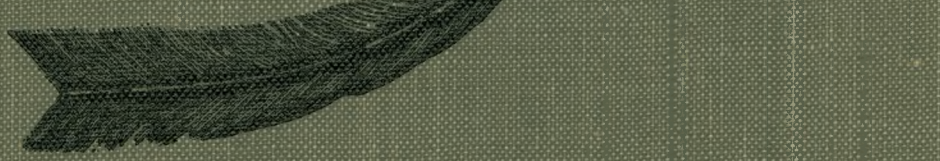
Student's Note Book



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The Royal Astronomical Society of Canada.

Toronto, Section.

Observing Section, No. 1.

Variable Stars
and Novae.

April, 1937.

Telephone ME 2930 Pilkington →

Register.

Page	Date of Enrolment.	Name and Address	Instr.	Program
7	March 2/37	Mr. Philip Perry, Huttonville, Ontario.	Visual, Cam.	Novae
9	March 20/37	Mr. Neil McNabb, Jr., Acton, Ontario	2" Opera. 6"	Nov. & Var
		~~Castlefield Ave. Fairbank P.O. Toronto.~~		
15	March 28/37	Mr. Burt Topham, ~~185 Regent St., West Toronto~~	6"	Nov. Var
Cont'd p. 45				
21	Mar. 31/37	Miss Ruth J. Northcott, 21 Jocey Block, Toronto	2"	Nov. Var
	Apr. 1/37	Mr. Donald A. MacRae, 265 Heath St. Tor.	Visual	Novae
	Apr. 1/37	Miss F. Shirley Patterson, Newmarket, Ont.	Visual	Novae.
~~27~~	Apr. 21/37	Mr. Gerald Longworth, Richmond Hill	Binoculars	Nov. & Var
31	Dec/37	Mr. Peter M. Mellman Ph.D. 181 Melrose Ave	"	Novae.
"	Feb. 8/38.	Mr. T.H. Mason, 49 Maple Ave, Toronto	4"	Nov. & Var
	~~Feb 8/38~~	Mr. C. Forster, 38 Rowanlea Ave Tor.	6"	" & "
	~~Feb 8/38~~	Mr. J.F. Morris, 198 Ellis Ave Swans.	Binoculars	" & "
39	Apr 8/38	Mr. R.S. Peterson, Apt 7, 102 Tyndall Ave	3"	Var.
27	'39 Oct. 5	Mr. Walter G. Johnman, 31 Scott Road.	3".	Var.

Mr. Philips Perry.

Material on loan:—

Reports of Observations.

Month	area No.	Mag. of stat. visible 6	5	4	3	2	1	Total no. nights	Month	area No.	Mag. of stat. visible 6	5	4	3	2	1	Total no. Nights

Mr. Neil McNabb.

Material on Loan:—

Reports of Observations.

1937 Novae Search

Month	Area	Mag. 7	8	9	Hrs. 4	Visits 2	8	Total Nights
March	8	1	3					4
	58	0	7					7
	72	6	9					15
April	8		2					2
	58	6	8					14
	72	5	7					12
May	8		3					3
	58	10	3					13
	72	2	3				6	11
	* one suspected nova ×							
June	8	2	1					3
	58	3	1					4
Aug.	8	1	4					5
	58	1	3					4
	77		5					5
	78		5					5
	86		5					5

* see correspondence

Variable Stars.

Design.	Variable J.D. & Dec.	No. Dates	Mag
154428	R Cor Bor 2428599–624	7	5.6
094211	R Leonis 2428599.8	1	6.4
094211	R Leonis 2428605-624	3	5.8
154428	R. Cor. Bor. 2428637-38	4	6.0
"	" 2428639.7	1	5.8.
154428	" 2428642.7	1	6.0
"	" 2428652-55	2	5.8
094211	R Leonis 2428635-38	2	6.4
094211	" 2428654.6	1	6.9
103769	R Ursa Maj. 2428639.7	1	8.8
"	" 2428654.7	1	8.0
094211	R. Leo. 656-685	4	6.9, 7.2, 7.5, 7.6
103769	R. Ursa Maj. 656. 685	3	8.0, 8.2, 8.4
154428	R. Cor Bor. 656-685	7	5.8, 6.0, 6.4, 6.4
154428	R Cor Bor 688-700	4	6.2, 6.4, 6.2, 6.0
154428	" " 751-773	3	6.0
184205	R Sct. 772, 778	2	5.0

Novae Searches — Variables.

Month	Area	Est Mag Vis 87654321	Total Night	Design.	Var.	J. Date	No	Mag
September	8	31	4	154428	R. Cor Bor	783.6	1	6.2
						785.6	1	6.0
	58	3	3			800.5	1	6.2
	77	4	4	184205	R Scuti	783.6	1	5.0
	78	4	4			800.5	1	5.2
	86	4	4					
October	8	61	7	021403	o Ceti	835.7		5.4
	58	1	1			838.6		5.2
	77	5	5	184205	R Scuti	837.5		5.6
	78	5	5	154428	R Cor Bor	837.5		6.0
	72	2	2					
	86	1	1					
November	77	2	2	R Scuti	184205	847.5		6.0
	8	1	1	1938				
	78	2	2					
1938	72	1	1			926.7		5.8
January	8	32	5	R Leonis	094211	930.8		5.8
	72	21	3			940.7		6.0
February	8	53	8	R Leonis	..	950.7		6.4
	36	8	8			955.5		6.6
	37	8	8			957.7		6.6
	38	8	8			958.6		6.7
	72	2431	10	o Ceti	021403	951.5		8.0
	58	21	3	R Urs. Maj	103769	955.6		8.2
March	8	55	10			958.6		8.0
	36	57	12	R. Cor Bor	154428	944.7		6.0
	37	57	12			950.7		5.8
	38	57	12			954.7		6.2
	58	1441	10			957.7		5.8
	72	633	12	R Leo.	094211	961.5		6.8
						964.7		7.0
						966.7		7.3
						978.7		7.5
						984.8		7.9
						986.7		8.0
				R Urs. Maj	103769	961.5		7.9
						966.7		7.8
						978.7		7.6
						984.8		7.5

Nova Searches

Month	Area	Mag. 8	7	6	5	4	3	2	1	Total Nights
April										
March Cont.	36		1	3	1					5
	37		1	3	1					5
	38		1	3	1					5
	58	1	1	2	1					5
	72		2	4						6
July	77			1						1
	78			1						1
	58		1							1
	86			1						1
	8		1							1
June	58	1		1						2
	77			2						2
	78			2						2
	8		1							1
1939 January	72		1	1	2					4
	36			3	2					5
	37			2	2					4
	38			2	2					4

Variables

Design.	Var.	J. D.	Mag.
~~R Cas. Maj.~~	~~985.6~~		
	~~986.7~~	985.6	7.5
103769	R Cas. Maj.	986.7	7.7
154428	R Cor Bor	964.7	5.8
		966.7	6.1
		967.7	5.8
		968.7	5.6
See Letter		978.7	5.8
		979.7	6.0
		984.7	6.2
		985.6	6.0
~~Eclipsed~~		986.7	6.0
154428	R Cor Bor	8995.7	6.1
		8996.7	5.8
		8998.7	5.9
		9011.6	6.0
		9016.6	6.1
094211	R Leonis	9002.6	8.2
		9011.7	8.6
		9016.6	8.8
103769	R Cas Maj	9011.7	8.2
		9016.7	8.5

+ short Intervals Obs.

June, July

154428	R Cor Bor	9053.6	5.8
		9055.6	5.8
		9059.6	5.6
		9070.7	5.8
		9098.6	5.6
094211	R Leo.	9055.6	9.3

Mr. Bert Topham.

Material on loan; - A.A.V.S.O. Circ #1., Mar 31/37.

Reports of Observations.

1937 Month	Nova Search area	mag. 6	5	4	3	7	8	Total Nights
April	91		1					1
May	75					1	1	2
	16					1	1	2
June	16						2	2
	75						1	1
							10	
July	16		8 9 10			1	2	3
	75		1 1 1					3
Aug	75		1					1
	16		1					1
Sept.	75		1 1					2
Oct.	60		1					1
	75		1					1
	91		1					1
Nov.	75		1					1
	91		1					1
1938	65.75		1					2
April	91		1 1					2

Variable Stars Design.	Variable	J.D.		Mag.
103769	R.Ursa Maj.	2428640.6	2	8.6
094211	R. Leonis	8640.6	1	6.1
163137	W. Herculis	2428643.6	1	9.4
072108	S Cam Min	8643.6	1	9.8
093014	X Hydrae	8643.6	1	—
094211	R Leonis	8643.6	1	6.4
103769	R. Ursa Maj.	8643.6	1	8
162119	U Herc.	8643.7	1	10.9
094211	R Leo	8669.6	1	6.5
		8684.5	1	7.2
103769	R U. Maj.	8669.7	1	8.0
		8683.6	1	8.0
162119	U Herc	8669.7	1	10.3
		8683.7	1	9.6
204405	T Oph.	8670.7	1	10.3
163137	W Herc.	8669.7	1	<13
		8674.6	1	<13
		8684.6	1	13

Mr. Bert Topham

Design	Var	J.D.	Mag	Design	Var.	J.D.	Mag
183969 ~~Hus~~	R Urs. Maj.	8708.6	1 8.9	175111	RT Oph.	720.7	14.3
115158	Z Urs. Maj.	8704.6	1 8.5	175519	RY ~~Oph~~ Herc	720.7	13.6
122532	T Can. Ven.	704.6	1 11.1	194632	χ Cygni	727.7	6.5
123160	T Urs Maj	704.7	1 7.9	191033	RY Sag.	747.7	7.4
123459	RS. Urs Maj	704.7	1 13.1	191033	RY Sag	783.6 [corrected]	7.3
123961	S Urs Maj	704.7	1 10.9	142539	V Bootis	782.6	9.1
163137	W Herc	706.6	1 11.8	"	"	803.5	8.3
	"	710.6	" 11.5	151731	S Cor Bor	784.6	7.8
	"	713.6	" 11.3	163137	W Herc.	800.5	8.3
163172	R Urs. Min	707.6	1 10.1	"	"	806.6	8.4
191033	RY Sagit.	707.8	1 10.4	141954	S Bootis	800.5	10.3
141567	U Urs. Min	721.6	10.3	163172	R Urs. Min	806.6	8.5
	"	740.6	9.7	141567	U Urs Min	837.5	9.4
141954	S Bootis	721.6	8.5	142539	V Bootis	837.5	7.8
	"	731.6	8.8	153378	S Urs. Min	837.6	10.2
	"	740.6	10.3	161138	W Cor Bor	837.6	11.9
142539	V Bootis	721.7	10.7	163137	W Herc	815.6 837.6	9.5 10.3
	"	731.6	10.2	190967	U Draco	837.6	12.5
142584	R Camel	721.7	13.0	192744	A.F. Cyg	837.6	7.1
163137	W Herc.	720.7	11.4	193449	R Cyg	837.7	9.5
174406	RS Oph.	720.6	11.9	194048	RT Cyg.	837.7	8.3
				215605	V Peg	811.6	10.1

Mr. Bert Taplan

Design	Var	J.D. 2428	Mag	Design	Var	J.D.	Mag
163137	W Her.	845.5	11.2	201520	V Sag	9032.7	10.8
044617	V Lami	847.6	9.3	203422a	R V Vulpe	9032.7	9.2
054319	SV Lami	847.6	9.7	004958	W Cas	9077.7	11.1
054920	U Cir.	847.6	8.9	115919	R Com Ber	9063.6	10.9
190108	R Aquilae	838.5	9.3	163127	W Her	9058.6	8.4
191007	W C "	838.5	9.1	175458a	T Dra	9058.6	12
.	TY "	838.5	10.7	180531	T Her	9058.6	11.8
193311	RT "	838.5	8.8	182224	SV Her	9058.7	13.4
210504	RS C "	838.6	10.6	141954	S Boo	9103.6	13.4
210812	R Equulei	838.6	10.1	142205	RS Vir	9082.6	8.1
211615	T Cap	838.6	11.9	"	"	9103.7	11.3
215605	V Peg	838.6	10.7	163137	W Her	9084.6	9.2
090151	VV Mai	1938 2429009.5	10.1	163172	R Cro Min	9084.6	9.1
163137	W Her.	011.71	11.1	163266	R Dra	9084.6	10.
004958	W Cas	014.5	11.2	163137	W Her.	9133.6	11.4
May 004958	W Cas	902 3.6	11.4	163172	R U Mi.	9133.6	8.6
	"	902766	11.6	174606	RS Oph	9133.6	11.5
	"	9032.8	11.9	185634	Z Lyr	9138.6	10.7
132202	V Virginis	9035.624	13.5	190907	TY Aql.	9138.6	10.9
163137	W Her	9027.7	9.4	191319A	S Sag	9138.6	10.9
	"	9043.7	9.3	201520	V Sag	9138.7	10.9

Noone.

Month	Area	Mag. 9	8	7	6	5	4	No. Nights
May	65			1				1
	75			1				1
	16			1				1
June	75			3	1			4
	65			3	1			4
	16			3				3
August	75			2				2
	65			2				2
	16			1				1
October	65			2	1			3
	75			2	1			3
	16				4			4
1939 January	16			2	1			3
	91			3				3
February	16			1	1			2
	91			1	2			3
	whole of Cluster			1				photograph.
	91			1	4			5
April	91				2	3		5
	75			1		1		2
June	65				2	1		3
	75				2	1		3
July	65			4	1			5
	75			4	1			5
	16					1		1
Sep.	16			1	1			2
	60			1	1			2
	75			1	1			2
nov.	65					2	1	2
	75					1	1	2
Dec.	68					1		1
	69					1		1
Feb.	91					2		2
	68					1		1
	69					1		1

		9	8	7	6	5	4	nights
april	40			2	1			3
	53			3	1			4
may	40			1	1			2
	53				1			1
June	40			3	1			4
Jul.	40			4	5			9
Aug.	40			1	3			4
Sep	40				9			9
Oct.	40			1	9			10
	53				4			4
1941 Jan.	Dome						3	3
	40			*	1			1
	53				2			2

		3m	2	nights
Feb.	Dome	1	1	7
	53			6
Mar.	Dome		1	10
	53			10
may	Dome	2	2	4
	40			3
Jul.	Dome		5	5
	40			6
Aug.	Dome		5	5
	40			5
Sep.	Dome		4	4
	40			4
Oct.	Dome		1	1
	40			4
	53			2
Nov.	Dome	2	1	3
	40			3
	53			2
Dec	Dome		1	1
	40			2
	53			3
Jan.	Dome	1	1	2
	53			4
Feb.	Dome		2	2
	40			2
	56			1
Mar.	Dome		2	2
	53			4
Apr.	Dome	2		2
	40			2

Mr. Bert Topham

Design.	Var.	J.D.	Mag.	Desig.	Var.	J.D.	Mag.
202954	ST Cyg	9138·7	107	184205	R Sct	9199·52	61
203422A	RU Vul	9138·7	107	201520	V Sag	9197·6	112
225120	S Aqr	9138·6	119	213843	SS Cyg	9197·58	118
004958	W Cas	9201·5	96	011041	UZ And	9204·54	113
010940	U And	9202·5	121	154428A	R CBr	9213·48	115
153378	S UMi	9186·54	85			9216·48	123
154428	R CBr	9186·57	79			Hazy limit of seeing → 9222·5	115
—	—	9197·54	79	163172	R UMi	9222·54	101
—	—	9199·50	83	173378	S UMi	9222·52	85
154536	X CBr	9200·54	127	175458A	T Dra. & UY UY Dra	9222·57	86
161138	W CBr	9200·57	103			← Blue UY 121 ← Uneven red deeper here T 86	12·1
163137	W Her	9186·58	133	204846	RZ Cyg.	9245·04	11·9
—	—	9200·56	126	001046	X And.	9258·54	10·4
163172	R UMi	9186·54	90	001755	T Cas.	9258·58	12·
163266	R Dra	9186·59	123	004533	RR And.	9258·6	11·1
—	—	9200·58	106	001046	X And	9272·56	104
164715	S Her	9188·541	121	001046	—	9283·52	104
165202	SS Oph	9188·56	93	001755	T Cas	9272·56	116
165631	RV Her	9188·57	138	—	—	9283·5	94
171723	RS Her	9188·60	106	004132	RW And.	9278·6	9
180565	W Dra	9200·593	121	004435	V And	9278·6	121
				—	—	9283·54	127

Desig	Var.	J.D.	Mag.	Desig.	Var.	J.D.	Mag.
004533	RR And	9272·58	99	054319	SU Taur	9339·58	10
011041	UZ And	9278·61	132	055646A	RS Aur.	9339·6	93
011272	S Cas	9272·63	123	–	–	9343·58	106
014958	X Cas	9272·63	122	055646B	SV Aur	9339·6	99
015254	U Per	9272·6	94	–	–	9347·58	95
052034	S Aur	9276·56	128	060450	X Aur	9347·58?	87
053326	RR Tau	9280·56	116	064030	X Gem	9347·6	128
053337	RU Aur	9280·56	134	065530	RS Gem	"	106
180445	Nova Here.	9278·47	88	081112	R Cancri	9351·56	105
180565	W Dra.	9278·5	103	081617	V Cancri	"	82
180666	X Dra.	9278·5	114	084803	S Hyd	9351·58	96
185737	RT Lyr.	9280·52	113	085120	T Cancri	—·6	10.
190967	U Dra.	9278·58	131	015254	U Per	9367·6	102
191350	TZ Cyg	9278·54	11	021558	S Per	"	106
191637	U Lyr.	9278·54	111	024356	W Per	"	103
194048	RT Cyg	9278·58	119	070122A	R Gem	9363·58	89
200357	S Cyg	9278·56	112	"	TW "	"	85
200843	RS Lac	9280·54	109	"	Z "	"	117
2014378	WX Cyg	9278·571	112	070310	R CMi	9363·6	107
201520	V Sag.	9280·5	112	072811	T CMi	9363·62	105
•53531	U Aur	9339·54	112	072820	Z Pup	"	87

cont'd p. 45.

Miss Ruth J. Northcott

Material on loan;- A.A.V.S.O. Circ. # 1, Apr. 13/37.

Rtd '39 June 7

Reports of Observations.

1937	Nova Search								Total Nights	Variable Stars			No. Obs.	Mag.
	Area	8	6	5	4	3	2	7		Design.	Variable	J.D.		
April	71	3	1					1	5	094211	R Lyncis	2428653-654	2	6.2
	9		1					1	2	094211	"	657-684	6	6.3, 6.5 6.9, 6.5 7.2, 7.5
May	71			3				4	7	154428	R Cor Bor	745.6		5.5
	9			2					2	183308	X Oph.	745.6		7.5
										184205	R Sct.	745.7		6.7
										190108	R Lyr	745.7		6.8

Walter J. Johnson 31 Scott Rd.

Material on Loan; A.A.V.S.O. Circ. #1; [illegible]/37.

3 in. refr.

Reports of Observations

1940

072708	S CMi	9748.54	97	
094211	R Leo	55	96	
103769	R UMa	55	ft 100	

November — Nov. 26, 1940

103769	R UMa	12:15 AM DST	fter than	
072708	S CaMi	12.50 — —	10.5 8.9	
001838	R And.	12.35 — —	9.5	

December — Dec. 26 1940

072708	S CMi	2.10 A.M. E.S.T.	9.7	
094211	R Leo.	2.15 —	10	
103769	R UMa	2.30	invisible	
123160	T UMa	2.40 —	85	

The above were again observed Jan 1 1941 3 AM DST with the same results

094211	R Leo	0106.7	89	
103769	R UMa	.8	[103	
121418a	R Cor	.7	72?	
123160	T UMa		[13	
132706	S Vir	.7	110	
151731a	S CrB	.8	?	
162119	U Her	0107.7	[103	
163266	R Dra	0106.8	92	
210868a	T Cep.	0106.8	75	
	RY Dra	0109.7	69	
	V Can	1111.6	?	
081112a	R Can	1111.6	[10	
054920b	U Ori	.6	10	

094211	R Leo	0132.7	62	
094211	"	0138.7	60	
103769	R UMa	0132.7	[103	
163266	R Dra	0132.7	[101	
132706	S Vir	0132.7	[100	
123060	T UMa	0132.7	[108	

001838	R And	0280.7		Invis.
004047a	U Cas	.7		100
004746	RV Cas	.7		Invis
163266	R Dra	.7		83
210868	T Cep	.7		64
—	—	0282.7		61
163266	R Dra	0283.7		82
230759	V Cas	.7		97
004958	W Cas	.7		100
060450	X Aur	0287.7		not sure
060547	SS Aur	.7		invis.
061647	V Aur	.7		110
054920a	U Ori	.7		110
193449	R Cyg	0289.7		invis
194048	RT Cyg	.7		105
201647	U Cyg	.7		invis
042309	S Tau	0293.7		invis
042209	R "	.7		"
103769	R UMa	.7		"

050953	R Aur	0314.7		90
060450	X Aur	0315.7		110
060547	SS Aur	.7		invis
061647	V Aur	.7		invis
054920a	U Ori	0323.7		90
060547	SS Aur	0323.7		invis

054920a	U Ori.	0347.7		70
072708	S CMi	7		invis
094211	R Leo	7		105
115158	Z UMa	7		70
123459	RS UMa	7		invis
123961	S UMa	7		110
123160	T UMa	7		invis
163266	R Dra	0349.6		invis

054920a	U Ori	0369·7	6·8	061647	V Aur	0461·6	102
		0372·7	6·4	070122	R Gem	·6	90
072708	S CMi	0373·7	6·0	072708	S CMi	·6	98
094211	R Leo	0369·7	105	081112	R Cam	·6	80
103769	R UMa	·7	10·	094211	R Leo	·6	72
004958	W Cass	0372·7	invis	103769	R UMa	·6	82
103266	R Dra	0373·7	104	115158	Z UMa	·7	80
123160	T UMa	0373·7	invis	121418	R Cor	·7	83
123459	RS UMa	0373·7	"	123160	T UMa	·7	98
123961	S UMa	·7	85	123459	RS UMa	·7	88
115158	Z UMa	·7	75	123961	S UMa	·7	88
070122a	R Gem	0383·8	75	132706	S Vir	·7	91
143227	R Boo	— ·8	invis	143227	R Boo	·7	80
123961	S UMa	0402·7	75	151731	S CrB	·7	invis
070122a	R Gem	0402·7	7·7	153378	S UMi	·7	105
054319	S d Tau	·7	10·	154428	R CrB	·7	58
054920a	U Ori	·7	65	163266	R Dra	·7	invis
094211	R Leo	·7	10·	090151	V UMa	0471·7	110
163266	R Dra	0403·7	invis	094211	R Leo	·7	64
115158	Z UMa	0403·7	86	103769	R UMa	·7	81
054920a	U Ori	0426·6	80	115158	Z UMa	·7	80
115158	Z UMa	·7	80	123160	T UMa	·7	98
123160	T UMa	·7	invis	123459	RS UMa	·7	92
123459	RS UMa	·7	92	123961	S UMa	·7	92
123961	S UMa	·7	72	180531	T Her	·7	75
103769	R UMa	·7	invis	201647	U Cyg	·7	92
163266	R Dra	·7	"	210868	T Cep	·7	110
094211	R Leo	·7	90	193449	R Cyg	0472·7	64
053005a	T Ori	7	invis	194048	RT Cyg	·7	93
210868	T Cep	7	97				
070122	R Gem	7	77	094211	R Leo	0485·7	66
154428	R CrB	7	60	103769	R UMa	·7	81
115158	Z UMa	7	80	154428	R CrB	·7	60
070122	R Gem	0438·7	79	210868	T Cep	·7	110
094211	R Leo	·7	87	090151	V UMa	0489·7	9·8 92 invis
153378	S UMi	7	invis	094211	R Leo	·7	66
072708	S CMi	7	barely vis	103769	R UMa	·7	81
115158	Z UMa	0442·7	78	115158	Z UMa	·7	80
123459	RS UMa	·7	87	121418	R Cor	·7	105
123961	S UMa	·7	85	123160	T UMa	·7	86
123160	T UMa	·7	invis	123459	RS UMa	·7	100
151731	S CrB	·7	"	123961	S UMa	·7	100
132706	S Vir	·7	84	132706	S Vir	·7	110
121418	R Cor	·7	85?	143227	R Boo	·7	88
050953	R Aur	0461 ·6	102	151731	S CrB	·7	20 93 invis
053005	T Ori	·6	invis	153378	S UMi	·7	105
054319	S d Tau	·6	103	154428	R CrB	·7	60
054920a	U Ori	·6	89	171723	RS Her	·7	92
060450	X Aur	·6	105	180531	T Her	·7	75
060547	SS Aur	·6	invis	193449	R Cyg	·7	79
				194048	RT "	·7	86

201647	U Cyg	0489·7	85
162119	U Her	0492·7	103 9.4 invis
163137	W Her	·7	92
163266	R Dra	·7	81
080165	RZ UMa	0493·7	105
134440	R CVn	·7	110
004958	W Cas	0499·77	105
115158	Z UMa	·74	80
123160	T UMa	·74	85
142539	V Boo	·73	103
154428	R CrB	·72	60
160325	SX Her	·72	89
160625	RU "	·72	90 94/84 invis
194632	X Cyg	·75	93 90 invis
213843	SS Cyg	·76	87?
004047	U Cas	0528·73	88
004746	RV Cas	·74	invis (98 100)
004958	W "	0519·73	105
080165	RZ UMa	0525·68	102
090151	V UMa	·68	invis (106, 98)
103769	RU Ma	0519·69	82
115158	Z UMa	·68	82
115158	"	0528·72	80
123160	T UMa	0519·69	80
—	"	0528·72	80
123459	RS UMa	0519·69	(99 106) invis
123961	S UMa	0519·69	(106) invis
132706	S Vir	0525·69	99 invis
134440	R CVn	·73	101 106 invis
142539	V Boo	·72	102
143227	R "	·71	(106) invis
151731	S CrB	·70	(103) invis
153378	RU Mi	0519·74	102
154428	R CrB	0525·70	60
160325	SX Her	0526·70	82
160625	RU "	·71	(102) invis
162119	U "	0525·76	(94, 103) invis
163137	W "	0526·72	(95) invis
163266	R Dra	0519·75	80
171723	RS Her	0525·77	(96 91.1) invis
180531	T Her	0526·69	99 invis
193449	R Cyg	0519·77	82
1'—	—	0532·73	88
194048	RT Cyg	0519·78	80
201647	U Cyg	·76	76
210868	T Cep	·75	103
215934	RT Peg	0532·74	(110 94) invis
220133	RZ "	0532·75	102?
230759	V Cas	0526·73	97

001838	R And	0547·78	95
004047	U Cas	·79	89
004746	RV Cas	·79	(100) invis
004958	W Cas	·68	95
024356	W Per	0549·77	92
103769	RU Ma	0547 ·67	92
115158	Z UMa	·72	80
115158	—	0554·67	82
115158	—	0561·72	80
122001	SS Vir	0556·63	78
123160	T UMa	0547·73	89
—	—	0561·71	92
123459	RS UMa	0547·73	invis 106
123961	S UMa	·73	invis 106
134440	R CVn	0549·67	invis 101
142539	V Boo	0549·67	98
143227	R Boo	·68	invis 106
153378	RU Mi	0547·71	85
154428	R CrB	0549·71	60
—	—	0554·67	60
163172	RU Mi	0547·72	101
163266	R Dra	0547·70	83
192745	AR Cyg	0549·74	77
193449	R Cyg	0549·73	98
194048	RT Cyg	0549·74	83
201647	U Cyg	·72	78
203905	Y Aqr	0547·71	invis 99
204104	W Aqr	·77	invis 102
204405	T Aqr	·76	invis 102
210868	T Cep	·69	95
213678	S Cep	0556·66	90
213843	SS Cyg	0554·68	84
213843	—	0556·69	85
213843	—	0561·71	98
215934	RT Peg	0549·74	98
215934	—	0561·73	96
220133	RZ Peg	0549·75	invis 100
230759	V Cas	0547·67	89
230759	—	0561·72	86
232848	Z And	0556·69	89
004958	W Cas	0575·70	96
024356	W Per	0588·67	92
10 37 69	RU Ma	0575·66	102
115158	Z "	0575·66	78
		0588·61	80
		0601·59	79
123160	T UMa	0575·67	99
123459	RS "	0575·67	invis 95
123961	S "	0575·67	97
	"	0601·56	85
142539	V Boo	0575·68	88
143227	R "	·68	invis
151731	S CrB	0588·64	70 92
154428	R "	·68	60
	"	0575··68	60
163266	R Dra	·69	92

210868	T Cep	0575.69	82
213843	SS Cyg	.65	invis 96
	"	0588.63	invis
	"	0601.61	invis
230759	V Cas	0575.71	94
001838	R And	0619.65	[94 invis
004047	U Cas	.64	[99 invis
004746	RU Cas	.64	[98 invis
004958	W Cas	0608.68	110
024356	W Per	0605.66	94
032043	Y Per	0605.66	82
103769	R UMa	0608.66	106
115158	Z UMa	.63	80
—	—	0631.55	78
123160	T UMa	0608.63	[92 invis
123459	RS "	.63	[109 invis
123961	S "	.64	76
—	—	0631.56	74
151731	S CrB	0608.62	72
153378	S UMi	.67	106
154428	R CrB	.62	60
163172	R UMi	.66	106
163266	R Dra	.65	[101 invis
193449	R Cyg	0614.76	[99 invis
201647	U "	.75	88
203905	Y Aqr	0615.68	[90 invis
204104	IV "	.68	[102 invis
204405	T "	0631.66	89
210868	T Cep	0608.67	87 75
213843	SS Cyg	0608.70	[109
—	—	0614.74	[109
		0619.61	[109
		0631.56	[109
230759	V Cas	0608.69	95
015254	U Per	0631.59	82

Oct - 29 observations

004958	W Cas	0678.51	98
015254	U Per	0668.60	108
024356	W "	0668.59	102
032043	Y "	.59	99
033362	U Cam	.60	75
050953	R Aur	0672.60	[93
060453	X "	0679.72	102
060547	SS "	0667.68	[108
		0672.63	[108
		0679.72	[108
061647	V Aur	0679.71	105
070122	R Gem	.78	[93

072708	S CMi	0679.77	101
080165	RZ UMa	.73	102
090151	V UMa	.72	110
103769	R UMa	.76	[103
115158	Z UMa	.74	80
123160	T UMa	.75	[92
123459	RS "	.76	[95
123961	S "	.75	83
153378	S UMi	0672.65	[99
163172	R UMi	.64	106
163266	R Dra	.63	[101
193449	R Cyg	.56	[99
194048	RT "	.57	84
194632	X "	.55	79
201647	U "	0667.67	95
210868	T Cep	.69	62
213678	S Cep	.69	90
213843	SS Cyg	.66	[109
213843	"	0678 53	[109

024356	W Per	0701.68	100
032043	Y Per	.68	101
033362	U Cam	.65	84
050953	R Aur	61	112
054319	SV Tau	71	[10
054920	U Ori	70	88
060450	X Aur	63	90
060547	SS "	62	[108
061647	V "	63	108
103769	R UMa	70	[105
115158	Z "	70	78
123160	T "	69	[92
123459	RS "	69	88
123961	S "	69	92
153378	S UMi	67	[106
163172	R "	67	100
163266	R Dra	65	[101
210868	T Cep	72	65

042209	R Tau	0727.63	84
042309	S "	0727.64	[103
054319	SV "	0727.61	105
054920	U Ori	.60	66
061702	V Mon	.65	[100
070109	V CMi	.71	[109
070122	R Gem	.69	80
070310	R CMi	70	[100
072708	S CMi	.70	106
090151	V UMa	.72	[101
094211	R Leo	0753.63	74
103769	R UMa	0727.71	[105
—	—	0753.66	98

115158	Z UMa	0727·72	79
—	—	0753·64	80
123160	T UMa	·64	81
123459	RS UMa	·65	95
123961	S UMa	·65	[106
163266	R Dra	·67	81
210868	T Cep	·68	67
015254	U Per	0758·58	106
024356	W ··	57	101
032043	Y ··	·58	102
033362	U Cam	0758·59	75
042209	R Tau	0761·73	82
042309	S ··	·73	[103
045514	R Lep	0764·62	72
054319	S U Tau	0758·54	invis
054319	—	0780·52	··
054920	U Ori	0758·58	72
—	—	0761·71	76
—	—	0780·52	85
070109	V CMi	0761·75	invis
070122	R Gem	0758·55	68
		61·72	66
		80·58	75
070310	R CMi	0761·75	104
072708	S ··	·74	101
073723	S Gem	0780·56	[103
074823	T ··	·56	[108
074922	U ··	·56	invis
081112	R Cnc	0764·65	[108
081617	V Cnc	0764·65	invis
090151	V UMa	0758·61	invis
094211	R Leo	0761·69	69
094211		64·63	66
		80·57	62
103769	R UMa	0758·60	86
		64·63	83
		80·57	82
115158	Z UMa	0758·63	79
		61·74	78
		80·58	78
123160	T UMa	0758·62	78
		61·73	78
		80·58	80
123459	RS UMa	0758·64	invis
123961	S UMa	·63	invis
153378	S UMi	0761·60	invis
163172	R UMi	0764·60	96
163266	R Dra	0758·64	80
··	··	84·60	80
210868	T Cep	0758·63	67

004958	W Cas	0818·56	92
015254	U Per	·58	105
024356	W Per	·57	104
032043	Y ··	0821·59	98
033362	W Cam	0818·57	75
050953	R Aur	·59	82
0 —	—	0837·58	84
054920	U Ori	0821·56	90
—	—	0837·59	96
060450	X Aur	0818·61	invis
—	—	0837·59	103
060547	SS Aur	0818·60	[108
—	—	0837·59	invis
061647	V Aur	0818·60	[100
070109	V CMi	0821·61	[109
070122	R Gem	·60	82
—	—	0841·58	89
070310	R CMi	0821·61	90
072708	S CMi	·61	89
081112	R Cnc	0823·64	79
—	—	0840·58	73
081617	V Cnc	0823·65	[106
090151	V UMa	·63	110
—	—	0837·60	108
094211	R Leo	0821·55	67
—	—	0840·58	69
—	—	0841·58	69
103769	R UMa	0821·57	81
1 —	—	0837·60	82
115158	Z UMa	0821·58	80
—	—	0837·61	79
123160	T UMa	0821·58	88
—	—	0837·60	91
123459	RS UMa	0821·58	invis
—	—	0837·60	[106
123961	S UMa	0821·59	86
—	—	0837·60	87
132706	S Vir	0841·60	[109
142539	V Boo	0840·60	82
143227	R Boo	0840·62	91
151731	S CrB	0840·61	invis
153378	S UMi	0821·59	101
154428	R CrB	0840·61	64
1 —	—	0841·60	62
163172	R UMi	0823·61	100
163266	R Dra	0818·64	92
210868	T Cep	0818·63	95

050953	R Aur	0846·59	87
060450	X "	·60	100
060547	SS "	·60	[108
070122	R Gem	·61	90
073723	S "	·62	[108
074323	T "	·62	91
074922	U "	·63	94?
081112	R Cnc	·64	73
081617	V "	·64	[106
094211	R Leo	0849·63	72
103769	R UMa	·64	88
115158	Z "	·65	78
—	—	0853·59	79
121418	R Crv	0846·65	[99
122001	SS Vir	0849·62	76
123160	T UMa	·64	90
123307	R Vir	·61	[102
123459	RS UMa	·64	[106
123961	S UMa	·64	82
132706	S Vir	0846·65	106
142539	V Boo	0853·61	82
143227	R "	·60	88
153378	S UMi	·63	87
154428	R CrB	·60	61
—	—	0874·66	60
162119	U Her	·67	[108
163137	W "	67	[105
163172	R UMi	0853·62	102
163266	D Dra	·61	[101
171723	RS Her	0847·68	91
180531	T Her	·68	[99
193449	R Cyg	·70	91
194048	RT Cyg	·70	86
201647	W "	·71	99
210868	T Cep	0853·63	97
213843	SS Cyg	0847·72	[96
001838	R And	0906·72	70
004958	W Cas	·70	110
033362	U Cam	·74	87
103769	R UMa	0884·66	[98
115158	Z "	0878·65	78
—	—	0884·65	77
—	—	0906·67	80
122001	SS Vir	0906·63	76
123160	T UMa	0884·65	[98
—	—	0899·68	invis
123307	R Vir	0906·66	84
123459	RS UMa	0884·65	[106
—	—	0899·68	invis
123961	S UMa	0878·66	73
—	—	0884·65	75
123961	S UMa	0899·69	86
—	—	0906·67	89
142539	V Boo	0886·67	74
—	—	0906·69	77
143227	R Boo	0886·69	72
—	—	0906·68	77
153378	S UMi	0884·67	84
154428	R CrB	0886·67	61
—	—	0906·74	60
163172	R UMi	0884·68	103
163266	R Dra	·67	[101
171723	RS Her	0886·70	85
193449	R Cyg	·72	91
—	—	0898·59	83
194048	RT Cyg	0886·72	84
—	—	0898·59	81
201647	W Cyg	0886·72	98
—	—	0898·59	84
210868	T Cep	0886·73	101
213843	SS Cyg	·71	[101
—	—	0898·58	invis
—	—	0906·69	[101
001838	R And	914·72	72
—	—	932·62	82
004047	U Cas	·65	[99
004746	RV "	·65	[98
004958	W "	914·75	110
015254	W Per	932·69	81
024356	?	·68	98
032043	Y "	935·68	98
033362	U Cam	933·66	84
103769	R UMa	914·73	[98
115158	Z UMa	926·68	invis
—	—	914·73	78
—	—	926·62	83
123160	T "	935·63	86
—	—	914·73	invis
123459	RS UMa	926·62	"
—	—	914·73	[106
123961	S "	926·62	invis
—	—	914·73	90
142539	V Boo	926·62	95
—	—	914·73	77
143227	R Boo	926·63	80
—	—	935·66	84
151731	S CrB	914·73	72
153378	S UMi	926·63	84
154428	R CrB	935·65	85
—	—	826·64	88
162119	W Her	914·76	86
163137		932·64	96
163172	R UMi	926·65	60
163266	R Dra	935·65	60
171723	RS Her	926·66	[108
—	—	926·65	[105
		932·63	106
		914·76	[101
		928·68	87
		935·66	88

935.64 − 106

cont'd

Mr. Clifford N. Forster.

~~Miss Shirley Patterson~~.

Material on Loan:-

Reports of Observations.

Nova Searches. Var. Stars.

1938 Months	Region	Hat & Visible 9 8 7 6 5 4 3 2 1	No. Nights	Design.	Var.	J.D.	Mag.
March				001838	R And. 1938	2428972.6	>10.0
				072708	S Cam Mira	964.6	9.5
						979.6	9.8
						984.6	9.8
						989.6	10.2
				090314	X Hyd.	964.6	>10.0
						979.6	>10.0
						984.6	>11.1
				094211	R Leo.	964.6	7.6
						979.6	8.2
						984.6	7.3
						989.6	6.8
				103769	R Hya. Maj.	964.6	8.0
						972.6	8.4
						979.6	7.5
						984.6	7.5
						989.6	7.5
				162119	U Her	984.7	>10.8
				163127	W Her	984.7	10.8
February.				001838	R And.	750.6	>10.5
				072708	S Cam Mira	936.6	8.5
						950.6	8.5
				090314	X Hyd.	950.6	>12.0
				094211	R Leo	936.6	5.8
						950.6	6.4
				103769	R Hya Maj	936.6	8.7
						950.6	8.7
				094211	R Leo.	8999.6	7.2
April.						9009.6	7.4
				090314	X Hyd	9009.6	>11.0
				072708	S Cam Mira	8999.6	10.4
						9009.6	10.5
				103769	R Hya Maj.	8999.6	7.5
						9009.6	7.5

Design	Var	Jul Day	Mag
162119	U Herc	8999.6	>9.4
		9009.-	>10.0
163167	W Herc	9009.-	>10.0
154428	R CrB	9009.-	6.0
072708	S Cam Min	9035.6	>10.0
081473	Z Cam	9041.6	>11.2
	"	9048.6	10.6
	"	9049.6	11.0
093014	X Hyd	9035.6	>11.0
094211	R Leo	9032.6	8.3
"	"	9035.6	8.3
"	"	9041.6	8.7
"	"	9049.6	9.0
103769	R Leo Maj.	9032.6	9.2
"	"	9035.6	9.0
"	"	9041.6	9.2
"	"	9048.6	9.7
115919	R Com Ber	9032.6	9.7
"	"	9035.6	9.5
"	"	9041.6	10.2
"	"	9048.6	10.0
154428	R CrB	9032.6	5.9
"	"	9041.6	5.9
162119	U Herc	9032.6	29.4
"	"	9041.6	11.2
"	"	9048.6	29.4
"	"	9049.6	11
163137	W Herc	9032.6	9.4
"	"	9041.6	8.6
"	"	9048.6	8.5
081473	Z Camel	057.6	11.5
		076.6	10.4 Haze
		077.6	10.2
094211	R Leo	057.6	8.9
103769	R Leo Maj	057.6	10.0
		-069.6	10.5
		077.6	10.8
115919	R Com Ber	069.6	10.0 Haze
		077.6	10.0
122532	T Can Ven	057.6	11.0
		069.6	11.2

Design	Var	Jul Day	Mag
122532	T Can Ven	0776	10.7
142205	RS Virgin	069.6	8.3
		076.6	8.0 Haze
		077.6	7.5
154428	R CrB	057.6	5.9
		069.6	5.9
		077.6	5.9
162119	U Herc	057.6	10.6
		069.6	11.1
		077.6	10.8
		057.6	Haze 8.4
163137	W Herc	069.6	8.3
		076.6	9.1

Jun 1938

Mr. Donald A. MacRae

Material on Loan:-

Reports of Observations.

Mr. R. S. Peterson 102 Tyndall Ave. Apt. 7 Toronto

3" telescope Report of observations:

Desig.	Var.	J. D.	Mag.
		1938	
184205	R Scu	9178·67	5·7
		9179·58	5·8
		9184·60	5·9
		9203·52	6·0
184205	R Scu	9213·56	6
		9214·50	6
		9223·48	6·05
		1939	
122001	SS Vir	9421·62	7·8
123307	R Vir	–	7·9
154428	R CrB	–	7·9
184208	R Scu	–	5·1
122001	SS Vir	9424·62	7·8
154428	R CrB.	–	7·9
184208	R Scu	–	5·1
122001	SS Vir	9438·67	7·6
123307	R Vir	–	7·7
154428	R CrB	–	8·0
184208	R Scu	–	5·2
122001	SS Vir.	9455·62	7·7
		9459·67	7·7
		9461·67	7·8
122001	SS Vir	9465·62	7·9
123307	R Vir.	9455·62	7·6
		9459·67	7·5
		9461·67	7·5
		9463·62	7·5
		9465·62	7·5
184205	R Scu.	9455·62	5·8
		9459·67	6·1
		9461·67	6·2
		9463·62	6·3
		9465·62	6·5
154428	R CrB	9455·62	8·5
		9459·67	8·7
		9465·62	8·9
		9469·65	9·1
160625	RU. Her.	9455·62	7·9
		9459·67	7·9
		9461·67	8·1
		9465·62	8·3
210868	T Cep.	9455·62	–
		9461·67	6·6
		9463·62	6·6
		9465·62	6·6
		9469·65	6·6
20 8	RS Cyg	9465·62	8·7

1942 Month	Zone	mag 2	6	5	4	3	2	no nights
Sep.	Dome						2	2
	40	5						5
Nov.	Dome					1		1
	40	3						3
	53	2						2
Dec	Dome						2	2
	40	1						1
	53	2						2
Feb.	Dome						4	4
	53	2						2
Apr.							2	2
		2						2
May	Dome						1	1
	53				1			1
	40	1						1
Jun.	Dome						3	3
	40	4						4
Jul	Dome						2	2
	40	3						3
Sep.	Dome						6	6
40		6						6
Oct.	Dome						12	12
	40	12						12
	53	7						7
Nov.	40	5	1					6
	53	6						6
	Dome						6	6
Dec.	Dome						2	2
	40	1	1					2
	53	1		1				2
Jan	Dome					1		1
	40	1						1
	53		1					1
Apr	Dome				1	3		(4) 3
	53		2					2
	40		2	1				3

Mr. Bert Topham cont'd from p. 20.

Desig.	Var.	J. D.	mag.
072820	T Y Pup	9363.62	88
—	X Pup	"	89
075612	U Pup	"	119
081633	T Lyn	9363.64	118
085008	T Hya	9363.64	119
090425	W Cnc.	9374.6	131
094211	R Leo	9362.58	95
—	—	9367.56	96
—	—	9374.56	96
093014	X Hya	9367.56	10
094836	U L Mi	9362.6	125
095814	R Y L Mi	9362.6	108
—	—	9374.57	103
093934	R L. Mi	9374.58	104
095421	V Leo	9362.62	126
102900	S Sex.	9362.66	124
102900	—	9369.6	133
104620	V Hya	9369.62	82
104814	W Leo	9362.66	124
—	—	9369.6	126
110500	S Leo	9362.66	121
120012	S U Vir	9369.58	117

Desig	Var.	J.D.	Mag.
121418	R Cor	9374.6	for <123
122532	T C Vn.	9374.68	103
123961	S Uma	9369.56	106
124204	R U Vir	9369.56	133
124606	U Vir	9369.58	117
140113	Z Boo	9362.68	141
141567	U U Mi	9367.58	108
142205	R S Vir	9362.68	133
142539	V Boo	9379.58	81
142584	R Cam.	9367.58	84
143227	R Boo	9369.54	84
144918	U Boo	9362.708	119
154428	R CrB	9369.54	89
123961?	var. marked on this Dchart 2.m2 E; 7.m5 of maxivar.		118.
115919	R Com	9391.58	94
122532	T C Vn	9391.58	98
123307	R Vir	9391.58	102
140512	Z Vir	9391.6	115
142205	R S Vir	.6	121
144918	U Boo	.62	109
151822	R S Lib	.62	117

142205	RS Vir	9439·58	91
142539	V Boo	·6	96
152714	RU Lib	·6	109
153020	X Lib	·62	122
154536	X CrB	·62	101
155018	RR Lib	·62	117
155229	Z CrB	·63	109
155823	RZ Ser	·63	91
160021	Z Ser.	·64	103
160210	U Ser	·64	112
160625	RU Her.	·66	9
161122A	R Ser.	·68	10
161138	W CrB	·68	105
161607	W Oph	·7	128
164319	RR Oph	·75	95
164403	TT Oph	9440·66	10
165905	TX Oph	·64	105
171401	Z Oph	9439·7	101
174406	RS Oph	9440·64	104
175111	RT Oph	9441·62	115
175519	RY Her.	·62	98
180445	Nova Her.	·62	98
181031	TV Her	9440·62	129
182224	SV Her	9440·62	113
183225	RZ Her	9438·63	112
184300	Nova Aql	·62	114
190108	R Aql	·62	91
005840	RX And.	9453·66	115
003179	Y Cep.	·66	113
004958	W Cas	·66	119
043274	X Cam.	·65	88
063159	U Lyn	·64	97
080165	RZ UMa	·62	101
090151	V UMa	·62	101
122532	TU CVn	9448·60	10
123160	TU Uma	9453·6	93
123459	RS UMa	·7	107
123961	S UMa		103
143227	R Boo	9462·58	121
140512	Z Vir.	9458·66	106
143417	V Lib.	9459·66	132
144918	U Boo.	9462·58	121
150018	RT Lib.	9462·62	121
150519	T Lib.	9459·66	115
150605	Y Lib.	9462·62	118
151520	S Lib.	9462·62	116
151714	S Ser.	·63	127
151731	S CrB	·64	103
	U Vir.	9458·66	121
151822	RS Lib.	9462·65	116
152714	RU Lib.	9459·68	118
153020	X Lib.	9462·66	122
153215	W Lib.	9462·66	78
153378	S UMi	·7	97
153620A	U Lib	9463·6	88
154428	R CrB.	·62	128
154536	X CrB	·62	132
154615	R Ser	9469·62	101
		9459·66	11
		9463·63	134 blue
		9463·64	98
		9 ·64	95
		·64	112

154639	V Cr B	9463·65	app·7	200715A	S Agl.	9468·62	104
155018	RR Lib	·66	13	200812	RU Agl.	·62	124
155229	Z CrB	·68	106	201008	R Del	·64	101
155823	RZ Scr.	·68	93	201130	S X Cyg.	·65	127
160021	Z Scr.	·69	111	201437B	W X Cyg.	·65	112
162119	U Her.	9451·6	108	201520	V Sgr.	·66	110
	? Var.		119	201647	U Cyg	·67	98
162807	SS Her	9451·68	129	202817	Z Del	·67	116
—	—	458·62	129	203422A	RU Vul	·68	94
162815	T Oph.	9451·62	112	203611	Y Del	·68	132
—	—	459·6	12	203816	S Del	·69	99
162816	S Oph	·6	131	204016	T Del	·7	125
163137	W Her.	·63	132	204102	V Aqr.	·7	89
163172	R U Mi	469·63	91	204104	W Aqr.	·7	124
163266	R Dra.	·64	113	204215	U Cap.	·71	113
165202	SS Oph.	459·62	125	205627	RR Cap.	9455·66	113 below
164715	S Her.	·64	132	210504	RS Agl	·66	13
171723	RS Her.	·64	126	210812	R Agl.	·67	127
172809	RU Oph.	·65	126	115158	Z U Ma	9503·56	88
175458A	T Dra	469·66	118	123160	T U Ma	57	80
175654	V Dra.	·67	122	123961	S U Ma	57	81
180222A	VX Sag.	458·64	94	160118	R Her	9492·56	125
180445	Nova Her.	455·58	91	160210	U Ser	57	89
—		461·6	89	160221A	X Sco	59	113
*		469·69	9	160325	S X Her	·60	81
180531	T Her.	468·69	80	160625	RU Her	·60	105
—		458·63	98	161122B	S Sco	·62	91
—		461·62	94	161138	W CrB	9493·57	128
181031	TV Her	·63	114	162119	U Her	·58	93
181103	RY Oph.	·63	123	162807	SS Her	·59	101
181136	W Lyr.	·64	99	163137	W Her	·624	135
181631	TU Lyr.	·64	107	164403	TT Oph	·63	100
182224	SV Her.	·65	128	~~164715~~	S Her	9494·6	133 seems below normal
182306	T Ser.	·66	131	200212	SY Agl	9498·56	105
183149	SV Dra.	455·60	119	200715A	S Agl	·57	94
183225	RZ Her.	461·66	120	200812	RU Agl	·58	96
183308	X Oph	·68	69	201008	R Del	·59	95
184134	RY Lyr.	·68	125				
184137	AY Lyr.	·69	133	133273	T U Mi	9518·54	126
184205	R Sct.	·69	61	134440	R C Nv.	—	107
184243	RW Lyr	·70	119				
184300	Nova Agl. no 3	·71	112	141567	U U Mi	·56	101
185032	RX Lyr.	·72	121	141954	S Boo	—	·84
190818	RX Sag.	455·62	95	142539	V Boo	·57	89
190819A	RW Sag.	·62	95	142584	R Cam	·58	124
190907	TY Agl.	·64	107	162807	SS Her	9524·52	105
191007	W Agl	·64	112	163137	W Her	·53	132
191350	TZ Cyg	451·62	105	164403	TT Oph	·56	103

164715	S Her	9524·57	121
165631	RV Her	··57	110
165905	TX Oph	·58	99
170627	RT Her	·58	127
171401	Z Oph.	9525·52	127
171723	RS Her	·53	103
172809	RU Oph	·56	93
174406	RS Oph	·57	107
175111	RT Oph	·57	124
175458A	T Dra	9527·52	111 Red
-	UY "		113 Blue
175458A	T "	9537·51	111 Red
-	UY -		113 Blue
175519	RY Her.	9525·58	120
175654	V Dra	9527·53	111
-	UW "	too bit for any comp. *	*81
180445	Nova Her.	9510·58	92
-	-	9527·54	91
180531	T Her	9510·64	92
-	-	9526·54	99
180565	W Dra.	9510·65	96
-	-	9527·55	99
180666	X Dra.	·55	115
-	-	-	114
181031	TV Her	9512·54	126
181103	RY Oph	·55	104
-	-	9526·56	91
181136	W Lyr.	9512·56	81
-	-	9526·56	80
181631	TU Lyr.	9512·56	112
-	-	9526·57	112
182224	SV Her.	9512·56	139
182306	T Ser	·58	107
-	-	9526·57	105
183225	RZ Her	9512·58	118
-	-	9526·57	121
184243	RW Lyr.	9516·54	122
-	-	9527·56	119
184300	Nova Aql 3	·56	109
-	-	9526·57	112
184811	VW Aql	9516·57	107
-	-	9528·52	113
185032	RX Lyr	9516·58	118
-	-	9528·53	125
185737	RT Lyr	9516·59	105
-	-	9528·53	116
190108	R Aql.	9516·6	116
-	-	9528·53	111
190529A	V Lyr	9516·61	112

190529A	V Z Lyr.	9516·61	121
	V Lyr	9528·54	100
	V Z Lyr	9528·54	120
190933A	R S Lyr.	9516·62	106
-	-	9528·54	112
191007	W Aql.	9516·63	122
-	T Y Aql	·64	108
191201	Nova Aql	9528·54	114
	below 114 · no comp zoom B chart - no C+D charts		
191629	A V Cyg	9522·54	107
-	-	9528·56	104
191637	U Lyr.	9522·53	115
	U Z Lyr	-	97
	U Lyr.	9528·56	118 below
192928	T Y Cyg	·56	129
-	-	9522·56	131
193311	R T Aql	-	95
-	S V -	-	94
193428	B G Cyg	9528·57	111 below
182224	S V Her	9509·51	139
182306	T U Ser.	C —	108
183146	S Z Lyr	·56	115
184243	R W Lyr	·57	117
190967	U Dra	·58	105
200715A	S Aql	9523·55	108
200812	R U Gal	9523·57	93
201008	R Del	·58	93
201130	S X Cyg	—	below 133
201437B	W X Cyg	·6	114
201520	V Sag	·64	109
202817	Z Del	·65	87
203422A	R U Vul	·65	93

000451	S S Cas	9548·57	129
001046	X Cas	·59	108
001726	T And.	9549·58	119
001755	T Cas	9548·59	82
001838	R And.	9549·58	101
001909	S Cet.	·59	112
003179	Y Cep	9552·5	113
—	—	one marked oar.	115
004435	V And.	9551·49	134
004533	RR And	·5	118
004746A	R V Cas	—	139
004958	W Cas	·54	10
005840	R X And	·54	115
010102	Z Cet	9551·57	132
010940	U And	·55	113
011041	U X And	·56	129

not confused with 129 adjacent to it

011208	S Pis	132 comp. clear to see	below 132
011272	S Cas	9552.51	128
011712	V Pis	9551.57	11
012350	RZ Per	.58	101
012502	R Pis	.59	136
013238	RU And	9552.56	113
013338	Y And	.6	136
014958	X Cas	.51	11
015254	U Per	.52	87
020356	UV Per	—	below 137
015912	S Ari	.6	bel 43
020448	RV And	.54	101
—	—	.63	102
020657	TZ Per	.55	124
—	one marked variable also		135
021024	R Ari	.63	94
021143A	W And	9555.57	128
021281	Z Cep	.59	127
021558	S Per	9556.54	88
—	T Per	—	87
022150	RR Per	.56	138
023133	R Tri	.57	97
024136	TX Per	.58	108
024217	T Ari	.58	91
024356	W Per	.59	95
—	ZZ Per	—	107
030514	U Ari	.6	11
032043	Y Per.	9557.5	86
—	VW Per	.51	101
032335	R Per	.52	117
033362	U Cam	.53	74
163137	W Her	9560.54	114
163172	R UMi	.55	10
181136	W Lyr	9557.54	85
181631	TU Lyr	.54	111
182224	SV Her	.56	bel. 134
183146	SZ Lyr	.56	121
183225	RZ Her	9560.5	135
*184134	RY Lyr	.52	134
184300	Nova Aql. 1903	.53	112
—	—	9538.5	112
184811	VW Aql	.51	107
185032	RX Lyr	.51	134
185634	Z Lyr	.52	13
185737	RT Lyr	.52	12
190108	R Aql	.53	113
190529A	V Lyr	.54	101
190925	S Lyr	.54	135
190933	RS Lyr	.58	119

190941	RU Lyr	9538.58	bel 138
191007	TY Aql	.6	107
191350	TZ Cyg	.6	104
191629	AV Cyg	.61	103
191637	U Lyr	.62	11
—	UZ Lyr	.62	95
192928	TY Cyg	.63	121
193311	RT Aql	.64	102
193449	R Cyg	9539.57	124
193509	RV Aql	.57	103
—	? var	.58	115
194348	TU Cyg	.6	119
194632	X Cyg	9539.61	71
195849	Z Cyg	.62	102
200212	SY Aql.	9540.52	115 (*)
200357	S Cyg	9544.6	119
200715A	S Aql	9540.53	117
200812	RU Aql	.54	98
201008	R Del	.54	98 (**)
201130	SX Cyg	.55	138
201437B	WX Cyg	.56	121
201520	V Sag	.56	112
201647	U Cyg	9544.6	82
202817	Z Del.	9540.56	92
—	other var next to 99	.57	107
203422A	RU Vul	c .57	94
202954	ST Cyg	9544.61	107
203611	Y Del	9541.51	128
203816	S Del	.53	86
203847	V Cyg	9544.61	127
203905	Y Aqr	9541.54	124
204102	V Aqr.	.54	88
204104	W Aqr	.55	99
204318	V Del	.56	116
204405	T Aqr	.56	128
204846	RZ Cyg	9544.61	113
205017	X Del	9541.56	124
—	also var. marked 135 to S.		123
205030A	UX Cyg.		bel. 135
—	UY Cyg	— .58	111
205923A	R Vul.	.59	127
210129	TW Cyg	.59	129
210504	RS Aqr.	.60	105
210516	Z Cap	.60	108
210812	R Equ	.61	131
210903	RR Aqr	.61	10

* Star marked 69 on D & E charts has a blue comp. about 11th mag. not shown on chart.

(*) Star marked 119 - 8 mm W of SY is about 111 - variable?

(**) unmarked star 4 mm N, 8 mm W of 98 & conspicuous against 8th mag star shown on D chart.

211614	X Peg	9541·61	101	18+811	V W Aql	9569·56	108
211615	T Cap	9543·51	131	190108	R "	·57	88
212814	Y Cap	·52	118	190529A	V Lyr	·58	106
—	U U Cap	·53	102	—	V Z "	·58	129
213843	S S Cyg	·54	111	+91350	T Z Cyg	9570·51	112
214024	R R Peg	·55	136	+91629	A V "	·52	115
215605	V Peg	·56	141	191637	U Lyr	·52	122
215717	U Aqr	·57	124* bel. 135	—	U Z "	·53	103
215934	R T Peg			192745	A F Cyg	·53	73
220133B	R Z Peg	·58	100	—	A W "	·54	78
—	R Y "	·58	125	192928	T Y "	·54	117
220412	T "	·59	123	193311	R T Aql	9571·49	110
220613	Y "	·60	117	—	S V "	·50	122
220714	R S "	·61	119	193428	B G Cyg	·51	102
220843A	R S Lac	·62	113	193448	R "	·52	98
220912	R U Peg.	·67	123	193509	R V "	·53	119
222129	R V "	·67	95	—	? Var.	·53	117
222439	S Lac	·67	124	194048	R T Cyg	·54	81
223841	R "	·68	99	194348	T U "	·54	112
224049	R V "	·68	102	194604	X Aql	·55	118
—	R W "	·69	113	194632	Y Cyg	·56	95
225342	T V And	9544·50	95	195202	R R Aql	·56	109
225542	S Z "	·51	135	195849	Z Cyg	·57	105
225745	V Y "	·52	103	200212	S Y Aql	·58	125
225914	R W Peg	·52	135	200357	S Cyg	9582·48	107
230110	R "	·53	101	200715A	S Aql	9571·59	120
231040	T Y And	·54	111	—	R W "	·60	92
231425	W Peg	·56	98	200812	R U Aql	·61	110
231508	S "	·56	117	201008	R Del	9572·51	112
231539	R Y And	·57	125	201130	S X Cyg	·52	114
232848	Z And	·57	81	201520	V Sag	·53	104
233335	S T "	·58	102	201437B	W X Cyg	·53	123
235525	Z Peg	·58	127	201647	U "	9580·48	78
235939	S V And	·59	124	202817	Z Del	·50	114
210868	T Cep	·62	63	—	Var.	·51	103
213678	S "	9548·50	95	202954	S T Cyg	9582·49	111
221255	Nova Lac	·54	134	203422A	R U Vul	9580·52	111
230552	R Z And	·55	93	203611	Y Del	·53	132
—	R T "	·55	92	203816	S "	·54	89
—	S S "	·56	91	203847	V Cyg	·54	122
230759	V Cas	·56	110	203905	Y "	9582·51	131
233959	Z Cas	·57	132	204016	T Del.	·52	138
235053	R R "	·57	132	204102	V Aqr.	·53	93
235350	R "	·57	93	204104	W Aqr.	·53	108
235855	Y "	·58	126	204215	U Cap	·55	134
				—	T Z "		bel. 134
				204405	T Aqr	·56	102
				204846	R Z Cyg	·57	124
				205017	X Del	·58	126
				—	var. also	·58	126

* White 65 stars see 2 stars 7th+8th mag. also numbered as 29 A a R on chart

205923 A	R Vul	9583·49	100	231508	S Peg	9594·52	94
—	V Z "	·50	94	231539	R Y And	9595·48	132
205030 A	U X Cyg	9582·59	138	232848	Z "	·49	83
—	U Y "	·60	112	233335	S T "	·50	102
210129	T W "	9583·51	132	233815	R Aqr.	·51	78
210504	R S Aqr	·52	125				
210516	Z Cap	·52	bel 128	000451	S S Cas	9620·53	79
210812	R Equ	·53	131	001046	X And	9612·54	94
210868	T Cap	·57	78	—	V Z "	·55	88
210903	R R Aqr	·53	118	001755	T Cas	9620·54	115
211614	X Peg	·54	93	001838	R And	9609·49	65
211615	T Cap	·54	108	004047	U Cas	9612·56	bel 135
212030	S Mic	·55	102	004435	V And	9609·55	106
213678	S Cap	·58	96	004533	R R And	·56	90
213753	R U Cyg	·59	86	004746A	R V "	·57	bel 134
213843	S S "	·56	111	004958	W Cas	9620·55	92
215605	V Peg	9584·48	133	005840	R X And	9612·51	114
215717	U Aqr	9595·51	115	010102	Z Cet	·53	100
211321	X "	·51	87	010940	U And	·52	132
215934	R T Peg	9585·48	135	012356	R Z Per	9620·56	122
—	S Y "	·49	94	012354	U Per.	·58	88
—	S V "	·50	91	233956	Z Cas	·5	132
—	S Z "	·51	105	235053	R R "	·51	137
220133 B	R Z "	·51	110	235350	R "	·52	115
—		·52	123	235525	Z Peg	·55	120
220412	T? "	·52	136	235855	Y Cass.	·53	126
220613	Y "	·53	116	235939	S V And	·54	96
220714	R S "	·53	121				
220843 A	R S Lac	·53	117	015912	S Ari	9635·48	138
—	R Y "	·53	110	020448	R V And	·49	96
220912	R U Peg	·54	126	021024	R Ari	·51	127
222129	R V "	·55	105	021143a	W And	·52	98
222439	S Lac	·56	130	—	? Var.	·52	118
223841	R "	·56	124	021403	O Cet	·53	80
224049	R V "	·57	106	022000	R "	·54	92
—	R W "	·57	110	023133	R Ari	·55	116
225342	T V And	·58	104	024136	T X Per	·56	109
225542	S Z "	·58	135	024217	T Ari	·57	107
225745	V Y "	9594·48	102	031401	X Cet.	·58	112
225914	R W Peg	9590·51	102	032043	Y Per	·59	94
230110	R "	·52	82	032339	R U "	·59	113
230552	R Z And	9591·50	92	042209	R Tau	9637·48	118
—	R T "	·51	93	042309	S "	·49	132
—	R Z "	9594·49	92	042215	W "	·5	107
—	R T "	·49	100	043208	R X "	·51	129
—	S S "	·49	89	044617	V "	·52	109
230759	V Cas	9591·50	99	045307	R Ori	·52	114
—	V "	9594·50	97	050003	V "	·54	122
231040	T Y And	9591·53	99	050022	T Lep	·55	108
231425	W Peg	9594·51	85	052034	S Aur.	9645·5	117

carefully comp. against 115

052036	W Aur.	9645·51	135	022980	R R Cep.	9677·59	127
052404	S Ori	·52	121	024356	W Per	·60	94
053005A	T "	·54	102		Z Z "	·61	115
—	AN "	·56	116	033362	U Cam.	·62	75
—	BM "	·57	87	043065	T "	·63	99
—	TU "	·58	129	043274	X "	·64	100
053326	R R Tau	·58	119	050953	R Aur.	·65	136
053337	R U Aur	·59	132	052372	R R Cam.	·66	101
053531	U Aur	·60	99	053068	S Cam.	·67	91
054319	S U Tau	·61	95	055353	Z Aur	9685·54	112
054615	Z "	·62	129	065355	R Lyn	·55	89
—	RS "	·62	94	073508	U C Mi	9671·49	123
054705	C N Ori	9646·50	122	073520	Y Gem	·50	98
054920A	U "	·51	62	074323	T "	·51	101
—	U V "	·52	106	075612	U Pup	·52	107
055646A	RS Aur	·53	120	080165	R Z U Ma	9685·57	98
—	SV "	·54	94	080319	R V Cam.	9671·53	123
063308	R Mon	9647·48	122	081112	R "	·53	101
060450	X Aur	·49	101	081473	Z Cam	9685·58	122
060547	SS "	·50	bel 132	081617	V Cam	9671·54	94
061647	V "	·52	109	081633	T Lyn	·55	100
061702	V Mon.	·53	103	082405	R T Hyd	9675·51	95
062105	SW "	·54	116	—	V Z "	·52	93
—	TV "	·55	118	083019	U Cam	·53	121
*063308	R "	·56	119	083350	X U Ma	9685·58	134
064030	X Gem	9659·52	134	084803	S Hyd	9675·54	77
065111	Y Mon	·53	105	085008	T "	·55	112
065208	X "	·54	71	090151	V U Ma	9685·58	105
065226	S W Gem	·55	96	090425	W Cam.	9675·56	86
065530	R S "	·56	109	093014	X Hyd	9676·54	89
070109	V C Mi	·57	116	093934	R L Mi	·52	122
070122A	R Gem	·58	74	094211	R Leo	·55	99
—	TW "	·58	80	094735	S L Mi	·56	86
—	Z "	·58	125	094836	U "	·57	118
070310	R C Mi	·59	106	095814	R Y "	·59	108
071201	R R Mon	·61	108	103769	R U Ma	9685·59	121
072708	S C Mi	·62	101	104814	W Leo	9677·68	98
072811	T C Mi	·63	115	—	—	9689·52	100
				—	—	9686·51	103
				110506	S Leo	9685·53	101
				115158	Z U Ma	·60	85
				115919	R C. Ber.	9686·54	95

* SSW var. involved in nebulous streak — not noticed 9647·48.

011272	S Cas	9686·51	95	021024	R Ari.	9690·52	98
012350	R Z Per	·57	132	021143	W And.	·53	75
014958	X Cas	·56	124		? var	·54	120
015254	U Per	·58	94				
020356	U V "	·59	bel. 135	021281	Z Cph	·55	137
020448	R V And	·61	101	021558	S Per	·56	85
021558	S Per	9677·53	86	—	T Per	·57	86
022150	R R "	·58	129				

022200	R Cet	9690·58		91
022150	RR Per	the 109 is brighter than its companion	·58	107
023133	R Tri		·59	96
024136	TX Per		·6	102
024217	T Ari		·6	97
024356	W Per.		·61	102
	ZZ Per		·61	109
031401	X Cet		·62	89
032043	Y Per.		·62	96
061702	V Mon	9699·52		124
062105	SW Mon		·53	105
—	TV "		·53	118
063308	R Mon		·54	122
064030	X Gem		54	127
065111	Y Mon		·55	132
065208	X Mon		55	74
065326	SW Gem		56	98
065530	RS "		56	112
070109	V CMi		57	135
070122	R Gem		57	77
070122	TW "		57	86
—	Z "		57	127
070310	RC Mi		58	108
071201	RR Mon.		58	116
071713	V Gem	9700·53		115
072708	SC Mi		·54	117
072811	T C.Mi		·55	113
073508	U C.Mi.		·56	129
073520	Y Gem.		·57	101
073723	S Gem.		·58	139
074323	T "		58	91
074422	U Gem		59	139
075612	U Pup.		59	116
080319	RV Can		·60	123
081112	R "	9705·66		89
081617	V "		67	114
081633	T Lyn		68	100
082405	RT Hya		69	86
—	UZ "		69	87
083019	U Can		·76	124
084803	S Hya		70	91
085008	T -		71	96
090024	S Pyx		71	111
090425	W Can		72	96
093014	X Hya	9706·	52	85
093934	RL Mi		53	120
094211	R Leo		53	100
094735	S Mi		54	102
094836	UL Mi		54	109

095421	V Leo	9708·52		126
	almost lost in moon glare			
095814	RY Leo		·53	108
102900	S Sex		54	109
104620	V Hya		55	82
104814	W Leo		56	114
110506	S Leo		57	98
115919	RC Br		58	94
120012	SU Vir.		58	133
120905	T Vir.		59	122
121418	R Cor		59	110
122001	SS Vir		60	74
122532	T C Vn	Br. aur. moon	61	96
122803	Y Vir		62	114

052034	S Aur	9721·53		106
052036	W "		·54	108
052404	S Ori		·55	101
053005A	T "		·56	103
	BM "			108
	AN "			120
	TU "			132
053326	RR Tau		·58	133
053337	RU Aur		·59	134
053531	U Aur		·59	98
054319	SU Tau		·59	97
054615A	Z "		·60	130
—	RS "		·60	94
— C	RU "		below	135
054705	CN Ori	9725·53		132
054920A	U "		·54	86
—	UW "		·55	106
061115	CZ "		" below	136
061702	V Mon		·57	133
062105	SW "		·58	103
—	TV "		·58	115
063308	R "		·58	120
064030	X Gem		·59	112
065111	Y Mon		·60	137
065208	X "		·60	90
065326	SW Gem	9726·52		91
065530	RS "		·53	111
070109	V CMi		·54	142
070122A	R Gem		·5	77
	TW "		·5	84
	?Var "		·5	126
070310	RC Mi.		·56	108
071201	RR Mon		·56	127
071713	V Gem			98
072708	SC Mi		·57	123

072811	T	C Mi	9726	·57	125	140113	Z	Boo	9734	·61	136
	Z	Pup		·58	138	140512	Z	Vir		·62	127
072820B	TY	"		"	87	—	AL	"		·63	95
	X	"		"	88	142205	RS	"		·63	115
073508	U	C Mi		·58	128	142539	V	Boo		·64	98
073520	Y	Gem		·59	90	143227	R	"		·65	94
073723	S	"		·60	139	143417	V	Lib		·66	125
074323	T	"		·61	89	144918	U	Boo		·66	105
074922	U	"		·61	140	150605	Y	Lib		·66	122
075612	U	Pup.		·61	123	151520	S	"		·67	94
080319	RV	Can		·62	125	151714	S	Ser		·67	130
081112	R	Can.		·62	84	151731	S	CrB	9745	·56	124
081617	V	Can		·62	125	153378	S	UMi		·57	122
081633	T	Lyn.		·63	103	154428	R	CrB		58	63
082405	RT	Hya		·63	82	154536	X	"		58	102
	VZ	"		·63	86	154615	R	Ser.		59	129
083019	U	Can. C		·64	133	154639	V	CrB		60	103
084803	S	Hya		·66	105	155229	Z	"	9746	·56	121
085008	T	"		·67	88	160210	U	Ser		·57	91
085120	T	Can		·67	94	160325	SX	Her	9746	·58	82
090425	W	"		·68	106	160625	RU	"		58	129
093014	X	Hya		·69	96	161138	W	CrB		59	128
093934	RL	Mi		·69	118	162119	U	Her		60	117
094211	R	L Mi		·70	101	162807	SS	"	9747	·56	103
094735	S	" "		·70	117	163137	W	"		·57	132
094836	U	" "		·58	112	163172	R	UMi		58	86
095421	V	" "		·59	128	163266	R	Dra		59	74
095814	RY	" "		·60	105	164403	TT	Oph		61	96
102900	S	Sex.		·60	99	164715	S	Her		61	122
104620	V	Hya.		·61	82	165631	RV	"		62	99
104628	RS	"		·62	125	165905	TX	Oph		63	102
104814	W	Leo		·63	120	171401	Z	"		63	89
110506	S	"		·64	101	—	U	"		63	60
115919	R	Com.		·65	97	171723	RS	Her		64	96
121418	R	Cor.		·66	102	172809	RU	Oph		64	99
122001	SS	Vir		·67	68	155458A	T	Dra		65	108
122532	T	CVn.	9732	·54	97	—	UY	"		65	118
122803	Y	Vir.		·55	128	175519	RY	Her		66	115
123307	R	"		·56	78	175654	V	Dra		67	111
124204	RU	"		·57	133	180445	Nova	Her		67	102
124606	U	"		·58	125	180531	T	Her		67	135
130213	RV	"		·59	128	180565	W	Dra	9748	58	108
132002	W	"		·59	93	180666	X	"		58	107
132202	V	"		·59	117	181031	TV	Her		59	128
132422	R	Hya		·60	90	181136	W	Lyr		60	84
—	SS	"		·60	82	181631	TU	??		61	111
132706	S	Vir		·61	100						
134440	R	CrV	9734	·54	79						
135908	RR	Vir		·60	139						

115919	RC	9759·56	106	003179	Y Cep} Var	9829·62	92
120012	SU Vir.	·57	137			·62	113
120905	T "	·58	88	004958	W Cas	·63	121
121418	R Cor	·59	80	011272	S "	·64	115
122001	SS Vir	·60	72	014958	X "	·65	118
151822	RS Lib	9754·69	87	162815	T Oph	9817·65	106
152714	RU "	·70	106	"	" "	9834·62	114
153020	X "	·71	115	162816	S "	9817·66	104
183146	SZ Lyr	·58	109	"	" "	9835·60	100
183149	SV Dra.	·59	131	163137	W Her.	9817·60	121
183225	RZ Her.	·60	109	"	"	9835·61	109
	EX "	·60	122	163172	RU Mi	9817·61	96
184134	RY Lyr.	·61	118	163266	R Dra	·62	94
184137	AY "	·62	136	164319	RR Oph	·68	118
185634	Z "	·63	117	164403	TT "	·62	101
185737	RT "	·64	105	164715	S Her.	·63	131
190529A	V "	·65	122	165202	SS Oph	·63	124
	DW "	·66	120	165631	RV Her	·69	138
190925	S "	·67	112	165905	TX Oph	·70	96
190933	RS "	·67	118	170215	R "	·71	97
190941	RU "	·67	112	171401	Z "	·71	110
190967	UDra	·68	122	171723	RS Her	·72	79
				172809	RU Oph	73	137
094735	S LMi	9796·64	134	174406	RS "	73	115
094836	U —	·65	130	175111	RT "	74	114
140113	Z Boo	9810·62	96	175458A	UY Dra	9818·59	113
142205	RS Vir	·63	76	"	T "	·59	118
142539	V Boo	·64	82	175519	RY Her	·60	135
143227	R "	·65	82	175654	V Dra	·62	115
144918	U Boo	·66	114	"	UW "	·62	≈80
151714	S Ser.	·67	129	180445	Nova Her.	·63	107
151731	S CrB	·68	119	180531	T Her.	9820·59	82
154428	R "	·69	62	181031	TV "	·60	135
154538	X "	·70	128	181103	RY Oph	·61	85
154615	R Ser	·71	112	181136X	W Lyr	·62	124
154639	V CrB	·72	77	181631	TU "	·63	106
155229	Z "	9811·62	136	182306	T Ser.	9823·62	108
155823	RZ Sct	·63	118	183146	SZ Lyr	·63	118
160021	Z "	64	108	183149	SV Dra	·64	140
160118	R Her	·65	102	183225	RZ Her	·65	126
160210	U Ser.	·66	125		EX "	·66	119
160221A	X Sct	·66	126	183308	X Oph	·66	71
	UV "	·67	132	184134	RY Lyr	·67	130
160325	SX Her	·69	82	184205	R Sct	·68	50
160625	RU "	·70	124	184300	Nova Agl	9824·62	112
160519	W Sct.	·71	143	184811	VW "	·63	112
				185512A	ST Sag.	·64	101
000451	SS Cas	9829·60	121	185634	Z Lyr	·65	129
001755	T "	·61	96	185737	RT "	9827·59	100

190108	R Aql	9827.60	111	204102	V Aqr	9841.68	85
190818	RX "	9828.59	109 nearly full moon	204104	W "	68	121
190819	RW Sag.	.60	105	204215	U Cap	67	112
190925	S Lyr	9828.61	126		TZ "	69	136
190933A	RS "	.62	108	204405	T Aqr.	70	77
	WW "	.63	130	204846	RZ Cyg	71	107
190941	RU "	.63	133	205017	XSct	72	129
190967	U Dra	.65	102		Var	72	128
191007	W Aql	.63	89				
	TY "	.64	107	142205	RS Vir	9866.57	87
191017	T Sag.	.64	89	142539	V Boo	.60	80
193050	TZ Cyg	66	113	190967	U Dra	9843.58	105
192745	AF "	.67	69	191350	TZ Cyg	.59	116
193311	RT Aql	9835.62	89	195377	AB Dra	.60	136
	SV "	.62	97	203053A	UX Cyg	9842.61	138
193428A	BG Cyg	63	110		UY "	62	112
193449	R "	64	132		AP	63	128
193509	RV Aql	65	134	205627A	AR Cap	64	137
	? Var	65	117	205923A	R Vul	.65	91
194048	RT Cyg	66	106		VZ "	65	95
194348	TU "	67	96	210221	X Cap.	66	116
194604	X Aql	68	144	210382	X Cep	9843.62	124
194632	X Cyg	69	96	210504	RS Aqr	9842.67	135
	EW "	70	126	210516	Z Cap	.68	105
194929	RR Sag	71	95	210812	R Equ	69	136
195202	RR Aql	72	135	210869	T Cep	9843.63	68
195308	RS "	73	94	210903	RR Aqr	9842.70	124
195849	Z Cyg	9839.61	95	211614	X Peg	.71	131
200212	SY Aql	62	101	211615	T Cap	9843.67	113
200357	S Cyg	9839.63	122	213678	S Cep.	.64	114
200715A	S Aql	64	118	212030	S Mic	.68	102
	RW "	65	94	212814	Y Cap	.70	134
200812	RU "	66	112		UU Cap	71	100
200906	Z "	9840.62	133	213753	RU Cyg	.65	89
201008	R Del	63	101	213843	SS "	66	112
201130	SX Cyg	64	131	214024	RR Peg	72	142
201437B	WX "	65	104	215605	V "	73	134
201520	V Sag	66	113	215934	RT "	9856.60	109
201647	U Cyg	66	111	220133B	RZ "	.70	93
202817	Z Del	67	92	220412	T "	.72	98
	Var	67	116	220714	RS "	9862.54	90
202954	ST Cyg	67	111	220843A	RS Lac	55	115
203422A	RU Vul	68	92		RY "	55	113
203429	R Mic	9841.58	92	220912	RU Peg	56	126
203611	Y Del	56	135	221321	X Aqr	9865.64	83
203816	S "	59	90	222129	RV Peg	9862.57	122
203847	V Cyg	60	116	222439	S Lac	58	118
203905	Y Aql	62	134	223841	R "	9865.62	101
204016	T Del	66	139	224049	RV "	63	104
					RW "		106

225342	TV And	9865.65	104	
225542	SZ "	65	126	
225745	VY "	66	100	
151714	S Ser	9876.54	115	
151731	S CrB	.55	75	
	U Vir	.55	80	
152714	RU Lib	56	114	
154428	R CrB	57	61	
154536	X CrB	59	121	
154615	R Ser	60	77	
154639	V CrB	61	75	
155229	Z —	62	136	
160118	R Her	63	92	
160210	U Ser	64	128	
160325	S X Her	9877.55	88	
160625	R V Her	9876.58	56	
—	—	9877.55	88	
161138	W CrB	57	85	
162119	U Her	58	113	
162807	SS —	60	128	
163137	W —	61	85	
163172	R UMi	62	100	
163266	R Dra	63	124	
164715	S Her	64	97	
165205	SS Oph	9878.54	125	
165965	T X "	55	96	
170215	R —	56	126	
170627	RT Her	57	104	
171401	Z Oph	58	126	
171723	RS —	9883.56	122	
172809	RU —	57	116	
174406	RS (Nova) —	58	115	
175111	RT —	59	101	
175458A	T Dra	9884.56	116	
	U Y —	56	110	
175519	R Y Her	57	93	
175654	V Dra	58	137	
	U W —	no comp.	80	
180445	Nova Her	.60	105	
—	—	9894.51	108	
180531	T Her	52	134	
181103	RY Oph	53	119	
181136	W Lyr	54	92	
181631	TU "	54	110 *	
181631	— —	9895.56	109 *	
—	—	9900.50	111 *	
182224	SV Her	9894.55	106	
182306	T Ser	56	113	

183146	SZ Lyr	9894.57	109	
183149	SV Dra	58	119	
183225	EX Her	59	120	
183308	X Oph	60	82	
184137	AY Lyr	61	138	
184300	nova Aql	62	110	
184811	VW Aql	9895.57	112	
190108	R —	58	87	
191007	W —	59	105	
	TY —	60	106	
191017	T Sag	61	78	
191319A	S —	9900.51	116	
191350	TZ Cygni	52	108	
191629B	AV —	52	109	
191637	U Lyr	53	102	
192745	AF Cyg	54	69	
	AW "	55	87	
192928	TY —	56	118	
193311	RT Aql	9901 51	113	
193428A	BG Cyg	52	100	
193449	R —	53	138	
194048	RT —	54	93	
194348	TU —	55	109	
194632	X Cyg	56	50	
195202	RR Aql	57	102	
195308	RS —	58	111	
195849	Z Cyg	59	118	
200212	SY Aql	60	121	
000451	SS Cas	9922.52	101	
001046	X And	53	112	
001755	T Cas	54	79	
004047	U —	9924.51	117	
004435	V And	52	104	
004533	RR —	53	98	
004958	W Cas	54	106	
005840	RX And	55	120	
010102	Z Cet	56	131	
010940	U And	57	119	
011208	S Psc	58	133	
011272	S Cas	9925.50	128	
011712	U Psc	51	118	
012350	RZ Per	52	104	
013238	RU And	54	123	
014958	X Cas	9926.49	113	
015254	U Per	50	78	
020448	RV And	51	98	
021024	R Ari	52	85	
021143A	W And	53	130	
	? Var	53	121	
021558	S Per	55	111	

*also 3 obs. of uncharted star 110 - no movement or variation in mag.

023133	R Tri	9926·56	102	163137	W Her	9931·54	94				
024136	TX Per	57	111	163172	R UMi	54	103				
024217	T Ari	58	99	163266	R Dra	55	121				
024356	W Per	9927·55	90	164715	S Her	55	80				
	ZZ -	56	108	165631	RV -	56	123				
030514	U Ari	57	116	170627	RT -	58	111				
032043	Y Per	58	94	194348	RT Cyg	9921·49	84				
032335	R -	59	137		TU -	·49-·51	<138				
032339	RU -	60	108	200357	S -	9902·50	114				
033362	U Cam	9929·50	74	200514	R Cap	51	126				
043065	T -	51	90	200715A	S Aql	52	113				
043274	X -	52	130		RW -	53	94				
050953	R Aur	53	87	200812	RU -	54	134				
052372	RR Cam	54	93	200906	Z -	55	90				
053068	S -	55	81	200938	RS Cyg	56	85				
054974	V -	56	132	201008	R Del	57	125				
055353	Z Aur	56	104	201130	SX Cyg	58	138				
055646A	RS -	57	94	201437B	WX -	59	113				
	SV -	57	95	201520	V Sag	60	115				
060450	X -	58	116	201647	U Cyg	61	98				
063558	S Lyn	59	131	202817	Z Del	62	116				
065355	R -	59	122	202954	ST Cyg	9903·50	112				
080165	RZ UMa	60	96	203422A	RU Vul	52	104				
093178	Y Dra	9930·48	119	203429	R Mic	53	125				
103769	R UMa	49	88	203611	Y Del	54	139				
115158	Z -	50	74	203816	S -	55	113				
123160	T -	51	122	203847	V Cyg	56	119				
123459	RS -	52	92	203905	Y Aqr	57	132				
123961	S -	53	86	204102	V -	58	84				
133273	T UMi	53	110	204104	W -	59	86				
134440	RCVn	54	92	204215	U Cap	60	<139				
141567	U UMi	54	116	204405	T Aqr	60	115				
141954	S Boo	55	133	204846	RZ Cyg	62	112				
142539	V -	55	88	205017	X Del	9907·51	142				
142584	R Cam	56	90		also var		126				
151731	SCrB	57	73	205030A	U X Cyg	52	122				
	U Var	57	78		U Y -	52	105				
153378	S UMi	58	85	205627	RR Cap	54	106				
154428	RCrB	58	67	205923A	R Vul	54	98				
154536	X -	59	94		VZ -	54	94				
154639	V -	60	84	210129	TW Cyg	56	123				
155229	Z -	9931·50	103	210124	V Cap	55	104				
160118	R Her	51	127	210221	X Cap	57	138				
160210	U Ser	51	99	210382	X Cap	58	103				
160325	SX Her	52	86	210516	Z Cap	59	110				
160625	RU -	52	106	210812	R Equ	60	101				
161188	W CrB	52	106	210903	RR Aqr	60	108				
162119	U Her	53	82	211614	X Peg	61	122				
162807	SS -	53	108	211615	T Cap	61	97				
				213678	S Sgr	9912·54	116				

213753	RU Cyg	9912.	55	88	
213843	SS –		56	89	
215934	RT Peg	9916.	50	109	
	SY –		50	101	
	SV –		51	78	
	SZ –		51	84	
220133 R	RZ –		52	84	
220412	T –		53	128	
220714	RS –		54	97	
220843	RS Lac		55	109	
	RY –		55	110	
220912	RU –		56	124	
221255	Nova Lac no2		57	138	
221321	X Agr		58	94	
222129	RV Peg		59	113	
222439	S Lac		60	90	
223841	R –		61	126	
224049	RV –		62	98	
	RW –		62	112	
225342	TV And	9918.	51	101	
225745	VY –		52	102	
225914	RW Peg	9924.	50	139	
230110	R –	9918.	53	96	
230552	RZ And		53	96	
	RT –		54	92	
	SS –		54	89	
230759	V Cas		55	88	
	SW –		56	103	
231040	TY And		57	95	
231425	W Peg		58	86	
231508	S –	9921.	52	84	
232848	Z And		53	93	
233335	ST –		54	108	
233815	R Agr		55	110	
235053	RR Cas	c	56	137	
235209	V Cet		57	96	
235350	R Cas		58	73	
235525	Z Peg	9922.	50	125	
235939	SV And		51	93	

171401	Z Oph	9934.	50	118	
171723	RS Her		53	118	
172809	RU Oph		54	98	
175111	RT –		54	124	
175458A	T Dra		55	113	
	UY –		55	115	
175519	RY Her		56	97	
175654	V Dra		56	111	
180445	Nova Her.		57	109	
180531	T Her		57	109	
180565	W Dra		58	138	
181103	RY Oph	9937.	52	115	
181136	W Lyr		53	79	
181631	TU –		54	109	
182224	SV Her		55	124	
182306	T Ser		55	127	
183146	SZ Lyr		56	109	
183149	SV Dra		57	104	
183308	X Oph		57	86	
184134	RY Lyr		58	127	
184205	R Scu	approx →		56	
184243	RW Lyr		58	108	
184300	Nova Agl. 3	9946.	46	112	
184811	VW Agl		47	107	
185032	RX Lyr		48	127	
185634	Z –		49	115	
185737	RT –		50	132	
190108	R Agl		51	68	
190529A	V Lyr		51	105	
	VZ –		51	112	
191007	W Agl		52	112	
	TY –		52	106	
191017	T Sag		53	91	
191019	R –		54	78	
191124	TY –	9959.	45	101	
191321	Z –		46	113	
191319	S –		47	127	
191350	TZ Cyg		48	109	
191629B	AV –		49	107	
191637	U Lyr		54	111	
	UZ		54	103	
192745	AF Cyg		55	69	
	AW –		55	86	
192928	TY –		56	101	
193311	RT Agl		57	134	
	SV –		57	101	
193428A	BG Cyg.		58	97	
193449	R –		59	124	
193509	RV Agl	9965.	48	89	
	Var?			115	
194048	RT Cyg		50	81	
	TU "			125	
194632	X "		51	70	
195202	RR Agl	9980.	50	110	
195377	AB Dra		51	127	
195848	Z Cyg		52	115	
200212	SY Agl	9986.	50	128	
200715A	S "		51	118	
	RW "		51	92	

200938	RS Cyg	0002·48	89
201008	R Del	·49	112
201130	SX Cyg	·50	132
201437 B	WX "	·50	122
201647	U "	0015·48	79
202954	ST "	·49	137
203422	RU Vul	·50	95
203816	S Del	·50	101
203847	V Cyg	·51	106
204016	T Del	·51	117
204318	V "	·52	117
204846	RZ Cyg	·52	116
205017	X Del	·52	88
205923	R Vul	·53	84
	VZ "	·53	92

000451	SS Cass	0039·51	122
001046	X And	·51	117
001726	T "	·49	91
001838	R "	·50	81
001755	T Cass	·52	111
004047	U "	·56	115
004746A	RV "	0035·50	102
	CAS "	·50	108
004958	W "	·51	90
005840	RX And	51	116
VQ 1041	UZ "	51	133 (below)
012502	R Psc	53	118
013238	RU And	0038·50	109
013338	Y "	·50	89
014958	X Cas	·51	108
015254	U Per	52	103
015912	S And	53	123
020448	RV And	53	109
021024	R Ari	54	108
021143 A	W And	54	98
	? Var.	54	120
021558	S Per	55	115
021258	T "	56	90
021403	O Cet	0049·50	90
022200	R "	51	112
	RS "	51	84
022426	R For	52	123
022813	U Cet	53	122
023133	R Tri	54	75
024136	TX Per	54	108
024217	T Ari	55	95
024356	W Per	55	89
	ZZ "	55	107

* Est meteor seen

030514	U Ari	0049·56	144
031401	X Cet	56	88
032043	Y Per	56	94
032335	R "	57	91
032339	RU "	57	106
040226A	TX Tau	0052·50	109
B	TV "	51	113
041619	T "	53	103
042209	S "	53	98
042215	W "	54	106
043208	RX "	55	134
044617	V "	56	102
045307	R Ori	57	100
210129	TW Cyg	0026·49	111
210868	T Cep	49	88
213678	S "	51	100
213753	TU Cyg	51	79
213843	SS "	52	119
214024	RR Peg	52	117
220133 B	RZ "	53	108
	RY "	53	127
220843 A	RY Lac	53	113
	RS "	53	111
222439	S Lac	0028·50	126
224049	RV "	50	100
	RW "	51	112
225342	TV And	51	92
225745	VY "	52	101
225914	RW Peg	52	98
230110	R "	53	90
230552	RZ And	53	94
	RT "	54	96
	SS "	54	94
230759	V Cas	54	111
231040	TY And	54	97
231425	W Peg	55	115
231508	S "	55	99
232848	Z And	56	86
233335	ST "	56	99
233956	Z Cas	56	113
235053	RR "	57	110
235350	R "	57	104
235525	Z Peg	58	86
235855	Y Cas	59	123
235939	SV And	60	133

045514	R Lep	0055·52	93
050003	V Ori	53	131
050002	T Lep	54	88

050953	R Aur	0055·55	119	063308	R Mon	0060·58	116
052034	S Aur	56	118			0083·54	116
—	—	0079·53	117	063558	S Lyn	0061·52	130
052036	W "	·53	113	064030	X Gem	0083·55	92
—	—	0055·56	103	065111	Y Mon	0061·54	108
052404	S Ori.	·56	129			0083·55	100
"	"	0079·54	102	065208	X "	·56	111
053005A	T Ori.	·54	103			0061·54	92
	AN "	55	115	065326	SW Gem.	·55	89
	TU	55	130			0083·56	88
053005A	T "	0055·57	101	065355	R Lyn	0064·52	88
	AN "	57	111	065530	RS Gem.	·52	104
	TU "	57	132			0083·57	98
053326	RR Gem	58	119	070122A	R Gem	·57	82
"	"	0079·56	112		TW "	57	86
053337	RU Aur	·56	134		Z Var? "	57	126
"	" "	0055·58	138	070122A	R Gem	0064·54	68
053531	U "	59	97		TW	54	84
"	U "	0079·57	91		Z var?	54	124
054319	SU Gem	58	96	070310	R CMi	0064·53	102
"	"	0055·60	94			0083·58	97
054615A	Z "	·60	114	071201	RR Mon	0064·55	105
"	" "	0079·58	119			0083·58	115
054615C	RU "	0055·61	106	071713	V Gem	0064·56	88
	RS "	·61	104			0083·59	99
054615C	RU "	0079·59	107	072708	S CMi	0064·57	123
	RS	·59	94			0083·59	121
054629	R Col	0055·62	134	072811	T CMi	0067·51	132
054705	C N Ori	·63	122			0083·60	132
054920A	U Ori	0082·54	121	073508	U CMi	0067·52	115
	UW "	·54	appso	073520	Y Gem	·53	95
054920A	U Ori	·55	108	073723	S "	·53	125
	UW "	0060·51	79			0084·54	118
055353	Z Aur	·51	106	074328	T "	0068·51	91
		·52	98			0084·54	98
055646A	RS Aur	0082·55	110	074922	U "	0068·52	138
	SV "	·56	100			0084·55	138
055646A	RS Aur	·56	96	075612	U Pup	0068·53	133
	SV "	0060·53	98			0084·57	134
060450	X Aur	·53	94	080165	RZ UMa	0068·54	96
		·54	86	080319	RV Cam	·57	122
061647	V "	0084·56	106	080362	SU UMa	55	139
		·57	102	081473	Z Cam.	56	108
061702	V Mon	0060·55	98	081112	R Cam.	56	87
		·56	132	081617	V "	57	110
062105	SW "	0082·57	132	081633	T Lyn	57	96
	TV "	·58	95	082405	RT Hyd	58	72 98
062105	SW "	·58	118		VZ "	58	98
	TV "	0060·57	105	083019	U Cam	0074·52	136
		·57	120	083350	XU Ma	53	126
				084803	S Hyd	54	128

085008	T Hyd.	0074·55	80	085120	T Cen	0095·56	87
085120	T Cen	56	91	090151	V UMa	57	100
090024	S Hyx	57	[137	090425	W Cen	58	82
090151	V UMa	58	101	093178	Y Dra	0102·57	135
090425	W Cen	59	80	093934	R LMi	56	112
093014	X Hyd	59	107	094211	R Leo	58	84
093178	Y Dra	0075·52	135	094512	X ·	59	[134
093934	R LMi	52	122	094735	S LMi	59	89
094211	R Leo	53	88	094836	U ··	60	124
094735	S LMi	55	112	095421	V Leo	0103·56	105
094836	U LMi	55	123	095814	RY ··	57	104
095421	V Leo	56	127	102900	S Sex	0106·56	119
095814	RY ··	56	102	104620	V Hya	57	98
102900	S Sex	56	106	104814	W Leo	0111·56	121
103769	R UMa	0076·51	125	110506	S ··	·57	103
104620	V Hya	52	94	115919	R CrB	· 58	94
104814	W Leo	53	113	120012	SU Vir	59	131
110506	S ··	54	112	120905	T ··	60	93
115158	Z UMa	54	72	121418	R Cor	61	81
115919	R Com	56	100	122001	SS Vir	62	70
120012	SU Vir	57	93	122532	T CVn	0112·56	111
121418	R Cor	58	84	122803	Y Vir	57	102
120905	T Vir	58	106	123307	R ·	58	97
122001	SS ··	58	70app.	124204	RU ··	58	133
122532	T CVn	59	105	124606	U ··	59	107
122803	Y Vir	59	110	130212	RV ··	59	138
123160	T UMa	59	98				
123307	R Vir	60	78	132002	W Vir	0126·59	103
123459	RS UMa	60	138	132422	R Hya	0128·61	87
123961	S ·· ··	60	114		SS ··	·62	76
124204	RU Vir	61	133	132706	S Vir	63	111
124606	U ··	61	85app	134440	R CVn	64	88
132002	W ··	61	97	135908	RR Vir	65	120
132706	S ··	62	93	140113	Z Boo	0132·57	100
133273	T UMi	62	131	142205	RS Vir	58	82
				142539	V Boo	59	76
080319	RV Cen.	0087·54	122	143227	R ··	60	125
080165	RZ UMa	55	98	150018	RT Lib	61	106
080362	SU ··	56	[14	150519	T ·	62	121
081473	Z Cen	57	131	150605	Y ··	63	122
081112	R Cen	58	88	151520	S ··	0133·58	94
081617	V ··	59	92	151731	S CrB	59	132
081633	T Lyn	0088·53	94	151822	RS Lib	60	93
082405	RT Hya	0091·54	76	152714	RU ··	61	82
	VZ ·	55	87	154428	R CrB	0140·58	63
083019E	V Cen	0102·61	[137	154536	X ··	·60	114
083350	X UMa	56	131	154615	R Ser	61	118
084805	S Hya	57	120	154639	V CrB	62	77
085008	T ·	57	86				

154639	V CrB	0016·60	74	184811	VW Aql	0193·58	11
155018	RR Lib	61	107	185032	RX Lyr	60	122
155229	Z CrB	62	132	185512A	ST Sag.	61	88
155823	RZ Sco	63	111	185634	Z Lyr	62	128
160021	Z ..	64	106	185737	RT Lyr.	0196·58	133
160118	R Her	65	81	190108	R Aql.	59	95
160210	U Ser	66	113	190818	RX Sag	61	123
160325	SX Her	67	88		BH ..	-	125.
160625	RU ..	67	121				
161138	W CrB	0164·63	107	191017	T Sag	0217·57	105
161607	W Oph	65	126	191019	R ..	58	78
162112	V ..	66	82	191033	RY ..	59	68
162119	U Her	0166·60	117	191629B	AV Cyg	0223·58	108
162807	SS Her	61	92	191637	U Lyr	59	109
162815	T Oph	62	117	194632	X Cyg	60	100
163137	W Her	63	85	194929	RR Sag	61	124
	UY ..	-	86	195202	RR Aql	62	132
	TZ ..	-	87	195308	RS Aql	64	101
	UU ..	64	90	200212	SY ..	65	104
164403	TT Oph	0166·65	109	200715A	S ..	0224·56	105
164403	TT ..	0167·64	125		RW .	57	101
164715	S Her	66	125	200812	RU ..	58	138
165202	SS Oph	67	122	200906	Z ..	59	131
165631	RV Her	68	118	201008	R Del	59	126
165905	TX Oph	69	102	201130	RX Cyg	60	120
170215	R ..	0172·62	124	201437B	WX ..	61	102
170627	RT Her	63	86	201520	V Sag	62	113
	CX ..	-	102	202817	Z Del	0226·56	126
171401	Z Oph	64	110		Var	57	110
171723	RS Her	65	108	Ø23422A	RU Vul	58	114
172809	RU Oph	66	116	203429	R Mic	59	128
174406	RS Nova	67	118	203611	Y Del	60	136
				203816	S ..	60	118
175519	RY Her	0177·61	114	203905	Y Aqr	61	123
180222	VX Sag	62	112	204102	V ..	61	88
180531	T Her	63	78	204104	W ..	62	126
181031	TV Her	0188·64	134	204215	U Cap	62	115
181103	RY Oph	65	125	204405	T Aqr	0227·56	76
181136	W Lyr	66	106	204846	RZ Cyg	57	136
181681	TU Lyr	66	102	205017	X Del	58	132
182224	SV Her	0189·59	128		Var.	58	123
182306	T Ser	60	106	205030A	UX Cyg	59	108
183146	SZ Lyr	61	118		UY ..	-	105
183225	RZ Her	62	[136	205627	RR Cap	0229.60	104
	EX ..	63	120	205923A	R Vul	64	121
183308	X Oph	64	78		VZ ..	65	93
184134	RY Lyr	65	141	210124	V Cap	66	92
184205	R Ser	66	65	210129	TW Cyg	67	124
184300	Nova Aql 3	66	113	210221	X Cap	68	116

210504	RS Aqu	0239·54	126	
210516	Z Cap	·55	95	
210812	R Equ	·55	123	
210903	RR Aqu	·56	99	
211614	X Peg	·57	133	
212814	Y Cap	57	133	
213843	SS Cyg	58	90	
214024	RR Peg	59	101	
215605	X "	60	121	
215717	U Aqu	61	118	
215934	RT Peg	cannot separate from the III star.		
220133B	RZ "	61	110	
	RY "	61	124	
220714	RS Peg	0255·53	119	
220843A	RS Lac	54	114	
	RY "		109	
220912	RU Peg	55	127	
221321	X Aqu	56	118	
222129	RV Peg	57	116	
000451	SS Cas	0287·58	124	
001046	X And	59	88	
001726	T And	0289·51	94	
001755	T Cas	52	98	
001838	R And	53	137	
001909	S Cet	55	117	
003179	Y Cep	54	138	
004047	U Cas	55	106	
004132	RW And	56	132	
004435	V And	57	137	
222439	S Lac	0282·52	126	
224049	RV Lac	53	110	
	RW "	-	111	
225120	S Aqr	0283·51	98	
225342	TV And	52	100	
225745	VY "	53	103	
225914	RW Peg	54	111	
230110	R "	55	105	
231040	TY And	56	101	
231425	W Peg	0284·51	86	
231508	S Peg	52	82	
233335	ST And	53	103	
233815	R Aqr	54	109	
235209	V Cet	55	117	
235525	Z Peg	0287·50	105	
235939	SV And	51	112	

004533	RR And	0309·52	99	
004746A	RV Cas	·53	97	
	"		109	pos. l'inviz of RV
005840	RX And	·54	123	
010102	Z Cet	0315·49	132	
010940	U And	·50	134	
011041	UZ "	·51	143	
011208	S Psc	·52	137	
011712	U "	·53	133	
012502	R "	54	134	
013238	RU And	54	114	
013338	Y "	55	106	
014958	X Cas	55	111	
015254	U Per	55	85	
V0059 12	S Ari	56	115	
020448	RV And	0323·50	99	
021024	R Ari	·51	94	
021143a	W And	52	132	
180531	T Her	0329·45	85	
180445	Nova -	46	114	
180565	W Dra	46	108	
181103	RY Oph	46	107	
181631	TU Lyr	0347·50	103	
182224	SV Her	51	113	
183146	S Z Lyr	52	128	
183149	SV Dra	52	139	
184134	RY Lyr	53	99	
185737	RT "	54	136	
190933A	RS "	55	125	
191629B	AV Cyg	0349·49	106	
191637	U Lyr	50	109	
192745	AF Aql	0354·50	78	
192928	TY Cyg	0349·51	101	
193311	RT Aql	0354·45	137	
—	V "	45	134	
193428A	BG Cyg	46	122	
193449	R "	46	124	
193509	RV Aql	47	116	
	Var!	$19^h36^m\ 09°55'$	112	
194048	RT Cyg	48	80	
194348	TU "	49	137	
	CS "	-	134	
194604	X Aql	"	106	
194632	X Cyg	0354·51	68	
195377	AB Dra	52	128	
195553	Nova Cyg 3	53	137	
195849	Z "	54	88	

023133	R Dja	0383·51	114	
024136	TX Per	52	105	
024217	T Ari	53	91	
031401	X Cet	54	92	
032335	R Per	55	124	
032339	RU "	55	106	
040226A	TV Tau	56	114	
040226B	TX "	56	109	
041619	T "	0388·50	102	
042209	R "	51	90	
042309	S "	51	122	
042215	W "	52	98	
201437B	W X Cyg	0364·49	122	
201520	V Sag	50	110	
201647	U Cyg	51	102	
202817	Z Del	51	112	
"	var.	51	106	
203422A	RU Vel	52	110	
203816	S Del	52	88	
203847	V Cyg	53	124	
204016	T Del	0376·50	97	
204848	RZ Cyg	51	109	
205017	X Del	52	123	
205039	U X Cyg	52	120	
	U Y "	54	108	

050003	V Ori	0404·51	133	
052034	S Aur	0415·50	106	
052404	S Ori	51	124	
053005A	T Ori	52	102	
	AN "	52	108	
053326	RR Tau	53	121	
053337	RU Aur	54	98	
053531	U "	54	108	
054319	SU Tau	0425·49	109	
054615a	Z "	·50	131	
	RS "		93	
054629	R Col	0429·52	138	
054705	CN Ori	·51	[136	
054920a	U "	54	64	
	UW "		104	
061115	CZ "	55	116	
061647	V Aur	56	92	
061702	V Mon	57	132	
062105	SW Mon	0431·51	105	
	TV "		122	
063308	R "	52	116	
064030	X Gem	53	127	
065111	Y Mon	54	136	
065208	X "	55	73	
065326	SW Gem	56	98	

065530	RS Gem	0438·51	108	
070109	V CMi	"	52	135
070122a	R Gem		53	72
	TW			79
	? var		53	123
070310	R CMi		54	93
071201	RR Mon		55	98
071713	V Gem		56	140
072708	S CMi.	0443·51		94
073508	U "		52	111
073520	Y Gem		55	90
073723	S "	0444·52		101
080319	RV Cnc		53	125
081112	R "		54	84
081617	V "		55	84
081633	T Lyn		55	101
082405	RT Hya			96
	VZ "		56	88
083019	U Cnc		56	138
084803	S Hya		57	78
085008	T "		58	112
090425	W Cnc		59	94

093014	X Hya	0472·58	127	
093934	RL Mi	·59	118	
094211	R Leo	·60	68	
094735	RL. Mi.	61	138	
094836	U "	62	118	
095421	V Leo	63	127	
095814	RY "	63	91	
102900	S Sex	64	126	
104620	V Hya	0473·55	101	
104628	RS "	56	102	
104814	W Leo	57	108	
110506	S "	59	95	
115919	R Crt	60	98	
115919	R Com	0482·55	102	
120012	SU Vir	56	109	
120905	T "	57	107	
121418	R Crv	58	93	
122001	SS Vir	59	68	
122532	T CVn.	60	113	
122803	Y Vir	61	104	
123307	R "	62	71	
124204	RU "	0488·58	128	
124606	U "	59	83	
130212	RV "	60	132	
132003	W "	61	102	
132202	V "	61	117	

122002	IV Vir.	0518·62	104
122002	V "	·62	132
132422	R Hya	·63	85
	SS "	·63	80
132706	S Vir	64	110
134440	RC Ver	0519·60	106
135908	RR Vir	61	110
140113	Z Boo	62	142
140512	Z Vir	0524·62	133
140512	T "	0525·61	135
	AL "	·62	91
142205	RS Vir	63	97
142539	V Boo	64	103
143227	R "	65	114
143417	V Lib	66	112
144918	U Boo	67	99
150605	Y Lib	68	95
151520	S "	0530·59	92
151714	S Ser.	·60	131
151731	S CrB	61	113
151822	RS Lib	62	103
152714	RU "	63	126
153020	X "	64	113
153620a	U "	0534·61	118
154428	R CrB	62	63
154536	X CrB	0615·53	119
154615	R Ser	·54	81
154639	V CrB	·54	93
160118	R Her	·56	135
160210	U Ser	·57	130
160625	RU Her	0616·52	132
161138	W CrB	·55	96
162119	U Her	·55	127
162807	SS "	·56	111
163137	W "	0623·52	132
164403	TT Oph	·53	108
164715	S Her	·54	89
165205	SS Oph	·55	103
165631	RV Her	·56	136
165905	TX Oph	0631·52	98
170215	R "	·53	82
170627	RT Her	54	138
171401	Z Oph	54	126
171723	RS Her	55	105
172809	RU Oph	55	136
174406	RS "	56	103
175111	RT "	56	129
175519	RY Her	56	127
180222A	VX Sag	57	91
180531	T Her	57	89
181031	TV Her	0631·58	106
181103	RY Oph	58	101
181136	IV Lyr	59	119
181631	TU "	59	101
182224	SV Her	60	111
182306	T Ser	0632·50	134
183308	X Oph	51	85
184134	RY Lyr	52	128
184205	R Sct	53	69
184243	RW Lyr	54	[138
184300	Nova Aql 3	54	116
184811	VW "	55	109
185512A	ST Sag	56	122

132 diff * s 152 obs in Oct.

154428	RCrB	0665·48	122
154536	X "	·49	96
154615	R Ser	49	94
154639	V CrB	50	98
155229	Z "	50	129
160118	R Her	51	[132
160210	U Ser	51	97
160325	SX Her	52	86
160625	RU "	52	111
161138	IV CrB	52	112
190529A	V Lyr	0670·50	107
	VZ "	50	122
190925	S "	0672·48	126
190933A	RS Lyr	48	127
190967	U Dra	49	127
191007	W Aql	49	124
	TY	49	105
191350	TZ Cyg	49	108
191629B	AV "	50	108
191637	U Lyr	50	111
	UZ "	50	103
192745	AF Cyg	51	73
	AW "	51	90
192928	TY "	51	102
193311	RT Aql	52	139
193428A	BG Cyg	52	122
193449	R "	53	125
194048	RT	53	83
194348	TU "	54	96
194604	X Aql	54	129
194632	X Cyg	55	74
195202	RR Aql	55	103
195849	Z Cyg	0682·50	122

200212	SY Aql	0682·51	[128	
200715A	S "	51	102	
	RW "	52	98	
200812	RU	53	123	
201008	R Del	54	100	
201130	R X Cyg	56	[133	
201437B	W X "	56	110	
201520	V Lyr	57	113	
222439	S Lac	0701·48	104	
223841	R "		96	
225914	RW Peg	49	115	
230110	R "	49	82	
231425	W "	50	103	
053005A	T Orionis	0761·52	101	
	AN "	52	126	
	BM "	53	109	
	TU "	53	123	
053531	U Aur	54	136	
054319	S U Tau	0764·51	138	
054920A	U Ori	50	72	
	UW "	50	106	
054615A	Z Tau	52	132	
054615C	RU "	53	121	
	RS "	53	92	
054705	C N Ori	54	121	

Comet Whipple 11 PM Feb 24 bet. * s in side of Dipper 4·8 mag - distinctly easier to see than 5th mag *

061702	V Mon	0832·54	109	
064030	X Gem	55	85	
065111	Y Mon	56	104	
065208	X Mon	57	84	
065326	S W Gem	57	91	
065530	RS Gem	0837·54	112	
070122A	R "	55	86	
	TW "	55	81	
	Z "	55	127	
070310	R C Mi	56	84	
071201	RR Mon	57	99	
071713	V Gem	58	108	
072708	S C Mi	0853·57	76	
072811	T "	·58	112	
073508	U "	·59	104	
073520	Y Gem	·59	101	
142205	RS Vir	0896·59	85	
142539	V Boo	·60	79	
143227	R "	61	64	
144918	U "	61	119	
150605	Y Lib	0898·61	[133	
151520	S "	·62	90	
151714	S Ser	0898·63	122	
151731	S CrB	63	109	
151822	RS Lib	63	126	
152714	RU "	64	136	
153020	X "	64	116	
154428	R CrB	0899·61	62	
154536	X "	0900·59	95	
154615	R Ser	·60	111	
155018	RR Lib	61	135	
155229	Z CrB	906·60	128	
155823	RZ Ser	60	85	
160021	Z "	61	129	
160118	R Her	62	132	
160210	U Ser	63	86	
160221A	X Ser	64	116	
160625	RU Her	64	88	
161122B	S Ser	65	[136	
161122A	R "		[136	
161138	W CrB	66	113	
162112	V Oph	907·61	85	
162119	U Her		115	
162807	SS "	62	91	
162815	T Oph		113	
163137	W Her	914·60	130	
163172	RU Mi	61	99	
163266	R Dra	62	127	
164319	RR Oph		98	
164715	S Her	63	77	
161138	W CrB	988·51	114	
162112	V Oph	52	84	
162119	U Her	53	125	
162807	SS "	54	93	
163137	W "	55	92	
163266	R Dra	56	77	
164715	S Her	990· 52	107	
165202	SS Oph	53	93	
165631	RV Her	53	116	
165905	TX Oph	54	107	
171401	Z "	55	125	
171723	RS Her	56	121	
172809	RU Oph	56	123	
174406	RS "	993·51	115	
175519	RY Her	52	93	
175654	V Dra	53	117	
180531	T Her	"	85	
181031	TV "	53	124	
181103	RY Oph	54	116	
181136	W Lyr	54	112	
181631	TU "	55	102	
182224	SV Her	55	140	
182306	T Ser	56	127	
183146	SZ Lyr	56	121	

183149	SV Dra	993·57	108
183225	RZ Her	57	119
..	EX ..	58	114
183308	X Oph	58	82
184134	RY Lyr	58	95
184137	AY ..	59	141
184205	B Sct	60	55
184300	Nova Aql 3	60	111
184811	VW Aqr	64	106
185032	RX Lyr	64	112
190108	R Aql	994·51	109
190925	S Lyr	52	129
190933A	RS ..	52	111
191007	W Aql	53	122
	TY ..	53	106
191629A	AV Cyg	54	108
191637	U Lyr	54	122
192745	AF Cyg	55	68
192928	TY Cyg	995·50	122
193311	RT Aql	51	138
	SV ..	51	115
193428A	BG Cyg	52	115
193449	R ..	53	101
193509	RV Aql	53	126
194048	RT Cyg	54	112
194632	X ..	997·51	115
195202	RR Aql	51	125
195308	RS ..	52	108
200212	RY ..	53	116
200715A	S ..	53	104
	RW ..	54	94
200812	RU ..	54	132
200906	Z ..	55	126
201008	R Del	55	114
201130	SX Cyg	56	102
201437B	WX ..	56	102
201520	V Sgr	57	122
202817	Z Del	57	116

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203816	S Del	1032·50	113
203847	V Cyg	50	91
203905	Y Aqr	51	130
204016	T Del	51	97
204102	V Aql	52	86
..	..	1051·48	85
204104	W ..	49	94
204318	V Del	49	123
204405	T Aqr	49	75
205017	X Del	50	140
	UX Cyg	50	[135
	UY ..	51	110
205923A	R Vul	1051·51	113
210129	TW Cyg	52	112
210504	RS Aqr	1052·48	109
210812	R Equ	48	129
211614	X Peg	49	134
214024	RR ..	50	103
215605	V ..	50	140
215934	RT ..	cannot separate from	111
	SV ..		84
	SZ ..		96
	SY ..		99
220138B	RZ ..		127
	RY ..		122
220412	T ..	1053·48	118
220613	Y ..	48	121
220714	RS ..	47	[135
220912	RU ..	47	124
222129	RV ..	48	114
222439	S Lac	49	114
223841	R ..	50	95
224049	RV ..	50	102
	RW ..	51	101
225745	VY And	1054·46	98
225914	RW Peg	46	104
230110	R ..	47	81
231425	W ..	48	111
233335	ST And	49	96
233815	R Aqr	50	102
235209	V Cet	50	128
235525	Z Peg	51	91
001726	T And	1056·53	136
001838	R ..	54	120
001909	S Cet	55	92
010102	Z Cet	1063·49	129
011208	S Psc	·50	122
053005A	T Ori	1084·58	96
	AN ..	58	115
	TU ..	58	125
..	T ..	1120·48	101
	AN ..	48	118
	TU ..	48	126
053326	RR Tau	49	121
053337	RU Aur	49	136
054319	SU Tau	50	99
054615A	Z ..	51	132
..	RS ..	52	93
054705	CN Ori	53	126
054920A	U ..	53	66
	UW ..	54	106
070310	RC Mon	1208·54	78
071201	RR Mon	54	99
071713	V Gem	55	96
072708	S CMi	56	74
072811	T ..	56	106
072820B	TY Pup	57	87
	X ..	57	95
073508	U CMi	1209· 54	92
075612	U Pup	55	103
081112	R Cnc	56	70

053005 A	T Ori	1554.54	108
"	AN "		116
	BM "		107
	TU "	.55	128
053326	RR Tau	.55	122
053337	RU Aur		134
053531	U "	.57	[137
054319	SU Tau	1556.54	102
054615 A	RS "	54	96
	Z "	55	[125
054920 A	U Ori	55	78
061702	V Mon	56	74
062105	SW "	57	104

104814	W Leo	1931.54	115
	"	32.54	108
110506	S Leo	.55	134
115919	R CrB	.56	100
120012	SU Vir	.57	93
120905	T "		[128
121418	R Crv	.58	107
122001	SS Vir	.59	74
122532	T CVn	.60	118
122803	Y Vir		134
123307	R Vir	1935.56	94
124204	RO "	57	102
124606	U "	58	90
130212	RV "	59	[133
132002	W "	60	99
132202	V "	61	94
132422	R Hyd.	62	54
	SS "		76
	S Vir		91
134440	R CVn	1938.50	121
133908	RR Vir		[132
140113	Z Boo	57	141
140512	Z Vir	58	144
142205	RS "	59	84
142539	V Boo		76

cont'd.

180531	T Her	928.68	
—	—	935.67	110
193449	R Cyg	914.75	85
—	—	931.66	95
194048	RT "	914.75	83
—	—	931.67	83
201647	U Cyg	914.74	80
—	—	931.65	75
203905	Y Cep	933.65	invis
204104	W "	933.65	"
204405	T "	933.64	[102
210868	T Cep	914.75	92
2 —	—	933.66	83
213843	SS Cyg	914.72	invis
—	—	928.71	"
—	—	933.64	"
215934	RT Peg	935.64	"
221033	RZ "	935.65	"

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Sep.

001838	R And	993.64	106
—	—	998.66	106
004047	U Cas	.65	[99
004746a	RV "	.65	98?
004958	W "	975.71	106
—	—	993.65	106
015254	U Per	975.71	90
024356	W "	975.70	94
032043	Y "	975.70	105
033362	U Cam	975.69	82
050953	R Aur	979.83	[93
060547	SS "	979.82	[108
—	—	998.68	invis
103769	R UMa	986.59	[98
—	—	993.59	invis
115158	Z UMa	986.58	81
—	—	993.58	81
123160	T UMa	986.58	invis
—	—	993.58	100
123459	RS UMa	986.58	99
—	—	993.58	100
123961	S UMa	986.58	[106
—	—	993.59	invis
153378	S UMi	993.59	[106
154428	R CrB	993.57	60
160325	SX Her	993.58	90
160625	RU Her	993.58	[100
162119	U Her	986.59	invis
163137	W "	986.60	93
163172	RU Mi	986.63	99

Wohman - cont'd.

163266	R Dra	986.62	82
—	—	998.67	76
171723	RS Her	986.60	[96
180531	T Her	986.61	81
180531	—	993.60	82
193449	R Cyg	986.65	[99
—	—	997.63	invis
194048	RT Cyg	997.63	"
194632	X "	.65	" ?
201647	U "	986.65	75
—	—	997.62	76
203905	Y Cep	993.60	invis
204104	W Cep	"	invis
204405	T "	.60	95
210868	T Cep	986.64	69
213843	SS Cyg	975.68	invis
—	—	986.61	"
—	—	997.63	"
230759	V Cas	997.61	84

Oct. 63 estimates

001838	R And	00 54.49	[101
004047	U Cas	.50	99
004746	RU Cas	.51	[98
004958	W Cas	.49	96
015254	U Per	52.58	105
021403	O Cet	53.58	92
024356	W Per	51.59	99
032043	Y Per	51.59	99
033362	U Cam	52.58	84
042209	R Tau	52.67	92
042309	S "	.67	102
050953	R Aur	.56	[103
054309	SU Tau	.67	106?
054920	U Ori	.67	[102
060450	X Aur	.56	invis
103769	RU Ma	.68	"
115158	Z UMa	42.48	78
"	"	52.68	80
123160	T UMa	42.48	78
"	"	54.48	79
123459	RS UMa	42.48	invis
123961	S "	42.48	[106
153378	S "	51.58	invis
163172	RU Mi	51.58	92
163266	R Dra	.57	83
192745	AF Cyg	54 55	70
193449	R "	51.55	invis
194048	RT "	51.56	88
194632	X "	54.54	invis
201647	U "	51.55	78
203905	Y Cep	42.49	invis
204104	W Cep	42.49	"
204405	T "	42.49	78
210868	T Cep	53.55	80
213678	S "	52.53	65
213843	SS Cyg	53.56	102
"	"	42.50	invis
		51.55, 54.53	" "

230759 V Cas 54.49 109 VOHMAN

Dec. 18 observations

024356	W Per	0 113.63	97
032043	Y "	106.60	92
054920a	U Ori	106.59	71
070109	V CMi	113.64	104
070122	R Gem	106.59	82
070310	R CMi	113.64	[100
072708	S CMi	.64	95
094211	R Leo	106.61	64
"	"	113.62	65
103769	RU Ma	106 58	82
"	"	113.60	82
115158	Z "	106.57	76
"	"	113.60	78
123160	TU Ma	106.57	102
"	"	113.61	105
123459	RS U Ma	106 58	[100
123961	S "	106.58	73
"	"	113.61	75
153378	S U Mi	113.62	106
163172	R "	.62	90
163266	R Dra	106.56	[101
210868	T Cep	.56	63
213843	SS Cyg	094.50	invis
004958	W Cas	198.62	102
015254	U Per	194.60	85
024356	W "	.59	96
033362	U Cam	.60	85
050953	R Aur	.60	97
054920	U Ori	193. 56	90
070109	V CMi	.58	[105
070122	R Gem	.57	85
070310	R CMi	.58	82
072708	S CMi	208. 60	84
"	"	193. 58	80
073723	S Gem	208. 60	77
074323	T "	198 - 60	[108
074922	U "	198 - 61	90
081112	R Cnc	.61	invis
081617	V —	193. 59	78
084803	S Hya	.60	100
093014	X "	207. 64	80
094211	R Leo	208. 62	90
"	"	193. 60	90
103769	RU Ma	208. 61	94
115158	Z "	194. 57	[105
"	"	193. 61	86
121418	R CrB	208. 65	82
122001	SS Vir	198. 64	invis
123160	TU Ma	.64	75
123307	R Vir	193. 61	invis
123459	RS U Ma	208. 65	[105
123961	S "	198. 65	93
132422	R Hya	193. 62	invis
132706	S Vir	208. 65	96
142539	V Boo	193. 62	110
143227	R "	208. 65	invis
151731	S CrB	.68	403
153378	S U Mi	198. 63	96
—	—	194. 62	80
		198. 67	[105
		.68	invis
		194. 58	84
		208. 64	84

154428	R CrB	198. 64	60
—	—	208. 66	60
154639	V CrB	207. 67	79
160325	SX Her	208. 66	90
160625	RU "	-67	[105
162119	U "	200. 68	86
163137	W "	.67	invis
163172	RU Mi	194. 58	102
—	—	208. 64	105
163266	R Dra	.62	102
164715	S Her	.68	60?
171723	RS "	200. 69	invis
180531	T "	.70	[105
193449	R Cyg	.71	[99
194048	RT "	.72	[102
201647	U "	.71	108
210868	T Cep	194. 59	90
—	—	200. 73	90
213678	S "	.73	90
213843	SS Cyg	.73	invis
—	—	208. 69	[105
094211	R Leo	231. 60	100
103769	RU Ma	227. 70	[100
115158	Z "	.69	84
"	"	235. 62	86
122001	SS Vir	231. 63	75
123160	TU Ma	227. 69	invis
123307	R Vir	235. 62	"
123459	RS U Ma	231. 64	[106
—	—	227. 69	89
123961	S "	235. 62	87
132706	S Vir	227. 69	invis
142539	V Boo	231. 63	98
143227	R "	227. 70	88
151731	S CrB	231. 69	invis
153378	S U Mi	231. 65	[106
154428	R CrB	227. 69	85
—	—	231. 64	60
160325	SX Her	235. 63	60
160625	RU "	231. 68	84
162119	U "	.68	invis
163137	W "	-69	88
163172	RU Mi	.69	[110
163266	R Dra	227. 62	102
171723	RS Her	.68	83
180531	T "	238. 69	invis
193449	R Cyg	.70	[105
194048	RT Cyg	.68	[99
201647	W "	.69	102?
210868	T Cep	.68	108
213678	S "	231. 61	99
213843	SS Cyg	.62	99
—	—	231. 70	invis
		238. 67	"

June - 20 obs

Jul. 21 "

001838	R And	317·67	70
—	—	325·65	69
004047	U Cas	317·68	102
004958	W "	·68	105
015254	U Per	·69	100
024356	W "	·69	99
032043	Y "	·69	92
033362	U Cam	·70	85
115158	Z U Ma	312·61	78
"	"	325·61	78
123160	T "	325·61	81
"	"	312·62	79
123961	S "	312·62	71
"	"	325·62	76
151731	S CrB	312·65	70
154428	R "	312·64	60
"	"	325·61	60
163137	W Her	312·65	84
163172	R U Mi	·63	101
163266	R Dra	·63	93
"	"	325·63	100
171723	R S Her	312·66	82
180531	T "	·67	81
193449	R Cyg	325·64	101
194048	R T "	·65	93
210868	T Cep	312·64	101
213843	SS Cyg	325·64	invis

Aug. 27 obs
Sept. 17 "

Literature.

6 AAVSO Circular #1, 1934 - from Mrs. Hogg.
1 Magnitude Limit Chart for telescopes " "
1 Catalogue of Finder Charts " "
Monthly Bulletins " "

Charts Catalogued.

Novae Charts - promised May 1, 1937 - $2.00

A. A. V. S. O. Star Atlas

Chart No.	No. Copies
1	1
2	2
3	3
4	2
5	1
6	3
7	2
8	1
9	2
10	2
11	1
12	2
13	2

Variable Star Charts - donated by C. Netherbee M.D Twin Falls, Idaho
- received April 28, 1938

1 semi-circumpolar mag. star chart 0-12h
1 circumpolar star chart - (mag.)
1 A.A.V.S.O circular, 1930.

No.	Var.	Design.	Charts		No.	Var.	Design	Charts.	
1	χ And	001046	F1	d	16	Y Cass	013338	F16	d
2	T Cas	001755	3	bdd	17	R Ari	021024	19	d
3	T Cass	001726	2	d	18	W Cass	021143	20	e
4	R Cass	001838	4	ab	19	Z Cep	021281	21	bdd
5	S Cet	001909	5	d	20	R Cet	022000	22	bde
6	Y Cep	003179	6	dd	21	RR Pers	022150	23	d
7	U Cas	004047	7	d	22	R Hor	022426	24	d
8	RW Cass	004132	8	bd	23	U Cet	022813	25	ad (c)
9	V Cass	004435	8	d	24	RR Cep	022980	21	d
10	RV Cas	004746a	7	de	25	R Tri	023133	27	bddo
11	Z Cet	010102	10	ddd	26	O Cet	021403	22	a
12	U Cass	010940	9	de	27	U Ari	030514	28	bd
13	S Cas	011272	13	e	28	U Eri	034625	32	d
14	R Per	012502	12	bd	29	T Eri	035124	32	d
15	RU Cass	013238	16	d	30	W Eri	040725	32	d

No.	Var.	Design	Charts		No	Var	Design.	Charts	
			F					F	
31	RJan	042209	33	d	52	RMon	063308	48	d
32	SJan	042309	33	d	53	SLyn	063558	47	(o)
33	TCam	043065	34	d	54	XGem	064030	49	bd
34	RXJan	043208	35	d	55	YMon	065111	48	bdd
35	ROri	045307	35	d	56	XMon	065208	50	ad
36	RLep	045514	36	abb	57	RLyn	065355	47	(o)
37	TLep	050022	36	d	58	RSGem	065530	49	d.
38	VOri	050003	35	bd	59	RGem	070122a	52	abd
39	RAur	050953	37	ad	60	R6Mi	070310	51	d
40	SAur	052034	38	b(o)	61	RRMon	071201	51	bd
41	SOri	052404	40	bd	62	VGem	071713	53	d
42	SCam	053068	41	bd	63	S6Mi	072708	53	bd
43	TOri	053005a	40	d	64	ZPup	072820	54	d
44	UAur	053531	38	bd(o)	65	T6Mi	072811	53	d
45	ZJan	054615a	43	d	66	T6Mi	073508	53	d
46	RUJan	054615c	43	d	67	SGem	073723	55	d
47	VCam	054974	41	bd	68	TGem	074323	55	d
48	RCol	054629	44	d	69	UGem	074922	55	bd
49	UOri		43	abbdde	70	RCanc.	081112	57	aabdde
50	XAur	060450	45	bd	71	ZCam	081473	58	dd
51	YMon	061702	46	bd	72	VCanc.	081617	59	e

No.	Var	Design.	Charts		No	Var	Design	Charts	
			F					F	
73	XU Ma	083350	61	bd	94	R Virg ~~125~~	123307	81	aaddd
74	S Hya	084803	62	bd	95	SU Maj	123961	(80)	d
75	T Hya	085008	63	b	96	RU Virg	124204	81	d
76	S Pyx	090024	64	d	97	V Virg.	124606	84	d
77	VU Maj	090151	61	d	98	W Virg	132002	84	a
78	W Canc	090425	65	dd	99	V Virg	132002	84	a d
79	X Hyd	093014	66	bb	100	S Virg	132706	83	abd
80	Y Drac	093178	67	dd	101	T U.Maj.	133273	86	ddd
81	R Leo	094211	70	a	102	R C.Ven.	134440	87	d
82	X Leo	094512	70	ddd	103	RR Virg	135908	88	d
83	R. UrsMaj.	103769	72	ad	104	Z Boot.	140113	89	dd
84	RS Hya	104628	74	d	105	Z Virg	140512	88	Idd
85	V Hya	104620	73	dd	106	S Boo.	141954	91	d
86	W Leo	104814	75	22	107	RS Virg	142205	92	ad
87	S Leo	110506	75	2,2	108	R Boo	143227	94	a (d)
88	R Com Ber	115919	76	dd	109	V Boo	144918	87	(d)
89	T Vir	120905	77	11,b	110	RT Lib	150018	95	dd
90	R Corvi	121418	78	11,ad	111	T Lib	150519	95	1
91	T C.Vn	122532	79	d	112	Y Lib	150605	96	ddd
92	Y Virg ~~122803~~	122803	77 (80)	d	113	U C.Br	151432	97	bb
93	TU.Maj ~~123160~~	123160	~~81~~	aad	114	S C.Br	151731	97	ab

No.	Var.	Design.	Charts		No.	Var.	Design.	Charts	
			F					F	
115	S Lib	151520	98	d, e.	136	SS Oph.	165202	115	d
116	RS Lib	151822	98	ddd	137	RV Her	165631	116	d
117	RV Lib	152714	96	bd	138	R Oph	170215	113	ad
118	W Lib	153215	100	b	139	RT Her.	170627	116	d
119	S Ur. Mi	153378	101	bdd	140	Z Oph	171401	115	b
120	RS Boo	154428	102	dd	141	T Dra	175458a	118	d
121	V Coo Boo	154639	103	bb d	142	UY Dra	175458b	118	d
122	R Scrp.	154615	104	ad	143	T Her	180531	120	o3da
123	RR Lib.	155018	100	d	144	RY Oph.	181103	122A	bdd
124	RZ Scrp	155823	100	(d)	145	W Lyr	181136	123	b
125	U Ser	166210	106	b	146	SV Dra	183149	124	d
126	W Coo Boo	161138	107	bd	147	RZ Her	183225	124	dd
127	R Scorp.	161122	105	(d)	148	RV Lyr	184134	126	d
128	S Sco	161122	105	(d)	149	RW Lyr	184243	123	ddo
129	W Oph	161607	108	bbd	150	ST Sag	185512a	128	dd
130	V Her	162119	110	bdd (o)	151	Z Lyr	185634	126	dd
131	SS Her	162807	111	bdd(d)	152	R Aql	190108	129	dd(2)
132	S Oph.	162816	109	d	153	V Lyr	190529a	126	de
133	R Dra.	163266	112	abd	154	RX Sgr	190818	128	d
134	RR Oph	164319	113	db	155	RW Sgr	190819a	128	d
135	S ~~Her~~ Her	164715	111	bd	156	RO Lyr	190941	131	d

No	Var	Design	Charts F		No.	Var.	Design	Charts F	
157	S Lgr	190926	130	d	178	ST Egg	202954	138	dd
158	TY Sgr	191124	128	d	179	Y Delph	203611	143	dd
159	Z Sag.	191321	128	d	180	V Egg	203847	142	bdd
160	S Sag	191319[91]	128	d	181	Y Lgr	203905	144	bd
161	FZ Egg	191350	132	d	182	T Del	204016	143	d
162	V Lgr	191637	131	d	183	W Lgr.	204104		d
163	T Egg	192928	130	ddee	184	T Lgr	204405	144	ab
164	RT Lgl	193311	133	de	185	RZ Egg	204846	142	d
165	R Egg	193449	132	d	186	VX Egg	205030	146	d
166	RV Lgh.	193509	133	d	187	TW Egg	210129	146	de
167	RT Egg	194048	132	dd.	188	X Egph	210382	148	d
168	TV Egg	194348	132	e	189	RS Lgr.	210504	149	d
169	RR Sgr	194929	135	ddd	190	Z Cep	210516	150	d
170	RR Lgl	195202	136	d	191	T Cep	210868	152	aad
171	Nova Cygni	195553	132	Sp.	192	R Lgr.	210812	151	d
172	Z Egg.	195849	132	de	193	RR Lgr.	210903	149	d
173	R Cep	200514	139	d	194	S Eph	213678	148	dd
174	RY Lgl	200812	137	d	195	SS Egg	213843	155	d
175	R Delph.	201008	137	o.b	196	RT Leg	215934	156	bd
176	V Sgr	201520	160	d	197	RV Peg RZ Peg	220133b	156	dd
177	Z Delph.	202817	143	d	198	X Lgr	221321	158	d

No	Var	Design	Charts F		No	Var	Design	Charts #
199	RV Reg	222129	159	dd				
200	R Reg	230110	162	bddd				
201	V Conv	230759	163	bdd				
202	S Reg	231508	162	bbdd eezz				
203	Z Conv	232848	165	bd				
204	ST Conv	233335	166	bd				
205	R Conv Z Conv	233815	167	ad				
206	Z Conv	233956	168	e				
207	X Conv	235201	169	d				
208	R Conv	235350	165	dd				
209	SV Conv	235939	4	d				
210								
211			161	Fridge charts.				
212								
213								
214								
215								
216								
217								
218								
219								

We have (a) 161 finder charts. - Complete set contains 186, - 5 others, 4 yet to be made and 16 a maps making the difference.

(b) 373 charts, (a, b, d, e, 1, 2 + several older ones unclassifiable!).

1942				
Jun.	24	F.S.H.		02
		CAC		02
	26	CAC		05
		FSH		04
		FSH		02
Jul.	10	Campbell	report	03
Aug	10	"	"	03
	10	Buscombe		06
	10	FSH		04
	17	"		02
Aug	12	Campbell	report	03
Oct.	3	"	"	03
Nov.	19	Sherrick		02
	30	Dohman		02
Dec	10	AE Johns		03
	10	Campbell	report	03
		Johns		03
Jan.	4			30
	6	Campbell	"	03
Feb	12	Guimont	Handbk	02
	12	Campbell	report	03
Mar.	15	"	"	03
		De Kinder	reply re Hdbk	03
May	11	Campbell	report	04
	21	Robertson	reply re sinuporto	04

Stamps.

1937

Date	Person	Article	¢
Mar. 25	McNabb	Letter	03
31	"	"	03
31	Perry	"	03
31	Topham	"	03
31	"	A.A.-U.S.Circ.	02
April 7	Hartmann	for Charts	03
13	"	" "	03
22	Perry	Charts	05
	Topham	"	07
May 5	Rosebrugh	Apr. Van Obs	03
	Armfield	Apr Nova Obs	03
	Kennedy	Bill #2.00	02
6	Topham	Corresp.	02
June 2	"	"	02
7	Armfield	Report.	03
7	Campbell	"	03
July 9	Armfield	"	03
9	Campbell	"	03
Aug 4	Armfield	"	03
	Campbell	"	03

Date	Person	Article	¢
~~Sept~~ Oct.	Reports	—	6
	Reply to B Top		3
Nov. 2	A + C	reports	6
Dec 3	A + C	"	6
1938			
Feb. 9	Mason Infor.	Inform.	6
	Morris	"	6
	Forester	"	6
Apr 2	"	"	2
	Campbell	Report	3
1.10	Topham	Corresp	2
			2
Apr 8	Peterson	Inform	6
May 11	Forster	Charts	10
	Campbell	Report	2
	Armfield	"	2
June 20	Forster Top	Replies	4
	Campbell	Report	3
	Armfield	Report	3
July 16	Campbell	"	3
	Armfield	"	3
Aug 19	Campbell	"	3
			39

1938				
Date	Person	Article	¢	
Sep. 19	Leon Campbell	report	03	
19	L. Armfield	report	03	
Nov. 3	Leon Campbell	report	03	
3	L. Armfield	report	03	
15	Leon Campbell	report	03	
15	F Hartmann	for charts	03	
15	R.S. Peterson	reply	02	
16	T.H. Mason	re. var *.	02	
16	Neil McNabb	re. var *	03	
23	W.R. Sherrick	re. Uranus	02	
23	R.S. Peterson	charts	02	
Dec. 3	Leon Campbell	report	03	
3	Bert Topham	reply	02	
15	R.S. Peterson	reply	02	
1939				
Jan. 10	Leon Campbell	report	03	
Feb. 6	Leon Campbell	report	03	
6	L. Armfield	report	03	
6	N. McNabb	reply	03	
18	F. Watson	(F.S.H.)	02	
18	W. Findlay	(F.S.H.)	03	
Mar. 6	Bert Topham	reply	02	

1939				
Date	Person	Article	¢	
Mar. 6	Armfield	report	03	
Apr. 11	Armfield	report	03	
11	Campbell	"	03	
May 4	Armfield	report	03	
4	Campbell	"	03	
10	Armfield	re. region boundaries	03	
Jun. 2	Topham	reply	02	
10	Campbell	report	03	
15	Armfield	re region boundaries	03	
15	Druker	"	03	
Jul. 10	Armfield	+ report	03	
10	Campbell	report	03	Borrowed DDO Plan
Aug. 8	Armfield	report etc.	03	
8	Campbell	report	03	
11	Campbell	re: forms	03	
25	Seely	re region boundaries	03	
25	Peterson	charts	02	
Sep. 1	Druker	charts letter	07	
Sep. 12	Campbell	report	03	
Oct. 10	Campbell	report	03	
10	Armfield	report	03	

1939					
Oct.	10	W. G. Vohman	reply		04
	30	E. M. Budd	reply re nomination		02
Nov.	1	Bert Topham	reply		02
Dec.	12	Bert Topham	reply re nova regions		02
	12	Miss Alexander	re circ. no 14		02
	12	Leon Campbell	2 prints report		03
	12	Armfield	report		03
	15	Miss Alexander	return of copy		01
1940 Jan.	9	Andrew Thomson	minutes		02
	13	Leon Campbell	report		03
	13	Armfield	"		03
Feb.	14	Leon. Campbell	report		03
Mar.	1	Topham	reply		02
	8	Leon Campbell	report		03
	8	Armfield	"		03
	9	programmes	-		02
Apr.	11	Campbell	report		03
		Topham	reply		02
	19	E M Budd	cards		02
May	7	Campbell	report		03
	8	EMT	reply		03
	9	Vohman	reply re report		02
	15	Pagenton	re AAVSO		02
	21	Vohman	charts + reply		04
Jun.	11	Campbell	report		03
	19	(F.S.H)			02
Jul.	3	Topham	reply		02
	10	Campbell	report		03
	30	Topham	reply		02
Aug	10	Campbell	report		03
Sep.	11	Campbell	report + negatives		05
	13	Bank			02
Oct.	9	Duffie	inform.		03
	11	Campbell	report		03
	23	U.S. Naval Obs.	instructions		03
	25	Miss Budd	map of comet		02
	28	Miss Budd	remember		02
Nov.	7	-	re Mercury		26
	8	Campbell	report		05
Oct.	30	WBEN	signals		03
	30	C.B.C.	"		02
Nov.	12	Miss Budd	cards		02
	20	Miss Budd	card etc.		02
		Mr. Cunningham	prog.		02
	26	Mr. Duncalfe	re advert.		02
Dec.	3	Campbell	report		03
	3	Moyer	re var + obs.		03

1940				
Dec.	4	Leon Campbell	re Vohman's obs + Soc. Pub.	03
	4	Morris	re return of circ. + charts	03
	4	Forsta	"	02
	4	Vohman	reply + circ 1.	02
	16	Gorsee	talk	02
	31	Dr Best	re prog.	02
1941 Jan.	4	Bank	re report	02
	8	Johnson Campbell	report	03
	10	Forster	return of charts etc	02
	10	H.S. Harron	welcome + invit. to At-Home	02
	10	D. Andrew Hyslop		03
	10	R A A Johnston		02
	10	R D Cate		03
	17	R.S. Duncan	re committee slides	02
	20	Topham	re comet obs	02
	22	H.V.	re at home	02
	25	Duncalfe	advert.	02
Feb.	1	Topham	reply	02
	3	Mrs Whaley	"mercury"	01
	5	Ladd	re lecture	02
	5	F.S.H.		03
	10	Campbell	report	03
Mar.	5	Garneau	reply card	02
		Topham	" "	02
	15	Campbell	report	03
	26	Topham	re lecture	02
	26	Grant	"	03
	26	Patterson	"	03
Apr.	1	Vohman		02
	1	Guimont	acku.	02
	4	Topham		02
	8	Vohman	reply + charts	05
	8	Campbell	report	03
May	2	Vohman	reply	02
	2	Topham	reply	02
	5	Vohman	re J.D.	02
	8	Campbell	report	03
Jun.	14	"	"	03
Dec.	8	"	"	03
42 Jan	3	Vohman		02
	15	Campbell	report	03
	16	Duncan	re address	02
		Merritt Brown	reply	03
		Campbell		03
Mar.	4	Jack Bird	re sid. time	03
	14	Campbell		03
Apr.	1	Manson	reply	03
	8	Kennedy	(F.S.H)	03
	13	Campbell	report	03
	17	Seekins	re aluminizing	03
May	1	Topham		01
	6	Tohoman	Journal	02
	14	Campbell	report	03
	14	Vohman	re obs	02
	20	"	"	03
	27	Hextall (Australia)		03
Jun	1	Bellafeuille	meteor list	02
	3	FSH		03
	4	FSH		06
	4	Vohman		02
	13	Campbell		03

Expenditures.

Date	Article	Amount.	
1937 March 31.	Stamps (Miss Budd)	00	38
April 13	Charts	02	00
June 11	Stamps (Miss Budd)	00	30
Oct. 7	" "	00	42
		1	10
1938 Aug 22			75
	Aug. 19 Used by F.S.P.		39
	(Sep. 1) On hand		36

Date	Details	Received		Used	
1938 Sep. 1	Taken over from F.S.P. - stamps	00	36		
Nov. 16	Stamps used Sep 1 - Nov. 16.			00	25
Nov. 16	AAVSO charts ordered by money order pd. R.T.R.			00	64
Nov 17	Received from Miss Budd - stamps	00	50		
	for charts - cash	00	64		
Nov 17	Stamps on hand	00	61		
1939 Jun. 15	Stamps used 1938 Nov. 16 - 1939 Jun. 15			00	59
Jun. 15	Stamps on hand	00	02		
Sep. 7	Stamps used Jun 15 - Sep. 7 borrowed from S.D.O.			00	27
Sep. 7	Stamps received from Miss Budd (per FSH)	00	67		

Date	Details	Received	Used.
1939 Sep. 7	Stamps on hand	00 42	
1940 Feb. 13			0 39
	Stamps on hand	0 03	
1940 Feb. 16	Stamps received from Miss Budd	1 03	
	Stamps on hand	1 06	
1940 Nov. 18	Stamps on hand		1 04
	Stamps on hand	02	
Nov. 19	Stamps received from Miss Budd	1 08	
Nov. 19	Stamps on hand	1 10	
1941 Nov. 20	Stamps received from Miss Budd	1 00	
1942 Jun. 19	" " "	1 67	

Material on Loan.

A.A.V.S.O. Circ. # 1.

Bert Topham	Mar 31/37	Returned.
Ruth Northcott	Apr. 13/37	Returned
Isabel Longworth	Apr. 21/37	
T.H. Mason	Jan 9/38	Feb 15/38.
T.J. Morris	Feb 9/38	
C. Forster	Feb 9/38	41 Jan. 10
R.S. Peterson	Apr. 8/38	Apr. 8/38
W.G. Dohman	39 Oct. 10.	'40 Dec. 6.

Charts. Mason 7 4, 10

Morris 3, 6, 13

Forster. 3, 2, 12 41 Jan. 10

Charts A.A.V.S.O. Peterson 021403 ; 023133 ; 054920a ; 081112; 210868

lent 1938 Nov. 23

" 001838 ; 045514 ; 052034; 065111;

123307; 132002} 132202} ; 151432} 151731} 154639

lent 1939 Aug. 25

Circular no I - Dr. Best '40 Ap. 16.

H.L. Moyer 94½ Queenston St. St Catherines

1940 Nov. 20.

OVER.

AAVSO charts :

Wohman 1941 Apr. 8 :

		already on loan:	
054920a	b, d,		081112 a
061702	b, d,		121418 a
081112	(2) old (d)		123160 a
123160	old (d)		151731 a
132706	a, b, d		210868 a
163266	a, b, d		

O - Returned

Cyril Hallam
16 Ellis st East
Windsor Ont.

1945 Jun. 16.

001755	d	192928	d e
004746a,	d e	195849	d e
022000	b d	201520	d
180531	a d	210129	d e
		213843	d
		232848	b

circular no. 1

Variable Star Observers.

Mr. Neil McNabb: Reports on R Cr Bor; R Leonis)

Mr. Bert Topham: R Urs. Maj; R Leonis, W Herc,
S Cas Mira; X Hydrae; U Herc.

Miss A. J. Northcott: R Leonis

Mr. Gerald Longworth:

Mr. J. F. Mories

Mr. T. H. Mason.

Mr C. Forster

Mr. R. S. Peterson

Novae Search Programs.

Name	Region	Constell.	α	δ	Chart
Ruth J. Northcott	9	Cas	00 00 — 00 00	60 — 70	2
	40	Lyra	18 20 — 19 00	30 — 40	4
	71	Gemini	07 20 — 08 00	20 — 30	7
Neil Mc Nabb Jr.	8	Cep-Cas	23 00 — 00 00	60 — 70	2
obs # 77, 78, 86, 26, 31, 38	58	Hercules	16 20 — 17 00	20 — 30	6
	72	Cancer	08 00 — 08 40	20 — 30	4
Bert Topham	16	Lac-Cep	22 00 — 23 00	50 — 60	2
65, 66, 69, 25, 7, 68	75	Her-Oph	17 20 — 18 00	10 — 20	12
	91	Orion	05 00 — 05 40	0 — 10	13
Philip Perry	26	Cygnus	20 20 — 21 10	40 — 50	7
	34	Persei	03 00 — 03 50	40 — 50	3
	57	Ser-CrB	15 40 — 16 20	20 — 30	6
Gerald Longworth	X	Cepheus	22 00 — 23 00	60 — 70	2
~~25~~	~~Cygnus~~	~~20 20 — 21 10~~	~~40 — 50~~	~~7~~	
~~68~~	Taurus	05 20 — 06 00	20 — 30	3	
Donald A McRae	10	Cassiopeia	01 00 — 02 00	60 — 70	2
	39	Hercules	17 40 — 18 20	30 — 40	7
Topham	~~69~~	Gemini	06 00 — 06 40	20 — 30	3-4
Shirley Patterson	18	Cas.	00 00 — 00 00	50 — 60	2
	60	Hercules	17 40 — 18 20	20 — 30	6-7
	70	Gemini	06 40 — 07 20	20 — 30	4

			R. A.	Dec.	
F. F Morris	21	Cam-Per	3 00 – 4 00	50 - 60	3
	22	"	4.00 – 5 00	50 – 60	3
	59	Herc.	17 00 – 17 40	20 - 30	6
	79	Delphh.	20 00 – 20 40	10 - 20	13
C. Forster	10	Cas.	1 00 – 2 00	60 - 70	2
	35	Per.	3 50 – 4. 40	40 – 50	3
	36	Aur.	4. 40 – 5.30	40 – 50	3
	73	Herc	16 .00 – 16 40	10 to 20	12
	74	Her-Oph	16 40 17 20	10 – 20	12
Mason	14	Cyg.	20 00 – 21 00	50 – 60	7
	15	Cyg-Cyph	21 00 – 22 00	50 - 60	7
works in Summer only Hence misses these regions	37	Aur	4 40 – 5 30	40 – 60	4
	38	Aur	5 30 – 6 20	40 – 50	4
	83	Gem	6 40 – 7 20	10 – 20	10
	84	Gem	7 20 – 8 00	10 – 20	10
	5	Dra	20.00 – 21 00	60 – 70	7
	6	Dra Cyf.	21 00 – 22 00	60 - 70	7
M. Drucker	135	Puppis	6 40 – 7 30	-40 → -50	
	147	Ara-Sco.	16 40 – 17 30	-40 → -50	
	165	Carina	9 00 – 10 00	-60 → -70	
	175	Apus	13 30 – 15 00	-70 → -80	

Joseph N. Davis, 1 Bennett Ave, N.Y.C.

43 Mar. 29
sent appl.
for membership
(Hon. Extension)

Directory.

Nova Search Regions

Mr L. Armfield,

American Amateur Astronomical Association

1410 N. Marshall St., Milwaukee, Wisc.

Superseded. 1939 Aug. 10.

Nova Search Charts.

Mr. F. Hartmann

171-25 - 144th Ave

Springfield Gardens, N.Y.

Variable Star Reports to.

Mr. D. W. Roseburgh,

3 Yates Blvd.

Poughkepsie, N.Y.

Nova Search:

Mr Roy A. Seely

16 Sutton Place

New York City