

Notices of the Association.

The Meetings of the Association will be held on the last Wednesday in each month at Barnard's Inn Hall, Holborn. The Meetings will commence at five o'clock. The dates of the Meetings for the present Session will be as follows:—

1892 December 28.	1893 April 26.
1893 January 25.	May 31.
February 22.	June 28.
March 29.	

The Council have pleasure in announcing that they have arranged for a series of short Lectures to be delivered at the Meetings. The following is a provisional programme, and may be subject to some modifications. Should circumstances necessitate any changes due notice will be given of them.

1892—Nov. 30	-	G. M. SEABROKE, F.R.A.S.	“Measuring Double Stars.”
Dec. 28	-	ARTHUR COTTAM, F.R.A.S.	“Star Maps.”
1893—Jan. 25	-	Captain W. NOBLE, F.R.A.S.	“The Transit Instrument.”
Feb. 22	-	W. SCHOOLING, F.R.A.S.	“Astronomical Photography.”
March 29	-	A. M. W. DOWNING, M.A., F.R.A.S.	“How to find Easter.”
April 26	-	T. G. ELGER, F.R.A.S.	“Lunar Rills and Bright Streak Systems.”
May 31	-	N. E. GREEN, F.R.A.S.	“How to secure Accuracy in Astronomical Drawing and Sketching.”
June 28	-	Sir H. GRUBB, F.R.S.	Subject to be announced.

Mars Section.

In spite of the very unfavourable position of the planet for European observers, and the bad weather which has so generally prevailed during the opposition, the following reports and sketches have been received:—

E. M. Antoniadi (1 report)	-	-	5 drawings.
G. L. Brown	-	-	3 drawings.
G. T. Davis	-	-	8 drawings.
L. A. Eddie (1 report)	-	-	2 drawings.
H. Ellis	-	-	8 drawings.
Miss Alice Everett	-	-	7 drawings.
Rev. A. Freeman (1 report)	-	-	4 drawings.
Walter Gale (1 report)	-	-	4 drawings.
Capt. W. Noble	-	-	4 drawings.
Miss A. S. D. Russell	-	-	3 drawings.
Dr. D. Smart	-	-	2 drawings.
Rev. W. R. Waugh	-	-	3 drawings.
A. S. Williams (2 reports)	-	-	11 drawings.
Jas. Wykes	-	-	3 drawings.
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The record of work done must be regarded, under the adverse circumstances of the case, as being decidedly satisfactory. The majority of the drawings show, as was, indeed, to have been expected, only the leading markings of the planet, but several add also much interesting detail. Mr. Stanley Williams, for example, has been able to record the presence of several of the Schiaparellian canals, and the doubling of one or two of them; and Mr. Walter Gale has used to exceedingly good effect the better conditions he has enjoyed under Australian skies, his drawings showing not only a great amount of interesting detail, but much skill and accuracy in delineating it. The Director greatly regrets that for himself other and more pressing duties have almost prohibited the work of observation except during the most unfavourable season, and that he has been wholly unable to give that attention to the work of the Section, and to the assistance of its Members that they had a right to expect. He is the more indebted to them, therefore, for the amount of work they have accomplished under these disadvantageous circumstances.

The following ephemeris (by Mr. Marth, "Monthly Notices," Vol. LII., pp. 398-404) is in continuation of that given on p. 546, Vol. II. of the "Journal":—

Greenwich, Noon, 1892.	Angle of Position of Axis of Mars.	Areographical Co-ordinates of Centre of Disk.		Appt. Diameter.	Greatest Defect of Illumination.		Time of Zero Mern. crossing Centre.
		Long.	Lat.		Amount.	Posn. Angle.	
Dec. 1 -	343°00	242°77	24°76	9''54	1'31	67°35	h m 8 2·1
" 3 -	342°29	223°16	24°94	9'39	1'29	67°24	9 22·7
" 5 -	341°58	203°54	25°11	9'24	1'26	67°14	10 43·4
" 7 -	340°87	183°92	25°26	9'10	1'24	67°05	12 4·1
" 9 -	340°16	164°28	25°40	8'95	1'21	66°97	13 24·8
" 11 -	339°46	144°64	25°53	8'81	1'19	66°89	14 45·6
" 13 -	338°76	124°98	25°64	8'68	1'17	66°82	16 6·5
" 15 -	338°07	105°32	25°73	8'55	1'14	66°76	17 27·3
" 17 -	337°38	85°65	25°81	8'42	1'12	66°71	18 48·2
" 19 -	336°70	65°97	25°87	8'29	1'10	66°66	20 9·2
" 21 -	336°03	46°28	25°92	8'17	1'07	66°63	21 30·2
" 23 -	335°36	26°59	25°95	8'05	1'05	66°60	22 51·2
" 25 -	334°70	6°90	25°96	7'93	1'03	66°59	—
" 27 -	334°05	347°20	25°96	7'82	1'01	66°58	0 52·7
" 29 -	333°42	327°50	25°94	7'71	0'98	66°58	2 13·7
" 31 -	333°79	307°79	25°91	7'60	0'96	66°59	3 34·7

E. W. MAUNDER,

1892, December 5.

Director of the Section.

Lunar Section.

Drawings and notes have been received from the following members since the date of the last Report :—

Mr. G. T. DAVIS (Reading). (1.) Drawing of Aristarchus and Herodotus, under morning illumination, including a large unnamed enclosure on the north-east. (2.) Drawing of Messala under evening illumination, showing the cleft on the N.W. quarter of the floor and other details.

Rev. S. HUTCHINGS, F.R.A.S. (Alderbury Vicarage, Salisbury). Sketch of Vendelinus, under date 1892, September 7, 11^h 30^m, in which the semi-circular mounds on the E. flank of the large depression C are shown.

Mr. THOS. RADMORE (Portsmouth). Ptolemaus at sunrise, drawn with a power of 160 on a 3½-in. achromatic.

Dr. SHELDON, F.R.A.S. (Macclesfield). A pencil sketch and description of the long shallow trough, sometimes termed the Bullialdus Valley, extending from the region N. of Cichus to that S.E. of Bullialdus.

Rev. J. TUCKFIELD (Hobart, Tasmania). A drawing of Lohrmann and Hevel near the Terminator.

Lieut. P. B. MOLESWORTH, R.E. (Hong Kong), in a letter, dated August 1, 1892, calls attention to a craterlet south-east of Atlas, which he remarked with his 9¼-in. Calver reflector, when making a sketch of the rills on the floor of this formation, on July 29 this year, at 7^h L.M.T. It had the appearance of "a curious ill-defined circular dark spot, darker towards the centre." On July 30, at 7^h 30^m, it was noted as "a deep oval crater with considerable shadow, having a darker surface round it," and on the following night as "a very ordinary craterlet of some size, fairly deep, with a hardly perceptible darkness round it." The craterlet Lieut. Molesworth describes agrees very closely, both as regards position and appearance, with an object observed by me at 8^h on April 22, 1882, and subsequently shown in my drawing of Atlas and Hercules published in the "Selenographical Journal" on April 22 the same year. It is there described as "a dusky, ill-defined spot, with a dark centre." A cleft also was noted as extending from the north side of it across the plain on the south-east of Atlas. It is remarkable that there is nothing in the maps answering either to a craterlet or rill in this position, though many minute features of the former class are shown.

Bedford, 1892, October 29.

T. GWYN ELGER,
Director of Section.

The Saturn Section.

Observers are requested to watch for some of the E. and W. elongations of Saturn's innermost satellites. The list shows all that could be visible at Greenwich in December.

E. <i>Mimas.</i>			W.		
d	h	m	d	h	m
16	17	57	23	19	36
17	16	30	24	18	12
18	15	24	25	16	48
19	14	0	26	15	24
20	12	36	27	14	0
			28	12	39

E. <i>Enceladus.</i>			W.		
d	h	m	d	h	m
19	14	42	14	19	39
23	17	24	17	13	27
27	19	54	21	16	3
30	13	42	25	18	36

These elongation-times, being derived from the Washington Nautical Almanac ultimately, differ from Mr. Marth's ephemeris, and are 80^m too late for Mimas, and 16^m too early for Enceladus. Mr. Marth's ephemeris is nearly correct according to H. Struve's recent observations of these satellites.

A. FREEMAN,

December 2, 1892.

Director of the Section.

Double Star Section.**STARS FOR OBSERVATION.**

Name of Star and Herschel's Number.	Ap- proxi- mate R.A.	Ap- proxi- mate Dec.	Mags.	Ap- proxi- mate Posi- tion.	Approxi- mate Dis- tance.	Approxi- mate Change in Position during last 10 Years.	Approxi- mate Change in Distance during last 10 Years.
61 Cygni, 8898	h m 21 1	° ' " 38 7	{ 5.3 5.9 }	123	22	4	slight
B.A.C. 8372, 10304	° °	57 46	{ 6.9 8.0 }	325	1	18	slight
24 Cassiopeæ, 283	° 42	57 11	{ 4.0 7.6 }	193	5	30	slight
259 β Andromedæ, 818.	2 6	46 56½	{ 6.7 7.6 }	232 (?)	barely divided.	—	—
1947 -	5 4	-7 13	{ 8.0 10.0 }	50	20	4	2"
Castor, 3228	7 27	32 9	{ 2.7 3.7 }	233	6	7	slight
ζ Cancri, 3557	8 5	18 1	{ A.5.0 B.5.7 C.5.5 }	A.B. 37 A.C. 116	0.9 5.5	43 12	slight

G. M. SEABROKE,

1892, November 30.

Director of the Section.

New Members of the Association.

The following were elected October 26, 1892 :—

JOHN FLEETWOOD ACHESON, M.A., Head Master of Uttoxeter Grammar School, Uttoxeter.

WILLIAM BROADBENT, Central Iron Works, Huddersfield.

F. D. R. COPESTICK, Calton House, Denning Road, Hampstead.

T. A. ROGERS, F.R.C.S., 23, Endsleigh Street, W.C.

WILLIAM ROXBURGH, M.D., F.R.C.P., F.R.A.S., Wildersleigh, Westerfield Road, Ipswich.

F. G. TEMPLER, District Judge, Larnaca, Cyprus.

LLEWELYN THOMAS, 44, Parkfield Road, Liverpool.

The following Candidates were proposed October 26, 1892, and were elected November 30, 1892 :—

HAROLD ADAIR,

Main Street, Egremont, *viâ* Carnforth.

Proposer—John Sherwen. *Seconder*—John D. Thompson.

WILLIAM ALEXANDER,

28, Rockybank Road, Devonshire Park, Birkenhead.

Proposer—W. B. Hutchinson, F.R.A.S.

Seconder—P. F. Duke, F.R.A.S.

ELBERT ANDERSON,

Villa Plaisance, La Tour de Peilz, Vevey, Switzerland.

Proposer—Arthur Cottam, F.R.A.S.

Seconder—P. F. Duke, F.R.A.S.

GEORGE AVENELL,

56, Mansfield Road, Haverstock Hill, N.W.

Proposer—James Bisset. *Seconder*—F. Lanham.

CHARLES HENRY BOGEN,

66, Hamilton Street, Grimsby.

Proposer—Harry Parker. *Seconder*—W. H. Webster.

GEORGE ARTHUR BIDDELL, M.I.C.E.,

Bishops Hill, Ipswich.

Proposer—George Calver, F.R.A.S. *Seconder*—Arthur Cottam, F.R.A.S.

THOMAS GEORGE GLOSTER BRENT,

81, Long Lane, Aldersgate, E.C.

Proposer—Edward T. Markham.

Seconder—James H. Edwards.

BERNARD EDWARD CAMMELL,

Folly Court, Wokingham.

Proposer—(Rev.) Josh. T. Brown.

Seconder—W. H. T. Beechey, F.R.A.S.

CHARLES CALMADY COLLIER,

Brook, Horrabridge, S. Devon.

Proposer—A. S. Ussher. *Seconder*—George W. Maunder.

EDWARD J. COPE (Chemist),

Dan-y-cefu, West Malvern.

Proposer—G. T. Davis. *Seconder*—H. F. Lindars.

ROBERT CROSS,

32, St. Aldates Street, Oxford.

Proposer—G. T. Davis. *Seconder*—Walton Adams,

- ALLEN F. GILLIHAN,
135, Pandora Avenue, Victoria, British Columbia.
Proposer—Arthur Cottam, F.R.A.S. *Seconder*—P. F. Duke, F.R.A.S.
- Dr. E. W. GOODALL,
Eastern Hospitals, Homerton, N.E.
Proposer—J. B. Trapp. *Seconder*—P. F. Duke, F.R.A.S.
- Rev. GUSTAVUS JAMES GOODMAN,
The Manse, Walker-on-Tyne.
Proposer—C. Hutchinson, F.R.A.S.
Seconder—R. C. Nelson, F.R.A.S.
- H. GRIGGS,
298, Essex Road.
Proposer—Edwin Holmes. *Seconder*—W. Schooling, F.R.A.S.
- JOHN EBENEZER GROUT,
56, Effingham Road, Hornsey.
Proposer—Edwin Holmes. *Seconder*—Thos. Frid Maunder.
- JAMES HAMILTON,
7, Kilmaurs Road, Edinburgh.
Proposer—W. Forgan, F.R.M.S. *Seconder*—Thomas Mein.
- GEORGE FRANCIS HARDY F.I.A., F.R.A.S.,
36, Bloomsbury Square, W.C.
Proposer—Walter Goodacre, F.R.A.S.
Seconder—H. Sadler, F.R.A.S.
- J. HAROLD HERBERT,
"Elmswood," Mapperley Road, Nottingham.
Proposer—(Rev.) J. A. Mitchell, B.A.
Seconder—Edward Parry, M.I.C.E.
- GEORGE HOLMES,
Drury Hill, Lincoln.
Proposer—R. J. Newcombe. *Seconder*—E. Walter Maunder.
- Mrs. J. A. JAMESON,
Stuckeridge, Bampton, N. Devon.
Proposer—Alice Sandford.
Seconder—Wm. Schooling, F.R.A.S.
- JAMES JOLLY (Printer),
23, Bridge Street, Aberdeen.
Proposer—J. Russell. *Seconder*—Alexr. Reith, M.D.
- JAMES KELLY, Brigade-Surgeon (Retired),
1, Tivoli Terrace, South Kingstown, Co. Dublin.
Proposer—H. G. Beamish (Col. Retired List).
Seconder—R. J. Taaffe, M.E., &c.
- WILLIAM HENRY LANCASTER,
Clay Hill, Epsom.
Proposer—Arthur Kennedy, F.R.A.S.
Seconder—E. Walter Maunder, F.R.A.S.
- WILLIAM LAUNCHBURY,
14, Cripsey Road, Oxford.
Proposer—T. O. Smith. *Seconder*—Chas. A. Jenkins, F.R.A.S.
- HARRY LAWTON,
23½, Talfourd Road, Peckham, S.E.
Proposer—T. Harley, F.R.A.S. *Seconder*—T. Duncan Bell.

- Mrs. C. S. LERESCHE,
2, Mapesbury Road, Brondesbury, N.W.
Proposer—Ranald Macdonald. *Seconder*—Ann Agnes Power
- GEORGE BLUNDELL LONGSTAFF, M.A., M.D. (Oxon), F.R.C.P.,
"Highlands," Putney Heath, S.W.
Proposer—A. C. Ranyard, M.A., F.R.A.S.
Seconder—William Irving Pape, F.R.A.S.
- Prof. F. S. LUTHER,
Hartford, Connecticut, U.S.A.
Proposer—G. H. Peters. *Seconder*—E. Walter Maunder.
- PERCY MORRIS,
The Observatory, Cambridge.
Proposer—David E. Packer.
Seconder—William Noble, F.R.A.S.
- JOHN S. McCLURE,
122, Maclellan Street, Glasgow.
Proposer—R. Martin. *Seconder*—J. Johnston.
- Rev. A. E. BRISCOE OWEN, M.A.,
Rector of Rodington, Shrewsbury.
Proposer—W. E. Jackson, F.R.A.S.
Seconder—W. R. Waugh, F.R.A.S.
- DAVID E. PACKER,
Cambridge Observatory, c.o. Mr. Eyre, 19, Storks Road,
S. Bermondsey, S.E.
Proposer—Wm. Noble, F.R.A.S.
Seconder—A. Marth, F.R.A.S.
- EDWIN PHIPPS,
20, Cross Street, Maidstone.
Proposer—Robt. Woodhouse. *Seconder*—Albert G. Styles.
- T. A. PICKERING,
13, Peterboro' Street, Gateshead-on-Tyne.
Proposer—Geo. T. Lemmon. *Seconder*—Edwin Holmes.
- ROBERT ROBEY REDMAYNE, B.A., LL.B.,
Bishopstowe, Lichfield.
Proposer—W. E. Jackson, F.R.A.S.
Seconder—W. R. Waugh, F.R.A.S.
- A. D. RISTEEN,
Hartford, Connecticut, U.S.A.
Proposer—G. H. Peters. *Seconder*—E. Walter Maunder.
- LEWIS HUGH DE VISMÉ SHAW,
1, Richmond Terrace, S.W.
Proposer—Thos. S. Wageman. *Seconder*—Edgar H. Childe.
- FRANK SHERVILL, M.A.,
Bishop Auckland, Durham.
Proposer—W. E. Matthews. *Seconder*—J. W. Sheppard.
- JAMES SKINNER,
Westfield, Inverurie.
Proposer—George Proctor, A.M. *Seconder*—Alexr. Kemp.
- WILLIAM TEBB, F.R.G.S., F.Z.S.,
Rede Hall, Burstow, Surrey.
Proposer—E. Walter Maunder, F.R.A.S.
Seconder—Thos. Frid Maunder.

- H. J. TOWNSEND,
18, De Grey Terrace, Leeds.
Proposer—David Booth. *Seconder*—Arthur Cottam, F.R.A.S.
- HOWARD WHITE (Private Drawing Office),
Bank of England, E.C.
Proposer—F. D. C. Baly. *Seconder*—Augustus Wheeler.
- J. WILSON WILEY,
200, Dalston Lane, N.E.
Proposer—James Bassett. *Seconder*—John Warren.
- ALFRED SMITH WILSON,
The Hall, Sudbury, near Harrow.
Proposer—F. Hammond, F.R.I.B.A.
Seconder—J. G. Petrie, F.R.A.S.
- Rev. W. E. WINKS,
Richmond Road, Cardiff.
Proposer—E. G. Gange. *Seconder*—Arthur Mee, F.R.A.S.
- HENRY WYNDHAM (Civil Engineer),
9, Victoria Street, Westminster.
Proposer—J. H. Robinson. *Seconder*—H. M. Keone.

**New Members Elected November 8, 1892, North-Western
Branch (Manchester).**

- ALDERMAN W. H. BAILEY, J.P., Summerfield, Eccles New
Road, Salford.
- OTTO MUTH, 80, Yarburgh Street, Moss Side, Manchester.
- THOMAS THORP, Knowsley Road, Whitefield, near Manchester.
- A. J. KENNEDY, Malvern House, Bowdon, Cheshire.

Candidates for Election as Members of the Association.

DECEMBER 28, 1892.

- ASHTON CHARLES ALLEN,
Higham House, Blackheath, S.E.
Proposer—W. G. Thackeray, F.R.A.S.
Seconder—E. Walter Maunder, F.R.A.S.
- SIR ROBERT STAWELL BALL, LL.D., F.R.S.,
Lowndean Professor of Astronomy and Geometry, and
Director of the University Observatory, Cambridge.
Proposer—Lord Rosse. *Seconder*—Alexander Freeman.
- HENRY GURSON BATLEY,
21, Fellows Road, Hampstead, N.W.
Proposer—Chas. Brown, M.A., F.S.A.
Seconder—J. W. Pearce.
- LIEUT. F. J. DAVIES,
Grenadier Guards, Guards' Club, Pall Mall, S.W.
Proposer—E. E. Markwick, F.R.A.S.
Seconder—E. Walter Maunder, F.R.A.S.
- THE HON. CECIL DUNCOMBE, F.R.A.S.,
The Grange, Nawton, Yorks, R.S.O.
Proposer—Alice Sandford.
Seconder—Wm. Schooling, F.R.A.S.

FREDERICK FINCH,
20, Montpelier Square, S.W.

Proposer—E. Walter Maunder, F.R.A.S.
Seconder—Arthur Cottam, F.R.A.S.

ISABEL G. FINCH,
20, Montpelier Square, S.W.

Proposer—E. Walter Maunder, F.R.A.S.
Seconder—Arthur Cottam, F.R.A.S.

GEORGE MUIRHEAD,
30, Charlotte Square, Edinburgh.

Proposer—J. Cockburn. *Seconder*—Philip F. Duke.

EDWARD MILLES NELSON,
Cleve House, 66, West End Lane, West Hampstead, N.W.

Proposer—W. H. Maw, F.R.A.S.
Seconder—Arthur Cottam, F.R.A.S.

MRS. JESSIE PAGAN,
13, Blacket Place, Edinburgh.

Proposer—W. Forgan, F.R.M.S.
Seconder—James Baikie, F.R.A.S.

JOAO DE MORAES PEREIRA,
Professor at the National Lyceum, Ponta Delgada, S. Miguel,
Azores.

Proposer—E. Walter Maunder, F.R.A.S.
Seconder—T. F. Maunder.

REV. ROBERT BEAMISH SAUL,
Southbourne Terrace, Weston-super-Mare.

Proposer—Rev. Edwin Mosscrop.
Seconder—Joseph Workman.

MONTAGUE DIBDIN SEVERN,
24, Priory Villas, Sydenham, S.E.

Proposer—Herbert Sadler, F.R.A.S.
Seconder—A. C. Ranyard, F.R.A.S.

WILLIAM NICHOLS TETLEY,
Portora, Enniskillen.

Proposer—R. Wilding. *Seconder*—E. Walter Maunder.

REV. RALPH VINCENT TREMILLS, B.A. (Lond.), A.K.C.,
61, The Chase, Clapham Common, S.W.

Proposer—George Herbert Wheeler.
Seconder—Augustus Wheeler.

E. T. WHITELOW, Engineer,
70, Deansgate, Manchester.

Proposer—W. B. Hutchinson. *Seconder*—E. Walter Maunder.

MARY W. WHITNEY,
Professor of Astronomy in Vassar College, Poughkeepsie,
New York, U.S.A.

Proposer—Mary E. Byrd. *Seconder*—Wm. W. Payne.

MARY SOPHIA ZACHARY,
Holy Cross Mission Home, St. Peter's, London Docks, E.

Proposer—Elizabeth Brown. *Seconder*—Alice Everett, M.A.