

A. A. C. Eliot Merlin: a brief biography

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A. A. C. Eliot Merlin (1860–1946) was a prolific observer and writer who enjoyed a long professional career in the British Diplomatic Service. No proper account of his life has ever been given, and the recent gift of one of his notebooks to the BAA archive prompted this short account of his career and astronomical achievements. Observing under the clear skies of Volo, Thessaly in Greece he was able to make long continuous series of observations of several bright novae, and his records of Nova Persei (1901), Nova Geminorum (1912) and Nova Aquilae (1918) were particularly complete. Merlin's generosity to the BAA is remembered through the annual award of the Merlin Medal and Gift.

Introduction

Over thirty years ago (1985) I found myself the latest recipient of the Association's Merlin Medal and Gift. I already knew a little about the late A. A. C. Eliot Merlin and the bequest associated with his name, and that he had been a well-known observer who had bequeathed all his instruments to the BAA. But in spite of his great generosity towards the Association, and his membership stretching over more than half a century, his name rarely appeared in its publications: indeed, all I could find in print were a drawing of Jupiter in an old *Memoir*, and a photo of his observatory in Ealing, London. And why was there no Obituary published? Later, I discovered his very extensive and delightful writings in that old weekly newspaper, the *English Mechanic*.

Last year, a great-niece of Eliot Merlin's, Mrs Charlotte Johnson of Colinsburgh, Fife, donated an observational notebook and some photographs to the Association's archives, so I set out to write something about his life and work. This paper started off as a short note purely describing the arrival of the notebook, but as so little about Eliot Merlin has appeared in the *Journal*, I made it longer. The paper makes no pretence to completeness.

While researching Merlin's contributions in print I realised that it would be worthwhile to collect together his novae observations in one place, for they formed long and nearly continuous series of records, made under ideal sky conditions from Thessaly, Greece. These are given in the Appendix.

This paper celebrates Eliot Merlin's life and work from a perspective 70 years after his death.

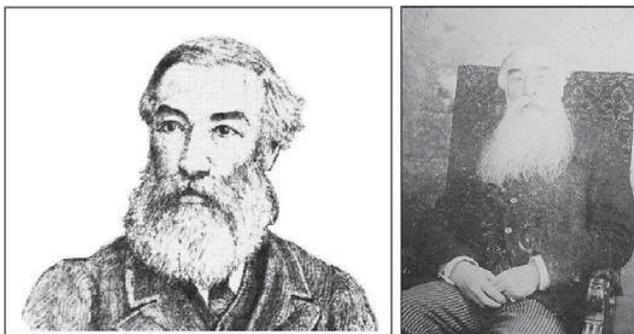


Figure 1. Charles Merlin, the father of Eliot Merlin. *Left:* A portrait drawing from the article by Galanakis (2012); *Right:* A studio portrait from the family photograph album. (This together with Figures 2, 4–7 and 10–14 are from the collection of photographs recently presented to the BAA.)



Figure 2. The British Consulate at Thessaly, Volo, Greece.

Career and family homes

Augustus Alfred Cornwallis Eliot Merlin was born in Athens on 1860 August 25. His father was Charles Louis William Merlin (1821–1896), who according to one source had been related on his own father's side to the French noble family of Merlin de Douai, fervent supporters of the French Revolution. Working for the British Foreign Office, C. L. W. Merlin (Figure 1) was stationed in Greece for many years (1839–1887), and in those days British Ambassadors were not obliged to make the frequent changes of residence that they do nowadays.

Fluent in French and with a command of Greek, Charles began with a clerical appointment at the British Consulate at Piraeus (the port for Athens) in 1839. In 1846 he became unpaid Vice-Consul there, as well as an agent of the British-sponsored Ionian Bank: later he became its Managing Director. In addition to his mercantile interests and unpaid (but light) Consular duties, Charles Merlin was engaged by the British Museum to acquire Greek antiquities for them, and this activity he pursued on a large scale over many years. Until the 1860s he had no fixed Government salary, so trading was essential in order to make a good living.

Charles Merlin moved to Athens in 1854 as Vice-Consul, then back to Piraeus as Consul in 1867. With his wife Isabella Dorothea Merlin (née Green, 1822–1902) Charles had six children, only three of whom survived infancy: they were Charles Edward Prior Merlin (1850–1898), Sidney Louis Walter Merlin (1856–1952) and the subject of this paper (1860–1946). Charles Junior started the negotiations with the French delegation in Athens regarding the con-

DESLOGES' OUTER CRAPE RING OF SATURN.

[13.]—There is an interesting note regarding this feature in the December *B.A.A. Journal* (p. 125). This elusive appendage to the Saturn ring system was discovered by M. Jarry Desloges, at Revard, on September 7, 1907. It had been previously seen on September 5, but was then attributed to an error of focus. The telescope employed was a 37 cm. (15-in.) refractor, of which, in spite of its perfectly corrected objective and the exceptionally favourable atmospheric conditions of Revard, altitude 1,550 metres, aperture was usually cut down to 21 cm. (8.5 in.). As regards this, M. Desloges states: "In spite of the great elevation of Saturn above the horizon, it is interesting to establish (constater) that one could not apply to his study either a larger aperture of objective than that habitually used for the planet Mars, nor even a greater magnifying power." Apparently, the aperture used on the occasion of the discovery was 21 cm. (8.5 in.), although no aperture is stated for that particular observation. The seeing is described as "absolutely perfect at moments," the magnification employed being 320. Once, on a particularly good night at Volo, this elusive feature was caught with my beautiful 8.5 in. speculum, and the observation was reported to "Ours" at the time. Of course, this was after being aware of M. Desloges' observation. That gentleman did me the honour of sending me his three invaluable volumes of "Observations des Surfaces Planétaires," and most kindly authorised me to quote from them. In view of the present fashion of upholding big apertures, wherever situated, as best for the study of planetary surface detail, it is significant that, so far as I am aware, the new crape ring has not yet been confirmed by great telescopes, even although one would expect light grasp to tell on such a faint object. After all, the proof of the pudding is in the eating.

A. A. C. Eliot Merlin.

Ealing, January 22, 1921.

Figure 3. A letter from Eliot Merlin to *English Mechanic* describing the outer ring D of Saturn.

of six children of James Frederick Walsh. They however had no children. A surviving carte-de-visite of Marion Jane Merlin (known to the family as Jenny, and hereafter referred to as such in this paper) was rather formally inscribed 'Mrs Cornwallis Eliot Merlin'. During their many years in Greece the Merlins witnessed three wars: the war with Turkey in 1897, after which Thessaly was occupied by the Turks for a year, the Balkan War in 1912 and then World War 1. And as future Londoners they would also have to endure (as elderly pensioners) some of the trials of World War 2.

Jumping ahead to 1917, from March 1 onwards Eliot Merlin finally became the Consul at Volo. But after only a few years in that office he reached the retirement age of 60, and in 1920 he and Jenny settled in West Ealing, in the suburbs of London. Gone were the sweeping Grecian vis-

struction of a mansion to house the French embassy. Sidney on the other hand was an accomplished sportsman who represented Great Britain more than once in shooting events at the Olympics.

Charles's youngest son used the name Eliot, though in the London Electoral Register for 1922 (available online) he appears as Alfred Cornwallis Merlin. After being educated at Chester and in Glasgow, Eliot followed his father into a career with the British Foreign Office. When his wealthy father retired at age 67 from the Consular Service (though not yet from his lucrative contract with the Ionian Bank!) to Campden Hill in London, Eliot became Vice-Consul to Thessaly in the town of Volo, Greece, and this was to be his home for many years (Figure 2).

In 1888 he married Marion Jane Walsh (1867–1959), one

tas taking in water and mountains. Instead, trees became an obstacle for the first time. After a short period at 3 Cleveland Gardens, the Merlins moved to 107 Argyle Road, and would remain there. A recent search of London property websites shows that the latter road possesses several large houses, generally having six bedrooms, and today some are divided into flats. In today's grossly inflated housing market, such London properties now command prices in excess of £1 million.

Astronomy, microscopy and meteorology

Eliot Merlin's telescopic work began in 1877, with a little 1.25-inch (32mm) OG, so that in 1927 he could start his serial for *English Mechanic*, entitled 'Fifty Years at the Telescope'. This ran over numerous issues and gained well-deserved praise. By 1878 he was using a 3.3-in (84mm) OG with which he saw the Great Red Spot of Jupiter. Over the years he made many observations from the flat, stone-paved roof of the Consulate building situated on the sea front at Volo, which commanded a tremendous view. 'The almost landlocked Gulf of Volo, with its mountainous surroundings, is, beyond question, one of the beauty spots of the world...' he once wrote to *English Mechanic*.

Merlin's main instrument was an 8.5-inch (216mm) Newtonian made by Horne & Thornethwaite. Another fine instrument was an apochromatic refractor of 75mm aperture. Joining the youthful BAA in 1893 (elected May 31, proposed by Thomas Curties and W. H. Maw) he wrote many letters to *English Mechanic* describing his work, and commenting upon the observations of others. He was always extremely precise in his descriptions, and his knowledge of optics was second to none. The town clock at Volo was regulated

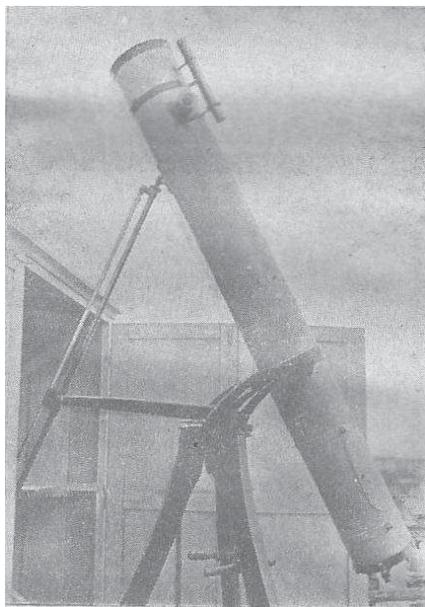


Figure 4. Eliot Merlin's 8.5-inch Newtonian on the roof of the Consulate building at Volo (from *English Mechanic*).



Figure 5. Colonel Gifford and his observatory. [The original is not very sharp.]

by Merlin's transit observations before the advent of radio time signals.

Volo as an observing location also provided very dark skies, and one delicate observation of Merlin's was the confirmation of the controversial outer ring D of Saturn, which had been reported at the observatory of R. Jarry-Desloges (but hardly anywhere else). This work was also described in *EM*: see the reference to it in Figure 3. The 8.5-inch reflector was very often in use for observations such as this, and was run out of a little shed on the roof of the Consulate building when required (Figure 4).

Scientifically speaking, Eliot Merlin may actually be even better known for his work in the field of microscopy, through his involvement with the Oxford-based Queckett Microscopical Club (which he also joined in 1893). An online search reveals several papers he authored. He worked with Colonel Gifford in the development of microscope lenses, and some of these he used for astronomical observation in lieu of the less satisfactory eyepieces available at the time. Henry McEwen, for many years Director of the Mercury & Venus Section, also mentions having obtained superior eyepieces from Gifford. Merlin kept a photograph of Colonel Gifford and his observatory, and because of its rarity value we publish it here (Figure 5).

Merlin was working on a book about microscopic illumination together with the famous microscopist Edmond Milles Nelson (1851–1938), but abandoned the project after Nelson's death. Fortunately the surviving notes were edited and published in the *Queckett's Journal* in 1962. Nelson (Figure 6) had been President of the Royal Microscopical Society around 1900, gave his name to a new de-



Figure 6. Edmond Milles Nelson in Eliot Merlin's back garden at West Ealing. Nelson too was a member of the BAA, and in addition to his well-known writings on the subject of microscopy had published a monograph in 1893 entitled *The Theory of Telescopic Vision* (Dulau & Co., London).

sign of microscope, and also had astronomical and meteorological interests, according to his letters written to *English Mechanic*. From 1902 till 1926 he lived at Beckington Castle, Somerset, but family photographs (Figure 7) suggest that Nelson was a frequent visitor to West Ealing. (Family papers concerning Eliot's interests in microscopy were donated to the Queckett Microscopical Club by Mrs C. Johnson.)

We should mention that meteorology was another strong interest, and Eliot Merlin was still taking meteorological observations until the day before he died. Both Eliot and Jenny belonged to the Ealing Scientific Society for many years until it was dissolved. Eliot was also making colour photographs, a challenging pursuit at that time, no doubt requiring cumbersome techniques such as the dye transfer process. Oddly there is no record of his having been a Fellow of the Royal Astronomical Society.

The notebook

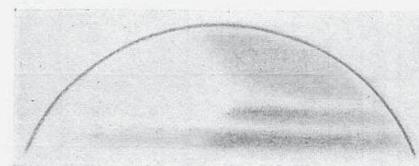
Eliot Merlin kept several notebooks during his lifetime, and the one we have lately acquired spans the years 1901 till 1929. It contains very few drawings, and as we know from the published record and from the actual notebook that he did make drawings, he must have kept them on loose sheets and/or in another place. There are excellent descriptions of Mars in 1920, 1926 and 1928, and some good descriptions of the surface of the Moon (with a couple of small drawings), but the greatest value of the book appears to me to be in its painstaking records of several fine naked eye novae. These I have collected in an Appendix. We show a published drawing of Jupiter (Figure 8) and an unpublished one of Mars (Figure 9A). We also show in Figure 9B a page of Eliot's beautifully handwritten Mars notes for 1926.

One small irritation (and surprise) is that the notebook does not contain all his observations during those years. We know for example that he sent Jupiter work to the BAA around 1926 (see *Mem. Brit. Astron. Assoc.*, **29**(3), 67 (1930)), and we know from his letters to *EM* he also watched Mars during other years than those men-



Figure 7. Mr and Mrs Nelson with Mr and Mrs Eliot Merlin and another lady in the back garden at West Ealing. Eliot Merlin wears the bowler hat.

S. Polar Regions.—Very quiet and usually without distinctive features. But on December 4 Mr. A. A. C. Eliot Merlin noted the curious aspect of the S. hemisphere shown in the accompanying sketch ($\lambda_2=326^\circ$), and on January 9 following, the



Dec. 4.

A. A. C. E. Merlin.

S. Polar Regions presented a very similar appearance to the Director with the central meridian 318° (System II). Bridger recorded the colour of this region as *dark grey*.

Figure 8. Jupiter in 1926 Dec 4 ($\lambda_2 = 326^\circ$) from the BAA *Memoir* (T. E. R. Phillips, *Mem. Brit. Astron. Assoc.*, **29**(3), 67 (1930)). Observation made with the 12¼-inch Newtonian.

tioned above. These records too must have been filed elsewhere. Having read in our *Journal* (16(6), 220 (1906)) a report of the 1906 March 28 Ordinary Meeting, it appears that only days beforehand Merlin had seen three dusky patches in Saturn's Equatorial Zone. In searching the notebook I had particularly hoped to find some more precise record or sketch, but there was none: here too, the record must have been elsewhere. I did notice however that on 1907 December 30 Merlin using the 8.5-inch saw faint blue-green

wisps crossing Saturn's coppery-coloured equatorial zone ('much like Jupiter's but far fainter'), and the latter contrasted in colour with the blue-green belts and other zones.

Following his move to 107 Argyle Road, West Ealing in 1920 (Figure 10), Eliot Merlin built a fine observatory with a transit house in the rear garden. Through the courtesy of Merlin's great-niece, we have acquired some pictures taken in the garden: several show

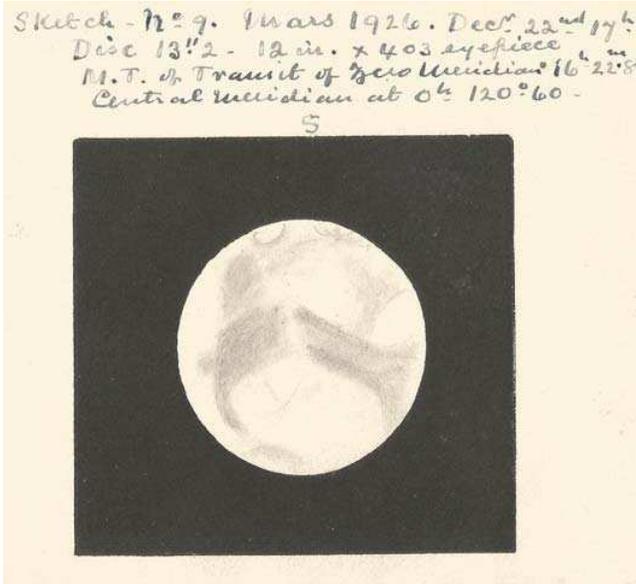


Figure 9A. Mars on 1926 Dec 22, 17:00 UT, from Eliot Merlin's notebook. Observation also made with the 12¼-inch Newtonian, ×403. Syrtis Major, Sinus Sabaeus etc. are well visible.

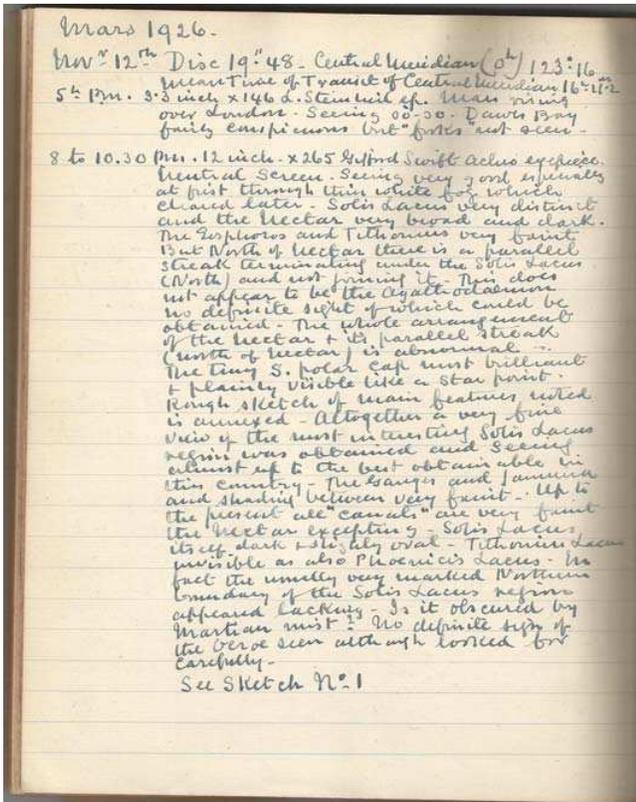


Figure 9B. A page of Eliot Merlin's Mars notes for the 1926 opposition.



Figure 10. 107 Argyle Road, West Ealing from the street, sometime in the 1920s or '30s.



Figure 11. The observatory at West Ealing.

the observatory (Figures 11 & 12). Like many family albums, they are mostly not annotated, but we can identify most of the people who are represented. Presumably Jenny Merlin took many of the photos. There is also a nice profile of Eliot Merlin, in the form of a studio portrait (Figure 13).

For his principal instrument Eliot Merlin set up a 12¼-inch (320mm) Newtonian by Linscott, mounted on a clock-driven equatorial. The primary mirror was by G. H. With, so one could hardly have done better! This setup was illustrated and described in the *Journal* in 1943 (Figure 14), though the then BAA Secretary F. M. Holborn apologised to him that the original text had to be cut on grounds of paper economy.

Merlin often expressed his opinions in print. He particularly liked making what would be regarded as difficult observations. Spotting the faint moons of the outer planets, like Saturn's Mimas or Enceladus, or Neptune's Triton came within this remit. He could see the two outer satellites of Uranus as delicate objects with the 8.5-inch mirror from Greece, but completely failed to catch them with the much larger reflector from London. On the other hand in 1921 he did see Mimas from Ealing: 'Although extremely dim, and with a peculiar absence of sparkle, under a power of 675 diameters and acutely averted vision, Mimas could be held for several seconds at a time.' Spectroscopy of novae would fall under the same heading of challenging observations. One might add the detection of fine martian or lunar details. In the surviving notebook he de-



Figure 12. A winter view of the West Ealing observatory.

scribes several very fine observations of Uranus and its satellites from Volo in 1917: he suspected the presence of belts too, but was not quite convinced.

Eliot Merlin was a little critical of George F. Chambers, the author of large and comprehensive textbooks on astronomy, adding that although the wealthy barrister had equipped his own (extremely large) house with a fine 6-inch (152mm) refractor on the roof, he had never made what Merlin would have called a 'difficult' observation. Indeed, Chambers was more interested in cataloguing star colours. Not every reader of *EM* accepted this severe judgement of Chambers, but it seems to me to be apt. One must also agree with his comments about Captain Noble, who had used the pseudonym 'FRAS' in all his writings in that serial. Why did Noble, who freely offered copious weekly opinions and so much other advice, never own a bigger telescope than a 4¼-inch (105mm) Ross refractor? He certainly could have afforded one, wrote Merlin.

Retirement

Eliot Merlin continued to use his instruments into old age, when he began to lose his eyesight: by 1946 June 23 Dr W. H. Steavenson had replied to a letter received from Merlin after many years, and wished his correspondent would retain sufficient vision to allow some enjoyment of life. Steavenson thanked Merlin for offering his telescopes to the BAA. In fact Eliot had already presented his dynamometer and Dolland micrometer to the Association in 1943: there exists a letter of thanks for the first of these written by the Secretary, F. M. Holborn, dated

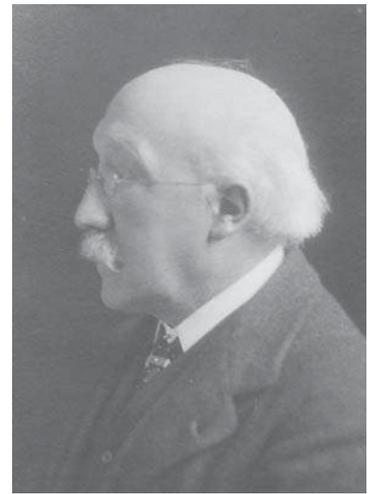


Figure 13. Eliot Merlin, a studio portrait taken in old age.

1943 July 25. By 1946 July, Jenny Merlin was writing on behalf of her husband to ask Holborn to call at Argyle Road together with the Instrument Curator, J. H. Burt, to assess the instruments in the garden. But just before these fellow Londoners could visit him, Eliot Merlin died quite unexpectedly on 1946 July 18. His funeral took place in Golders Green four days later. Surviving correspondence shows that he had been well-liked by his neighbours.

The later 1940s lists of instruments included in successive annual BAA Council Reports are a testament to the great generosity of Eliot Merlin, and instruments nos. 111 to 121 inclusive comprise the main telescopes mentioned already (no. 111 being the 12¼-inch reflector, and no. 112 the 8.5-inch), as well as a heliostat, a sextant, spectroscope, and a bifilar micrometer.

As of 2015 May, for example, the largest (no. 111) remains in the Association's hands, after passing through the hands of numerous borrowers. The annual reports of Council from 1948 to 1994 record the movements and eventual disposals of some of the other instruments. This is not the place for an 'instrument travelogue' but we shall record here (very incompletely!) that Patrick Moore

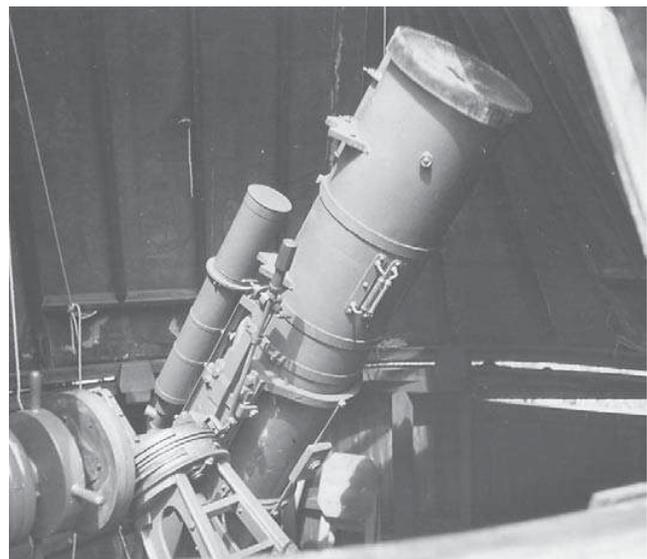


Figure 14. Looking through the open dome of the 12¼-inch Newtonian (this photograph was also published in the *Journal*, 53 (4–5), 162 (1943)).



Figure 15. The BAA Merlin Medal.

and Miss Davies–Scourfield were both users of the 8.5-inch Newtonian, and that good work with the 12¼-inch was done by Alfred Curtis. Rossall School (Fylde, Lancashire) borrowed the bifilar micrometer for use on their 6-inch (152mm) Cooke refractor.

Jenny Merlin died on 1959 March 22. In 1960 the residual estate was given to the BAA. Council's first decision was to instigate a Merlin Medal and Gift (Figure 15) to acknowledge a significant

astronomical discovery (the rules have changed somewhat over the years). At the time, Council had only the Walter Goodacre Medal available to award, and the rules (which were sometimes ignored) dictated that it could be given no more often than once every second year. The Merlin bequest was also used for other purposes, including the cost of publishing the General Index to the first 50 volumes of the *Journal*, which had been compiled by Mrs Vera Reade in 1940 but which had not been published due to lack of funds. It was finally printed in 1963.

Concluding remarks

Eliot Merlin clearly delighted in making difficult and challenging observations under the transparent skies of Volo. His great generosity to the Association is a matter of public record, and some of the instruments that he bequeathed to the BAA are still in working condition today. This paper has summarised just a few of his astronomical records, and demonstrates what a very fine observer he was. The value of the novae observations is that they were made under excellent conditions by the same skilled observer.

I hope that I have been able to throw a little more light upon some of the details of Eliot Merlin's life. In the form of the Merlin Medal and Gift, his name lives on.

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Appendix

Merlin's observations of Nova Persei 1901, Nova Geminorum 1912 and Nova Aquilae 1918

Looking at the BAA reports upon these novae, Merlin's name is conspicuous by its absence. According to the pages of the *English Mechanic*, not only did he record brightness and colour changes, but later he made detailed notes with a direct vision prism spectroscope.

For the BAA, Colonel Markwick reported the Variable Star Section's work on Nova Persei 1901 in a detailed *Memoir* (*Mem. Brit. Astron. Assoc.*, 10(3) (1902)). Nova Geminorum 1912 was also well observed by the BAA, and the principal spectroscopic observer, Harold Thomson (later to direct the Mars Section), compiled the joint BAA *Memoir* of the Variable Star and Spectroscopic Sections (*Mem. Brit. Astron. Assoc.*, 19(4) (1914)). Nova Aquilae 1918 did not get a separate *Memoir* publication, but its variations up to late July of that year were described in some detail in the *Journal* at the time (C. L. Brook *et al.*, *J. Brit. Astron. Assoc.*, 28(8), 237–255 (1918)). Again Merlin's name does not appear. He was

clearly excited by novae but he seems to have had little or no interest in the long period variables that formed the staple diet of the VSS a century or more ago.

Merlin had the great advantage of the Mediterranean climate with long runs of clear and still nights, and apparently a lot of free time on his hands in which to pursue his interests. In his *EM* letters, many of these novae observations were mentioned, but with *EM* lacking an Author index, it is always tedious to search, even in the electronic format now available up to the mid-1920s. In my possession is a most useful book of cuttings from that serial, compiled by a past BAA member and one-time *EM* subscriber, the late W. B. Caunter, which is at least quick to leaf through. In the notes below I have transcribed direct from the notebook the series for the first two novae. For the third nova there were so many observations made that I have not transcribed them here, but I have made a few notes, and have at least listed all the dates upon which there was a record.

Nova Persei 1901

Discovered by Thomas David Anderson on 1901 February 22 at 02:40 UT, at magnitude 2.7. An issue of *The Globe* containing the news arrived in Volo on March 8, and Merlin's work began the same evening. All times are local, VMT = Volo Mean Time. Magnitudes were initially naked eye estimates, being replaced as the nova faded by a low power binocular or opera glass. Note how his initial doubts about the nova's variability during the course of a single night are replaced by definite estimates at different times of each night.

March 8: 7.30h to 9.30h VMT. [In other words, 7.30 to 9.30 pm local time.] Magnitude about 3.2, being a very little brighter than Delta Persei. Colour a dull deep yellow verging on orange. [3.3-in OG, ×250]

March 9: 7.30h to 9.45h VMT. Magnitude 3.7 to 3.8. Colour a rich ruddy orange with vivid flashes of crimson. [8.5-in refl., ×100] No trace of nebulosity.

March 10: All observation prevented by dense clouds.

March 11: 8.30h to 9.30h VMT. Magnitude 3.6. Colour a fiery orange. [2.5-in OG, ×40]

March 12: Dense clouds prevented observation.

March 13: 8.00h to 8.15h VMT. Magnitude 3.6. Colour a fiery orange inclining to red. [ditto] Both Delta and Nu very blue in comparison. Strong suspicion that the magnitude varies slightly rather rapidly, at times the Nova only appearing very little brighter than Nu, at others its advantage over the latter seeming more decided.

March 14: 7.30h to 9.00h VMT. Colour with [×]200 eyepiece a deep red, almost purple; with 400 eyepiece a deep fiery orange. [8.5-in refl.] Magnitude about 3.7. Under most favourable atmospheric conditions none of the rapid fluctuations in colour and magnitude previously noted have been remarked – these occurred with poor seeing and were probably entirely illusory.

March 15: 8.00h to 9.30h VMT. Nova shows no alteration in mag. or colour since last seen.

March 16: At 8.00h VMT Nova compared with Nu Persei... found to be undoubtedly a trifle fainter. At 9.50h with same optical means the Nova appeared fully equal to Nu... In the interval with naked eye the new star appeared alternately fainter and as bright as Nu, once even a little brighter. The atmospheric conditions so good that these fluctuations were probably real. This evening it cannot have exceeded 3.09 taking Nu as 4.0 mag. At 8h it was probably near 4.2. Colour – no marked alteration.

March 17: 8.00h to 9.25h VMT. Magnitude equal to Nu. At 9.20h possibly a little brighter than Nu. Colour – no change noted. Rather purple with 70. [8.5-in refl., ×70]

March 18: 8.00h to 9.15h VMT. Magnitude 3.9. A purple tint with 60 power. More orange with 400 eyepiece. [8.5-in refl.] No fluctuations of colour or magnitude noted.

March 19: 7.30h to 7.45h VMT. A very great and remarkable diminution in its magnitude has occurred since last night, it now being no brighter than 30 Persei [on R. A. Proctor's small star atlas] or 5 mag. On [Arthur]

Cottam's chart of Perseus the star which it equals is marked 32 and of 5 mag, while one adjacent marked 30 is given as 5.5 mag. [32 Persei was apparently not shown on Proctor's chart.] The colour is decidedly redder than yesterday now appearing a dull rich crimson both with 100 and 400 eyepiece. [8.5-in refl.] Not the slightest trace of fuzziness or of surrounding nebulosity either with 100 or 400 oculars. At 10 pm estimated to be 0.1 mag. fainter than 32 Persei.

- March 20: 8.00h VMT. A trifle brighter than Nu or 3.9 mag. Thus the Nova has recovered its brightness... Magnitude at 8.35h estimated at only a little under Delta Persei or say 3.7 mag. Colour pale yellow. [3.3-in OG ×50] Thus there has been a great change not only of mag. but of colour since yesterday. 8.54h. Estimated with the opera glass to be equal to Delta [Persei], or 3.5 mag. 9.25h. Magnitude 3.7. [Ditto at 9.45h]
- March 21: 7.35h VMT. Nova estimated at 3.75 mag. Colour pale yellow. [3.3-in OG ×80] 9.15h 4.1 mag. 9.53h 4.0 mag. 10.05h 4.0 mag. 10.35h 4.1 mag.
- March 22: 7.50h to 8.00h VMT. Nova about 5.1 mag. Colour a rich crimson [3.3-in OG ×80] 8.40h 5.2 mag. Very crimson. [ditto]
- March 23: 8.00h to 8.30h VMT. Magnitude 3.75. Colour deep yellow. [ditto]
- March 24: 8.53h VMT. A brief glimpse through a fairly clear gap in drifting cloud. Magnitude 3.85.
- March 25: 7.45h VMT. Fainter than 32 Persei and equal to 30 Persei. [Cottam] Colour a deep vivid crimson. [ditto]
- March 26: 7.30h to 8.50h VMT. Nova about 4.4 mag. A deep orange. [ditto]
- March 27: 8.00h to 8.30h VMT. Nova estimated at 3.8... but hazy clouds. A dark rich yellow. [ditto] 8.50h. With clearing sky... 4.2 mag.
- March 28: Cloudy.
- March 29: 8.40h VMT. 4.8 mag. Scarlet. [ditto]
- March 30: 8.15h VMT. 4.3 mag.
- March 31: 9.15h VMT. Nova estimated at 4.5 taking Nu as 4 and 32 Persei as 5. Haze.
- April 1: 7.55h VMT. No change in mag. of Nova since last night's observation. Orange. [ditto]
- April 2: 8.00h VMT. About 5.25 mag. Rich crimson. [ditto]
- April 3: 8.00h to 8.20h VMT. Mag. of Nova about equal to 30 Persei. Dark ruby. [ditto]. Thin wispy haze.
- April 4: 7.55h VMT. Magnitude of Nova about 4.3. A medium yellow. [ditto] A great increase of mag. and change of colour since last night.
- April 5: 7.30h VMT. 4.5 mag. Hazy clouds.
- April 6: Cloudy.
- April 7: 8.30h VMT. Mag. of nova about 6 being considerably fainter than 30 Persei. A dark ruby. [ditto]
- April 8: 8.00h to 8.40h VMT. Magnitude 4.25. A dark yellow. [ditto]
- April 9: 8.00h to 8.25h VMT. Nova 4.5. A dark yellow. [ditto]
- April 10: 7.30 to 8.00h VMT. 5.3 mag. Fiery red. [ditto]
- April 11: 7.30h VMT. Mag. of Nova 5.6 taking 30 Persei as 5.5.
- April 12: 8.00h VMT. No change... so far as can be judged through hazy clouds. 9.00h... under better conditions 5.0 mag.
- April 13: 7.30h VMT... about 4.4 mag. Haze.
- April 14: 8.50h VMT. Nova seen through drifting clouds... say about 5.3 mag.

Nova Geminorum 1912

According to the BAA *Memoir*, this nova was discovered on the evening of 1912 March 12 by Mr Sigurd Enebo in Norway, at magnitude 4.2. The first UK observations were made on March 15. Eliot Merlin first observed it on March 29, and the times are now in GMT, which I have converted to UT. The Nova was not found sooner, he tells us, having

been erroneously reported to be near Eta instead of Theta Geminorum. He pays more attention to the spectrum than to the magnitude.

The following spectroscopic notes make interesting comparison with those in the BAA *Memoir*.

- March 29: 20:30 UT. Recognised by very peculiar spectrum consisting of a broad bright (double?) band at region of F line. Otherwise faint continuous spectrum with fancied indications of other lines. [McClean star spectroscope] Mag. about 6.
- March 30: Cloudy.
- March 31: 20:00 UT. Mag. has not apparently altered, being about 6 or a little above. Colour found decidedly crimson with [×]350. [8.5-in refl.] Spectrum has greatly changed since last observation, there now being a sharply defined brilliant line about the F line region in place of the broad band.
- April 1: 19:30 UT. Colour and mag. remain unaltered. The brilliant F line not so bright as yesterday but still sharply defined. Another bright line just suspected more towards Red end of spectrum about E or b line region. (Calcium?)
- April 2: 20:00 UT. Nova about 6 mag. Very red. Bright F(?) line very sharply defined. No other lines certainly seen. [3.3-in OG] Very strong S. wind prevented use of 8.5-in.
- April 3: 17:30–18:00 UT. Colour thought less red and more yellow or orange than hitherto. [8.5-in refl., ×350] Spectrum magnificent. Hydrogen β (?) line exceedingly bright and cleanly defined. Another much fainter bright line possibly Hydrogen γ , although thought perhaps not situated sufficiently towards the violet for this latter line. Hydrogen α conspicuously absent... Two distinct bright lines about the position of the solar E and b. The existence of many other crowded bright lines suspected in the green and yellow as also of dark shadings between the E and F lines region.
- April 4: 19:00 UT. A glimpse at the Nova through clouds. Spectrum and magnitude unaltered. [8.5-in refl.] Colour decidedly red.
- April 5: 18:00 UT. Colour thought very red, almost crimson. Spectrum unaltered. [ditto]
- April 6: 18:30 UT. Spectrum unaltered. Magnitude about 6 or 6.3. Seeing rather poor.
- April 7: 18:00 UT. Nova very crimson with 350 e.p. Apparently has increased in redness and slightly decreased in magnitude since yesterday evening. Spectrum unchanged except that an additional bright line seen close to Hydrogen β (?) towards red end of spectrum.
- April 8: 19:30 UT. Colour very crimson. Spectrum wonderfully well seen... [3.3-in OG]. All the bright lines recorded visible with the exception of yesterday's difficult line close to H β (?).
- April 9: Cloudy.
- April 10: 19:45 UT. Colour of Nova very crimson with 80 e.p. [3.3-in OG] Spectrum unchanged and well seen. Magnitude thought to have decreased very slightly.
- April 11: 18:00 UT. Magnitude of Nova considered to have slightly decreased. Colour crimson. The H β line still very bright but not so distinct as it was some days ago. The line close to it on the red side (first seen on the 7th) practically certain... A broad bright band towards violet and other faint bright lines glimpsed in that part of spectrum. All bright lines previously recorded visible and many others in green and yellow suspected. Indications of dark bands also seen. [8.5-in refl.]
- April 12: 18:00 to 20:30 UT. Nova thought to have slightly increased in brightness since yesterday. Colour crimson with 250 e.p. Spectrum unchanged except that the brilliant glory of the H β line is slowly but surely passing. [ditto]
- April 19: 20:30 UT. First chance of observing Nova since the 12th owing to clouds. Magnitude unaltered. Colour thought a little less crimson... the H β line no longer conspicuous although still brighter than the other lines. No change noticed in number of lines but all their former bright sparkle has departed. [3.3-in OG]
- April 20: 18:30 UT. Nova very crimson. H β line quite faint... [8.5-in refl.]

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April 25: 20:15 UT. First night that Nova could be observed since 20th owing to clouds. Has seemingly considerably decreased in magnitude since the 20th but moonlight helped haze to make observation difficult. [3.3-in OG]

April 26: 21:15 UT. A glimpse... Mag. decreasing.

April 27: 18:30 UT. Nova very crimson with $\times 350$ e.p. Spectrum very faint. Even H β line is now very faint. Mag. probably not over 6.5 or 6.7 but rather difficult to estimate owing to moonlight. [8.5-in refl.]

Nova Aquilae 1918

According to the report in the *Journal*, this nova was first observed on the evening of 1918 June 8. The first UK observation received by the BAA was made by Miss Grace Cook.

Merlin independently spotted Nova Aquilae on the evening of June 11, and at 11.30 pm local time sent a telegram to the Royal Observatory at Greenwich: 'Bright and dark line Nova of first magnitude visible in Aquila...' He had seen it through cloud the previous night. On June 11 with the 3-in OG the colour was pure white. The magnitude was brighter than Altair and almost exactly equal to Vega. The McClean star spectro-scope revealed three broad brilliant bright lines or bands in the blue-green part of the spectrum. One bright line at the end of the violet was also seen, and a broad dark line in the blue. Other bright and dark lines could also be made out.

On June 12 the Nova was already declining and he sent the RO another telegram. From now onwards he would continue to make detailed magnitude, colour and spectrum observations, filling many pages of his note-book, being able to observe night after night without a break. The first cloudy evening was July 23, the next August 12 and 16. For reasons of space I have not transcribed these records, all of which appear to have been published in *EM*.

The record continued into September, still without any significant gap, only Sep 28 being cloudy. In October the records, though generally now brief, continued nightly, with Oct 6, 8, 15, 18, 25, 26, 29 & 30 being cloudy, and no observation made on Oct 31 (one suspects he may have needed an evening off!). November opened with the nova faded to mag. 5.25 on Nov 1. Nov 2, 10 & 11 were cloudy, otherwise Merlin's records continued up to and including Nov 12. At that point Merlin recorded a cloudy spell until Nov 30 (mag. 5.4).

Merlin made two more observations on December 6 and 7, and then gave it a long break and came back to look at the nova in another nearly complete series during 1919 June 22 to July 5. Now the nova was leaden in colour and had faded to mag. 6.5, but details of the faint spectrum could still be witnessed.

Notes and selected references

Charles Merlin and the British Museum: Y.Galanakis, 'On Her Majesty's Service: C. L. W. Merlin and the Sourcing of Greek Antiquities for the British Museum,' *CHS Research Bulletin*, no. 1 (2012). Galanakis writes: 'The BM today houses around 450 Greek antiquities, some of outstanding quality and importance, that were purchased from Charles Merlin over a period of 30 years (1865–1892). Most of them comprise objects of classical antiquity, though earlier and later periods are also represented...' and: 'Charles Merlin was only one of many from whom the BM purchased annually Greek and Roman antiquities. Yet he appears to have been among the most prolific, if not the most important, direct providers of antiquities sent to the BM from the kingdom of Greece during the 1860s–1880s.' http://mrs.harvard.edu/urn-3:hlnc:essay:GalanakisY.On_Her_Majestys_Service.2012

References from the *London Gazette*: A. A. C. Eliot Merlin was appointed Consul at Volo, Thessaly, on 1917 March 1: noted in an edition of the *London Gazette* dated 1918 Aug 2, p. 9110. Eliot Merlin died 1946 July 18: cited in an edition dated 1946 August 9, p. 4045. The latter notice names Mrs Marion Jane Merlin and his Ealing solicitors. <http://www.thegazette.co.uk>

References in the *English Mechanic*: The *English Mechanic*, very many issues. (This serial is now available in electronic format, up to 1926, when its title changed. Its astronomical usefulness continued till 1934 when there was a regrettable change in editorial policy. See R. J. McKim, 'Barker's Circle', *J. Brit. Astron. Assoc.*, **123**(1) 20–32 (2014).)

Merlin's instruments: See the *Journal*, **58**(7), 251 (1948) for the first version of a published list of the instruments (nos. 111–121) donated to the BAA from Eliot Merlin's collection, from the 1947/48 Council Report. This source records that they had been donated by Mrs Eliot Merlin, which is technically correct, although she was simply carrying out the previously expressed wishes of her husband (and as we have seen, the dynamometer and Dolland micrometer had already been donated by Merlin in 1943).

The 12¼-inch reflector used by Merlin at Ealing was purchased from local amateur astronomer Mr J. Milton Offord, who at the time was downsizing to a 117mm (4.6-inch) refractor. He had used the reflector in the open air for many years, but had an observatory built for the refractor. These facts were recently discovered in a letter sent by Milton Offord's cousin to the late Alfred Curtis: Curtis had the instrument on loan from the BAA for more than twenty years. Milton Offord contributed planetary work (mostly Jupiter) to the BAA from 1891 until 1933, first from St John's Wood, moving to Ealing in 1894 when Linscott refigured the With mirror and made an equatorial mounting. (F. J. Dykes to A. C. Curtis, 1953 Oct 28 (*BAA Archives*)).

Merlin's family tree: From Mrs C. Johnston I learnt that her grandfather was Bernard John Merlin Walsh, and that one of his sisters had married Eliot Merlin. Mrs Johnston also provided a partial family tree which will be deposited in the Association's archives.

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