

**RESULTS OF OBSERVATIONS OF THE
FIXED STARS MADE WITH THE MADRAS
MERIDIAN CIRCLE AT THE GOVERNMENT
OBSERVATORY MADRAS IN THE YEAR
1874, 1875, AND 1876**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649692637

Results of Observations of the Fixed Stars Made with the Madras Meridian Circle at the Government Observatory Madras in the Year 1874, 1875, and 1876 by C. Michie Smith & Norman Robert Pogson

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C. MICHIE SMITH & NORMAN ROBERT POGSON

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IN THE YEARS 1874, 1875, AND 1876

UNDER THE DIRECTION OF THE LATE

NORMAN ROBERT POGSON, C.I.E., F.R.A.S.

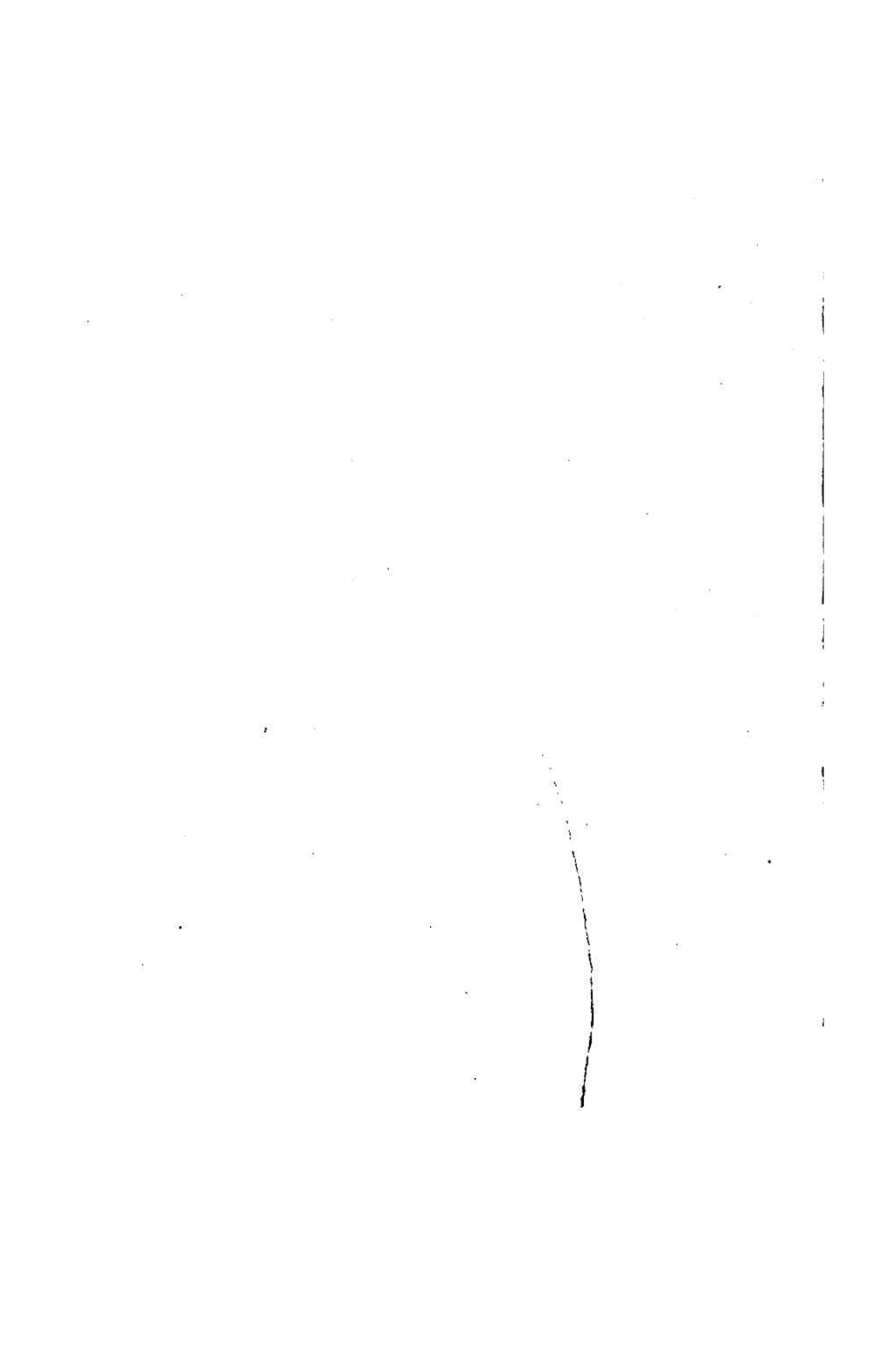
BY

C. MICHIE SMITH, B.Sc., F.R.A.S., F.R.S.E.

OFFICIATING GOVERNMENT ASTRONOMER AT MADRAS

PUBLISHED BY ORDER OF THE GOVERNMENT OF MADRAS

MADRAS
PRINTED AT THE LAWRENCE ASYLUM PRESS, BY G. W. TAYLOR
1892



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INTRODUCTION.

The present volume deals with the Meridian Circle Observations made in the years 1874-75-76. The Observers were Moottoosawmy Pillay (M) and a new Observer P. Ragavachari (R) who is now First Observatory Assistant. A number of observations were also made by another observer (G) but the whole of these have had to be rejected. During these three years a comparatively small number of observations were made and I gather from the Annual Administration Reports that the reason for this was that the staff was chiefly employed in bringing up arrears of reductions. It seems, too, that the intention was to confine the Catalogue to the stars that had been observed up to that time. In 1877, however, it was resolved to increase the number of stars observed so that the next volume will deal with 9,637 observations and the volume for 1880-81-82 with 9,267 observations. A final volume will contain the 4,052 observations made between 1883 and 1887, when the work was closed.

During the years dealt with in this volume no change was made either in the instrument or in the methods of reduction.

Instrumental Corrections adopted in 1874.

Date.	Obs.	Index.	Run in S'.	Clock Rate.	Inclina- tion.	Collima- tion.	Meridian.	Determining Stars.
Jan. 1	M	- 58	- 04	- 011	+ 018	+ 004	+ 031	84 and 115 R. P. L.
3	"	- 78	- 04	- 004	+ 015	+ 001	+ 043	115 R. P. L. and γ Tauri.
5	"	- 76	- 04	- 006	+ 014	- 002	+ 029	42 and 116 R. P. L.
6	"	- 74	- 04	- 007	+ 018	+ 001	+ 025	
7	"	- 78	- 04	- 006	+ 016	- 002	+ 023	20 and 115 R. P. L.
8	"	- 84	- 04	- 011	+ 018	000	+ 036	111 R. P. L. and ϵ Tauri.
9	"	- 92	- 04	- 012	+ 014	- 002	+ 038	
10	"	- 96	- 04	- 004	+ 015	+ 002	+ 041	111 R. P. L. and γ Tauri.
12	"	- 103	- 04	- 006	+ 009	- 008	+ 036	45 and 116 R. P. L.
13	R	- 96	- 04	- 010	+ 018	+ 002	+ 044	
14	M	- 117	- 04	+ 003	+ 014	+ 002	+ 055	
15	"	- 111	- 04	+ 002	+ 007	- 001	+ 028	84 and 111 R. P. L.
16	"	- 120	- 04	+ 011	+ 012	+ 002	+ 029	42 and 111 R.P.L.
17	"	- 118	- 04	+ 018	+ 007	- 001	+ 032	42 R.P.L. & 2293 Redhill.
19	"	- 114	- 04	+ 009	+ 009	- 003	+ 031	42 R.P.L. & 2293 Redhill.
20	M & R	- 125	- 04	000	+ 012	- 003	+ 033	42 R.P.L. & 2293 Redhill.
21	M	- 122	- 04	+ 006	+ 012	- 003	+ 029	42 R.P.L. & 2293 Redhill.
22	"	- 115	- 04	+ 005	+ 016	000	+ 045	34 R.P.L. and ϵ^1 Eridani.
23	"	- 118	- 04	+ 013	+ 017	- 002	+ 028	42 R.P.L. & 2293 Redhill.
24	"	- 120	- 04	+ 017	+ 017	- 002	+ 029	42 R.P.L. & 2293 Redhill.
25	"	- 121	- 04	+ 005	+ 016	- 003	+ 017	42 R. P. L. & 24 Ura. Min.
27	R	- 123	- 04	+ 007	+ 019	+ 001	+ 041	43 R.P.L. & 2293 Redhill.
28	"	- 118	- 04	+ 013	+ 016	- 001	+ 035	2293 Redhill and α Aurigæ.
29	"	- 127	- 04	+ 012	+ 018	+ 001	+ 036	43 R.P.L. & 2293 Redhill.
30	"	- 129	- 04	+ 012	+ 020	+ 003	+ 037	43 R.P.L. & 2293 Redhill.
31	"	- 123	- 04	+ 015	+ 018	+ 001	+ 024	43 and 114 R. P. L.
Feb. 2	"	- 131	- 02	+ 009	+ 018	+ 001	+ 032	43 and 116 R. P. L.
3	"	- 131	- 02	+ 011	+ 017	000	+ 035	45 R. P. L. & 24 Ura. Min.
4	"	- 127	- 02	+ 016	+ 018	000	+ 029	24 Ura. Min. and β Tauri.
5	"	- 129	- 02	+ 013	+ 017	000	+ 036	45 R. P. L. & 24 Ura. Min.
6	"	- 127	- 02	+ 017	+ 019	+ 001	+ 038	45 R. P. L. & 24 Ura. Min.
7	"	- 123	- 02	+ 025	+ 020	000	+ 028	46 R. P. L. & 24 Ura. Min.
9	"	- 129	- 02	+ 019	+ 018	000	+ 008	46 R. P. L. and 24 Cephei.
10	"	- 126	- 02	+ 013	+ 019	000	+ 007	59 R.P.L. and 24 Cephei.
11	"	- 139	- 02	+ 016	+ 020	- 001	- 001	24 Cephei and α Aurigæ.
12	"	- 130	- 02	+ 025	+ 021	+ 001	- 008	24 Cephei and β Tauri.
13	"	- 132	- 02	+ 009	+ 019	- 001	000	
14	"	- 136	- 02	+ 005	+ 021	000	+ 004	
16	"	- 136	- 02	+ 001	+ 019	000	+ 011	
18	"	- 134	- 02	+ 004	+ 018	- 001	+ 018	
19	"	- 135	- 02	+ 005	+ 019	- 001	+ 021	
20	"	- 133	- 02	000	+ 019	- 001	+ 025	60 and 150 R. P. L.
21	"	- 134	- 02	+ 002	+ 018	- 001	+ 018	72 and 150 R. P. L.
23	"	- 143	- 02	+ 007	+ 018	000	+ 025	72 and 143 R. P. L.
24	"	- 131	- 02	+ 010	+ 018	000	+ 027	72 and 143 R. P. L.
25	"	- 127	- 02	+ 006	+ 016	- 001	+ 013	60 and 151 R. P. L.
26	"	- 140	- 02	+ 008	+ 017	- 001	+ 018	
27	"	- 129	- 02	+ 006	+ 017	000	+ 024	
28	"	- 127	- 02	+ 014	+ 018	+ 001	+ 030	60 and 151 R. P. L.
Mar. 2	M	- 142	...	+ 014	+ 019	+ 002	+ 013	70 R.P.L. and 24 Cephei.
3	"	- 150	...	+ 012	+ 020	+ 001	+ 032	70, 143 and 151 R. P. L.
4	"	- 151	- 04	+ 023	+ 017	- 002	+ 025	70 and 151 R. P. L. [Min.
5	"	- 147	- 04	+ 018	+ 013	- 005	+ 026	72, 143, 153 R.P.L. & λ Ura.
6	"	- 151	- 04	- 001	+ 017	- 001	+ 030	79, 143 and 151 R. P. L.
7	R	- 135	- 04	+ 001	+ 021	+ 004	+ 022	79 R.P.L. & 24 Cephei. and α Urae Minoris.

P. Raghavachary taken as zero of Personal Equation from January 1st, instead of N. B. Pogson, assuming until further determinations. N. R. Pogson—0•30.—O. Raghonathachary—0•03, and Mootooanmy Pillay—0•45.

INTRODUCTION.

Instrumental Corrections adopted in 1874.

Date.	Obs.	Incl.	Run in 5'.	Clock Rate.	Inclina- tion.	Collima- tion.	Meridian.	Determining Stars.
Mar. 9	M	-140	-0.4	+0.23	+0.31	+0.04	+0.36	79 and 153 R. P. L.
10	"	-15.2	-0.4	+0.21	+0.23	+0.03	+0.29	79 and 151 R. P. L.
11	"	-15.4	-0.4	+0.07	+0.22	-0.01	+0.24	79 and 153 R. P. L.
12	R	-13.9	-0.4	+0.04	+0.23	0.00	+0.21	79 R. P. L. and 24 Cephei.
13	"	-14.5	-0.4	+0.16	+0.23	+0.01	+0.24	79 R. P. L. and 24 Cephei.
14	"	-14.2	-0.4	+0.19	+0.21	0.00	+0.22	87 and 153 R. P. L.
16	"	-13.9	-0.4	+0.18	+0.22	0.00	+0.19	87 and 143 R. P. L.
17	"	-14.6	-0.4	+0.16	+0.21	0.00	+0.30	87 and 143 R. P. L.
19	"	-14.9	-0.4	+0.16	+0.24	-0.01	+0.25	87 and 153 R. P. L.
20	"	-14.8	-0.4	+0.18	+0.27	0.00	+0.29	87 and 153 R. P. L.
21	"	-14.9	-0.4	+0.13	+0.25	-0.01	+0.25	10 and 90 R. P. L.
23	"	-13.7	-0.4	+0.06	+0.33	0.00	+0.29	90 and 153 R. P. L.
24	"	-14.3	-0.4	+0.08	+0.32	-0.01	+0.30	
25	"	-13.7	-0.4	+0.09	+0.34	0.00	+0.31	
27	"	-14.9	-0.4	+0.11	+0.32	0.00	+0.32	
28	"	-15.1	-0.4	+0.14	+0.28	-0.01	+0.32	
30	"	-14.1	-0.4	+0.23	+0.32	-0.01	+0.38	153 R. P. L. and γ Cancer.
31	"	-13.5	-0.4	+0.03	+0.33	-0.01	+0.37	96 and 18 R. P. L.
Apl. 1	M	-15.2	-0.4	-0.15	+0.42	+0.03	+0.38	
4	R	-14.0	-0.4	+0.17	+0.33	0.00	+0.42	98 and 153 R. P. L.
6	"	-13.7	-0.4	+0.20	+0.36	+0.01	+0.40	98 and 153 R. P. L.
8	"	-13.1	-0.4	+0.09	+0.32	0.00	+0.41	98 and 153 R. P. L.
9	"	-14.6	-0.4	+0.09	+0.31	+0.01	+0.36	
11	"	-14.0	-0.4	+0.15	+0.34	+0.01	+0.33	98 and 18 R. P. L.
13	"	-14.8	-0.4	+0.25	+0.37	+0.01	+0.34	98 and 18 R. P. L.
14	"	-14.8	-0.4	+0.25	+0.36	-0.01	+0.33	98 R. P. L. and Polaris.
15	"	-14.5	-0.4	+0.27	+0.38	+0.02	+0.36	98 and 18 R. P. L.
16	"	-14.1	-0.4	+0.27	+0.38	+0.02	+0.35	98 and 18 R. P. L.
17	"	-14.0	-0.4	+0.17	+0.40	+0.01	+0.35	98 and 18 R. P. L.
20	M	-15.9	-0.4	+0.03	+0.43	-0.01	+0.35	108 and 14 R. P. L.
21	"	-15.1	-0.4	+0.05	+0.49	+0.04	+0.38	101 and 10 R. P. L.
22	C R	-13.6	-0.4	+0.05	+0.47	+0.02	+0.38	
23	R	-15.2	-0.4	+0.04	+0.40	+0.03	+0.38	101 and 10 R. P. L.
24	"	-15.2	-0.4	+0.19	+0.44	+0.06	+0.43	101 and 10 R. P. L.
25	"	-14.6	-0.4	+0.23	+0.45	+0.03	+0.43	
27	"	-13.6	-0.4	+0.05	+0.48	+0.03	+0.44	101 and 10 R. P. L.
29	"	-14.6	-0.4	+0.10	+0.44	+0.01	+0.43	
30	"	-15.2	-0.4	+0.09	+0.44	+0.02	+0.43	
May 1	G	-14.5	+0.3	+0.02	+0.44	0.00	+0.41	
2	"	-13.7	+0.3	+0.31	+0.43	-0.04	+0.40	
7	"	-8.4	+0.3	-0.25	+0.30	+0.05	+0.37	
8	"	-7.9	+0.3	+0.03	+0.24	+0.01	+0.36	35 R. P. L. and β Leonis.
9	"	-7.1	+0.3	+0.28	+0.26	+0.02	+0.17	
11	"	-7.1	+0.3	-0.19	+0.25	+0.05	-0.20	111 and 14 R. P. L.
12	"	-7.0	+0.3	+0.04	+0.29	+0.02	+0.40	114 and 33 R. P. L.
13	"	-7.2	+0.3	+0.36	+0.35	+0.04	+0.26	
15	"	-9.1	+0.3	+0.41	+0.31	-0.01	-0.01	106 and 33 R. P. L.
16	"	-7.0	+0.3	+0.36	+0.26	-0.02	+0.10	
18	"	-6.3	+0.3	+0.26	+0.39	-0.01	+0.33	30, 14 and 18 R. P. L.
19	R	-6.8	-0.6	+0.19	+0.39	+0.03	+0.43	101 and 10 R. P. L.
20	"	-7.0	-0.6	+0.15	+0.36	+0.00	+0.40	
21	"	-7.2	-0.6	+0.18	+0.38	+0.01	+0.38	101 and 10 R. P. L.
22	"	-7.8	-0.6	+0.07	+0.39	+0.01	+0.39	101 and 10 R. P. L.
23	"	-7.6	-0.6	+0.06	+0.38	+0.01	+0.38	
25	"	-7.8	-0.6	+0.23	+0.40	+0.02	+0.38	
26	"	-8.0	-0.6	+0.22	+0.40	+0.02	+0.38	