

CAPE ASTRONOMICAL ASSOCIATION.

Report of Annual Meeting, June 12, 1918.

The Annual Meeting of the Association was held in the rooms of the Owl Club on Wednesday, June 12th, 1918, at 8 p.m., the President, Dr. J. Lunt, F.I.C., being in the chair.

THE NEW STAR.

The President, in making reference to the new star in the constellation Aquila, said: "Before proceeding to our ordinary business, I should like to refer to the important discovery of the nova in Aquila made by one of our members, Mr. Watson, of Beaufort West. It is fitting, I think, that we send Mr. Watson a telegram from this Association in Annual Meeting assembled, conveying to him our heartiest congratulations on his discovery. Mr. Watson's name will go down to posterity as the first, in South Africa at any rate, to detect this nova which suddenly developed into one of the brightest stars in the sky, and one of the most brilliant novas of recent times.

"His name will be linked with that of Dr. Anderson, of Edinburgh, another amateur who discovered the new stars in Auriga and Perseus.

"Mr. Watson realised the importance of his discovery, he was not content to write a letter to his local paper, hoping it would catch the eye of some astronomer, but he telegraphed the information both to the Royal Observatory and the Union Observatory, and enabled them to make spectroscopic observations of the condition of the star at a stage which might have been lost but for his prompt notification.

"The star has attracted attention in other lands than ours, but let us hope that Mr. Watson's discovery may be the first. It is an illustration of the important aid the amateur can render to the professional astronomer and to science in general, and if the continued existence of the Cape Astronomical Association required any justification, a discovery such as this by one of its members supplies it."

It was resolved that the following telegram be sent to Mr. Watson: "Association in Annual Meeting assembled send hearty congratulations on your important discovery of new star in Aquila."

Mr. Long read extracts from a letter he had received from Mr. Watson, in which he states that the nova was first observed between 9.50 and 9.55 p.m. Cape standard time on Saturday, June 8th. It seemed unfamiliar, and he tried to identify it in Norton's Star Atlas, but failed. He was then certain that it was a nova. At 11 o'clock he communicated the position to the Royal Observatory, the reply being that it was cloudy. He also communicated with the Union Observatory at Johannesburg, and received a reply: "It seems to be a new star, or one brightening up; we are observing and photographing it." The star was then practically second magnitude, but by 5 a.m. on Sunday, June 9th, was brighter than Altair. On Sunday night Mr. Watson reckoned the magnitude to be two-thirds the way from Canopus to Arcturus, that is, magnitude minus 0.17. Mr. Long pointed out that though the star was also discovered in England, there is little likelihood of the time being prior to the time of Mr. Watson's discovery, as the star would at that time have been at a very low altitude, and, being only of the second magnitude, would have been lost in the mists of the horizon.

ANNUAL REPORT.

Session July, 1917—June, 1918.

Your Committee, in presenting this, the Fourth Annual Report, are pleased to be able to record the continuance of the usefulness of the Association in fostering the study of the sidereal firmament and circulating astronomical information useful to members.

MEETINGS AND LECTURES.

The Committee has met four times, and there have been nine General Meetings of the Association during the year now ended. The following is a synopsis of the proceedings, viz:—

1917.

July II.—(a) The Work of the Union Observatory.

(b) Some Unsolved Problems in Astronomy. By Mr. H. E. Wood, M.Sc., of the Union Observatory.

- Aug. 8.—A Second of Arc. Dr. J. Lunt.
 The Equation of Time. Mr. J. F. Skjellerup.
 Kappa Crucis. Mr. D. G. McIntyre.
 The Rising and Setting of the Planets. Mr. A. W. Long.
- Sept. 12.—Demonstration on Spectroscopes and Spectra. Dr. J. Lunt, at the Astrophysical Laboratory, Royal Observatory.
- Oct. 10.—Comets. Mr. J. F. Skjellerup.
- Nov. 14.—The Nebulae. A paper published by Dr. H. D. Curtis, of Mount Hamilton, Observatory.
 (Read by the Rev. A. Graham.)
- Dec. 12.—The Progress of Astronomy during 1916. Mr. Clement J. Taylor, F.R.A.S.
 Circles for Astronomical Instruments Mr. A. Humphries.
 Exhibition of Astronomical Photographs. Mr. W. Reid.
- 1918.
- Mar. 20.—Observational Meeting at Observatory of Mr. W. Reid.
- April 10.—An Evening in a Private Observatory. Rev. A. Graham.
 (Paper printed and circulated.)
 The Heavens in Poetry. Mr. H. W. Schonegevel.
- May 8.—The Cape Observatory. Mr. A. Pilling.

There were no meetings held during January or February, this period being observed as a recess.

NEW STAR.

A new star was discovered in the constellation Aquila by Mr. Watson (a member of this Association) at Beaufort West on the night of 8th June. It is the brightest nova discovered since the apparition of Nova Persei in 1901.

RULES.

A special meeting was held on 8th August to consider amended rules for the Association. These were passed, and have been printed and circulated among members.

PLACE OF MEETING.

Your Committee having secured the Gallery of the Owl Club as the place of meeting are assured that this has conduced to the comfort of members and the better appreciation of addresses and papers read before the Association.

MEMBERSHIP:

The membership now numbers forty-six. Six new members were elected during the year past, and there have been two resignations. Your Committee regret to have to place on record the death of an esteemed member, the late Mr. I. Meiring.

PUBLICATION.

The Monthly Notes so ably compiled by Mr. A. W. Long continue to be published in the *Cape Times*, and are of considerable value and use to members of the Association and others interested in observing the heavens.

FINANCE.

The Balance Sheet will show that the finances of the Association are in a satisfactory state.

(Signed) JOSEPH LUNT,

President.

H. W. SCHONEGEVEL,

Hon. Secretary.

Cape Town, 12th June, 1918.

REPORT OF VARIABLE STAR SECTION.

(Presented by Mr. J. F. Skjellerup, Director.)

This is the first occasion that the Variable Star Section has been able to present a report. I regret that I have not been able to supply charts to those members who last year agreed to take up this work. Prof. Pickering, who kindly supplied the charts at present in use, promised to supply duplicate sets for the use of the members, but the preparation of these has evidently been delayed, as they have not yet come to hand. Mr. Long and I commenced observations in June, 1917, on 18 long period variable stars. The number under observation has been gradually increased until at the present time 68 variables are being regularly observed. Over 1,200 observations have been made during the past twelve months, the results being sent to the Harvard Observatory at the end of each month. Details of the results of our observations would not make very interesting reading matter, therefore I do not intend to give any. I should, however, like to take this opportunity of pointing out the value and importance of this branch of astronomy. Long period variable stars have recently been the subject of several interesting papers

by well-known English astronomers, notably those by Prof. Turner and the Rev. T. E. R. Phillips, a former President of the British Astronomical Association. I quote the following from one of Mr. Phillip's papers:—

“ There can be little doubt but that the study of variable stars will prove more and more in the future to be of very great importance in problems of physical astronomy. I hope that what I have said may serve to awaken in some, and perhaps deepen in others, interest in this subject. Mr. Brook and his band of workers, like the Harvard observers, and Mr. Charles Grover, of the Peek Observatory, are engaged in a task of the greatest value, and they deserve of us all the support and encouragement we can give. We want more and more stars observed, and we want *continuity* in the work, such as can be most easily assured by a number of observers working in concert under an active controlling head.

“ In addition, the observation of variables is the kind of thing which seems peculiarly suited to the amateur, and in no direction is he likely to contribute anything of greater value to our knowledge than in the study of variable stars. He may not accomplish anything sensational or startling, but by quietly, continuously, and cheerfully plodding away year by year he is unselfishly labouring for the general good, and helping to accumulate materials which may lead to the ultimate solution of the problems I have vaguely hinted at.”

These encouraging remarks by Mr. Phillips should be a great inducement to any amateur who can spare two or three hours weekly to take up this work.

Mr. Brook, the Director of the Variable Star Section of the British Astronomical Association, in a recent letter states that Prof. Turner asks for observations of certain stars, some of which are southern. I think that this is an opportunity that should not be neglected, and hope that many more of our members will join the Variable Star Section, and help to make it a great success. Continuity of observation is what is of the greatest importance, and this can only be secured by having a number of observers ready to carry on the work in the event of one or more of the members having to fall out for a time.

REPORT OF THE COMET SECTION FOR SEASON 1917 AND 1918.

(Presented by Mr. W. Reid, Director.)

It is usual on an occasion of this kind for the Director of a Section to tender his acknowledgments to the various members who have helped him during his term of office. Your Director would have been delighted to have followed the usual practice,

but unfortunately no reports have reached him from anyone, therefore this pleasant function will have to be dispensed with on the present occasion.

A new comet was discovered by Wolf at Heidelberg on the 27th April, 1916. It was seen in South Africa the following May. At this time it was an exceedingly faint object, hardly visible in a four-inch glass. Owing to its great distance at discovery it was thought by some that it would turn out a brilliant object; these hopes were not realised. At its very brightest it was little more than 9th magnitude. As it does not belong to the period under review, it would not have been mentioned here but for the fact that it was kept under observation until October, 1917, when it became too faint to be followed any longer.

Comet (a) 1917 (Mellish).—A new comet was discovered by Mr. John E. Mellish, of Sutoria, Ohio, on March 19th, 1917. When first discovered it was rather a faint object low down on the western horizon, but in a few days it brightened up remarkably, and on the 3rd and 4th of April it was visible to the naked eye, and had a short, bright tail. The comet was discovered after perihelion by Mr. John Warren, of Robben Island, on the morning of April 15th, and reported by him to the Royal Observatory on the same date. It was seen the following morning by several members of our Association. It was then about 1st magnitude, and had a long narrow curving tail. It rapidly declined in brightness, and on the 9th May was a telescopic object. It was followed for a couple of months longer, and when last seen resembled a faint hazy star.

Comet (b) 1917 (Schaumasse). — Discovered at Nice on April 25th; was a faint object in a small telescope at date of discovery; it was soon lost in the rays of the sun, but was again seen after perihelion. No one in South Africa appears to have seen this comet.

D'Arrest's periodic comet should have come to perihelion on April 2nd, 1917. Unfortunately it was very badly placed for observation, and seems to have escaped unseen. A long and careful search was made for it, but without result.

Comet (c) 1917 (Encke).—This comet was seen * in South Africa on the evening of the 31st December, 1917. It was a very faint object, magnitude between 10 and 11. It was followed for about half an hour, but during that time it was repeatedly hidden by clouds. Owing to the first few nights of January being cloudy, it was not seen again until it appeared in the morning sky; on its re-appearance it was very much brighter, but still very small. It is now becoming very faint, and will not be seen much longer in small glasses.

* This was an independent discovery by Mr. W. Reid, the Director—(H. W. S., Secy.).

During the period under review, a great part of the southern heavens has been kept constantly under observation for new comets, and though several small Nebulæ have been discovered which are not in the N.G.C., no new comets were seen.

Several Periodic Comets come to perihelion during the present year, and they are all well placed for southern observers, so it is to be hoped some of the members will try and be the first to discover them.

At the conclusion of this report Mr. Reid informed the meeting that he had discovered a new comet in the constellation Hydra on the previous evening (June 11th), and had verified it before coming to the meeting. He was warmly congratulated by the members.

(This addition to the report is made by direction of the meeting.)

THE ELECTION OF OFFICERS.

This resulted as follows:—

Hon. President:

Mr. S. S. Hough, M.A., F.R.S.

Hon. Vice-Presidents:

Dr. A. W. Roberts, F.R.S.E.

Mr. R. T. A. Innes, F.R.A.S.

President:

Dr. J. Lunt, F.I.C.

Vice-Presidents:

Mr. A. W. Long. Rev. A. Graham.

Hon. Secretary:

Mr. H. W. Schonegevel.

Hon. Treasurer:

Mr. E. J. Steer.

Hon. Librarian:

Mr. A. Bull.

Committee:

Mr. C. J. Taylor, F.R.A.S., Mr. W. Reid, Mr. G. P. Lestrade,
Mr. A. Humphries.

After refreshments and a short conversazione, the President, Dr. J. Lunt, gave an address on "Occultations," illustrating his remarks by means of a model, the blackboard and lantern slides. The moon's motions and their effect in occulting the stars being described.

It will be remembered that at the conclusion of his paper, read at the meeting last April, Rev. Andrew Graham made use of the following words: ". . . and then before we were aware we were caught by the dawn. The whole night had gone in an orgy of wonder on wonder. As we came to the door of the observatory the eastern heavens were flushing pink, and the dying moon hung low in the sky like a wasting lamp. All the stars had gone except the few lusty stragglers that watch the dawn, when suddenly, as we looked, the dark of the moon seemed to be agitated at a point near the centre of the dark limb—so perfect was the illusion, it looked as though one of the giant craters was flashing into brilliant activity, crowned with leaping, dazzling flame, and then—Spica gracefully loosed herself from her temporary imprisonment. We had been fortunate in witnessing the finish of her occultation."

Dr. Lunt showed the various dates when occultations of Spica may have occurred; by eliminating those that could not have been visible at Cradock, and then those which did not correspond with a dying moon low down in the sky. The date left for the possible occultation was November 24th, 1913.

Mr. A. W. Long stated that he had made calculations to find whether an occultation of Spica had occurred on that date, which would be visible at Cradock, and found that such had taken place, the exact time being 4.23 a.m. He showed by means of a diagram the exact position of the sun below the horizon at that moment, and the moon's position in the sky, also indicating the position on the moon's limb where the re-appearance took place.

The Rev. A. Graham, in moving a vote of thanks, stated that when he wrote the paper he was uncertain of the date when the observation was made, but had since been able to verify the fact that it had occurred on the morning of 24th November, 1913.

The meeting terminated at 10.30 p.m.
