough~~]] defect OK?  
 [[~~strickethrough~~]] Image poor  
 +5° 3993|9.3|18 53 7 |+5 48.5| |I 25511|June 30, 1900|Ma| | |  
 -21° 5703|[[smudge]].2|20 17 42 |-21 39.7| |B 21930|Sept. 5,  
 1898|F8|F| |  
 -14° 6437|8.2|23 11 54 |-14 21.9| |B 17392|Sept. 7, 1890|F5|F|F|  
 |  
 +1° 4774|8.7|23 43 58 |+1 52.3| |Should not this be [[~~strickethrough~~]] 1320 not  
 1369| See p. 58 |B 24592|Dec. 1, 1899|Ma?|F|Near edge|  
 +1° 4774|8.7|23 43 58 |+1 52.3| |I 21901|Dec. 5, 1898|Ma?| | |  
 |  
 -37° 15492|8.0|23 59 31 |-37 51.0| |B 14593|Sept. 11, 1895|K5|  
 F| |

Design	Magn.	R.A.	Dec.	Magn.	Plate	Date	Sp.	Dos.	Rem.
-23° 11940	7.6	14 45 59	-23 52.8		B 11303	May 25, 1894	G5	F	
+54 1716	7.7	14 52 20	+54 4.3		I 22641	April 1, 1899	G?	F	Image poor
-15° 4041	9.2	15 4 44	-15 59.1		I 36147	Aug 12, 1909	G5	F	
-15° 4041	9.2	15 4 44	-15 59.1		A 8664	April 25, 1908	K5	F	
-15° 4042	9.0	15 4 44	-15 54.1		A 8664	April 25, 1908	G	F	
-8° 4352	8.8	16 50 8	-8 9.1		{B 23751	Aug. 1, 1899	K?	F	F
-8° 4352	8.8	16 50 8	-8 8.1		{B 40102	April 24, 1909	K	F	
+2° 3312	8.0	17 20 47	+2 14.0		I 35241	April 2, 1908			
+68° 947	7.9	17 37 0	+68 25.8		I 35911	March 20, 1909	F	F	F
+68° 947									
+5° 3993	9.3	18 53 7	+5 48.5		I 32913	March 14, 1905			
-21° 5703	[[smudge]].2	20 17 42	-21 39.7		B 21930	Sept. 5, 1898	F8	F	
-14° 6437	8.2	23 11 54	-14 21.9		B 17392	Sept. 7, 1890	F5	F	F
+1° 4774	8.7	23 43 58	+1 52.3						
-37° 15492	8.0	23 59 31	-37 51.0		B 14593	Sept. 11, 1895	K5	F	

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February 1, 1910.

Exam. of plates for revision of Cl. of Sp., for list of Frank's. M.N. 70, 191

[9 columned table]

No. | R. A. | Dec. | Magn. | Sp. | Plate | Date | Ex. | Rem. |

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

589 | 1<sup>h</sup> 55.6<sup>m</sup> | +63° 54' | 5.62 | B8? | 19742 | Oct. 21, 1893 | 7 | ~~Image poor, on edge of pl.~~

7763 | 20 14.1 | +37 43 | 4.88 | Pec. | B1539 | July 28, 1887 | 85 | P Cygni by independent ident from pec. of spectrum.

7759 | 20 13.4 | +40 3 | 5.50 | Kp | Aug. 10, 1886 | 50<sup>h</sup> | Slight tendency to band indicating K5. Add lines. Comp.?

8306 | 21 39.1 | +40 42 | 5.54 | K | B1662 | Sept. 4, 1887 | 69 | Adjacent star Cl. A=DM+40° 4615

8857 | 23 12.5 | +44 37 | 6.55 | G5 | B1895 | Nov. 18, 1889 | - |

2394 | 6 28.6 | +61 34 | 6.05 | K | 19698 | Oct. 17, 1893 | 62 |

3779 | 9 26.5 | +10 9 | 5.28 | K | B2152 | Jan. 10, 1888 | 104 |

P 5853 | 15 39.1 | +2

50 | 5.80 | ~~K~~ | ~~G~~ | B22983 | June 3, 1899 | 62 | Ident. checked by LDW. ~~CI A.~~

adj. ~~CI A.~~

6849 | 18 13.0 | +56 34 | 6.41 | F | B2663 | June 1, 1888 | 75 |

8729 | 22 52.5 | +20 14 | 5.59 | F8 | B8589 | Sept. 18, 1892 | 60 | H gamma and H delta too well marked to place sp. in Cl. G.

4504 | 11 36.9 | +67 18 | 5.48 | K | B2200 | Jan. 19, 1888 | 98 |

4964 | 13 5.0 | +37 57 | 6.14 | Ma | B2359 | Feb. 18, 1888 | 60 |

February 5, 1910.

[9 columned table]

7391 | 19 22.1 | +19 41 | 6.04 | K | B1660 | Sept. 4, 1887 | 65 |

2241 | 6 10.8 | +12 18 | 5.11 | F2 | B1741 | Oct. 14, 1887 | 52 |

7904 | 20 34.9 | +29 59 | 5.86 | G | 807 | Oct. 7, 1886 | 62 | Image poor?

996 | 3 14.1 | +3 0 | 4.96 | G | 887 | Nov. 28, 1886 | 62 | Image poor?

6638 | 17 44.1 | +20 36 | 5.77 | K | 2855 | Aug. 29, 1888 | 60 |

5940 | 15 52.6 | +14 42 | 5.66 | Ma | 1454 | June 12, 1887 | 63 |

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February 1, 1910.

*Exam. of plates for revision of Cl. of Sp. for  
list of Frank's. M.N. 70, 191*

No.	R.A.	Dec.	Magn.	Sp.	Plate	Date	Ex.	Rem.	
589	1 55.6	+63 54	5.62	B8?	19742	Oct. 21, 1893	7	Image poor, on edge of pl.	
7763	20 14.1	+37 43	4.88	Pec.	B1539	July 28, 1887	85	P Cygni by independent ident from pec. of spectrum.	
7759	20 13.4	+40 3	5.50	Kp	B1539	Aug. 10, 1886	50 <sup>h</sup>	Slight tendency to band indicating K5. Add lines. Comp.?	
8306	21 39.1	+40 42	5.54	K	B1662	Sept. 4, 1887	69	Adjacent star Cl. A=DM+40° 4615	
8857	23 12.5	+44 37	6.55	G5	B1895	Nov. 18, 1889	-		
2394	6 28.6	+61 34	6.05	K	19698	Oct. 17, 1893	62		
3779	9 26.5	+10 9	5.28	K	B2152	Jan. 10, 1888	104		
?	50	5.80		<del>K</del>	<del>G</del>	B22983	June 3, 1899	62	Ident. checked by LDW. <del>CI A.</del>
6849	18 13.0	+56 34	6.41	F	B2663	June 1, 1888	75		
8729	22 52.5	+20 14	5.59	F8	B8589	Sept. 18, 1892	60	H gamma and H delta too well marked to place sp. in Cl. G.	
4504	11 36.9	+67 18	5.48	K	B2200	Jan. 19, 1888	98		
4964	13 5.0	+37 57	6.14	Ma	B2359	Feb. 18, 1888	60		

February 5, 1910.

7391	19 22.1	+19 41	6.04	K	B1660	Sept. 4, 1887	65	
2241	6 10.8	+12 18	5.11	F2	B1741	Oct. 14, 1887	52	
7904	20 34.9	+29 59	5.86	G	807	Oct. 7, 1886	62	Image poor?
996	3 14.1	+3 0	4.96	G	887	Nov. 28, 1886	62	Image poor?
6638	17 44.1	+20 36	5.77	K	2855	Aug. 29, 1888	60	
5940	15 52.6	+14 42	5.66	Ma	1454	June 12, 1887	63	

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This classification written at Mrs. [??] dictation in A.D.A.'s book III; copied from there in the book.

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March 31, 1910

Exam. of Spectra of Comp. Stars. cont. from page 11.

[[left margin]]

Object

~~[[striketrough]]~~ 000271 ~~[[/underlined]]~~ ~~[[/striketrough]]~~

02 10 71

-Hydri

[[/left margin]]

Dec | 6at. No. | Photog. Magn. | Sh. Plate | A 28 99

a | -72° | 166 | 8.82 ~~[[striketrough]]~~ 9.50 ~~[[/striketrough]]~~

b | -72° | 153 | 9.50 |

c | -72° | 160 | 9.68 |

d | -71° | 120 | 9.86 |

e | -72° | 161 | 9.94 |

f | -72° | 157 | 10.09 |

g | -72° | 148 | 10.37 |

h | -72° | 147 | 10.47 |

k | -71° | 111 | 10.65 |

l | -72° | 158 | 10.73 |

m | " | " | 10.88 |

n | " | " | 11.06 |

o | " | " | 11.26 |

p | " | " | 11.48 |

q | " | " | 11.71 |

[[left margin]]

022260

~~[[striketrough]]~~ 0002 60 ~~[[/underlined]]~~ ~~[[/striketrough]]~~

S Horologii

[[/left margin]]

a | AG6 | 2666 | 8.16 | B15153 B23779

b | ^ZC 2 ^h | 856 | 8.64 |

c | -59° | 211 | 9.09 |

d | ^ZC 2 ^h | 611 | 9.39 |

e | " | " | 9.74 |

f | " | " | 10.12 |

g | " | " | 10.47 |

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March 31, 1910

Exam. of Spectra of Comp. Stars. cont. Page 11

Star (No.)	Dec	6at. No.	Photog. Magn.	Sh. Plate	A 28 99
a	-72° 166	8.82	9.50		
b	-72° 153	9.50			
c	-72° 160	9.68			
d	-71° 120	9.86			
e	-72° 161	9.94			
f	-72° 157	10.09			
g	-72° 148	10.37			
h	-72° 147	10.47			
k	-71° 111	10.65			
l	-72° 158	10.73			
m	" "	10.88			
n	" "	11.06			
o	" "	11.26			
p	" "	11.48			
q	" "	11.71			

Star (No.)	Dec	6at. No.	Photog. Magn.	Sh. Plate	A 28 99
a	286 2666	8.16			
b	856	8.64			
c	-59° 211	9.09			
d	611	9.39			
e	" "	9.74			
f	" "	10.12			
g	" "	10.47			

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## Exam. of Spectra of Comp. stars. (cont.)

[[left margin]]

Object

[[underlined]] 02 26 69- [[/underlined]]

-Hydri

[[/left margin]]

Dec | 6at. No. | Photog. Magn. | Sh. Plate | B 20 429

a | AY62587 | 7.44 |  
 b | 2c2^h 452 | 7.94 |  
 c | " | 2^h 361 | 8.22 |  
 d | " | 2^h 818 | 8.47 |  
 e | " | 2^h 839 | 8.72 |  
 f | " | 2^h 443 | 9.02 |  
 g | " | 2^h 565 | 9.24 |  
 h | " | 2^h 676 | 9.49 |  
 k | -70° | 152 | 9.79 |  
 l | -70° | 159 | 10.01 |  
 m | -70° | 156 | 10.29 |

[[left margin]]

[[underlined]] 02 37 23 [[/underlined]]

-beti.

[[/left margin]]

a | -22° 907 | 7.63 | A8159  
 b | -22° 908 | 8.11 |  
 c | -23° 1020 | 8.49 |  
 d | -23° 1017 | 8.81 |  
 e | -23° 1009 | 9.16 |  
 f | -23° 1032 | 9.46 |  
 g | -23° 1028 | 9.71 |  
 h | -23° 1033 | 10.03 |  
 k | -22° 916 | 10.38 |

[[left margin]]

[[underlined]] 02 41 54 [[/underlined]]

-Horologii

[[/left margin]]

a | 2^h 1300 | 8.25 | B15153  
 b | 2^h 972 | 8.65 |  
 c | 2^h 1096 | 9.00 |  
 d | -55° 455 | 9.22 |

Exam. of Spectra of Comp. stars (cont.)			
Object	Dec	6at. No.	Photog. Magn.   Sh. Plate
02 26 69- -Hydri	26 26 69	7.44	B 20 429
	26 26 69	7.94	
	26 26 69	8.22	
	26 26 69	8.47	
	26 26 69	8.72	
	26 26 69	9.02	
	26 26 69	9.24	
	26 26 69	9.49	
	26 26 69	9.79	
	26 26 69	10.01	
	26 26 69	10.29	
02 37 23 -beti.	37 23 23	7.63	A8159
	37 23 23	8.11	
	37 23 23	8.49	
	37 23 23	8.81	
	37 23 23	9.16	
	37 23 23	9.46	
	37 23 23	9.71	
	37 23 23	10.03	
	37 23 23	10.38	
02 41 54 -Horologii	41 54 54	8.25	B15153
	41 54 54	8.65	
	41 54 54	9.00	
	41 54 54	9.22	

## Exams of Spectra of Comp. Stars (cont)

Object Dec Lat. No [Photog. Magam Sp.??] Plate B15153  
 [[underlined]]024154[[/underlined]] (cont) e -55°459 9.67

f -55°463 9.95

g -54°474 10.25

[[underlined]]025050[[/underlined]]

R. Horologii a 2<sup>h</sup> 1055 5.33 B23791

b 2<sup>h</sup> 1060 6.51

c 2<sup>h</sup> 1307 7.31

d 2<sup>h</sup> 1310 8.57

f -50°857 9.45

g -50°856 9.70

h -50°858 9.70

k -50°846 10.76

l -50°854 11.16

[~~14~~] 01

033362 a +62°595 9.88

U [6am??] b +62°595 10.10

c +62°602 10.38

d +62°589 10.63

[~~e~~]

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*Exam of Spectra of Comp. Stars (cont.)*

Object	Dec	Lat.	No. Photog.	Sp. Plate	Notes
024154 cont					
e	-55°459	9.67			
f	-55°463	9.95			
g	-54°474	10.25			
025050					
R. Horologii a	2 <sup>h</sup> 1055	5.33			B23791
b	2 <sup>h</sup> 1060	6.51			
c	2 <sup>h</sup> 1307	7.31			
d	2 <sup>h</sup> 1310	8.57			
e	2 <sup>h</sup> 1310	8.57			
f	-50°857	9.45			
g	-50°856	9.70			
h	-50°858	9.70			
k	-50°846	10.76			
l	-50°854	11.16			
033362					
a	+62°595	9.88			
b	+62°595	10.10			
c	+62°602	10.38			
d	+62°589	10.63			
e					

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## Exam of Spectra of Comp. Stars (cont.)

[[6 column chart]]

Object| Des.| Cat.| No.| Photog. Magn.| Sp. Plate.| BA 6932

[[033555]] a| 3<sup>h</sup>| 1103| 7.60| -|  
 - Reticuli| b| -55°| 561| 8.00| -|  
 - c| -55°| 557| 8.25| -|  
 - d| 3<sup>h</sup>| 1126| 8.37| -|  
 - e| 3<sup>h</sup>| 1152| 8.52| -|  
 - f| -55°| 550| 8.84| -|  
 - g| -55°| 548| 9.02| -|  
 - h| -55°| 546| 9.32| -|  
 - K| -55°| 547| 9.64| -|

[[143738]] a| 4<sup>h</sup>| 1265| 6.86| -| -| A6956  
 R Caeli| b| 4<sup>h</sup>| 1077| 7.46| -| -|  
 - c| 4<sup>h</sup>| 1271| 8.16| -| -|  
 - d| 4<sup>h</sup>| 1157| 8.88| -| -|  
 - e| 4<sup>h</sup>| 1186| 9.46| -| -|  
 - f| 4<sup>h</sup>| 1210| 10.21| -| -|  
 - g| -38°| 1687| 11.13| -| -|  
 - h| -38°| 1695| 11.95| -| -|

[[04 43 49]] a| AGC| 5478| 7.57| -| -| B38400  
 R Pictoris| b| AGC| 5490| 7.77| -|  
 - c| -49°| 1563| 7.97| -|  
 - d| 4<sup>h</sup>| 1539| 8.25| -|  
 - e| -49°| 1422| 8.55| -|  
 - f| -50°| 1505| 8.83| -|  
 - g| -49°| 1428| 9.15| -|

Exam of Spectra of Comp. Stars. (cont.)					
Object	Des.	Cat.	No.	Photog. Magn.	Sp. Plate.
033555 - Reticuli	a	3 <sup>h</sup>	1103	7.60	
	b	-55°	561	8.00	
	c	-55°	557	8.25	
	d	3 <sup>h</sup>	1126	8.37	
	e	3 <sup>h</sup>	1152	8.52	
	f	-55°	550	8.84	
	g	-55°	548	9.02	
	h	-55°	546	9.32	
143738 R Caeli	a	4 <sup>h</sup>	1265	6.86	
	b	4 <sup>h</sup>	1077	7.46	
	c	4 <sup>h</sup>	1271	8.16	
	d	4 <sup>h</sup>	1157	8.88	
	e	4 <sup>h</sup>	1186	9.46	
	f	4 <sup>h</sup>	1210	10.21	
	g	-38°	1687	11.13	
	h	-38°	1695	11.95	
04 43 49 R Pictoris	a	AGC	5478	7.57	
	b	AGC	5490	7.77	
	c	-49°	1563	7.97	
	d	4 <sup>h</sup>	1539	8.25	
	e	-49°	1422	8.55	
	f	-50°	1505	8.83	
	g	-49°	1428	9.15	

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## Exam of Spectra of Comp. Stars (cont.)

[[6 column chart]]

Object| Dis.| Cat.| No.| Photog. Magn.| Sp. Plate.| B 18482 (pour)

S Pictoris	a	5<sup>h</sup> 320	8.47	-	-
[[underline]]050848[[/underline]]	b	5<sup>h</sup> 327	8.73	-	-
-	c	5<sup>h</sup> 363	9.28	-	-
-	d	5<sup>h</sup> 1675	9.70	-	-
-	e	5<sup>h</sup> 1670	10.30	-	-
-	f	5<sup>h</sup> 1660	10.85	-	-

-Pictoris	a	5<sup>h</sup> 536	8.57	-	B184821 (pour)
[[underline]]050848[[/underline]]	b	5<sup>h</sup> 409	8.82	-	-
-	c	5<sup>h</sup> 477	9.12	-	-
-	d	-46° 555	9.44	-	-
-	e	-47° 556	9.66	-	-
-	f	-46° 557	9.98	-	-
-	g	-47° 557	10.23	-	-

T 6•lumbae	a	-33° 2217	7.23	-	B24442
[[underline]]051533[[/underline]]	b	-33° 2238	7.81	-	-
-	c	-34° 2177	8.23	-	-
-	d	-33° 2256	8.71	-	-
-	e	-33° 2269	8.93	-	-
-	f	-33° 2285	9.28	-	-
-	g	-33° 2276	9.63	-	-
-	h	-33° 2230	10.01	-	-

Exam of Spectra of Comp. Stars (cont.)						
Object.	Dis.	Dec.	Mag.	Sp. Plate.	B 18482 (pour)	
S Pictoris	a	5 <sup>h</sup> 320	8.47			
050848	b	5 <sup>h</sup> 327	8.73			
	c	5 <sup>h</sup> 363	9.28			
	d	5 <sup>h</sup> 1675	9.70			
	e	5 <sup>h</sup> 1670	10.30			
	f	5 <sup>h</sup> 1660	10.85			
-Pictoris						
	a	5 <sup>h</sup> 536	8.57			B 184821 (pour)
050848	b	5 <sup>h</sup> 409	8.82			
	c	5 <sup>h</sup> 477	9.12			
	d	-46° 555	9.44			
	e	-47° 556	9.66			
	f	-46° 557	9.98			
	g	-47° 557	10.23			
T 6•lumbae						
	a	-33° 2217	7.23			B 24442
051533	b	-33° 2238	7.81			
	c	-34° 2177	8.23			
	d	-33° 2256	8.71			
	e	-33° 2269	8.93			
	f	-33° 2285	9.28			
	g	-33° 2276	9.63			
	h	-33° 2230	10.01			

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## Exam. of Spectra of Comp. Stars. (cont.)

[[6 column chart]]

Object| Des.| Cat.| No.| Photog. Magn.| Sp. Plate.| A7577

S Doradus | a | AY6 6218 | 7.94 | - | - |  
 [[underline]]0518 69[[/underline]] | b | -69° 355 | 8.52 | - | - |  
 - | c | AY6 6259 | 9.07 | - | - |  
 - | d | -69° 354 | 9.52 | - | - |  
 - | e | -69° 352 | 9.94 | - | - |  
 - | f | -69° 357 | 10.36 | - | - |  
 - | g | " | 10.78 | - | - |  
 - | h | " | 11.13 | - | - |

R Columbae | a | -29° 2540 | 7.64 | - | B9054 |  
 [[underline]]0546 29[[/underline]] | b | -29° 2541 | 8.3 | - | - |  
 - | c | -29° 2519 | 8.87 | - | - |  
 - | d | -29° 2542 | 9.39 | - | - |  
 - | e | -29° 2535 | 10.07 | - | - |  
 - | f | -29° 2534 | 10.52 | - | - |

R Ictautis | a | AY6 9770 | 6.92 | - | B22238 |  
 [[underline]]0556 86[[/underline]] | b | AY6 7601 | 7.22 | - | 15146 |  
 - | c | AY6 5292 | 7.57 | - | - |  
 - | d | -86° 49 | 7.85 | - | - |  
 - | e | -86° 53 | 8.25 | - | - |  
 - | f | -86° 80 | 8.60 | - | - |  
 - | g | -86° 81 | 8.90 | - | - |  
 - | h | -86° 75 | 9.25 | - | - |  
 - | k | -86° 83 | 9.57 | - | - |

Exam. of Spectra of Comp. Stars. (cont.)					
Object	Des.	Cat.	No.	Photog. Magn.	Sp. Plate.
S Doradus AY 6218	a	AY6 6218	7.94		
	b	-69° 355	8.52		
	c	AY6 6259	9.07		
	d	-69° 354	9.52		
	e	-69° 352	9.94		
	f	-69° 357	10.36		
	g	"	10.78		
	h	"	11.13		
R Columbae AY 2540	a	-29° 2540	7.64		
	b	-29° 2541	8.3		
	c	-29° 2519	8.87		
	d	-29° 2542	9.39		
	e	-29° 2535	10.07		
	f	-29° 2534	10.52		
R Ictautis AY 9770	a	AY6 9770	6.92		
	b	AY6 7601	7.22		
	c	AY6 5292	7.57		
	d	-86° 49	7.85		
	e	-86° 53	8.25		
	f	-86° 80	8.60		
	g	-86° 81	8.90		
	h	-86° 75	9.25		
	k	-86° 83	9.57		

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April 12, 1960

Exam. of plates for spectra of variable stars

[[10 column table]]

[Object|Design|DM. No|Photo|Magn.|Sp.|Plate|Date|Obs.|Remark.]

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

[Scuti|[[underlined]]184310|[[underlined]]-10° 4814]

[[underlined]]8.0|9.8|[[underlined]]AF|B38080|Aug. 28, 1907|F|Image well defined]

[Sagittarii|[[underlined]]185323|[[underlined]]-23°

14922z|[[underlined]]8.8|9.9|[[underlined]]G|B40745|Aug. 21, 1909|F|

[SZ Aquilae|185901|+1°

3877|[[underlined]]8.8|10.5|[[underlined]]G5|B30866|Sept. 12, 1903|F|

[SZ Aquilae|185901|+1°

3877|[[underlined]]8.8|10.5|[[underlined]]Gp|B14665|Sept. 18,

1895|F|Spectrum Composite?]

[XZ Cygni|193056|+56°

2257|[[underlined]]8.6|9.3|[[underlined]]A|B34696|May 20, 1907|F|Image well defined]

[XZ Cygni|193056|+56°

2257|[[underlined]]8.6|9.3|[[underlined]]A|B34818|Aug. 14, 1907|F|Image well defined]

[Aquilae|194613|+56°

3741|[[underlined]]10.3|12.7|[[underlined]]K?|B23117|July 2,

1899|F|Image poor]

[X Vulpeculae|195326|+26°

3741|[[underlined]]9.5|10.5|[[underlined]]K?|B11241|July 5,

1894|F|Image poor]

[Aquilae|200103|+26°

3741|[[underlined]]9.0|10.8|[[underlined]]F5?|B13001|Oct. 18, 1893|F|

[XX Cygni|200158|+26° 3741|10.7|11.6|A|B1144|May 11, 1890|F|

[Vulpeculae|203422|+22°

4137|[[underlined]]10.3|10.8|[[underlined]]M5|B19053|Sept. 28,

1897|F|H gamma = [[underlined]]1.0|[[underlined]]H delta

= [[underlined]]0.4|[[underlined]] (An exam. of chart plates taken on Aug.

15, 1890, Sept. 9, 1892, Sept. 23, 1899, Sept. 30, 1901 shows a

variation of about a magnitude]

[UY Cygni|205230|+22° 4137|9.6|10.4|F?|B32272|Nov. 7, 1904|F|Image

poor.]

[RZ Lyrae|183932|+22°

4137|[[underlined]]9.9|11.2|[[underlined]]A?|B30710|Aug. 14,

1903|F|Image poor]

[RZ Lyrae|183932|+22°

4137|[[underlined]]9.9|11.2|[[underlined]]A?|B35428|Aug. 2, 1908

[F|Image poor]

[VX Cygni|205339|+39° 4379|9.1|10.3|K?|B31017|Oct. 20, 1903|F|Image

poor]

[VX Cygni|205339|+39° 4379|9.1|10.3|K|B31134|Nov. 12, 1903|F|

[RV Capricorni|[[underlined]]205515|[[underlined]]+39°

4379|[[underlined]]9.2|10.1|[[underlined]]A|B14376|Aug. 15,

1896|F|Plates B6020 May 21, 1891 and B16722, July 7, 1896, show a

variation of about a magnitude.]

[RV Capricorni|[[underlined]]205515|[[underlined]]+39°

4379|[[underlined]]9.2|10.1|[[underlined]]A|B40621| July 20,

1909|F|Plates B6020 May 21, 1891 and B16722, July 7, 1896, show a

variation of almost a magnitude.]

[JX Cygni|205642|+42° 3935|8.5|9.5| No good Sp. on either of these

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April 12, 1960.

Exam. of plates for spectra of variable stars.

Object	Design	DM. No	Photo	Magn.	Sp.	Plate	Date	Obs.	Remark
- Scuti	184310	-10° 4814	95	95	A?	B38080	Aug. 28, 1907	F	Image well defined
- Scuti	185323	-23° 14922z	88	88	G	B40745	Aug. 21, 1909	F	
SZ Aquilae	185901	+1° 3877	88	85	G5	B30866	Sept. 12, 1903	F	
XZ Cygni	193056	+56° 2257	86	83	A	B34696	May 20, 1907	F	Image well defined
"	"	"	"	"	A	B34818	Aug. 14, 1907	F	Image well defined
Aquilae	194613	+56° 3741	106	107	K?	B23117	July 2, 1899	F	Image poor
X Vulpeculae	195326	+26° 3741	95	95	K?	B11241	July 5, 1894	F	Image poor
Aquilae	200103	+26° 3741	90	90	F5?	B13001	Oct. 18, 1893	F	
XX Cygni	200158	+26° 3741	107	106	A	B1144	May 11, 1890	F	
Vulpeculae	203422	+22° 4137	103	108	M5	B19053	Sept. 28, 1897	F	H gamma, H delta
UY Cygni	205230	+22° 4137	96	94	F?	B32272	Nov. 7, 1904	F	Image poor
Exam. of chart plates taken on August 15, 1890, Sept. 9, 1892, Sept. 23, 1899, Sept. 30, 1901 shows a variation of about a magnitude									
RZ Lyrae	183932	+22° 4137	99	112	A?	B30710	Aug. 14, 1903	F	Image poor
"	"	"	"	"	A?	B35428	Aug. 2, 1908	F	Image poor
VX Cygni	205339	+39° 4379	91	103	K?	B31017	Oct. 20, 1903	F	Image poor
"	"	"	"	"	K	B31134	Nov. 12, 1903	F	
RV Capricorni	205515	+39° 4379	92	101	A	B14376	Aug. 15, 1896	F	Plates B6020 May 21, 1891 and B16722, July 7, 1896, show a variation of about a magnitude
"	"	"	"	"	A	B40621	July 20, 1909	F	Plates B6020 May 21, 1891 and B16722, July 7, 1896, show a variation of almost a magnitude
JX Cygni	205642	+42° 3935	85	95					No good Sp. on either of these
Vy Cygni	210039	+39° 4379	88	90	K	B31134	Nov. 12, 1903	F	
"	"	"	"	"	K	B31134	Nov. 12, 1903	F	
- Indi	212770	-70° 28' 20"	92	102	F	B13053	June 2, 1895	F	
"	"	"	"	"	F	B13053	June 2, 1895	F	
U Lacertae	220550	+55° 55' 28"	88	92	F	B13053	June 2, 1895	F	
V Lacertae	224465	+55° 55' 28"	85	95	F	B13053	June 2, 1895	F	
X Lacertae	224465	+55° 55' 28"	85	95	F	B13053	June 2, 1895	F	

plates: 1193, 1230, 225, 12110, 11484, 11499, 23133, 33604, 34131 and  
 35427 | | | |  
 |VY Cygni|210039|+39°  
 4423|8.8|9.5|K|I|~~8909~~|13489 |Sept. 13,  
 1895|F| |  
 |VY Cygni|210039|+39° 4423|8.8|9.5|K|I31017|Oct. 20, 1903|F| |  
 |-Indi|212770|-70°  
 2860|9.0|10.0|F|B13553|June 3, 1895|F| |  
 |-Indi|212770|-70°  
 2860|9.0|10.0|F|B19966|Aug. 3, 1897|F| |  
 |Y Lacertae|220550|+50° 3581|8.8|9.2|F|I34261|Sept. 18, 1906.|F| |  
 |V Lacertae|224455|+55° 2815|8.5|9.5|  
 G2|I33750|Dec. 18, 1905|F| - |  
 |X Lacertae|224555|+55° 2817|.|.G2|I33750|Dec. 18, 1905|F| |

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April 15, 1910

Exam. of plates to det. spectra of var. stars.

[[10 columned table]]

Object	Design	DM. No	Photo	Magn.	Sp.	Plate	Date	Obs.	Remark.
SW Cassiop	+0230258	9.2	10.2	G2	I33708	Nov. 27, 1905	F		
SW Cassiop	+0230258	9.2	10.2	G2	I34820	Aug 14, 1907	F		
RS Cassiop	+233261	+61°2487	9.1	10.0	G5	I31322	Dec. 22, 1903	F	
RY Cassiop	+234758	+58°2487	9.3	11.8	G5	I33584	Dec. 28, 1905	F	

Variable Stars of Long Period. Table VIII.

[TU Androm|002725|+58°2487|9.5|12|Mc|I28017|Nov. 30, 1901.|F] |  
 [T Sculptoris|002438a|-38°138|7.8|11.4|Ma?|B40948|Oct.  
 19, 1909.|F|Image poor|  
 [Y Cephei|003179|+79°14a|9|12|Md6|I35016|Nov. 11, 1907|F|H gamma=  
 1.0, H delta=5.0|  
 [RW Androm|004132|+79°14a|8.3|<12|Md6|I33818|Jan. 24, 1906|F|H  
 gamma=1.0, H delta=5.0|  
 [RV Cassiop|804746a\*|+79°14a|9.0|12.5|Md6|I16113|Oct. 8, 1896|F|H  
 gamma=1.0, H delta=6.0|  
 [[left margin]]  
 April 18, 1910  
 [[left margin]]  
 [T Horologii|025751|+79°14a|8.0|11.5|Md5|A4167|Dec. 1, 1899|F|H  
 gamma=1.0, H delta=1.2|  
 Plates exam for spectra of long period variables  
 through 032339, and every class entered that could be  
 obtained except for X Sculptoris.  
 [T Ursae Maj.|123160|+60 1406|6.4|13.1|Md6|I36636|March 9, 1910|F|H  
 gamma=1.0, H delta=1.0|  
 [T Ursae Maj.|123160|+60 1406|6.4|13.1|Md6|I36642|March  
 11, 1910|F|H gamma=1.0, H delta=0.9|  
 [V Bootis|142539|+39 2773|6.9|11.0|Mb5|I36644|March 11, 1910|F] |  
 [Y Monocerotis|065111|+39 2773|8.0|13.5|Md5|I36625|March  
 8, 1910|F|[[crossed out]]H gamma[[crossed out]]470=0.6?, H  
 gamma=1.0, H delta=1.2|  
 [Y Hydrae|094622|-22 2739|8.0|10.0|Na|I36228|March 8, 1910|F] |  
 [Y Hydrae|094622|-22 2739|8.0|10.0|Na|I36633|March 9, 1910|F] |  
 [R Tauri|042209|+9 585|8.0|14.0|Md5|I36641|March 11, 1910|F|H  
 gamma=1.0, H delta=1.0, lambda 507=1.0|  
 [S Tauri|042309|+9 586|9.5|14.6|Md5|I36641|March 11, 1910|F] |  
 [SS Virginis|122001|+1 2694|8.3|12.5|Na|I36634|March 9, 1910|F] |  
 [RW Virginis|120206|-5 3424|7.1|8.3|Mb5|I36635|March 9, 1910|F] |  
 [U Librae|153620|-20 4305|9|<14|Md?|I36638|March 9, 1910|F] |

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April 15, 1910.

Exam. of plates to det. spectra of var. stars.

Object	Design	DM. No	Photo	Magn.	Sp.	Plate	Date	Obs.	Remark.
SW Cassiop	+0230258	9.2	10.2	G2	I33708	Nov. 27, 1905	F		
SW Cassiop	+0230258	9.2	10.2	G2	I34820	Aug 14, 1907	F		
RS Cassiop	+233261	+61°2487	9.1	10.0	G5	I31322	Dec. 22, 1903	F	
RY Cassiop	+234758	+58°2487	9.3	11.8	G5	I33584	Dec. 28, 1905	F	

Variable Stars of Long Period. Table VIII.

TU Androm	002725	9.5	12	Mc	I28017	Nov. 30, 1901	F		
T Sculptoris	002438a	-38°138	7.8	11.4	Ma?	B40948	Oct. 19, 1909	F	Image poor
Y Cephei	003179	+79°14a	9	12	Md6	I35016	Nov. 11, 1907	F	H gamma=1.0, H delta=5.0
RW Androm	004132	+79°14a	8.3	<12	Md6	I33818	Jan. 24, 1906	F	H gamma=1.0, H delta=5.0
RV Cassiop	804746a*	+79°14a	9.0	12.5	Md6	I16113	Oct. 8, 1896	F	H gamma=1.0, H delta=6.0
T Horologii	025751	+79°14a	8.0	11.5	Md5	A4167	Dec. 1, 1899	F	H gamma=1.0, H delta=1.2
T Ursae Maj.	123160	+60 1406	6.4	13.1	Md6	I36636	March 9, 1910	F	H gamma=1.0, H delta=1.0
T Ursae Maj.	123160	+60 1406	6.4	13.1	Md6	I36642	March 11, 1910	F	H gamma=1.0, H delta=0.9
V Bootis	142539	+39 2773	6.9	11.0	Mb5	I36644	March 11, 1910	F	
Y Monocerotis	065111	+39 2773	8.0	13.5	Md5	I36625	March 8, 1910	F	
Y Hydrae	094622	-22 2739	8.0	10.0	Na	I36228	March 8, 1910	F	
Y Hydrae	094622	-22 2739	8.0	10.0	Na	I36633	March 9, 1910	F	
R Tauri	042209	+9 585	8.0	14.0	Md5	I36641	March 11, 1910	F	H gamma=1.0, H delta=1.0, lambda 507=1.0
S Tauri	042309	+9 586	9.5	14.6	Md5	I36641	March 11, 1910	F	
SS Virginis	122001	+1 2694	8.3	12.5	Na	I36634	March 9, 1910	F	
RW Virginis	120206	-5 3424	7.1	8.3	Mb5	I36635	March 9, 1910	F	
U Librae	153620	-20 4305	9	<14	Md?	I36638	March 9, 1910	F	

Plates exam for spectra of long period variables through 032339, and every class entered that could be obtained except for X Sculptoris.

April 21, 1910

[[10 columned table]]

Object	Design	DM No.	Photo.	Magn.	Sp.	Plate	Date	Obs.	Remark			
RJ Hydrae	082405	..	8.9	12.8	Mc	136626	March 8, 1910	F				
Z Ceti	010102	..	9.0	13.0	Md	B23768	Aug. 3, 1899	F	H gamma = 1.0, H delta = 5.0			
Z Ceti	010102	..	9.0	13.0	Md	B23789	Aug. 8, 1899	F	H gamma = 1.0, H delta = 5.0			
SX Androm	012746	..	9.2	<12.5	Md	119648	Nov. 27, 1897	F	Image very faint			
SS Persei	014950	+50°49'	..	..	Md	135801	Jan. 15, 1909	F	Image very faint			
- Columbae	050534	-34°59'	8.8	9.7	Md	B24442	Oct. 25, 1899	F	Image faint.			
ST Aurigae	053538	..	9.5	<12	Md	13030	Feb. 10, 1891	F	Image faint.			
SU Tauri	054319	..	10.0	<15	Ma	131403	Jan. 18, 1904	F	Image poor.			
SS Aurigae	060547	..	9.0	<14.5	Md	132859	March 6, 1905	F	Image very faint			
SS Aurigae	060547	..	9.0	<14.5	Md	132967	April 2, 1905	F	Image very faint			
SU Gemin.	060727	..	delta 10	[[??]]	2.5	Md	47	March 11, 1898	F	Image faint		
IR Monocer.	063308	+8°14'27"	9.5	13	R	119627	Nov. 23, 1897	F	No well defined spectrum can be separated from that of the neb., which is cont. and hazy.			
IRV Puppis	063942	-42°26'82"	9.1	<11.5	Md	A8552	Nov. 13, 1907	F	SP. on edge of plate			
IR Volantis	070772	..	8.7	11.5	Md	B15168	Nov. 16, 1897	F	[[crossed out]]2[[/crossed out]]5 Faint trace of bright H gamma and H delta.			
RX Monocerotis	072404	..	9.5	<12.5	Md	B20681	Oct. 28, 1897	F	Very faint. H gamma=1.0, H delta=5.0			
Z Puppis	0728206	..	7.5	[[?]]	13	Md	B18983	April 28, 1897	F	H gamma=1.0, H delta=6.0		
Y Velorum	092551	-51°38'58"	8.6	12.5	Md	B39868	Jan. 25, 1909	F	Spectrum very faint.			
RS Hydrae	104628	..	[[crossed out]]28	[[crossed out]]27	7724	8.6	12.0	Md	B15601	April 13, 1896	F	Spectrum very faint
RU Ursae Maj.	113639	..	9.0	<11	Md	5	124965	March 27, 1900	F	H gamma=1.0, H delta=5.0		

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April 21, 1910.

Object	Design	DM	To Photo.	Magn.	Sp.	Plate	Date	Obs.	Remark	
RJ Hydrae	082405	..	8.9	12.8	Mc	136626	March 8, 1910	F		
Z Ceti	010102	..	9.0	13.0	Md	B23768	Aug. 3, 1899	F	H $\gamma$ =1.2, H $\delta$ =5.0	
"	"	..	9.0	13.0	Md	B23789	Aug. 8, 1899	F	H $\gamma$ =1.0, H $\delta$ =5.0	
SX Androm.	012746	..	9.2	<12.5	Md	119648	Nov. 27, 1897	F	Image very faint	
SU Tauri	054319	..	10.0	<15	Ma	131403	Jan. 18, 1904	F	Image poor.	
SS Aurigae	060547	..	9.0	<14.5	Md	132859	March 6, 1905	F	Image very faint	
SS Aurigae	060547	..	9.0	<14.5	Md	132967	April 2, 1905	F	Image very faint	
SU Gemin.	060727	..	delta 10	[[??]]	2.5	Md	47	March 11, 1898	F	Image faint
R Monocerotis	063308	+8°14'27"	9.5	13	R	119627	Nov. 23, 1897	F	No well defined spectrum can be separated from that of the neb. which is cont. and hazy.	
IRV Puppis	063942	-42°26'82"	9.1	<11.5	Md	A8552	Nov. 13, 1907	F	SP. on edge of plate	
IR Volantis	070772	..	8.7	11.5	Md	B15168	Nov. 16, 1897	F	[[crossed out]]2[[/crossed out]]5 Faint trace of bright H $\gamma$ and H $\delta$ .	
RX Monocerotis	072404	..	9.5	<12.5	Md	B20681	Oct. 28, 1897	F	Very faint. H $\gamma$ =1.0, H $\delta$ =5.0	
Z Puppis	072820	..	7.5	13	Md	B18983	April 28, 1897	F	H $\gamma$ =1.0, H $\delta$ =6.0	
April 28, 1910.										
Y Velorum	092551	-51°38'58"	8.6	12.5	Md	B39868	Jan. 25, 1909	F	Spectrum very faint.	
RS Hydrae	104628	..	[[crossed out]]28	[[crossed out]]27	7724	8.6	12.0	Md	B15601	
RU Ursae Maj.	113639	..	9.0	<11	Md	5	124965	March 27, 1900	F	H $\gamma$ =1.0, H $\delta$ =5.0

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May 4, 1910

Exam. of Plates to det. spectra of Variables

[[10 columned table]]

Object	Design.	DM No.	Photo.	Magn.	Sp.	Plate	Date	Obs.	Remark
R J Librae	150	<del>13051</del>	April 17, 1895	F	H	gamma=1.0, H delta=0.6			

R J Librae 150~~13051~~ 018-18  
3975|8.5|13.5|Md5|B13051|April 17, 1895|F|H gamma=1.0, H delta=0.6|

May 12, 1910.

[[10 columned table]]

Object	Design.	DM No.	Photo.	Magn.	Sp.	Plate	Date	Obs.	Remark
-Carinae	101060	10.0	<15.5	Md8	A2223	March 12, 1897	F	Well Defined	

-Carinae|101060|10.0|<15.5|Md8|A2223|March 12, 1897|F|Well Defined|

-Herculis|164012|+12°3081|9.4|<11.0|Md8|I25570|July 18, 1900|F|  
SS Ophiuchi|165202|8.1|12.0|Md5|B13819|June 22, 1895|F|H  
gamma=10 H delta=10.

[[crossed out]]RV Herculis[[crossed out]]-Scorpii[[crossed out]]  
165631[[crossed out]]170432[[crossed out]]+31°2949[[crossed out]]  
-32°12429|9.6|[[crossed out]]15.8|[[crossed out]]  
out|11.3|Md6|A6438|July 1, 1903|F|H gamma=10, H delta=12|

[[crossed out]]11.3|Md6|A6438|July 1, 1903|F|H gamma=10, H delta=12|  
SU Herculis|174422|10|<12|Mc|I31722|May 16, 1904|F|

SS Lyrae|191046|9|13|Md8|I33542|Oct. 17, 1905|F|Image poor.|  
SS Lyrae|191046|9|13|Md10|I35424|July 30, 1908|F|Image poor.|

S Sagittarii|191319|-19°5394|9.1|14.5|Md6|B38106|Aug. 31, 1907|F|  
U

Lyrae|191637|+37°3418|alpha|8.3|<12|[[crossed out]]Md6?[[crossed out]]WS|I32242|Oct. 29, 1904|F|Image poor.|

S  
Septentis|102900|+37°3418|alpha|8.9|10.5|Md?|  
B13378|May 18, 1895|F|Image poor|

SY Scorpii|174734a|R|8.7|<12.0|[[crossed out]]Md5?[[crossed out]]  
out|B39203|June 19, 1898|F|

-Aquilae|192201|1°4003|9.8|<13.5|Md?|B24086|Sept. 7, 1899|F|Image very ft|

TY Cygni|192928|+28°3387|8.7|<14|Mc|I30680|July 27, 1903|F|Image ft|  
-Telescopii|193245|+28°3387|9.2|<13.5|Md5|A3613|June 9, 1899|F|Well defined H gamma=10, H delta 10|

-Sagittarii|193742|+28°3387|9.0|13.2|MD10|A4377|  
May 7, 1900|F|Faint|H gamma 10, H delta 100|

RS Lyrae|190933a|+33°3371a|10|<13.5|Md?|I35428|August  
2, 1908|F|Image faint|

RJ Lyrae|185737|+37°3309a|10.5|<14.5|Md5?|I34172|Aug 15, 1906|F|H  
gamma=10, H delta=10|

L Delphini|202817|+16°4290|9.3|<12|Md4|I31167|Nov. 20, 1903|F|H  
gamma=10, H delta=10.

L Delphini|202817|+16°4290|.|.Md4|I31193|Nov. 25, 1903|F|H  
gamma=10 H delta=10?

L Delphini|202817|+16°4290|.|.Md4|I3156|July 31, 1895|F|H  
gamma=10 H delta=4|

SJ Cygni|202954|+54°2|[[crossed out]]4|[[crossed out]]  
out|373a|9|14|Md8|I32311|Nov. 12, 1904|F|H gamma=10 H delta=60|

34	May 4, 1910.				
	Exam. of Plates to det. spectra of Variables				
Object	Design.	DM No.	Photo.	Magn.	Sp.
R J Librae	150	13051	April 17, 1895	F	H
					gamma=1.0, H delta=0.6
May 12, 1910.					
-Carinae	101060	10.0	<15.5	Md8	A2223
					March 12, 1897 F Well Defined
-Herculis	164012	+12°3081	9.4	<11.0	Md8
					I25570 July 18, 1900 F
SS Ophiuchi	165202	8.1	12.0	Md5	B13819
					June 22, 1895 F H gamma=10, H delta=10.
[[crossed out]]RV Herculis	[[crossed out]]165631	[[crossed out]]170432	[[crossed out]]+31°2949	[[crossed out]]-32°12429	9.6
					[[crossed out]]15.8
[[crossed out]]	[[crossed out]]	[[crossed out]]	[[crossed out]]	[[crossed out]]	[[crossed out]]
					out 11.3 Md6 A6438 July 1, 1903 F H gamma=10, H delta=12
SU Herculis	174422	10	<12	Mc	I31722
					May 16, 1904 F
SS Lyrae	191046	9	13	Md8	I33542
					Oct. 17, 1905 F Image poor.
SS Lyrae	191046	9	13	Md10	I35424
					July 30, 1908 F Image poor.
S Sagittarii	191319	-19°5394	9.1	14.5	Md6
					B38106 Aug. 31, 1907 F
U					
Lyrae	191637	+37°3418	alpha	8.3	<12
					[[crossed out]]Md6?[[crossed out]]WS I32242 Oct. 29, 1904 F Image poor.
S					
Septentis	102900	+37°3418	alpha	8.9	10.5
					Md? B13378 May 18, 1895 F Image poor
SY Scorpii	174734a	R	8.7	<12.0	[[crossed out]]Md5?[[crossed out]]
					out B39203 June 19, 1898 F
-Aquilae	192201	1°4003	9.8	<13.5	Md? B24086
					Sept. 7, 1899 F Image very ft
TY Cygni	192928	+28°3387	8.7	<14	Mc I30680
					July 27, 1903 F Image ft
-Telescopii	193245	+28°3387	9.2	<13.5	Md5 A3613
					June 9, 1899 F Well defined H gamma=10, H delta 10
-Sagittarii	193742	+28°3387	9.0	13.2	MD10 A4377
					May 7, 1900 F Faint H gamma 10, H delta 100
RS Lyrae	190933a	+33°3371a	10	<13.5	Md? I35428
					August 2, 1908 F Image faint
RJ Lyrae	185737	+37°3309a	10.5	<14.5	Md5? I34172
					Aug 15, 1906 F H gamma=10, H delta=10
L Delphini	202817	+16°4290	9.3	<12	Md4 I31167
					Nov. 20, 1903 F H gamma=10, H delta=10.
L Delphini	202817	+16°4290	. .	Md4	I31193
					Nov. 25, 1903 F H gamma=10 H delta=10?
L Delphini	202817	+16°4290	. .	Md4	I3156
					July 31, 1895 F H gamma=10 H delta=4
SJ Cygni	202954	+54°2	[[crossed out]]4	[[crossed out]]	out 373a 9 14 Md8 I32311
					Nov. 12, 1904 F H gamma=10 H delta=60

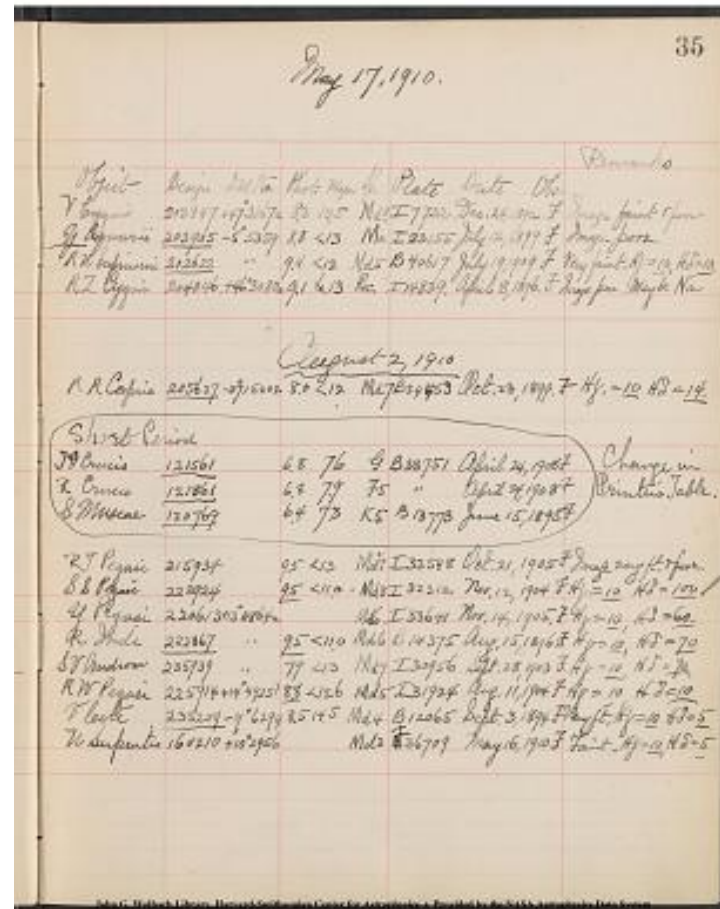
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May 17, 1910

[[10 columned table]]  
Object	Design	DM No.	Photo.	Magn.	Sp.	Plate	Date	Obs.	Remark
V Cygni	203847	+47°3167a	8.3	135	Md?	7732	Dec. 24, 1892	F	Image
faint and poor									
Y Aquarii	203905	-5°5359	8.8	<13	Mc	I23155	July 12, 1899	F	Image
poor									
RU Capricorni	202622	-5°5359	9.4	<12	Md5	B40617	July 19,		
1909	F	Very faint. H gamma=10 H delta=10.							
RL									
 Cygni|204846|+46°3080a|9.1|[[~~striketrough~~]]6|[[~~striketrough~~]]13|Pec.|  
 14839.|April 8, 1896|F|Image poor. Maybe Na|

August 2, 1910

[10 columned table]  
[RR Capric[[205627][-27°15'20.8]<12|Md7|B24453|Oct. 28, 1899|F|H  
gamma=[[1.0]] H  
delta=[[14.]]  
|Short Period|  
|J|~~G~~|  
Crucis[[121561][6.8]|7.6|G|B38751|April 24,  
1908|F|Change in Printer's Table.|  
|R Crucis[[121861][6.8]|7.9|F5|B38751|April  
24, 1908|F|Change in Printer's Table.|  
S Muscae[[120769][6.4]|7.3|K5|B13773|June 15, 1895|F|Change in Printer's Table.|  
RJ Pegasi|215934| |9.5|<13|Md?|I33548|Oct. 21, 1905|F|Image very ft.  
& poor|  
SS Pegasi|222924| |9.5|<11.0|Md8|I32312|Nov. 12, 1904|F|H  
gamma=[[10]] H  
delta=[[100]]  
Y Pegasi|220613+13°48'64a| |M6|I33641|Nov. 14, 1905|F|H  
gamma=[[10]] H  
delta=[[60]]  
|R  
Indi[[222867][+13°48'64a]9.5|<11.0|Md6|B1437  
5|Aug. 15, 1896|F|H gamma=[[10]] H  
delta=[[70]]  
SV Audrom|[235939]+13°48'64a|7.9|<13|Md7|I30956|Sept. 28, 1903|F|H  
gamma=[[10]] H  
delta=[[70]]  
RW Pegasi|225914+14°49'25?|8.8|<126|M5|I31924\_Aug. 11,  
1904|F|H gamma=[[10]] H  
delta=[[10]]  
V Lecti[[235209][9°6'294]8.5|14.5|M4|B12065|Sept. 3, 1894|F|Very ft. H  
gamma=[[10]] H  
delta=[[5]]  
U Serpentis|160210+10°29'56| |M3|I36709|May 16, 1910|F|Faint.  
H gamma=[[10]] H  
delta=[[5]]





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Exam of Sheetra of Enough Stars for variables

Object | Des. | Gat. | No. | Photog. Magn. | Sh. | Plate | B 20670

0701 35 | a | 6h | 2906 | 7.68  
 -Puffio. | b | 7h | 244 | 8.18  
 | c | 7h | 214 | 8.53  
 | d | 7h | 19 | 8.75  
 | e | 7h | 59 | 8.95  
 | f | -36° | 3359 | 9.43  
 | g | 6h | 3164 | 9.71  
 | h | -35° | 3315 | 9.96  
 | k | -35° | 3337 | 10.36

0721 46 | a | +46° | 1273 | 7.67 | 33840  
 -Lyneis | b | +46° | 1272 | 7.92  
 | c | +46° | 1266 | 8.22  
 | d | +46° | 1269 | 8.50  
 | e | +45° | 1436 | 8.70  
 | f | +45° | 1433 | 8.88  
 | g | +46° | 1264 | 9.18  
 | h | +46° | 1267 | 9.70

0722 11 | a | -11° | 1948 | 9.02 | B 24606  
 -Puffio | b | -11° | 1949 | 9.40  
 | c | -11° | 1944 | 9.68  
 | d | -11° | 1938 | 9.90  
 | e | -11° | 1943 | 10.12

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Exam of Sheetra of Enough Stars for variables

Object	Des.	Gat.	No.	Photog. Magn.	Sh.	Plate
0701 35	a	6h	2906	7.68		
-Puffio.	b	7h	244	8.18		
	c	7h	214	8.53		
	d	7h	19	8.75		
	e	7h	59	8.95		
	f	-36°	3359	9.43		
	g	6h	3164	9.71		
	h	-35°	3315	9.96		
	k	-35°	3337	10.36		
0721 46	a	+46°	1273	7.67		33840
-Lyneis	b	+46°	1272	7.92		
	c	+46°	1266	8.22		
	d	+46°	1269	8.50		
	e	+45°	1436	8.70		
	f	+45°	1433	8.88		
	g	+46°	1264	9.18		
	h	+46°	1267	9.70		
0722 11	a	-11°	1948	9.02		B 24606
-Puffio	b	-11°	1949	9.40		
	c	-11°	1944	9.68		
	d	-11°	1938	9.90		
	e	-11°	1943	10.12		

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## Exam. of Spectra of Comp. Stars cont.

Object Des. Are var called N  
 074241 a in Vol. 55 entered  
 M Puppis b in C at N or Na. See type C  
 c  
 d  
 e  
 f  
 g  
 h

080138 a  
 RJ Puppis b

c  
 d  
 e  
 f  
 g

082476 a  
 R Chamaeleontis b

c  
 d  
 e

f -75° 500 9.75

yes - enter "a"

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Exam. of Spectra of Comp. Stars cont.

Are var called N

in Vol. 55 entered

in C at N or Na. See

IV type Cat? yes -

enter "a"

Object Des. Are var called N

074241 a in Vol. 55 entered

M Puppis b in C at N or Na. See

c

d

e

f

g

h

080138 a

RJ Puppis b

c

d

e

f

g

082476 a

R Chamaeleontis b

c

d

e

f -75° 500 9.75

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[[Start Page]]

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Exam of Spectra[[?]] Of bough. Stars. cont.

Object. Des. bat. No. Photog. Magn. Sp. Plate. A 7586  
074241

N Puppio[[?]]

[[4 Column Table]]

Des. bat. No. Photog. Magn. Sp. Plate]

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

a|7h|3227|7.66|

b|7h|2778|8.14|

c|7h|2876|8.64|

d|7h|3114|9.14|

e|-42°|3480|9.52|

f|7h|3060|9.90|

g|-42°|3491|10.38|

h|-41°|3360|10.88|

080138 [[right margin]]B39920[[/right margin]]

RJ Puppio [[?]]

[[4 Column Table]]

Des. bat. No. Photog. Magn. Sp. Plate]

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

a|8h|143|7.70|

b|8h|65|8.08|

c|~~h~~|~~h~~|119|8.38|

d|8h|217|8.73|

e|-38°|4063|9.08|

f|-38°|4031|9.40|

g|-38°|4024|9.72|

082476

Rbamaeleontis [[?]]

[[4 Column Table]]

Des. bat. No. Photog. Magn. Sp. Plate]

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

a|8h|1647|8.22|

b|-75°|488|8.70|

c|-75°|495|9.00|

d|8h|1587|9.28|

e|-75°|490|9.53|

f|-75°|500|9.75|

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Exam of Spectra of Comp. Stars. cont.

Object	Des.	Bat. No.	Photog.	Magn.	Sp. Plate
074241	a	7 <sup>h</sup> 3227	7.66		
N Puppio	b	7 <sup>h</sup> 2778	8.14		
	c	7 <sup>h</sup> 2876	8.64		
	d	7 <sup>h</sup> 3114	9.14		
	e	-42° 3480	9.52		
	f	7 <sup>h</sup> 3060	9.90		
	g	-42° 3491	10.38		
	h	-41° 3360	10.88		
080138	a	8 <sup>h</sup> 143	7.70		
RJ Puppio	b	8 <sup>h</sup> 65	8.08		
	c	8 <sup>h</sup> 119	8.38		
	d	8 <sup>h</sup> 217	8.73		
	e	-38° 4063	9.08		
	f	-38° 4031	9.40		
	g	-38° 4024	9.72		
082476	a	8 <sup>h</sup> 1647	8.22		
Rbamaeleontis	b	-75° 488	8.70		
	c	-75° 495	9.00		
	d	8 <sup>h</sup> 1587	9.28		
	e	-75° 490	9.53		
	f	-75° 500	9.75		

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[[left margin]]

Sequence selected by H.S.L.

[[left margin]]

Adopted Cl.

[[5 columned table]]

| Good | Poor |

var. +18° 661|1985|~~9~~|~~6~~ 13°|Poor B183  
13°p|136520 5°p|

|-----|

a|B8|A|A|F|

b|B5|A|A|F|

c|G|G|G|F|

d|B8|A|A|F|

e|F5|F5|G?|F|

f|A|A|A|F|

g|B5|A|A|F|

var.|F8G|F8G|F8G|F|

The above was copied from the cover of the plate I9856 W.

I9856 July 21, 1893

B183 Dec. 7, 1885

I36520 Jan. 15, 1910

[[~~8~~ inch Draper. X163|~~]]~~]]

[[8 columned table]]

| X|Y|X|Y|X|Y. |

|-----|

Comet|8.30|8.75|8.35|8.75|8.32|~~]]~~|~~]]~~8.75|Comet|8.60|8.55|8.60|8.60|8.60|8.5|~~]]~~|~~]]~~9|  
1875) R.A. 16°|[h] 11°|[m] 22.82°|[s] Dec. +14° 52' 51.2"Comet|8.85|8.45|8.85|8.45|8.85|8.45|~~]]~~|~~]]~~0|~~]]~~|  
h|10) 16 12 59.34 +14 47 30.09

|a|6.75|13.45|6.75|13.40|6.75|13.42| |

|~~]]~~|~~]]~~b|~~]]~~|~~]]~~adj. samestar|9.25|8.30|9.25|8.35|9.25|8.32|See Arville Walker's Book 3 p. 20-22  
for reduction of position|~~]]~~|~~]]~~c|~~]]~~|~~]]~~adj. same

star|9.20|8.35|9.25|8.35|9.22|8.35| |

|d|3.20|4.20|3.20|4.20|3.20|4.20| |

|e|5.55|~~]]~~|~~]]~~1|~~]]~~|~~]]~~2.65|5.55|2.70|5.55|2.68| |

Comet|8.30|8.75|8.35|8.75|

Comet|8.60|8.60|8.60|8.60|

Comet|8.85|8.45|8.85|8.45|

E F L's scale used (0.5 mm).

Very ft. Oly follows "a" 2 div. = 1mm. South of "a" 5 div. = 2.5 mm,

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[[End Page]]

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mm. +11° 661	Draper	mm. B183 5°p	I 36520 5°p	
a B1	A	A	A	5
b B1	A	A	A	5
c B1	B	B	B	5
d B1	A	A	A	5
e B1	A	A	A	5
f B1	A	A	A	5
g B1	A	A	A	5
var. F8G	F8G	F8G	F8G	F

The above was copied from the cover of plate I 9856 W.

I 9856 July 21, 1893  
B183 Dec. 7, 1885  
I 36520 Jan. 15, 1910

Draper, X163

X	Y	X	Y	X	Y
Comet 8.30	8.75	8.35	8.75	8.32	8.75
8.60	8.55	8.60	8.60	8.60	8.5
8.85	8.45	8.85	8.45	8.85	8.45
8.30	8.75	8.35	8.75	8.32	8.75
8.60	8.60	8.60	8.60	8.60	8.60
8.85	8.45	8.85	8.45	8.85	8.45
8.30	8.75	8.35	8.75	8.32	8.75
8.60	8.60	8.60	8.60	8.60	8.60
8.85	8.45	8.85	8.45	8.85	8.45

16 11 22.82 Dec. +14° 52' 51.2  
16 12 59.34 +14 47 30.09  
See Arville Walker's Book 3, p. 20-22  
for reduction of position

Very ft. Oly follows "a" 2 div. = 1mm. South of "a" 5 div. = 2.5 mm.

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Search for Metcalf's Comet, by W.P.F.  
 Found on Plate 136780 taken August 9, 1910.  
 Exposure 63 m. Beg. S.J.  $19^{\circ}11'$   $2^{\circ}11'$  End.  $20^{\circ}11'$   $5^{\circ}11'$ .  
 Middle of Ex.  $19^{\circ}11'$   $34^{\circ}11'$ . 5.

[[7 columned table]]

Plate|R.A.|Dec.|Ex.|Approx R.A. 1855|Approx Dec. 1855|Obj.|

36870| $16^{\circ}11'$ | $8^{\circ}11'$ |+14.5|63m| $16^{\circ}11'$ | $11.0^{\circ}$ | $14^{\circ}56'$ |Motion SW  
 obj. (hazy).]

Metcalf's obs. reported by telephone on Aug. 9 at 10.15 P.M. Received  
 by S.C. Catterall.

Monday Aug. 8  $15^{\circ}11'$   $16^{\circ}11'$ , G.M.T. R.A.  $16^{\circ}11'$   $27^{\circ}11'$  Dec. +16  
 0'.

Tuesday Aug. 9 1400 G.M.T. R.A. 16 10 Dec. +15 20.  
 8th magnitude NW (should be SW).

Metcalf's Comet. W.P.F.

(Approx 1855)  $16^{\circ}11'$   $10.6^{\circ}$  Dec. +  $15^{\circ}58'$

a +  $15^{\circ}29'22''$   $10^{\circ}11'$   $10^{\circ}11'$   $8.0^{\circ}$  +  $15^{\circ}8.4'$  8.3

b +  $15^{\circ}29'23''$   $16^{\circ}11'$   $15.6^{\circ}$  +  $15^{\circ}1.7'$  9.2

c +  $14^{\circ}30'26''$   $16^{\circ}9'$   $24.9^{\circ}$  +  $14^{\circ}48.0'$  9.5

d +  $14^{\circ}30'27''$   $16^{\circ}9'$   $26.2^{\circ}$  +  $14^{\circ}44.2'$  9.0

e +  $14^{\circ}30'19''$   $16^{\circ}9'$   $53.6^{\circ}$  +  $14^{\circ}40.3'$  8.9

August 10, 1910

Search for Metcalf's Comet, by W.P.F.

Found on Plate 136780 taken August 9, 1910.  
 Exposure 63 m. Beg. S.J.  $19^{\circ}11'$   $2^{\circ}11'$  End.  $20^{\circ}11'$   $5^{\circ}11'$ .  
 Middle of Ex.  $19^{\circ}11'$   $34^{\circ}11'$ .

Plate R.A. Dec. Ex. 1855 1855 Obj.  
 36870  $16^{\circ}11'$   $8^{\circ}11'$  +14.5 63  $16^{\circ}11'$   $11.0^{\circ}$  +14.56 Motion SW (hazy).

Metcalf's obs. reported by telephone on Aug. 9 at 10.15 P.M. Received by S.C. Catterall.  
 Monday Aug. 8  $15^{\circ}11'$   $16^{\circ}11'$ , G.M.T. R.A.  $16^{\circ}11'$   $27^{\circ}11'$  Dec. +16 0'.  
 Tuesday Aug. 9 1400 G.M.T. R.A. 16 10 Dec. +15 20.  
 8th magnitude NW (should be SW).

Metcalf's Comet. W.P.F.  
 (Approx 1855)  $16^{\circ}10.6'$  Dec. +  $15^{\circ}58'$

a +  $15^{\circ}29'22''$   $16^{\circ}10.6'$  +  $15^{\circ}8.4'$  8.3  
 b +  $15^{\circ}29'23''$   $16^{\circ}11.156'$  +  $15^{\circ}1.7'$  9.2  
 c +  $14^{\circ}30'26''$   $16^{\circ}9'24.9'$  +  $14^{\circ}48.0'$  9.5  
 d +  $14^{\circ}30'27''$   $16^{\circ}9'26.2'$  +  $14^{\circ}44.2'$  9.0  
 e +  $14^{\circ}30'19''$   $16^{\circ}9'53.6'$  +  $14^{\circ}40.3'$  8.9

10. 16 10. 37 +14 56 41

Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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August 10, 1910

Search for Metcalf's Comet, by W.P.F.  
 Found on Plate I 36780 taken August 9, 1910.  
 Exposure 63 m Beg. S.J.  $19^{\circ}16'$  End.  $20^{\circ}56'$  5<sup>h</sup> 5<sup>m</sup>.  
 Middle of Ex.  $19^{\circ}34'$  5.

[[7 columned table]]

Plate|R.A.|Dec.|Ex.|Approx R.A. 1855|Approx Dec. 1855|Obj.|

36870| $16^{\circ}16'$ | $8^{\circ}14'$ |63| $16^{\circ}16'$ | $11.0^{\circ}$ |14° 56'|Motion SW  
 obj. (hazy).|

Metcalf's obs. reported by telephone on Aug. 9 at 10.15 P.M. Received  
 by S.C. Catterall.

Monday Aug. 8  $15^{\circ}16'$   $16^{\circ}16'$  G.M.T. R.A.  $16^{\circ}16'$  Dec. +16  
 0'.

Tuesday Aug. 9 1400 G.M.T. R.A. 16 10 Dec. +15 20.

8th magnitude NW (should be SW).

Washington.

Aug 10. 7174 G.M.T. 16 10 29.3 + 14° 56' 41"

Harvard plate.

[[2 columned table]]

Aug. 9. 630 GMT| $16^{\circ}16'$ | $13^{\circ}16'$ | $0^{\circ}16'$ |+14° 47 31|

|16 10 29 +14 56 41|

[[5 columned table]]

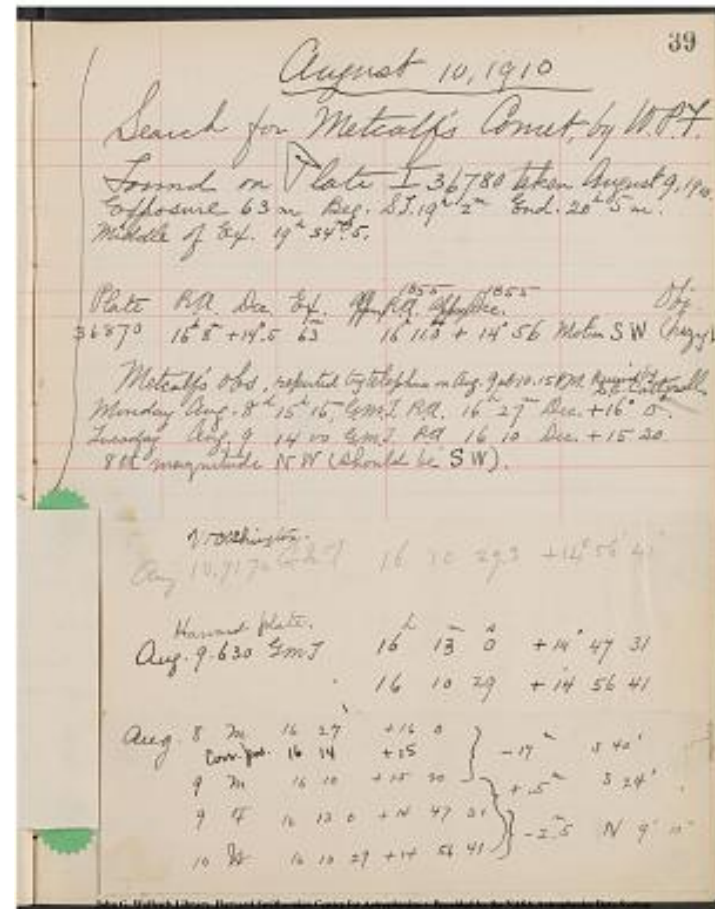
Aug. 8|M|16 27|+ 16 0|-17<sup>h</sup>|S 40'|

|Corr. pos.|16 14|+ 15|-17<sup>h</sup>|S 40'|

|9|M|16 10|+15 20|+5<sup>h</sup>|S 24'|

|9|F|16 13 0|+14 47 31|-2.5<sup>h</sup>|N 9' 10"|

|10|W|16 10 29|+14 56 41|-2.5<sup>h</sup>|N 9' 10"|



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Metcalfs Comet.

[[5 columns]]

Plate | Date | [[?]] | R.C.L. | Dec.

| | | m | s |

[[MC 522 | Aug. 12, 1910 | 60^m | 16 [[crossed-out]] 4 [[crossed-out]] 3

58.5 + 15^0 20^1 (1855)

| 36783 | Aug 12, 1960 | 60. | | Shows [faint]] images of spectrums

M.C.522

[[5 columns]]

[[blank space]] | x | y | x | y

[[?]] [[crossed-out]] x [[crossed-out]] 12.30 | [[crossed-out]] y [[crossed-out]]

6.85 | 12.35 | 6.85

" | 12.60 | 6.80 | 12.60 | 6.75

" | 12.90 | 6.75 | 12.85 | 6.70

a | 1.80 | 1 [[crossed-out]] 3 [[crossed-out]] 5.70 | 1.80 | 15.70

b | 10.85 | 4.10 | 10.85 | 4.10

c | 15.70 | 15.60 | 15.70 | 15.60

d | 21.25 | 13.60 | 21.25 | [[crossed-out]] 6 [[crossed-out]] 13.55

[[ 8 columns]]

Comet | 12.35 | [[crossed-out]] 12.60 [[crossed-out]] 6.90 | [[crossed-

out]] 12.35 [[crossed-out]] | 6.85 | [[crossed-out]] 6.90 | 12.35 | 6.85

" | 12.60 | 6.80 | 12.60 | 6.75

" | 12.90 | 6.75 | 12.85 | 6.70

a | 180 | 13.7 [[crossed-out]] [replaced with]] 5 | 1.80 | 15.70 |

b | 19.85 | 4.10 | 10.85 | 4.10 |

c | 15.70 | 15.60 | 15.70 | 15.60 |

d | 21.25 | 13.60 | 21.25 | [[crossed-out]] 6 [[replaced with]] 13.55 |

Comet | 12.35 | 12.60 [[crossed-out]] [[replaced with]] 6.90 | 6.90 [[crossed

out]] [[replaced with]] 6.85 | 12.35 [circled] | 6.85 [[circled]] |

" | 12 [[crossed-out]] .85 [[replaced with]] .60 | 6.85 | [[crossed-out]] 12.60

| [[crossed-out]] 6.75 | [[crossed-out]] 6.85 [[circled]] | 12.60 [[circled]] |

" | 12.85 | 6.75 | [[crossed-out]] 12.85? | | [[crossed-out]] 6.70 | [[crossed-

out]] 6.75 | 12.85 [[circled]]

1875

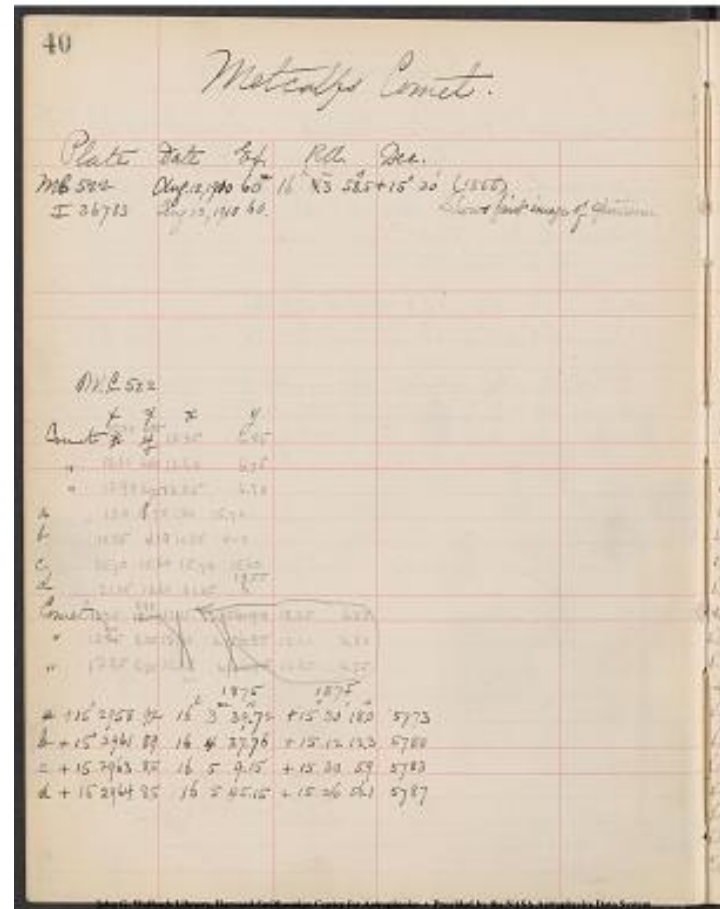
L M S O I? II?

a +15? 2958 9.2 | 16 3 39.72 | +15 30 180 | 5773

b +15? 2961 8.9 | 16 4 37.76 | +15 12 12.3 | 5780

c +15 2963 8.5 | 16 5 9.15 | +15 30 5.9 | 5783

d +15 2964 8.5 | 16 5 45.15 | +15 26 56.1 | 5787



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October 4, 1910.

Nova Sagittarii No. 2. Found by W.P. Fleming, October 1, 1910, on B41397 taken at Arequipa with the 8-in Bache Telescope, on May 31, 1910.

Approx R.A. 17 52, Dec.-27<sup>h</sup> 30<sup>m</sup>, magn. 8.5?

[[7 columned table]]

Plate|Date|Ex|Est.| J D| |

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

B/39051|08, 5,

29,|11<sup>h</sup>|~~[[m]]~~[[~~[[N.S.]]~~]]~~[[12]]~~ |

12[[12]] | 1|

B/40259|09, 5, 11|18|N.S.<[[12]] | 2|

B 9279|?| N.S.<[[12]] | 3|

B 985[[~~[[7]]~~]]|N.S.<[[12]] | 4|

<12[[12]] | 4|

B 3886|July 23, 1889| N.S.<12.5| 5|

B 37314|May 2, 1907,|10|N.S.<12| 6|

B 41365|May 28, 1910,|15|8.5|8820| 7|

B 4059|Aug. 21, 1889|80|N.S.<12.5| 8|

AM 6946|May 28, 1910|60|8.5|8820. | 9|

AM 6445|Aug. 10, 1909|75|N.S.<9.5| 10|

AM 6636|Oct. 7, 1090,|125|N.S.<9.5| 11|

AM 6976|June 2, 1910|60|8.6|8825. | 12|

AM 6945|May 28, 1910,|60|8.1|8820. | 13|

B 40363|May 29, 1909,|10|N.S.<12| 14|

AM 6613|Sept. 21, 1910,|125|N.S.<11.5| 15|

AC 11574|Apr. 12, 1910,|70|8.4|8774. | 16|

[[~~[[AC 17320|Mar. 21, 1910,|60|8.3|8777. | 17|~~]]]] | 17|

AM 6880|Apr. 15, 1910|60|7.9|8777. | 18|

AC 11520|Mar. 21, 1910|60|8.5|8752. | 19|

AC 11702|June 10, 1910|64|8.5|8825. | 20|

AM 1589|Sept. 30, 1902|60|N.S.<11| 21|

AM 6952|May 29, 1910,|60|8.2| 8821. | 22|

AM 6475|Aug. 16, 1909,|68|N.S.<10.5| 23|

AC 11664|May 16, 1910,|60|4.8| 8808. | 24|

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October 4, 1910.

Nova Sagittarii No. 2. Found by  
W.P. Fleming, October 1, 1910, on B41397 taken at  
Arequipa with the 8-in Bache Telescope, on May 31, 1910.  
Approx R.A. 17 52, Dec.-27<sup>h</sup> 30<sup>m</sup>, magn. 8.5?

Plate	Date	Ex	Est.	J D	
B/39051	08, 5,				1
29,	11 <sup>h</sup>	<del>[[m]]</del>	<del>[[N.S.]]</del>	<del>[[<u>12</u>]]</del>	
12	<u>12</u>				1
B/40259	09, 5, 11	18	N.S.<12		2
B 9279	?		N.S.<12		3
B 985	<del>[[7]]</del>		<del>[[N.S.&lt;12]]</del>		4
B 3886	July 23, 1889		N.S.<12.5		5
B 37314	May 2, 1907	10	N.S.<12		6
B 41365	May 28, 1910	15	8.5	8820	7
B 4059	Aug. 21, 1889	80	N.S.<12.5		8
AM 6946	May 28, 1910	60	8.5	8820.	9
AM 6445	Aug. 10, 1909	75	N.S.<9.5		10
AM 6636	Oct. 7, 1090	125	N.S.<9.5		11
AM 6976	June 2, 1910	60	8.6	8825.	12
AM 6945	May 28, 1910	60	8.1	8820.	13
B 40363	May 29, 1909	10	N.S.<12		14
AM 6613	Sept. 21, 1910	125	N.S.<11.5		15
AC 11574	Apr. 12, 1910	70	8.4	8774.	16
[[ <del>[[AC 17320 Mar. 21, 1910, 60 8.3 8777.   17 </del> ]]]]					17
AM 6880	Apr. 15, 1910	60	7.9	8777.	18
AC 11520	Mar. 21, 1910	60	8.5	8752.	19
AC 11702	June 10, 1910	64	8.5	8825.	20
AM 1589	Sept. 30, 1902	60	N.S.<11		21
AM 6952	May 29, 1910	60	8.2	8821.	22
AM 6475	Aug. 16, 1909	68	N.S.<10.5		23
AC 11664	May 16, 1910	60	4.8	8808.	24

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Oct. 4, 1910.

Nova Sag. No. 2 cont.

[[5 columned table]]

[Plate|Date|Exp.|Est.||JD.]

-----

AM 6972|June 1, 1910|56^|[m]]|8.5|8824.|

AM 6953|May 29, 1910|60|8.5|8821.|

AC 11711|June 4, 1910|60|8.5|8827.|

B 8712|?|&lt;12 N.S 14|

AM 6861|Apr. 4, 1910|60|8.5|8766.|

AC 11595|Apr. 16, 1910|44|8.0|8778.|

AM 6623|Sept. 24, 1909|67|&lt;9. N.S 15|

AC 1655|Aug. 14, 1901|70|Too poor 17|

AC 1462|May 13, 1901|55|&lt;9 N.S 16|

AC 963|Aug. 16, 1900|74|Too poor|

AC 858|May 11, 1900|60|&lt;9.5 N.S|

AC 868|May 29, 1900|72|&lt;9.0 N.S|

AC 869|Too poor|

AC 471|Oct. 10, 1899|69|Too poor|

AC 577|Oct 6 1899|Too poor|

AM 1278|May 27, 1902|60|&lt;12. N.S|

AM 1252|" 15, 1902|60|&lt;11 N.S|

AM 1043|Sept. 6, 1901|60|&lt;11.5 N.S|

AM 137|Sept. 6, 1899|75|&lt;11.5 N.S|

AM 15|July 26, 1899|71|&lt;11 N.S|

AM 817|May 28, 1901|60|&lt;12 N.S|

AM 808|May 27, 1901|51|&lt;11.5 N.S|

AM 802|May 22, 1901|60|&lt;11 N.S|

AM 614|Sept. 1 1900|40|&lt;10 N.S|

AM 577|Aug. 2, 1900|62|&lt;11 N.S|

AC 9512|June 4, 1908|48|&lt;9 N.S|

AC 9589|June 29, 1908|60|Too poor|

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Oct. 4, 1910.

Nova Sag. No. 2 cont.

Plate	Date	Exp.	Est.	JD.
AM 6972	June 1, 1910	56	8.5	8824
AM 6953	May 29, 1910	60	8.5	8821
AC 11711	June 4, 1910	60	8.5	8827
B 8712	?	<12	N.S	14
AM 6861	Apr. 4, 1910	60	8.5	8766
AC 11595	Apr. 16, 1910	44	8.0	8778
AM 6623	Sept. 24, 1909	67	<9	N.S 15
AC 1655	Aug. 14, 1901	70	Too poor	17
AC 1462	May 13, 1901	55	<9	N.S 16
AC 963	Aug. 16, 1900	74	Too poor	
AC 858	May 11, 1900	60	<9.5	N.S
AC 868	May 29, 1900	72	<9.0	N.S
AC 869	Too poor			
AC 471	Oct. 10, 1899	69	Too poor	
AC 577	Oct 6 1899		Too poor	
AM 1278	May 27, 1902	60	<12	N.S
AM 1252	" 15, 1902	60	<11	N.S
AM 1043	Sept. 6, 1901	60	<11.5	N.S
AM 137	Sept. 6, 1899	75	<11.5	N.S
AM 15	July 26, 1899	71	<11	N.S
AM 817	May 28, 1901	60	<12	N.S
AM 808	May 27, 1901	51	<11.5	N.S
AM 802	May 22, 1901	60	<11	N.S
AM 614	Sept. 1 1900	40	<10	N.S
AM 577	Aug. 2, 1900	62	<11	N.S
AC 9512	June 4, 1908	48	<9	N.S
AC 9589	June 29, 1908	60	Too poor	

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Oct. 4, 1910  
Nora Sag. No. 2, cont.

[[6 columned table]]  
 Plate|Date|Est.|J.D.|  
 AC 9608|July 6, 1908|60^m|Toohoo.| |  
 AC 9667|Aug. 20, 1908|60|<9 N.S| |  
 AC 9684|Aug 27 1908|63|<9 N.S| |  
 AC 9697 " 29 " |60|Toohoo.| |  
 AC 9754|Sept. 29, " |67|Toohoo| |  
 AC 9792|Oct. 6, " |64|Toohoo| |  
 AC 10519|May 24, 1909|35| " " | |  
 AC 10630|July 7, 1909|61| " " | |  
 AC 10693|Aug. 7, 1909|62| " " | |  
 AM 6462| " 14, " |63|>9 N.S| |  
 AM 6471|Aug 14 " |120|<10 N.S| |  
 AM 6493| " 20, " |130|<10 N.S| |  
 AM 6503| " 22, " |60|<9.5 N.S| |  
 AM 6575|Sept. 11, " |60|<9.5 N.S| |  
 AM 6606|Sept. 19, " |63|<[[struck out]]9[[\struck out]]10 N.S| |  
 AM 7014|June 9, 1910|59|8.5|8832.| |  
 AM 7023|June 11, 1910|120|8.8|8834.| |  
 AM 7035| " 25, 1910|124|8.9|8848.| |  
 AM 7040| " 26, 1910|60|8.9|8849.| |  
 AM 7116|July 11, 1910|120|9.0|8864.| |  
 AM 6592|Sept. 15, 1909|120|<12 N.S| |  
 AC 10825|Sept. 18, 1909|71|<9 N.S| |  
 AC 11[[\struck out]]617[[\struck out]]716|June 7, 1910|62|8.9|8830.| |  
 AC 11741|June 29, 1910|68|9.2 Image [?]|8852.| |  
 AC 11757|July 6, 1910|59|8.8?|8859.| |  
 AC 11807|July 29, 1910|60|8.8|8882. [?]| |  
 AC 10641|July 19, 1909|60|<9 N.S| " " | |  
 AC 10464|Apr. 26, 1909|60|<9 N.S|E [[\struck out]]"[[\struck out]]

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Oct. 4, 1910  
Nora Sag. No. 2, cont.

Date	Time	Est.	Obs.	J.D.
AC 9608	July 6, 1908	60	Toohoo	
AC 9667	Aug. 20, 1908	60	<9	8852
AC 9684	Aug 27 1908	63	<9	8859
AC 9697	" 29 "	60	Toohoo	
AC 9754	Sept. 29, "	67	Toohoo	
AC 9792	Oct. 6, "	64	Toohoo	
AC 10519	May 24, 1909	35	" "	
AC 10630	July 7, 1909	61	" "	
AC 10693	Aug. 7, 1909	62	" "	
AM 6462	" 14, "	63	<9	8852
AM 6471	Aug 14 "	120	<10	8852
AM 6493	" 20, "	130	<10	8852
AM 6503	" 22, "	60	<9.5	8852
AM 6575	Sept. 11, "	60	<9.5	8852
AM 6606	Sept. 19, "	63	<9	8852
AM 7014	June 9, 1910	59	8.5	8832
AM 7023	June 11, 1910	120	8.8	8834
AM 7035	" 25, 1910	124	8.9	8848
AM 7040	" 26, 1910	60	8.9	8849
AM 7116	July 11, 1910	120	9.0	8864
AM 6592	Sept. 15, 1909	120	<12	N.S
AC 10825	Sept. 18, 1909	71	<9	N.S
AC 11[[\struck out]]617[[\struck out]]716	June 7, 1910	62	8.9	8830
AC 11741	June 29, 1910	68	9.2	Image [?] 8852
AC 11757	July 6, 1910	59	8.8?	8859
AC 11807	July 29, 1910	60	8.8	8882
AC 10641	July 19, 1909	60	<9	N.S
AC 10464	Apr. 26, 1909	60	<9	N.S

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Oct. 4, 1910  
 Meas of Slora[[?]] Lag. [[?]] Slo. [[?]] 2 conf. [[?]]  
 Plate Date Eth [[?]] Est. JD  
 AC 10497 May 11, 1909 60 | <9.5 | E  
 AC 10568 June 16, " | 63 | <9 | E  
 AC 10457 Apr. 24, " | 60 | <9.5 | E  
 AC 10551 June 8, " | 60 | <9 | E  
 AM 6393 July 22, " | 61 | <11.5 | E  
 AM 6921 May 14 1910 60 | 8.5 | E 8806.  
 AC 11676 " 19 1910 87 | 7.5 | E 8811. Plclacked [[?]]  
 AM 6015 Mar. 30, 1909 73 | [[strikethrough]] Too  
 foer. [[?]] [[strikethrough]] <9.0  
 [[strikethrough]] AM 6312 July 6, 1909 64 | [[strikethrough]]  
 Oct. 5, 1910  
 AC 11710 | Too foer [[?]]  
 AM 7008 June 8, 1910 60 | 9.5 | 8831  
 [[strikethrough]] AM 7019 " 10, " | 120 | [[strikethrough]]  
 AM 7033 June 25, " | 61 | 9.1 | 8848.  
 AM [[strikethrough]] July [[strikethrough]] 7063 July 2, " | 78 | 9.0 | 8855.  
 AM 7084 " 6, " | 60 | 9.4 | 8859.  
 AM 6989 June 4, " | 65 | 8.2 | E 8827.  
 AM 6997 June 5, " | 120 | 8.3 | E 8828.  
 AM 7015 June 9, " | 120 | 8.5 | E 8832.  
 AM 7039 " 26, " | 122 | 9.2 | E 8849.  
 AM 7083 July 6, " | 60 | 9.4 | E 8859.  
 AM 7102 July 9, " | 64 | 9.2 | E 8862.  
 AM 7128 July 13, " | 61 | 9.3 | E 8866.  
 AC 11747 " 4, " | 60 | 9.0 | E 8857.  
 AC 11760 " 6, " | 60 | 8.8 | E 8859.  
 AM 6278 June 23, 1909 60 | <10 | E  
 AM 6124 May 13, " | 72 | <10.5 | E  
 AM 6206 June 9, " | 60 | <10 | E

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Oct. 4, 1910.

Meas of Slora Lag. Slo. 2 conf.

Plate	Date	Eth	Est.	JD
AC 10497	May 11, 1909	60	<9.5	E
AC 10568	June 16, "	63	<9	E
AC 10457	Apr. 24, "	60	<9.5	E
AC 10551	June 8, "	60	<9	E
AM 6393	July 22, "	61	<11.5	E
AM 6921	May 14 1910	60	8.5	E 8806.
AC 11676	" 19 1910	87	7.5	E 8811.
AM 6015	Mar. 30, 1909	73	[[strikethrough]]	Too foer. [[?]]
[[strikethrough]] AM 6312	July 6, 1909	64	[[strikethrough]]	[[strikethrough]]
Oct. 5, 1910				
AC 11710				Too foer
AM 7008	June 8, 1910	60	9.5	8831
[[strikethrough]] AM 7019	" 10, "	120	[[strikethrough]]	[[strikethrough]]
AM 7033	June 25, "	61	9.1	8848.
AM [[strikethrough]] July [[strikethrough]] 7063	July 2, "	78	9.0	8855.
AM 7084	" 6, "	60	9.4	8859.
AM 6989	June 4, "	65	8.2	E 8827.
AM 6997	June 5, "	120	8.3	E 8828.
AM 7015	June 9, "	120	8.5	E 8832.
AM 7039	" 26, "	122	9.2	E 8849.
AM 7083	July 6, "	60	9.4	E 8859.
AM 7102	July 9, "	64	9.2	E 8862.
AM 7128	July 13, "	61	9.3	E 8866.
AC 11747	" 4, "	60	9.0	E 8857.
AC 11760	" 6, "	60	8.8	E 8859.
AM 6278	June 23, 1909	60	<10	E
AM 6124	May 13, "	72	<10.5	E
AM 6206	June 9, "	60	<10	E

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Oct. 5, 1910.  
Meas. of Shora[[?]] Sag[[?]] Sho. [[?]]2 cont.

Plate	Date	Eth[[?]]	Est.
AM 6416	July 26, 1909	61	<10.5 E
AM 6223	June 13, 1909	123	<10.5 E
AM 6264	June 21, 1909	120	<10.0 E
AM 6320	July 7, 1909	71	<10.0
AM 3802	Aug. 18, 1905	66	<12.0
AM 3883	Sept. 16, 1905	60	<10.5
AM 4269	May 29, 1906	63	<12.0
AM 4339	June 22, 1906	67	<11.5
AM 4365	July 2, 1906	60	<10.
AM 4388	July 11, 1906	60	<12
AM 4527	Aug. 2, 1906	69	<12.5
AM 4539	Aug. 27, 1906	61	<12.0
AM 4562	Sept. 11, 1906	60	<11.5
AM 4620	Oct. 11, 1906	85	<12.
AM 4804	May 7, 1907	60	<12
AM 4858	May 23, 1907	66	<11.5
AM 4920	June 11, 1907	60	<10.5 E
AM 4931	June 20, 1907	60	<12
AM 5013	July 17, 1907	126	<12.2
AM 5024	July 30, 1907	120	<12.2
AM 5090	Aug. 25, 1907	67	<12.
AM 5114	Sept. 1, 1907	70	<12
AM 5340	Mar. 26, 1908	60	<11.5
AM 5390	Apr. 10, 1908	58	<10.5
AM 5444	May 7, 1908	60	<10.5
AM 5576	June 18, 1908	60	<10.5
AM 5640	July 7, 1908	?	<12.
AM 5683	July 25, 1908	125	<12.5

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Oct. 5, 1910.

Meas. of Shora Sag. Sho. cont.

Plate	Date	Eth	Est.
AM 6416	July 26, 1909	61	<10.5
AM 6223	June 13, 1909	123	<10.5
AM 6264	June 21, 1909	120	<10.0
AM 6320	July 7, 1909	71	<10.0
AM 3802	Aug. 18, 1905	66	<12.0
AM 3883	Sept. 16, 1905	60	<10.5
AM 4269	May 29, 1906	63	<12.0
AM 4339	June 22, 1906	67	<11.5
AM 4365	July 2, 1906	60	<10.
AM 4388	July 11, 1906	60	<12.
AM 4527	Aug. 2, 1906	69	<12.5
AM 4539	Aug. 27, 1906	61	<12.0
AM 4562	Sept. 11, 1906	60	<11.5
AM 4620	Oct. 11, 1906	85	<12.
AM 4804	May 7, 1907	60	<12.
AM 4858	May 23, 1907	66	<11.5
AM 4920	June 11, 1907	60	<10.5
AM 4931	June 20, 1907	60	<12.
AM 5013	July 17, 1907	126	<12.2
AM 5024	July 30, 1907	120	<12.2
AM 5090	Aug. 25, 1907	67	<12.
AM 5114	Sept. 1, 1907	70	<12.
AM 5340	Mar. 26, 1908	60	<11.5
AM 5390	Apr. 10, 1908	58	<10.5
AM 5444	May 7, 1908	60	<10.5
AM 5576	June 18, 1908	60	<10.5
AM 5640	July 7, 1908	?	<12.
AM 5683	July 25, 1908	125	<12.5

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Oct. 5, 1910

meas of Nora Sag. No 2 cont.

[4 columned table]

[Plate][Date][Exh.][Esp.]

Am 5712|Aug. 2, 1908|[66^[[m]]]<12.5]

Am 5752|" 17, "[60]<10.5]

Am 5778|" 29, "[60]<11.0]

Am 5807|Sept. 12 "[61]|Too poor|

Am 5820|Sept. 14, "[120]<12|

Am 5854|" 24, "[61]<12|

Am 6011|May. 29, 1909|[120]<10.5|

Am 6114|May 11, "[67]<11.5|

Am 6136|" 15, "[120]<10.5|

Am 6170|" 26, "[60]<10.5|

Am 6228|June 14, "[60]<10.5|

Am 6338|July 11, 1909|[144]<11.5|

Am 6343|July 12, "[123]<12|

Am 6347|" 13, "[63]<10.5|

Am 6374|" 18, "[140]<11.5|

Am 6422|" 28 "[151]<9|

Am 6454|Aug. 12, "[66]<11.5|

~~[B 8628 Sp.]|Too poor|~~

B 8713|---|<11|

B 9209|---|<12|

B 9210|---|<11.5|

B 9280|May 1, 1893|---|<10.5|

~~[B 9588 Sp.]|~~

B 9592|---|<12.5|

B 9593|---|<13.0|

B 6615|---|<10|

B 4124|Sept. 2, 1889|[60]<12|

~~[B 4136]" 4 "[10]|~~

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Oct. 5, 1910.

meas of Nora Sag. No 2 cont.

Plate	Date	Exh.	Esp.
Am 5712	Aug. 2, 1908	[66^[[m]]]	<12.5
Am 5752	" 17,	[60]	<10.5
Am 5778	" 29,	[60]	<11.0
Am 5807	Sept. 12	" [61]	Too poor
Am 5820	Sept. 14,	" [120]	<12
Am 5854	" 24,	" [61]	<12
Am 6011	May. 29, 1909	[120]	<10.5
Am 6114	May 11,	" [67]	<11.5
Am 6136	" 15,	" [120]	<10.5
Am 6170	" 26,	" [60]	<10.5
Am 6228	June 14,	" [60]	<10.5
Am 6338	July 11, 1909	[144]	<11.5
Am 6343	July 12,	" [123]	<12
Am 6347	" 13,	" [63]	<10.5
Am 6374	" 18,	" [140]	<11.5
Am 6422	" 28	" [151]	<9
Am 6454	Aug. 12,	" [66]	<11.5
<del>[B 8628 Sp.] Too poor </del>			
B 8713	---	---	<11
B 9209	---	---	<12
B 9210	---	---	<11.5
B 9280	May 1, 1893	---	<10.5
<del>[B 9588 Sp.] </del>			
B 9592	---	---	<12.5
B 9593	---	---	<13.0
B 6615	---	---	<10
B 4124	Sept. 2, 1889	[60]	<12
<del>[B 4136]" 4 "[10] </del>			

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Oct. 5, 1910

Meas. of Nova Sag. No. 2, cont.

[[5 columned table]]

[Plate][Date][Exp.][Est.][JD.]

B 5006||May 1, 1890||12||&lt;10||---

B 5338||May 29, 1890||12||&lt;12||---

B 7922||---||---||&lt;12||---

B 8233sf.||---||---||N.S.||---

B 3438sf.||---||---||N.S.||---

B 3754||---||---||&lt;11.5||---

B 3993||---||---||&lt;10.5||---

B 12117||Sept. 11, 1894||10||&lt;12.5||---

B 13163||May 1, 1895||61||N.S.||E|

B 13345||May 13, 1895||10||&lt;12||---

B 13346||May 13, 1895||14||&lt;12||E|

B 13406||May 23, 1895||60||N.S.||E|

[[strikethrough]]B13433S.p.||Not cover.||---||---||[[/strikethrough]]

B13434sf||May 23 1895||60||N.S.||E|

[[strikethrough]]B13433sf||Not cover.||---||---||[[/strikethrough]]

B13434sf||May 27, 1895||---||N.S.||E|

[[strikethrough]]B13462sf||---||---||---||[[/strikethrough]]

B9656||---||---||N.S.||E|

B9826sf||---||---||N.S.||E|

B9827||---||---||N.S.||---

B9818Sf.||---||---||N.S.||---

[[strikethrough]]B9855||---||---||---||[[/strikethrough]]

B16036||May 30, 1896||10||&lt;12.5||---

B41608||July 13, 1910||10||9.0||8866.|

B16156||June 5 1896||17||&lt;10||---

[[strikethrough]]B16415||June 17 1896||23||Not cover||---

[[/strikethrough]]

B16496||June 27 1896||10||&lt;10||E|

B16576||July 1, 1896||12||&lt;10||---

B14176||July 21, 1895||117||&lt;10||---

B14176||July 21, 1895||117||&lt;10||---

[[strikethrough]]B15834||May 12, 1896||12||---||---

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Astrophysics•Provided by the NASA Astrophysics Data System

Plate	Date	Exp.	Est.	JD.
B 5006	May 1, 1890	12	<10	
B 5338	May 29, 1890	12	<12	
B 7922			<12	
B 8233sf.			N.S.	
B 3438sf.			N.S.	
B 3754			<11.5	
B 3993			<10.5	
B 12117	Sept. 11, 1894	10	<12.5	
B 13163	May 1, 1895	61	N.S.	E
B 13345	May 13, 1895	10	<12	
B 13346	May 13, 1895	14	<12	E
B 13406	May 23, 1895	60	N.S.	E
[[strikethrough]]B13433S.p.			Not cover.	[[/strikethrough]]
B13434sf	May 23 1895	60	N.S.	E
[[strikethrough]]B13433sf			Not cover.	[[/strikethrough]]
B13434sf	May 27, 1895		N.S.	E
[[strikethrough]]B13462sf				[[/strikethrough]]
B9656			N.S.	E
B9826sf			N.S.	E
B9827			N.S.	
B9818Sf.			N.S.	
[[strikethrough]]B9855				[[/strikethrough]]
B16036	May 30, 1896	10	<12.5	
B41608	July 13, 1910	10	9.0	8866.
B16156	June 5 1896	17	<10	
[[strikethrough]]B16415	June 17 1896	23	Not cover	[[/strikethrough]]
B16496	June 27 1896	10	<10	E
B16576	July 1, 1896	12	<10	
B14176	July 21, 1895	117	<10	
B14176	July 21, 1895	117	<10	
[[strikethrough]]B15834	May 12, 1896	12		[[/strikethrough]]

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Oct. 5, 1910  
 Meas of Shosa Tag No 2 cont.  
 Plate Date Uh Tsh  
 B13936 July 3, 1895 10 < 12.5  
 B13828 SHh. June 26, " 95 SV.S < 10.5  
 B13536 " 3, " 10 < 10.5  
 B13535 " 3, " 10 < 11  
 B41706 Sh July 25, 1910 64 Hbeta, Halpha, Hepisolon{?} high Sholioca  
 of times characteristic of gaseous metulae  
 B13728 June 11. 1895 10 < 12  
 B13748 June 12, 1895 10 < 12.5  
 B13767 Sh " 14 " 60 SVS  
 B21077 Mar 26, 1898 10 < 12  
 B20502 Sept 23, 1897 10  
 B20212 Aug 31, 1897 65 SVS  
 B20451 Sept 18, 1875 10 < 12  
 B20466 " 20 " 10 < 12  
 B19114 May 13, " 14 < 12.5  
 B17092 Sh Aug 11, 1896 78 SVS  
 B17440 Sept 22 " 10 Too meal edge of fifteen  
 B17651 Oct 13, " 10 < 12.5  
 A2798 Oct 5, 1897 10 < 13.5  
 A4821 " 23, 1900 20 {??}  
 A2735 Sept 15, 1897 60  
 A8386 July 16, 1909 60  
 A8443 Aug 17, 1907 10  
 AM 7008 June 8, 1910 9.2 "L" 9.3 "F"  
 AC 11676 May 19, 1910 87 7.5 "L" 7.4 "F"  
 AM 11921 May 14, 1910 60 7.5 "L" 7.5 "F"  
 AC 11807 July 29, 1910 60 - "L" 8.8 F

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Oct 5 1910

Meas of Shosa Tag No 2 cont.

Plate	Date	Uh	Tsh	Notes
B13936	July 3, 1895	10	< 12.5	
B13828	SHh. June 26, "	95	SV.S < 10.5	
B13536	" 3, "	10	< 10.5	
B13535	" 3, "	10	< 11	
B41706	Sh July 25, 1910	64	Hbeta, Halpha, Hepisolon{?}	high Sholioca
B13728	June 11. 1895	10	< 12	
B13748	June 12, 1895	10	< 12.5	
B13767	Sh " 14 " 60	SVS		
B21077	Mar 26, 1898	10	< 12	
B20502	Sept 23, 1897	10		
B20212	Aug 31, 1897	65	SVS	
B20451	Sept 18, 1875	10	< 12	
B20466	" 20 " 10	< 12		
B19114	May 13, "	14	< 12.5	
B17092	Sh Aug 11, 1896	78	SVS	
B17440	Sept 22 " 10	Too meal edge of fifteen		
B17651	Oct 13, "	10	< 12.5	
A2798	Oct 5, 1897	10	< 13.5	
A4821	" 23, 1900	20	{??}	
A2735	Sept 15, 1897	60		
A8386	July 16, 1909	60		
A8443	Aug 17, 1907	10		
AM 7008	June 8, 1910	9.2	"L" 9.3 "F"	
AC 11676	May 19, 1910	87	7.5 "L" 7.4 "F"	
AM 11921	May 14, 1910	60	7.5 "L" 7.5 "F"	
AC 11807	July 29, 1910	60	- "L" 8.8 F	

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JD

position of Nova  
position of Nova ?  
position of Nova ?



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October 8, 1910  
 New Variable star in Cygnus(?).  
 [?] 19 49 55.01 + 36[?] 46' 57".4 ([?]) [?] by [?]  
 Confirmed by W.P. Fleming October 8, 1910.  
 [?] information [?] letter of Arthur R. [?] of Sept 29, 1910.  
 [?] ident. by photo chart sent with [?] letter W.P.[?].[?]  
 Plate Date Ef Ect [?]  
 I 25328 May 10, 1900 | 13 | <12 | 241.5150 |  
 I 13205 Aug. 8, 1895 | 22 | <12 | 3414 |  
 I 18989 Sept. 24 1897 | 12 | <11.5 | 4192 |  
 I 6808 Sept. 1, 1892 | 15 | 11.5 | 2343 |  
 I 23131 July 4, 1899 | 23 | <12.5 | 4840 |  
 I 35565 Oct 6, 1908 | 12 | 10.8 | 8221 |  
 A 5366 June 14, 1901 | 60 | 10.0 | 5550 |  
 I 8849 July 20, 1893 | 11 | <11 | 2665 |  
 I 35388 June 21, 1908 | 10 | <12 | 8114 |  
 I 30401 April 29, 1903 | 30 | <10.5 | [?] |  
 October 15, 1910  
 AC 11718 June 4, 1910 | 50 | [?] | 8830 |  
 AC 11940 Sept. 20, 1910 | 69 | <10.0 | 8935 |  
 AC 11869 Aug. 20, 1910 | 61 | <10.0 | 8904 |  
 AC 11096 Apr. 30, 1909 | 60 | <11.0 | 8641 |  
 AC 11074 Apr. 26, 1909 | 60 | <10.0 | 8634 |  
 AC 11686 May 29, 1910 | 60 | Too [?] |  
 AC 11773 July 9, 1910 | 60 | Too [?] |  
 AC 11815 July 30, 1910 | 62 | <9.8 | 8883 |  
 AM 3023 Sept. [?], 1904 | [?] | 10.8 | [?] |  
 AM 5056 Aug. 12, 1907 | 236 | Too [?] |  
 AM 2115 July 13 1903 | 60 | <11.0 | 6309 |  
 AC 11946 Sept. 22, 1910 | 60 | <11.0 | 8907 |  
 AC 11954 Sept. 23, 1910 | 60 | <9.5 | 8938 |

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October 8, 1910

*New Variable star in Cygnus(?)*  
*R.A. 19 49 55.01, Dec. 36 46 57.4 (1908) Found by Hand?*  
*Confirmed by W. P. Fleming October 8, 1910*  
*For information see letter of Arthur R. Hodge Sept 29/10*  
*Var. ident. by photo chart sent with Hodge letter. W.P.F.*

Plate	Date	Ef.	Ect.	jd
I 25328	May 10, 1900	13	<12	241.5150
I 13205	Aug. 8, 1895	22	<12	3414
I 18989	Sept. 24 1897	12	<11.5	4192
I 6808	Sept. 1, 1892	15	11.5	2343
I 23131	July 4, 1899	23	<12.5	4840
I 35565	Oct 6, 1908	12	10.8	8221
A 5366	June 14, 1901	60	10.0	5550
I 8849	July 20, 1893	11	<11	2665
I 35388	June 21, 1908	10	<12	8114
I 30401	April 29, 1903	30	<10.5	[?]
<u>October 15, 1910</u>				
AC 11718	June 4, 1910	50	[?]	8830
AC 11940	Sept. 20, 1910	69	<10.0	8935
AC 11869	Aug. 20, 1910	61	<10.0	8904
AC 11096	Apr. 30, 1909	60	<11.0	8641
AC 11074	Apr. 26, 1909	60	<10.0	8634
AC 11686	May 29, 1910	60	Too [?]	
AC 11773	July 9, 1910	60	Too [?]	
AC 11815	July 30, 1910	62	<9.8	8883
AM 3023	Sept. [?], 1904	[?]	10.8	[?]
AM 5056	Aug. 12, 1907	236	Too [?]	
AM 2115	July 13 1903	60	<11.0	6309
AC 11946	Sept. 22, 1910	60	<11.0	8907
AC 11954	Sept. 23, 1910	60	<9.5	8938

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Oct. 15, 1910.

New Var. plat in Cy g[[?]]? found left Hand[[?]] cont.

[[5 Column Table]]

Plate|Date|Eth|[[?]]|Est.|JD|[[?]]|

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

AC1870|Oct. 16, 1901|.59m|<10g|5674|

AC1954|Nov. 4, 1901|97|<10. [[~~5693~~]]|5693|

AC1957|" 5, "158|<10|5694|

AC2000|" 22, 1901|77|<10|5711|

AC2678|July 10, 1902|72|<11.2|5941|

AC6977|Nov. 11, 1905||Toopoor(e)||

AC6892|Oct. 26, "170|11.5?|7145|

AC6640|Aug. 29, 1905|75|<10.5|7087|

AC2866|Oct. 7, 1902|82|<10.5|6030|

AC2838|Sep. 14, 1902|62|<10.5|6007|

AC2772|Aug. 23, "164|Toopoor.||

AC2865|Oct. 7, 1902|59|<10.5|6030|

|9113|Aug. 8, 1893|11|<11.0|2684|

|30313|Apr. 17, 1903|10|11.5|6222|

|1660|Aug. 20, 1890|13|<10.8|1600|

|4196|Sept. 10, 1891|17|<10|1986|

|9032|Aug. 2, 1893|10|<10|2678|

|11379|" 21, 1894|14|<10|3062|

|25160|Apr. 14, 1900|10|<10.5|5124|

|30287|" 5, 1903|14|11.4|6210|

|30285|" 5, "15|11.4|"

|30316|" 17, "11|<11.5|6222|

|30506|May 17, "22|<10.5|6252|

|22769|Apr. 23, 1899|19|<11.8|4768|

|23074|June 25, 1899|10|<11.4|4831|

|1430|July 11, 1890|11|11.6|1560|

|29336|Oct. 9, 1902|19|Too near edge.||

|6830|Sept. 2, 1892|16|Toopoor||

Cont. on pg. 5-6.

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[[End Page]]

Oct 15 1910				
New Var. plat in Cy g[[?]]? found left Hand[[?]] cont.				
Plate	Date	Eth	Est.	JD
AC 1870	Oct 16, 1901	59	210.4	5674
AC 1954	Nov 4, 1901	97	210.5	5693
AC 1957	" 5, " 158	58	210	5694
AC 2000	" 22, 1901	77	210	5711
AC 2678	July 10, 1902	72	211.2	5941
AC 6977	Nov 11, 1905		Too poor	
AC 6892	Oct 26, " 170	11.5?	210.5	7145
AC 6640	Aug 29, 1905	75	210.5	7087
AC 2866	Oct 7, 1902	82	210.5	6030
AC 2838	Sep 14, 1902	62	210.5	6007
AC 2772	Aug 23, " 164		Too poor	
AC 2865	Oct 7, 1902	59	210.5	6030
9113	Aug 8, 1893	11	211.0	2684
30313	Apr 17, 1903	10	211.5	6222
1660	Aug 20, 1890	13	210.8	1600
4196	Sept 10, 1891	17	210	1986
9032	Aug 2, 1893	10	210	2678
11379	" 21, 1894	14	210	3062
25160	Apr 14, 1900	10	210.5	5124
30287	" 5, 1903	14	211.4	6210
30285	" 5, " 15	11.4		
30316	" 17, " 11	11.5	211.5	6222
30506	May 17, " 22	10.5	211.5	6252
22769	Apr 23, 1899	19	211.8	4768
23074	June 25, 1899	10	211.4	4831
1430	July 11, 1890	11	211.6	1560
29336	Oct 9, 1902	19	Too near edge	
6830	Sept 2, 1892	16	Too poor	

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October 13, 1910

Nova Arae found by W.P. Fleming

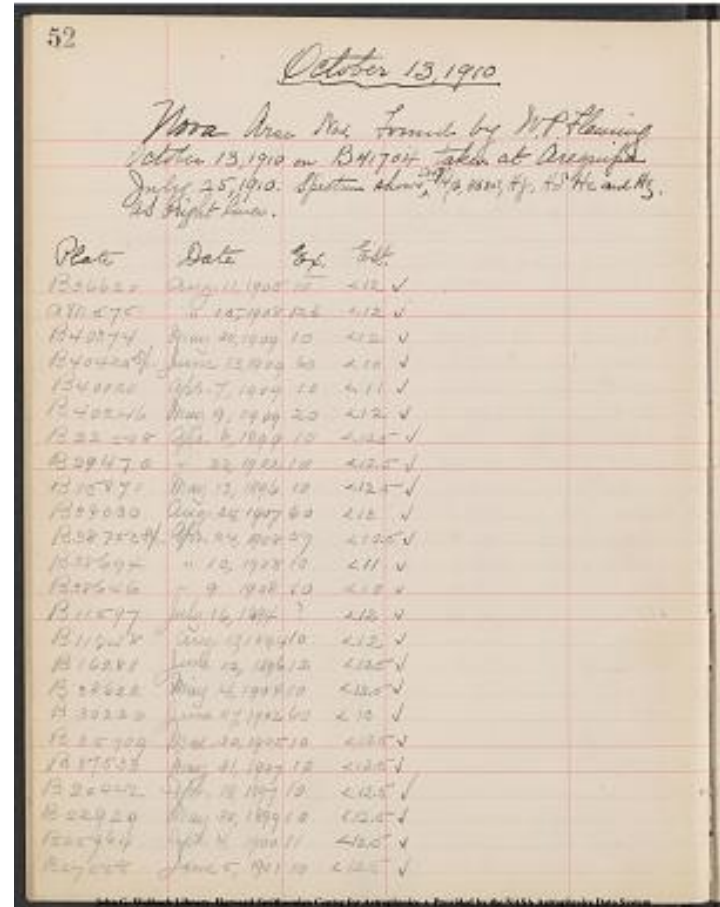
October 13, 1910 on B41704 taken at Arequipa July 25, 1910. Spectrum shows 5007? H Beta, 4680?, H gamma, H delta, H epsilon and H zeta, as bright lines.

[[4 column table]]

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

Plate | Date | Ex. | Est.

B 36620		Aug. 11, 1905	10   <12
AM 5751		Aug. 15, 1908	126   <12
B 40374		May 30, 1909	10   <12
B 40425 Sp		June 13, 1909	60   <10
B 40020		Apr. 7, 1909	10   <11
B 40246		May 9, 1909	20   <12
B 22508		Apr. 6, 1899	10   <12.5
B 29470		Apr. 28, 1902	10   <12.5
B 15871		May 13, 1896	10   <12.5
B 38030		Aug. 25, 1907	60   <13
B 38755 Sp.		Apr. 24, 1908	57   <10.5
B 38694		Apr. 10, 1908	10   <11
B 38646		Apr. 9, 1908	10   <10
B 11597		July 16, 1894	?   <12
B 11848		Aug. 13, 1894	10   <12
B 16281		June 12, 1896	12   <12.5
B 33622		May 4, 1904	10   <12.5
B 30220		June 27, 1902	60   <13
B 35709		Mar. 30, 1905	10   <12.5
B 37533		May 31, 1907	10   <12.5
B 20442		Sept. 18, 1897	10   <12.5
B 22929		May 30, 1899	10   <12.5
B 25964		Sept. 4, 1900	11   <12.5
B 27558		June 5, 1901	10   <12.5



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Oct. 13, 1910

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[[?]]

Plate	Date	Elh.	Est.
B11595	July 16, 1894	?	<10 [[checkmark]]
B27478	May 28, 1901	10	<12.5 [[checkmark]]
B11629	July 20, 1894	?	<12.5 [[checkmark]]
B27749	June 25, 1901	10	<12.5 [[checkmark]]
B4047	Aug. 20, 1889	60	<12.5 [[checkmark]]
B30189	June 26, 1902	62	<13 [[checkmark]]
B31877	May 28, 1903	61	<14 [[checkmark]]
B11801	Aug. 11, 1894	10	<12 [[checkmark]]
B15865	May 13, 1896	10	<10 [[checkmark]]
B16107	June 4, 1896	30	<12 [[checkmark]]
B22473	Apr. 5, 1899	10	<12 [[checkmark]]
B23469	July 14, 1899	11	<12 [[checkmark]]
B29275	Apr. 3, 1902	10	<10 [[?]] [[checkmark]]
B32095	July 2, 1903	10	<12.5 [[checkmark]]
B15559	Apr. 8, 1896	75	<13 [[checkmark]]
B36952	Sept. 9, 1905	10	<12 [[checkmark]]
B41342	May 27, 1910	15	<8.5 [[checkmark]] 8819
B41738	Sp. 5007, H13, 4670, H8, H[S?], HE, H[?]		[[checkmark]] 8883
B41625	July 14, 1910	10	9.7 [[checkmark]] 8867[[checkmark]]
B41338	May 27, 1910	15	8.0 [[checkmark]] 8819[[checkmark]]
AM6910	May 5, 1910	69	8.5 [[checkmark]] <del>strikethrough 8797</del>
AM6899	April 29, 1910	60	7.5[[checkmark]] 8791[[checkmark]]
AM6927	May 26, 1910	64	8.7[[checkmark]] 8818[[checkmark]]
AM6971	June 1, 1910	120	8.8[[checkmark]] 8824[[checkmark]]
AM6975	June 2, 1910	60	9.0[[checkmark]] 8825[[checkmark]]
AM7069	July 3, 1910	72	9.3[[checkmark]] 8856[[checkmark]]
AM7013	June 9, 1910	60	8.6[[checkmark]] 8832[[checkmark]]
AM7090	July 7, 1910	120	9.5[[checkmark]] 8860[[checkmark]]

Oct 13, 1910

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Stellar Catalogue

Plate	Date	Elh.	Est.
B11595	July 16, 1894	?	<10 ✓
B27478	May 28, 1901	10	<12.5 ✓
B11629	July 20, 1894	?	<12.5 ✓
B27749	June 25, 1901	10	<12.5 ✓
B4047	Aug. 20, 1889	60	<12.5 ✓
B30189	June 26, 1902	62	<13 ✓
B31877	May 28, 1903	61	<14 ✓
B11801	Aug. 11, 1894	10	<12 ✓
B15865	May 13, 1896	10	<10 ✓
B16107	June 4, 1896	30	<12 ✓
B22473	Apr. 5, 1899	10	<12 ✓
B23469	July 14, 1899	11	<12 ✓
B29275	Apr. 3, 1902	10	<10 ✓
B32095	July 2, 1903	10	<12.5 ✓
B15559	Apr. 8, 1896	75	<13 ✓
B36952	Sept. 9, 1905	10	<12 ✓
B41342	May 27, 1910	15	<8.5 ✓
B41738	Sp. 5007, H13, 4670, H8, H[S?], HE, H[?]		✓
B41625	July 14, 1910	10	9.7 ✓
B41338	May 27, 1910	15	8.0 ✓
AM6910	May 5, 1910	69	8.5 ✓
AM6899	April 29, 1910	60	7.5 ✓
AM6927	May 26, 1910	64	8.7 ✓
AM6971	June 1, 1910	120	8.8 ✓
AM6975	June 2, 1910	60	9.0 ✓
AM7069	July 3, 1910	72	9.3 ✓
AM7013	June 9, 1910	60	8.6 ✓
AM7090	July 7, 1910	120	9.5 ✓

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Oct. 13, 1910.

Nora Arcue cont.

[[5 columned table]]

Plate|Date|Est.|JD|

[[struck out]]AM 7047[[/struck out]]June 29, 1910|60^m| | |

AM 7070|July 3, 1910|60^m|10.0 |8856|

AM 6861|Apr. 4, 1910|60|6.0 |8766|

AM 6855|Mar. 19, " |60|[[struck out]]9.5[[/struck out]]&lt;10 |

AM 6857|Mar. 19, " |60|&lt;10 | |

B41755Lh|Aug. 3, 1910. 5007, HB|4670, Hj, |HS, He, Hs, Hm|

AM 6887|Apr. 17, 1910|67|6.5 |8779|

AM 6916|May 12, 1910|6[[struck out]]0[[/struck out]]5|8.5 |8804|

AM 6961|May 31, " |120|8.7 |8823|

AM 6969|June 1, , |60|9.0 |8824|

AM 7082|July 6, " |121|9.7 |8859|

AM 7094|July 8, " |61|9.8 |8861|

A 8440|Aug. 17, 1907|10|&lt;15|

A 8400|July 27, " |11|&lt;15|

Remeas. Oct. 14, 1910

AM 7070| | |9.9|

" 7090| | |10.0|

" 7013| | |8.6|

AM 6969| | |9.0|

AM 6971| | |9.3|

B41[[struck out]]738[[/struck out]]338| | |8.4|

54

Oct. 13, 1910.

Nora Arcue cont.

Plate	Date	Est.	JD
AM 7047	June 29, 1910		
AM 7070	July 3, 1910	10.0	8856
AM 6861	Apr. 4, 1910	6.0	8766
AM 6855	Mar. 19, "	9.5	
AM 6857	Mar. 19, "	<10	
B41755Lh	Aug. 3, 1910	5007, HB	4670, Hj, HS, He, Hs, Hm
AM 6887	Apr. 17, 1910	67	6.5 8779
AM 6916	May 12, 1910	6	5 8804
AM 6961	May 31, "	120	8.7 8823
AM 6969	June 1, ,	60	9.0 8824
AM 7082	July 6, "	121	9.7 8859
AM 7094	July 8, "	61	9.8 8861
A 8440	Aug. 17, 1907	10	<15
A 8400	July 27, "	11	<15
Remeas.	Oct. 14, 1910		
AM 7070		9.9	
" 7090		10.0	
" 7013		8.6	
AM 6969		9.0	
AM 6971		9.3	
B41		738	338 8.4

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55

[[no entries]]



55

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Oct. 15, 1910

New Var. star in Cygnus? found by Hinds cont.

[[5 column table]]

Plate | Date | Exh | Est. | JD

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

I21321|Oct 3, 1898|12|&lt;11.5|4566|

I30174|Mar. 12, 1903|28|10.3|6186|

I30472|May 11, 1903|28|&lt;11.0|6246|

I6849|Sept. 3, 1892|2|&lt;11.3|2845|

[[struck out]]I7605[[\struck out]]I9457|" 12, 1893|28|&lt;11.6|2719|

I9980|Nov. 22, 1893|?|&lt;11.3|2790|

I11374|Aug. 18, 1894|10|11.3|3059|

I27991|Nov. 21, 1901|15|&lt;11.5|3710|

I30508|May 17, 1903|40|&lt;10.5|6252|

I35388|June 21, 1908|10|&lt;12.1|8114|

I1539|Aug. 1, 1890|13|&lt;11.4|1581|

I8961|July 27, 1893|11|&lt;11.5|2672|

56

Oct 15, 1910

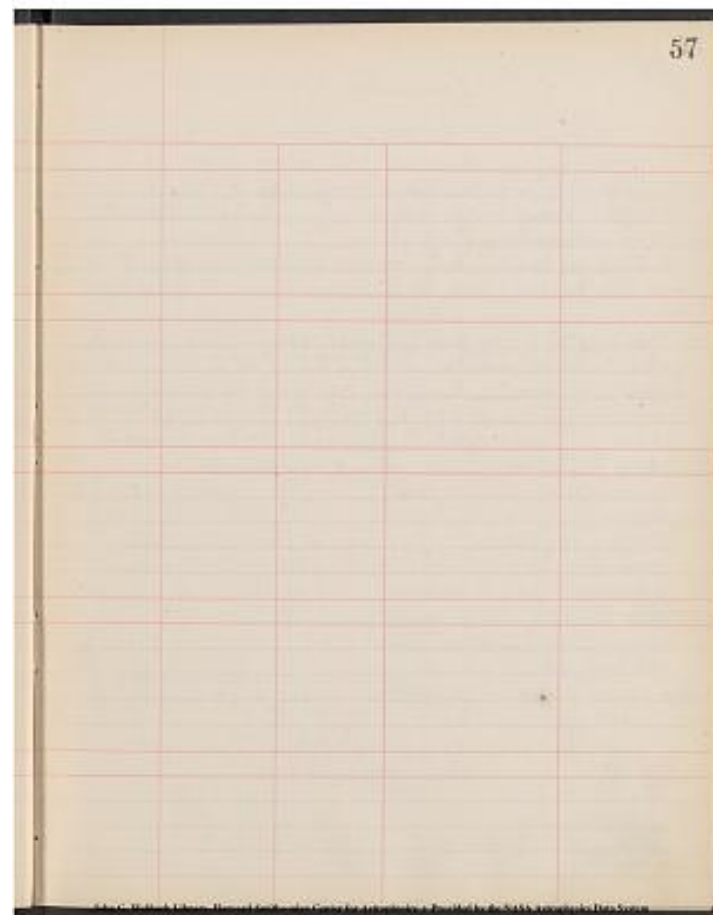
New Var. star in Cygnus? found by Hinds cont.

Plate	Date	Exh	Est	JD
I21321	Oct 3, 1898	12	<11.5	4566
I30174	Mar. 12, 1903	28	10.3	6186
I30472	May 11, 1903	28	<11.0	6246
I6849	Sept. 3, 1892	2	<11.3	2845
<del>I7605</del>	" 12, 1893	28	<11.6	2719
I9980	Nov. 22, 1893	?	<11.3	2790
I11374	Aug. 18, 1894	10	11.3	3059
I27991	Nov. 21, 1901	15	<11.5	3710
I30508	May 17, 1903	40	<10.5	6252
I35388	June 21, 1908	10	<12.1	8114
I1539	Aug. 1, 1890	13	<11.4	1581
I8961	July 27, 1893	11	<11.5	2672

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[[no entries]]



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[[November 3, 1910.]]

Exam of plates for Russell's stars probably an error in list sent to Kapteyn. See letter of Russell.

[[5 column table]]

|Plate|Object|Sp.|Note.|

|No. 6.|I35911|~~[[strikethrough]]T[[/strikethrough]]~~|Cincinnati  
1001=OA174156|

|Best plate of = BD+68 946|G5 Pic.|Early and late charts compared.  
Confirm P.M.|

|region. Image ^[[very]] poor.|BD+68 947.|F.|This ident, was assumed  
and sent to Kapteyn.|

|N.5.|Plate|Object|Sp.|Note. B8646+1°4773 7.7 show spectrum F2.|

|Was not this the spectrum obtained at Mt. Wilson.|

|I36306|Cinn. 1319 +1°477487

|~~[[strikeout]]+57°2787[[/strikeout]]~~|Ma?|Kapteyn does not ask for 1319,  
but asks|

|B24592|Cinn. 1319 ~~[[strikeout]]= Piscium[[/strikeout]]~~|Ma|for 1320. Is  
not there some misunderstanding|

|regarding this star? Piscium is +0°5037|

|I21901|Cinn. 1319|Ma?|and not +1°4774 as given in the Cinn. Cat.|

|I32413|Cinn. 1320=+57°2787~~[[strikeout]]~~|87~~[[strikeout]]~~|G|Adjacent  
star, +57°2780, is faint and|

|I33701|P. 23^[[h]]164|G|difficult, but is either A or A5.|

|No. 1.|I34623|+18°2776|Plate too poor for classification|

|I35929|RA. 13^[[h]] 4^[[m]] 0^[[r]]+18°20'|No better plate yet obtained.|

|I31454|

|I31466|

|I31778|

|I35761|

|No. 4.|I34819|+56°2783 9.0|K?|Image very faint and poor. Classification

doubtful|

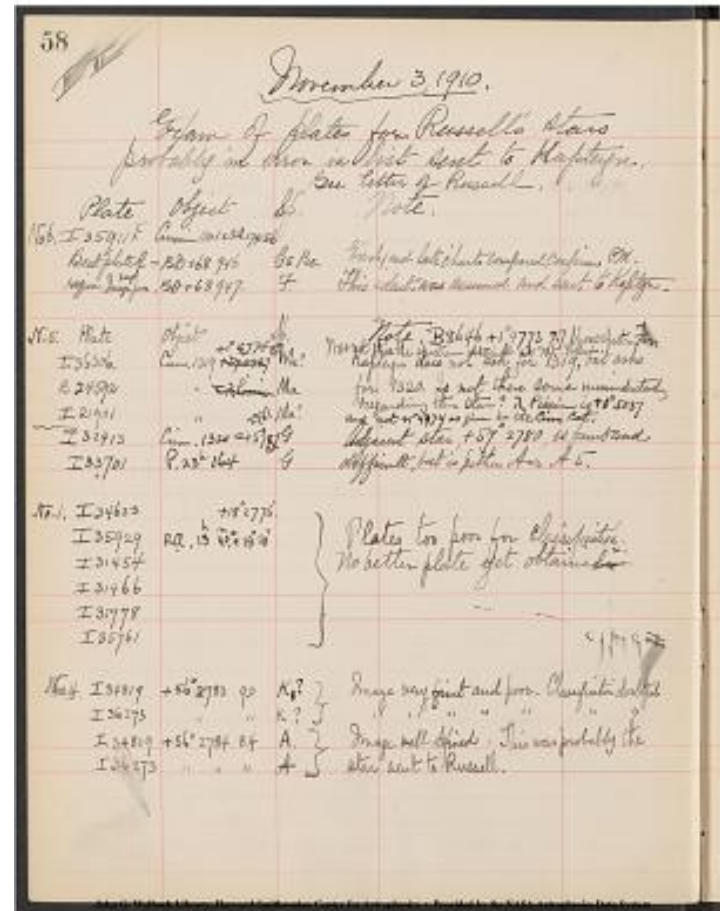
|I36273|+56° 2784 9.0|K?|" " " " " " " " " " " "

|I34819|+56° 2784 8.4|A.|Image well defined. This was probably the

|I36273|+56° 2784 8.4|A|star sent to Russell.|

[[/5 column table]]

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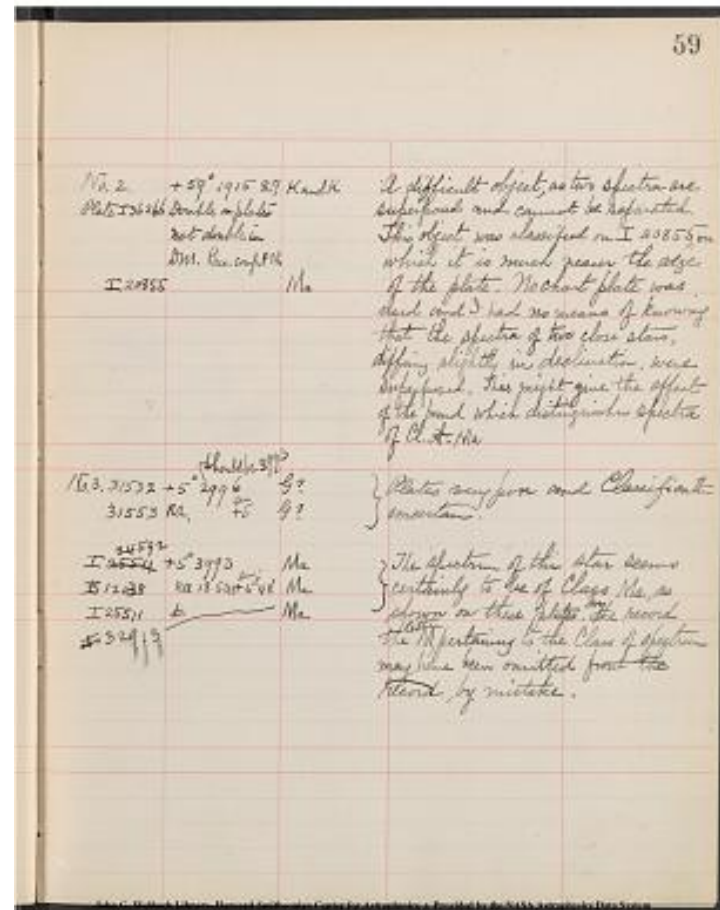
No.2. |+59°19'15.9|KendK  
 Plate I36266|Durable on pleio| |  
 |Not durable in| |  
 |DM. Prec. comp. PM.| |  
 I20855| |Ma|

A difficult object, as two specters are superposed and cannot be separated. This object was classified on I20855, on which it is much nearer the edge of the plate. No chant plate was used and I had no [?] of knowing that the specter of two close [?], differing slightly in declination, were superposed. This might give the effect of the brand which distinguishes spectra of Cl. [?]. Ma

[?] 3993| | |  
 No.3.31532|+5°29'96|G?|}Pates vary for and  
 31553|RA, +5 |G?|}Classification meantime.

I|~~24592~~|~~24592~~|+5°39'93|Ma}  
 B12038|RA 1853.+5°48|Ma}  
 I25511|~~?~~|Ma}  
 I32913| | |}

The spectrum of this ster seems certainly to the of Class Ma, as [?] on three plates. [?] the record the letter M, pertaining to the Class of [?] may have been omitted [~~24592~~] from the record [~~24592~~], by mistake.



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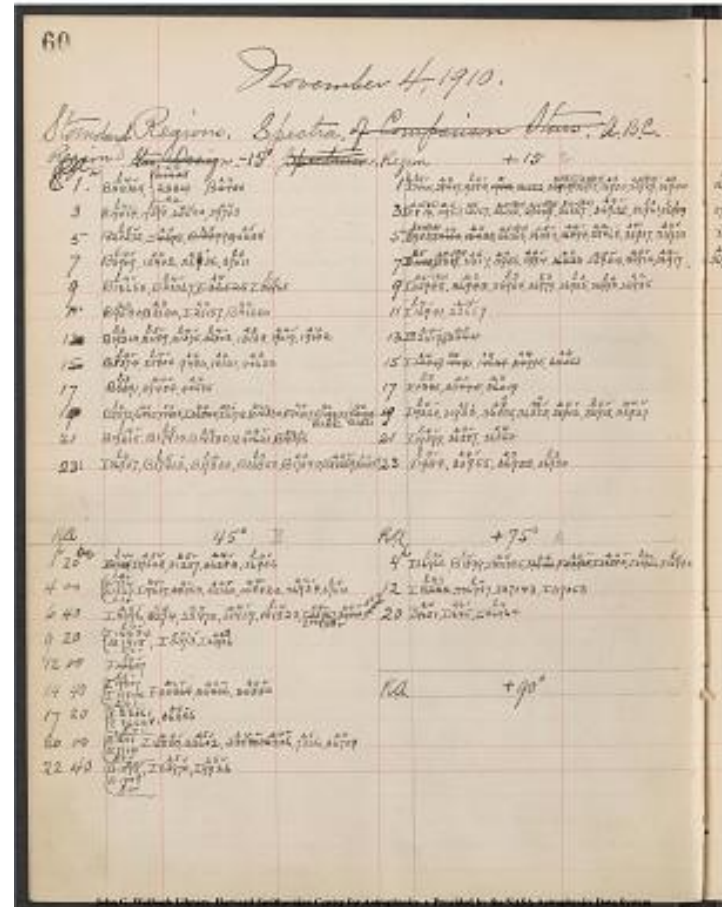
November 4, 1910.

Standard Regions. Spectra ~~of~~ Comparison  
Stars ~~A.B.C. Region D.~~ Star. Design.  
Spectrum. ~~of~~

[[4 columned table]]

|RA D|-15°|Region|+15 C|

1|B22104<sup>h</sup>[[4]], ~~B10628 23814~~<sup>h</sup>[[s4]],  
~~B10420~~<sup>h</sup>[[s4]]1|10101<sup>h</sup>[[h4]],  
 28447<sup>h</sup>[[s3]], 19384<sup>h</sup>[[4]], ~~19800~~<sup>h</sup>[[s]]~~[[s4]]~~,  
~~36482~~<sup>h</sup>[[s4]],  
 3690<sup>h</sup>[[s4]]5<sup>h</sup>[[s3(8.5)]], 36912<sup>h</sup>[[s3(8.7)]],  
 36925<sup>h</sup>[[s3]], 36929<sup>h</sup>[[s3(9.0)]], 36930<sup>h</sup>[[s3]],  
 3|B17414<sup>h</sup>[[4]], 17698<sup>h</sup>[[4]], 20580<sup>h</sup>[[s4]],  
 39703<sup>h</sup>[[s4]]3|11814<sup>h</sup>[[s4(8.5)]], 11953<sup>h</sup>[[s4]], 12157<sup>h</sup>[[s4]],  
 26122<sup>h</sup>[[25(9.0)]], 28449<sup>h</sup>[[s4(9.0)]], 36867<sup>h</sup>[[4(8.0)]], 36932<sup>h</sup>[[24]],  
 36961<sup>h</sup>[[13]], 36989<sup>h</sup>[[13]],  
 5|B20232<sup>h</sup>[[15]], ~~14678~~<sup>h</sup>[[R4]],  
~~B12379~~<sup>h</sup>[[R5]],  
~~B12628~~<sup>h</sup>[[R5]]5|B983<sup>h</sup>[[15(9.0)]],  
~~14662~~<sup>h</sup>[[s4]],  
~~12433~~<sup>h</sup>[[24]], 26262<sup>h</sup>[[s4(9.0)]],  
 36883<sup>h</sup>[[s4]], 36894<sup>h</sup>[[s4]], 28468<sup>h</sup>[[s3]], 36937<sup>h</sup>[[s4?]], 36933<sup>h</sup>[[s4]]  
 7|B8909<sup>h</sup>[[4]], 15402<sup>h</sup>[[s4]], 36936<sup>h</sup>[[s4?]],  
 37011<sup>h</sup>[[4]]7|~~B1083~~<sup>h</sup>[[15]],  
 18229<sup>h</sup>[[s4(9.0)]], 11817<sup>h</sup>[[s4]], 11956<sup>h</sup>[[s4]], 11994<sup>h</sup>[[s4]],  
~~16433~~<sup>h</sup>[[s4]], 35944<sup>h</sup>[[s4]], 36914<sup>h</sup>[[s4]],  
 36917<sup>h</sup>[[s4]],  
 9|B18650<sup>h</sup>[[4]], B21367<sup>h</sup>[[4]],  
~~136525~~<sup>h</sup>[[s4]],  
 136965<sup>h</sup>[[4]]9|35948<sup>h</sup>[[s4(9.0)]], 36943<sup>h</sup>[[s3]], 36964<sup>h</sup>[[13]], 36979<sup>h</sup>[[13]],  
 36985<sup>h</sup>[[13]], 36998<sup>h</sup>[[4]], 36985<sup>h</sup>[[s3]],  
 11|B9540<sup>h</sup>[[s3]], B13130<sup>h</sup>[[s3]], 125187<sup>h</sup>[[s4]],  
 B41220<sup>h</sup>[[s4]]11|16941<sup>h</sup>[[4]], 22657<sup>h</sup>[[s4]],  
 13|B19210<sup>h</sup>[[13]], 21189<sup>h</sup>[[15]], 21375<sup>h</sup>[[4]], 35803<sup>h</sup>[[4]], 13138<sup>h</sup>[[s3]],  
 19019<sup>h</sup>[[s4]], 19032<sup>h</sup>[[s4]]13|B2419<sup>h</sup>[[s4]],  
~~13544~~<sup>h</sup>[[s3]],  
 15|B8374<sup>h</sup>[[4]], 35804<sup>h</sup>[[4]], 9480<sup>h</sup>[[s4]], 10121<sup>h</sup>[[s4]],  
 40622<sup>h</sup>[[s4]]15|~~14457~~<sup>h</sup>[[s4]],  
~~14491~~<sup>h</sup>[[s4]],  
~~14624~~<sup>h</sup>[[s4]],  
~~24995~~<sup>h</sup>[[s4]],  
~~34058~~<sup>h</sup>[[s4]],  
 17|B8391<sup>h</sup>[[13]], 39484<sup>h</sup>[[s4]],  
 40585<sup>h</sup>[[s4]]17|~~1381~~<sup>h</sup>[[13]],  
~~28445~~<sup>h</sup>[[s3]],  
~~36019~~<sup>h</sup>[[s3]],  
 19|B2872<sup>h</sup>[[4]], 6545<sup>h</sup>[[s5]], 14208<sup>h</sup>[[s5]], 136844<sup>h</sup>[[s4]], 111172<sup>h</sup>[[s4]],  
 B14380<sup>h</sup>[[s4]], B20207<sup>h</sup>[[s4]], B30435<sup>h</sup>[[s4]], B30448<sup>h</sup>[[s4]],  
 B38106<sup>h</sup>[[s5]], B37623<sup>h</sup>[[s4]]19|19320<sup>h</sup>[[4]], 31922<sup>h</sup>[[s54]],  
 36835<sup>h</sup>[[s]]4<sup>h</sup>[[s4]],  
 36853<sup>h</sup>[[1]]3<sup>h</sup>[[s4]], 36902<sup>h</sup>[[s4]], 36918<sup>h</sup>[[4]],  
 36927<sup>h</sup>[[s4]],  
 21|B19215<sup>h</sup>[[4]], B17410<sup>h</sup>[[15]], B14580<sup>h</sup>[[s4]], B40621<sup>h</sup>[[s4]],  
 B14376<sup>h</sup>[[s4]]21|19399<sup>h</sup>[[4]], 36287<sup>h</sup>[[s4]], 36854<sup>h</sup>[[s4]],  
 23|36957<sup>h</sup>[[13]], B17412<sup>h</sup>[[15]], B17330<sup>h</sup>[[4]], B36950<sup>h</sup>[[13]],



B17040<sup>[[s4]]</sup>, B20559<sup>[[s4]]</sup>, B10358<sup>[[s4]]</sup>|23|I9684<sup>[[l4]]</sup>, 30955<sup>[[s4]]</sup>,  
36928<sup>[[s3]]</sup>, 36980<sup>[[l3]]</sup>

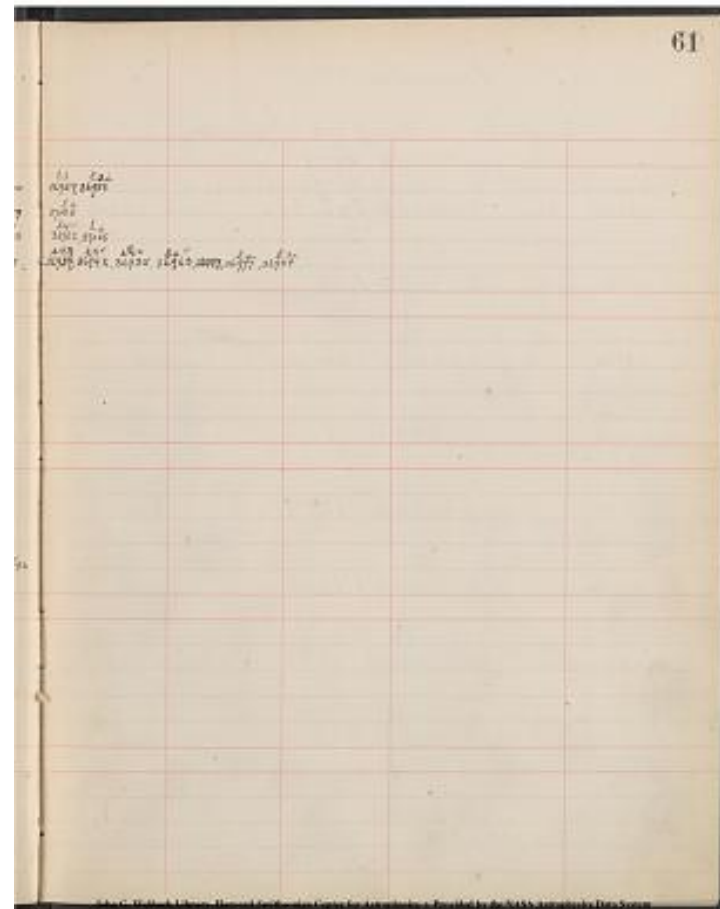
[[4 columned table]]  
RA|45° B|RA|+75° A|  
|---|---|---|  
1<sup>^</sup>[[h]] 20<sup>^</sup>[[m]]|~~B1755~~<sup>[[l4]]</sup>,  
19648<sup>[[s5]]</sup>, 31237<sup>[[s5]]</sup>, 36283<sup>[[s4]]</sup>,  
36956<sup>[[l4]]</sup>4<sup>^</sup>[[h]]|I36966<sup>[[l3i]]</sup>, B1899<sup>[[l4]]</sup>, I32385<sup>[[s4]]</sup>,  
~~I32466~~<sup>[[s4]]</sup>,  
~~I33568~~<sup>[[s4]]</sup>, I36884<sup>[[s4]]</sup>,  
I36966<sup>[[l4i]]</sup>, I36996<sup>[[l4]]</sup>  
4 00|B1774<sup>[[l4]]</sup>, I19657<sup>[[s4]]</sup>, 28553<sup>[[l4]]</sup>, 35160<sup>[[s4]]</sup>,  
35842e<sup>[[s4]]</sup>, 36934<sup>[[s4]]</sup>, 37010<sup>[[l4]]</sup>,  
B1827<sup>[[l3]]</sup>12|I36622<sup>[[l4]]</sup>4~~[[s4]]~~3],  
I36987<sup>[[l4]]</sup>, I37043, I37053|  
6 40|I3396<sup>[[s4]]</sup>, 3274<sup>[[s4]]</sup>, 28470<sup>[[s4]]</sup>, 31459<sup>[[s4]]</sup>, B1823<sup>[[l4]]</sup>,  
~~I32967~~<sup>[[s4]]</sup>,  
~~I34010~~<sup>[[s4]]</sup>,  
~~I34626~~<sup>[[s4]]</sup>,  
I36978<sup>[[l4]]</sup>20|I4051<sup>[[s4]]</sup>, I1645<sup>[[s4]]</sup>, I36864<sup>[[l4]]</sup>  
9 20|I14634<sup>[[l4]]</sup>, I3373<sup>[[s4]]</sup>,  
I36986<sup>[[s4]]</sup>4~~[[s4]]~~3], B1918<sup>[[l4]]</sup> | |  
12 00|~~I14637~~<sup>[[l4]]</sup> | |  
14 40|I19807<sup>[[l5]]</sup>, I19846<sup>[[l4]]</sup>,  
~~I25264~~<sup>[[s4]]</sup>,  
~~I25356~~<sup>[[s4]]</sup>,  
~~I25253~~<sup>[[s4]]</sup>|R.A.|+90°|  
17 20|I20861<sup>[[l4]]</sup>, I36668<sup>[[l4]]</sup>, 36286<sup>[[s4]]</sup> | |  
20 00|B1661<sup>[[l4]]</sup>, B1719<sup>[[l4]]</sup>, I15830<sup>[[s4]]</sup>, 33602<sup>[[s5]]</sup>,  
~~I33580~~<sup>[[s4]]</sup>,  
~~I36206~~<sup>[[s4]]</sup>, 7326<sup>[[s5]]</sup>, 36759<sup>[[s4]]</sup>  
| |  
22 40|B1895<sup>[[l4]]</sup>, B1909<sup>[[l4]]</sup>, I23970<sup>[[s4]]</sup>, I9926<sup>[[s4]]</sup> | |

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61

l3 l3i  
36959, 36988  
l4  
37003  
l4 l4  
36962, 37005  
s4.8 s4 s~~4~~4~~4~~3 l4 l3i  
36937, 36942, 36935, 36963, ~~36997~~, ~~36997~~,  
36977, 36984



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November 7, 1910

Classification of stars for Schwarzschild

[[10 columned table]]

Design	R.A.	Dec.	Sp.	Sp.	Sp.	Sp.	Sp.	Sp.	Sp.	Remark
1	136927	136902	136853	19320	A8335	[[July 3, 315. 1910.]]				
2575										
2581										
2582										
2583										
2586										
2589										
2591										
2595										
2596										
18 46 53.9	+12 51.6	8.0	K							
5° 5'	5° 13'	Bruce	Sch.							

[[left margin]]

1+123701 (1855)

[[/left margin]]

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62

November 7, 1910.

Classification of stars for Schwarzschild

Design	R.A.	Dec.	Sp.	Sp.	Sp.	Sp.	Sp.	Sp.	Sp.	Remark
2575										
2581										
2582										
2583										
2586										
2589										
2591										
2595										
2596										
18 46 53.9	+12 51.6	8.0	K							
5° 5'	5° 13'	Bruce	Sch.							

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[[10 columnned table]]

2+12°37'07(1855°)18 47 2.1+12 49.1 7.8 A       A2^[[
[[ <u>]]R[[/u]] ]]]K=0.2]</u>
2597     F5 F8 F5 F5 F? F
2599     A0 A0 A0 A1^[[ [[ <u>]]R[[/u]] ]]] A A0 H lines</u>
normal. K=0.1]
2607     A0 A0 A0 A0 A A0
2609     F0 F? F0? F0 F F
2613     A? A A? A0 A A
2615     K K K K G5^[[ [[ <u>]]R[[/u]] ]]]?K? e poor, </u>
2618     A5 A0 A5 A5^[[ [[ <u>]]R[[/u]] ]]]A5^[[</u>
[[ <u>]]R[[/u]] ]]]? A5^[[ [[<u>]]R[[/u]] ]]]</u></u>
]]K=0.5 K=0.6 K=0.5?
2619     K K K K K? G5
2622     G5? G? K? G5p^[[ [[ <u>]]R[[/u]] ]]]- G5 or</u>
K Composite?]
[3+14°37'33(1855°)18 52 37.][[ <del>]]3[[/del]]2]+14 56.1</del>
7.7 A0
A0

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[illegible]

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[[10 columned table]]

2623 | | A5|Sp. F?|A5^[[  ]]R[[  ]]  
 ]][~~F0~~][~~A5p~~][  ]]R[[  ]]  
 ]][A|A5^[[  ]]R[[  ]]]]K=0.5 Comp? K=0.5|  
 2625 | | F8?|G|G?|F8?|G| |  
 2628 | | K?|K?|K?|K|-|K| |  
 2629 | | F5|F5?|F8|F5|-|F5?| |  
 2630 | | K|K?|K5?|K^[[  ]]R[[  ]]]]?|-|K?|ft too  
 poor.  
 dbl. 2631 | | A| |A|A|A|var.?| |  
 dbl. 2631 | | K|K?|K?|K|K|A0^[[var.? [[  ]]]]R[[  ]]  
 ]][South fol. North prec. var.?|  
 4 +15°3656 (1855)|18 54 36.3|+15 28.8 8.3|G5| | | | G0| |  
 5 +15 3658 (1855)|18 54 49.3|+15 28.1 8.9|A| | | | A0| |  
 2638 | | A0|A0|A0|A0|-|A0| |  
 6 +14°3750 (1855)|18 55 28.4|+14 13.3 7.7|A3| | | | A| |  
 7 +14°3755 (1855)|18 56.0 0.0|+14 21.7 7.4|G5| | | | G0| |  
 2648 | | K5?|Ma|K5|K5|p^[[  ]]R[[  ]]  
 ]][K5,aM|Compos?|  
 8 +16° 3712 (1855)|18 56 59.2|+16 51.8 7.2|G| | | | G0| |  
 9 +15 3371^[[3370]] (1855)|18^[[18]] 57^[[15.7]] 33.3^[[30.1]]+14^[[14]]  
 53.3^[[53.9]] 7.6^[[9.3]]|Kp| | | | G5?| |  
 2652 | | F5?|F0?|F5?|F8| |F| |  
 2653 | | A2|A0|A0|A2^[[  ]]R[[  ]]]]A|A0|K = 0.2,  
 K = 0.2|  
 10 +12° 3819 (1855)|19 1 42.0|+12 52.6 6.8|K| | | | K| |  
 11|[[]]+15 3696 (1855)|[[]]+15° 3698  
 (1855)|[[]]19 1 4.8|[[]]19 1  
 11.4|[[]]+15 16.8 8.3|[[]]+15 51.2 8.0|K| | | |  
 ?| |

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Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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65

12 +15° 3696 (6855) 19 1 4.8 +15 16.8 8.3 G5 | G? |  
 2659 |[[circled]] 19 2 22.1 +14 32.8 7.2[[/circled]] A0 (Spepe.) A0 A0 A0  
 A- |  
 13 +14 3802 | K | K?  
 2664 | A? | Fo? A5? A5? R | A8 R | K=0.8 [[arrow]] H lines normal? K=0.5  
 Comp? additional faint lines

2673 | | G5 | K? G5 G5 p? | G5?

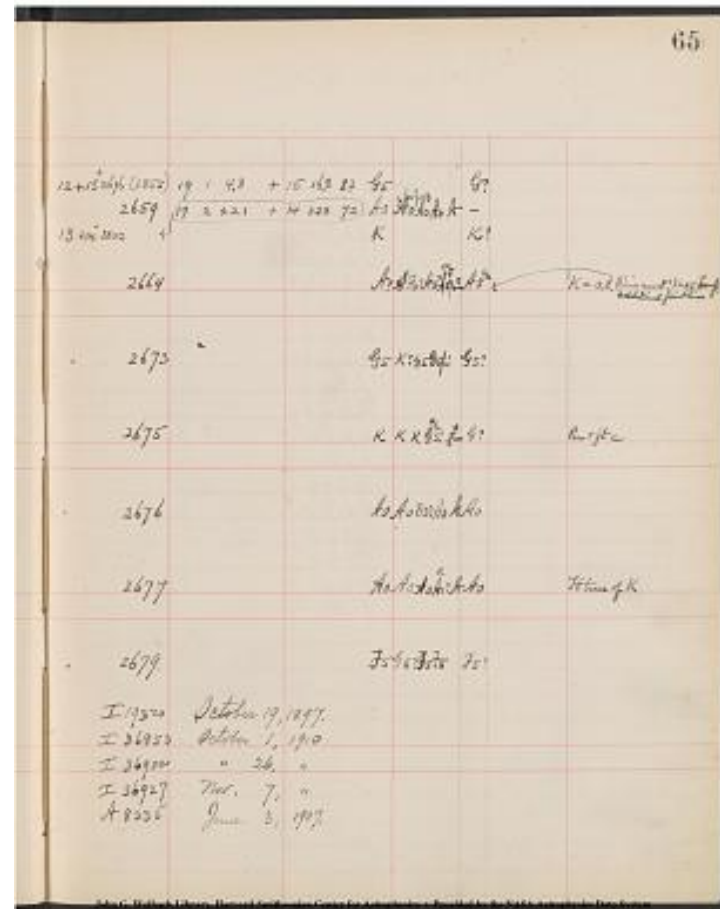
2675 | | K | K K G5? R A | G? | | Pon 5 ft. e.

2676 | | A0 | A0 B5? A0 A | A0 |

2677 | | A0 | A0 A0 A1? ^ R A | A0 | | Ft trace of K

2679 | | F5 | G5? F5 F5 | F5?

I 19320 | October 19, 1897. |  
 I 36853 | October 1, 1910 |  
 I 36902 | October 26, 1910 |  
 I 36927 | Nov. 7, 1910 |  
 A 8335 | June 3, 1907. |



Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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November 15, 1910.

PleiadesEstimates of Class of Spectra for ft stars in sequence  
for H.S. Leavitt

[[9 column table]]

Letter Design | R.A. 1900 | Dec. 1900 | Class.

133718 | 15282 | 15289 | 12233 | 130336 | Concl. Cl. |

e | | A0? | A0 | A0 | A1? | A0 | A0 |

e' | | A2 | A1 | A0 | A2 | A | A2 |

f | | A1 | A1 | A1 | A1 | A | A1 |

f' | | A2 | A1? | A | A0 | A | A2 |

f' | | A2 | A0? | A2 | A2 | A | A2 |

g | | A2 | A0 | A2 | A1 | A | A2 |

h | | A3 | A3 | A3 | A3 | A | A3 |

h' | | A5 | A | A3 | A5 | A | A5 |

i | |

[[Strikeout]] G5 [[/Strikeout]] [[Strikeout]] A0 [[/Strikeout]] A0 | A0 | A | Definition  
too poor to give much weight to subdivision of Cl. of sp. | A0 |

i | | A5 | A5 | A5 | A5 | A5 |

j | | A0? | A | A [[strikeout]] 0 [[/strikeout]] 5 | A5 | A5 |

j' | | F [[strikeout]] A2 [[/strikeout]] F? | F | F0 | F0 |

j' | | A? | A0 | A3 | A | A |

j2 | | K? [[strikeout]] 2 [[/strikeout]] G | F5? | F5 | F5 |

j3 | | K | G5 | G? | G? | G? |

j4 | | G? | K | K | K | K |

jj5 | | A? | G? | - | - | - |

k | | - | - | - | - | - |

k' | | - | - | - | - | - |

l | | - | - | - | - | - |

l' | | - | - | - | - | - |

m | | - | - | - | - | - |

m' | | - | - | - | - | - |

n | | - | - | - | - | - |

o | | - | - | - | - | - |

p | | - | - | - | - | - |

q | | - | - | - | - | - |

r | | - | - | - | - | - |

[[/9 column table]]

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*Pleiades* November 15, 1910.

*Estimates of Class of Spectra for ft stars in sequence*

*for H.S. Leavitt*

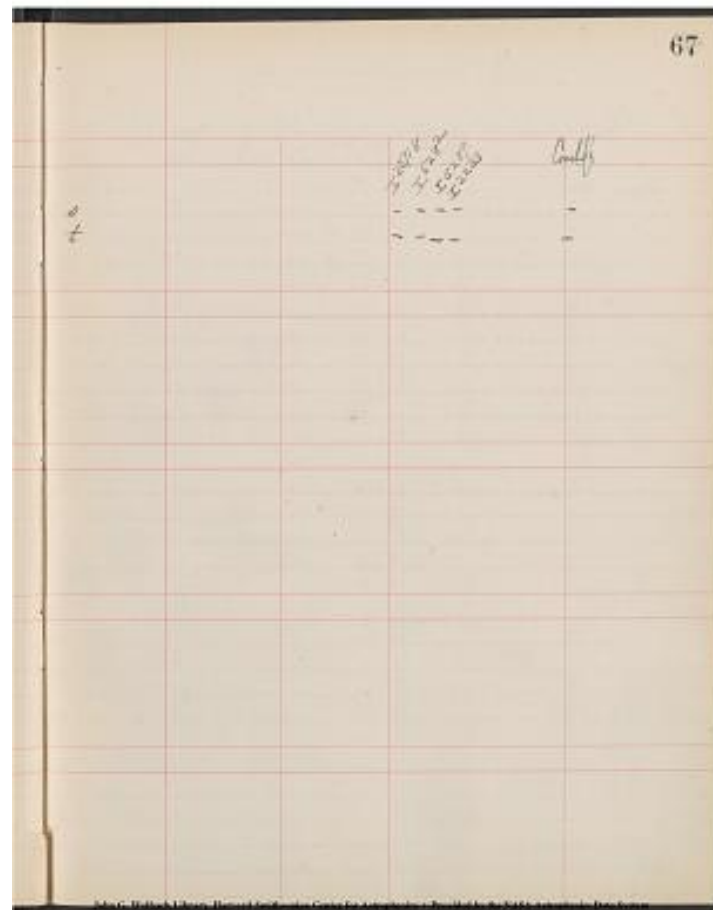
Letter Design	R.A. 1900	Dec. 1900	Class.	Concl. Cl.
e			A0	A0
e'			A0	A0
f			A1	A1
f'			A1	A1
g			A2	A2
g'			A2	A2
h			A3	A3
h'			A3	A3
i			A5	A5
i'			A5	A5
j			A0?	A
j'			A0?	A
j2			K?	G
j3			K	G5
j4			G?	K
jj5			A?	G?
k			-	-
k'			-	-
l			-	-
l'			-	-
m			-	-
m'			-	-
n			-	-
o			-	-
p			-	-
q			-	-
r			-	-

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[[5 columned table]]  
|33718|5282|5289|2233|Cond. Sp.|  
-	-	-	-

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s  
t  
[[/left margin]]



Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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November 22, 1910

Classification of Neotoma in Hawaiian Islands Region C1.  
R.A. Dec. May 50 59<sup>th</sup> at U.S. Nat. Museum

[illegible]

Smithsonian Institution Transcription Center, Harvard-Smithsonian Center for Astrophysics



November 22, 1910.

## Classification of Spectra in Harvard Standard Region C1

[[14 columned table]]

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
27	+16° 103 0	55 28.7	+16 45.1	9.2	50	54	G	—	G

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
28	+16 104 0	55 28.7	+16 45.1	9.2	50	54	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
29	+16 105 0	55 45.0	+16 28.1	8.8	50	54	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
30	+16 106 0	56 21.2	+16 42.0	9.2	50	54	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
31	+16 109 0	57 42.9	+16 54.9	9.0	50	54	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
32	+16 111 0	58 26.6	+16 57.3	8.8	50	54	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
33	+16 112 0	58 43.2	+16 50.9	9.3	50	54	A	—	A

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
34	+16 113 0	59 10.9	+16 56.2	8.8	50	54	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
35	+16 108 0	57 31.3	+16 70.9	9.5	50	54	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
36	+16 110 0	58 2.0	+16 17.8	9.0	50	54	G	—	G

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
37	+16 114 0	59 20.2	+16 21.5	9.5	50	54	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
38	+16 116 1	0 12.4	+16 37.5	8.0	50	7.64	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
39	+16 117 1	0 16.0	+16 59.5	8.9	50	7.64	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
40	+16 118 1	0 23.0	+16 24.6	9.0	50	7.64	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
41	+16 119 1	0 46.2	+16 52.4	8.6	50	8.26	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
42	+16 121 1	3 4.5	+16 10.8	9.0	50	8.26	G	—	G

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
43	+16 123 1	3 21.7	+16 10.8	8.5	50	8.26	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
44	+16 124 1	4 3.1	+16 58.1	9.1	50	8.26	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
45	+16 125 1	5							

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
9.4	+16 8.2	9.2	50 8.26	K	—	—	—	—	—

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
46	+16 128 1	8 10.4	+16 54.5	9.0	50	8.26	G	—	G

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
47	+16 129 1	8 25.8	+16 51.5	8.3	50	8.42	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
48	+16 131 1	9 2.5	+16 51.5	9.5	50	8.42	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
49	+16 130 1	8 29.7	+16 4.2	8.1	50	8.42	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
50	+15 139 0	49 38.5	+15 34.0	8.5	50	8.42	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
51	+15 140 0	49 46.0	+15 23.8	8.7	50	8.42	K	—	K

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
52	+15 141 0	49 58.5	+15 47.1	9.3	50	8.42	F	—	F

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
53	+15 142 0	50 5.7	+15 15.7	9.2	50	8.42	G	—	G

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November 22, 1910.

Classification of Spectra in Harvard Standard Region C1

R.R. Dec. 1910

No	Design	RA	Dec.	DM Magn.	HA 50	HA 54	36929	10101	19384
27	+16 103 0	55 28.7	+16 45.1	9.2	50	54	G	—	G
28	+16 104 0	55 28.7	+16 45.1	9.2	50	54	F	—	F
29	+16 105 0	55 45.0	+16 28.1	8.8	50	54	K	—	K
30	+16 106 0	56 21.2	+16 42.0	9.2	50	54	K	—	K
31	+16 109 0	57 42.9	+16 54.9	9.0	50	54	K	—	K
32	+16 111 0	58 26.6	+16 57.3	8.8	50	54	F	—	F
33	+16 112 0	58 43.2	+16 50.9	9.3	50	54	A	—	A
34	+16 113 0	59 10.9	+16 56.2	8.8	50	54	F	—	F
35	+16 108 0	57 31.3	+16 70.9	9.5	50	54	K	—	K
36	+16 110 0	58 2.0	+16 17.8	9.0	50	54	G	—	G
37	+16 114 0	59 20.2	+16 21.5	9.5	50	54	F	—	F
38	+16 116 1	0 12.4	+16 37.5	8.0	50	7.64	F	—	F
39	+16 117 1	0 16.0	+16 59.5	8.9	50	7.64	K	—	K
40	+16 118 1	0 23.0	+16 24.6	9.0	50	7.64	F	—	F
41	+16 119 1	0 46.2	+16 52.4	8.6	50	8.26	F	—	F
42	+16 121 1	3 4.5	+16 10.8	9.0	50	8.26	G	—	G
43	+16 123 1	3 21.7	+16 10.8	8.5	50	8.26	K	—	K
44	+16 124 1	4 3.1	+16 58.1	9.1	50	8.26	F	—	F
45	+16 125 1	5							
9.4	+16 8.2	9.2	50 8.26	K	—	—	—	—	—
46	+16 128 1	8 10.4	+16 54.5	9.0	50	8.26	G	—	G
47	+16 129 1	8 25.8	+16 51.5	8.3	50	8.42	K	—	K
48	+16 131 1	9 2.5	+16 51.5	9.5	50	8.42	K	—	K
49	+16 130 1	8 29.7	+16 4.2	8.1	50	8.42	K	—	K
50	+15 139 0	49 38.5	+15 34.0	8.5	50	8.42	F	—	F
51	+15 140 0	49 46.0	+15 23.8	8.7	50	8.42	K	—	K
52	+15 141 0	49 58.5	+15 47.1	9.3	50	8.42	F	—	F
53	+15 142 0	50 5.7	+15 15.7	9.2	50	8.42	G	—	G

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November 22, 1910.

[[13 columned table]]

| | | | | DM Magn. | HA 50 | HA

54 | 136929 | 5 | 110 | 101 | 15 | 19384 | 136905 | 136912. Rem. | |

No. | Design | RA | Dec | | Sp. | | | |

54. | +15° 144 | 0 | 51 | 45.5 | +15° 32.3 | 8.0 | | | | G5, K, G5, G5, |  
G5

55. | +15 146 | 0 | 51 | 45.5 | +15 46.9 | 9.5 | | | | A? | | | | A?

56. | +15 145 | 0 | 51 | 16.2 | +15 18.5 | 9.5 | | | | F? | | | | F?

57. | +15 147 | 0 | 51 | 46.6 | +15 8.2 | 9.4 | | | | F? | | | | F?

58. | +15 148 | 0 | 51 | 56.1 | +15 20.9 | 8.5 | | | | G, G?, G, G | G |

59. | +15 149 | 0 | 53 | 14.3 | +15 53.5 | 8.9 | | | | A5? | | | | F |

60. | +15 150 | 0 | 53 | 23.0 | +15 35.5 | 9.5 | | | | F? | | | | F?

61. | +15 151 | 0 | 53 | 56.7 | +15 15.9 | 9.3 | | | | A? | | | | A?

62. | +15 152 | 0 | 54 | 0.1 | +15 5.0 | 9.5 | | | | G? | | | | K? | G5?

63. | +15 154 | 0 | 55 | 22.4 | +15 22.5 | 8.5 | | | | 8.58 | G

| | | | | ~~K~~ | | | | ~~G5, K~~ | G5

64. | +15 155 | 0 | 56 | 56.8 | +15 52.4 | 9.5 | | | | 8.58 | F? | | | | F?

65. | +15 156 | 0 | 57 | 16.0 | +15 28.1 | 8.0 | | | | 8.58 | K5, K, K, Kp, | K |

66. | +15 157 | 0 | 57 | 53.5 | +15 27.0 | 9.5 | | | | 8.58 | K? | | | | K |

67. | +15 159 | 0 | 58 | 41.9 | +15 32.3 | 8.5 | | | | 8.30 | A5, F, | A5 | A5 |

68. | +15 160 | 0 | 58 | 47.8 | +15 51.3 | 9.0 | | | | 8.30 | A | | | | A |

69. | +15 161 | 0 | 58 | 53.1 | +15 35.1 | 9.0 | | | | 8.30 | F, | | | | ~~F~~ |G | | | | | ~~G~~ | F5 |

70. | +15 162 | 0 | 59 | 22.5 | +15 6.5 | 9.5 | | | | 8.30 | G? | | | | G? | G?

71. | +15 163 | 0 | 59 | 41.0 | +15 11.2 | 9.5 | | | | 8.30 | K? | | | | K?

71a | | | 0 | 59.9 | +15 22 | | | | A | | | | A |

72. | +15 164 | 1 | 0 | 11.8 | +15 4.7 | 8.0 | | | | 8.10 | G, G, G, G, | G |

73. | +15 165 | 1 | 0 | 31.1 | +15 28.5 | 9.5 | | | | 8.10 | K | | | | K |

74. | +15 166 | 1 | 0 | 49.5 | +15 31.9 | 9.5 | | | | 8.10 | F | | | | F |

75. | +15 167 | 1 | 0 | 53.5 | +15 1.2 | 8.4 | | | | 8.64 | G, K, G5, | G5 |

76. | +15 170 | 1 | 2 | 37.1 | +15 49.2 | 9.0 | | | | 8.64 | K | | | | K |

77. | +15 171 | 1 | 2 | 55.8 | +15 37.8 | 9.4 | | | | 8.64 | F | | | | F |

78. | | | 1 | 3.0 | +15 52 | | | | 8.64 | F | | | | F |

79. | +15 172 | 1 | 3 | 28.0 | +15 47.9 | 9.0 | | | | 8.64 | F | | | | G | F5 |

80. | +15 173 | 1 | 3 | 29.0 | +15 55.3 | 9.1 | | | | 8.64 | K | | | | K |

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November 22, 1910.

No.	Design	RA	Dec	Sp.	Notes
54.	+15° 144	0	51   45.5	+15° 32.3   8.0	G5, K, G5, G5, G5
55.	+15 146	0	51   45.5	+15 46.9   9.5	A?
56.	+15 145	0	51   16.2	+15 18.5   9.5	F?
57.	+15 147	0	51   46.6	+15 8.2   9.4	F?
58.	+15 148	0	51   56.1	+15 20.9   8.5	G, G?, G, G
59.	+15 149	0	53   14.3	+15 53.5   8.9	A5?
60.	+15 150	0	53   23.0	+15 35.5   9.5	F?
61.	+15 151	0	53   56.7	+15 15.9   9.3	A?
62.	+15 152	0	54   0.1	+15 5.0   9.5	G?
63.	+15 154	0	55   22.4	+15 22.5   8.5	8.58 G
64.	+15 155	0	56   56.8	+15 52.4   9.5	8.58 F?
65.	+15 156	0	57   16.0	+15 28.1   8.0	8.58 K5, K, K, Kp, K
66.	+15 157	0	57   53.5	+15 27.0   9.5	8.58 K?
67.	+15 159	0	58   41.9	+15 32.3   8.5	8.30 A5, F, A5 A5
68.	+15 160	0	58   47.8	+15 51.3   9.0	8.30 A
69.	+15 161	0	58   53.1	+15 35.1   9.0	8.30 F, <del>F</del>
70.	+15 162	0	59   22.5	+15 6.5   9.5	8.30 G?
71.	+15 163	0	59   41.0	+15 11.2   9.5	8.30 K?
71a	+15 163	0	59.9	+15 22	A
72.	+15 164	1	0   11.8	+15 4.7   8.0	8.10 G, G, G, G, G
73.	+15 165	1	0   31.1	+15 28.5   9.5	8.10 K
74.	+15 166	1	0   49.5	+15 31.9   9.5	8.10 F
75.	+15 167	1	0   53.5	+15 1.2   8.4	8.64 G, K, G5, G5
76.	+15 170	1	2   37.1	+15 49.2   9.0	8.64 K
77.	+15 171	1	2   55.8	+15 37.8   9.4	8.64 F
78.	+15 171	1	3.0	+15 52	8.64 F
79.	+15 172	1	3   28.0	+15 47.9   9.0	8.64 F, G F5
80.	+15 173	1	3   29.0	+15 55.3   9.1	8.64 K

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[illegible]

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Miscellaneous Observations #19  
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November 22, 1910.

|DM. eta eta 5°15°  
|RA Dec. |Magn. 50 54| I36929 I10101 I19384 36905 |

No. Design |h m  
110. +13 129 |0 49 0.9 +13 7| 9.5 "" "" | Sf F--F | F[[check]]  
111. +13 130 |0 49 6.0 +13 59.0| 8.7 "" "" | 8.58 | K--K | K[[check]]  
112. +13 134 |0 50 25.3 +13 47.8| 9.5 "" "" | F--F | F[[check]]  
113. +13 136 |50 31.6 +13 29.1| 9.3 "" "" | F?-- | F?[[check]]  
114. +13 137 |50 37.5 +13 2.1| 9.5 "" "" | G?-- | G?[[check]]  
115. +13 139 |50 59.3 +13 16.2| 9.5 "" "" | F-- | F[[check]]  
116. +13 140 |51 9.2 +13 17.3| 9.5 "" "" | G-- | G[[check]]  
117. +13 141 |51 27.3 +13 56.8| 8.9 "" "" | G--K | G5[[check]]  
118. +13 142 |51 49.3 +13 20.2| 9.3 "" "" | F?--F | F[[check]]  
119. +13 143 |52 7.7 +13 50.1| 8.5 "" "" | 9.00 | F--F | F[[check]]  
120. +13 144 |52 48.3 +13 27.2| 9.5 "" "" | F-- | F[[check]]  
121. +13 145 |53 39.1 +13 13.1| 9.3 "" "" | G?-- | G?[[check]]  
122. +13 146 |54 9.3 +13 13.4| 9.5 "" "" | K?--K | K[[check]]  
123. +13 147 |54 23.0 +13 57.7| 9.5 "" "" | K?--K | K[[check]]  
124. +13 148 |54 27.3 +13 47.0| 9.5 "" "" | K?--K | K[[check]]  
125. +13 149 |54 45.3 +13 24.1| 9.2 "" "" | K--K | K[[check]]  
126. +13 150 |54 56.9 +13 28.0| 8.5 "" "" | 8.93 | G5--G5 | G5[[check]]  
127. +13 152 |55 8.9 +13 6.7| 9.0 "" "" | G--G5 | G[[check]]  
128. +13 153 |55 17.6 +13 52.3| 9.1 "" "" | F--F | F[[check]]  
129. +13 155 |56 14.0 +13 9.5| 8.7 "" "" | 8.83 | G--G5 | G[[check]]  
130. +13 156 |56 23.5 +13 12.7| 9.0 "" "" | K--K | K[[check]]  
131. ... | 56.1 +13 28 | "" "" "" | F?--F | F[[check]]  
132. +13 158 |56 54.0 +13 55.9| 9.5 "" "" | F?-- | F?[[check]]  
133. +13 160 |57 5.0 +13 54.8| 9.2 "" "" | G--F? | F5[[check]]  
134. +13 157 |56 48.7 +13 37.7| 9.5 "" "" | F--G? | F5[[check]]  
135. +13 162 |57 47.1 +13 20.0| 8.6 "" "" |  
K--K.. | K[[check]]  
136. +13 165 |58 57.8 +13 6.6 7.3| 7.32 | F,F5,F2,F5 | F2[[check]]

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November 22, 1910.

No.	Design	h	m	RA	Dec.	Magn.	Spectral Classification
110.	+13 129	0 49 0.9	+13 7	9.5	""	""	Sf F--F
111.	+13 130	0 49 6.0	+13 59.0	8.7	""	""	8.58 K--K
112.	+13 134	0 50 25.3	+13 47.8	9.5	""	""	F--F
113.	+13 136	50 31.6	+13 29.1	9.3	""	""	F?--
114.	+13 137	50 37.5	+13 2.1	9.5	""	""	G?--
115.	+13 139	50 59.3	+13 16.2	9.5	""	""	F--
116.	+13 140	51 9.2	+13 17.3	9.5	""	""	G--
117.	+13 141	51 27.3	+13 56.8	8.9	""	""	G--K
118.	+13 142	51 49.3	+13 20.2	9.3	""	""	F?--F
119.	+13 143	52 7.7	+13 50.1	8.5	""	""	9.00 F--F
120.	+13 144	52 48.3	+13 27.2	9.5	""	""	F--
121.	+13 145	53 39.1	+13 13.1	9.3	""	""	G?--
122.	+13 146	54 9.3	+13 13.4	9.5	""	""	K?--K
123.	+13 147	54 23.0	+13 57.7	9.5	""	""	K?--K
124.	+13 148	54 27.3	+13 47.0	9.5	""	""	K?--K
125.	+13 149	54 45.3	+13 24.1	9.2	""	""	K--K
126.	+13 150	54 56.9	+13 28.0	8.5	""	""	8.93 G5--G5
127.	+13 152	55 8.9	+13 6.7	9.0	""	""	G--G5
128.	+13 153	55 17.6	+13 52.3	9.1	""	""	F--F
129.	+13 155	56 14.0	+13 9.5	8.7	""	""	8.83 G--G5
130.	+13 156	56 23.5	+13 12.7	9.0	""	""	K--K
131.	...	56.1	+13 28	""	""	""	F?--F
132.	+13 158	56 54.0	+13 55.9	9.5	""	""	F?--
133.	+13 160	57 5.0	+13 54.8	9.2	""	""	G--F?
134.	+13 157	56 48.7	+13 37.7	9.5	""	""	F--G?
135.	+13 162	57 47.1	+13 20.0	8.6	""	""	
136.	+13 165	58 57.8	+13 6.6 7.3	7.32			F,F5,F2,F5

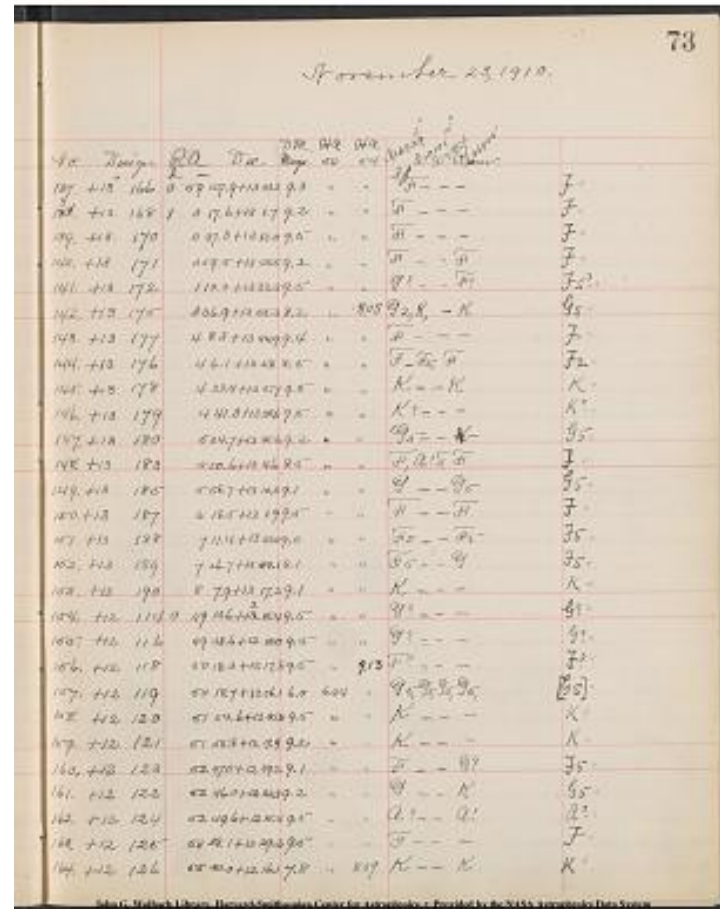
Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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73  
November 23, 1910.

DM. eta eta 5° 15°

No. Design. | RA Dec. | Magn. 50 54 | I36929 I10101 I19384 36905

	sigma	h	m	
137. +13 166	0 59.59 +13 43.2	9.3	50 54	Sf F--- F[[check]]
138. +13 168	1 0 17.6 +13 1.7	9.2	50 54	F--- J[[check]]
139. +13 170	0 47.3 +13 12.0	9.5	50 54	F--- J[[check]]
140. +13 171	0 59.5 +13 55.5	9.2	50 54	F---F J[[check]]
141. +13 172	1 10.0 +13 33.5	9.5	50 54	G?--F? J5?
142. +13 175	3 36.9 +13 55.3	8.2	50 8.05	g 2.K.-K G5[[check]]
143. +13 177	4 8.3 +13 44.9	9.4	50 8.05	F--- J[[check]]
144. +13 176	4 6.1 +13 5.8	8.5	50 8.05	F F5.F J2[[check]]
145. +13 178	4 22.4 +13 5.7	9.5	50 8.05	K- - K K[[check]]
146. +13 179	4 41.3 +13 28.6	9.5	50 8.05	K?-- - K?[[check]]
147. +13 180	5 34.7 +13 45.6	9.2	50 8.05	g5 - K g5[[check]]
148. +13 183	5 50.6 +13 4.6	8.5	50 8.05	F,A?F,F J[[check]]
149. +13 185	5 58.7 +13 10.3	9.1	50 8.05	g - g5 g5[[check]]
150. +13 187	6 18.5 +13 1.9	9.5	50 8.05	F - -F J[[check]]
151. +13 188	7 11.4 +13 53.0	9.0	50 8.05	F5--F5 J5[[check]]
152. +13 189	7 26.7 +13 54.1	8.1	50 8.05	F5-g J5[[check]]
153. +13 190	8 7.9 +13 17.2	9.1	50 8.05	K--- K[[check]]
154. +12 114	0 49 13.6 +12 15.4	9.5	50 8.05	g?--- g?[[check]]
155. +12 116	49 38.6 +12 15.0	9.5	50 8.05	g?--- g?[[check]]
156. +12 118	50 18.3 +12 17.8	9.5	50 9.13	F?--- J?[[check]]
157. +12 119	50 18.7 +12 56.1	6.0 6.44		
9.13 g5.g5.g5.g5				9.13 g5.g5.g5.g5
158. +12 120	51 54.6 +12 33.8	9.5 6.44 9.13	K--- K[[check]]	
159. +12 121	51 55.8 +12 17.9	9.2 6.44 9.13	K--- K[[check]]	
160. +12 123	52 47.5 +12 39.2	9.1 6.44 9.13	F-g? J5[[check]]	
161. +12 122	52 46.0 +12 22.3	9.2 6.44 9.13	g--K g5[[check]]	
162. +12 124	52 49.6 +12 15.4	9.5 6.44 9.13	A?--A? A?[[check]]	
163. +12 125	54 38.1 +12 29.2	9.5 6.44 9.13	F-- - J[[check]]	
164. +12 126	55 30.0 +12 16.1	7.8 6.44 8.09	K--K K[[check]]	



Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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November 23, 1910.

DM. HA HA 5° 15°

No. Design | RA Dec. | Magn. 50 54|136929 110101 119384 136905 136912 |

	h m	Sp.
165. +12° 127	0 56 21.5 +12° 20.9	9.5 50 54 K? ---- K?[[check]]
166. +12 128	56 39.3 +12 34.2	9.5 50 54  K---- K[[check]]

167. +12 129	57 2.1 +12 39.7	9.5 50 54  F?---- J?[[check]]
168. +12 133	58 11.8 +12 32.7	9.1 50 54  g-g-  g[[check]]
169. +12 134	58 34.0 +12 29.2	8.0 50 54  g-g-g- g[[check]]
170. +12 135	0 58 57.3 +12 9.9	6.2 6.22 54 g5,K,g5,g5- g5[[check]]
170. +12 135	[[strike]]+35 0[[strike]]	
171. +12 136	0 59 15.7 +12 49.2	9.2 6.22 54 g5-g?- g5[[check]]
172. +12 137	59 20.3 +12 32.7	9.4 6.22 54 A?---- A?[[check]]
173. +12 138	59 43.0 +12 24.1	9.5 6.22 54 K-K?- K[[check]]
174. +12 139	1 0 8.2 +12 54.0	9.5 6.22 54 g5---- g5[[check]]
175. +12 140	1 0 33.1 +12 54.9	9.0 6.22 54 K-K-  K[[check]]
176. +12 141	1 1 34.0 +12 34.4	8.5 6.22 54 K-K-  K[[check]]
177. +12 142	1 3 5.5 +12 52.7	9.5 6.22 54 F?---- J?[[check]]
178. +12 145	1 4 46.5 +12 40.9	9.0 6.22 54 g-f-  J5[[check]]
179. +12 146	1 4 48.6 +12 16.0	9.0 6.22 54 K-K-  K[[check]]
180. +12 149	1 5 59.6 +12 36.1	9.5 6.22 54 g?---- g?[[check]]
181. +12 150	1 7 11.5 +12 20.9	9.4 6.22 54 K---- K[[check]]
182. +12 152	1 7 24.8 +12 17.5	9.2 6.22 54 K-K-  K[[check]]
183. +12 153	1 8 10.6 +12 16.8	9.5 6.22 54 F?---- J?[[check]]
184. +12 154	1 8 24.5 +12 12.6	9.5 6.22 54 K?---- K?[[check]]
185. +12 155	1 8 31.4 +12 58.1	8.7 6.22 54 K-K-  K[[check]]

[[underline]]November 25, 1910[[underline]]

186. +17 119	0 47 32.4 +17 27.5	8.9  F--F-  F2[[check]]
187. +17 122	48 0.3 +17 5.3	9.5  K-- K- K[[check]]
188. +17 120	47.40.5 +17 1.3	9.3  F-- g- J5[[check]]
189. +17 121	48 0.3 +17 5.3	9.5  F?---- J?[[check]]
[[strike]]189a[[strike]]		
190. +17 123	48 59.9 +17 9.9	8.2  g-g-  g[[check]]
191. +17 124	49 8.0 +17 9.9	9.0  K-g5- K[[check]]

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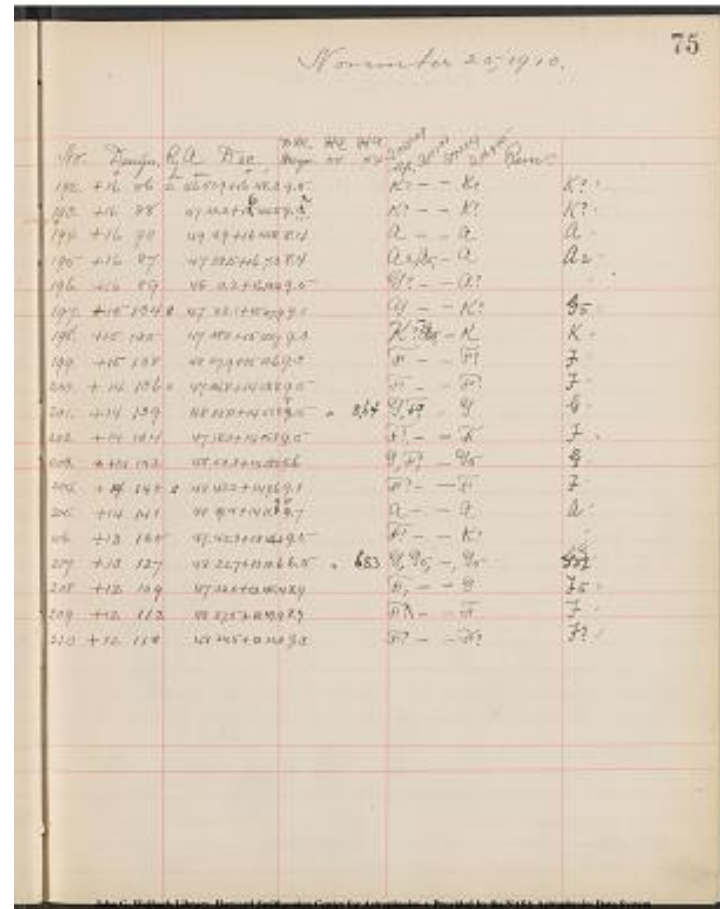


November 25, 1910.

[No. | Design | Ra | Dec. | DM Magn. | HA 50 | HA 54 | 136929 | 110101 | 119384 | 136905 | Rem.]

| ° | h m | ° ' | | | Sp. | |

192	+16 86	0 46 51.9	+ 16 48.3	9.5		K? - - K?   K?
193	+16 88	47 30.2	+ 16 45.5	9.2		K? - - K?   K?
194	+16 90	49 4.9	+ 16 55.8	8.4		A - - A   A
195	+16 87	47 28.5	+ 16 7.3	8.4		A2 A5 - A   A2
196	+16 89	48 0.2	+ 16 18.4	9.5		G? - - A?
197	+15 104	0 47 22.1	+ 15 47.3	9.1		G - - K?   G5
198	+15 135	47 38.0	+ 15 25.7	9.3		K? - - K   K
199	+15 138	48 57.9	+ 15 10.6	9.3		F - - F?   F
200	+14 136	0 47 34.8	+ 14 58.8	9.5		F - - F?   F
201	+14 139	48 35.0	+ 14 57.8	8.5		8.64   G F? - G   G
202	+14 134	47 18.0	+ 14 15.8	9.5		F? - - F   F
203	+14 142	48 50.8	+ 14 23.5	8.6		G F? - G5   G
204	+14 140	0 48 43.2	+ 14 9.6	9.1		F? - - F   F
205	+14 141	48 49.4	+ 14 11.9	8.7		A - - A   A
206	+13 125	47 45.3	+ 13 46.3	9.5		F? - - K?
207	+13 127	48 32.7	+ 13 10.6	6.5		6.83   G G5 - G5   G5
208	+12 109	47 32.0	+ 12 45.4	8.9		F - - G   F5
209	+12 112	48 27.5	+ 12 49.4	8.9		F - - F   F
210	+12 113	48 34.5	+ 12 22.0	9.3		F? - - F?   F?



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January 4, 1911

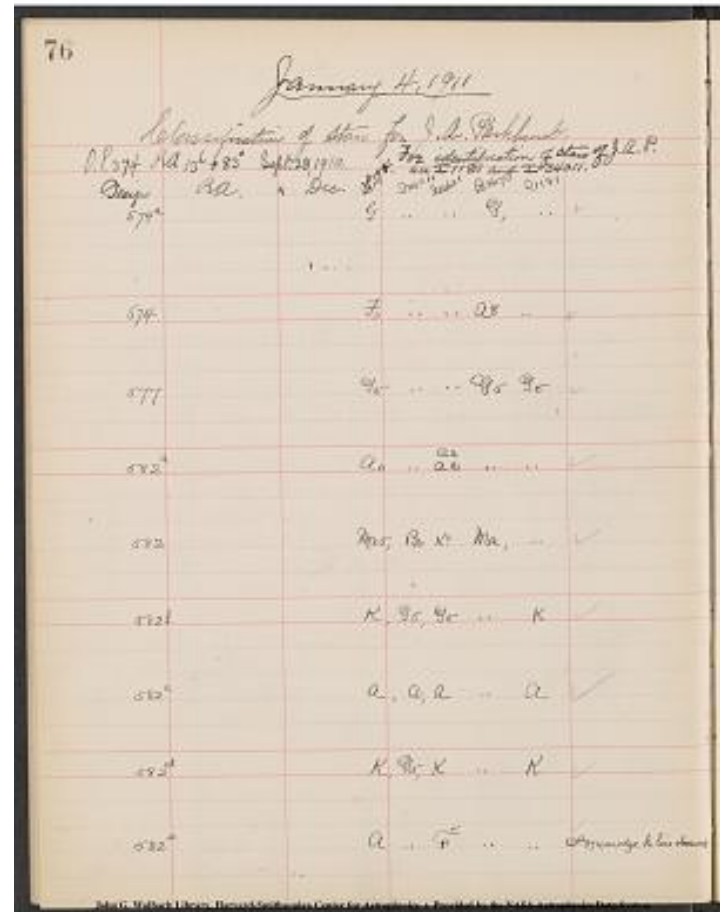
Classification of stars for J. A. Parkhurst  
 D.P. 374 RA 13<sup>h</sup> 13<sup>m</sup> 48<sup>s</sup> Sept. 28, 1910  
 For identification of stars of J.A.P. see I1181 and I34011.

[[9 columned table]]

Design	R.A.	Dec.	D.P. 37	I34011	I36621	B2670	I1181
574a							
574							
577							
582a							
582							
582b							
582c							
582d							
582e							

OP374, on edge. k line obscured.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics.  
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 Miscellaneous Observations #19  
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Classification of stars for J.A. Parkhurst.

[[10 columned table]]

OP374	RA13 +83	Sept. 28, 1910							
Design.	RA	Dec.	OP374	I34017	I36621		B2670	I1181	
584									
579									
579 <sup>a</sup>									
579 <sup>b</sup>									
579 <sup>c</sup>									
57 <sup>d</sup>									
586									
589									
589 <sup>a</sup>									
589 <sup>b</sup>									
590									

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

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Classification of stars for J.A. Parkhurst.

OP374	RA	Dec.	Sept. 28, 1910						
584									
579									
579 <sup>a</sup>									
579 <sup>b</sup>									
579 <sup>c</sup>									
57 <sup>d</sup>									
586									
589									
589 <sup>a</sup>									
589 <sup>b</sup>									
590									

Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
Miscellaneous Observations #19  
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[[7 columned table]]

Design. | OD374 | I34011 | I36621 | B[[strikethrough]]2510[[/strikethrough]]26  
70 | I1181 |

581?	or 583	F5	...	F8	..	
581 <sup>a</sup>	[[a]]	A	...	A	A	
581 <sup>b</sup>	[[b]]	A	...	A	A	
587	F5	...	F	...		
587 <sup>a</sup>	[[a]]	A1				
592	A2	...	A5	A5		
593	G	G	G	G	G	
594	A2	A5	A5	A5	A	
594 <sup>a</sup>	[[a]]	K	...	K		
594 <sup>b</sup>	[[b]]	K	...	K		

78						
Design	581/2, 593	581 <sup>a</sup>	581 <sup>b</sup>	587 <sup>a</sup>	587 <sup>b</sup>	594 <sup>a</sup>
OD	374	374	374	374	374	374
I	34011	I	I	I	I	I
B	2510	B	B	B	B	B
26		26	26	26	26	26
I1181		I1181	I1181	I1181	I1181	I1181
581?	or 583	F5	...	F8	..	
581 <sup>a</sup>	[[a]]	A	...	A	A	
581 <sup>b</sup>	[[b]]	A	...	A	A	
587	F5	...	F	...		
587 <sup>a</sup>	[[a]]	A1				
592	A2	...	A5	A5		
593	G	G	G	G	G	
594	A2	A5	A5	A5	A	
594 <sup>a</sup>	[[a]]	K	...	K		
594 <sup>b</sup>	[[b]]	K	...	K		

Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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[[7 columned table]]

Design|OP374|I34011|I36621|B2670|I1181| |

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

59[[\struck out]]9[[\struck out]]6, 597|Ao,|Ao,(B)|A,A|A,A|..||

599|K,|K,|K,|K,|K,|K,||

599^a|A2,|A,|A,|..|A||

600|G2,|G,|G,|..|G2||

601|F5|..|..|F1||

603|K5|K,|[[\struck out]]G2[[\struck out]]K,|K,|..||

603^a|G?,|F|[[\struck out]]A[[\struck out]]F|..|F||

603^t|K|G5|..|..|G5||

605|F5|..|..|[[\struck out]]G[[\struck out]]F5,|F,|..||

79						
Design	OP374	I34011	I36621	B2670	I1181	
59	599	599	599	599	599	599
599	K, K, K, K, K, K, K					
599 <sup>a</sup>	A2, A, A, .. A					
600	G2, G, G, .. G2					
601	F5 .. .. F1					
603	K5, K, [[\struck out]]G2[[\struck out]]K, K, ..					
603 <sup>a</sup>	G?, F [[\struck out]]A[[\struck out]]F .. F					
603 <sup>t</sup>	K G5 .. .. G5					
605	F5 .. .. [[\struck out]]G[[\struck out]]F5, F, ..					

Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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[[7 columned table]]  
 Design|OP374|I34011|I36621|B2670|I1181| |  
 --|--|--|--|--|  
 605^a|F4|..|F|..|F||  
 607|G.|G2.|G5|...|G2||  
 607^a|A.|A.|A|..|..||  
 608|F|..|..|F|F|~~8~~|~~5~~||  
 611|Ma?|..|~~KG5~~|~~...~~|..|..|?|  
 611^a|K.|K.|~~G~~|~~K~~|..|..||  
 612|K.|G.|K.|K|..||  
 613|K.|..|K.|..|..||  
 615|K?|..|..|K.|K||  
 616|~~Ma~~|~~...~~|~~K5~~|..|K.|..|..||  
 616^a|A.|A.|A|..|A||  
 617|G?|..|..|F5.|F5|?||

80						
Design	OP374	I34011	I36621	B2670	I1181	
605 <sup>a</sup>	F4	..	F	..	F	
607	G.	G2.	G5	...	G2	
607 <sup>a</sup>	A.	A.	A	..	..	
608	F	..	..	F	F	
611	Ma?	..	<del>KG5</del>	<del>...</del>	..	?
611 <sup>a</sup>	K.	K.	<del>G</del>	<del>K</del>	..	
612	K.	G.	K.	K	..	
613	K.	..	K.	..	..	
615	K?	..	..	K.	K	
616	<del>Ma</del>	<del>...</del>	<del>K5</del>	..	K.	.. ..
616 <sup>a</sup>	A.	A.	A	..	A	
617	G?	..	..	F5.	F5	?

Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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[[7 columned table]]  
 Design|IP374||34011||36621|B2670||1181| |  
 617^a|Mc?|...|F||  
 623|G5\*|...|[[\struck out]]K[[\struck out]]G5|G5|\*Image hoar.|  
 623^a|G5|...|G||  
 623^h|K|...|K||  
 627|K|...|K|K||  
 633|K|...|G5|K||  
 639|A?|...|A?|A||

81						
Design	IP374	34011	36621	B2670	1181	
617 <sup>a</sup>	Mc?				F	
623	G5*				G5	*Image hoar.
623 <sup>a</sup>	G5				G	
623 <sup>h</sup>	K				K	
627	K				K, K	
633	K				G5, K	
639	A?				A, A	

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January 12, 1911  
Classification of plants for J.A.Packhust  
OP 410|RA^h+79°|Oct. 15, 1910|Op410|

[[5 columned table]]

Design	R.A	Dec.		
4		Ao		
6		Ao		
8		G5		
8^a		A		
10		K		
10^a		K		
10^h		A		
13		G2		
15		A8		
15^a		A8		
15^h		A		
21		K5		
25		K		

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January 12, 1911

Classification of stars for J. A. Packhust.  
O.P. 410|RA<sup>h</sup>+79°|Oct. 15, 1910|Op410|

Design	R. A.	Dec.		
4			Ao	"
6			Ao	"
8			G5	"
8 <sup>a</sup>			A	"
10			K	"
10 <sup>a</sup>			K	"
10 <sup>h</sup>			A	"
13			G2	"
15			A8	"
15 <sup>a</sup>			A8	"
15 <sup>h</sup>			A	"
21			K5	"
25			K	"

Star Chart for Packhust, Revised 1911, by J. A. Packhust, Copyright 1911, by J. A. Packhust, New York

Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
Miscellaneous Observations #19  
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Classification of stars for  
QP410 RA 1<sup>h</sup> +79 Oct. 15, 1910 OP410

Design

26			A5	
23			G	
23^a			A	
23^f			A8	
23^c			F5	

31			A0	
----	--	--	----	--

33			A?	
----	--	--	----	--

35			K	
----	--	--	---	--

36			A5?	
----	--	--	-----	--

40			K5?	
----	--	--	-----	--

43			A	
----	--	--	---	--

83			
Classification of stars for J. A. Rankine			
QP410 RA 1 <sup>h</sup> +79 Oct. 15, 1910			
Design			
26		A6	
23		G	
23 <sup>a</sup>		A	
23 <sup>f</sup>		A8	
23 <sup>c</sup>		F5	
31		A0	
33		A?	
35		K	
36		A5?	
40		K5?	
43		A	

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84

P410  
 Design  
 450 k  
 451 a2  
 436^a a4  
 437 a  
 438 F18  
 438a a  
 438^L a5  
 440 F1  
 445 G2  
 446 a2  
 447 F1  
 447^a a0  
 449 a1

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84		
Design	436^a	
437	a	
438	F18	
438a	a	
438^L	a5	
440	F1	
445	G2	
446	a2	
447	F1	
447^a	a0	
449	a1	

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85  
 Design OP410  
 453 a0  
 454 a0  
 455 a  
 456 K5?  
 457 K  
 458 a  
 459 a  
 460 a8  
 461 a8  
 462 a  
 463 a2

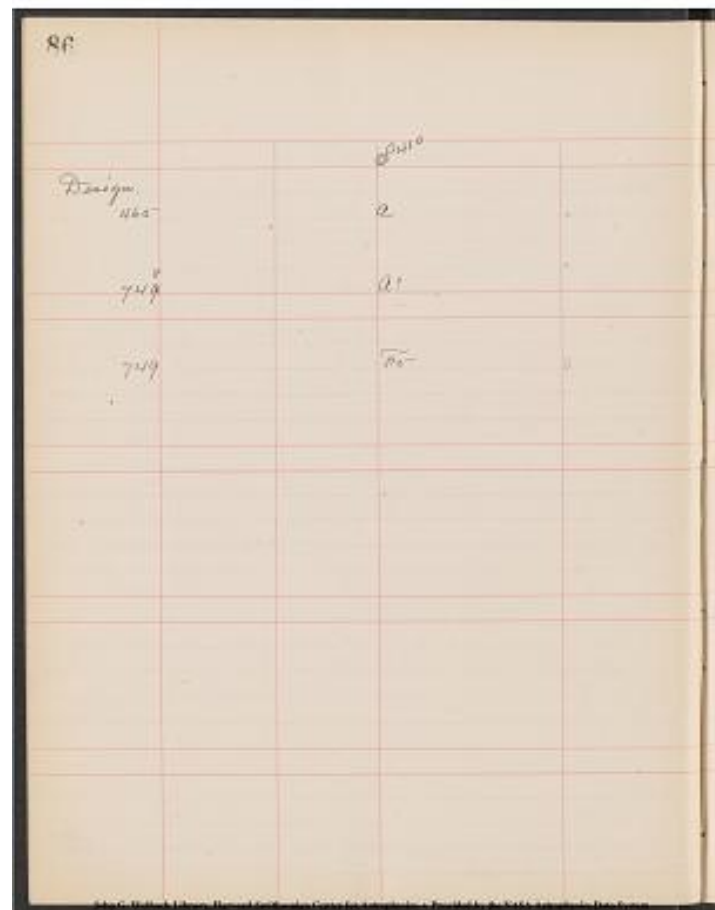
		85
Design	OP410	
453	a0	
454	a0	
455	a	
456	K5?	
457	K	
458	a	
459	a	
460	a8	
461	a8	
462	a	
463	a2	

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86

Design	P410
465	a
748	a?
749	A5

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January 12, 1911

Classification of stars for J. A. Parkhurst

[[3 columned table]]

OP377 R.A. 15^<sup>h</sup> + 83° Sept. 30, 1910|OP377| |

Design| | |

---|---|---

596^7|AA,||

611|Ma?||

607|G2||

605|G2|Image poor. In corner of plate.|

608|F?||

612|K||

613|K5?||

616|K||

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January 12, 1911			87
Classification of stars for J. A. Parkhurst			
OP377 R.A. 15^h + 83° Sept. 30, 1910			
Design			
596^7	AA,		
611	Ma?		
607	G2		
605	G2	Image poor. In corner of plate.	
608	F?		
612	K		
613	K5?		
615	K		
616	K		

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[[3 columned table]]  
 Design. | OP377 |  
 ---|---|---  
 617 | G5? | [Image poor.]  
 620 | G |  
 621 | K |  
 622 | Ft. |  
 623 | K |  
 627 | K5? |  
 626 | G |  
 624 | A1 |  
 630 | G5 |

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88		
Design.	Star	Image from
617	G5?	
620	G	
621	K	
622	Ft.	
623	K	
627	K5?	
626	G	
624	A1	
630	G5	

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[[3 columned table]]

Design|OP377|

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

631|K||

632|F2||

633|F1?|\*|Image poor|

639|A5||

634|K5||

635|F2||

637|K5?||

638|A3|Ft star Cl. A North superposed?|

641|A3||

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			89
			OP377
Design			
631		K	
632		F2	
633		F1	* Image poor
634		K5	
635		F2	
637		K5?	
638		A3	Ft star Cl. A North superposed?
641		A3	

Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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January 26, 1911.

Exam. of Sp. Plates for  $0^{\wedge}[[1]], 0^{\wedge}[[2]]$  Eridani

[[5 columned table]]

[Plate|Date|Ex.] | |

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

[B 12750|Dec. 15, 1894|60<sup>^</sup>[[m]]|0<sup>^</sup>[[1]]|Too bright]

[B 12750|Dec. 15, 1894|60<sup>^</sup>[[m]]|0<sup>^</sup>[[2]]|Too bright. Prismatic comp. seems to show Sp. class G5 with another Sp. slightly north superposed on it. This may be class A. It seems to show dark hyd. lines.]

[B 17408|Sept. 10, 1896|70 0<sup>^</sup>[[1]]|Sp. burned out? Adjacent star following in same dec is Class F.]

[B 17408|Sept. 10, 1896|70 0<sup>^</sup>[[2]]|Sp. burned out. In the ultra-violet the sp. extends beyond the usual limit of second type stars and seems to indicate also spectra superposed.]

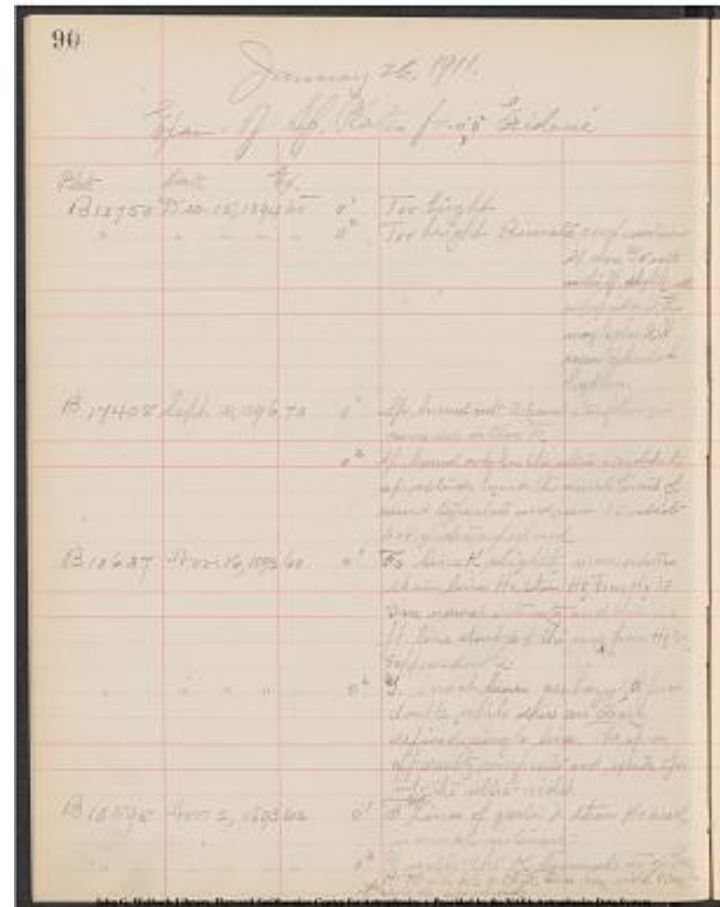
[B 10637|Nov. 16, 1893|60 0<sup>^</sup>[[1]]|F0 line K slightly more intense than line H epsilon, ~~then~~ H xi From H xi to nu are normal intensity and there is a ft. line about 0.6 of the way from H xi to eta theta appears double.]

[B 10637|Nov. 16, 1893|60 0<sup>^</sup>[[2]]|G. Several lines are hazy, ~~A~~ a few double, while others are clearly defined, single lines. The sp. is apparently composite and extends far into the ultra-violet.]

[B 10595|Nov. 2, 1893|62 0<sup>^</sup>[[1]]|F. <sup>^</sup>[[Hyd.]] Lines of greater lambda than H epsilon are of normal intensity.]

[B 10595|Nov. 2, 1893|62 0<sup>^</sup>[[2]]|\*G with the K lines stronger than H. Ft. star fol is Cl. A lines very wide. Maybe lines sp. superposed.]

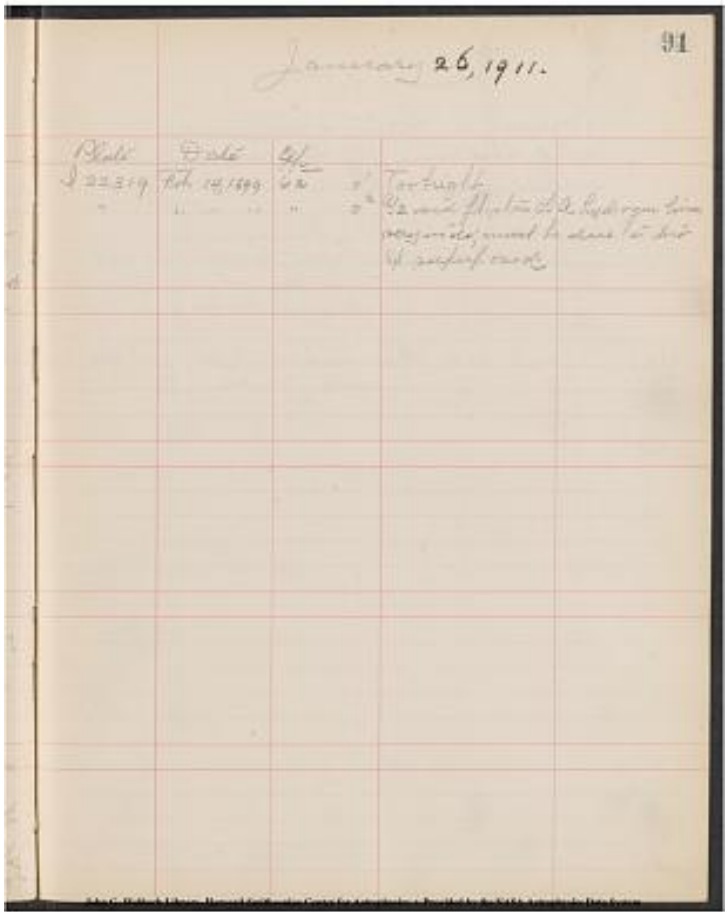
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January 26, 1911.

[[5 columned table]]  
Plate	Date	Exp.		
22319	Feb. 14, 1899	62^A	[m]] o^A[[1]]	Too bright
22319	Feb. 14, 1899	62^A	[m]] o^A[[2]]	G2 and ft. stars cl. A hydrogen
lines very wide; must be due to two Sp. superposed.|



Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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February 3, 1911.

Exam. of plates to determine class of spectrum of Miss Leavitt's variable  
[[120659]].

[[5 columned table]]

Plate|Date|Ex.|Sp.|Remark|

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

B37591|June 6, 1907|60|G pec.|Composite, showing many bright lines.  
May be similar to beta Lyrae? Near max.? Lines fine and clear|

B38957|May 20, 1908|60|G pec.|Composite. A few bright lines visible.  
Near min.?

92

February 3, 1911.

Exam. of plates to determine  
Class of spectrum of Miss Leavitt's variable  
120659.

Plate	Date	Ex.	Sp.	Remark.
B37591	June 6, 1907	60	G pec.	Composite, showing many bright lines. May be similar to beta Lyrae? Near max.? Lines fine and clear.
B38957	May 20, 1908	60	G pec.	Composite. A few bright lines visible. Near min.?

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Miscellaneous Observations #19  
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[[no entries]]



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Feb. 4, 1911

Examine of Sp. for class of RZ Oph

[5 columned table]

Plate|Date|Exp|Sp. |

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

|11174|June 7 1894|60^|[m]]|~~H~~|Ft?|Very  
ft & indistinct|

|33286|Aug. 29, 1905|61|Ft?|Image fairly br. but definition

very poor.|

|34061|May 20, 1906|54|?|On edge of pl. Image br. but no lines clearly  
shown.|

|11065|May 9, 1894|63|F?|Image ft. & sp. rather poor. Shows better  
definition than any of these preceeding plates.|

|36099|June 26, 1909|60|?|Image ft & defective. Impossible to classify|

B14170|July 20, 1895|60|Too ft.|

B9478| | |Too ft.|

|11300|July 30, 1894| |Too ft.|

|11226|June 30, 1894|61^|[m]]|Too ft.|

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Plate	Date	Exp	Sp.	
11174	June 7 1894	60^	[m]]	<del>H</del> Ft? Very ft & indistinct
33286	Aug. 29, 1905	61	Ft?	Image fairly br. but definition very poor.
34061	May 20, 1906	54	?	On edge of pl. Image br. but no lines clearly shown.
11065	May 9, 1894	63	F?	Image ft. & sp. rather poor. Shows better definition than any of these preceeding plates.
36099	June 26, 1909	60	?	Image ft & defective. Impossible to classify
B14170	July 20, 1895	60		Too ft.
B9478				Too ft.
11300	July 30, 1894			Too ft.
11226	June 30, 1894	61^	[m]]	Too ft.

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February 7, 1911.

Exam. of plates for J.H. Astbury's  
~~[[strickethrough]]~~ suspected ~~[[/strickethrough]]~~ new variable +60° 1743 R.A.  
 17<sup>h</sup> 15.3<sup>m</sup> Dec. +60° 46' (1900), 6.3, 6.55  
 See letter of H.H. Turner, Jan. 20, 1911.

[[right margin]]  
 [[equation]]  
 .+R. 6368  
 [[equation]]  
 +61° 1640  
 F5  
 [[equation]]  
 [[/right margin]]

[4 columned table]  
 [Plate][Date][Ex.][Est.]

AC329	May 24, 1899	78 <sup>h</sup> 7.2	7.8
AC5200	Aug. 29, 1904	69	7.4 8.0
AC3636	May 15, 1903	60	7.1 7.7
AC3797	Aug. 1, 1903	84	7.4 8.0
AC3930	Sept. 13, 1903	54	7.5 8.1
AC3951	Sept. 19, 1903	72	7.2 7.8
AC4001	Sept. 28, 1903	91	6.8 7.4
AC4022	Oct. 2, 1903	66	7.3 7.9
AC5289	Sept. 27, 1904	69	7.6 8.2
AC5241	Sept. 10, 1904	86	7.5 8.1
AC5246	Sept. 15, 1904	59	7.1 7.7
AC4134	Oct. 30, 1903	90	7.0 7.6
AC2538	May 10, 1902	39	6.6 7.2
AC2695	July 15, 1902	63	6.9 7.5
B2901	Sept. 13, 1888	63	Sp. Comp. Classes G&F. (Comp. with)

An examination of the above plates shows a variation of half of a magnitude or more. Rough estimates give limits to ~~[[strickethrough]]~~6.6~~[[/strickethrough]]~~2 to ~~[[strickethrough]]~~7.5~~[[/strickethrough]]~~8.2. The spectrum has been compared with a star of class F and <sup>^</sup>[[one of]] Cl. G, and contains lines characteristic of both.  
 W. P. Fleming

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February 7, 1911.

Exam. of plates for J.H. Astbury's suspected  
 new variable +60° 1743 R.A. 17<sup>h</sup> 15.3<sup>m</sup> Dec. +60° 46' (1900), 6.3, 6.55  
 See letter of H.H. Turner, Jan. 20, 1911.

Plate	Date	Ex.	Est.
AC 329	May 24, 1899	78	7.2 7.8
" 5200	Aug. 29, 1904	69	7.4 8.0
" 3636	May 15, 1903	60	7.1 7.7
" 3797	Aug. 1, 1903	84	7.4 8.0
" 3930	Sept. 13, 1903	54	7.5 8.1
" 3951	Sept. 19, 1903	72	7.2 7.8
" 4001	Sept. 28, 1903	91	6.8 7.4
" 4022	Oct. 2, 1903	66	7.3 7.9
" 5289	Sept. 27, 1904	69	7.6 8.2
" 5241	Sept. 10, 1904	86	7.5 8.1
" 5246	Sept. 15, 1904	59	7.1 7.7
" 4134	Oct. 30, 1903	90	7.0 7.6
" 2538	May 10, 1902	39	6.6 7.2
" 2695	July 15, 1902	63	6.9 7.5
B2901	Sept. 13, 1888	63	Sp. Comp. Classes G&F. (Comp. with)

An examination of the above plates shows  
 a variation of half a magnitude or more.  
 Rough estimates give limits to ~~[[strickethrough]]~~6.6~~[[/strickethrough]]~~2 to ~~[[strickethrough]]~~7.5~~[[/strickethrough]]~~8.2. The spectrum  
 has been compared with a star of class F and <sup>^</sup>[[one of]] Cl. G, and contains lines  
 characteristic of both.  
 W. P. Fleming.

Project PHaEDRA - Williamina P. Fleming - Spectral Classification;  
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Classification of <sup>^</sup>[Spectra of] Ft. Stars on list of George Abetti Accomp.  
Letter of <sup>^</sup>[Feb. 18, 1911]

[7 columned table]

No. | Design | RA 1875 | Dec. 1875 | <sup>^</sup>[  
[[~~strickethrough~~]] Photom. [[~~strickethrough~~]] ] ] Magn. BD. | Spect. | Remarks. |

No.	Design	RA 1875	Dec. 1875	Magn.	BD.	Spect.	Remarks.
1	+41° 1023	4° 50.9	+41° 41'	7.1			
2	+41° 1033	52.6	+41° 49'	8.0			
3	+40° 1142	53.7	+40° 53'	3.94		Kp.	
4	+40° 1154	55.2	+40° 30'	8.0			
5	+41° 1058	57.8	+41° 43'	28			
6	+39° 1175	59.2	+39° 46'	7.8			
7	+38° 1041	51.1	+38° 31'	7.1			
8	+39° 1205	3.6	+39° 57'	7.1			
9	+38° 1063	4.9	+38° 20'	5.2	A3		
10	+39° 1236	8.6	+39° 19'	7.0			
11	+39° 1248	10.4	+39° 59'	4.9	G		
12	+39° 1262	12.4	+39° 29'	8.0			
13	+40° 1268	14.1	+40° 54'	6.0	A2		
14	+37° 1182	17.1	+37° 56'	7.8			
15	+52° 971	24.8	+52° 53'	8.1			
16	+54° 914	26.3	+54° 21'	6.0	K		
17	+53° 934	31.2	+53° 26'	6.3	G2		
18	+56° 1058	35.9	+56° 46'	6.1	A		
19	+54° 942	37.3	+54° 27'	6.5			
20	+5° 1027	44.4	+55° 40'	5.0	A2		
21	+53° 962	45.5	+53° 26'	8.0			
22	+55° 1032	47.2	+55° 38'	7.1			
23	+54° 970	49.2	+54° 16'	4.0	K		
24	+55° 1044	51.7	+55° 18'	8.0			
25	+53° 981	53.0	+53° 32'	7.0			
26	+55° 1058	58.9	+55° 59'	7.4			

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Classification of Ft. Stars on list of George Abetti Accomp. Letter of Feb. 18, 1911

No.	Design	RA 1875	Dec. 1875	Magn.	BD.	Spect.	Remarks.
1	+41° 1023	4° 50.9	+41° 41'	7.1			
2	+41° 1033	52.6	+41° 49'	8.0			
3	+40° 1142	53.7	+40° 53'	3.94		Kp.	
4	+40° 1154	55.2	+40° 30'	8.0			
5	+41° 1058	57.8	+41° 43'	28			
6	+39° 1175	59.2	+39° 46'	7.8			
7	+38° 1041	51.1	+38° 31'	7.1			
8	+39° 1205	3.6	+39° 57'	7.1			
9	+38° 1063	4.9	+38° 20'	5.2	A3		
10	+39° 1236	8.6	+39° 19'	7.0			
11	+39° 1248	10.4	+39° 59'	4.9	G		
12	+39° 1262	12.4	+39° 29'	8.0			
13	+40° 1268	14.1	+40° 54'	6.0	A2		
14	+37° 1182	17.1	+37° 56'	7.8			
15	+52° 971	24.8	+52° 53'	8.1			
16	+54° 914	26.3	+54° 21'	6.0	K		
17	+53° 934	31.2	+53° 26'	6.3	G2		
18	+56° 1058	35.9	+56° 46'	6.1	A		
19	+54° 942	37.3	+54° 27'	6.5			
20	+5° 1027	44.4	+55° 40'	5.0	A2		
21	+53° 962	45.5	+53° 26'	8.0			
22	+55° 1032	47.2	+55° 38'	7.1			
23	+54° 970	49.2	+54° 16'	4.0	K		
24	+55° 1044	51.7	+55° 18'	8.0			
25	+53° 981	53.0	+53° 32'	7.0			
26	+55° 1058	58.9	+55° 59'	7.4			

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## Classification of Spectra of Ft. Stars on List of G. Abetti. (cont)

[[7 column table]]  
 No.|Design.|R.A.|Dec.|BD magn.|Spect.|Remarks.|  
 ||1875|1875| || || || ||  
 24|+60°938|6.5|+58 52|7.6| || ||  
 25|+58°912|6.5|+58 52|7.6| || ||  
 ||+59°959|8.6|+59 3|5.0|A| || ||  
 26|+59°964|11.0|+59 25|7.0|A2| || ||  
 27|+58°923|15.0|+58 40|8.0| || || ||  
 28|+58°927|15.9|+58 29|6.0|G5| || || ||  
 29|+58°932|20.0|+58 15|6.3|G| || || ||  
 30|+57°978|22.0|+57 56|8.3| || || || ||  
 31|+58°943|25.4|+58 12|6.8| || || || ||  
 32|+10°1193|29.3|+10 23|8.1| || || || ||  
 33|+9°1322|32.3|+9 45|8.1| || || || ||  
 ||+10°1220|34.1|+10 1|var.^|[[1]]|Oe5| || ||  
 34|+9°1350|34.6|+9 58|8.3| || || || ||  
 35|+9°1376|38.6|+9 54|7.5| || || || ||  
 36|+9°1382|39.7|+9 20|7.7| || || || ||  
 37|+20°1661|52.0|+20 37|8.2| || || || ||  
 38|+21°1472|54.8|+21 0|7.9| || || || ||  
 ||+20°1687|56.7|+20 45|var.^|[[1]]|G| || || ||  
 39|+21°1503|58.2|+21 11|8.2| || || || ||  
 40|+21°1516|7 0.9|+21 4|8.2| || || || ||  
 41|+41°1618|5.6|+41 24|8.0| || || || ||  
 42|+41°1622|6.9|+41 35|8.1| || || || ||  
 43|+41°1628|9.0|+41 10|7.5| || || || ||  
 ||+41°1630|9.3|+41 6|6.0|A| || || || ||  
 44|+40°1850|14.5|+40 56|8.1| || || || ||  
 45|+40°1852|15.5|+40 55|5.8|K| || || || ||  
 46|+40°1864|19.5|+40 54|7.4| || || || ||  
 [[7 column table]]

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Classification of Spectra of Ft. Stars on List of G. Abetti. (cont)

No.	Design.	R.A.	Dec.	BD magn.	Spect.	Remarks.
24	+60°938	6.5	+58 52	7.6		K
25	+58°912	6.5	+58 52	7.6		
	+59°959	8.6	+59 3	5.0	A	
26	+59°964	11.0	+59 25	7.0	A2	
27	+58°923	15.0	+58 40	8.0		
28	+58°927	15.9	+58 29	6.0	G5	
29	+58°932	20.0	+58 15	6.3	G	
30	+57°978	22.0	+57 56	8.3		
31	+58°943	25.4	+58 12	6.8		
32	+10°1193	29.3	+10 23	8.1		
33	+9°1322	32.3	+9 45	8.1		
	+10°1220	34.1	+10 1	var.^	[[1]]	Oe5
34	+9°1350	34.6	+9 58	8.3		
35	+9°1376	38.6	+9 54	7.5		
36	+9°1382	39.7	+9 20	7.7		
37	+20°1661	52.0	+20 37	8.2		
38	+21°1472	54.8	+21 0	7.9		
	+20°1687	56.7	+20 45	var.^	[[1]]	G
39	+21°1503	58.2	+21 11	8.2		
40	+21°1516	7 0.9	+21 4	8.2		
41	+41°1618	5.6	+41 24	8.0		
42	+41°1622	6.9	+41 35	8.1		
43	+41°1628	9.0	+41 10	7.5		
	+41°1630	9.3	+41 6	6.0	A	
44	+40°1850	14.5	+40 56	8.1		
45	+40°1852	15.5	+40 55	5.8	K	
46	+40°1864	19.5	+40 54	7.4		

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## Classification of Spectra of Ft. Stars on List of G. Abetti. (cont)

[[7 columned table]]

No.[Design]R.A 1875|Dec. 1875|BD Magn.|Spect.|Remarks|

No.	Design	R.A 1875	Dec. 1875	BD Magn.	Spect.	Remarks
68	+52°1362	8.7	58.3	8	7.3	
69	+52°1365	9.0	52.6	5.0	A3p	
70	+52°1371	1.4	52.53	8.0		
71	+53°1320	5.8	53.13	8.0		
72	+53°1321	5.9	53.13	8.0		
73	+53°1330	11.7	52.58	7.0		
74	+52°1389	16.2	52.7	6.7	F8	
	+52°1401	24.5	52.15	3.0	F8	
75	+52°1402	26.3	52.36	5.0	A	
76	+51°1536	34.3	51.50	7.5		
77	+72°473	43.0	72.16	7.1		
	+73°478	47.2	73.28	6.3	K	
78	+73°481	50.8	73.1	8.2		
79	+73°484	56.6	73.13	7.8		
80	+73°489	10.7	73.42	6.5	F	
81	+36°2064	18.2	36.50	6.8		
82	+36°2068	19.2	36.52	8.1		
	+37°2080	20.6	37.21	4.0	K	
83	+37°2087	23.4	37.40	8.0		
84	+39°2366	28.6	39.11	7.6		
85	+37°2102	29.9	37.53	8.2		
86	+38°2156	32.0	38.34	5.7	K	
87	+38°2167	32.6	38.29	7.8		
88	+38°2172	35.1	38.42	8.0		

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Classification of Spectra of Ft. Stars on List of G. Abetti. (cont)

No.	Design	R.A 1875	Dec. 1875	BD Magn.	Spect.	Remarks
68	+52°1362	8.7	58.3	8	7.3	
69	+52°1365	9.0	52.6	5.0	A3p	
70	+52°1371	1.4	52.53	8.0		
71	+53°1320	5.8	53.13	8.0		
72	+53°1321	5.9	53.13	8.0		
73	+53°1330	11.7	52.58	7.0		
74	+52°1389	16.2	52.7	6.7	F8	
	+52°1401	24.5	52.15	3.0	F8	
75	+52°1402	26.3	52.36	5.0	A	
76	+51°1536	34.3	51.50	7.5		
77	+72°473	43.0	72.16	7.1		
	+73°478	47.2	73.28	6.3	K	
78	+73°481	50.8	73.1	8.2		
79	+73°484	56.6	73.13	7.8		
80	+73°489	10.7	73.42	6.5	F	
81	+36°2064	18.2	36.50	6.8		
82	+36°2068	19.2	36.52	8.1		
	+37°2080	20.6	37.21	4.0	K	
83	+37°2087	23.4	37.40	8.0		
84	+39°2366	28.6	39.11	7.6		
85	+37°2102	29.9	37.53	8.2		
86	+38°2156	32.0	38.34	5.7	K	
87	+38°2167	32.6	38.29	7.8		
88	+38°2172	35.1	38.42	8.0		

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## Classification of Spectra of Ft. Stars on List of G. Abetti. (cont)

[[7 columned table]]

No.	Design.	R.A. 1875	Dec.	BD Magn.	Spect.	Remarks.
89	+34°2158	10 <sup>h</sup> 39.8 <sup>m</sup>	+34° 13'	8.2		
90	+33°2039	41.9	+33 4	8.0		
	+34°2172	46.3	+34 53	4.0	K	
91	+34°2181	48.8	+34 10	5.5	K	
92	+35°2196	50.1	+35 52	8.2		
93	+34°2188	52.0	+33 59	8.2		
94	+31°2242	11 5.5	+30 54	8.2		
95	+32°2124	8.5	+32 17	7.9		
	+32°2132	11.5	+32 14	3.7	G	
96	+33°2099	12.8	+33 30	7.8		
97	+32°2124	16.1	+32 31	7.7		
98	+43°3107	18 48.5	+43 33	7.0		
99	+43°3112	49.7	+43 58	7.5		
	+43°3117	51.5	+43 47	4.5	Mb	
100	+43°3132	55.3	+43 33	7.0		
101	+44°3042	57.6	+44 12	7.2		
102	+53°2188	19 5.6	+53 26	7.5		
103	+52°2371	10.8	+53 0	8.0		
	+53°2216	14.2	+53 8	4.5	K	
104	+53°2220	15.5	+53 10	7.9		
105	+52°2409	19.6	+52 48	7.5		
106	+52°2434	24.4	+52 4	6.1	A	
	+51°2605	26.5	+51 28	4.0	A2	
107	+49°3034	28.0	+50 2	6.0	K	
108	+50°2815	31.1	+50 58	6.0	F	
	+49°3062	33.1	+49 56	4.9	F5	

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No.	Design.	R.A. 1875	Dec.	BD Magn.	Spect.	Remarks.
89	+34°2158	10 <sup>h</sup> 39.8 <sup>m</sup>	+34° 13'	8.2		
90	+33°2039	41.9	+33 4	8.0		
	+34°2172	46.3	+34 53	4.0	K	
91	+34°2181	48.8	+34 10	5.5	K	
92	+35°2196	50.1	+35 52	8.2		
93	+34°2188	52.0	+33 59	8.2		
94	+31°2242	11 5.5	+30 54	8.2		
95	+32°2124	8.5	+32 17	7.9		
	+32°2132	11.5	+32 14	3.7	G	
96	+33°2099	12.8	+33 30	7.8		
97	+32°2124	16.1	+32 31	7.7		
98	+43°3107	18 48.5	+43 33	7.0		
99	+43°3112	49.7	+43 58	7.5		
	+43°3117	51.5	+43 47	4.5	Mb	
100	+43°3132	55.3	+43 33	7.0		
101	+44°3042	57.6	+44 12	7.2		
102	+53°2188	19 5.6	+53 26	7.5		
103	+52°2371	10.8	+53 0	8.0		
	+53°2216	14.2	+53 8	4.5	K	
104	+53°2220	15.5	+53 10	7.9		
105	+52°2409	19.6	+52 48	7.5		
106	+52°2434	24.4	+52 4	6.1	A	
	+51°2605	26.5	+51 28	4.0	A2	
107	+49°3034	28.0	+50 2	6.0	K	
108	+50°2815	31.1	+50 58	6.0	F	
	+49°3062	33.1	+49 56	4.9	F5	

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## Classification of Spectra of Ft. Stars on List of G. Abt (cont)

BD				
No. Design.	R.A.	Dec.	Magn.	Spect.
h 1875 o <sup>h</sup> 1875				
109 +48° 2922	19 34.5	+49 0' 6.6	g	
110 +49° 3082	38.1	+49 24 7.7		
111 +52° 2497	40.1	+52 16 7.1		
112 +53° 2303	46.0	+53 27 7.1		
113 +52° 2547	47.5	+52 40 5.3	K	
114 +51° 2703				
	48.9	+51 57 7.0		
+52° 2572				
	52.4	+52 6 5.5	A3	
115 +51° 2734	56.6	+51 48 7.3		
116 +53° 2344	20 0.6	+53 5 8.0		
117 +52° 2623	2.9	+52 47 5.9	A	
118 +52° 2657	10.3	+52 44 6.5		
119 +53° 2374				
	12.0	+53 46 7.0		
120 +59° 2257				
	29.5	+60 0 6.8		
121 +60° 2142	35.2	+60 19 7.0		
122 +59° 2272	37.6	+60 3 6.2	7	
123 +60° 2154	40.0	+60 9 6.2	A	
+61° 2050	42.8	+61 21 3.7	K	
124 +61° 2057				
	46.8	+62 4 8.0		
125 +61° 2070				
	51.0	+61 18 7.2		
126 +38° 4306	54.9	+38 20 6.5		
127 +38° 4325	58.2	+38 10 6.0	K	
+38° 4343	21 1.3	+38 8 5.0		
128 +38° 4344	1.3	+38 8 5.3	K5	
129 +37° 4189				
	3.2	+38 1 7.9		
130 +37° 4229				
	8.5	+37 53 7.8		
+37° 4240	9.8	+37 31 4.0	7	
131 +37° 4271	14.4	+37 43 6.2		
132 +36° 4533	17.3	+36 38 7.0		

Classification of Spectra of Ft. Stars on List of G. Abt (cont)				
No. Design.	R.A.	Dec.	Magn.	Spect.
109 +48° 2922	19 34.5	+49 0' 6.6	g	
110 +49° 3082	38.1	+49 24 7.7		
111 +52° 2497	40.1	+52 16 7.1		
112 +53° 2303	46.0	+53 27 7.1		
113 +52° 2547	47.5	+52 40 5.3	K	
114 +51° 2703				
	48.9	+51 57 7.0		
+52° 2572				
	52.4	+52 6 5.5	A3	
115 +51° 2734	56.6	+51 48 7.3		
116 +53° 2344	20 0.6	+53 5 8.0		
117 +52° 2623	2.9	+52 47 5.9	A	
118 +52° 2657	10.3	+52 44 6.5		
119 +53° 2374				
	12.0	+53 46 7.0		
120 +59° 2257				
	29.5	+60 0 6.8		
121 +60° 2142	35.2	+60 19 7.0		
122 +59° 2272	37.6	+60 3 6.2	7	
123 +60° 2154	40.0	+60 9 6.2	A	
+61° 2050	42.8	+61 21 3.7	K	
124 +61° 2057				
	46.8	+62 4 8.0		
125 +61° 2070				
	51.0	+61 18 7.2		
126 +38° 4306	54.9	+38 20 6.5		
127 +38° 4325	58.2	+38 10 6.0	K	
+38° 4343	21 1.3	+38 8 5.0		
128 +38° 4344	1.3	+38 8 5.3	K5	
129 +37° 4189				
	3.2	+38 1 7.9		
130 +37° 4229				
	8.5	+37 53 7.8		
+37° 4240	9.8	+37 31 4.0	7	
131 +37° 4271	14.4	+37 43 6.2		
132 +36° 4533	17.3	+36 38 7.0		

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## Classification of Spectra of Ft. Stars on List of G. Abiti. (cont.)

[[7 columned table]]

No. | Design. | R.A. ^[[1875]] | Dec. ^[[1875]] | Magn. ^[[BD]] | Spectra. | Remarks.

No.	Design.	R.A. ^[[1875]]	Dec. ^[[1875]]	Magn. ^[[BD]]	Spectra.	Remarks.
133	+46° 3305	21^[[h]]	20.7^[[m]]	+46° 10' 6.0	a	
134	+45° 3546	22.9	+45 52	7.6		
	+45° 3558	24.8	+45 59	5.4	K	
135	+45° 3559	25.0	+45 53	6.7		
136	+45° 3577	27.6	+45 42	8.2		
137	+44° 3865	29.3	+45 2	4.1	K	
138	+44° 3877	31.3	+44 49	var		
139	+44° 3889	32.7	+44 8	6.4		
140	+45° 3618	34.5	+45 37	7.3		

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Classification of Spectra of Ft. Stars on List of G. Abiti. (cont.)

No.	Design.	R.A. ^[[1875]]	Dec. ^[[1875]]	Magn. ^[[BD]]	Spectra.	Remarks.
133	+46° 3305	21	20.7	+46 10	6.0	a
134	+45° 3546	22.9	+45 52	7.6		
	+45° 3558	24.8	+45 59	5.4	K	
135	+45° 3559	25.0	+45 53	6.7		
136	+45° 3577	27.6	+45 42	8.2		
137	+44° 3865	29.3	+45 2	4.1	K	
138	+44° 3877	31.3	+44 49	var		
139	+44° 3889	32.7	+44 8	6.4		
140	+45° 3618	34.5	+45 37	7.3		

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Exam. of Plates for Var. or Nova 134.1910 Piscium. See Astron Nach Vol. 187,9. (E. Ernst). 0 27.3 +9 30 (1855).

[[3 columned table]]

Plate	Date	Ex.
2861	Jan. 20, 1891	11m
28070	Dec. 12, 1901	45
32101	Oct. 2, 1904	19
34745	July 8, 1907	31
34746	July 8, 1907	30
B 38170	Sept. 17, 1907	10
AC 8769	Sept. 1, 1907	57
AC 8779	Sept. 16, 1907	60
AM 5173	Sept. 27, 1907	60
AC 8823	Oct. 2, 1907	61
AM 6409	July 24, 1909	138
AC 12180	Dec. 8, 1910	60
AC 12226	Dec. 22, 1910	60

An examination of the above plates fails to show any object in the position of the object marked on the Astron. Nach. Chart. A faint star is seen on all the plates, following b (however) in the same relative position as that given for the Nova? as preceding b. This star shows no evidence of change in magnitude, but the images of star b seem to indicate a slight variation. W.P.F. March 13, 1911.

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*Exam. of Plates for Var. or Nova 134.1910 Piscium  
See Astron Nach Vol. 187,9. (E. Ernst). 0 27.3 +9 30 (1855)*

Plate	Date	Exp.
I 2861	Jan. 20, 1891	11
I 28070	Dec. 12, 1901	45
I 32101	Oct. 2, 1904	19
I 34745	July 8, 1907	31
I 34746	July 8, 1907	30
B 38170	Sept. 17, 1907	10
AC 8769	Sept. 1, 1907	57
AC 8779	Sept. 16, 1907	60
AM 5173	Sept. 27, 1907	60
AC 8823	Oct. 2, 1907	61
AM 6409	July 24, 1909	138
AC 12180	Dec. 8, 1910	60
AC 12226	Dec. 22, 1910	60

*An examination of the above plates fails to show any object in the position of the object marked on the Astron Nach Chart. A faint star is seen on all the plates, following b (however) in the same relative position as that given for the Nova? as preceding b. This star shows no evidence of change in magnitude, but the images of star b seem to indicate a slight variation. W.P.F. March 13, 1911.*

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## Classification of Spectra in Harvard Standard Region C4

[[8 columned table]]

| | | | |Magn.|Plates|Rem.|Cond. Sp.|

No.|Design.|RA|Dec.|DM. H.A. 50 H.S. 54|Sp.^[[I36917]]| | |

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

1|+17°|1429|[[~~4~~]]4|[[~~6~~]]6^[[h]]|44^[[m]]|5|[[~~5~~]]5|[[~~4.3~~]]4.3^[[s]]|+17° 20.0'|9.4|K?| | |

2|+17|1430|6 44 56.2|+17 21.5|9.5|A| | |

3|+17|1435|6 45 36.7|+17 48.0|9.2|K| | |

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*Classification of Spectra in Harvard Standard Region C4*

No.	Design.	RA	Dec.	DM. H.A. 50 H.S. 54	Sp. Type	Remarks
1	+17 1429	6 44 56.2	+17 21.5	9.5	A	
2	+17 1430	6 44 56.2	+17 21.5	9.5	A	
3	+17 1435	6 45 36.7	+17 48.0	9.2	K	
4	+17 1436	6 45 46.5	+17 48.1	9.5	A	
5	+17 1437	6 45 48.7	+17 48.2	9.5	A	
6	+17 1441	6 46 18.7	+17 51.7	9.4	K	
7	+17 1451	6 45 10.5	+17 22.2	9.5	A	
8	+17 1452	6 45 04.0	+17 20.0	9.4	A	
9	+17 1452	6 45 26.2	+17 49.9	9.5	A	
10	+17 1454	6 45 04.5	+17 21.8	9.4	K	
11	+17 1457	6 45 46.0	+17 48.3	9.5	A	
12	+17 1458	6 45 46.5	+17 49.7	9.5	A	
13	+17 1442	6 44 22.6	+17 48.9	9.4	G0	
14	-	-	-	-	A	
15	+17 1451	6 45 33.4	+17 43.1	9.5	K	
16	-	-	-	-	A	
17	-	-	-	-	A	
18	+17 1455	6 45 40.7	+17 47.9	9.4	K	
19	+17 1445	6 43 41.7	+17 41.2	9.5	G2	
20	+17 1446	6 43 23.2	+17 41.1	9.5	A	
21	+17 1447	6 43 51.0	+17 40.5	9.4	K	
22	+17 1448	6 43 3.7	+17 40.4	9.5	A	
23	+17 1449	6 43 27.2	+17 40.6	9.1	G1	
24	+17 1450	6 43 34.8	+17 40.6	9.5	K	
25	+17 1452	6 43 20.1	+17 40.6	9.5	A	
26	+17 1451	6 44 22.6	+17 48.9	9.4	K	

Mag. H.D. 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0

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[[8 columned table]]

No.	Design.	RA	Dec.	DM.	H.A.	50 H.S.	54 Sp.	^[[I36917]]
27	+17° 1454	6^[[h]]	48^[[m]]	56.7^[[s]]	+17° 35.1'	9.4	A	
28	+17 1455	6 4	<del>48</del>	<del>56.7</del>	<del>35.1</del>	9.4	A	
29	+17 1457	6 49	42.4	+17 56.9	9.4	A?		
30	+17 1458	6 49	51.4	+17 48.1	9.5			
31	+17 1460	6 50	8.6	+17 58.4	9.2	A		
32	+17 1461	6 50	13.4	+17 39.6	8.8	Ma		
33	<del>+17 1462</del>	<del>6 50</del>	<del>44.2</del>	<del>+17 27.4</del>	<del>9.5</del>	<del>F?</del>		
34	+17 1453	6 48	54.9	+17 1.9	9.4	G?		
35	+17 1456	6 49	36.2	+17 18.8	9.5	A?		
36	...	...	...	...	...	A		
37	+17 1459	6 50	7.3	+17 5.3	9.3	K		
38	...	...	...	...	...	A		
39	+17 1462	6 50	44.2	+17 27.4	9.5	F?		
40	+17 1465	6 50	58.7	+17 21.6	9.0	A		
41	+17 1464	6 50	58.0	+17 42.8	8.5	G5		
42	+17 1466	6 50	59.0	+17 50.8	9.5	F?		
43	+17 1463	6 50	55.8	+17 58.6	9.5	K?		
44	+17 146	<del>6 50</del>	<del>55.8</del>	<del>+17 58.6</del>	<del>9.5</del>	<del>K?</del>		
45	+17 1468	6 52	5.8	+17 57.2	9.5	A?		
46	+17 1469	6 52	16.8	+17 9.5	7.8	A		
47	...	...	...	...	...	F?		
48	...	...	...	...	...	A		
49	+17 1470	6 52	21.2	+17 39.3	9.5	G?		
50	+17 1471	6 52	31.7	+17 48.6	9.5	F		
51	+17 1472	6 52	40.6	+17 35.5	9.3	K		
52	+17 1473	6 52	56.1	+17 59.5	9.0	K		

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No.	Design.	RA	Dec.	DM.	H.A.	50 H.S.	54 Sp.	^[[I36917]]
27	+17° 1454	6^[[h]]	48^[[m]]	56.7^[[s]]	+17° 35.1'	9.4	A	
28	+17 1455	6 4	<del>48</del>	<del>56.7</del>	<del>35.1</del>	9.4	A	
29	+17 1457	6 49	42.4	+17 56.9	9.4	A?		
30	+17 1458	6 49	51.4	+17 48.1	9.5			
31	+17 1460	6 50	8.6	+17 58.4	9.2	A		
32	+17 1461	6 50	13.4	+17 39.6	8.8	Ma		
33	<del>+17 1462</del>	<del>6 50</del>	<del>44.2</del>	<del>+17 27.4</del>	<del>9.5</del>	<del>F?</del>		
34	+17 1453	6 48	54.9	+17 1.9	9.4	G?		
35	+17 1456	6 49	36.2	+17 18.8	9.5	A?		
36	...	...	...	...	...	A		
37	+17 1459	6 50	7.3	+17 5.3	9.3	K		
38	...	...	...	...	...	A		
39	+17 1462	6 50	44.2	+17 27.4	9.5	F?		
40	+17 1465	6 50	58.7	+17 21.6	9.0	A		
41	+17 1464	6 50	58.0	+17 42.8	8.5	G5		
42	+17 1466	6 50	59.0	+17 50.8	9.5	F?		
43	+17 1463	6 50	55.8	+17 58.6	9.5	K?		
44	+17 146	<del>6 50</del>	<del>55.8</del>	<del>+17 58.6</del>	<del>9.5</del>	<del>K?</del>		
45	+17 1468	6 52	5.8	+17 57.2	9.5	A?		
46	+17 1469	6 52	16.8	+17 9.5	7.8	A		
47	...	...	...	...	...	F?		
48	...	...	...	...	...	A		
49	+17 1470	6 52	21.2	+17 39.3	9.5	G?		
50	+17 1471	6 52	31.7	+17 48.6	9.5	F		
51	+17 1472	6 52	40.6	+17 35.5	9.3	K		
52	+17 1473	6 52	56.1	+17 59.5	9.0	K		

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[[8 columned table]]

No.	Design.	R.A.	Dec.	DM.	H.A.	50 H.S.	54	136917
53	+17° 1474	6 <sup>h</sup> 53 <sup>m</sup> 29.2	+17° 23.2	9.5	A			
54	+17 1475	6 53 29.2	+17 23.2	9.5	A			
55	+17 1477	6 53 29.2	+17 23.2	9.5	A			
56	+17 1478	6 53 29.2	+17 23.2	9.5	A			
57	+17 1479	6 53 29.2	+17 23.2	9.5	A			
58	+17 1477	6 53 52.0	+17 9.1	9.1	G			
59	+17 1478	6 53 53.0	+17 49.6	9.0	A			
60	+17 1479	6 53 59.1	+17 57.1	60	mb			
61	+17 1480	6 54 7.3	+17 57.9	9.5				
62	+17 1481	6 54 7.3	+17 57.9	9.5				
63	+17 1482	6 54 53.6	+17 59.3	9.5				
64	+17 1483	6 55 2.5	+17 4.1	9.4	A			
65	+17 1484	6 55 30.9	+17 4.7	9.5	F?			
66	+17 1486	6 55 48.0	+17 2.3	9.4	A			
67	+17 1485	6 55 38.0	+17 54.7	9.5	A			
68	+17 1487	6 55 49.0	+17 55.5	8.8	A			
69	+17 1488	6 56 11.9	+17 15.6	9.0	G5			
70	+17 1489	6 56 27.4	+17 54.3	9.5	A?			
71	+18 1474	6 56 26.2	+18 0.3	9.5	A?			
72	+17 1490	6 56 56.2	+17 33.3	9.5	A			
73	+17 1491	6 57 28.0	+17 33.3	9.0	A			
74	+17 1492	6 57 52.2	+17 57.5	7.1	A			

106							
No.	Design.	R.A.	Dec.	DM.	H.A.	50 H.S.	54
53	+17° 1474	6 <sup>h</sup> 53 <sup>m</sup> 29.2	+17° 23.2	9.5	A		
54	+17 1475	6 53 29.2	+17 23.2	9.5	A		
55	+17 1477	6 53 29.2	+17 23.2	9.5	A		
56	+17 1478	6 53 29.2	+17 23.2	9.5	A		
57	+17 1479	6 53 29.2	+17 23.2	9.5	A		
58	+17 1477	6 53 52.0	+17 9.1	9.1	G		
59	+17 1478	6 53 53.0	+17 49.6	9.0	A		
60	+17 1479	6 53 59.1	+17 57.1	60	mb		
61	+17 1480	6 54 7.3	+17 57.9	9.5			
62	+17 1481	6 54 7.3	+17 57.9	9.5			
63	+17 1482	6 54 53.6	+17 59.3	9.5			
64	+17 1483	6 55 2.5	+17 4.1	9.4	A		
65	+17 1484	6 55 30.9	+17 4.7	9.5	F?		
66	+17 1486	6 55 48.0	+17 2.3	9.4	A		
67	+17 1485	6 55 38.0	+17 54.7	9.5	A		
68	+17 1487	6 55 49.0	+17 55.5	8.8	A		
69	+17 1488	6 56 11.9	+17 15.6	9.0	G5		
70	+17 1489	6 56 27.4	+17 54.3	9.5	A?		
71	+18 1474	6 56 26.2	+18 0.3	9.5	A?		
72	+17 1490	6 56 56.2	+17 33.3	9.5	A		
73	+17 1491	6 57 28.0	+17 33.3	9.0	A		
74	+17 1492	6 57 52.2	+17 57.5	7.1	A		

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[[6 columned table]]

No	Design	R.A.	Dec.	DM.	H.A.50 H.A.54	[36917]
79	+17 1493	6 58	18.2	+17 38.4	9.3	F
80	+17 1494	6 58	19.0	+17 34.5	9.3	A
81						A
82	+17 1495	6 58	48.4	+17 4.2	8.5	F
83	+17 1496	6 58	54.0	+17 12.5	9.5	..
84	+17 1498	6 59	15.7	+17 14.6	9.0	GG
85	+17 1499	6 59	20.0	+17 15.1	9.0	Aa
86	+17 1501	6 59	30.3	+17 6.6	9.4	A
87	+17 1502	6 59	43.1	+17 4.7	9.0	A
88	+17 1497	6 59	7.0	+17 48.2	9.0	G5
89	+17 1500	6 59	26.7	+17 53.9	9.5	..
90	+17 1503	6 59	48.7	+17 33.4	8.5	K
91	+17 1504	7 0	13.8	+17 34.8	8.2	A
92	+17 1505	7 0	18.7	+17 53.8	7.3	F5
93	+17 1507	7 0	29.8	+17 23.7	+9.5	..
94	+17 1506	7 0	23.8	+17 8.4	+7.9	K
95	+17 1508	7 0	31.7	+17 10.8	9.0	F
96	+17 1509	7 1	3.1	+17 53.8	8.9	A0
97	..					F?
98	+17 1510	7 1	39.8	+17 1.7	9.3	G?
99	+17 1511	7 1	51.3	+17 16.7	9.5	F?
100	+17 1512	7 2	15.6	+17 35.7	9.3	K?
101	+17 1513	7 2	17.7	+17 42.7	9.0	K
102	+17 1514	7 2	36.4	+17 4.2	9.5	F?
103	+17 1515	7 2	56.5	+17 41.1	9.4	F?
104	+17 1516	7 3	8.0	+17 38.5	9.0	A

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No	Design	R.A.	Dec.	DM.	H.A.50 H.A.54	[36917]
79	+17 1493	6 58	18.2	+17 38.4	9.3	F
80	+17 1494	6 58	19.0	+17 34.5	9.3	A
81						A
82	+17 1495	6 58	48.4	+17 4.2	8.5	F
83	+17 1496	6 58	54.0	+17 12.5	9.5	..
84	+17 1498	6 59	15.7	+17 14.6	9.0	GG
85	+17 1499	6 59	20.0	+17 15.1	9.0	Aa
86	+17 1501	6 59	30.3	+17 6.6	9.4	A
87	+17 1502	6 59	43.1	+17 4.7	9.0	A
88	+17 1497	6 59	7.0	+17 48.2	9.0	G5
89	+17 1500	6 59	26.7	+17 53.9	9.5	..
90	+17 1503	6 59	48.7	+17 33.4	8.5	K
91	+17 1504	7 0	13.8	+17 34.8	8.2	A
92	+17 1505	7 0	18.7	+17 53.8	7.3	F5
93	+17 1507	7 0	29.8	+17 23.7	+9.5	..
94	+17 1506	7 0	23.8	+17 8.4	+7.9	K
95	+17 1508	7 0	31.7	+17 10.8	9.0	F
96	+17 1509	7 1	3.1	+17 53.8	8.9	A0
97	..					F?
98	+17 1510	7 1	39.8	+17 1.7	9.3	G?
99	+17 1511	7 1	51.3	+17 16.7	9.5	F?
100	+17 1512	7 2	15.6	+17 35.7	9.3	K?
101	+17 1513	7 2	17.7	+17 42.7	9.0	K
102	+17 1514	7 2	36.4	+17 4.2	9.5	F?
103	+17 1515	7 2	56.5	+17 41.1	9.4	F?
104	+17 1516	7 3	8.0	+17 38.5	9.0	A

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No.	Design.	R.A.	Dec.	Magn.	h	m	a	o	1
105	+17 1517	7 3 19.6	+17 18.8	9.1					K
106	+17 1518	7 3 24.0	+17 13.0	7.0					K K
107	+17 1520	7 4 5.7	+17 1.0	9.4					F
108	+17 1519	7 4 1.7	+17 22.2	9.5					K?
109	+17 1521	7 4 22.7	+17 2.4	9.4					F?
110	+17 1522	7 4 25.0	+17 15.2	9.2					A?
111	+17 1523	7 4 28.0	+17 23.0	9.5					A
112	+17 1524	7 4 47.1	+17 41.3	9.3					A
113									A
114									K
115									A
116	+17 1526	7 5 16.6	+17 49.3	9.5					..
117	+18 1529	7 5 24.0	+18 0.4	9.0					A0
118	+17 1525	7 4 49.5	+17 10.1	9.0					A
119	+17 1527	7 5 29.1	+17 5.6	9.3					A
120	+17 1528	7 6 33.6	+17 4.4	9.5					F5
121	+17 1530	7 6 55.3	+17 11.1	9.1					K
122	+17 1529	7 6 41.1	+17 42.7	9.0					G
123									A
124									G
125									F
126	+16 1321	6 45 5.6	+16 15.3	9.3					G
127	+16 1322	6 45 18.2	+16 10.9	9.5					A
128	+16 1323	6 45 47.5	+16 5.0	9.5					A
129	+16 1324	6 45 49.7	+16 19.5	9.5					A
130	+16 1325	6 46 8.8	+16 42.6	8.8					K

108									
No.	Design.	R.A.	Dec.	Magn.	h	m	a	o	1
105	+17 1517	7 3 19.6	+17 18.8	9.1					K
106	+17 1518	7 3 24.0	+17 13.0	7.0					K K
107	+17 1520	7 4 5.7	+17 1.0	9.4					F
108	+17 1519	7 4 1.7	+17 22.2	9.5					K?
109	+17 1521	7 4 22.7	+17 2.4	9.4					F?
110	+17 1522	7 4 25.0	+17 15.2	9.2					A?
111	+17 1523	7 4 28.0	+17 23.0	9.5					A
112	+17 1524	7 4 47.1	+17 41.3	9.3					A
113									A
114									K
115									A
116	+17 1526	7 5 16.6	+17 49.3	9.5					..
117	+18 1529	7 5 24.0	+18 0.4	9.0					A0
118	+17 1525	7 4 49.5	+17 10.1	9.0					A
119	+17 1527	7 5 29.1	+17 5.6	9.3					A
120	+17 1528	7 6 33.6	+17 4.4	9.5					F5
121	+17 1530	7 6 55.3	+17 11.1	9.1					K
122	+17 1529	7 6 41.1	+17 42.7	9.0					G
123									A
124									G
125									F
126	+16 1321	6 45 5.6	+16 15.3	9.3					G
127	+16 1322	6 45 18.2	+16 10.9	9.5					A
128	+16 1323	6 45 47.5	+16 5.0	9.5					A
129	+16 1324	6 45 49.7	+16 19.5	9.5					A
130	+16 1325	6 46 8.8	+16 42.6	8.8					K

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[[6 columned table]]

No. | Design. | RA | Dec. | Magn. DM. H.A. 50 H.S. 54 | |

131	+16° 1326	6 46 35.4	+16 15.2	9.5	..	G
132	+16 1328	6 46 35.4	+16 15.2	9.5	..	
133	+16 1329	6 46 38.3	+16 21.9	9.5	G?	
134	+16 1327	6 46 26.9	+16 59.1	9.4	A	
135					A	
136	+16 1332	6 47 18.6	+16 22.8	9.5	F?	
137	+16 1331	6 47 18.5	+16 29.7	9.5	..	
138	+16 1330	6 47 10.1	+16 54.3	9.5	G?	
139	+16 1333	6 47 25.9	+16 59.3	9.5	G?	
140	+16 1334	6 47 39.4	+16 57.7	9.3	A	
141	+16 1335	6 47 48.2	+16 39.9	9.5	A	
142	+16 1336	6 47 52.6	+16 15.6	9.5	K	
143	+16 1337	6 48 14.5	+16 59.9	9.3	K	
144	+16 1338	6 49 4.4	+16 12.7	9.2	G?	
145	+16 1339	6 49 9.5	+16 21.9	9.4		

~~A~~ | ~~K~~ |

146 +16 1340 6 49 26.7 +16 14.7 9.5 A |

147 | | | A |

148 | | | A |

149 | | | A |

150 | | | A |

151 | | | A |

152 +16 1341 6 49 28.3 +16 46.3 8.6 G |

153 +16 1342 6 49 33.6 +16 50.2 8.8 A |

154 +16 1343 6 49 42.4 +16 54.9 8.8 G5 |

155 +16 1344 6 49 5.2 +16 3.9 9.0 A0 |

156 +16 1345 6 50 34.1 +16 49.0 |

9. ~~0~~ | ~~3~~ | K? |

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 Provided by the NASA Astrophysics Data Systems

No.	Design.	RA	Dec.	Magn.	DM.	H.A.	H.S.	54
131	+16	1326	6 46 20.7	+16 15.2	9.5	..		G
132	+16	1328	6 46 35.4	+16 15.2	9.5	..		-
133	+16	1329	6 46 38.3	+16 21.9	9.5	G?		G?
134	+16	1327	6 46 26.9	+16 59.1	9.4	A		R
135						A		A
136	+16	1332	6 47 18.6	+16 22.8	9.5	F?		F?
137	+16	1331	6 47 18.5	+16 29.7	9.5	..		-
138	+16	1330	6 47 10.1	+16 54.3	9.5	G?		G?
139	+16	1333	6 47 25.9	+16 59.3	9.5	G?		G?
140	+16	1334	6 47 39.4	+16 57.7	9.3	A		R
141	+16	1335	6 47 48.2	+16 39.9	9.5	A		A
142	+16	1336	6 47 52.6	+16 15.6	9.5	K		K
143	+16	1337	6 48 14.5	+16 59.9	9.3	K		K
144	+16	1338	6 49 4.4	+16 12.7	9.2	G?		G?
145	+16	1339	6 49 9.5	+16 21.9	9.4			XX
146	+16	1340	6 49 26.7	+16 14.7	9.5	A		A
147						A		A
148						A		A
149						A		A
150						A		A
151						A		A
152	+16	1341	6 49 28.3	+16 46.3	8.6	G		G
153	+16	1342	6 49 33.6	+16 50.2	8.8	A		A
154	+16	1343	6 49 42.4	+16 54.9	8.8	G5		G5
155	+16	1344	6 49 5.2	+16 3.9	9.0	A0		A0
156	+16	1345	6 50 34.1	+16 49.0				K?

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[[6 columned table]]

No. | Design. | RA | Dec. | DM. H.A. 50 H.S. 54 | |

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

157 | +16° 1346 | 6^h | 50^m | 46.3^s | +16° 13.3' | 7.9 | K |

158 | +16 1347 | 6 50 47.0 | +16 19.1 | 8.0 | G |

159 | +16 1349 | 6 51 2.4 | +16 15.6 | 9.2 | F? |

160 | +16 1348 | 6 51 1.5 | +16 06.0 | 9.3 | K? |

161 | +16 1350 | 6 51 24.5 | +16 21.4 | 9.0 | K? |

162 | +16 1351 | 6 51 28.9 | +16 2.7 | 9.5 | ~~F~~ | ~~A~~ |

163 | | | | | F? |

164 | +16 1352 | 6 51 30.8 | +16 8.5 | 7.4 | G2 G5 |

165 | | | | | A |

166 | +16 1354 | 6 51 50.2 | +16 16.2 | 6.0 | K K5 |

167 | +16 1353 | 6 51 50.2 | +16 35.2 | 9.5 | F? |

168 | | | | | |

169 | | | | | |

170 | | | | | |

Five stars common to H.A. 71^h | 71.2

[[3 columned table]]

| L 10 | ~~6~~ | ~~7~~ - 110 | 71.2 |

84 | G | G |

85 | A | A |

106 | K | K |

164 | G2 | G5 |

166 | K | K5 |

No.	Design.	RA	Dec.	DM.	H.A.	H.S.	Notes
157	+16	1346	6 50 46.3	+16 13.3	7.9		K
158	+16	1347	6 50 47.0	+16 19.1	8.0		G
159	+16	1349	6 51 2.4	+16 15.6	9.2		F?
160	+16	1348	6 51 1.5	+16 06.0	9.3		K?
161	+16	1350	6 51 24.5	+16 21.4	9.0		K?
162	+16	1351	6 51 28.9	+16 2.7	9.5		<del>F</del> <del>A</del>
163							F?
164	+16	1352	6 51 30.8	+16 8.5	7.4		G2 G5
165							A
166	+16	1354	6 51 50.2	+16 16.2	6.0		K K5
167	+16	1353	6 51 50.2	+16 35.2	9.5		F?
168							
169							
170							

No.	Design.	RA	Dec.	DM.	H.A.	H.S.	Notes
84	+16	1346	6 50 46.3	+16 13.3	7.9		K
85	+16	1347	6 50 47.0	+16 19.1	8.0		G
106	+16	1349	6 51 2.4	+16 15.6	9.2		F?
164	+16	1352	6 51 30.8	+16 8.5	7.4		G2 G5
166	+16	1354	6 51 50.2	+16 16.2	6.0		K K5
167	+16	1353	6 51 50.2	+16 35.2	9.5		F?

Five stars common to H.A. 71^h

No.	Design.	RA	Dec.	DM.	H.A.	H.S.	Notes
84	G	G					
85	A	A					
106	K	K					
164	G2	G5					
166	K	K5					

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May 9, 1911

U Geminorum (Cont.)

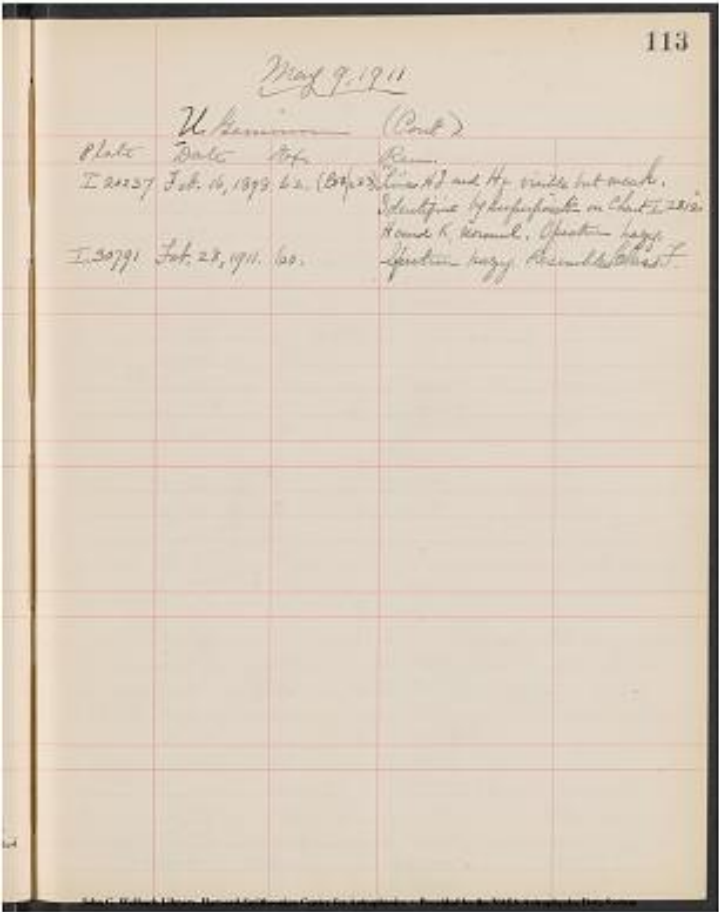
[4 columned table]

Plate | Date | Exp. | Rem.

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

I 20237 Feb. 16, 1898 62. (B18p23). "Lines H delta and H gamma visible but weak. Identified by superposition in Chart I 2812". H and K, normal. Spectrum hazy.

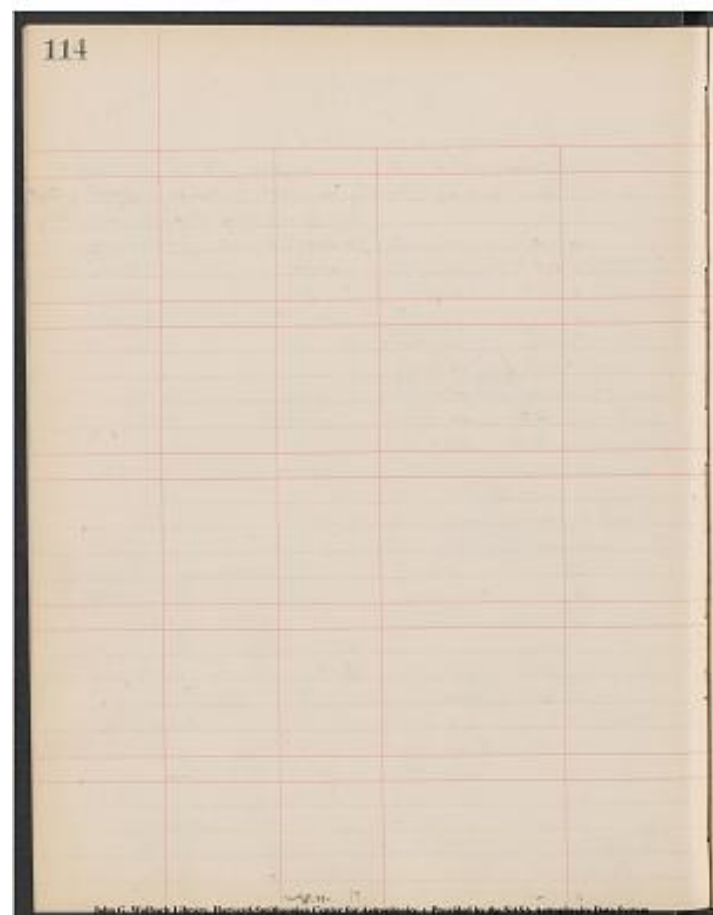
I 30791 Feb. 28, 1911. 60. Spectrum hazy. Resembles Class F.



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[[no entries]]



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Friday, June 23, 1911.

Estimate of stars of Class N for H.A. 56. Stars now marked N, Nb, or Nd. or Variable A.J.C. and E.C.P.

[[6 columned table]]

RA					
0 14.6	-				
1 10.6	N	Na		10156	0, 8, 10
1 26.8	N	Na		135788	
N5R-1 38.7	Nd			135801	3, 6, 10
2 19.9	-	Not N		135801	
[[ <del>3 10.0</del> ]]	Na	[[ <del>3 10.0</del> ]]			
Pec. U Camel-3 33.7	N			133486	[[ <del>06 0</del> ]] 1, 2, 6, 10
4 30.4	N	Np		12244	[[ <del>0, 6, 10</del> ]]
5 30.2	N	?			
5 41.7	N	Na		1711	[[ <del>3</del> ]] 12, 0, 8, 10
6 4.7	N				
6 19.8	N				
6 39.4	N			123975	
7 31.3	N	Na		B12755	0, 6, 10
8 14.9	N	Na		131569	0, 6, 10
N5R-8 15.2	Na			B20857 B18984	3, 6, 10
9 46.5	Np	Np		135878	
Nb5c-12 19.2	Nb			B13041	0, 3, 6,
1 [[ <del>3</del> ]]	[[ <del>3</del> ]]	[[ <del>3</del> ]]		[[ <del>3</del> ]]	0
11 [[ <del>3</del> ]]	[[ <del>3</del> ]]	[[ <del>3</del> ]]		252.4	Np
17 23.8	N			140623	
18 4.0	N			184	[[ <del>25389</del> ]]
18 39.4	Na	[[ <del>5</del> ]]		134172	0, 6, 10 0
1 [[ <del>8</del> ]]	[[ <del>8</del> ]]	[[ <del>9</del> ]]		13.4	Na
[[ <del>134914</del> ]]	[[ <del>0, 6, 10</del> ]]				
[[ <del>19</del> ]]	[[ <del>40.6</del> ]]	Na		B39347	[[ <del>0, 8, 10</del> ]]
19 54.0	N	Na		134282	0, 8, 10

Friday, June 23, 1911.  
 Summary of stars of Class N for H.A. 56.  
 Stars now marked N, Nb, or Nd. or Variable A.J.C. and E.C.P.

0 14.6	-	I 30251	
1 10.6	N	Na I 10156	0, 8, 10
1 26.8	N	" I 30788	
N5R-1 38.7	Nd	I 33801	3, 6, 10
2 19.9	-	not N	
3 10.0	Na		
4 30.4	N	I 32454	0, 6, 10, 12, 10
5 30.2	N	Na I 12244	1, 2, 6, 10
5 41.7	N	Na I 26124	12, 0, 8, 10
5 40.4	N	B15220	
5 41.7	N	Na I 71132	12, 0, 8, 10
6 4.7	N		
6 19.8	N		
6 39.4	N	I 23975	
7 31.3	N	Na B12755	0, 6, 10
8 14.9	N	Na I 31569	0, 6, 10
N5R-8 15.2	Nd	B 20857 B18984	3, 6, 10
9 46.5	Np	Na I 35878	
Nb5c-12 19.2	Nb	Na I 3041	0, 3, 6, 10
11 3.4	Np	Na I 252.4	
17 23.8	N	B13041	0, 6, 10
18 4.0	N	Na I 184	25389
18 39.4	Na	I 134172	0, 6, 10 0
19 54.0	N	I 134282	0, 8, 10

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June 23 1911

Stars of Class N continued

[[4 columned table]]

20|27.4|N|I31018|

21|32.5|N|I31321|

23|22.2|N|I25940|

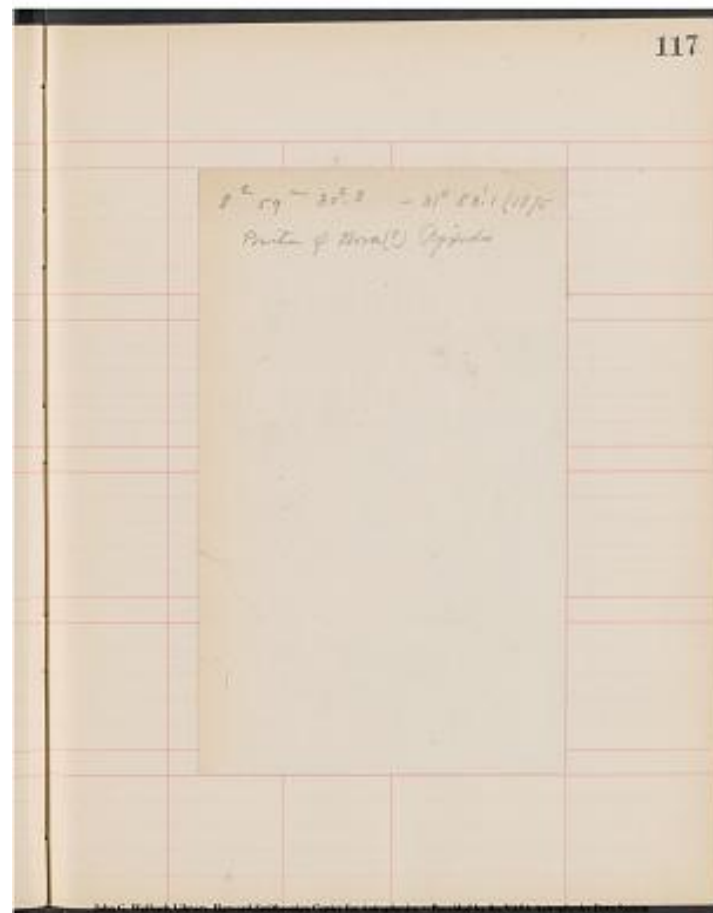
116			
June 23 1911 Stars of Class N continued			
20	27.4	N	I31018
21	32.5	N	I31321
23	22.2	N	I25940

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8h 59m 30s.8 -31° 53'.1 (1875

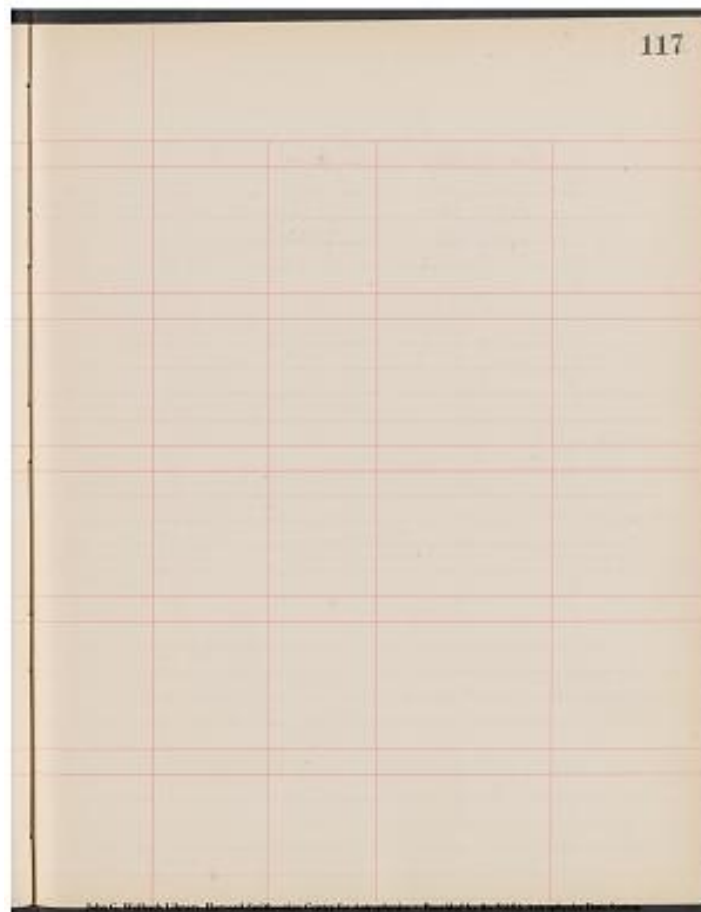
Position of Nova(?) Pyxidis



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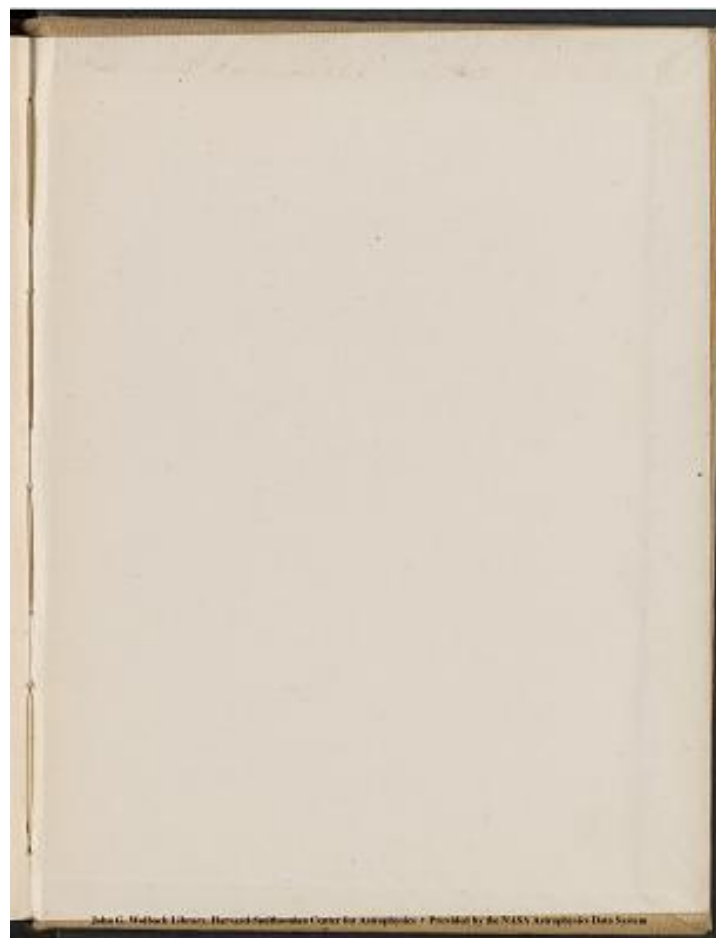
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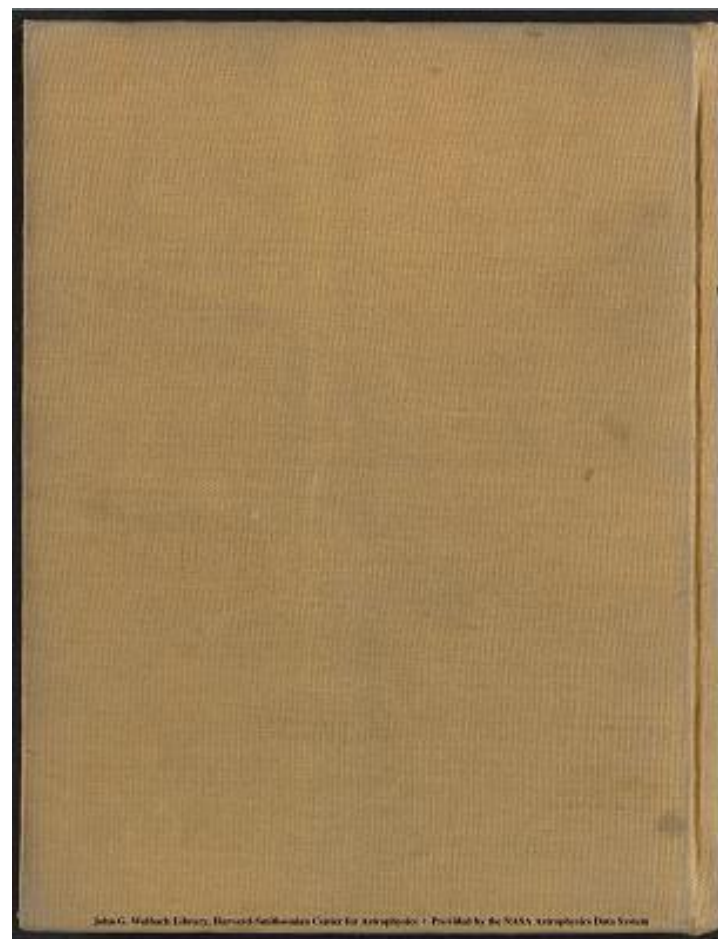


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