

1939phae.proj...7898

KG

11365

798

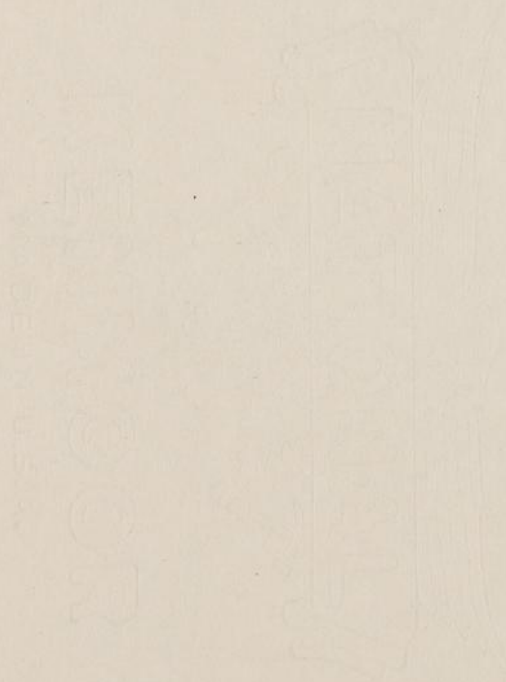
Radiometry

II

KG 11365.798

The procedure used in this book is essentially the same as that developed and used in the first radiometric book. The order of the columns has been rearranged so that all material written at the telescope is contained on only one side of a double page. Unless otherwise noted, the formula: $\epsilon = -\frac{\sum w a s}{\sum w s^2}$ has been used. The Δ 's have been computed by means of $\Delta = \frac{1}{16} (y_1 - 3y_2 + 4y_3 - 4y_4 + 4y_5 - 4y_6 + 4y_7 - 4y_8 + 3y_9 - y_{10})$. The galvanometer was "standardized" each night with a series of fixed voltage steps.

Emerson



KG 11363; 798¹



2✓

61" 54

New roll of paper.
34"

#	F	Obj	α	δ	UT	ST	Remarks
1420	-	α Tau	4 32	+16.4	1 02	3 43	O. Very bad seeing 19.5
1421		α Ceti	2 59	3.9	1 01	3 52	23°F
1422		β Tri	2 06	34.7	1 20	4 01	
1423		α Ari	2 03	23.2	1 28	4 09	
1424		β And	1 06	35.3	1 40	4 21	
1425		α And	0 05	28.8	1 49	4 29	
1426		α Tau	4 32	16.4	1 58	4 39	Bar of 5s across low SW-
1427		ϵ Aur	4 53	33.1	2 07	4 48	" moved across low S
1428		51 Gem	7 10	16.2	2 18	4 57	Seeing better
1429		α CMi	7 36	5.4	2 25	5 06	
1430 ²		β Gem	7 41	28.2	2 35	5 16	
1431 ³		α Leo	10 05	12.3	2 44	5 25	
1432		β Ori	5 5	-5.2	2 54	5 35	
1433		β Ori	5 12	-8.3	3 02	5 43	
1434		γ Ori	5 21	+6.3	3 10	5 51	
1435		ϵ Ori	5 33	-1.2	3 18	6 09	
1436		δ Ori	5 38	-2.0	3 26	6 07	
1437		κ Ori	6 45	-9.7	3 34	6 15	
1438		β CMa	6 20	-17.9	3 43	6 24	
1439		α CMa	6 43	-16.6	3 51	6 32	
1440		α Per	3 19	49.6	4 02	6 43	
1441		ρ Per	3 01	38.6	4 10	6 51	
1442		γ Tau	3 43	23.9	4 19	7 00	Wind blows telescope
1443		δ Per	3 50	31.7	4 27	7 08	
1444		ϵ Per	3 54	39.8	4 35	7 16	
1445		α Tau	4 32	16.4	4 44	7 25	
1446		ϵ Aur	4 58	43.7	4 52	7 33	
1447		γ Aur	5 02	41.2	5 02	7 43	t.m.
1448		HD 32655	-	43.1	5 08	7 49	t.m.
1449 ⁴		α Aur	5 12	45.9	5 16	7 57	

 $\epsilon = 0.45$

Thursday, Jan 12-13, 1939

3

HA	S	A	a	a+es		
-0 49	0.13	938	7.43	7.49	817	-0.88
+0 53	.32	296	6.18	6.32	276	0.48
+1 55	.09	24.7	3.48	3.52	23.1	2.88
2 06	.19	180.9	5.64	5.73	177.	0.94
3 15	.27	373	6.43	6.55	349	0.23
4 24	.70	44.2	4.11	4.43	41.3	-
0 07	.11	1001	7.50	7.55	945.0	-0.88
-0 05	.02	143.6	5.42	5.43	134.6	-
-2 13	.29	61.6	4.47	4.60	57.6	2.16
-2 30	.56	359	6.39	6.64	336	0.04
-2 25	.19	304	6.21	6.30	284	0.31
-4 40	1.57	79.4	4.75	5.46	74.4	1.40
+0 30	.51	28.1	3.62	3.85	26.3	-
0 31	.61	289	6.15	6.42	270.0	0.11
0 30	.26	72.0	4.64	4.76	67.3	1.60
0 26	.40	68.5	4.59	4.77	64.0	1.77
0 29	.43	60.3	4.45	4.64	56.5	-
0 30	.66	45.3	4.14	4.44	42.3	-
0 04	1.03	41.4	4.04	4.50	38.8	-
-0 11	.96	1174	7.67	8.10		-
3 24	.23	105.4	5.06	5.16	98.9	1.36
3 50	.37	326	6.28	6.45	305	-
3 17	.39	20.9	3.30	3.48	19.5	2.76
3 18	.30	24.4	3.47	3.60	22.8	2.60
3 22	.26	18.0	3.14	3.26	16.8	2.84
2 53	.42	935	7.43	7.62	876	-0.88
2 35	.14	38.8	3.97	4.03	35.2	-
2 41	.16	16.1	3.02	3.09	15.0	3.06
2 47	.16	11.62	0.52	0.59	1.51	
2 45	.15	702	7.12	7.19	656	-0.61

4

#	F	Obj.	α	δ	UT	ST	
1450 ²	-	β Gem	7 41	28.2	7 22	10 06	1-
1451		ϵ Leo	9 42	24.1	7 31	10 13	hazy?
1452 ³		α Leo	10 05	12.3	7 39	10 21	15-2p SW-S-SE
1453		β Gem α Aur	5 12	45.9	7 46	10 28	no. m.
1454 ⁴		α Aur	5 12	45.9	8 01	10 42	hazy-15-25-3p SE, Leo S
1455		λ UMa	10 13	43.2	8 11	10 53	
1456		μ UMa	10 19	41.8	8 19	11 01	
1457		γ Leo	10 17	20.2	8 29	11 10	
1458		δ Leo	11 11	20.8	8 38	11 19	
1459 ³		α Leo	10 05	12.3	8 46	11 27	
1460 ⁵		α Boo	14 13	19.5	8 59	11 41	
1461		γ Vir	11 43	6.9	9 08	11 50	
1462		β Leo	11 46	14.9	9 16	11 57	
1463		β Vir	11 48	+2.1	9 24	12 06	25-35 coming up from SE
1464		γ Vir	12 38	-1.1	9 32	12 14	
1465		δ Vir	12 52	+3.7	9 40	12 22	dragging back; haze-10p?
1466		ι CVn	12 53	38.9	9 49	12 31	
1467		ϵ Vir	12 59	11.3	9 58	12 40	
1468		γ Boo	13 51	18.7	10 08	12 49	
1469 ⁵		α Boo	14 13	19.5	10 16	12 58	
1470		Blank	-	-	10 23	13 05	t.m.
1471		Blank	-	-		13 12	no. m.
1472		γ Boo	14 30	38.6	10 39	13 21	
1473		ϵ Boo	14 42	27.3	10 47	13 29	
1474 ³		α Leo	10 05	12.3	10 57	13 39	

$$t = - \frac{z_{was}}{z_{ws}} = 0.45$$

Thursday, Jan 12-13, 1939

5

HA	\checkmark S	$\Delta \checkmark$	\checkmark a	\checkmark a+ES
2 25	0.19	276	6.10	6.19
0 31	.06	39.9	4.00	4.03
0 16	.16	67.2	4.57	4.64
0 23	.17	+0.28	-1.38	-1.30
5 30	.81	360	6.39	6.75
0 40	.01	11.9	2.69	2.69
0 42	.01	127.6	5.26	5.26
0 53	.11	152.4	5.46	5.51
0 08	.07	32.9	3.79	3.82
1 22	.23	84.3	4.81	4.91
-2 32	.30	1110	7.61	7.75
+0 07	.23	51.4	4.28	4.38
0 11	.13	49.6	4.24	4.30
0 18	.33	16.4	3.04	3.19
-0 24	.40	29.8	3.68	3.86
-0 30	.30	154.9	5.48	5.61
-0 22	.01	18.4	3.16	3.16
-0 19	.18	43.5	4.10	4.18
-1 02	.12	40.9	4.03	4.08
-1 15	.13	99.4	7.49	7.55
-1 08	.12	+0.59	-0.57	-0.52
-1 01	.12	+1.04	0.04	0.09
-1 09	.03	16.8	3.06	3.07
-1 13	.07	49.8	4.24	4.27
3 34	.75	27.4	3.59	3.93

6

61" 54

RMS + RMS
23"

#	F	Obj	α	δ	UT	ST		
1475 ¹	-	α Leo	10 05	+12.3	6 00	8 50	0-15°F	16.8
1476 ²		γ Vir	11 43	6.9	6 09	8 58		
1477 ³		β Gem	7 41	28.2	6 19	9 08		
1478		ϵ Leo	9 42	24.1	6 29	9 18		
1479		π Leo	9 57	8.3	6 38	9 23		
1480		γ Leo	10 17	20.2	6 46	9 35		
1481		λ UMa	10 13	43.2	6 55	9 45		
1482		μ UMa	10 19	41.8	7 05	9 55		
1483		ν UMa	11 06	44.8	7 20	10 10		
1484		χ UMa	11 43	48.1	7 29	10 19		
1485		Blank	-	-	7 36	10 26	t.m.	
1486		Blank	-	-	7 42	10 32	no m.	
1487 ¹		α Leo	10 05	12.3	7 53	10 42		
1488		δ Leo	11 11	20.8	8 01	10 51		
1489		β Leo	11 46	14.7	8 08	10 59		
1490		ζ Vir	12 53	38.7	8 18	11 08		
1491		ϵ UMa	12 51	56.3	8 27	11 17		
1492 ⁴		α Boo	14 13	19.5	8 36	11 26		
1493 ²		γ Vir	11 43	6.9	8 45	11 35		
1494 ³		β Gem	7 41	28.2	8 55	11 45		
1495		γ Vir	12 38	-1.1	9 53	12 44		
1496		δ Vir	12 52	+3.7	10 02	12 52		
1497		ϵ Vir	12 59	11.3	10 10	13 00		
1498 ⁴		α Boo	14 13	19.5	10 18	13 08		
1499 ¹		α Leo	10 05	12.3	10 28	13 18		
1500 ²		γ Vir	11 43	6.9	10 36	13 26		

* δ 's have been corrected for non-linearity of the galvanometer and for change of sensitivity (assumed to be linear during the night).
 $\epsilon = 0.45 \left(\frac{\delta_{\text{was}}}{\delta_{\text{was}^2}} \right)$

Sat. Jan 14-15, 1939

7

\checkmark HA	\checkmark s	\ast $\Delta\checkmark$	\checkmark a	\checkmark a+es
- 1 15	0.21	89.8	4.88	4.97
- 2 45	.59	58.0	4.41	4.67
1 27	.09	315	6.24	6.28
- 0 24	.06	50.9	4.27	4.30
- 0 30	.22	39.1	3.98	4.08
- 0 42	.10	172.4	5.59	5.63
- 0 28	.01	14.1	2.87	2.87
- 0 24	.01	152.0	5.45	5.45
- 0 56	.01	67.8	4.58	4.58
- 1 24	.04	38.9	3.97	3.99
- 1 17	.03	+0.26	-1.46	-1.45
- 1 11	.03	-0.33	-1.20	-1.19
+ 0 37	.17	93.2	4.92	5.00
- 0 20	.08	32.7	3.79	3.83
- 0 47	.15	51.5	4.28	4.35
- 1 45	.06	20.4	3.27	3.30
- 1 34	.07	70.3	4.62	4.65
- 2 47	.35	113.4	7.64	7.80
- 0 08	.23	56.2	4.37	4.47
+ 4 04	.57	26.0	6.04	6.30
0 06	.39	30.3	3.70	3.88
0 00	.29	178.7	5.63	5.76
0 01	.17	53.7	4.32	4.40
- 1 05	.12	124.0	7.73	7.78
3 13	.60	73.9	4.67	4.94
- 1 43	.36	46.9	4.18	4.34

61" 54
NG

RMSE RMS

22"

#	F	Obj	α	δ	UT	ST
1501 ¹		β Gem	7 41	+28.2	4 49	7 41
1502 ²		α C Mi	7 36	5.4	4 55	7 49
1503 ³		α Leo	10 05	12.3	5 04	7 57
1504		λ U Ma	10 13	43.2	5 12	8 05
1505		μ U Ma	10 19	41.8	5 20	8 13
1506		β U Ma	10 58	56.7	5 28	8 21
1507		α U Ma	11 00	62.1	5 35	8 29
1508		ψ U Ma	11 06	44.8	5 43	8 37
1509		χ U Ma	11 43	48.1	5 51	8 45
1510		γ U Ma	11 50	54.0	6 00	8 54
1511		ϵ U Ma	12 51	56.3	6 08	9 01
1512 ⁴		12 C Vn	12 53	38.7	6 15	9 10
1513		ζ' U Ma	13 21	55.2	6 23	9 17
1514		η A Ma	13 45	49.6	6 31	9 25
1515 ⁵		α Boo	14 13	19.5	6 40	9 34
1516		ϵ Leo	9 42	24.1	6 50	9 43
1517		π Leo	9 57	8.3	6 57	9 51
1518 ³		α Leo	10 05	12.3	7 05	9 59
1519 ¹		α C Mi	7 36	5.4	7 14	10 07
1520		β Gem	7 41	28.2	7 24	10 17
1521		δ Leo	11 11	20.8	8 51	11 45
1522		ν Vir	11 43	6.9	8 59	11 53
1523		β Leo	11 46	14.9	9 06	12 01
1524		β Vir	11 48	2.1	9 14	12 09
1525 ¹		β Gem	7 41	28.2	9 23	12 18

21°F
Overhead - 15-23-3p S-SE 16.7

Very good seeing

 Δ 's have been corrected for non-linearity of gal. scale (no correction) σ is the correction for change of sensitivity; expressed in mag. and to be added to α . $\epsilon > 0.50$

Sunday, Jan 15-16, 1939

116,

✓ HA	✓ S	✓ Δ	✓ α	ot
0 00	0.03	276	6.10	0.00
0 13	.26	329	6.29	-
-2 08	.34	85.9	4.84	-
-2 08	.10	14.3	2.89	.01
-2 06	.09	137.8	5.35	-
-2 37	.15	37.5	3.94	-
-2 31	.15	176.5	5.62	-
-2 29	.12	60.5	4.45	-
-2 58	.17	33.0	3.80	.02
-2 56	.17	37.9	3.95	-
-3 50	.29	65.9	4.55	-
-3 43	.34	19.8	3.24	-
-4 04	.32	39.0	3.98	.03
-4 20	.40	50.8	4.26	-
-4 39	1.15	114.9	7.65	-
+0 01	.05	42.4	4.07	-
-0 06	.21	35.2	3.87	-
-0 06	.16	89.1	4.87	.04
+2 31	.56	316	6.25	-
+2 36	.22	283	6.13	-
0 34	.08	25.0	3.49	.06
0 10	.23	44.2	4.11	.07
0 15	.13	41.5	4.04	-
0 21	.33	14.2	2.88	-
4 37	.82	164.4	5.54	-

#	F	Obj	α	δ	UT	ST	
1526	-	V Vm	12 38	-1.1	9 35	12 29	1-
1527		δ Vm	12 52	+3.7	9 42	12 37	
1528		E Vm	12 59	11.3	9 52	12 47	hazy all over?
1529 ⁹		12 CVm	12 53	38.7	10 01	12 56	
1530 ⁵		α Boo	14 13	19.3	10 29	13 23	hazy all over, 15-SES-SW 16.5

N.G. Sweeney, Jan 15-16, 1939

\checkmark HA	\checkmark s	\checkmark Δ	\checkmark a	\checkmark at
-0 09	0.39	21.6	3.34	0.08
-0 15	.29	112.4	5.13	-
-0 12	.19	39.4	3.99	-
+0 03	.00	18.6	3.17	-
-0 50	.11	708	7.12	.09

8"+

22"

#	F	Obj	α	δ	UT	ST	
Gal P = 7.6 to right, 6.9 to left. Styl. open, 012340560 open.							
1531	-	α Aur	5 12	45.9	2 58	67:33	15-35 Low all around
1532	-	-	-	-	3 05	67:41	
1532	-	ϵ Aur	4 58	43.7	3:16	6:52	clds coming up

Revealed Gal. P = 6.4. Styl. ^{open} 01234056810120 open							
1534	α	Aur	5 12	45.9	6 30	10 10	0
1535	0	U Ma	8 25	60.9	6 40	10 20	
1536	i	U Ma	8 55	48.3	6 48	10 28	
1537	κ	U Ma	8 59	47.4	6 56	10 36	
1538	h	U Ma	9 27	63.3	7 04	10 44	
1539	θ	U Ma	9 29	51.9	7 12	10 53	
1540	t	U Ma	9 47	59.3	7 20	11 00	
1541	α	U Ma	11 00	62.1	7 35	11 15	
1542	β	U Ma	10 58	56.7	7 43	11 23	
1543	γ	Dra	16 23	61.6	7 54	11 34	
1545	β	U Ma	14 51	74.4	8 02	11 42	
1546	γ	U Ma	13 45	49.6	8 12	11 52	
1547	3	U Ma	13 21	55.2	8 21	12 01	
1548	ϵ	U Ma	12 51	56.3	8 30	12 10	
1549	r	U Ma	11 51	54.0	8 37	12 19	
1550	χ	U Ma	11 43	48.1	8 46	12 26	

N.G.

Thursday Jan 26-27, 1939

\checkmark H A	\checkmark s	\checkmark Δ	\checkmark a	\checkmark ot	\checkmark a+ot+res
---------------------	-------------------	--------------------------	-------------------	--------------------	--------------------------

Friday, Jan 27-28, 1939

4 58	.61	561	6.87	0.20	702
1 55	.11	29.6	3.68	-	371
1 33	.05	18.4	3.16	-	317
1 37	.05	11.8	2.68	-	269
1 17	.09	11.4	2.64	-	266
1 24	.05	27.6	3.60	0.00	361
1 13	.07	14.6	2.91	-0.01	292

#	F	Obj	α	δ	UT	ST	
1551		β UMa	10 58	+56.7	9 18	12 58	—
1552		α UMa	11 00	62.1	9 26	13 06	
1553		γ Dra	16 23	61.6	9 41	13 21	
1554		β UMi	14 57	74.4	9 53	13 33	
1555		γ UMa	13 45	49.6	10 01	13 41	
1556		ϵ UMa	12 51	56.3	10 10	13 51	
1557		γ UMa	11 51	54.0	10 19	13 59	
1558		ψ UMa	11 06	44.8	10 27	14 08	
1559		α UMa	11 00	62.1	10 36	14 16	
1560		γ Dra	16 23	61.6	10 45	14 26	Very good night.

Styl Gal open 01 — 120 open $P = 6.3$

Assume $E = 0.25$

Friday 27-28, 1939

15

\checkmark H A	\checkmark s	\checkmark Δ	\checkmark a	\checkmark ot	\checkmark arrtes
2 00	.09	36.8	3.91	-0.02	391
2 06	.12	171.6	5.59	-	560
- 3 02	.19	60.5	4.45	-	448
- 1 18	.19	234	5.92	-	5.95
- 0 04	.01	52.6	4.30	-0.02	428
1 00	.05	66.4	4.56	-0.03	454
2 08	.09	35.4	3.87	-	386
3 02	.19	60.5	4.45	-	447
3 16	.21	177.0	5.62	-	564
- 1 57	.11	61.2	4.47	-	447

#	F	Obj	α	δ	UT	ST
std.		UT 0150	21° F	P = 6.0 ^S	open	0 --- 10, 0, 0.C.
"		UT 4:15	17° F	P = 5.6	oc.; 0	--- 10, 0; 0.C.

std.		U.T. 3:00	25° F	P = 5.6 ^S	oc.; 0	--- 10, 0; 0.C.
"		3:10	-	P _{right} 6.4 ^S , P _L = 7.6 ^S	oc.; 0	--- 6, 0; 0.C.

Repaired thermocouples, pumped out, photographed, etc.
 $R = 90\Omega$

Wednesday, Feb. 1-2, 1939

H4	δ	Δ	α	notes
Sunday Feb. 12-13, 1939				

#	F	Obj	α	δ	UT	ST			
---	---	-----	----------	----------	----	----	--	--	--

H4 S A a a+es.

24

Oct 22-23 Sun-Mon
Nov 1-2 Wed-Thur.

#	Obj	α	δ	EST	θ	H.A.	Remarks
	Gal. Test						Line + Thrmoe = 110 Ω
	"	"		11:50			Line to gr = $\infty \Omega$ Period 9 sec
1570	α Jan	4 ^h 30	16.3	0:57	3:53		3/4 moon
1571	β Gem	7 ^h 0	20.7	1:47	4:43		
1572	η Gem	6 ^h 11 ^m	22.3	2:01	4:57		

Nov 15-16 Wed-Thur

N.G.

Per 6.12 sec

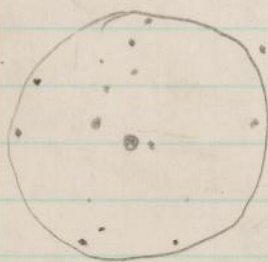
Gal Test	1, 2, 3, 4, 0, 5, - 7:10 P.M.	B steady - H=60 Fal - T 35° Fal -	Clouds - low E - SE. Haze	
1573	β And	10 ^h 4 ^m	35.1 9 01 P 0 53	Seeing Good
1574	" a	"	" 9 09 1 01	Not Refocused
1575	θ Ceti	2 ^h 16 ^m	-3.1 9 33 1 25	
1576	" a	"	" 9 41 1 34	Refocused
1577	α Jan	4 ^h 32	+16.3 9 56 1 50	Clouds up to 30° alt
1578	" a	"	" 10 05 1 58	in Ends
1579	β And	1 04	35.1 10 18 2 11	
1579	"	"	" 10 26 2 19	
1580	α Jan	4 32	+16.3 11 54 3 46	Long cloud + 15° SE
1581	" a	"	" 0 02 A 3 56	
1582	U Ori	5 50	+20.9 1 39 5 37	Identif. Doubtful
1583	α Jan	4 32	+16.3 2 00 5 54	
Gal. Test	1, 2, 3, 4, 0, 5		6 10	Per changed
"	"	"	6 14	Zero point moved.

1st p.
(>100,000)

Open 1 - 2, - 3, - 4; 5, open.

Wathin paper

Pumped out couples



U Ori

N.C.

#	Obs	L	S	EST	θ	AA	Remarks
1584	α Tau	4 ^h 32 ^m	+16.3	2 52	6 46		Hazy all over
1585	α " a	3 ^h 04	"	3 01	6 55		
1586	α Ori a	5 ^h 51 ^m	7.4	3 12	7 06		(cont)
1587	"	"	"	3 22	7 16		
1588							

Per = 7.5

gal Test 0, 1, 2, 3, 4, 5, 0 4:00

gal Test 1, 2, 3, 4, 5, 6 1 ant Per 6.5

Dec 4-5 - 1939g.j. P=7.4 1, 2, 3, 4, 5, 0 3^h 50 Hi Damp to LeftDec 7-8 1939g.j. P=6.8 1, 2, 3, 4, 5, 0 2^h 10 $\theta \rightarrow$

1588	B and	1 04	+35.0	2 21	1 17		0 ^o . just cleaned off.
1589	" a			2 49	1 45		
1590	R and	0 19	+38.1	3 18	2 59		dit of focus?
1591	" a			3 30	3 11		
1592	" a			3 37	3 18		
1593	R and			3 45	3 26		
1594	R Pis	1 28	+21.6	4 15	2 47		
1595	o Ati	2 17	-3.2	4 30	2 13		
96	" a	"	"	4 40	2 23		
97	" a	"	"	4 47	2 30		

see Z-1

0.04

0.08

0.10

0.122

0.24

0.25

0.73

0.77

0.81

0.87

28

#	Obj	α	δ	EST	Θ	HA	Remarks
1598	α Ceti	2 17	-3.2		4 56	2 39	
1599	α Ceti	2 57	3.7		5 50	2 53	
1600	α " α	"	"		5 58	3 01	measured
Dec 8-9							
Gal Test	1, 2, 3, 4, 5, 6, 0			22 $\frac{1}{2}$ V	6 45		7.8
1601	R Pis	1 28	+2.6		2 15	41	
1602	"					-	Lost in Clouds
1603	δ Peg	0 08	14.6		3 32	3 24	windy Fast moving
1604	" α	"	"		3 40	3 32	clouds.
1605	R Ant	0 21	38.3		4 08	3 47	
1606	R And	"	"		4 15	3 54	Clouds?
1607	R And	1 04	35.1		4 27	3 23	
1608	"	"	"		4 35	3 31	
1609	R Tri	2 31	33.8		5 04	2 33	
1610	" α	"	"		5 13	2 42	
1611	R Lep	4 55	-14.9		5 39	0 44	Red!
1612	"	"	"		5 49	0 54	
1613	α Tau	4 30	+16.3		6 11	1 41	Clouds in SE
1614	" α	"	"		6 19	1 49	
1615	α Ori	5 50	+20.1		7 51	2 01	Wagging
1616	"	"	"		7 59	2 09	Seeing bad
1617							Clouded over
Gal Test	1, 2, 3, 4, 5, 6, 0			22 $\frac{1}{2}$ V	8 20		7.6

Δm_2

0.91

0.75

0.80

.62

.62

.67

#	Obj	α	δ	EST	Θ	HA	Remarks
				Dec	18-19		
Gal test		1,2,3,4,5,0			6:11		P=9.5
1617	U Ori	5 52	+20.2		7:00		0 Cloud Cleared off
1618	" α	"	"		7:08		Seeing good
1619	γ Gem	6 32	+16.5		7:20		old Bank 15° up
1620	"	"	"		7:28		" " Lower 32°F
1621	RCnc	8 13	+11.9		9:04		" " 20° up
1622	" α	"	"		9:14		very hazy
Gal test		1,2,3,4,5,0			10:40		P=9.5!

Dec 23-24

Gal Test		1,2,3,4,5,0			5:45		8.2
1623	U Ori	5 52	+20.2		6:23		0? Moon
1624	" α	"	"		6:32		Poor guiding
1625	γ Gem	6 32	+16.5		6:44		
1626	" α	"	"		6:52		
1627	α CMa	7 34	+5.5		8:08		new sheet zero
1628	"	"	"		8:16		
1629	R Leo	9 45	+11.7		8:38		Bright
1630	" α	"	"		8:46		
1631	γ Leo	9 43	+34.7		9:01		
1632	"	"	"		9:16		
1633	γ Leo	10 14	+20.4		9:51		Double
1634	" α				10:00		Very good night

all Harry
rest F

20 86
39 43
147

Wrong??
"

3474
3338
136

changed

ant

32

Dec 26-27 -1939

#	Obj	α	δ	EST	θ	HA	Remarks
Gal Test		$\alpha, 1, 2, 3, 4, 5, 6$			$\theta 58$		$6^S.8$ H=45 T=12
1634	R And	0 41	+38.3		1 55		zero pt moved
35	" α	"	"		2 02		0 Seeding good
36	α And	0 03	+28.5		2 34		Full Moon
37	R Pis	1 28	+2.6		3 11		
38	" α	"	"		3 21		
39	O Ceti	2 17	-3.2		3 41		
1640	"	"	"		3 55		seeding not so good
41	α Ceti	2 57	+3.7		4 09		" worse
42	"	"	"		4 39		zero changed 750
43	α C. Mi	7 34	+5.5		7 47		
44							

Dec 28-29 1939

Gal Test	$\alpha, 2, 3, 4, 5, 6$				$\theta 35$		
1644	O Ceti	2 15	-3.2		3 46		Hazy 0?
45	" α	"	"		3 55		
46	" α	"	"		4 02		
47	α Ceti	2 57	+3.7		4 16		
48	" α	"	"		4 23		
49	"	"	"		4 31		cloud low - South West
1650	R Tau	2 31	+33.8		5 04		TM +20 " SW & S
51	" α	"	"		5 12		TM " 40
52	" α	"	"		5 20		TM clouds?
Gal Test				11:30			

Jan 2-3, 1940

*	Obs	α	δ	EST	θ	HA	Remarks
	gal test				2 30		
1653	Ortob	2 17	-3.2		2 51		very hazy at sunset
154	" a	"	"		2 59		
55	"	"	"		3 07		o?
56	And	6 03	+28.5		3 38		o?
57	" a	"	"		3 46		
58	" b	"	"		3 54		Windy bluster
59	R Trib	2 31	+33.8		4 34		7 11 m
60	" a	"	"		4 42		
61	"	"	"		4 50		
62	R Lep	4 51	-14.8		5 44		seeing niter good
63	" a	"	"		5 53		o "
64	" b	"	"		6 00		
65	Ortob	2 57	+3.7		6 32		
66	" a	"	"		6 40		
67	"	"	"		6 47		
68	N Ori	5 03	+1.1		7 17		
69	" a	"	"		7 25		clouds?
1670	" b	"	"		7 32		"
71	51 Gem	7 08	+16.3		8 19		
72	" a	"	"		8 26		
73	"	"	"		8 33		
74	N Ori	5 32	+20.2		9 01		
75	" a	"	"		9 08		
76	" b	"	"		9 16		
77	R Lep	9 45	+11.7		10 15		
78	" a	"	"		10 23		} wrong star??
79	"	"	"		10 30		

#	Obs	L	S	EST	Θ	HA	Remarks
1680	R Leo	9 45	+11.7		10 57		correct star
81	" α	"	"		11 04		
82	" β	"	"		11 11		
Gal test					11 30		Clouded up from East

Jan 6-7 Sat-Sun 1940

Gal test					2 05		period = 7.0
1683	u Ori	5 52	+20.2	0	2 20	3 32	0?
84	"	"	"	a	2 29	3 23	0
85	"	"	"	b	2 38	3 14	0 clouded
86	"	"	"	b	6 31	0 39	0 just cleared off
87	"	"	"	a	6 38	0 46	0
88	"	"	"	0	6 46	0 54	0 seeing not too good
89	"	"	"	0	7 30	1 38	0
90	"	"	"	a	7 38	1 46	0
91	"	"	"	b	7 45	1 53	0?
92	"	"	"	b	8 32	2 40	0?
93	"	"	"	a	8 41	2 49	0 windy
94	"	"	"	0	8 48	2 56	0 "
95	"	"	"	0	9 38	3 44	0 "
96	"	"	"	a	9 48	3 54	0 "
97	"	"	"	b	9 55	4 01	0
98	"	"	"	b	10 30	4 38	0 " seeing bad
99	"	"	"	a	10 37	4 45	0
1700	"	"	"	0	10 44	4 52	0 "
1701	R Leo	10 14	+20.4	0	11 13		Trouble with alt & az.
02	"	"	"	a	11 21		

Dec 2-1

Dec 2

1.50

1.49

1.44

1.10

1.10

1.10

1.16

1.18

1.18

1.34

1.35

1.37

1.62

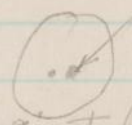
1.68

1.74

2.10

2.21

2.32

#	Obj	α	δ	F	θ	HA	Remarks
1703	R Leo	9 45	11.7	α	11 45	0	
04	"	"	"	b	11 52	0	
05	"	"	"	0	11 59		
06	R Leo	9 43	+34.7	0	12 33		
07	"	"	"	α	12 40		faint H α fpa b
08	R Leo	11 09	21.1	α	12 54	0	
09	"	"	"	0	13 00	0	

Jan 27-28 Sat-Sun - 1940

1710	O Ceti	2 17	-3.2	0	4 25	0?	P=9.0+
11	"	"	"	a	4 36	Focus	
12	"	"	"	b	4 43	"	
1713	R Leo	4 57	+14.8	b	5 03		
14	"	"	"	a	5 10	seeing bad	
15	"	"	"	0	5 18		
16	W Ori	5 03	+1.1	0	5 37		
17	"	"	"	α	5 45	+12° F	
18	"	"	"	b	5 52		
19	U Ori	5 52	+20.2	b	6 07		
20	"	"	"	α	6 15		
21	"	"	"	0	6 23		
22	R Leo	9 45	+11.7	0	7 01		
23	"	"	"	a	7 09		
24	"	"	"	b	7 17		
25	S Bern	7 08	+16.3	b	7 32		
26	"	"	"	a	7 40		
27	"	"	"	0	7 48		
28	S Bern	7 08	+20.5	0	8 13	} w P B	
29	"	"	"	a	8 24		

Jan 28-29-1940

#	Obj	α	δ	F	Θ	HA	Remarks
1730	gal Test				4 20		
1730	L Jan	4 30	+16.3	0	4 45		WPR off edge
31	R hep	4 57	-14.8	0	5 06		0
32	"	"	"	a	5 15		+15° F
33	"	"	"	b	5 23		seeing good
34	U Ori	5 52	+20.2	b	5 39		
35	"	"	"	a	5 47		
36	"	"	"	0	5 55		
37	R Leo	9 43	+11.7	0	6 14		moving star?
38	"	"	"	a	6 34		correct "
39	"	"	"	a	6 42		
40	"	"	"	b	6 50		light increased
41	W Ori	5 03	+1.1	0	7 09		hazy? moon
42	"	"	"	a	7 17		
43	"	"	"	b	7 25		
44	51 Gem	7 08	16.3	b	8 10		
45	"	"	"	a	8 17		
46	"	"	"	0	8 25		
47	5 Gem	7 05	20.6	0	8 40		
48	"	"	"	a	8 49		WPR
49	R Cnc			0	9 20		
50	"			a	9 28		
51	"			b	9 35		
52	U Ori	5 52	20.2	b	10 10		quadrant Paf.
53	"			a	10 18		
54	"			0	10 25		
55	R Leo	9 43	11.7	0	10 40		
56	"			a	10 48		
57	"			b	10 56		

Recorder set on
max to reduce vibration.

1st bad

Am 5?

#	Obj	α	δ	Fi	Θ	HA	Remarks
1758	u Vir	10 16	42.0	b	11 28		
59	"	"	"	a	11 36		
60	"	"	"	o	11 45		
61	R Hyd	13 24	22.7 22.1	o	13 20		
62	"	"	-22.7	a	13 48		
63	"	"	"	b	13 56		guiding star.
64	β Boo	14 58	40.8	o	14 15		
Gal Test					14 30		$P=8.75$

Jan 31 - Feb 1

Gal Test					4:50		9^s -
65	R Lep			o	5:16		o Light Wind
66	"			a	5:24		24°F
67	"			b	5:31		
68	W Ori			b	5:45		
69	"			a	5:53		
1770	"			o	6:01		
71	u Ari			o	6:14		
72	"			a	6:22		
73	"			b	6:30		
74	R Leo			b	6:47		
75	"			a	6:55		
76	"			o	-		Light Out
77	R Leo			o	7:24		
78	"			a	7:31		
79	"			b	7:38		
1780	γ Gem			o	7:51		
81	"			a	7:58		
82	"			o	8:06		Laps out of adj.
83	"			o	8:17		
84	"			a	8:33		

#	Obj	α	δ	F	θ	HA	Remarks
1785	51 Gem			b	841		
86	3 Gem			a	854		
87	"			b	902		
88	U Ori			o	—		off Scale!
89	"			o	1026		brought back by
1790	"			a	1035		again switch.
91	"			b	1042		
							off Scale
							went and back.

Feb 5-10

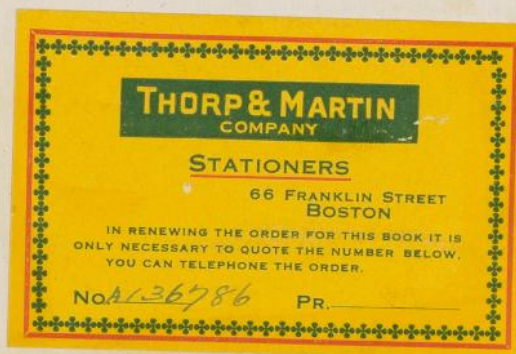
1792	R Tri	2 13	33 50	o	501		02 Clouds just
93	"			a	508		cloud 30°
94	"			b	516	2 48	
95	R Lep	4 55	-14 57	b	530		
96	"			a	539		1-2 focus not?
97	"			o	546		
98	R Leo	9 45	11.7	o	600		
99	"			a	608		
1800	"			b	615		
01							
02							
03							
04							
05							

#	Obs	α	δ	Ri	θ	HA	Remarks
---	-----	----------	----------	----	----------	----	---------

48

#	Obs	α	δ	P_i	θ	HA	Remarks
---	-----	----------	----------	-------	----------	----	---------





1939phae.proj..799E