

DOUGLAS FAMILY

ALLIE U. DOUGLAS

Travel Diary  
1955  
(IAU - Dublin)

2303.24

Box 7

File 24

1955

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Switzerland  
Westmorland  
Edinburgh  
Norwich  
London  
Dublin IAU

Alfred Douglas

Summer 1955

Can. Passport 4-110095

1953-

Aug. 1.

£ 10 + [3]

Am. Express Chq. \$ 120

250

U.S. cash. 56

Can. cash \$ 60  
65

1955

July TCA Mil-London. #

Shannon-Mil. 486.90

BOAC - Swiss Airways.

London Berne London 78.90

Boac - Aer Lingus

London - Dublin 22.70

CNR. K - Mil - K. 10.90

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599.40

march deposit on Dublin

room. Hotel Wicklow £ 5.1.0

July. RASC conversazione 15.0

Aug 1

Petty cash on train 7.15

Aug 2. Case # 50  
Sack # 60 + # 10 # 53.

1955

Aug 1. Taxi	50	Imperial	15	\$ 2
Porter	45	Supper	65	65
Windsor Hotel				1.10
				5.00
2. Hat (Simpson's)		for 2 shoes	later	7.55
				9.35
Bkfst	50	Munich	15	Pine
				10
				5
				30
1. 2 Mentor like		Sakewitz		(PP)
				1.20
Orangeade		with PP		.40
2. Tel.	20	Kresge pen	40	.60
Lunch	85	milk	10	.95
Porter	25	Car to Dorval	125	1.50

\$ 21.85

to p. 17

Hotel Gurten, Bern  
 Sfr 23 per day all included  
 = \$5.35 per day

1955  
 Aug  
 3

	£	s	d
Prestwick <sup>8:30 am</sup> - Airdrie + post		5	8
Tea + Bus		2	6
London Airport 11 <sup>10</sup> am		5	-
Taxi to 31 Dames		3	9
Bus <sup>4:45</sup> Taxi to U. Col. <sup>5/9</sup>		6	8
Taxi to Waterloo <sup>6/6</sup>		5	6
Bus to Airport 10/ - + Tax		10	0

4

£ 1.19.0

Changed \$40

Travel @ \$1 = 4.26 1/2  
Chgs = 170.60

Cost of room & with bath

\$70.23 per day = \$5.35

1955

Aug 4

Berne

S. France

With Dr Walther & Min

Jakobalen (Norway) to Schlen 3.00

Dr Walther to dinner 6.50

5. P.C. 2 + 25<sup>0</sup> Stamps 2.60 5.10

Bahn + tram tickets 10.-

Trip to Lake Thun Oberfelden 10.-

Trip to Friburg 10.-

Coffee .90

6. 10 punn-Keyhollen-cig box <sup>2.50</sup> 25.-

2 briar pipes 6.-

cafe "pe" 2.-

Schwatzsee tea + 2.-

Vin rouge 2.50

3 FOU reception 4.-

7 Sunday Vin rouge 2.40

Coffee with Forsaith 1.50

90.90

Aug 11

Charged \$5.50 Am Sap. Chgs.  
in Berne @ 4.26 1/2  
= S. fr. 213.25

1955 Berne

fund 90.90

8 Mon. Vin 1.70	3 Tea 1.20	Bun 1.50	4.50
Bus trip to Munchalil re.			20.-
9 Tues. Stamps 1	Types Bun 2	Tea 40	3.40
Vermouth 1.70 + Killers 1.20			2.90
10 Cafe' Beer 1.50	Vin 2.20		4.70
11 Thurs. 3 straw bags			9.90
Berne cards (sets)			3.60
Candy 3.30 Cheese 5.50			8.80
Choc liqueur 1 Beer 1			2.-
6 Haks 90			5.40
2 Cushion covers			5.00
1 Gun metal chain			4.80
2 Beer (Jeanne Choton)			80
2 White metal spoons 9.50			9.50
Stamps 50 Donation Relief 5-			5.50
Hotel Guntzen Berne beer 9 wine			2.50

204.00



Total Swiss fr. 170.60  
 213.25  
 383.85

1955

fr 184.00

Hotel Gerten 178.00  
 Bier + Lunch for R. Remdas 6 7.  
 12. - Bier + Tips + Bahn<sup>130</sup> 2.30  
 Taxi 5.80 + 50 6.30  
 Bier + choc. to take to London 3.70  
 381.30

Swiss Cash left - MIL.

Miscel. expenses 2.55

~~#90~~ = 383.30

gifts 5. fr. 85 = #20

1953  
 Aug 12. Cash £6.0.0 }  
 £5.1.0 }

Charged £10 Am Express = £ 3.11  
 add 13 approx  
 Total £ 16.11.0

1953  
 Aug London. fwd. £ 1.19.0

12	Airplane 2.00 cigs	1. - -
	£ 3-4-0 in exp	5. -
	Airways Coach	3. -
	Taxi to Danvers St	4. 0
13	Bus 6+10 stamps 8+5+1/6	-
	Ticket to Edinburgh	6. 3. 4
	Telegram to Dr Morrison (see 16th)	3. 2
	Lunch Nat Gal	12. 0
	Cable to Gof Emp	3. 6
	Milk 7 1/2 Tea 1/6 Buns 3 Super!	2. -
	Tip to Lous cage Canada H	5. -
	Supper - Crosby Hall	8. -
14	Taxi to tractor 7 tip 1/4	2. 6
	L.D. Call to my H. on 13 <sup>th</sup>	9. 0
	Dinner on train 7/4. 9 Cider + 9	1. -
	Ticket Oxenholm - Kendal	1. -
	County Hotel Exp 1/4	1. 3
	Tea + sandwich	
		£ 12. 2. 9

\$50 Am Expr.

= £ 17-15-0.

add 16. 11. 0

Total £ 34. 6. 0

16. 11. 0

16. 5. 2

0. 5. 10

Cash 5. 0. 0. 1

5. 9

18 3  
29  
18. 6. 0

1953  
Aug.  
15

Tue. £ 12. 2. 9

Carstaker at Kewal Tennis Club 2.  
8 Lakes Buns 10/ K B Bradenall 17 11. 7  
Woolworth Buns 2/6 net 2 Hair D<sup>c</sup> 5.  
Tea<sup>b+2</sup> Lynch 7/3 + 7 8. 6  
Entrance + woodwork + decoration 1. 7  
Tup on bus + Bownen Bus 3/6 Paper 1. 6  
Supper Steamers at Hotel Snack 2. 4  
Beer 1/4 PC 1/4 3.  
16. County Hotel £1 per night bkb. 2. 2.  
P.C. 1/6 misc<sup>b</sup> in old Dairy 15/4 1. 6  
2 sandwiches 1. 2  
Tea on Train 2/6 + 4 3. 10  
16. 5. 2  
(Telegram to Dr. P. Morrison) 5. 9  
Edinburgh taxis 2/6 + 2/9 5. 3  
Wheatbuns 4/6 Supper 3/3 + 6<sup>d</sup> 4. 1  
Mrs. Clouston 15 E. London St 1. 1. 0  
6 + 6 2 nights 2. -  
George Hotel Porters 1 + 1 2. -  
18. 3. 3

Cash - (1+12+3) = 16.2.9

Bank of Scotland Prince St.  
 #20 Am Embroidery

@ £ 7.1.5  
 2/- of for service!

Total £ 41.7.5.

1958  
 Ang. fund £ 18.1.3  
 17 Wed St Margaret's Hotel (deposit) 1. - -  
 3 sets hokp. + 1 puddle. 9.9  
 3 Scotch wood ties 8/11 1.6.9  
 Bus 9 + 4 + 1.0  
 18 Bus <sup>2+3+3+2</sup> 1. -  
 Lunch Crawford 5.0  
 C & A stores - Plastic Raincoat 8. -  
 Jemmer's 6 pr pattern stitd stocking 4.5.3  
 3 nylon 12/11 3 lace 11/6 1.6  
 Fruit 1. -  
 Postage 1. -  
 19 Fri Bus <sup>3+3+3</sup> Bus <sup>1/2</sup> Soap <sup>1/4</sup> 3.3  
 Beer <sup>1/2</sup> Dinner at Hotel 1.3  
 20 Bus <sup>3+4+3+6</sup> Lunch (MacKies) <sup>3/6</sup> 4.10  
 Plums <sup>1/2</sup> Buns <sup>3</sup> Envel. <sup>6</sup> 1.9  
 Cider (Bulmers Woodpecker) 2.6  
 Tel SW 2 TW <sup>6</sup> Dr Morrison (Self) 2.3  
 Stamps .5  
 Sleeper to London

£ 25.14.9

Cash. £ 8-15-6

1955

ford. 7/ 27. 7. 3

Aug 21 Sun - Miscellaneous 2.9  
Bar<sup>3+2</sup> Coll<sup>2</sup> Sides<sup>2/-</sup> 2.6  
Lunch 7/-  
Bus to Selkirk 7.-  
Aug 22 Mon. Mond 5.-

→ St Margaret Hotel  
18 Cranmillan Park 1/4 18/6 3.18/6

Bar<sup>2+3</sup> Stamps 1/6 Tel<sup>3</sup> 2.3  
Station bag 1/- Porter 1/-  
Supper 4/3 + 6 4.9  
[Sleeper to London 10 PM - 6 AM]

Aug 23 Tues. K's Hotel. Bkfst 7.3  
Tip<sup>6</sup> Bar<sup>4+4+8</sup> 2.0  
Lunch 1/5 Milkshake<sup>10</sup> 2.3

Victoria Queen's Demos<sup>4/-</sup> 4.0  
Gogarty's Sackville St<sup>2/6</sup> 2.6  
Musical Show 8/6 Tea at Aug<sup>8/6</sup> Mon<sup>8/6</sup> 17.-

Aug 24 Barclays Bank - Norwich

£40 Am Express

- 2/6 Service Charge

~~£40~~  
@ 2.79 = £ 14 - 4 - 2  
- 4

Total £ 55 - 11 - 3

Cash £ 13 - 11 - 9 - double check

Cash 12 - 13 - 4 - Have

18/3 = 20/3

1957

Aug

ford

£ s d  
34 14 0

23 Tues. 2 cotton blouses 15.0

Beer 1/10 Tip 6 Rose 2.4

24 wed Tip 3 Taxi 5/- Paten 2/ 7.6

Gr Northern (KmX) Hotel 1. 15.0

Ticket to Norwich 3/6 1. 16.0

arr. Norwich 12<sup>10</sup> pm. Lunch 4.0

Tel<sup>3</sup> Bus 4<sup>1/2</sup> + 4 + 3 + 3 + 4 + 4  
Bag 1/- 3.0

Taxi to 2 Christchurch Rd 5.0

7m D. I. Edington widow of Arthur John E.  
1<sup>st</sup> cousin of Arthur Stanley E. -

25 Bus 4 Tea 9 1.0

26 Mind 5/- 5.0

Lunch on train to London 7<sup>10</sup> 9.0

Taxi to 31 Danvers<sup>80</sup> - Tip 6 9.0

Beer + chess<sup>2</sup> / Tea 5 Bus 6 + 6 3.6

Ice cream at Tea House of my room 6

27 Taxi to Air Terminal 7/6 Coach 10/- 17.6

Tip for Hermes woman 2.0

£ 100.0.6

Cash £ 12-13-4

1955  
Aug 27

fund. £42.9.6

Dublin airport coach	2.
Taxi to Hotel Wicklow 1/6	4.
Lunch	5 6
Porters 6 + 1/-	1 6
Registration 1A V - Dinner	1.0-0
Tea 1/6 Abbey Theatre 8/-	9.6
Supper 4/6 Beer 1/6	6.-
Stamps	1.6

Aug 28 Sunday. Col. St Patrick	2.6
Lunch 2/6 Beer 1/-	3.2
Bus to Glendalough	8.6
Pepsi 4 Supper 4/6 Tea 6	5.6

29 Mon. L. Newmarket	5.6
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30 Paper 2 <sup>d</sup> + 2 <sup>d</sup> Tel 3 Tip 6	11.
Lunch 3/6 Cider 1/6	5.-
Supper 3/3 Stamps 1/8	4.-

£46.14.8

Aug  
31

fund.

14  
146.14.8

L. at C K's at home -  
 Tea at O'Kelly's -  
 Gate Theatre - Carmilla. 5.3  
 Tea + lunch at Gale 1.-

Sept 1. Thurs. Lunch the Barley 7.0  
 Ordered grey suit for 15.6  
 Bought grey socks hdkf. 4/11 (3) 6.11  
 Saffers - tea + sandwiches at hotel 5.6  
 Tea on Dawson St. 1.-

Sept 2. Fri. Paper 3 + 5ms 2/4 .6  
 Lunch with F. O'Riordan. Saffers 4.-  
 Beer at Wicklow 1.6

Sept 3. Paper + stamp .6  
 Lunch with May K + collect .-  
 Saffers 7 + cocoa 2.9

Sept 4. Sun Train to Malinbeg 2/6 3.-  
 Tea at Cong + Whiskey, Trilks 18.6  
 Beer at Wicklow 3.-



Bank of Munster & Leinster  
Gravelly St. Dublin  
am Express \$50 = £ 17. 16. 3

Total to date      from 55-11-3  
£ 73. 7. 6

Cash. £ 4. 8

Cash £ 2. 13. 6

1955  
Sept  
5 Grey 2 piece all wool jersey 8. 12. 3  
2 Hdkp P & J 11. -  
4 shoulder ornaments 8/6 + 2/4 1. 7. 6  
Lustine 2. 6  
Lunch 4. 6  
Tel<sup>3</sup> + Comm<sup>2</sup> 3/3 3. 6  
Ball pen 4. -  
Stamps 1. -  
"Comm. 43" Sherry 4. 6  
Wicklow Hotel £ 6. 15. 6  
Dining Room 5. -  
maids 5. -  
'Willie' 2. 6  
Paper<sup>3</sup> Tel<sup>3+3</sup> 4. -  
Taxi<sup>3/2</sup> + Porter<sup>1/-</sup> 4. -  
Ticket to Limerick 1. 3. 4

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£ 69. 10. 0

Cash on train  $\frac{1}{2}$  - 13.6  
 $\frac{2}{2}$   $\frac{6}{6}$   
 $\frac{6}{6}$  ✓

Cash  $\frac{5}{9}$  ✓

Total 73.7.6  
 Accounts 72.9.0  
 Misc 18.5

1955  
 Sept  
 6 Tues

10

69-10-0

Perryvale Ale Rathdowney 1.6  
 Limerick Lunet Cruise Hotel 6.6  
 PC<sup>3</sup> Stamp<sup>3</sup> Buses<sup>1/2</sup> Tea<sup>1/3</sup> 2.9  
 3 Hdkys 7 1/2 Green beads 4 1/6 12.6  
 Vicks 1/6 Bag + porters 2 1/2 - 3.6  
 Chickens speps<sup>10</sup> + 2 Tel to airport<sup>1/2</sup> 2.-  
 [ing 31 Dublin Nylon fill 5.6]  
 Bus to airport - 3/ Porters 1/ 4.0  
 g.g. at Shannon<sup>150</sup> or 10.6  
 Snapper " " 3.2  
 Ale at Shannon Str 12 1.3  
 = 72.3.3  
 Cash bal - 5.9  
 = 72.9.0  
 Miscellaneam 18.6  
 #204. = 73.7.6

Total Spent.

Travel p. 2. \$ 600

Dublin Room dep. 35

Services p. 7. 90

GB & Ireland p. 16. 204

Car. 26

\$ 955

AFW refund

Chargeable to Edlington Research

. Ocean rc 200

Kendal & Edin } 80

4 Norwich } 28

1955  
Sept 7 Gaudin coffee 5<sup>00</sup> fund. \$ 21.85  
Dowd. Tans 1<sup>25</sup> Peter<sup>10</sup> Bay<sup>10</sup> . 10  
Tea all morning 4<sup>0</sup> Tom & Dec. 4<sup>0</sup> coffee<sup>10</sup> . 90  
1.55

Cash 5/9

\$ 56 USA

\$ 56 + 50 Can.

# Purchases for Customs list

Savon leather cases S. fr 25

papers 6

3 straw bags - 10

Halkfs & Cushion covers 10

2 brooches 9

perme 3

S Fr 68

\$ 14

Halkfs 2 - 9.0 Savon

Ties 1.7.0

Knives 8.0

Shoeking 4.5.0

Silk halkfs 18.0 Dublin

Wool suit 8.12.0

4 ornaments 1.7.0

Halkfs 3 Linnick

Beads 5

2 blouses 15 London.

Fr 114

= 51.

Total \$ 65.

19.1. 10/6

1.50  
66.50

1955

Berne Council (FAS)

Kendal

Edin

Norwich

London

Dublin (FAS)

1955  
Aug 2 Durnal.

off 4<sup>10</sup> pm 19000' to Goose Bay  
S. shore to Cap Chat - saved.

ok to Sept 2/5.

Goose Bay at 7<sup>10</sup> EST

3 hours flying!

Sun getting low under blue and  
opal + dark grey clouds.

Lovely sunset + moon rise

off 8<sup>15</sup> (9<sup>15</sup> at summer time)

7<sup>h</sup> 20<sup>m</sup> to Prestwick

at 17000, 19 + 21000 ft

1<sup>c</sup>. Prestwick at 3<sup>45</sup> am EDT

or 8<sup>45</sup> GST.

Summary at 1<sup>am</sup> EDT skip at 1<sup>30</sup>

arr Prestwick 3<sup>30</sup> am EDT = 8<sup>30</sup> <sup>or 6<sup>30</sup> GST</sup> GST

off 4<sup>45</sup> = 9<sup>45</sup>

arr - London 11<sup>10</sup> am.

Flax 19006  
SF  
man Hennes at Anvers + to 31 Durnal

Aug 4

Dr Walther ELSA  
12 DÄHLHÖLZLIWEG  
Bern

Aug 5 Dr Stettler

Dr. Stettler - v. Albertin  
Museum historique  
Bern

1955 To Miss Col. Gomerst to see  
Prof Dingle. Sent Mrs D. Morrison  
expects reply before Aug 12.  
Tel. him on return WPL 3581  
(104 Downcourt Rd. Purley.)  
May advise me to go to see Dr Morrison  
at Edinburgh.  
(also see Sir E T Whitaker 48 George Sq.

Aug 4. 8<sup>30</sup> am Waterloo air Ter. & to  
(Central) London Airport - Swiss air to  
Bern. views of coasts & of Jura & Lac  
Biel - landed on Grass Pt S. of Bern -  
Dr M Steiger met me & up to Gurten A  
Lovely views of Bern & surrounding hills  
fields forests - Gurten 2800 ft.  
River Aare winding round city

Aug 4. Dr. Elsa Walther drove  
Jakkebeln (Oslo) + me to Schloss  
Jegenstorf to N.E. valley farms  
typical home + barn under one large  
overhanging roof of red brown tiles.  
flowers - red geran. phlox, Zinnias  
roses + every where - 3 Rembrandts  
+ nice old house (central tower +  
4 corner towers - carp pond.

Aug 5. Dr. Steiger + Walther drove  
6 of us to Lake Thun + Schloss  
Oberhofen - 12<sup>th</sup> cent central tower  
+ old gate + lake wall, lovely formal  
gardens - ev. room a period museum with  
Vin + choc. <sup>stone figures,</sup> ~~houses~~

Aug 6 To Bern to shops (leather)  
+ cath + arcade + old clock 12<sup>am</sup>  
with march of bees.  
In bus to Schwytzersee SW  
of Fribourg + tea + walk  
round lake off high rocky mt  
wild flowers - Black throat  
old + new Fribourg - liked  
Univ. better.

Sun 7. Talked with Bowie

Comm. IFVW.

Large Bus trip to W + NW  
by old walled towns + Neuchâtel  
+ 2 smaller lakes.



1955

Aug 12 off from Berne Airport green  
from runway - 3:15 pm  
to London - 6:10 6:50 hr  
arr. London 6:25

(To 31 Danvers St.)

Aug 13 Sat to Can H. closed but 2/6  
brought letters from old poles  
Sunday for Dr. Morrison idm

Aug 14 left London 11:05 am  
arr - Kendal 7:30 pm

County Hotel opp. stu.  
walked up Strammongate St  
over Strammongate Bridge  
& saw Strammongate Hotel  
old grey stone arch & old  
bdy behind passage was

Prof Gerald Graham  
Bay 8372  
49 Notland Sq.

the Strammongate School  
under Bryan Lancaster  
Trust. Friends gave it  
up about 1930 <sup>1930</sup> & the  
Borough took it over about 6  
years later for a Borough Boys  
school. New Headmaster  
(from Midlands) is Mr Foss,  
who lives at Notland just  
outside Kendal.

The caretaker took me  
into the Hall - old dark

woodwork recently painted  
pale pink + white +  
deep crimson long curtains,  
Good quad + large  
playing field to west. High  
grey stone walls. Several  
halls. Headmaster's house  
prob. The one to the street  
not now part of school.  
See Mr Wilson (Quaker)  
head of Dry Salter's firm  
also Mr Brimthorpe (85)  
old Quaker who remembers  
early days of school, i.e.  
Eddington's father's time.  
There is a Dalton House  
+ an Eddington House  
originally boys residences  
beyond Strammigate Bridge.

+ to right from school -  
now nursing homes of  
Bryan Lancaster Trust.  
Engine of A.H. Eddington  
or A.S. Eddington.

Borough Hall with clock  
tower at top of hill +  
down cross street.

A Museum just to left  
of Hotel.

Take bus to Bowness + get  
boat up Windermere to  
Amble + then bus to W.

HAROLD CREWDSON WILSON.

Cairns College Camb.

was invited to introduce him  
sponsor presenting him to the Mayor.

R.A.S. of <sup>PM</sup> <sup>AM</sup> R.A.S.

Janssen RS medal. H. Draper

In Mayor's Room Town Hall  
inset in wall as above  
but no inscription yet to tell  
what they are.

on side wall Katharine Parr's  
prayer book. 8 or 10 fine  
Romneys. He was born near  
Kendal + lived here for many  
years.

Photo of <sup>D<sub>2</sub></sup> Howard Sommerville of

Kendal ( + Mrs Ernest ) + other  
receiving Freedom of Borough  
Town Clerk to show me photo  
of ass - tomorrow

Saw Mr Wilson who introduced  
Ed. to the Mayor at the Freedom  
Ceremony. In his safe the  
Minutes of Bryan Lancaster  
Trust. He showed me the Anker  
Meeting House (one of largest  
in England) almost opp.  
Stramondale School -  
also Eddington House,  
grey stone facing river  
double bay windows - now  
a maternity home.  
The old school closed in  
1930 due to depression +

people could not send  
their sons to boarding  
school. He showed  
me the house (now printers  
offices & elect. offices  
beside old School entrance  
arch where Headmaster's  
home was - + entry

Feb 14 1884 of aft E's  
death in typhoid epidemic.  
School drains in bad  
state.

Took Shakes Bus trip  
K. to Windermere to Kirkstone  
Pass 1500ft Brothers Water (small)  
lots of lakes Ullswater - Glenridding for  
lunch C Campbell's Blue Bird made  
world record here this summer -  
mattidale common - high with fine  
views of high mts. + vale of St John to  
Keswick at N end Derwent water  
with high steep wooded rock shore,  
across low land to N to Bassenthwaite  
Lake, around it + back  
to Keswick for tea - steep grey  
town narrow streets. S. to  
Thirlmere - long & narrow  
+ on S. to Grasmere village  
with Wordsworth's house <sup>Dove Cott</sup>  
afterwards deBunbury's + photos

of Scott, Cowper de Q. etc  
who were in it - also church spire  
w. in bridge in churchyard  
lovely lake & beyond it  
Rydal water also small  
& beautiful + so to Ambleside  
at or. of Windermere +  
down to Windermere Town  
high above lake

Walked down  $1\frac{3}{4}$  to  
Bowness at lake edge  
bus back to W. + on  
to Kendal by 8<sup>30</sup> pm.

Under my window was main N-S  
road Scotland to Western Eng.  
+ trucks all night round  
past hotel + round bend  
by station opposite hotel.

July 16. at Townhall  
T. Clerk Mr Alldred  
showed me Ed's file - his  
brief acceptance of the proposed  
houses, the letter of J. J. by hand  
+ his Lodge typed with addn  
+ the photo of Council Chamber  
with Ed on dais at Mayor's R.H.  
also the illuminated address  
to Ed. i.e. official document  
with seals of "Kirkcubly Kendal".

also Romney's father John  
Romney agreement to  
apprentice George Romney  
to John Stiles painter for  
4 years with £ 21 + clothing  
+ Stiles to give lodging + board  
+ washing + instruction.

Aug 16 Tues

Arr. Edinburgh 4<sup>30</sup> pm

no rooms in George or St Andrew  
(where Mrs & A. stayed in 1930)  
or Royal. soaked N. & went  
with Mr Plinston to 15 East London St  
very poor - soldiers & airmen are  
her usual lodgers - Generals!  
Worked on MS.

Aug 17 - worked on Index +  
to George Hotel at 12<sup>15</sup> + met  
D. Morrison + Mr Plumbidge  
+ Sir Ed. Appleton - Brno Edu  
Univ -

Grand chat + lunch.

EVA told of smart asking Ed  
how many people wd. understand  
Ed's reply after some thought -  
I think perhaps 7. and  
another story of asking Ed

if he had got found a solution  
for some particularly troublesome  
point of difficulty - Ed's reply  
No but. I have learned how to  
live beside it.

Talk of st teachers, of GK Chesterton  
wonders and wonders; of Sir A.  
Currie whom Morrison held more  
highly than A.C. Geddes; of Glover  
whom EVA loved though he admitted  
his weakness for clever stories etc  
experience of others - yet he thinks  
wd. have been dreadfully distressed if he  
had thought he had hurt anyone's feelings;  
of scholars (D) vs business adminis-  
trators as heads of universities (EVA)  
I showed them Ed's letters to WJ Adams  
& Hole - EVA greatly impressed -  
at Ed's flow of ideas given freely  
to a fellow scientist.

after lunch drove to Nelsons large  
office + printing press below Arthur's  
Seat. D. Morrison said they intended  
to publish.

With Mr Dickson (old Scotie) head  
reader + Miss ~~Young~~<sup>Yule</sup>, who likes all  
my inserts + the illustrations.

He does not like the Foreword - nor  
the impression of belittling Jeans nor  
my 'superlatives'. omit greatest action  
of the half century, nor Mendip Hills, prop  
Title to be "Eddington" only -

I shall work them all tomorrow + next  
day if necessary.

Moved to airy clean St Margarets  
Hotel, Craigmillan Park!

1955 Aug 18

at Thos Nelsons Sons. (founded about  
150 years ago)

Met Miss Park (Welfare Head) cousin of  
Donald Gordon.

Miss W.T. Yule (off to Jodelaken.)

17<sup>th</sup> - worked at press all day, torn  
down refs to pt. 9. - improvement.

19. worked at Nelsons am + aft.

In pm - walked to S.E. corner  
of The Meadows + right across  
huge extent to far corner via  
jawbone walk to Waverley PK  
Crescent with Gillespie Girls school  
in front of it + meadows at each  
end. golf - bowls, playground  
+ tennis ones near Univ. Hosp.  
fine views of Castle + Arthur's Seat.  
Reminiscences of 1903!

Aug 22 Sat. Nelsons closed -

Tram to Waverley Stn + got sleep  
for London for Mon. pm. Lunch meeting  
along Princes St to Lothian Rd.  
+ St John's Ch (not St Andrew's)  
+ across gardens to Reg Festival Hall  
no tickets for Sun. pm. Berlin Strathmore  
To University 15<sup>th</sup> Century

Worked at Hotel all aft. Telephone  
Sir Ed. Whittaker + Dr Morrison

To 48 George Sq. + saw tall  
spare thin faced Sir Edmund W. +  
gentle Lady W. + all his medals -  
Copley, Copernicus, Sylvester, +  
2 Papal medals - no good stories of  
Ed. - but invited to lunch on Mon.  
to meet N.B. Slater! I should  
write Kilminster + Temple  
off.

Kings Col  
Strand  
WI!

D. H. P. Morrison

Sharnpark Selkirk

Tel. Selkirk 2241

Sir Edmund Whittaker

48 George Sq. Edinburgh

Tel 43490

Prof. Herbert Dingle

104 Downcourt Rd.

Purley, Surrey.

Tel. Uplands 3581

Mr Leslie Annand Murby

Managing Director of Nelsons

114 Rannoch Garden  
Edinburgh

Mr G. S. Dickson - Senior Reader

Miss N. T. Yule, Asst Sen. Reader



Aug 21 Sunday To St Giles at mid sermon  
mine was but delightful on joy of Christy  
2 p.m. bus to Selkirk via Dalkeith  
+ Stow + Galabuch - sheep - fences  
heather, hiel, woods + wool mills  
Met at Selkirk Sq. by Dr. & Mrs. Morrison  
& drove up to lovely Showpark  
in extensive grounds - over brow  
of hilltop + woods - wonderful  
library study room - desk  
+ yardwide sloping book rest  
for refs - Talk of Whittaker +  
historians - Trenchard <sup>together</sup> (he thanks  
little of him too) C. & Constan letters  
of R.C.s - Five French historians  
at turn of century - Thanks largely  
of M. Sullivan V. of T.

morning bought Showpark 5 yrs

met Mrs. Oswald (V. of London Hostel)

at their home - She knows Prof. I. H. Alexander

Bus back to Edin. 6-8 pm.

Aug 22 Mon.  
at Hotel Donald Selvie  
of Q. Com 56 this morning  
Final consultation with  
Mrs Dickson -

To lunch with Whittaker  
+ W.P. Slater (to Cornell  
in Sept for 3 1/2 mos -  
not much new - noteworthy  
of 2 sentences -

He has 3 papers on gas  
reaction by quantum  
theory etc.

Sat. Wm Calder + Lady C.

[inscriptions on tombs in Turkey of  
3rd century Christians of a 'fundamentalist'  
- Eolish' sect like 'wike trees']

Lunch of excellent curried meat  
with raisins & onion & peas, <sup>in</sup> rice  
& plum pie - sherry & beer.  
Sir E. & Lady W. tee total themselves.  
The W's & Calder's very hard  
on Lady Rutherford.

To Nelsons + Mr Pearson took  
me around works. Linotype &  
monotype - casting frames  
of page, impressing on a fibre  
board under 50 ton pressure -  
thus a permanent record.

Double printing press doing 64  
pages on one side of large  
sheet + 64 on reverse side,  
cutting machines, folding,  
stitching sections, gluing &  
binding - Cu. or Au. Gilding  
at 4.00 went up to Mr Murley's

office. He is pleased about Stalling  
short life - says it is good  
advance publicity. was v. interested  
in Ed. Publications notebook - a  
valuable record on 200 yrs time -  
Invited me to 14 Ramsay Gdns  
top flat 93 steps high above  
Edin. Castle parade to see Festival  
Tattoo at 9 pm.

Left Nelsons at 5.25 + went  
up Park Rd. to Holyrood Park  
& up to Craig's - Mist, rain  
& falling. Castle a faint steep  
outline. Then lost. very lonely.

To Hotel + to Waverley Stn -  
To Mr Murley, at 8.15 +  
time, view of Coldstream Gds  
Band, Dominion Band  
Boys Parade drill, then

off, after leaving Edd Moss  
with Mumley, to Stin 9<sup>45</sup>

Aug 23. <sup>Tues</sup> Kings Cross 6<sup>20</sup> am.

To Station Hotel. To Cam. H. for mail.  
G.O.E. & J. also Edmund Gendron of  
Cultrina accepting 'Canada's Stake in U.S.'  
Wrote him re Bowley re complication!

To Burlington H. RAS and to Municipal Comtee

To RAS Comtee again & met  
Mrs Jackson & D. Story of Cape  
Sherry, sandwiches & cakes -

Presentation of Eddington medal  
to Van der Hulst (herden)

Sir H. Jeffray <sup>in chair</sup> gracious &  
easy - Hulst said he valued  
medal bec. of name it bore  
for through his books he must  
consider Edd one of his teachers.

Presentation of vols of essays to  
J.P.M. Station at 70<sup>th</sup> year -

24<sup>th</sup> To Norwich - Caths + 3

Two rides to Mrs Doris J. J.P.  
at Woodside, 2 Christchurch Rd  
Kindly grey haired J.P. recent  
accident to knee, still stiff -  
tea in garden

Not much Eddington of use to  
me. Brother Mrs Norton & his  
wife & son Roger -

Letters all pm & funeral tree

25. Am worked - pm to town

Saw Castle & market - huge -

No humming bird cases!

26 off at 11<sup>30</sup> am to London.

Norton was Downing - Roger  
is doing Ph.D Hist on  
German Labor Movement

MRS DORIS EDDINGTON, J.P.  
2, Christchurch Rd. Norwich

26 Fri Cont.

To 31 Dammers St. - man H  
in Hosp for amputation of  
finger - To Tea House of the  
August Moon - very nice.

27<sup>th</sup> Sat up 6<sup>15</sup> am. To  
waterloo by 7 am & off  
Aer Lingus 9<sup>30</sup> - Arr Dublin  
11<sup>30</sup> - To Wicklow Hotel

Then to Univ to register  
& saw D. Oosterhoff.

Read Draft Reports & AV  
program in sum in Stephens  
Green 2-4 - To a

tea house on Grafton St &  
found Jack Heard there -  
Went with him for supper &  
to Abbey Theatre - Blood is  
thicker than water -

Sat off to Waterloo at 6<sup>45</sup> & to

27 Airport - saw Severn & Wedh  
hills & many villages - Dublin 11<sup>30</sup>  
Wicklow Hotel.

Registered at Univ.

Read documents in St Stephens  
Green - high geraniums cut  
like 5' rose bushes - red &  
scarlet & deep pink like  
scrambler roses from a distance.  
Met Jack Heard in tea room.

Sun Wrote Tues 11.

To St Patricks - sermon  
on 'And what he was doing  
this & that they were gone'.  
To Glendalough by bus  
with Jack & Ruth Withcott.

Mon with Prof Dingle for  
formal opening - Costello,  
de Valera, Mg de Brim,  
Dr Brück & Otto Struve  
& Irish songs with harp.

First session with Prof Stratton.  
New rules for membership.  
Krauskopf's invitation to  
Moscow 1958 & Hanson's  
motion to accept &  
invitation to Palomar  
for 1961 - Gt. applause!

Tea with Dingle & Whitrows  
Met McVitie with Dingle  
& a lunch Dr Oterma  
& Turkia -

Tues Sessions  
Extragalactic distances  
& Radio astron.

Lunch alone & to Trumb  
Early books - Princeton etc  
& W.R.H.'s notebook with  
1st ideas of Quaternions.  
Wrote letters to 20 Kent  
to Mr. Low, G.S. Dickson,  
Wm Smart, C.J. Trumb  
telling him of dedication.

To give session on Cosmology  
Merritt, Morton  
Bondi, Dingle & Bork

Wed. Aug 31

Sessions

Mazellanic Clouds -  
Spitzer, Thackeray,  
Van de Hulst, Stromgren,  
masses & rotations.

Christopher L'Estrange  
Took me to Dun L. to  
lunch - charming wife  
& Stella and Lara & dog  
Korgi & maid.

They took me to hosp't  
see sister Stella, op. well  
over - *Cynpantherinus* given  
by Mary L'E - off to  
Tanganyika next - back  
recently from Egypt.  
Soldiers clubs - WAS.

Then a sea bus coasted  
lytlehouse supply ship  
on to Phoenix Park to  
reception by O'Kelly's  
2 bands (Irish papers in  
orange kilt & grey green  
coats - long club with  
Dr. M. Innes) - suspicious  
of USA wrecking peace  
prospects by attitude to  
China, Korea, C.K. China  
& Malaya.

Asked NASA Dr V  
& Mrs Messier as translators  
re Edd's visit to Russia  
in 1938. They will find  
out & send me word.

To G. at Theatre, Carrulla  
London and The Vampire

Thurs Sept 1

To order agency comb.

To Dublin Inst for Adv. Studies

+ read Boston + Kilmister P.R.S. <sup>1952</sup>

To session on Clusters + on non stable stars. Worked on FT Ch XI all pm. Tel. May Kirkwood

Sept 2. To Dub Inst for Adv. Studies

Read Boston + K. Proc Camb Phil Soc

+ R on E-members in bin <sup>1954</sup>

S<sup>2</sup> system in P.R.S. 1951

To lunch with Mr Florence Keordan of Ext. Off. [Dinner in B. Aires in Dec]

To Dunsink in pm with Dingle Heard <sup>Jackson</sup> etc. Saw television of

Moon's surface. They can photograph in infra red in 5 sec with Pye's storage valve television.

Edd's photo (Lafayette) on desk when

we all signed visitors book + on wall small photos of Ball, Whittaker etc.

Sat Sept 3. To Inst Adv. St. again write up Kilmister + Boston section in <sup>am</sup> aft. + to session + on to

the Dan embassy residence. Mr Tom Grant Major. Met Dr. Pirani

of Edd group in Camb. who is an Irish astron. but has an appointment to King's Col Strand. + will be assoc<sup>d</sup> with Kilmister.

Jack Heard + I walked up quay + bus down to North wall.

Finished Ch XI additions  
by 145 am 6<sup>th</sup> Sept.

Posted it at 845 am to G S Dickson.

Saba wants copy of what  
Edd said in Alekhabad &  
will send photo.

Train to Limerick after  
phoning Miss Mills (flowers) &  
+ Mrs C Listrange.

Limerick

Lunch at Hotel - v. dull town  
but lovely old Post. Church 12<sup>th</sup> c.  
+ wonderful harbour front + old  
bridge.

Tea up stairs over a bread shop  
lovely old sideboards + table.

Off Shannon airport at 11<sup>25</sup> pm  
17.000 yr.

arr. Gander 730 g. 5 T or 4<sup>am</sup> local.  
off at 515 local.

Dawal



I.A.U.

DUBLIN 1955

1955 IAU  
Aug 29 to  
Sept. 5

Opening Ceremony. 10 am  
Mr Castello, DeValera,  
Mqr. De Brun (Inst. Ado. St.)  
Dr Brück - Duneink  
Otto Struve. Pres IAU.  
with Irish songs & harp.

1<sup>st</sup> Gen. Assembly.

Mansion House

Dr Struve - pres.

Dr Karkar in USSR - Pres of

Rus. Acad. of Sci

invited IAU to Moscow 1958

Dr Nassan USA seconded this  
& invited IAU to Palomar 1961

New membership plan & smaller  
commissions.

Dr Dingle

Cy McVittie Wilkinson - president  
invited bec pro Adm. S.

F/M Strasser

Dr Dingle + Whitson

Jacksons H Jeffreys O Struve

Stoops H S Jones

Sadler C. Payne Gap + Dr Gap.

Grant Major's Com Change d'Affaires

Mayor + Lady Mayores

Irish Eccl Aff. Lab from Buenos Aires

Dr Robertson 85 yrs. (US Naval obsy)

H Dingle's advice - Do not add award  
of 2nd Ed. medal to Ch. XII

Dingle did not think I was unduly  
hard on JH James.

HD gave me tea with Whitson's

Aug 30. Extra Gal. Rebr. Baade.

To 23<sup>m</sup> Meteorometric scale

S Area. 51, 57, 68

Down to 19<sup>m</sup>.5 overlapping for N + S hemisphere  
comparison

Repetition of Hubble's survey

1<sup>m</sup>.5 cov<sup>m</sup> 1952 now confirmed.

M ~~classical~~

0.00 ~~classical~~ log P

m-M = 24.25

Colour mag. as step to obs mag.

Large scatter but sharp higher edge

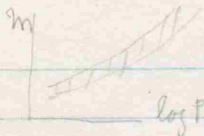
Caused by scatter

Colour excess + deviation from  
top edge should be corrected

$\pm 0.<sup>m</sup>13$  mean error

M 31, IC 1613 He hopes to get  
true Per-Sun relation

Stratton's story - Ed. + Stratton +  
Rutherford and a fourth playing  
billiards after a dinner at  
the Saville Club: R's ball did  
not go in the pocket. Stratton  
said to him Don't you know  
the laws of dynamics?  
R. replied Yes I do but the  
damned balls don't!



IC 1613 Beads  
M 31  
M 33 sandage  
NGC 68 overbook

Sculptor system

Variables 1. red Mira type 200<sup>d</sup>  
2. red P 60<sup>d</sup> - 120<sup>d</sup>.  
3. Type II cepheids

NGC 2403 200" can handle  
but not M1 or M101??

important for red shift constant

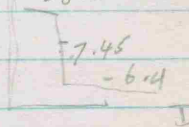
180 - 200 km/sec mega/psc.

570  
285 ~~Ed. value~~  
10 yrs. to fix to 10%.

Use brightest blue stars.

Hubble observed regions - not blue stars.

2<sup>nd</sup> group of distance indicators Novae  
30 novae in 2 yrs.  $M_p - 8.5$



Baade thinks nova

unstable, gives rough check

3<sup>rd</sup> -  $H_2$  regions  
over 300 in M81

M81 only 1 cep. var.

i. very accurate dist. criteria.

$H_2$  region out to  $2\frac{1}{2}$  times radius in NGC 2423

4 glob. clusters unless values of  $m_{80}$  -  
assume same as in our Gal.

5. Brighter stars.

10 or 12 yrs program.

masses of galaxies or impl. to obtain

Supernova not very reliable  
as dist. indicators.

O III lines 5007 at 21<sup>m</sup> localized  
Search for planetary neb.

Spiral arm go into very center

Aug 30

5

Radio Astron

Appendix to report, with later report

Terminology: Seeger, Haddock chair  
Smith + Blum, Minneart

Tables for gal. Tables  
on Lund pole

or a new pole? Westerland

Bok, McCauley, McKee

Frequency allocations by international Board  
40 megacycles, 3000 megacycles <sup>observed</sup>  
asked for in 1950

CCIR - ask 10 - 30 or so

Ryle - national problem - ask gov to  
keep local radio stations near an  
observing clean of band used by  
astronomers

Laffineur, Hagen, de Voigt Ryle  
+ Vitkevich (USSR)

Standard (sources) for calibration  
areas

6  
 Abs accuracy of 2% seems possible. Abs calibration is needed concerted attack (now Camb. W. world + + only workers now cross checking - See gas (tech. man with Van de Hulst.

830pm Aug 30 meetings.

K correction

$$K = K_1 \delta + K_2 \delta^2 + \dots$$

7  
 Radio Sources  
 $h \propto \lambda^p$

St Whit " Stefan Whitcomb

$$\Delta M = W_1 \delta + W_2 \delta^2 + \dots$$

$$ds^2 = dt^2 - \frac{R^2(t)}{c^2} \{ dr^2 + r^2 d\theta^2 + r^2 \sin^2 \theta dy^2 \}$$

$$I = \frac{L}{D^2} \left\{ 1 - (p+1) \left( \frac{h_1 D}{c} \right) + \dots \right\}$$

$$N = \gamma D^3 \left\{ 1 - \frac{3 h_1 D}{c} + \dots \right\}$$

$$10^{0.2m} = A_1 \delta + A_2 \delta^2 + \dots \quad (*)$$

$$A_1 = \frac{c}{h_1} 10^{0.2M_0 - 1} \quad A_2 = h_1 \left( b_1 + \frac{h_1^2 + h_1}{2 h_1^2} \right)$$

$$\therefore \frac{d \log N}{d \log I} = -\frac{3}{2} + \frac{3(p+3)}{4} \frac{h_1}{c} \left( \frac{L}{I} \right)^{\frac{1}{2}} + \dots$$

$$h_1 = \frac{R'(t_0)}{R(t_0)}, \quad h_2 = \frac{R''(t_0)}{R(t_0)}$$

$$b_1 = 0.2 (\log_e 10) (K_1 + W_1)$$

$h_1$  ranges from  $5.37 \times 10^{-18} \text{ sec}^{-1}$  to  $3.09 \times 10^{-18} \text{ sec}^{-1}$

Baade  $5.8$  to  $6.5 \times 10^{-18}$

Creation of matter  $h_1^2 = h_2$   
 Kin Rel  $h_2 = 0 \quad h_1^2 \neq 0$   
 Data  $h_2 < 0$

$R$  is expansion function  
 $K$  is Hubble factor  
 $A$  is mag. - red shift rel. (\*)  
 goes to 18m Data from 19.5m Palomar  
 WLV's conclusion (tentative)

- ①  $h_2 < 0$  is against Cont. creation.
- ② expansion is slowing up!

See Ryke's Hubble lecture  
 If radio stars are distant galaxies not Maxwell demp. violating our data  
 $L$  = luminosity  
 $D$  = dist  
 $I$  = intensity at observer



Aug 31

Bondi: Mag. Cl.

Mag. Cl. rich in paper gal.

Dv Thackeray Radcliffe Mag.  
Pretoria

Variable  $l + s$  in both clouds

Dust & interstellar gas within the clouds

Plan - net

Spec. 29 A/m 49 + 86 A/m  
results for stars -8<sup>m</sup> and 11<sup>m</sup>

8<sup>h</sup> exposures for 12<sup>m</sup> stars

mostly on brighter cepheids

problem of foreground stars

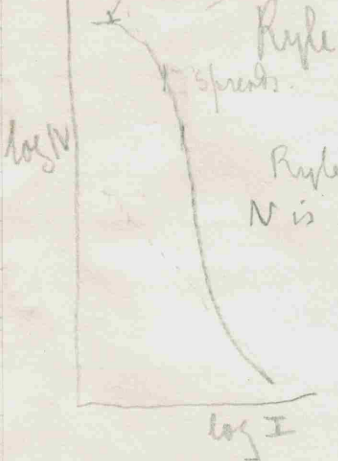
Evidence for prop. of Type II stars  
in the Mag. cloud

Dust pins in clouds

Lunt - mag 15, 15<sup>m</sup>. 5 red for  
enough

Aug 30

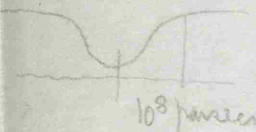
intermediate  
error



$h_1$  for optical not necessarily same as  $h_1$  for radio sources  
Bok warns against cosmology.

Ryle - Amelation results (Parsey) give less steep curve, slope  $\frac{3}{2}$   
 $N$  is no. of sources in a solid angle  
When Ryle's slope is 3.

If radio sources are all in our galaxy  
spherical space around observer



Whitrow L-D def. is only true if  $K=0$   
McVittie says No. not at all. L-D in terms of

Bondi - a good agreement about principle of homogeneity.  
If Ryle's survey & distance scale is right, homogeneity is confirmed.

Ryle - his math simpler with homogeneous form (5) but he is not essentially assuming homogeneity.  
If inter standards diff. by 1.6 betw N. + S hemisphere it would explain  
diff curves of Ryle + Australia.

76 2

10/10  $\Delta V$  Mt Strombo Amalthea

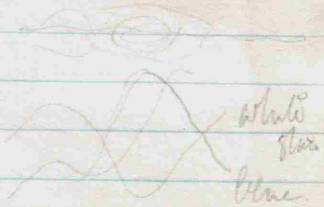
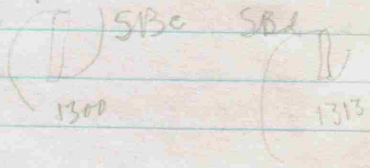
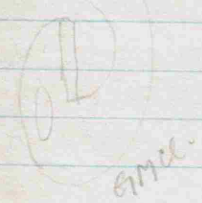
Summary on mag. clouds

	larger cl	small cl
$\Delta$	$\pm 0.5$	$\pm 2.3$
	$\pm 0.1$	$\pm 0.5$
$b-v$	$+0.33$	cores blue
		blow in cross
		outward

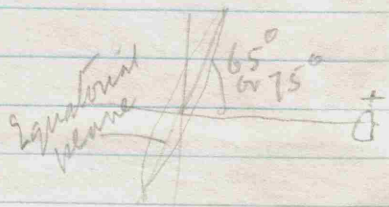
Larger Cloud

Structure of late bar spiral sequence

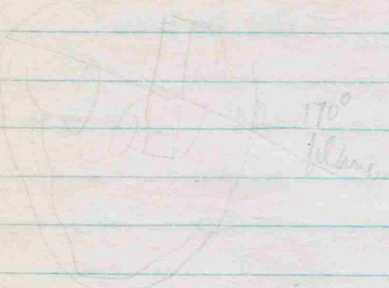
SBM



Rotation



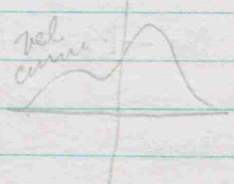
g.M.C.



Rad. Vel. (with M33)

\* Mass  $2.5 \times 10^9 \odot$  @  $65^\circ$   
 $5.5 \times 10^9 \odot$  @  $75^\circ$

17 velocities  
 26 cm. distrib  
 across eq. plane



~ from peak vels. near eq. plane

12 Lcl. Scl.

$$+280 \text{ km/sec} + 161 \text{ km/sec}$$

mean vel.

allow of gal rot

$$+30 \quad -20 \text{ km/sec}$$

If they are in rot about each other

$$\text{total mass } 10^{10} \odot$$

(min value)

for both clouds - i.e. same distance

$$M - M = 18.75 \pm 0.1$$

(max value)

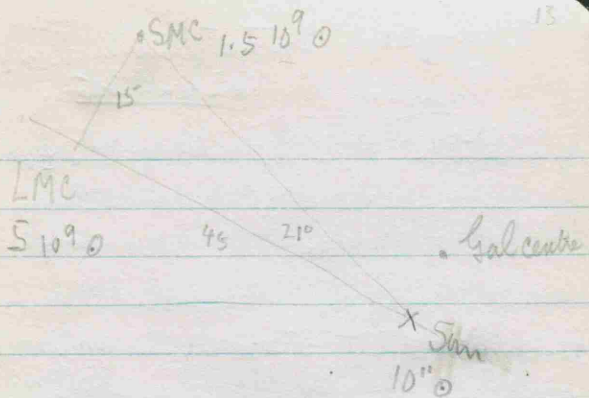
$$\text{for noise } 18.6$$

i.e. good agreement

$$\text{mass of H } \cdot 7 \cdot 10^9 \text{ for large cl.}$$

$$\cdot 5 \cdot 10^9 \text{ " small cl.}$$

mass - lumin. relation  $\frac{m}{L}$  of order 2



15 Aug 31. Interstellar matter.  
Chairman D. Van der Hulst.

(1) Distrib<sup>n</sup> of  
Sphere of Knowledge  
to 1000 pc.  $\rightarrow$  5. sun  
GC.

(2) Long<sup>n</sup> + temp of the interstellar  
gas.

(3) Diffuse neb & emission regions

Dv Stromgren Y.O. or (1) Plans for future  
C.I. of 13 stars + dust

C.I. on A + F 2 dimensional class<sup>5</sup>

(1) H<sub>2</sub> strength <sup>15</sup> and (2) Balmer discontinuity

A<sub>2</sub> to G<sub>0</sub>

Springs how choose stars?

82' 40A with grad, 15A/min  
to 18<sup>m</sup> in 3<sup>h</sup>.

Simultaneous readings in  
2 bands by a filter with  
rest of beam reflected to a

second filter.

S. hemisphere preferable due to  
Camera reason.

Back - need for thin interference filter  
work in S-Hem.

Dv Beck Cataloguing Diffuse Neb  
Shapes in Draft reports

Overlapping Nos now 5 or 6 for some.

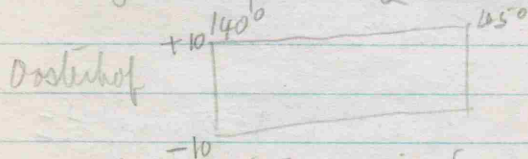
Time not yet. await Mr Palomar <sup>at</sup>

Minkowski [55 yr ±? / heavy solid gas]

Y.O. 15" res. power on high field,

H<sub>2</sub> gas emission H<sub>2</sub>

adjacent plates H<sub>2</sub> + 6430



mapped emission regions from

Palomar + 40 plates.  
(6 $\frac{1}{2}$ " diam)  
areas



Can de Haas - diff temp in  
diff clouds due to amt of  
internal motion.

Cosmic ray cut off at  $10^6$  volts  
not yet understood

would a diff of temp 15000  
and say 150 lead to  
shock waves betw these  
regions?

## Gas betw the clouds

Mag fields between clouds  
 $\geq 3 \cdot 10^{-6}$

dens between clouds  $10^{-11}$

$v \geq 30$  km/sec  $1.3 \cdot 10^{-11}$  / cm<sup>3</sup>

Ca II line also Na I

Spitzer



star  
gas line

some evidence for this

obs proof  $\left\{ \begin{array}{l} \text{wide absorption lines} \\ \text{wide 21 cm emission} \end{array} \right.$

all at high lat

these arguments  $\left\{ \begin{array}{l} n = 0.1 \text{ cm}^{-3} \\ \text{mag fields} \end{array} \right.$

Stromgren. Time for new det of  
dens of int space.

Spitzer  
interstellar matter replenished  
by explosion of matter from  
stars with but little cooling  
from  $10^6$  degrees.

1 atom / cc at  $100^\circ$

$10^{-3}$  " / cc at  $10^6$  deg.  
(but undetectable)

Testy. this or evidence by Bo Spitzer  
 $\leftarrow$  binaries when  
wide line would oscillate!

21 In Draft Rep. origin of clouds  
Orts

To Div. Inst. <sup>am</sup> ~~Study Studies~~ 40  
Sept 1 - Cluster Com. 37. 11:30 <sup>am</sup>  
to

Chari Heckmann.

Rosino.

H.S. Hogg.

need of data on 5 Hemisphere  
Scholars -

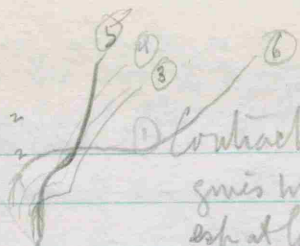
Schwarzschild (young, thin, <sup>high mass</sup> cooling)

1958 von Weizsäcker & Baer

Before 1938. M, L, Redden  
were available.

with nuclear reactions a new era -

Agreement with R. Hertzsprung data  
is test of theoretical work on  
evolution of stars + clusters



① Contraction only

gives main sequence  
esp. at lower part  
in theoretical homogen  
models

②  $H \rightarrow He$  non homogeneous star  
as H gets less in core ↑ ↑

Core outer + inner 95% mass of star  
Outer layers do not effect  
the interior. (Milne vs Edd!)

Low metal content ③

now H 50%

core contraction rate + temp increase  
& He reaction increases with  
expansion

for diff masses tracks lie more  
or less // ④.

This is not seen in clusters

Instantaneous tracks ⑤!

1) age of a cluster can be estimated -  
even 1<sup>st</sup> hook will date date ages to acc. of 20% are obtainable -

Composition - amt of metals & He affect curve. more metal lowers curve. Pop 1 heavier elements (6)

He content not yet predictable sub dwarfs lab on a L.H. main seq.

Glob Cl. 1) Distances  
2) from  $10^6$  yr Gal Cl. to  $5 \times 10^9$  yr Gl. Cl.  
Intermediate age clusters need more obs<sup>n</sup>.

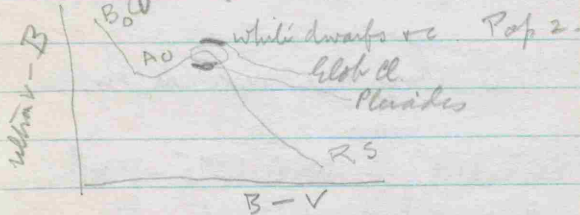
3) Rich in younger systems of heavy stars  
Red giants + super giants -  
even to metal clouds

Rotation too slow to mix gases only very fast stars lead to mixing.

Basic assumption that all stars in a cluster are same age.

Otherwise we wd. not get a one-parameter array.

Morgan Y.P.



oldest known glob cl. (Turns up in the F's)  
NGC 752

Pleiades youngest, near sun this type of star is of order of age of the ordinary glob cl.



Baade Ultra violet col. excess  
Morgan you must correct  
for interstellar reddening

breaking up. + 2 sq  
mergers - are spirals  
a final stage of what began as  
2 sq in front an inner core  
+ an outer elliptical ring?

Sept 2 Symposium  
Gal. Structure + other for  
Baade  
no blue stars within 3 kilopsec of  
center of M31

Van de Hulst H in galaxy  
Int in f (long lat + V)  
He wants Numbers in x y z coord

Umbarger  
high no of multiple galaxies.

4 Region  $R > 8$  kilopsec.  
 $3 < R < 8$   
 $R < 3$   
near sun

Min Kowski - NGC 1275 - 2 colliding  
galaxies is the only explanation.

Tracing spiral arms by H density along

Thackeray - Large Mag. Cloud.  
see okay for the coming.

Morgan - Optical results for other  
Galaxies.  
O + B giants near disk in H  
regions around Perseus double

Lindblad spiral arms.

How are D21 distances estimated  
Schmit (Leiden) By radial vel  
+ proper rotation effect

after  $6 \cdot 10^8$  yrs - map

In Mag. Cl. water arms  
there is no concentration of H.  
high rel. near centre.

Magal sheet of spirals - bands  
Emission in 3727  $\mu$ m <sup>10<sup>6</sup> yr</sup>  
+ 10<sup>6</sup> yr

Rotation: Period 74  $\times$  100  $10^6$  yr  
+ one 250  $10^6$  yr

Hambro/Bronson

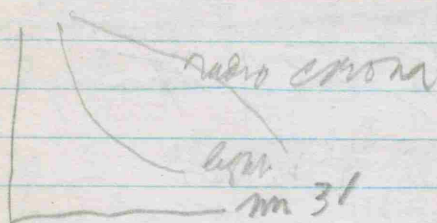
Ionized gas  $\rightarrow$  10 cm. +  
non thermal at 1-10 metre

She. H gal centre

Corona around galaxy

Radio sources  
intense sources concentrated  
around gal plane (class 1)  
class 2 are Wolofree

28  
Ryle has mag. 2000  
class 2 sources



Sept 3

Edd ch XI allam.

Lunch Maj. Kirkwood + Aleck

2:30 pm

comm 41 Hist of astronomy.

Ch. Dingle

Sec. D. Swain.

Member - MN Saha - + Das.

Chairman - Knikovsky

Records of Halley's Comet

since 200 B.C.

Whitrow asks for a translation  
of Ptolemy in Eng.

RadioCom - Comm 40

Res. 1 - 1 week Symposium  
in France prior to IAU 1958  
Funds from Unesco.

Res. 2 - Clearing radio freq  
bands CCIR + URSI.

Res. 3 - New system of Galactic  
Coords. due to prob. change  
in posn. of Gal pole &  
zero of Gal long  
(Bladen, Pansy & Westerhout)

Bibliography Cornell Imo Caplan.

Simple and useful work - Ryli

(a) Jupiter & some Sun work.

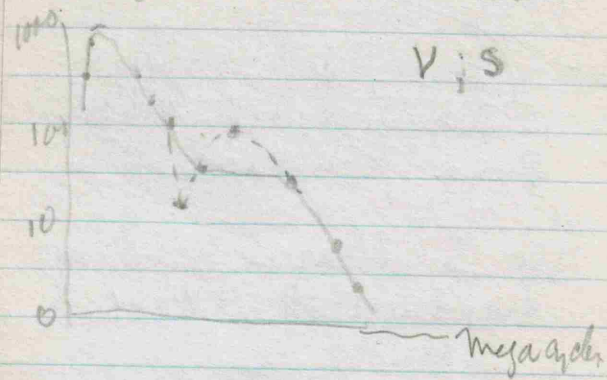
(b) abs-meas - of intens of point  
sources.

c - variable radio stars -

Calibration & Standard areas

Secretariat in Paris.

Seeger - Cass A radio power



Summary

- 1) A nova now observed to be a double star. What was its history?
- 2) New location of Gal Pole
- 3) Their work checked against obs<sup>n</sup> by Keltie gives evidence against continuous creation of matter.
- 4) Spiral nature of the Magellanic clouds
- 5) Evolutionary track of Group II stars from main seq. up to right & turning back toward main seq. & on down toward white dwarfs.
- 6) Slowing down of vel of expansion.