

1853phase,proj,20045



THIS BOOK BELONGS TO

CLASS OF

8+20 This work was reported on at the  
8-20005 meeting December 1953 in  
Nashville, summarized in an O.G. early  
in 1954. H. Shapley, A.B. Hearn.

An interim report was published  
in Liege Report of the Symposium  
in July 1954. H. Shapley, O. Hearn.

Final version PNAS Oct. 1955.  
H.S. J. Sweeney.

HARVARD COOPERATIVE SOCIETY

CAMBRIDGE, MASS.

Tables in H. A. 106 #2.

H.S., J.S., and P. Kokoras.

1953phae.proj.2504S

"MILKY WAY BORDERS"

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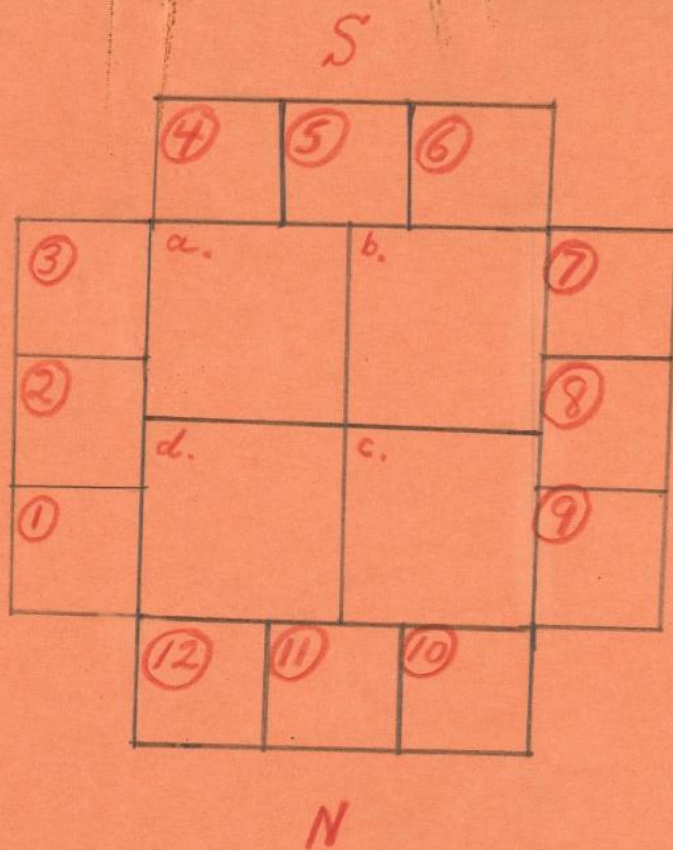
BRUCE SURVEY

OF

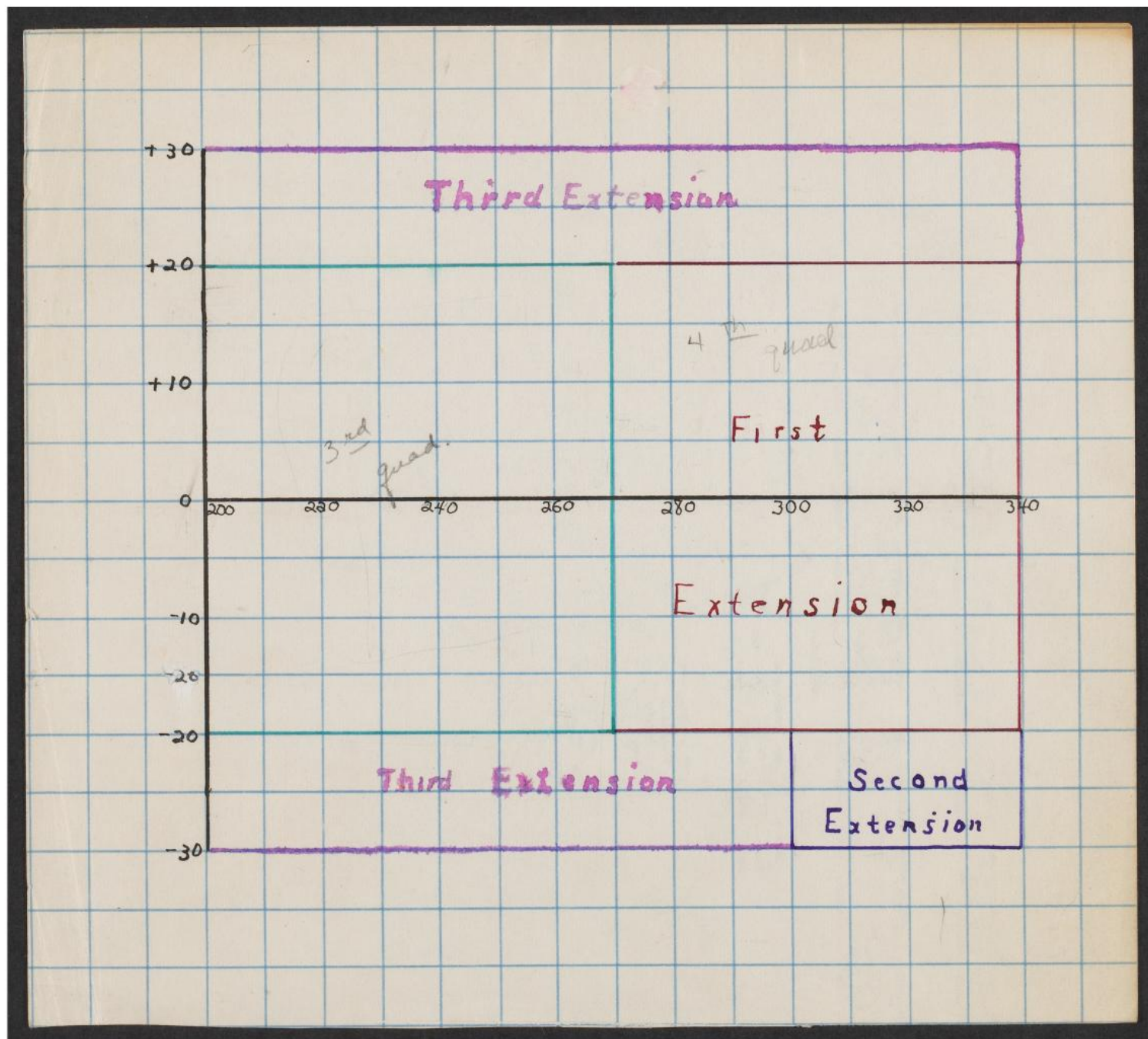
3<sup>d</sup> QUADRANT GALAXIES — pp. 1 —

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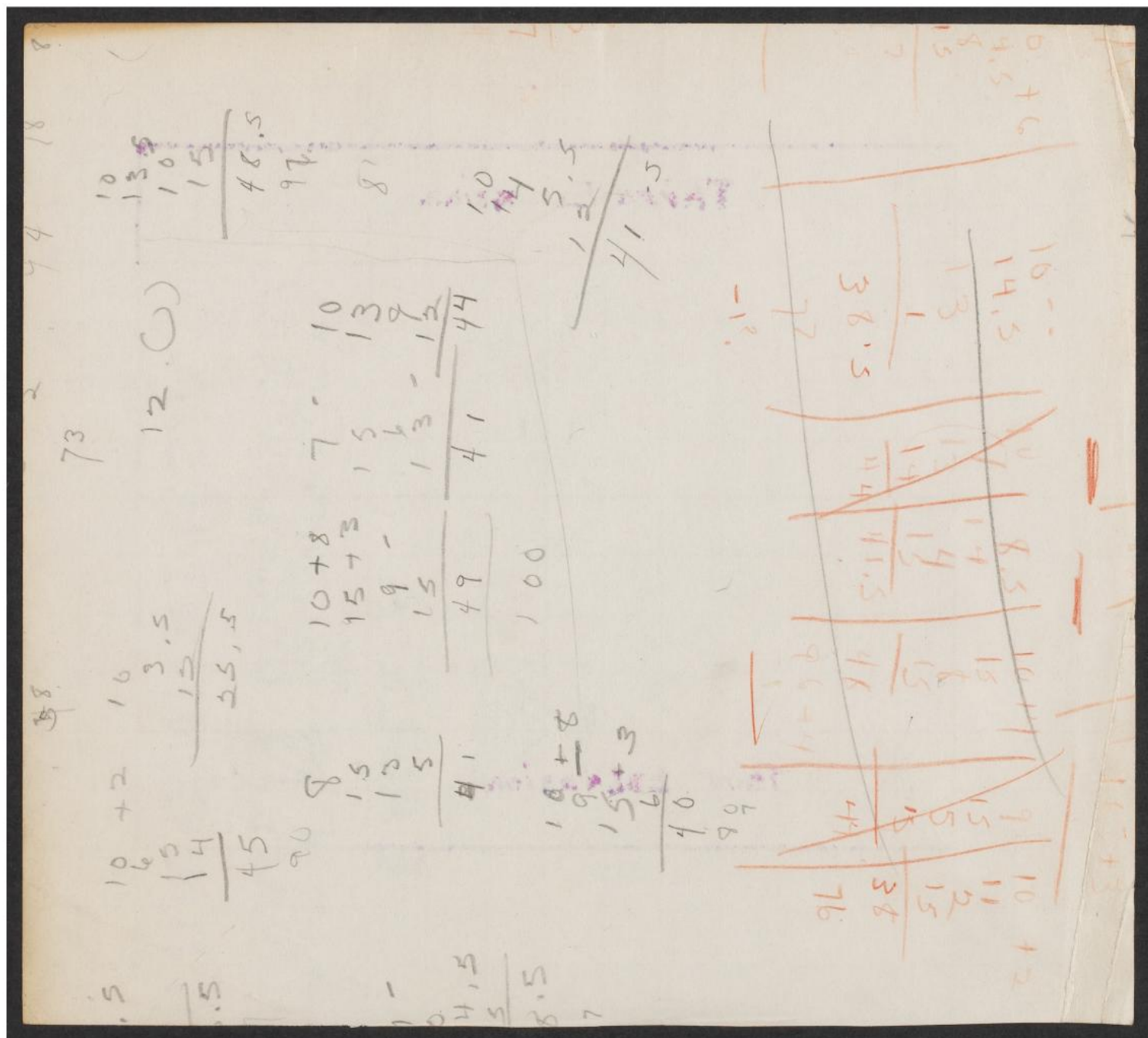














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1953phae.proj:2504S

"MILKY WAY BORDERS"

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BRUCE SURVEY

OF

3<sup>d</sup> QUADRANT GALAXIES — pp. 1 —

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The Third Quadrant area surveyed here includes  
 $\lambda = 200^\circ$  to  $270^\circ$  and  $\beta = +20^\circ$  to  $-20^\circ$ . *to be extended*  
 to  $\lambda = 340^\circ$ .

✓ Plate has been found in stacks & has been  
 in c37.

✓ = I have looked at plate to see if can be used for gal. count.  
 • = plate proves unusable.  
 • = examined once (usually by JEF)  
 •• = reexamined (usually by ABH)  
 out = can't find in stacks.

✓ Accept & count.

3<sup>rd</sup> quad. ; 17 plates  $\leq$  quality 3



✓ Accept

PLATE NO.	$\alpha$		$\delta$	$\lambda$	$B$	Examined	NT	$N_{25}$	$N_9$	Plate limit
	h	m	°	°	°					
✓ A 14578	6	00	-25.0	198	-19	MEM, SFM, JEF			136+15?	
✓ X 14580	6	00	-30	204	-21	SFM, 223, 764				17.5
✓ 25195	6	00	-30	203	-22	JEF 7/17/53, ABH 7/18/53				
✓ X 19027	6	10	-22.5	197	-18	S.L.				
✓ 19029	6	10	-27.5	202	-18	SL ABH				
✓ 19025	6	9.8	-32 35.1	206.9	-20.5	SFML, 123B	3rd opt.		457	17.4
	6	10	-32.5							
✓ 14564	6	20	-25.0	200	-16	MEM, SFM JEF				
✓ 14555	6	30	-22.5	199	-12.5	MEM, SFM JEF				
✓ 19984	6	30	-27.5	204	-15	ABH, JEF				
✓ 20529	6	28.3	-32 28.6	209	-17	IGB, ABH			250	
	6	30	-32.5							
✓ 20543	6	28.8	-37 32.8	213	-18	IGB, ABH			420	
	6	30	-37.5							
✓ X 18284	6	30	-42.5	218	-20					
✓ 19144	6	30.9	-42 22	218.2	-20.0	CDP SFML		515	219	17.4
	6	30	-42.5							
✓ 19823	6	50	-22.5	201	-9	ABH, JEF				
✓ X 20054	6	50	-22.5	201	-9					
✓ X 18987	6	50	-32.5	211	-13					
✓ 21566	6	47.9	-32 02	211	-12.5	IGB, ABH			176	
	6	50	-32.5							
✓ 23493	6	55	-27.5	206	-10	JEF 7/17/53, ABH July '53				
27022	7	00	-15.0							
✓ 17440	7	9.8	-22 21	203.15	-4.2	IGB, FWW			19	
	7	10	-22.5							
✓ 21470	7	8.5	-32 29	212.0	-9.2	IGB, ABH				
	7	10	-32.5							
✓ 25652	7	00	-42.5	221	-15	ABH, JEF				



Quality ng = no good	Remarks (R = repeat)	Known	AX
4			— ✓
	R by A <sup>25195</sup> <del>1458</del>		—
OK. <i>I see poor.</i>	R of A 14580.		4420
			—
			—
		2 NGC, 1 IC	—
4			—
4i			—
→	focus out, oval images dense background.		—
		2 NGC	—
		1 NGC	—
	focus out		—
6.		1 NGC	—
<del>Double images</del> <del>but could</del> <del>be used.</del>	R by A 20054.		—
ng <u>Trailed.</u>	R of A <sup>19</sup> <del>20</del> 823		—
	R by A 21566 n.g. Repeat.		—
	R of A 18987	1 NGC; 1 IC	—
good <i>medium</i> <i>but visible</i>			4205
OK, out of area			
7 or 8		1 IC + 5 NGC cl.	—
		1 IC	—
OK. focus bad			—



PLATE	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined	$N_T$	$N_{25}$	$N_9$	Plate lim.
4									
16411	7 11.9 7 10	-57.5 -57.5	236 235.6	-20 -19.2	FWW, IG			178	17.3
23498	7 10	-57.5	236	-20					
23543	7 10	-57.5	236	-20	SEP, ABH				
27013	7 12	-17.5							
14621	7 18.0 7 20	-24.5 -25.0	206.3	-3.7	MEM, FWW, <del>SFM</del>			6	
14636	7 18.6 7 20	-29.5 -30	210.7	-6.0 -5.5	MEM, FWW, <del>SFM</del>			18	
14640	7 17.9 7 20	-34.3 -35	214.8 215	-8.4	MEM, FWW, <del>SFM</del>			41	
15882	7 19.9 7 20	-47.3 -47.5	226.7 227	-14.0 -14	SFM, FWW			33	
19820	7 20	-52.5	232	-16					
21492	7 18.5 7 20	-52.2 -52.5	231	-16	IGB, ABH			175	
17312	7 25.5 7 25	-62.2 -62.5	241.2	-19.6	MMS + ?	453	422	202	18.1 (neb limit 17.8)
18214	7 28.9 7 30	-22.2 -22.5	205.4	-0.35 -5	SFML, FWW	7 SFML	3 SFML	1 SFML 3 FWW	
19060	7 28.8 7 30	-32.3 -32.5	214.2	-5.3	IGB, FWW			FWW 15	
18209	7 30	-42.5	222	-10					
21502	7 28.4 7 30	-42.2 -42.5	222.8	-10.4	IGB, ABH			33	
19056	7 30.3 7 30	-47.3 -47.5	227.5 228	-12.5 -12	SFML, FWW			FWW 36	
24575	7 35	-37.5	219	-7	IEF, ABH				
27031	7 40	-12.5	198	+6	SEP, ABH				
27025	7 40	-17.5	203	+4	IEF, ABH				
27026	7 40	-17.5	203	+4					
17250	7 40.6 7 40	-67.3 -67.5	246.8	-20.2	MMS, ABH	562	520	233	18.0 (neb. lim 17.7)
12874									
27027	7 45 7 41	-15.0 -26.0	201 209.9	+7 $\pm 0.0$	IEF, ABH PK				
4259	7 50	-57.5	238	-14	MRD, SFM				



Quality	Remarks	Known	AX
	R by 23498, 23543		— ✓
poor	R <sup>of</sup> 16411; R by 23543 <sup>not as good.</sup>		4208
	R of 16411, 23498. About as faint as 16411, but quality in 9° better.		4211
bad n.g.			4611
5 or 4			—
4 or 6			—
4 or 5			—
3			—
	R by 21492. <sup>trailed. Dense backgrd.</sup>		—
		no NGC, 2 IC	—
(mit 17.8) 9		3 NGC, 1 IC (see HA105)	—
7-8			—
FWW6			—
ng Multiple images	R by 21502		—
			—
FWW5 or 6	True member of local family? — NGC		—
α.			4337
OK			4625
OK			4619
ng			4620
7.7) 8	see HA105. Exp. 165 <sup>m</sup>	3 NGC, 1 IC	—
OK.			4621
3	100 <sup>m</sup> Exp.		—
4			—



PLATE

6

	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined	$N_T$	$N_{25}$	$N_9$	Plate lim
✓ 15035	7 52	-57.7	238	-14	MEM, ENC <i>js</i>				
✓ 16343	7 52	-57.7	237	-14	P.K.				
✓ 23561	8 00	-15.0	203	+10	ABH, <i>js</i>				
✓ 26721	8 00	-15	203	+10					
✓ 27030	8 00	-15	203	+10					
✓ 23018	8 00	-20.0	207	+8					
✓ 23557	8 00	-20.0	207	+8	ABH, <i>js</i>				
out 24599	8 00	-37.5	217	0					
✓ 14370	7 58.1 8 00	-35.6 -25.0	211.2	+3.9 +5	MEM, SPM, FWW			FWW <del>25</del> 29	
✓ 14647	7 58.1 8 00	-29.45 -30	215.1	+1.3 +2	MEM, SPM, FWW			14	
✓ 20575	7 58.8 8 00	-52.27.4 -52.5	234 <del>234</del>	-11 <del>-12</del>	IGB, <i>js</i>			88	
✓ 20099 <del>22340</del>	8 10	-22.5	210.5	+8					
✓ 22370	8 07.0 8 10	-22.26 -22.5	210.5	+8	ABH, <i>js</i>				
✓ 20109	8 9.8 8 10	-27.15 -27.5	214.5 215 <del>217</del>	+4.9 +4 <del>+9</del>	FWW, IGB			6	
✓ 20590	8 10	-32.5	218	+2	ABH <i>ng</i>				
✓ 23497	8 10	-35.0	221	+1					
✓ 23495	8 10	-35.0	221	+1	ABH, <i>js</i>				
✓ 18402	8 10.3	-37.20 -37.5	222.8	-0.9 -1	SFML, FWW, <del>AG</del>	2	2	1; FWW 5	
✓ 19928	8 9.2 8 10	-42.24 -42.5	226.8 227	-4.0	FWW, IGB			FWW 16	
✓ 17451	8 10.6	-47.16 -47.5	230.9 227	-6.55 -3	FWW, IGB + ? '53			FWW 24	
✓ 17351	8 15.7	-62.28 -62.5	244.1	-14.5	MMS, <i>js</i>	283	263	116	HA 105: 17.9 <sup>neb lim</sup> = 17.8
✓ 23511	8 20	-10.0	201.5	+17					
✓ 25182	8 20	-10.0	201.5	+17	ABH, <i>js</i>				
✓ 24015	8 20	-15	214	+14	ABH <i>js</i>				



Quality	Remarks	Known	AX	7
3.5	better plate		— ✓	
OK.			4213	
<del>OK.</del>			4567	
poor.			4624	
trailed			—	
sharper than 23018 but not so faint.			—	
trailed of A 18462 meteor			4341	
4; FWW 6	1 NGC (+5 NGC = cl, 1 plan., 1 gal. neb.) →		—	
4; FWW 3	1 NGC (+6 NGC = cl, +1 plan.) →		—	
	<del>1</del> 1 NGC	1 NGC	—	
	Repeat? trailed & streaked.		—	
5 FWW		2 NGC (+6 = cl); 1 IC.	—	
	repeat? trailed		—	
	Fuzzy images - <u>poor</u> .		4207	
	Better plate.		4206	
		1 gal neb? + 2 NGC (1* cl.) (1 n.s.)	—	
FWW 5		none known	—	
FWW 5		1 NGC cl	—	
			—	
	very poor trailed		—	
But clear - o.k. to examine.	Elongated images; poor		—	
OK.			4256	



PLATE	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined	$N_T$	$N_{25}$	$N_9$	Plate limit	
8										
✓ 24641	8 20	-20.0	210	+11				<del>196.15</del>		ref
✓ 25207	8 20	-32.5	220	+4						Q
✓ 25208	8 20	-32.5	220	+4	ABH, <i>js</i>					Q
✓ 14626	8 <sup>20.9</sup> 20	<sup>-72.18</sup> -72.5	253.0	<sup>-19.4</sup>	SFM, <del>MMS</del> <i>js</i>	42	34	18	17.5	3
✓ 4265	8 22	-57.8	241	-11	MRD, SFM					5
✓ 16345	8 <sup>22.5</sup> 22	<sup>-57.49</sup> -57.8	<sup>240.7</sup> 241	<sup>-11.2</sup> -12	IGB, FWW			FWW 28		
✓ 27040	8 30	-35.0	223	+3	ABH, <i>js</i>					OK
✓ 14519	8 30	-22.5	214	+11	MEM, SFM					
✓ 16302	8 <sup>28.8</sup> 30	<sup>-22.32</sup> -22.5	<sup>213.15</sup>	<sup>+11.1</sup> +12	IGB, FWW			FWW 57		
✓ 21595	8 <sup>28.2</sup> 30	<sup>-27.28</sup> -27.5	217.0	+8.0	IGB, <i>js</i>			79		
✓ 19101	8 30	-37.5	225	+3						NG
✓ 19089	8 <sup>29.8</sup> 30	<sup>-42.28</sup> -42.5	<sup>229.1</sup> 230	<sup>-1.0</sup>	SFML, FWW			FWW 8		FW
✓ 15848	8 <sup>29.8</sup> 30	<sup>-47.30</sup> -47.5	<sup>233.1</sup>	<sup>-4.1</sup>	SFM, FWW			FWW 2		
✓ 25219	8 30	-47.5	233	-4	ABH, <i>js</i>					OK
✓ 17398	8 <sup>32.6</sup> 30	<sup>-77.20</sup> -77.5	258.0	-21.5	MMS, <i>js</i>	459	432	247	pl. lim. 18.8 neb. lim. 18.6	7
✓ 15862	8 <sup>39.9</sup> 40	<sup>-9.56</sup> -10.0	204.2	+20.7	SFM, FWW			273	17.7	
✓ 23952	8 40	-15.0	208	+18	ABH, <i>js</i>					OK
✓ 23950	8 40	-15.0	208	+18						
✓ 25186	8 40	-20.0	213	+15	ABH, <i>js</i>					OK
✓ 25175	8 40	-20.0	213	+15						
✓ 24607	8 40	-52.5	240	-8	P.K.					
✓ 17391	8 <sup>40.0</sup> 40	<sup>-67.26</sup> -67.5	249.9	-15.3	MMS, <i>js</i>	676	627	320	pl. lim. 18.3 neb. lim. 17.8	10
✓ 27036	8 50	-5.0	237	-3						new
✓ 19042	8 50	-22.5	216	+15	SFML, ABH					



Quality	Remarks	Known.	AX
repeat; double images			4350 ✓
OK.			4425
OK. Better plates sharper images.			4425 (?)
3	see HA 105	1 NGC	—
5			—
		1 NGC cl	—
OK.			4630
			—
		1 NGC, 1 H cl.	—
		2 NGC + 1 IC (+5 NGC cl.)	—
NG. Repeat!			—
FWW5		2 NGC cl, 1 NGC gal. neby.	—
		4 NGC + 1 IC = cl.	—
OK			4430
7 <del>see 3<sup>rd</sup> ext</del>	see HA.105.		—
			—
OK			4249
	broken		—
OK.			4415
	discarded in S. Africa		4414
	<del>missing</del> , broken		4343
10	see HA.105.		—
very poor; prob. NG	mended		4628
	done in S. A		—



PLATE	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	$N_T$	$N_{25}$	$N_9$	Plate Limit	
10										
✓ 19109	8 50 <sup>+9.5</sup>	-27.5 <sup>-27.29</sup>	220 <sup>+20.1</sup>	+12 <sup>+11.7</sup>	FWW, SL			150		90
✓ 19103	8 50 <sup>50.1</sup>	-32.5 <sup>-32.28</sup>	224 <sup>+24</sup>	+9 <sup>+8.5</sup>	SL, FWW			28		
✓ 19026	8 50 <sup>49.7</sup>	-37.5 <sup>-37.24</sup>	228 <sup>+27.7</sup>	+6 <sup>+5.2</sup>	SFML, FWW			FWW 19		FW
✓ 18413	8 50 <sup>50.7</sup>	-42.5 <sup>-42.22</sup>	232 <sup>+31.5</sup>	+3 <sup>+2.1</sup>	SFML, FWW, AG	AG? 21	AG? 18	AG? 8 FWW 11 SFML 21?		FW
✓ 18269	8 50 <sup>49.8</sup>	-47.5 <sup>-47.25</sup>	233 <sup>+35.2</sup>	-1 <sup>-1.4</sup>	FWW, SFML			FWW 3?		FW
✗ 18430	8 50	-47.5	235	-1						
✗ 4257	8 50	-57.8	243	-8	MRD, SFM					4
✗ 16438	8 53	-57.7	244	-9						
✗ 16443	8 53	-57.7	244	-9						
✗ 21545	8 53	-57.7	243	-9						
✓ 21601	8 53 <sup>51.6</sup>	-57.7 <sup>-57.28</sup>	242.9	-7.9	IGB, ABH			IGB: 41		
✓ 24614	9 00	-15.0	211	+21	ABH	3				just
✗ 24635	9 00	-20	216	+18						train
✓ 25232	9 00	-20	216	+18	CMH, ABH					OK
✓ 14431	9 00	-25.0	220	+16	SFM, ABH					
✓ 5106	9 00	-72.5	255	-17	MRD, MEM, SFM					
✓ 19968	9 05 <sup>54.5</sup>	-47.5 <sup>-47.21</sup>	238 <sup>+35.65</sup>	0 <sup>-0.8</sup>	IGB, FWW			FWW 3?		FW
✓ 16696	9 05 <sup>5.5</sup>	-62.5 <sup>-62.29</sup>	249 <sup>+47.8</sup>	-10 <sup>-10.1</sup>	MMS, FWW	MMS 150	MMS 144	FWW 89 MMS 75	pl. lim 17.7 neb. lim. 17.6	5
✓ 14533	9 10	-22.5	220	+18	MEMO, BH					
✓ 17262	9 10	-27.5	224	+15	J.S., ABH.					B
✓ 24593	9 10	-30.0	224.7 225	+13.2 +14	P.K.					def
out ✓ 9264	9 14	-32.3	228	+12	SFM?					
✗ 25225	9 15	-32.5	228 229	+12 +16						
✓ 23024	9 20	-20	220	+21	SS, ABH					P



Quality	Remarks	Known	AX	11
good			— ✓	
FWW 3		none	—	
FWW 5		3 NGC = 2 cl, 1 pl.n.	—	
FWW 6		1 NGC gal, 4 NGC cl, 1 IC cl.	—	
	red plate		—	
4			—	
	discarded in S. Africa		—	
	→ R by A 21545, 21601		—	
	→ R by 21601		—	
	2 NGC		—	
fuzzy <u>o.k.</u>			4344	
trilled, badly scratched	R by 25232		—	
OK.			4436	
			—	
			—	
FWW 4 or 5.			—	
5			—	
	see HA. 105		—	
Better plate.			—	
defects 4.5			4340	
badly trilled! Hg	8 x 10		—	
	discarded in S. Africa		4431	
Poor plate, images fuzzy - but accept.		plan. or plate spiral?	—	



PLATE NO.

12

 $\alpha$  $\delta$  $\lambda$  $\beta$ 

Examined by

 $N_T$  $N_{25}$  $N_9$ 

Plate limit

✓ 24604	9 20	-37.5	233	+10	JS, ABH				
✓ 19962	9 20	-42.5	236	+6	FWW, IGB			FWW 40	
✓ 19035	9 20	-52.5	242	-1	FWW, SFML			FWW 6?	
✓ 23028	9 20	-25	223	+18					
✓ 9332	9 22	-26.3	224	+18	SFM <i>Correct - guess for it</i>				
✓ 4248	9 22	-57.0	245	-5	MRD, LC Jr., SFM				
✓ 9360	9 25	-25.4	225	+19	SFM <i>Correct - guess for it</i>				
✓ 15182	9 25	-57.5	245	-5	FWW, MEM, BH			FWW 15	
✓ 25230	9 40	-47.5	242	+5					
✓ 25236	9 40	-47.5	242	+5					
✓ 25241	9 40	-47.5	242	+5	CMH, <i>go</i>				
✓ 5049	9 40	-67.5	254	-11	MRD, MEM, SFM				
✓ 5104	9 40	-72.5	257	-15	MRD, MEM, SFM				
✓ 16077	9 40.1	-67.9	254.2	-11.65	FWW, IGB			FWW 55	
✓ 16075	9 40.1	-72.7	257.4	-14.9	MMS, <i>go</i>	64	54	19	17.3 (HA 105)
✓ 22377	9 45	-32.5	233	+17	JS, ABH				
✓ 22400	9 45	-37.5	237	+14	CMH, ABH				
✓ 9988	9 50	-37.5	237	+14					
✓ 19152	9 50	-42.5	240	+10	FWW, SL,			FWW 38	



Quality	Remarks	Known.	AX
ok			4342 ✓
FWW 5 or 6		2 NGC cl; 1 NGC plan; 1 IC neb.	—
FWW 5 or 6		0 gals; 4 NGC cl	—
double images n.g.			4119
	8x10		—
5			—
	8x10		—
FWW 4		1 NGC gal? 2 NGC cl, 1 NGC pl. 1 IC plan.	—
out of focus; poor			4434
n.g.	discarded in S. Africa		4438
rather poor <u>o.k.</u>			4440
4	"Stewart 1"		—
			—
			—
4			—
			—
<u>o.k.</u> best plate.			—
			—
			—
	<del>"<del>NGC</del> This is NGC 3132 (CDB) [ "nebula semicircled in red in lower corner of SW section. I think this is almost certainly a very bright planetary. Compare this with the planetary NGC 3132 on A 19166. It seems to be of an identical type." ]"</del>		—



Plate No.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	$N_T$	$N_{25}$	$N_9$	plate limit
14									
✓ 4266	9 50	-57.5	249	-3	MRD, SFM				
✓ 21630	9 51 <sup>49.8</sup>	-57.35 -57.7	248.7	-2.7	IGB, <i>go</i>			8	
✓ 16919	9 55 <sup>56.0</sup>	-62.08 -62.5	252.1	-7 <sup>-6.0</sup>	MMS, FWW	MMS 66	MMS 61	FWW 12 MMS 13	11.7 (HA. 105)
✓ 19158	9 58.9 10 00	-52.25 -52.5	246.8 247	+2.2 +3	SL, FWW			FWW 11	
✓ 6649	10 00	-77.5	262	-18	MRD, CDB, SFM				
✓ 16316	10 01 <sup>0.0</sup>	-77.27 -77.6	261.6	-18.2	MMS, <i>go</i>	104	93	39	pl. limit: 18.0 (HA) neb. lim: 17.8 <sup>105</sup>
✓ 4342	10 10	-32.6	237	+20	MRD, MEM, SFM				
✓ 16473	10 12 <sup>12.2</sup>	-32.16 -32.6	237.2	+20.3	<del>FWW, IG</del> <i>ABH, go</i>			267	17.8
✓ 24064	10 12	-32.6	237	+20	P.K.				
✓ 11930	10 14	-45.9	245	+9					
✓ 15160	10 15 <sup>15.1</sup>	-45.57 -46.0	245.4 246	+9.1 +10	FWW, MEM, BH			FWW 51	broken & poor v. high quality
✓ 27049	10 15	-56.2	251	+1					
✓ 15940	10 20	-35.0	240	+19	MEM, ABH	518?			
✓ 25193	10 20 <sup>cl. 10 18<sup>45.9</sup></sup>	-45.0 -46.0	246 255	+10 +12					
✓ 19166	10 20	-40.0	243	+15	SL, <i>go</i>	262?			
✓ 4320	10 20	-57.5	252	0	MRD, SFM,				
✓ 17313	10 20 <sup>19.3</sup>	-57.25 -57.5	251.9	0.4	IGB, FWW			FWW 16	
✓ 5044	10 20	-67.5	257	-9	MRD, SFM				
✓ 16330	10 20 <sup>19.8</sup>	-67.22 -67.5	257.1	-10 <sup>-9.0</sup>	MMS, FWW,			FWW 27	17.6 (HA. 105)
✓ 5102	10 20	-72.5	260	-13	MRD, MEM, SFM	MRD 0?			
✓ 14442	10 20	-72.7	260	-13					
✓ 16328	10 20 <sup>20.1</sup>	-72.49.6 -72.9	260	-14	MMS, <i>go</i>				



Quality

Remarks

Known.

AX

15

4

"Stewart 0"

2 NGC + 1 IC = cl.  
 1 NGC = gal. neb. 1 IC(?)

4266

FWW 5, MMS 4

FWW 6

4i

"Frost 0" Both poor.  
 16316 fainter. other -  
 were about =.

(HA)  
105

3

"Stewart 24"

90-5 IC.

3073

Better than 16473.

4265

8x10

FWW 5

Overlap with 25193

10<sup>h</sup> 20<sup>m</sup>~~"Ex. MEM 518"~~

OK.

4419

5

"Stewart 0"

FWW 7

90- (1 H N<sub>2</sub>)  
 2 NGC = gal neb,  
 1 = cl.)  
 (5 NGC = cl. + gal. neb.  
 1 IC. gal. neb.)

5

"Stewart 1"

MMS 6, FWW 5

~~ABA has.~~

"Stewart 0"

poor, not worth examining



Plate No.

16

	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	$N_T$	$N_{25}$	$N_9$	Plate limit
✓ 16711	10 30.2 10 30	-54 58.8 -35	242	+20	FWW (90°) partial.				17.1
✓ 19168	10 39.7 40	-47 21 -47.5	249.8 250	+9.9 +10	IGB, FWW			FWW 93	
✓ 19173	10 39.0 40	-52 26 -52.5	252.0 251	+5.3 +6	SL, FWW			FWW 18	
✗ 3018	10 40	-59.0	255	±0					
✗ 2208	10 40	-59.5	255	-1	IGB, FWW			FWW 5?	
✓ 16934	10 41.0 40	-62 11 -62.5	256.6 257	-3.3 -3	MMS, FWW,	98	95	47	pl. lim. 17.3 (HA 105) neb. lim. 17.1
✗ 1807	10 41	-59.2	255	-1	MRD				
✗ 12370	10 41	-59.2	255	-1	MRD, SFM, Menzel				
✗ 12371	10 41	-59.2	255	-1					
✓ 27074	10 43	-59.4	256	-1	ABH, go				
✓ 21648	10 47.5 50	-39 52 -40	249	+18	IGB (90°), go				
✗ 6657	10 51	-57.5	255	+2	Frost, MRD, MEM, SFM				
✓ 16941	10 53.4 53	-57 19 -57.7	256.0 256	+1.8 +1	FWW, IGB,			FWW 17	
✓ 21663	10 52.4 55	-42 59 -43	250	+15	IGB (90°), go			137	
<del>22674</del>	<del>11 00</del>	<del>-67.5</del>	<del>260</del>	<del>-7</del>	<del>Stewart, MRD, MEM, SFM</del>				
✗ 5202	11 00	-67.5	260	-7	Stewart, MRD, MEM, SFM				
✗ 6717	11 00	-72.5 <del>-72.5</del>	262	-12	Frost, MRD, MEM, SFM				
✓ 16409	10 58.8 11 00	-72 26 -72.5	262.4 262.5	-11.9 -12	IGB, FWW			FWW 35	
✓ 21567	10 59.8 11 01	-67 22 -67.5	260.5	-7.2	IGB (90°), go			20	
✗ 16366	11 03	-72.7	263	-12.5	MMS,	192	176	72	pl. lim. 17.5 (HA 105) neb. lim. 17.4
✓ 3076	11 4.4 05	-61 19 -61.2	258.8 258	-0.8 -1	FWW, go			7?	
✗ 2513	11 05	-61.3	259	-1	MRD, MEM, SFM				
✗ 24737	11 15	-42.5	254	+18					
✓ 25837	11 15	-42.5	254	+17	CMH, ABH				



1953phae.proj. 25048

it	Quality	Remarks	Known.	Ax	
				— ✓	
	FWW 9 or 8			—	
	FWW 4		2 NGC cl.	—	
				—	
	FWW 4 or 5	"Menzel: 8"		—	
HA.105	4			—	
	4	"no nebulae"		—	
				—	
	5-			—	59 57 8
		on $\eta$ Carinae		—	
			2 NGC, 0 IC	—	
		"Frost 0"		—	30.2 29.1 2 1.1 .60
	FWW 6		7 NGC cl. & gal. neb. 1 IC gal. neb. 1 HN + 4 HN reg.	—	29.1 .6 59.7
		1 NGC cl, 1 NGC $\approx$		—	
	5			—	
	4			—	
	FWW 5 or 6			—	
			1 IC m = plan.	—	
HA 105	4			—	
	5			—	
		no new neb., only IC, NGC.		—	
	double images			4362	
	OK.			4524	



Plate no.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	$N_T$	$N_{25}$	$N_9$	Plate limit.
18									
✓ 14694	11 20	-40	253	+20	MEM, SFM				17.7
✓ 20761	11 17.7 20	-39 53.6 -40	253.4	+19.6	IGB(90), <del>90</del>			206	18.5
✓ 17320	11 19.2 20	-47 22 -47.5	256.15	+12.5 +13	IGB, FWW			FWW 271	
✓ 19163	11 19.2 20	-52 24 -52.5	257.7 258	+7.7 +9	FWW, SL,			FWW 59 SL 11	
✓ 13263	11 18.8 20	-62 10 -62.5	260.7 261	-1.6 -2	SFM, FWW, <del>90</del>			FWW 15 (5?)	
✓ 27054	11 29	-60.4	261	+1					
27081	11 30	-60.4	261	+1					
✓ 27099	11 29	-60.4	261	+1					
✓ 16481	11 31.0 30	-59 40 -60	261.3	+1.2	FWW, MMS,	84	74	33 MMS 31 FWW 21	17.2 (HA 105)
✓ 21682	11 32.8 35	-42 52 -43	257.5	+18	IGB(90), <del>90</del>			266	
✓ 16950	11 38.9 35	-82 03 -82.5	267.8	-20.4	MMS, <del>90</del>	270	242	120	pl. lim. 17.8 neb. lim. 17.7
✓ 22575	11 40	+20							
✓ 5355	11 40	-72.5	265	-11	Stewart, MRD, MEM,				
✓ 16436	11 39.8 40	-72 27 -72.5	265.4	-11.0	SFM, FWW, MMS			FWW 76 MMS 102(10)	
✓ 163371	11 42	-72.6	265	-11					
✓ 5348	11 42	-67.6	264	-6	Stewart, MRD, MEM,				
✓ 16406	11 42.5 43	-67 39 -67.8	264.6 265	-6.3	SFM, FWW, MMS,	22	20	10 MMS 10 FWW 9	17.5 (HA 105)
✓ 6715	11 52	-62.5	264	-1	Frost, MRD	Frost 4? MRD 0?			
✓ 16073	11 52.5 53	-62 30 -62.8	264.6 265	-1.0	FWW, MMS	81	75	31 MMS 32 FWW 25	pl. lim.: 17.5 (HA 105) neb. lim.: 17.3
✓ 22520	11 55	-47.5	262.5	+14					
✓ 25257	11 55	-47.5	262.5	+13					
✓ 25387	11 55	-47.5	262.5	+13	JS, ABH				
✓ 22558	11 57.4 00	-52 20 -52.5	264	+9	JS, ABH				
✓ 4398	12 00	-77.5	267	-16	Stewart, MRD, SFM,				



Quality	Remarks	Known.	AX	19
3			—	19
		4 NGC.	—	19
FWW 9			—	19
FWW 7 or 8			—	19
FWW 3; 4i			—	19
			—	19
	[8x10]		—	19
103a-E	[8x10]		—	19
FWW 4; MMS 1	<del>ABH. Lamm.</del>	1 NGC = 2 HN; 11 NGC + 3 IC. cl + gal. neb.	—	19
		1 NGC cl.	—	19
5		1 IC.	—	19
	"Stewart 1"		—	19
FWW 5 or 4			—	19
			—	19
FWW 4, MMS 6	<del>ABH. Lamm.</del>		—	19
5			—	19
MMS 2, FWW 4			—	19
Repeat?			—	19
O.K.			4444	19
O.K. Prob. feat.			4462	19
O.K.			—	19
	"Stewart 3"		—	19



PLATE NO.

20

 $\alpha$  $\delta$  $\lambda$  $\beta$ 

Examined by

 $N_T$  $N_{25}$  $N_9$ 

Pl. Lim.

16011	11 56.5 12 02	-77 47 -77.9	267.6 267.6	-16.0 -16.0	WJL, MMS, <i>g</i>	78	77	44	PLATE: 18.0 NEBLIM: 17.8
22387	12 10	-42.5	264	+20					
23560	12 10	-42.5	264	+20	IS, ABH				
4401	12 18	-67.8	267	-6	MRD, MEM, BH, HBS				
6395	12 20	-57.5	267	+5	MRD				
16445	12 20 19.0 -57.21 -57.5	267.2	+4.5	FWW, IGB,			FWW 29		
4400	12 20	-72.5	267	-11	MRD, SFM,				
16026	12 20.7 18.9 -72.40 -72.8	268.4	-12	FWW, <del>WJL</del> , IGB			FWW 7		
7639	12 21	-62.5	268	-1	SFM				
16021	12 20.5	-67.5	268	-5	WJL				
16134	12 20.5 20.0 -67.12 -67.5	268.1	-5.3	MMS, FWW,	MMS 47	MMS 43	MMS 29 FWW 15	17.5 (HA 105)	MMS
24781	12 22.8	-67.5	268	-5					
20777	12 23 20.6 -62.27.6 -62.7	267.8	-0.6	IGB, <i>g</i>			0		
16930	12 30	-47.5	268	+15	IGB, <i>g</i>		44		
20648	12 27.7 37 -52.19.4 -52.5	269.6	+9.7	IGB, <i>g</i>			25		



QUALITY	REMARKS	Known.	AX	21
4	see HA105.		— ✓	
streaked full of defects. NG. <sup>very</sup> fainter better			—	
			—	
	"stewart o"		—	
3i	"Frost o", "MRD. o"		—	
FWW 4		3 NGC cl, 1 inside 9°	—	
5	"Stewart o"		—	
FWW 3			—	
5			—	
	Smashed to smithereens!		Smithereens mended.	
Mrs 2, FWW 3			—	
	missing — ?!		4368	
		8 NGC cl.	—	
			—	
		1 IC	—	







Extension of Milky Way Borders.

from  $\lambda$   $270^\circ$  to  $\lambda$   $340^\circ$

$\beta + 20^\circ$  to  $\beta - 20^\circ$

14 plates  $\pm$  quality 3



21

No.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	Nt	N25	N9	Plate Limit
20 648	<sup>37.7</sup> 12 40 <sup>-52 19.4</sup>	<sup>52.5</sup>	269.6	+9.7	AB			25	
12372	<sup>42.2</sup> 12 43 <sup>-61 54</sup>	-62.0	270.3	0.0	7m. 7W.W.			<del>25</del>	
21739	<sup>42.6</sup> 12 45 <sup>-42 51</sup>	-43	270	+19	AB JS			284	
X 15907	12 50	-57.5	271	+5	7m	0			
X 13093	12 50	-62.5	272	$\pm 0$	covered by other plates				
X 11852	12 50	-62.5	272	$\pm 0$	"				
X 11888	12 50	-62.5	272	$\pm 0$					
X 11889	12 50	-62.5	272	$\pm 0$					
X 11890	12 50	-62.5	272	$\pm 0$					
✓ 24774	12 50.2	-62.6	272	$\pm 0$	S.S., C.M.H.				
X 14529	<sup>47.2</sup> 12 51 <sup>-62 20</sup>	-62.5	270.8	-0.3	M.E.M.	66	65	30	17.6
X 7277	12 51	-62.5	272	$\pm 0$	7m, <del>7m</del>				
X 7281	12 51	-62.5	272	$\pm 0$					
X 7283	12 51	-62.5	272	$\pm 0$					
X 12950	12 51	-62.6	272	$\pm 0$					
X 12951	12 51	-62.6	272	$\pm 0$					
<del>15280</del>	<del>12 52</del>	<del>+</del>							
X 7244	12 52	-62.5	272	$\pm 0$					
✓ 21674	<sup>53.1</sup> 12 55 <sup>-47 20</sup>	-47.5	272.5	+14.5	ABH ✓				
✓ 24203	13 00	-57.5	273	+5	S.S., C.M.H.				
X 4406	13 00	-72.5	272	-11	mR.D. 7m				
✓ 16033	<sup>00.0</sup> 13 03 <sup>-72 33</sup>	-72.7	271.6	-10.6	mms. ✓	107	98	30	18.0
X 4407	13 04	-67.4	273	-5	mR.D. <del>7m</del>				



Quantity

Remarks

Known  
ns = not seen

Ax No.

25

5

Exp 360

~~26~~

25 NGC 4275

no good.

grating

gratingmost "galaxies" are  
doublets

4367

Published HA 105

~~A.B. H. 100~~

" " "

soft images

double images  
soft imagesst. trailed  
soft images

4282

of can't find use 5907 12 50  
-57.5

no new nebulae

trailed

2



Photo no.	$\alpha$	$\delta$	$\lambda$	$\rho$	Examined by	$n_z$	$n_{25}$	$n_7$	Photo Limit	
26 16047	$13^h 1.6$ $13^h 04$	$-67^\circ 16.1$ $-67.6$	2730	-5	<del>mm</del> $gs, ABH$					
X 4402	13 04	-77.6	272	-16	$m, PRQ$					
✓ 6452	$13^h 03.9$ 13 04	$-77.27$ $-77.6$	$271.3$ 272	-15.5	$mm, gs$				17.9	
X 16139	13 05.3	-78.0	272	-16	<del>Prob. would be better to</del> <del>Examine than 16452 if is located.</del>					<del>Has been</del> <del>located.</del>
<del>15384</del>	<del>13 10</del>	<del>+12.5</del>	<del>276</del>	<del>+12</del>	<del><math>sfm, ABH</math></del>	<del>158</del>	<del>158</del>		<del>17.7</del>	
<del>26301</del>	<del>13 1</del>									
<del>16413</del>	<del>13 10</del>	<del>-32.5</del>								
X 6750	13 10	-52.5	275	+9	$m, PRQ$					
X 16520	13 13	-52.5	275	+9						
✓ 16891	$13^h 12.9$ 13 14	$-52.0$ $-52.5$	275	+9	$gs, cmH$					
✓ 15906	13 20	-52.9	276	+4	$sfm, gs$					
X 4408	13 20	-62.9	275	-1	$m, PRQ$					
X 13719	13 21	-42.5	278	+19	$m, PRQ$					
✓ 16958	13 21.5	-42.7	278	+19	$SFmL, gs$					
✓ 12373	13 21	-47.0	277	+15	$sfm, 7WW$					
✓ 16441	13 23	-62.9	275	-1	$gs, cmH$					
✓ 16419	13 32	-52.4	278	+9	<del><math>m, PRQ</math></del> , $gs, cmH$					
✓ 16996	13 40	-47.5	280	+14	$ABH, gs$					
✓ 17009	13 40	-57.5	278	+4	$gs, ABH$					
X 4412	13 40	-67.7	276	-6	<del><math>m, PRQ</math></del>					
✓ 4415	$13^h 39.9$ 13 40	$-72.0$ $-72.5$	275	-12	$m, PRQ, gs$	0				
✓ 16450	$13^h 40.7$ 13 42	$-67.30$ $-67.8$	275.8	-6.2	$mmS, gs$	81	77	32	17.4	
X 18374	13 49	-44.6	282	+16	$sfm$					
✓ 21760	$13^h 47.2$ 13 50	$-39.56$ $-46$	285	+20	$sfm, gs$				327	



Quality	Remarks	Known	Q & No.
	fuzzy, 4407 better		
7	Not too good for photo. K.		3061
= No 1	not faint		Best of three
		12 NGC + 7 NS 2 IC + 1 NS	
	fuzzy; sh. trailed		
	Broken. Marked up by w. L.		
	Better than 16520		
	o.k.		
	w Cen. show plate.		
	MRD all marks removed.		3053
	fuzzy but usable		
	MRD markings removed no new neb.		
	no new neb.		
4			3059
		3 NGC, 2 IC + 1 = NGC	



Plate no	$\alpha$	$\delta$	$\lambda$	$\rho$	Examined by	Nt	N25	N9	Plate Limit	2
28										
2402	13 46.6 50	-44.51	282.2	+15.6	C.M.H., <i>jd</i>					
5908	13 50	-57.5	279	+3						
5370	13 50	-62.5	278	-2	<i>sfm.</i>	0				
5914	13 52	-52.5	281	+8	<i>sfm., <i>jd</i></i>					
16527	13 53	-52.5	280	+9						
16418	13 52.5 53	-62.8	278.3	-1.7	<i>mmS, <i>jd</i></i>	83	79	29	17.5	4
3657	13 54	-10.3	298							
14466	14 00	-77.5	274	-16	<i>mmS, <i>jd</i></i>					
16152	14 00	-77.8	274	-17						
26341	14 10	-38.0	289	+20						
26359	14 10	-38.0	289	+20	<i>S.S., C.M.H.</i>					
6765	14 10	-42.2	288	+17	<i>sfm.</i>					
16965	14 10	-47.5	286	+12						
23290	14 10	-47.5	285.5	+12	<i>sf, C.M.H.</i>					
6751	14 10	-52.5	284	+8	<i>Sfm.</i>					
16522	14 10	-52.5	284	+8						
16963	14 12	-42.4	288	+17						
24765	14 12	-42.4	288	+17						
25245	14 12	-42.4	288	+17						
25752	14 12	-42.4	288	+17						
25760	14 12	-42.4	288	+17	<i>S.S., C.M.H.</i>					
20191	14 15	-35	292	+23						
16486	14 12	-52.5	284	+8						
20681	14 15	-35	290.4	+23.5	<i>20 B</i>		266		18.8	



Quality

Remarks

Known

Ax no.

29

8 badly broken to be  
mended  
Stewart 0

Mender, st. trailed, but ok  
Poor background + fuzzy

Mengel 2  
Both poor 5914  
badly trailed, 16527  
v. fuzzy

3103

4

H A 105 A.B. Ham.

3043

Both trailed, but  
16152 softer image  
4466 PM, marks

MPQ marks removed

4542

4549

Better plate.

+roz 0

3100

soft image

elongated images

4365

elongated images

4442

Trailed! Badly

4508

Best plate on region.

4516

double images

SNGC+INS, 6 LC H?  
+2 NS.



Plate No.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	Nt	N <sub>25</sub>	N <sub>9</sub>	Plate Limit
30									
✓ 2393	14 <sup>h</sup> 15 <sup>m</sup> 11.2	-52.2	284	+7	JS, c.m.H.				
✓ 6156	14 <sup>h</sup> 18.0 19.3	-72.0 23.2	277	-12	JS, c.m.H.				
X 5909	14 20	-57.5	283	+2	SFM	0			
✓ 24241	14 20	-57.5	284	+3	JS, c.m.H.				
X 25756	14 20	-57.5							
X 5373	14 20	-62.5	281	-2	SFM				
X ✓ 4476	14 20	-67.6	279	-7	MRQ	0			
X ✓ 4468	14 20	-72.5	279	-12	MRQ				
✓ 16161	14 22.6	-67.7	279	-8	P.K.				
✓ 16154	14 23.6	-62.8	281	-2	JS, c.m.H.				
✓ 13041	14 30	-37.5	294	+20	MRQ, HS				
✓ 13043	14 <sup>h</sup> 28.7 30	-41.0 58.9	291	+15	SFM, HS, JS				
X 6764	14 30	-47.6	289	+10	SFM				
X 6422	14 30	-52.5	287	+6	SFM	0			
✓ 13045	14 30	-52.5	287	+6	SFM, JS				
X 9125	14 31	-79.6	277	-19	SFM				
✓ 16460	14 <sup>h</sup> 31.2 32	-47.0 11.2	285	+10	JS, c.m.H.				
<del>23736</del>	<del>14 35</del>	<del>-37.5</del>	<del>294</del>	<del>+19</del>					
✓ 25231	14 40	-32.5	297	+23					
X 25235	14 40	-47.5	290	+10					
✓ 25773	14 <sup>h</sup> 36.3 40	-47.0 11.2	290	+10	JS ABH				
✓ 25239	14 <sup>h</sup> 36.3 40	-52.0 6.3	288	+5	JS, ABH				
✓ 25244	14 40	-57.5	286	+1	JS, A.B.H.				
✓ 8368	14 <sup>h</sup> 43.2 48	-44.0 57.4	293	+11	SFM, JS, ABH				



Quality	Remarks	known	Az no.
	poor emulsion, but better than 16486		
	good quality.		none 4509
	decent images Poor quality.	Stewart 0	
3	images very fuzzy.		
	poor res 25773		
	fuzzy O.K.	Frost 0	
	use 25773		3068 4226 4435
	soft images		4437 4514
	good quality.		4439 4441
	Bailey: old 6, new 3 Bailey 6, old.		St. D. 1000



Plate no	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	N <sub>t</sub>	N <sub>25</sub>	N <sub>26</sub>	Plate	Wm
32										
<del>8368</del>	<del>14 48</del>	<del>-45.2</del>	<del>293</del>	<del>+11</del>	<del>SFM</del>	<del>X</del>				
X 6766	14 50	-42.3	294	+13	SFM					
X 19429	14 50	-49.0	291	+9	see A 25773	14 <sup>n</sup> 40	-47.5			
X 6762	14 50	-52.5	289	+5	SFM	0				
X 15915	14 50	-57.5	287	+1	MRQ	0				
X 15376	14 50	-62.8	284	-4	MRQ					
✓ 16439	14 52 <sup>49.6</sup>	-62.40 <sup>-62.40</sup>	284.3	-4.3	mm, J	41	37	19	17.9	
X 16454	14 53	-42.3	295	+14						
✓ 23299	14 53 <sup>47.9</sup>	-42.3 <sup>-42.0</sup>	295	+13.5	J, A.B.H.					
✓ 21604	15 00 <sup>57.4</sup>	-32.5 <sup>-32.25</sup>	300.8	+21.3	J, B		330	18.4		
✓ 21631	15 00 <sup>57.8</sup>	-37.5 <sup>-37.22</sup>	300	+19	A.B.H. J					
X 4493	15 00	-67.5	283	-9	SFM	0				
X 4533	15 00	-72.6	280	-13	SFM, H					
X 4535	15 00	-77.5	278	-17.5	MRQ					
X 16431	15 00	-77.5	277	-17						
X 16462	15 00	-77.5	277	-17						
X 5362	15 00	-82.5	274	-22	SFM					
✓ 17401	15 00 <sup>55.6</sup>	-82.5 <sup>-82.25</sup>	274.5	-21.6	mm, J	361	334	153	18.9	
X 17532	15 00	-82.5	275	-21						
✓ 16167	15 03 <sup>00.8</sup>	-67.6 <sup>-67.20</sup>	283.0	-8.9	mm, J	34	31	9	17.8	
✓ 16418	15 03 <sup>00.2</sup>	-77.7 <sup>-77.33</sup>	277.5	-17.6	mm, J	136	127	50	18.4	
✓ 16169	15 04 <sup>02.8</sup>	-72.9 <sup>-72.24</sup>	280.5	-13.3	mm	82	77	50	18.0	
X 14386	15 04	-77.7	278	-18						
✓ 26298	15 07.8 <sup>0.3</sup>	-72.6 <sup>-72.53</sup>	281	-13	J, A.B.H.					



Quality	Remarks	Known	Ax No.
	Bailey: old 6, new 3	Bailey: old 6	
	Frost 7		
	vs. <i>transient</i>		
	Frost 0		
	Stewart 0		
3	HA 105		3051
	unusual gal in sq # 12	1 NGC + 1 NGC plan. 1 IC n.s.	
	Stewart 2		
	Stewart 1		
	fuzzy tails		3045
	Images a little fuzzy.		3070
	Stewart 3		transient
7	{ both soft images 17401, 1 small fainter		
4	HA 105 <del>ABH</del> <del>trans.</del>		
6	HA 105		3040
6	HA 105		

Excellent plate.



Plate No	$\alpha$	$\delta$	$\lambda$	$B$	Examined by	Nt	N25	N9	Plate Limit
34									
✓ 21627	15 10 <sup>8.0</sup>	<sup>-42.27</sup> -42.5	296	+10	JS ABH.				
✓ 19160	15 10	-47.5	295	+8	SL, JS				
✓ 6423	15 14	-52.5	292	+3	MRD, 27m				
✓ 16483	15 14	-52.6	293	+3					
✓ 17042	15 14	-52.5	293	+3	JS, cmH				
✓ 22448	15 14	-52.6	292	+3					
✓ 26344	15 20	-46.0	296.5	+12					
✓ 26351	15 16.3 <sup>-45.37</sup> 20	-46.0	296.5	+12	JS, cmH				
✓ 5994	15 20	-57.5	290	-2	7m	0			
✓ 5447	15 20	-62.5	287	-6	7m	0			
✓ 3079	15 22	-50.0	295	+4	MRD	0			
✓ 16540	15 22	-57.7	290	<sup>-3</sup> +9					
✓ 16769	15 23	-57.7	290	<sup>-3</sup> +9	JS, A.B.H.				
✓ 2518	15 24	-50.5	295	+4	MRD, 7m				
✓ 16043	15 24	-62.6	288	-6	<del>129.2</del> JS, ABH				
✓ 10134	15 27	-41.1	301	+11	7m	0			
✓ 16760	15 27	-50.7	295	+3	JS, ABH				
✓ 20706	15 30 <sup>26.5</sup>	<sup>-32.27</sup> -32.5	307	+18	cmH, ABH				
✓ 21883	15 30 <sup>26.7</sup>	<sup>-37.29</sup> -37.5	304	+14	ABH, JS				
✓ 7376	15 30	-52.5	294	+2	MRD				
✓ 10115	15 32	-42	301	+9	7m	0 never found			
✓ 23648	15 50	-32.5	310	+15	JS, ABA				
✓ 20240	15 50	-42.5	303	+7	JS cmH				
✓ 19358	15 50	-47.5	300	+3	JS cmH				



Quality	Remarks	Known	αγ No.
	Frost & O fuzzy		
	poor background, fuzzy		3078
	st. trailed "but best of 4"		
	poor background.		
	Blurred.		4544
	Beautiful plate.		4546
	Mengel : 1		
	Stewart		
	no new neb.		
	St. trailed Both } background post, } and n = 1		3110
	no new nebulae		not as trailed as 3079
	8X10 Exp. 256 multiple exposure		
	O.K.		
		1 nOC	
	no new nebulae		
	<u>also pub. quantity 1</u>		
			none



Plate No.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	Nt	N2g	Ng	Plate Limit	2u
36										
X 6805	15 50	-52.5	297	0	mRQ	0				
X 5995	15 50	-57.5	293	-3						
X 5449	15 50	-62.5	290	-8	d 7m	0				
✓ 15373	15 51	-57.5	294	-4	mE m. $\phi$	13				
✓ 16878	15 53	-52.4	297	0	$\phi$ , ABH					
X 17109	15 53	-52.6	297	0						
X 16120	15 53.3	-62.8	290.0	-8.4	m. m. $\phi$	50	47	14	17.7	
✓ 26297	15 55.8	-62.7	289	-9	$\phi$ ABH					
✓ 13454	16 00	-25	317	+19	d 7m, ABH					
✓ 13461	16 00	-30.0	314	+15	mRQ, $\phi$					
✓ 13471	16 00	-35	310	+11	d 7m					
X 20247	16 00	-37.5	308	+10						
✓ 24250	16 00	-37.5	308	+10	$\phi$ , ABH					
✓ 8381	16 02	-74.9	283	-18	d 7m, $\phi$	0				
X 4537	16 04	-77.8	279	-19	d 7m					
✓ 20204	16 05	-5.0	335	+30	CDB				18.2	
X 16172	16 07	-77.8	280	-20	$\phi$ see 3 <sup>rd</sup> exp					
X 6401	16 10	-42.5	306	+5						
X 16508	16 10	-45.5	307	+5						
X 6420	16 10	-42.7	306	+5	d 7m					
X 16954	16 11	-22.5	320	+18						
X 23105	16 11	-22.5	320	+18						
✓ 25419	16 11	-22.5	320	+18	$\phi$ , A.H.					
X 8485	16 12	-15.0	327	+23	d 7m	0				



Quality	Remarks	Known	Or no.
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Frost 0

Mergel

Stewart

2 H N

w. fuzzy

fuzzy

fuzzy

4 H A 105

26297 fainter & smaller now  
 no sept as 16120, 16120 ok,  
 remains 26297 after time?

A B H

St. Trained, fainter

none

Bailey: old 7, new 0

Stewart 2

Exposure 120<sup>m</sup>

Frost 0

doesn't go as far as 3093  
 as C401 & C402

Frost 1

faint, fuzzy Traced

faint.

bad.

best.

4467

Bailey: old 0, new 2  
 Sept 3<sup>rd</sup> extensions



Plate no.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	N <sub>6</sub>	N <sub>25</sub>	N <sub>9</sub>	Plate Lon	2
38										
X ✓ 3690	16 12	-22.4	321	+18	d 7 m					
X ✓ 16505	16 12	-32.5	313	+12						
X ✓ 24279	16 12	-32.5	313	+12	JS, A.B.H.					
X ✓ 7382	16 12	-52.5	299	-2	d 7 m					
X ✓ 3635	16 13	-20.9	322	+19	d 7 m					
✓ - 16952	16 13	-42.7	307	+5	JS, ABH					
✓ - 16988	16 13	-52.5	299	-2	JS, ABH				slide made?	
X ✓ 3632	16 14	-21.2	322	+19	d 7 m					
X ✓ 3630	16 17	-20.9	323	+18	d 7 m					
X ✓ 6452	16 18	-57.5	297	-7	d 7 m				0 use 16963 16 22	-5
✓ - 22471	16 20	-20	324	+18	JS, ABH					
X ✓ 23335	16 20	-20	324	+18						
X ✓ 25511	16 20	-20	324	+18						
X ✓ 12043	16 20	-24.5	321	+16	d 7 m				0	
X ✓ 16550	16 20	-27.5	318	+14						
✓ - 24338	16 20	-27.5	318	+14	JS cmH					
✓ - 16985	16 20	-30	316	+12	cmH, ABH					
X ✓ 20721	16 20	-47.5								
✓ - 24286	16 20	-47.5	304	0	JS, ABH					
X ✓ 21036	" "	" "	" "	" "						
X ✓ 5451	16 20	-62.5	292	-11	d 7 m					
X ✓ 4539	16 20	-67.5	289	-13	d 7 m					
X ✓ 4545	16 20	-72.6	286	-17	d 7 m					
✓ - 14845	16 21 <sup>19.7</sup>	-72.5 <sup>-72.19</sup>	285.1	-17.1	m 8 m, JS	38	30	17	17.7	
X ✓ 12420	16 22	-24.0	321	+15	d 7 m					
X ✓ 12497	16 22	-24.1	321	+15	d 7 m					



Quality	Remarks	Known	ax No.
	soft images		
	no new nebulae Menzel: 2		no. ax
	good.		
		NGC 6067	
-576 / 3	Proctor, Menzel 0		
	bad images		
	no. continued soft images		4481 ✓
		I 4596	
	soft images, not very faint		3117
	sl. trailed, but better than 16550		4296
	soft images		4286
	Stewart 0		
	Stewart 0		
	no new nebulae: 7 m Stewart 0		
6	H.A. 105		
	no new nebulae		
		1 IC 4384	



Plate No.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	N+	N25	N9	Plate Limit	2u
40										
✓ 16993	16 22	-57.6	297	-8	mE m, $\phi$	41				
✓ 16128	16 23.6	-62.7	292	-11	A.B.H., $\phi$					
✓ 12037	16 24	-24.5	321	+15	d7 m, $\phi$					
✓ 16185	16 <sup>22.4</sup> 24	<sup>-67.28</sup> -67.6	289.0	-14.0	m.m.d., $\phi$	106	<del>95.0</del>	46	18.0	
X 23273	16 27.4	-67.6	289	-14						
X 25284	16 27	-67.4	289	-14						
<del>7372</del>	<del>16 30</del>	<del>+17.5</del>	<del>2</del>							
✓ 13019	16 30	-22.5	324	+15	d7 m, $\phi$					
✓ 13021	16 30	-22.5	320	+13	d7 m, $\phi$	0				
✓ 13023	16 30	-32.5	316	+9	d7 m, $\phi$	0				
X 23338	16 30	-32.5	316	+9						
X 13060	16 30	-37.5	312	+5						
✓ 124072	16 30	-37.5	313	+6	$\phi$ cmH					
X 13065	16 30	-47.5	305	-1	mRd					
X 7378	16 30	-52.5	301	-4	d7 m	-				
✓ 16967	16 30	-55	299	-6	mE m, $\phi$	78				
✓ 8668	16 31	-42.5	309	+2	mRd, $\phi$					
X 10938	16 32	-42.5	309	+2						
X 16471	16 33	-52.5	301	-5	mE m					
X 23360	16 33	-52.5	301	-5						
✓ 24062	16 33	-52.5	301	-5	$\phi$ , ACH					
✓ 16199	16 <sup>39.5</sup> 40	<sup>-9.58</sup> -10	335.7	+20.8	7W, mE m	25 mE m				
X 23129	16 40	-15	331.5	+18						
X 23340	16 40	-15	331.5	+18						
							<sup>7W2</sup> 16 0 mE m		17.9	



Quality	Remarks	Known	Ax No.
	5 N (2 angel cl) 2 HN		
6	H. A. 105		4446 ✓
	double images.		no ax
	strang. background.		
	defects, but better background,		4268
	mengel 2		
		3 NGC	
	no new nebulae		
			} both pl. trailed 16.6.8 has better background
	useable, PM marks.	4 N.C.C.	
	trailed badly.		4264
	SI trails, but best of 3		



Plate no.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	N 6	N 25	N 9	Plate lim
42									
✓ 25525	16 40	-15.0	331.5	+18	C.M.H., ABH				
✓ 23113	16 40	-20.0	327.5	+14.5					
✓ 23336	16 40	-20	327.5	+14.5	ABH, Jol				
✓ 16999	16 40	-25	323	+12	Jol, ABH				
✓ 12425	16 46	-41.3	311	+1	m E m, Jol				
✓ 8401	16 48	-44.8	308.8	-2.0	P.K.				
X 6417	16 50	-42.5	311	-1	m R D				12 425
X 20721	16 <sup>46.2</sup> 50	-47.5 <sup>-47.26.1</sup>	307	-4					
✓ 21036	16 <sup>47.0</sup> 50	-47.5 <sup>-47.27.4</sup>	307	-4	Jol, ABH				
✓ 6809	16 50	-57.5	299	-10	d 7 m.				
X 5453	16 50	-62.5	295	-13	d 7 m.				
X 17448	16 50	-62.5	295	-13	?				
✓ 14194	16 53	-28.2	322	+8	m E m, Jol				
X ✓ 19448	16 <sup>54.1</sup> 55	-55.0 <sup>-55.2</sup>	342.2	+20.6	20.7, FWU	62+27		62+27	17.7
✓ 16952	16 54	-57.6	301	-11	m E m, Jol	315			
✓ 16195	16 <sup>52.2</sup> 54	-62.6 <sup>-62.28</sup>	295.1	-13.4	m E m, Jol	228	182	112	18.2
X 23345	17 00	-10	338.5	+17					
X 26733	17 00	-10							
✓ 26855	17 00	-10	338.5	+17	IS, ABH				
✓ 24068	17 00	-15	336	+14	Jol, ABH				
X 23115	17 00	-20	330	+11					
✓ 23356	17 00	-20	330	+11	Jol, ABH				
✓ 14696	17 00	-25	325	+8	m E m, Jol				
✓ 14701	17 00	-30	322	+5.5	m E m, Jol				
✓ 14705	17 00	-35	318	+2	m E m, Jol	23			
✓ 17012	17 00	-40	314	-1	Jol, A.B.H.				
X 24010	17 00	-42.5	310	-3					
✓ 24090	17 00	-42.5	311.5	-1.8	P.K., GS.				



Quality	Remarks	Known	Ax No.
4.5	sl. trailed n. soft images sl. trailed soft images supernovae, qR. Dark neb Dark neb 21036 a little better	8 n. G. C. + 1?	4487
3.5	no new nebulae H.S. Stewart 0		
	double images 3N, 3I, 5MN HA 105	90 - 1NGC 2NGC + 1IC	
	Very poor quality.		4572
	trailed		4580
			4266
4	trailed n?		4269 4269

Secondary exp. of 2<sup>m</sup>  
double images

fuzzy 17448 much  
better



44

Plate No	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	$N_t$	$N_{25}$	$N_9$	Quality	P
23372	17 00	-52.5	304	-8	for, ABH					
✓ 4550	17 00	-67.5	291	-17						
✓ 46525	17 00	<sup>56.5-67.32</sup> -67.5	291.1	-16.6	m m $\phi$ , for	41	38	14	1	
✓ 4562	17 00	-72.5	287	-20	$\phi$ 7 m <sup>ABH</sup> <sub>qual 3</sub>					
X 14215	17 03	-14	336	+14	$\phi$ 7 m					
X 14690	17 03	-14	336	+14	$\phi$ 7 m	2+2?				
✓ 8377	17 03	-59.9	297	-12	m RQ=0 <sup>JS</sup> $\phi$ 7 m=2					
X ✓ 3913	17 05	-21.6	330	+9						
✓ 3821	17 06	-22.6	330	+9	$\phi$ 7 m <sup>ABH</sup> <sub>qual 3</sub>	0				
X ✓ 3824	17 06	-22.1	330	+9	$\phi$ 7 m					
X ✓ 3794	17 08	-22.0	330	+9	$\phi$ 7 m	0				
✓ 14802	17 10	-27.5	326	+5	m E m, for	2				
<del>✓ 15337</del>	<del>17 12</del>	<del>-32.3</del>	<del>321</del>	<del>+2</del>	<del>m E m <sub>qual 25</sub></del>	<del>19</del>				
X 17418	17 11	-52.5	305	-10	$\phi$ 7 m 0 mwd m E m 56					
✓ 16206	17 13	-52.5	305.2	-9.8	SS, ABH					
X 4595	17 12	-77.8	283	-22	$\phi$ 7 m					
X 14954	17 15	-77.6	283	-22.5						
X 14962	17 15	<sup>10.1-77.38</sup> -77.6	282.4	-22.7	m m $\phi$	96	80	43	3	
✓ 20076	17 18.3	-60.0	299	-14	CDB, JS					
<del>16931</del>	<del>17 20</del>	<del>+26</del>								
23376	17 20	-32.5	322	$\pm 0$						
23080	17 20	-32.5	322	$\pm 0$						
X 12089	17 20	+35.0	320	-1						
✓ 23368	17 20	-37.5	318	-2.5	for, ABH					
✓ 6455	17 20	-57.5	301	-13	m E m, JS	98				

E. spectrum 35m

all 3rd extension



Plate number	Remarks	Known	ex no.
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45

17.4	Stewart 0, completely smashed HA 105		3102
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too broken

Stewart 2; all neb.  
marked are probably

traced

defects H &  
images soft, using  
24068, 1700m - 15

Bailey: old 8, new 26

Stewart 0  
all quite poor  
3821 prob. best

Menzel 5; 214 (cl)  
22 (cl 1 plate)  
Stewart 6

double images

18.3	many soft images, poor HA 105	8 & C	
------	----------------------------------	-------	--

} little higher, poor  
quality plates

quite broken  
SE. traced



P. No.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	Nt	N25	N7	Quality
465920	17 21	-45.2	311.9	-6.9	P.K.				4.5
<del>14211</del>	<del>17 22</del>	<del>-5.5</del>	<del>346</del>	<del>+15.5</del>	<del>mcm</del>	<del>2?</del>			<del>4.5</del>
✓ 5455	17 22	-63.0	296	-17	JFM				
✓ 23305	17 25	-15	337.5	+8	JF ABH				
✓ 12511	17 25	-26	328	+4					
✓ 23178	17 25.8	-67	293	-19	JF, ABH				
X 12147	17 26	-26.2	329	+4					
X 15429	17 27	-22.5	332	+5					
X ✓ 3524	17 28	-21.8	332	+4					
X ✓ 3519	17 29	-22.2	332	+4	MRQ				
X ✓ 3522	17 29	-22.2	332	+4	MRQ				
✓ 1204	17 25	-63	296	-17	mcm, JF	242			
✓ 12090	17 26	-26.3	329	+4	MRQ, JF				
X ✓ 24079	17 27	-22.5	332	+5					
✓ 23823	17 27	-22.5	332	+5	JF, ABH				
X ✓ 6808	17 28	-17.5	337	+7	MRQ				
X ✓ 3517	17 30	-21.9	333	+4	MRQ				
X ✓ 23138	17 30	-27.5	328	+1					
✓ 23286	17 30	-27.5	328	+1	JF, A.B.H.				
✓ 49444	17 30	-40	<sup>317.2</sup> <del>308</del>	-5	JF, A.B.H.				
✓ 21960	17 <sup>27.0</sup> 30	<sup>-45.6</sup> -45	313	-10	JF, ABH				
✓ 21966	17 <sup>26.7</sup> 30	<sup>-50.7</sup> -50	308	-11	JF, ABH				
X ✓ 8956	17 30	-52.5	307	-13	MRQ, mcm	<sup>mcm</sup> 15			
✓ 17060	17 31	-17.5	337	+6	JF, ABH				
✓ 17004	17 33	-52.5	306	-12	mcm, FWW	124			



Photo Lim.	Remarks	IT record	ax	No	
		<del>1 noc cl + 12 cc</del> <del>+ 1 plm?</del>			badly scratched. 47
	no new neb.				
	sketches, soft images				not so faint as 12090
	doubt images				
	too badly broken & be mended.				"broken in 1900 by Prof W.H. Pickering"
	Stewart 0				
		7 noc 5 cc 12 H N			
	not so faint as 2823 + softer images	none			
		none			
	sketches + soft images				
	useful.				
	Case 28 - 27.5 Plate cover 8-32.5, but center as 23138				
	sketches, soft images, but useful				



Plate no	<del>18158</del>	$\delta$	$\lambda$	$B$	Examined by	$N_t$	$N_{25}$	$N_9$	Quality	P
48										
✓ 16158	17 40	-32.5	325	-3	gs, ABH					
✓ 8405	17 49	-44.9	315	-11	gs, m, gs	0				
✓ 20267	17 50	-15	341	+4	gs, ABH					
✓ 22584	17 50	-22.5	334.5	-6	gs, ABH					
✓ 14724	17 50	-27.5	331	-2	m, E m, ABH					
X ✓ 22556	17 50	-37.5	321.5	-7.5						
✓ 23283	17 50	-37.5	321.5	-7.5	gs, ABH					
X 5458	17 50	-62.5	299	-19	gs, m					
X 6840	17 52	-57.5	303	-17	gs, m					
✓ 16218	17 52 <sup>51.0</sup> <del>-62.8</del>	298.4	-19.3	m, E m, gs	249	220	103		1	
27268	17 53	-29.0	329	-4						
X ✓ 27479	17 53	-29	329	-4						
X 27427	17 53	-32.5	327	-6						
X 27484	17 53	-32.5	327	-6						
✓ 27090	17 53	-36.0	323	-8	gs, ABH					
X 27096	17 53	-36.0	323	-8						
X 27490	17 53	-36.0	323	-8						
X 7413	17 53	-52.5	308	-15	gs, m					
✓ 17072	17 54	-57.5	303	-17	m, E m, gs	254				
X 15451	17 55	-22.5	334	-1						
X 1835	17 55	-23.6	335	-2						
✓ 17079	17 55	-52.5	308	-15	m, E m, <sup>gs, ABH</sup> CDB 156					
X 14037	17 54 <sup>7</sup>	-23.0	334	-1	m, E m				see 22584 17 50	
X 14935	17 57	-23.7	335	-2						



Plate limit	Remarks	Known	Ar no.
	Out of focus + defects		
17.2	HA 105	8 HOC, 10 LC 2 HN	
8X10	<u>103a-E</u>		4645
			4639
	8X10 soft images		103a-E
	Menzel: 3		
	{ Both trailed badly, but 1935 has less fuzzy images	5 LC, 2 HN 1 Menzel	
		2 HOC glob. cl. 3 HN	
instead	great 3- soft images		



1953phae.proj.25045

Plate no.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	N <sub>T</sub>	N <sub>25</sub>	N <sub>9</sub>	Quality	Pl
504295	18 00	-33.5	<del>320</del>	<del>-11</del>						
<del>25380</del>	18 00	-33.5	326	-8	JS, cmH					
<del>16524</del>	18 00	-40	320	-11	MEM, JS	217				
V20742	17 56.9 18 00	-45.02.5 -45	316 <del>325</del>	-13 -8	JS, cmH					
✓13331	18 00	-60	301	-19	MRQ, JS					
✓21973	18 05	-26.10 -26	333	-4.6	JS, cmH					
X12087	18 05	-31.0	328	-7	JS, 7m					
✓12045	18 05	-31	328.4	-7.3	P.K.				3.5	
X16050	18 08	-33.0	327	-8	JS, 7m	0				
✓16237	18 09	-33.1	327	-9	JS, ABH					
X7424	18 11	-47.5	314	-16	JS, 7m					
X6951	18 11	-52.5	309	-18	JS, 7m					
27063	18 13	-30.0	330	-8						
27493	18 13	-30.0	330	-8						
✓16966	18 13	-47.4	314	-16	S. edge CDB, ABH, JS					
✓17125	18 13	-52.5	309	-18	mmq CDB					
✓22059	18 20	-20	340	-5	JS, ABH					
✓14727	18 20	-25	335	-8	MEM	9				
✓21978	18 20	-30.7 -30	331	-9.5	JS, ABH					
✓21681	18 20	-37.35 -37.5	324	-13	A.B.H., JS					
X5654	18 20	-57.5	305	-21	JS, 7m					
X16507	18 20	-57.5	305	-21	mmq, CDB					
X5459	18 20	-62.5	308	-22	MRQ					
✓14253	18 22	-62.7	300	-22	MEM	523				
✓14202	18 23	-67.29 -67.7	294.6	-23.8	JS, 7m	67	31	27	3	
27064	18 26	-30.0	332	-11						
X27087	18 26	-30.0	332	-11						



Plate Lim.

Remarks

Known

Ap No.

51

print images over as sharp as  
26380

3101

Show Plate!

Both weather poor  
16237 less than 16238

Wenzel 1

Frost 0

Stewart 16; Too badly  
broken to be mended  
Old Plate Lim. 17.6, su-  
perior sequence  
Stewart 39

Lugten removed all marks 7 HGC, 51 LC, 1 HN

Lugten removed all marks 7 HGC, 51 LC, 1 HN  
6 HGC, 15 LC

H A 105

6 HGC 15 LC

too broken

3092

14253 much better,  
reexamine small  
box WGS removed

103a-E 8420



Plate no	$\alpha$	$\delta$	$\lambda$	$B$	Examined by	HT	N <sub>25</sub>	N <sub>7</sub>	Quality
52									
20271	18 30	-42.5	320	-17					
21762	18 30	<sup>26.6</sup> -42.37	320	-17	JS, ABH				
21687	18 30	<sup>28.1</sup> -42.40	320	-17					
6852	18 30	-47.5	315	-18	7m				
6504	18 30	-52.8	310	-21	7m				
16028	18 30	<sup>27.5</sup> -55.87	307.7	<u>-21.0</u>	mms, CDB			97	
21772	18 33	<sup>31.9</sup> -24.5	338	-9	20B 9°				
16868	18 33	-47	315	-19	5 mag, CDB 90 ABH, P.K.				
16513	18 34	-52.5	310	-22	mms, CDB				
22550	18 34	<sup>30.4</sup> -52.36	310	<u>-21.5</u>	9° 20B				
14238	18 35	-29.5	333	-12	7m	0			
14240	18 35	-29.5	333	-12	mms	34			
16810	18 40	-22.5	340	-11	7WW(90)				
21268	18 40	<sup>37.2</sup> -26.09	337	-12	JS, ABH, 6810				
16893	18 40	-30	333	-14					
16163	18 40	-32	331	-14	MEM, JS				
22865	18 40	-37.5	326	-16.5					
24967	18 40	-37.5	326	-16.5	P.K., ABH				
16890	18 50	-32.5	332	-16					
10241	18 50	-37.5	326	-17	7m, mms				
7426	18 50	-47.5	316	-22	7m, ABH				
3810	18 51	-37.5	327	-15	7m				
4124	18 52	-27.8	335	-15	mms				
14965	18 53	-27.5	336	-15	mms, ABH	66			



Plate Limit Remarks

Known

Ap No.

53

Frost 0

Frost 6 Menzel checked.

17.9

3898

16.9

Old plate lim. 17.6; supersed-  
ed sequence  
fainter 16513

much fainter than 14238

No evidence of former exam.

lost at sea

4381

no new neb. fuzzy

Stewart 1

Poor emulsion, not faint



Plate no	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	N+	N25	N <sub>7</sub>	Quality
54									
10061	18 53	-37.3	327	-19	d 7 m				
10242	18 53	-37.5	327	-19	d 7 m				
14951	18 53	-37.4	327	-18	m E m, ABH	30			
X 16490	18 53	-37.3	327	-19					
X 18488	18 53	-45.1	319	-21	m RQ				
X 21245	18 <sup>50.0</sup> 53 <sup>-47.40</sup>	-47.6	316.5	<del>-21.8</del>	20 B (90)	190			
X 12576	18 54	-37.0	327	-19	d 7 m				
X 14709	19 00	-25	339	-16	m E m	use A 25288 which is			
X 14759	19 00	-30	335	-17	m E m				
X 17066	19 00	-35	330	-19	m m d	77			
X 23146	19 00	-35	330	-19	P.K. ABH				4
X 25345	19 00	-35	329.8	-19	P.K. 9.5				4.5
X 10231	19 00	-37.5	327	-20	d 7 m, 9.5, ABH.				
X 16542	19 00	-37.5	327	-20					
X 17074	19 00	-40	325	<del>-21</del>	m m d	126			
X 22908	19 00	-40	325	-21					
X 24964	19 00	-40	325	-21					
22867	19 05	-30.0	335	-18					
X 25288	19 05	-30.0	335	-18	A.B.H., P.K.				
X 25381	19 05	-30.0	335	-18					
22843	19 10	-25.0	340	-17.5					
25456	19 10	-25.0	340.5	-17.5					
X 6134	19 10	-27.5	338	-18	d 7 m				
X 14920	19 12	-27.5	338	-18	m E m, ABH	121			
X 14731	19 20	-25	341	-19	m E m, ABH				



Plate time

Remarks

known

ax no.

55

fuz 18

no new nebulae

(post smile)

fuz 34

Bailey: old 1, new 23

19.1

1 LC, 15 MN (+1 ng)

off center. (center  $19^h 05^m -30^{\circ} 0'$ )

better

ask for ADH

neither in the faint, 10231

handler images

see 14951, 1853

16542 soft,

but 10231 show a depth

17.2

24964 little better, but not  
enough to macrofilm, was  
lost at sea 17074

4380

→ lost at sea

no ax

4460

→ lost at sea

4474

Menzel: 1







Second Extension of Milky Way Borders  
from  $\lambda 300^\circ$  to  $\lambda 340^\circ$   
 $\beta - 20^\circ$  to  $\beta - 30^\circ$

a line under  $\alpha + \delta$  indicates  
plates listed in both extensions

3 plates  $\frac{1}{2}$  galaxy 3



Di- No.	$\alpha$	$\delta$	$\lambda$	$B$	Examined by	$N_t$	$N_{25}$	$N_9$	Plate Limit
58									
5654	18 <sup>h</sup> 20	-57.5	305	-21	SFM				
16507	18 20								
16507	18 20	-57.5	305	-21	m.m.s. CDB				16.9 (old 17.6)
dup. 5459	18 20	-62.5	300	-22	MRQ, ME m, STM				
4611	18 20	-67.5							
dup. 14253	18 22	-62.7	300	-22	SFM, DMQ				mag 19.7
6504	18 30	-52.8	310	-21	SFM				
16028	18 30	-55.0	307	-21.0	m.m.s. CDB			97	17.9
21772	18 33								
dup. 16513	18 34	-52.5	310	-22	m.m.s. CDB				16.9 (old 17.6)
22550	18 34	-52.5	310	-21.5	ISB, I.S.				
7426	18 50	-47.5	316	-22	SFM, I.S., A.B.H.				
5655	18 50	-57.5	307	-24	SFM, ME m				
5546	18 50	-62.8	301	-26	SFM, ME m				
7412	18 52	-52.6	312	-23	SFM				
14874	18 52	-57.6	306	-25	CDB, ME m				17.8
22563	18 52	-57.6	306.5	-25					
23291	18 52	-57.6	306.5	-25					
25517	18 52	-57.6	306.5	-25					
26732	18 52	-57.6	306.5	-25	P.K., ABH				
8488	18 53	-45.1	319	-21	MRQ, ME m, SFM				
16495	18 53	-47.6	317	-22					16.5 (old 17.7)
dup. 21245	18 53	-47.6	316.5	-21.9	DOB, I.S.			190	19.1
14222	18 54	-62.7	300.6	-25.8	SFM, m.m.s.	514	457	253	19.7 (old 18.2)
24455	18 55	-62.6	306.6	-25.8					



Quality	Remarks	Known	Exp. No.
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56	Stewart 16, too badly broken to be counted		
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4	Stewart 39		
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Exp 265

5	Luyten removed all marks!		
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5	Frost 6, Mangel		
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Exp 240 min.

both soft images  
22350 printer

5

4 Stewart 27

4 Stewart 25

5 Mangel 34

badly broken, not too faint

many defects

Badly out of focus.

4484

dark background

4571

Bailey, old 1, new 23

NOT faint

12C, 15 H.N.

8 H.A 105 ABH lar.

not as good as 14223

4313



Plate No.	$\alpha$	$\delta$	$X$	$\beta$	Examined by	Nt	N25	N9	Plate Lim
60									
22574	18 <sup>h</sup> 55	-45	319.5	-22	—	—	—	—	—
24985	18 50	-45	318.7	-20.5	P.K.	—	—	—	—
17147	18 55	-52.5	312	-24	L.B. FWW	—	—	272	17.3
17074	19 00	-46	325	-21	mmf, S.S.	126	—	—	17.2
22908	19 00	-46	325	-21	—	—	—	—	—
24964	19 06	-40	325	-21	—	—	—	—	—
4728	19 06	-67.5	—	—	—	—	—	—	—
8383	19 03	-59.8	305	-27	47m	—	—	—	—
20921	19 05	-60.1	303.6	-26.6	FWW	—	—	157	18.4
16250	19 10	-47.5	317.7	-24.9	L.B., MEM	MEM 319	—	L.B. 310	17.9
9026	19 10	-47.6	318	-25	—	—	—	—	—
9017	19 10	-52.5	312	-26	47m, MEM	—	—	—	—
16346	19 10	-52.5	312	-26	—	—	—	—	17.3
23352	19 10	-52.5	312	-26	—	—	—	—	—
15399	19 20	-30	339	-22	MEM, OBH	—	—	—	17.1
5656	19 20	-57.5	307	-28	47m, MEM	marks removed.	—	—	—
16484	19 20	-42.5	323	-26	MEM	196?	—	—	16.5 (old 12)
23296	19 20	-42.5	323	-25.5	OBH	—	—	—	—
23442	19 20	-42.5	323	-25.5	—	—	—	—	—
5548	19 20	-62.5	302	-29	47m.	—	—	—	—
44250	19 25	-62.4	302	-29	MEM, S.S.	108	—	—	18.3
14737	19 30	-27.5	339	-23	—	—	—	—	—
23408	19 30	-30	337	-29	—	—	—	—	—
14748	19 30	-32.5	335	-24	47m, S.S.	31	—	—	16.6
23404	19 30	-35	332	-25	CMH, S.S.	—	—	—	—



Quality	Remarks	Known	Acc No.	
3.5	sl. trailed			61
4.5	better plate ok.			→ check for plate center
	lost at sec			
	Out of focus, poor		4380	
	Bailey: old 50, new 20			quite good
	or	MSC 6752 slot		check for plate center
	Born N = quality	32C, 26 HN		
3	9026 little more trailed			
	v. trailed			
	not focus enough			
	neb count B.H.			
5	not point			1/2" gal, double X
	trailed			
	best v. trailed, soft image		none	double with envelope
5	neb count B.H.			
	poor plate			
	sl. trailed, rather soft, best of		none	check for plate center
	neb. count E.H.C			
	sl. trailed, rather soft, but quite ok		4185	check for plate center



Plate no.	$\alpha$	$\delta$	$\lambda$	$B$	Examined by	N <sub>1</sub>	N <sub>25</sub>	N <sub>9</sub>	Plate Limit
62									
✓ 74 43 19	30	-52.5	313	-29	STm				
✓ 69 10 19	31	-47.5	318	-28	STm, me m				
✓ 65 47 19	32	-52.3	313	-30					
✓ 23 35 7 19	32	-52.3	313	-30					
✓ 24 24 5 19	32	-52.3	313	-30	S.S., A.B.H.				
✓ 16 62 2 19	33	-47.4	318	-28					
23 36 1 19	33	-47.4	318	-28					
✓ 23 38 0 19	33	-47.4	318	-28					
✓ 23 41 6 19	35	-25.3	425	-23					
✓ 20 82 8 19	35	-37.5	329.4	-26.4	25 B 90, S.S.		206	18.2	
✓ 14 88 1 19	40	-30	338	-26	me m, IGB, FW.				(9.6) 17.2 <sup>and</sup> Leucke
✓ 46 54 9 19	40	-35	333	-27	me m, ABH	284			16.4
✓ 15 68 1 19	50	-27.5	341	-27	me m	13			(8.1) 16.7
✓ 16 55 3 19	50	-32.5	337	-29					17.0
✓ 90 21 19	50	-42.5	325	-31	STm, me m				
✓ 16 95 6 19	52	-42.4	325	-31	25 B, ABH				18.8
22 87 5 19	55	-30	339	-29					
✓ 25 34 9 19	55	-30	339	-29	P.K., A.B.H.				
✓ 74 47 19	50	-47.5	319	-31	STm				
✓ 14 89 4 20	00	-30	339.3	-29.6	25 B, me m, FW.	146	69	17.5	



Quality	Remarks	Known	Q7 No.
5	Bailey: old 11, new 157 Menzel 16		
4	n fuzzy, not faint trailed		4284
	Blank bkg round.		
	trailed		
	poor background, but images better than 16620		
	st. trailed <del>to</del> back to stars		4188
	at	1 mpc + 1? 120 n.s.	
4	neb count B.H.		3116
4	neb count B.H., not 90° off axis sl. Trailed		
	Look at star		
5	Bailey: old: 11, new: 111	1 mpc	4456

not too faint, but ok

Exp. 240 min.

33 plates







Third Extension of Milky Way Borders

$\lambda 200^\circ$  to  $340^\circ$   $\beta +20^\circ$  to  $+30^\circ$

$\lambda 200^\circ$  to  $300^\circ$   $\beta -20^\circ$  to  $-30^\circ$

13 plates  $\pm$  quality 3



Plate No	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	$N_T$	$N_{25}$	$N_9$	Plate Lim
66									
✓ 21422	5 <sup>h</sup> 30 <sup>m</sup>	-32.5	203.6	-28.0					
✓ 21450	5 28.5 30	-32.5	203.8	-28.8	DOB (90) JS			922	17.6
✓ 17403	5 31	-27.5							
✓ 22221	5 38.7 40	-37.36	210.0	-28.1	DOB (90) A.B.H.			324	
✓ 18281	5 50.1 50	-37.23	210.4	-25.9	CQB, 47mX		950	468	17.3
✓ 18168	5 49.8 50	-42.32	216.0	-27.3	CQB, 47mX		1933	907	17.5
✓ 18018	5 50.6 50	-47.33	221.5	-28.3	CQB, 47mX		1931	1057	17.7
✓ 16318	5 50.1 50	-57.37	232.9	-29.9	CQB, MEM, ABH	606	551	278	17.4
X 16641	5 50.5 50	-62.47	233.8	-30.3	MEMS	347	274	104	17.2
✓ 4580	6 00	-30	204	-21	DOB, 700 47m				17.5
✓ 25195	6 00	-30.0	203	-22	47, ABH				
✓ 4588	6 00	-35.0	208	-23.9	DOB, MEM	601		275	17.8
✓ 21568	6 00	-52.5	227.4	-28.0	DOB, 90, A.B.H.			721	17.9
X 16645	6 00	-75	252	-29	MEM				
X 4923	6 00	-77.5	256	-29	MEM (Comp MEM)				
✓ 16315	6 00	-77.5	255.9	-29.4	(MEMS) MEM, ABH	195	176	82	17.9
✓ 7193	6 00	-82.5	261.8	-28.8	MEM, ABH	195	172	72	17.4
✓ 19025	6 10	-32.5	206.9	-20.5	DOB, 47mX			457	17.4
✓ 19030	6 10	-37.5	211.9	-22.1	CQB, 47mX		966	485	17.4
✓ 19024	6 10	-42.5	217.1	-23.7	CQB, 47mX	1215	1000	454	17.6 Sig.
✓ 19028	6 10	-47.5	222.1	-25.0	CQB, 47mX	1360	1213	547	17.5
✓ 16324	6 20	-62.5	239	-27					17.8 Sig.
X 15870	6 20	-65.0	242	-27	MEM				
X 16698	6 20	-67.5	245	-27.5	MEM	333			



Quality	Remarks	Known	Clx no.
	→ "Exposed on A21418 by mistake"	5 HGC + HGC 2061	
		2 LC + 1 HGC cl.	
5	Plate tends toward double images (HGC)	1 LC	
8			
7		1 HGC + 1 ms.	
5		2 HGC + 1 ms, 6 HN + 1 HN ng; 1 m.g.	
1	Neb. lim 17.1	17 HGC + 2 cl.	H.A. 105
	A. of 1458, 28195 etc.	9° 1 LC	
	double images		
3	Neb. lim 17.7 <i>fuzzy, but</i>	2 HGC, 5 LC + 4 cl	H.A. 105
1	Neb. lim 17.3	1 HGC + 1 cl. 1 LC 2 HGC + 1 LC (+1 ms.)	170 min. exp. H.A. 105
6			
7		2 HGC + 1 ms.	
6		1 HGC ms 1 HN + 1 ng	



Plate No.	$\alpha$	$\delta$	$A$	$B$	Examined by	$N_T$	$N_{25}$	$N_9$	Plate Len	2
68										
6368	6	20-72.5	250.1	-27.9	mEm	462	389	180	17.7	6
8284	6	30-42.5	218	-20						
19144	6	30-42.5	218.2	-20.0	COB, SFML	515	219	17.4		6
15874	6	30-47.5	223.4	-21.8	COB, SFM	394	195	17.4		
16416	6	30-57.5	233.7	-24.6	COB, SFM	929	432	17.3		4-
23515	6	35-47.5	224	-21	JS, ABH					
14109	6	35-62.6	239	-25	SFM				17.14 Sq	
4256	6	35-62.6	239.6	-25.3	SFM, SFM	458	400	199	17.5 Sq	
15081	6	35-62.6	239	-25						
21467	6	40-52.5	228.9	-22.1	COB, SFM			184	17.3	
16758	6	40-67.5	244.6	-26.2	mEm, JS	1292	1093	559	18.3 Sq	
17211	6	45-85	264.5	-27.6	mEm	340	308	156	17.7	
16699	6	50-67.5	245	-25	mEm, ABH	522				
16411	7	10-57.5	235.6	-19.2	FWW, SFM			178	17.3	
23498	7	10-57.5	236	-20	JS, ABH					
23543	7	10-57.5	236	-20						
17256	7	20-72.5	251.2	-23.5	mEm	548	484	178	17.7	
17312	7	25-62.5	241.2	-19.6	mEm	453	422	202	18.1	
8214	7	30-72.5	205							
17316	7	30-77.5	257	-24	mEm, ABH	440				
17250	7	40-67.5	246.8	-20.2	mEm	562	520	233	18.0	
22356	7	53+15.0	174.3	+22.4	COB 90				18.2	
19921	8	00+10	180	+22	COB, FWW			319	17.2	
4626	8	20-72.5	253.0	-19.4	SFM	42	34	18	17.5	



Quality	Remarks	Known	Qx no.	
6	neb. lim. 17.5	3 nOC + 5 cl 2 dc	HA 105	
6		1 nOC ns.		
3		1 nOC cl. 1 HN lpg		
4-5		2 nOC	3041	
			none.	better than 15874
	quite poor			
8	neb. 17.4 best of 3	11 nOC + 1 cl	HA 105	
	covered by 14109, 14256 faint images, fuj34			
4	neb. lim 18.0	10 nOC + 8 cl	HA 105	
1	neb. lim 17.6	1 nOC + 1 cl	HA 105	
	better than 16411		4208	
	better than 16411		4211	
2	neb. lim 17.5	1 nOC	HA 105	
9	neb. lim. 17.8	3 nOC, 1 dc	HA 105	
<del>7778</del> 8	neb. lim. 17.7	3 nOC, 1 dc	HA 105	Exp: 165 min
		<del>3 nOC + 1 dc</del>		
		<del>4 nOC, 1 dc (90)</del>		
3	HA 105	1 nOC		



70

Plot No					Examined by NT	N <sub>25</sub>	N <sub>9</sub>	Plot Line
173988	30	-77.5	258.0	-21.5	m m d, <del>JS</del>	459	432	247 18.8
158628	40	-10	204.2	+20.7	7 m, 7 W W		273	17.7
158678	50	-2.5	198.9	+26.9	M.E.M., F.W.W.			
174088	55	-82.5	263	-24	IGB, ABH			
246149	00	-15	211	+21	<del>JS</del>			
146989	00	-90	270	-27				
198749	05	-10.0	208.0	+25	7 W W, 20 B		476	17.5
199549	15	-5.0	204.7	+30.7	F.W.W., 20 B			
199819	30	-10	212.4	+30.3	7 W W, 20 B		173	18.0
239649	20	-15	214.2	+25.1	P.K.			
240239	40	-15.0	219	+29				
230799	40	-15.0	219	+29	JS, ABH			
230799	40	-20.0	222.2	+24.8	P.K.			
240599	40	-20.0	223	+26	JS, ABH			
251819	40	-25.0	227	+21.5	m c m 7 W W, 20 B 90	241	110	17.6 +10
2243770	00	-20	227	+28				
2519610	00	-20	227	+28	JS, ABH			
2162410	00	-25	229.7	+24.3	20 B, ABH		549	18.5
2159710	05	-27.5	232.4	+23.1	20 B, ABH		378	18.2
434210	10	-32.6	237	+20	m R A			
1647310	12	-32.6	237.2	+20.3	7 W W, 20 B, 20 B, JS		267	17.8
2406410	12	-32.6	237	+20	P.K., ABH.			
2308110	20	-20	231	+31				
2405110	20	-20	231	+31	JS, ABH			
472010	20	-25	233.7	+27.2	m E m 7 W W, 20 B	416	193	17.9 day 18.3 week
1588310	30	-27.5	237.7	+26.2	m E m 7 W W, 20 B	563	386	17.4
2070810	35	-30	239.5	+24.5	20 B, ABH		141	18.0



Imaging	Remarks	Known	Az no.	71
7	H A 105, Neb. Lim. 18.6			
4	Plate lim: old. unreduced sequence.			
	fuzzy <del>poor</del> <sup>poor</sup> plate <del>not</del> worth searching		4344	
4.5		1 H $\alpha$ C 4 H $\alpha$ C cl 1 L C 1 H $\alpha$ C ns; 9°		
3.5	Exp. 175 min		4251 4259	
3.5	better than 24033 Exp. 102 rich for low		none 4263	
	Repeat many defects Better than 22437		Exp. 172 4421	
5	240 min exp. earlier marking removed	Stewart 24 9° - 5 L C	3073	
	Better imaging, defects	426	4265	
	trails, almost double im. better than 23081			
		9° - 2 H $\alpha$ C	Exp 220	
		9° 12 H $\alpha$ C, 1 ns 2 L C, 1 H $\alpha$ C = L C		
		7 H $\alpha$ C, 6 L C		



Plate no.	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	NT	N 25	N 9	Plate dim	24
72										
20 050	10 54.6 10 55	-34 49 -35	246.8	+22.4	LOB, ABH			137	18.0	
19896	14 00	-30	246	+28						→
21569	11 58.5 11 00	-29 48 -30	245.3	+27.6	LOB, JS			481	18.4	
24132	11 20	-27.5	245	+29	JS, ABH					
<del>21674</del>	11 16.1 11 20	-34 -35	252	+24	LOB, JS			338	18.2	
214694	11 20	-40	253	+20	mm				17.7	
20761	11 17 24.6 11 20	-39 53.6 -40	253.4	+19.6	LOB			206	18.5	
22545	11 22.9 11 25	-29 50 -30	250.8	+23.3	JS, ABH				17.94	
21676	11 22 57 11 25	34 57 -35	252.7	+24.5	LOB, LOB			382	18.3	
16950	11 38.9 11 35	-82.3 -82.5	267.8	-20.4	mmS	230	242	120	17.8	
22470	11 42.1 11 45	-34 49 -35	256.8	+25.7					17.8	
22449	11 45	-40	259	+21						
24732	11 45	-40	259	+21						
19253	11 49.1 11 50	-29 52 -30	257.1	+30.9	LOB, mm			978	17.7	2. Rhijn
23087	11 50	-35	258	+26						
23121	11 50	-35	258	+26						
25822	11 50	-35	258	+26	JS, ABH					
14693	12 00	-90	269	-26						
14397	12 04	-81.8	269	-26	mm	0				
20740	12 10	-35	263	+27	LOB, JS			150	18.1	
22387	12 10	-42.5	264	+20						
23560	12 10	-42.5	264	+20	JS, ABH					
23035	12 30	-32.5	267	+29	mm, JS					
20719	12 32 51.8 12 35	-34 51.1 -35	268.3	+27.1	LOB, JS	1494	1329	734	18.0	
20781	12 32 44.1 12 35	-39 53.0 -40	268.3	+22.1	LOB, LOB			374	18.2	



Quality	Remarks	Known	Ap. no.
		9 nOC	
	Discarded in obs. office		
		4 nOC.	
	Overlap A22545, a better plate		4273
	images a little poorer than 21 676	8 nOC	
		4 nOC	
		2 nOC, 1 LC? + 1 LC plan.	
	Plate with new planetary	9 nOC; 1 nOC 90°	
5	neb. lim. 17.7; HA 105	1 LC	
	double images		
	better than 22449 <sup>u</sup> but not a jewel		4361
		5 nOC, 5 LC, 1 Hel	
	terrible		
	not as good as 22470		4520
	<sup>horrible</sup> Not worth examining		see 14698: 9 <sup>h</sup> 00-90
5	<sup>horrible</sup> Exp. 270 min.		
	streaked full of defects		
	22387 fainter, 23560 better quality		none
		2 nOC 2 LC	
		2 LC, 25 nOC.	



Plate No.	$\alpha$	$\delta$	$\alpha$	$\beta$	Examined by	NT	N25	N9	Plate dim	2
74										
20871	13 00	-35	273.9	+27.1	200B, J			350	18.4	
21749	13 00	-40	274	+22	200B, J			258		
16413	13 10	-32.5	277.1	+29.2	FWW, J			457		
16458	13 20	-32.5	280	+29	FWW partially					
21839	13 25	-35	280	+26	200B			659		
21806	13 25	-40	279	+21	200B, J			422		
16888	13 26	-31.1	281.0	+29.9	200B, J	3798	3410	1924	18.2	
13036	14 30			+33						
15382	13 30	-32.5	283	+29						
3078	13 33	-30.4	283	+30						
14653	13 35	-31.0	283	+30	SS, ABH					
17354	13 40	-30.0	284.9	+30.4	FWW + mm			601	18.5	
14741	13 40	-30	287	+30						
15215	13 43	-30	287	+30						
21813	13 50	-35	287	+25	200B, J			421		
21760	13 50	-40	295	+20	200B 1 <sup>st</sup> ext (4 <sup>th</sup> qual.)			327		
23728	14 00	-30.0	290	+29						
20186	14 00	-30.	290	+29	200B			18.1		
24022	14 00	-30	290	+29	SS, ABH					
14797	14 10	-27.5	293.3	+30.7	MEM. FWW, 200B			251	17.9	
20191	14 15	-35	292	+23						
20681	14 15	-35	290.4	+23.5	200B, ABH			266	18.8	
15376	14 20	-30.0	294.1	+27.4	FWW. MEM			214	18.0	
13037	14 30	-27.5	298	+29	27m, ABH					
13039	14 30	-32.5	295	+24						



Quality	Remarks	Known	Ap. no.
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sl. trailed

4 nDC 1 LC n.s.

20 nDC + 2 ms nDC

13 nDC + 8 LC

3039

3067

10 nDC. 2 LC

4 nDC.

16 nDC, 20 LC.

66 H.N. 7 Hel.

Discarded in South Africa

Menzel 103

neither plate good, but  
14653 much better image  
quality, but not faint

7 nDC, 10 LC

4 Hel. 22 H.N.

17354 better

poor emulsion.

3 nDC 5 LC

3 nDC 2 LC

Interesting region

best of 3

4258

poor background, visible  
24022 better, a through  
maybe not a faint as 20186

3 nDC (+1 ms.)

6 LC + 1? (+2 n.s.)

2 nDC. 1 LC

Exp. 240 min.

Not recovered?



Plate no.

76

 $\alpha$  $\delta$  $\lambda$  $\beta$ 

Examined by

NT

N25

N9

Plate Lim 2

✓ 13039	14	30	-32.5	295	+24	M.R.D., ABH				
✓ 22416	14	40	-27.5	299.4	+27.3	ABH				18.26
✓ 25231	14	40	-32.5	297	+23	JS, ABH				
✓ 16531	14	50	-22.5	305	+30					17.7
✓ 23759	14	50	-22.5	305	+30	P.K., A.B.H.				
✓ 26416	14	50	-27.5	302.5	+27	P.K., S.S.				
✓ 13342	15	00	-25.0	306	+27	M.R.D.				
✓ 21604	15	00	-32.5	302.8	+21.3	ABH				
✓ 5362	15	00	-82.5	277.4	-22	ABH				
✓ 17401	15	00	-82.5	274.5	-21.6	M.M.D.	361	334	153	18.9
✓ 17532	15	00	-82.5	275	-21					
✓ 5365	15	00	-87.5	274	-25	M.R.D.				
✓ 17405	15	00	-87.5	271.5	-25.9	M.M.D., ABH	278	258	113	18.5
✓ 17592	15	00	-87.5	274	-25	M.M.D. in Ob. Office				
✓ 16948	15	10	-22.5	309.0	+28	ABH, C.D.B.	531	417	168	18.1
✓ 13017	15	10	-22.5	310	+28	M.R.D.				
✓ 21062	15	10	-25	307.4	+26.3	ABH				
✓ 15463	15	10	-27.5	307	+24	M.E.M., ABH	66			17.4
✓ 20131	15	25	-15	318.0	+31.5	ABH				
✓ 21639	15	25	-20	316	+27					
✓ 21941	15	25	-20	314.1	+27.3	ABH				
✓ 15472	15	30	-27.5	310	+21	M.E.M.	43			(17.8) 17.2
✓ 23751	15	30	-27.5	310	+21	P.K., A.B.H.				
✓ 21920	15	35	-25	313	+22.5	ABH				



Lim	Quality	Remarks	Known	Ap no.	
				4435	
				3105	
		better yellow emission but better		4229	
				4551	
3i	1				
		Stewart 3			
7		Neb. lim. 18.6	3 LC		HA 105
		Stewart 0			Double 'major
6		Neb. Lim. 18.1	2 nbc		HA 105
			2 nbc + 1 cl. 1 LC		
			2 nbc, 1 LC		
			4 nbc + 3 ns. no LC.		
			2 Helium + 13.3 mb		Helium + 1?
		132. exp min. exp			
			1 nbc-cl + 1 ns.		} both not too faint
		better than 15472			yellow background, but
			none.		



Plate no	$\alpha$	$\delta$	$\lambda$	$\beta$	Examined by	NT	N25	N9	Plate Lim.
78									
23084	15 48	-10	327	+30.5					
25391	15 48	-10.0	327	+30.5					
21081	15 47 28.7	-14 56.8	322.7	+29.5	DOB, F.W.W.			81	18.4 source
21951	15 47.5	-20 9'	318.5	+23.9	DOB, ABH			124	18.75
20204	16 05	-5	335	+30	DOB, ABH				18.2
16172	16 07	-77.8	287	-22.5	JS, AH.				
8485	16 12	-15	327	+23	7m, ABH	0			
20258	16 14.2	-7 58	331.6	+25.8	DOB JS			168	18.1
20252	16 15	-15	328	+22					
20963	16 12 44.9	-15	328	+22	DOB, JS			144	
20056	16 20	0	342	+30	FWW, DOB				17.8
19453	16 29.1	-4 59	338.5	+25.8	DOB FWW			174	18.0
5398	16 30	-82.5	276	-24	7m	0			
20711	16 28 38.6	-04 49.2	338.6	+25.9	DOB, JS			84	18.0
4595	17 12	-77.8	283	-22	7m				
4854	17 15	-77.6	283	-22.5					
4862	17 10.1	-77 38	282.4	-22.7	7m, JS	96	80	43	18.3
4599	17 50	-72.5	289	-23	MRQ				
16536	17 50	-72.5	289	-23	JS, ABH				
4588	17 52	-67.5	294	-22	7m	3			
17470	17 52	-67.5	293	-21	poor ex. 17470 only of (equal 1)				
4607	18 00	-77.5	284	-25	7m				
3442	18 00	-82.5	277	-26	MRQ				
17473	18 54.1	-82 36	278.1	-26.3	7m, JS	51	44	23	18.0
17039	18 00	-87.5	274	-23	JS, ABH				17.8



Quality	Remarks	Known	Qx no
	many defects		4464
		1 NOC + 1?	
		none	
	Bailey dd 0, new 2		
	double images		
	Poor net. quality		
1 (HS)	Exp: 200 min.		
	Better images than 19453		
5	Exp: 240		
	Washed		
3	HA 105 <u>u</u> soft.	8 LC	
3 i	Stewart 5 Exp: 240 min.	both. w. poor	3107
3 i	Exp: 270 min.		
	Stewart 0 Exp: 241 min		
3 i	Exp. 203 min.		
1	HA 105	2 LC	

Both poor, 4598 images  
w. soft.



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80

Plate no	$\alpha$	$\delta$	$\lambda$	$B$	Examined by	N <sub>T</sub>	N <sub>25</sub>	N <sub>9</sub>	Plate lim	2 <sub>u</sub>
14182	18 01	-77.5	284	-25						
14184	18 01	-77.5	283.6	-24.9	mEm, JS	261	246	128	15.6	
4611	18 20	-67.5	295	-24	mRQ, JS					
X 4609	18 22	-72.8	289	-25	sfm					
X 4202	<sup>18 19.2</sup> 23	<sup>-67.39</sup> -67.7	294.6	-23.8	sfm	67	51	27	18.9	
14208	<sup>18 24.0</sup> 28	<sup>-72.39</sup> -72.8	289.2	-25.5	sfm, JS	73	66	37	19.0	
4728	19 00	-67.5	296	-27	sfm, JS, ABH					
X 4724	19 00	-72.5	290	-27	sfm					
X 4726	19 02	-77.5	285	-28	sfm					
X 16543	19 02	-77.5	284	-29						
X 18383	19 03	-59.8	305	-27	sfm					
X 16059	19 03.9	-67.7	295	-27	wqz 1 <sup>st</sup>					
246113	19 04	-67.7	295	-27	P.K., ABH					
X 24256	19 30	-20.0	347	-20						
24373	19 30	-20	347	-20						
44712	19 30	-22.5	345	-21	mEm				18.1	
44753	19 40	-25.0	343	-24	mEm	26			18.7 19.2	
44891	19 40	-30	338	-26	mEm				(19.6) 17.2 inches	
7447	19 50	-47.5	319	-31	sfm, ABH					
76945	<sup>20 01.0</sup> 20	<sup>-85.115</sup> -85	275.2	-29.5	mEm, ABH	544	1457	663	18.0	
X 14394	0 00	-90	273	-29	sfm+mEm					
14996	0 00	-90	273.0	-27.7	mms, JS	326	291	123	17.4	

} Both very poor. Ex. 4726  
only if necessary 2, 17.3



Exp	Quality	Remarks	Known	Ad no.	
		Exp 190 min			81
1		Neb. lim. 17.9	2 LC		HA 105
5		Exp 217 min			Stewart 4
5		Stewart 2 Exp 241			
9	3	HA 105	6 MDC, 15 LC	-	
0	6	HA 105	1 MDC, 9 LC		
		Stewart 10 Exp 240 min			
	3	Stewart 6 Exp 240 min			
	3	Stewart 10 Exp 240 min			Trained, but better
		not faint		3113	
		Bailey: old 5, new 20			Exp 120 min.
		Exp 240 min			
		Exp 170 min.		none.	
				4302	
3+		Exp 265			
		see 2 <sup>nd</sup> extension			
5		Bailey old 11, new 111			Exp: 240 min.
8		Neb. lim. 17.9	1 MDC		HA 105
		Exp. 240			
1		Neb. lim 17.2			HA 105











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