



The British Astronomical Association Historical Section

Director: Mike Frost
Deputy Director: Lee Macdonald

Newsletter No. 6

Spring 2013

From the Director

Mike Frost, Director

This year's Section meeting will be on April 6th, on the Saturday afternoon of the BAA Winchester Weekend. This takes place at Sparsholt College, five miles west of Winchester. Stagecoach's number 7 service runs hourly from Winchester, leaving the bus station at 10 minutes past the hour, calling at the railway station 4 minutes later, and arriving at Sparsholt College at 35 minutes past the hour. The Section meeting will run from 2:15pm to 5:15pm, but there will be a full lecture programme all day, finishing with the Alfred Curtis lecture in the evening. A number of day tickets are available: £37 including lunch or £54 for lunch and evening meal. I would, however, encourage you to attend the whole weekend; it's one of the highlights of the BAA social calendar. You will need to book in advance using the booking form in the Journal.

In keeping with the philosophy of the Winchester Weekend, our theme is 'Observational Astronomy and Telescope-Making'. We have three speakers, two of whom will be very familiar to you. Bob Marriott will be talking about 'The Silver-on-Glass Revolution', which he will complement with a hands-on mirror-making demonstration. Lee Macdonald will be telling us about 'Isaac Roberts, E. E. Barnard and the Mysterious Nebulae'. Our keynote speaker is Professor Keith Snedegar, from the Utah Valley University, who will be speaking about 'A. W. Roberts and the Quest for Precision Photometry'. Keith, who has written for the Journal on Norman Pogson,¹ is so keen to speak to us that he has arranged a visit to the UK to correspond with the Section meeting.

In addition to the speakers, Paul Haley will be presenting the new Gill-100 exhibition, prepared in anticipation of the centenary of Sir David Gill (1843-1914). Section members are invited to bring along their own material for exhibition, a tradition which has enhanced both our recent Section meetings, but I'd be grateful if you could let us know in advance so that we make sure there is enough display space.

*

If you read my article later on in this newsletter, you will see that I had a stab at translating some of Jeremiah Horrocks's works from Latin. I am not the

only person who has tried this – I have received several requests for translations. My own knowledge of the language is basic. Are any Section members willing to lend their expertise in translation on an as-needed basis? Please let me know if you have any translation skills – Latin to English is the most likely, but any others might turn out to be useful.

*

I am a child of the space age. The Apollo XI expedition to the Moon took off two weeks before my seventh birthday – I remember watching the lift-off on TV in my primary school. The Moon landing took place in the middle of the night, British time, and I begged my parents to wake me up so that I could watch it, which they did.

Being so young, it simply didn't occur to me that my parents might never have woken me up, because the mission had failed and Aldrin and Armstrong were dead or dying on the surface of the Moon. As we now know, the Eagle did land successfully on the lunar surface; this was due in a large part to Neil Armstrong's genius and cool-headedness as a pilot.

As a seven-year old, I wanted to know more about space. Actually, I wanted to know *everything* about space! So I got books out of the library, and birthday presents from my parents. I can't remember the library book titles but I still have a birthday present, *The Observer's Book of Astronomy* by Patrick Moore. Over the years I have acquired many books by Patrick – *The Guinness Book of Astronomy*, *Bang!*, *Fireside Astronomy*, *Can You Speak Venusian?* – and I would wager that every single reader of this newsletter has read at least one of these.

Of course, I wanted to meet a professional astronomer. My father obliged once more by taking me to see Bernard Lovell of Jodrell Bank, who gave a lecture in Rochdale library. I don't suppose I understood very much about the fine detail of his talk, but I do remember how thrilling it was to listen to a real-life astronomer. I'm fairly sure I asked a question; I cringe to think what that might have been.

Well as we all know, these three pivotal figures – Neil Armstrong, Patrick Moore, Bernard Lovell – all passed away in 2012. For me it feels like the end of the

journey I started in 1969. Many of the forecasts from the books of the sixties – lunar colonies, men on Mars – have yet to pass. But with last year's transit of Venus, I have now reached the end of the list of astronomical delights – Halley's Comet, England's total eclipse, the Leonid meteor storms around the millennium – which were promised to us in the sixties. Now we move on to twenty-first century astronomy. The lifelong concerns of seven-year-olds who catch the astronomy bug today will be finding new planets round other stars; searching for life in the solar system and beyond; untangling the secrets of dark matter and dark energy. They may even get to achieve one of my boyhood ambitions and travel into space themselves.

The world moves on – as it should. But it's our duty as historians to honour those who were so important to our generation.

*

Finally, may I draw your attention to the splendid website www.camperobscura.co.uk. Jonathan Blyth and Matthew Pontin have installed a camera obscura in a camper van, which they take to various locations around the south of England; mostly the south-west, but my sister came across the van on the seafront at Brighton. Look out for them!

Reference: ¹ Vishnu Reddy, Keith Snedegar, Balasubramanian Ram Kumar, 'Scaling the magnitude: the rise and fall of N.R. Pogson'. *J.Br.Astron.Assoc.* **117**, 5, 2007, pp. 237-245.

Editorial

Lee Macdonald, Deputy Director

Welcome to the Spring 2013 issue of the Historical Section Newsletter.

I look forward to seeing as many of you as possible at the Section meeting near Winchester on April 6th. I would reiterate Mike's point in his article above: do attend the entire weekend if you can, as it is great fun and the price of £170 for BAA members (£190 for non-members) includes two nights' accommodation in well-appointed en-suite rooms, excellent food and a great programme of talks on a wide variety of subjects in amateur and professional astronomy. A number of trade stands and exhibitors normally attend this event. Whether you choose to come for the whole weekend or just for the day, I would strongly advise booking as soon as possible, as places at this popular event can sell out. The final deadline for payment is March 11th.

A reminder that we are always looking out for articles for this newsletter from the Section membership – this is *your* newsletter. Please send material to either Mike Frost or myself. If you are doing, or have completed, an interesting piece of research but don't feel up to writing a full paper for the BAA Journal, this is the place to tell others about your work.

Jeremiah Horrocks and New England

Mike Frost

In my article on 'Christopher Columbus's eclipses' in edition number 2 of the Historical Section newsletter, I gave an example of astronomers from the time of ancient Greece having been able to calculate differences in longitude by comparing timings of lunar eclipses.

In that article, I also gave an example from the life of Jeremiah Horrocks. I came across it in the recent biography, *The Transit of Venus: The Brief, Brilliant Life of Jeremiah Horrocks Father of British Astronomy* by Peter Aughton. I had the pleasure of meeting Mr Aughton on Transit Day, 2004, and he signed my copy of his book.

I think the Horrocks biography is a well-written and enjoyable book, which I recommend to my audiences when I speak about Horrocks, but I think in the case of the lunar eclipses the biography has got the facts a little mixed-up. When I tried to tie up the loose ends I came across another unexpected story, one which gives a fascinating insight into the early years of the American colonies.

Jeremiah Horrocks was a Puritan, a Liverpudlian, and a student of Emmanuel College in Cambridge University (my own alma mater). In the seventeenth century, all three groups were a fertile source of colonists for the new settlements on the far side of the Atlantic.

The *Mayflower* landed at Plymouth Rock, Massachusetts in 1620. This wasn't the first successful English colony in America; that was Jamestown, Virginia, founded eight years previously. But during the 1620s and early 1630s the New England colony thrived, centred on what is now the city of Boston. The leading political figure in the Massachusetts Bay Colony in its early years was one John Winthrop, governor for 12 of its first 20 years.

The primary reason why people emigrated to America was the splintering of religious faith which racked England during the seventeenth century. In the previous century, Henry VIII had split England from the Catholic faith, to form the established, Anglican church. But congregations disagreed over the fine points of theology and of practice. Many of the American colonists had a Puritan, 'back-to-basics' view of faith, eschewing ceremony and finery. Back in England, Emmanuel was the intellectual centre of this viewpoint and so many of students from the college ended up in New England; most notably John Harvard, founder of Harvard University. One of the most important of the New England colonists was John Cotton, a preacher from Boston, Lincolnshire, who sailed to Boston, Massachusetts to escape Archbishop Laud's purges of the Puritans. Cotton's first wife, who died in 1631, was Elizabeth Horrocks, Jeremiah's cousin. Cotton remarried a year later and sailed to America with his second wife in 1633.

It would be wrong to assume that the Puritan movement was unified. In the New England colony, followers of different sects within Puritanism squabbled with each other. Between 1636 and 1638, for example, occurred the Antinomian (Free Grace) dispute. Anne Hutchinson, a midwife from Alford, Lincolnshire, a woman described as ‘disruption personified’, engaged the colony in a series of theological debates. Their nature is impenetrable to me, although modern day writers tend to interpret them in gender terms (which may prove equally impenetrable to future generations). Anne Hutchinson was put on trial in 1637 for traducing [slandering] ministers. John Cotton, who had preached to her in Lincolnshire, initially supported her. The result of the trial was that Anne, her family, and her followers, the Hutchinsonians, were banished from the Massachusetts Bay colony. They made their way to undeveloped land to the south of the colony in what is now the state of Rhode Island.

In Rhode Island today the first settler is celebrated as one William Blackstone, a graduate of Emmanuel who arrived in 1635. However, Blackstone was a loner rather than the founder of a colony; additionally he settled in the portion of the colony closest to Massachusetts. The first two colonies in Rhode Island were both founded by groups ejected from Boston. The full name of the state, the ‘State of Rhode Island and Providence Plantations’ commemorates the first two colonies – one on the mainland, centred on what is now the state capital of Providence; and the other on Rhode Island itself, now home to the millionaire mansions of Newport. The first colony in Providence was founded by Roger Williams in 1636, and the first settlers of Rhode Island were the Hutchinsonians, who arrived in 1638. With Roger Williams’s help, the Hutchinsonians purchased the island from the local tribe, the Wampanoag, and called it by its Wampanoag name, Aquidneck. (The name Rhode Island came later – possibly from the Dutch for reddish, ‘Rodish’; or perhaps from a supposed resemblance to the Greek island of Rhodes.)

Why am I interested in these settlements? Because Peter Aughton connects Jeremiah Horrocks to the Rhode Island settlement: ‘... we discover that Jeremiah was still in touch with his cousin Thomas Horrocks, whom he had known at Cambridge, and who had emigrated to America with his uncle (-in-law) John Cotton. Jeremiah asked his American cousin to estimate as accurately as he could the local time from the first recovery of the Moon’s light after the lunar eclipse of 1638 until the sunrise on the same day... The observation is traditionally thought to have been made from the place now known as Quidnick in Rhode Island’. (Aughton, p.147)

Aughton had already written about Thomas Horrocks and a lunar eclipse. ‘There were observations of an eclipse of the Moon on 10 December 1638 by William Gascoigne ... The lunar eclipse had also been observed by Jeremiah Horrocks and he had tried to use the data

to calculate the longitude of a point on the American continent by comparing his timings with the observations of Thomas Horrocks, his American cousin’. (p.9) This eclipse was also seen by Samuel Foster, John Twysden and John Palmer from New House, Coventry, which I mentioned in my article in the last newsletter.

However, there is a problem. On page 147, Aughton goes on to date the lunar eclipse to June 1638, following soon after a solar eclipse in May of that year. You can see that on page 9, Aughton refers to a December eclipse, and on page 147 a June eclipse. Two separate events are combined.

I have a particular interest in New England because I have my own connections to that part of the world. One hundred and eight years ago, in 1905, my maternal great-great-grandparents and five of their six children left the cotton mills of Lancashire for the cotton mills of Rhode Island, leaving behind their eldest daughter, my great-grandmother, who was already engaged to my great-grandfather. So the states of Rhode Island and Massachusetts are full of third cousins of mine. My mother corresponded with several of them and, in 1998, I chauffeured my parents when we visited Rhode Island to meet the relatives. They turned out to be the most welcoming and friendly people, and I have stayed in touch with many of them subsequently.

My third cousin Jim Collinson knows of my interest in astronomy, and drew my attention to an article in the *Providence Journal* about the Transit of Venus in June 2012, mentioning Jeremiah Horrocks and William Crabtree. I wrote to Sheila Lennon, the author of the article, to ask if she was aware of the connections between Jeremiah Horrocks and Rhode Island. Sheila smelt a good story, and wanted to find out more. We exchanged a number of emails, where I detailed my sources. Sheila then began to research the story from her own perspective.

What she found wasn’t quite what either of us expected.

On June 23rd she emailed me: ‘I have a found Thomas Horrocks, age 22, on the manifest of the ship George on Aug. 21, 1635. The ship went from London to Virginia. Jamestown.’

Thomas Horrocks did NOT emigrate to Rhode Island!

So what’s the real story? Which lunar eclipse of 1638 was observed from America? Was it really observed from Rhode Island, and if so, by whom?

As a historian of astronomy, I should have known exactly how to resolve these questions – go to the primary sources. So let’s see exactly what Horrocks actually said, in *Opera Posthuma*:

‘Ultimum exemplum nuper mihi communicarum est. Anno 1638, Junii 16 observavit quidam, inter primam

recuperationem luminis in Ecclipsi Lunae, & ortum visibilem, susses horam 1.5' per horologium. Hoc suit loco quodam Nova-Angliae, quem ille vocat Aquedniek, sub elevatione Poli 40.50'. Sol oriebatur vere hor. 4.32', per refractionem h. 4.28', ergo totales tenebrae desinebant hora 3.23 mane. Goesa hoc suit hora 8.53'. ex calculo Lansbergii. Hinc differentia Meridianorum, hor. 5.30. sed nolis huic confidere, incertus enim calculus, nec omnino exacta observatio.'

Between my Latin O-level and Google translator, I think this translates as:

'The last example is a recent communication to me. In the year 1638, on June 16, 1 hour and 5 minutes elapsed between the recovery of light after a lunar eclipse, and the rising of the Sun. This happened in a place in New-England called Aquedniek, at a latitude of 40.50' [it's actually at 41.55']. The sun rose at 4:32am, 4:28am after correction for refraction, so total darkness ceased at 3:23am. At Goes [in the Netherlands] this happened at 8.53am from the calculations of Lansberg. Hence the difference of the meridians is 5 hrs. 30 minutes. But you do not want to trust this completely, for the calculation is uncertain, and the observation not exact.' [Goes is actually 3.9 deg E of Greenwich, and Aquidneck 71.3 deg W, so the difference in longitude is 75.2 degrees which corresponds to approximately 5 hours 1 minute in time.]

You can see that the observation genuinely was made from Aquidneck. You can also see that no name is mentioned (and you can also see that Horrocks didn't place much faith in the accuracy of the calculation). So there is no evidence from Jeremiah Horrocks that it was his second cousin Thomas who made the observation.

I wrote to Peter Aughton to find out if there was a source he had used which I had missed. Peter was kind enough to email me back. His main source for Horrocks's family history was a 1954 paper by Sydney Gaythorpe in the *Proceedings of the Lancashire and Cheshire Historical Society*. Here's what Sydney Gaythorpe had to say:

'... another somewhat distant relation of Jeremiah's, and one, perhaps, who contributed his mite to his young kinsman's store of astronomical observations, was Christopher Horrockes of Bolton-le-Moors, fuller [wool cleaner]. ... He was probably a cousin of Jeremiah's father ... It is well known that Christopher the fuller and his family, with the exception of his only son, Thomas Horrocks, then a sizar at St. Johns College, Cambridge, accompanied the Reverend John Cotton, when the latter sailed for New England on 16 July 1633. And there can be little doubt that this Christopher Horrockes, or some member of his family, was the un-named correspondent who communicated to Jeremiah the time interval of 1h 5m by the clock ... as observed at Aquidneck.'

So it appears that identifying Thomas Horrocks as the observer was due to a mis-reading of Gaythorpe's paper. According to Gaythorpe, Thomas Horrocks did not travel to New England; Gaythorpe added a footnote to say that Thomas became a minister and died in Battersea in 1687, so the Virginia Thomas Horrocks may not even have been related. On the other hand, a new candidate has emerged – Thomas's father, Christopher Horrocks, who sailed with his in-law John Cotton to New England in 1633. The phrase *'it is well-known that...'* hints at further sources not known to me; my researches tell me that John Cotton arrived in New England on a ship called the *Griffin*, but there is no extant passenger list for that voyage, so I can't confirm Gaythorpe's assertion (we do have a passenger list for the *Griffin's* next voyage from England to New England; it includes Anne Hutchinson and her family). And even Sydney Gaythorpe can't say for certain that it was Christopher Horrocks who made the lunar eclipse observation.

In fact, we haven't found out who the observer was. Sheila Lennon made the very valid point to me that the observation of a lunar eclipse was one which could have been made by many people. Moreover, a much greater proportion of the population would have been interested in such activities than in our society today. These were practical people, used to doing their own surveying, building their own houses. The timing of a lunar eclipse, although in some ways trickier than now, would also have been feasible – for without clocks, how else could you tell the time at night other than by the stars? Many colonists would be familiar with the concept of using the Plough pointers as clock hands, estimating a time interval from the angle through which they turned. Estimating times to the accuracy implied by *1 hour and 5 minutes elapsed between the recovery of light after a lunar eclipse, and the rising of the Sun* would not be possible, but perhaps this accounts for some of the error in the calculated longitude difference.

Sheila Lennon then dug a little deeper, and turned up a fascinating story, detailed in a website by Christy K. Robinson, a twelfth-generation descendant of the first Rhode Island settlers.

Remember the context – the colony of Rhode Island was founded by the most fanatical of the Puritan settlers, the ones who had not only followed their faith from Britain to America, but had then fallen out with their fellow Puritans in Massachusetts, had once again turned their backs on society, and had pushed on into the 'wilderness' of Aquidneck (Rhode) Island.

Aquidneck was a tiny, deeply religious community, in a life-and-death struggle to establish itself in a hostile environment. And on Tuesday June 1st 1638 they suffered a terrifying setback. In the early afternoon, an earthquake of about magnitude 6.5-7.0 hit the fledgling colony. An aftershock followed half an hour later, followed over the next few weeks by several more.

A number of contemporary accounts exist. This is from the journal of Governor John Winthrop: *'June 1. Between three and four in the afternoon, being clear, warm weather, the wind westerly, there was a great earthquake. It came with a noise like a continued thunder or the rattling of coaches in London, but was presently gone. It was at Connecticut, at Narragansett, at Pascataquack, and all the parts round about. It shook the ships, which rode in the harbor, and all the islands, etc. The noise and the shakings continued about four minutes. The earth was unquiet twenty days after, by times.'*

Winthrop also recorded a hearsay account of the earthquake in Rhode Island: *'On the first of June 1638, there was an earthquake which continued about four minutes and left the earth in an unquiet condition for twenty days afterwards. Mrs. Hutchinson and some of her adherents happened to be at prayer when the earthquake was at Aquiday, etc., and the house being shaken thereby, they were persuaded, (and boasted of it,) that the Holy Ghost did shake it in coming down upon them, as he did upon the apostles'*

For a fanatical religious community, the lunar eclipse of June 18th took on great significance. Revelation 6:12 describes the prophecies of the end of days: *'and lo, there was a great earthquake; and the sun became black as a sackcloth of hair, and the moon became as blood'*. What could be a clearer sign to the Rhode Island colonists? Moreover, the earthquake came at the time of Pentecost, the descent of the Holy Spirit onto the apostles – admittedly not a festival celebrated by Puritans; but surely, in the minds of the colonists, not a coincidence.

Of course, the settlers took the earthquake and the eclipse as a direct message from God – chastising the sinful for their wicked ways. Roger Williams writing to John Winthrop: *'... in the affairs of the Most High; his late dreadful voice and hand: that audible and sensible voice, the Earthquake. All these parts felt it, (whether beyond the Narragansett I yet learn not), for myself I scarce perceived ought but a kind of thunder and a gentle moving, &c., and yet it was no more this way to many of our own and the natives' apprehensions, and but one sudden short motion. The younger natives are ignorant of the like: but the elder inform me that this is the fifth within these four score years in the land: ... and they always observed either plague or pox or some other epidemical disease followed; three, four or five years after the Earthquake, (or Naunaumemoauke, as they speak). He be mercifully pleased himself to interpret and open his own riddles, (and grant if it be pleasing in his eyes) it may not be for destruction, and but (as the Earthquake before the Jailer's conversion) a means of shaking and turning of all hearts, (which are his,) English or Indian, to him. To further this (if the Lord please) the Earthquake sensibly took about a thousand of the natives in a most solemn meeting for play, &c.'*

Needless to say, everyone came to the conclusion that God's message was that they were only ones on the right path, and everyone else on the wrong path!

So, what do we learn from the story? It's possible, but not at all proven, that it was Christopher Horrocks who timed the lunar eclipse of June 1638; it certainly wasn't Thomas Horrocks. On the other hand, there were many people who had a great interest in this eclipse, because of the previous earthquake and for reasons of their extreme faith, and many of these people would have been quite capable of making the timings which Horrocks quotes. We also know that there were boats like the *Griffin* which made multiple crossings of the North Atlantic, and it would be easy to suppose that the settlers in the colonies sent news of their adventures back to the old country.

You can imagine Christopher Horrocks adding a P.S. to a letter home, asking the recipient to send news of lunar observations back to the 'curious astronomer' in rural Lancashire – perhaps not even observations he had made himself, but had heard from the fanatical Hutchinsonians of Rhode Island.

We may never know the whole story.

Sources:

The Transit of Venus: The Brief, Brilliant Life of Jeremiah Horrocks Father of British Astronomy, Peter Aughton (Weidenfeld and Nicolson, 2004).

'Jeremiah Horrocks – Date of Birth, Parentage and Family Associations', Sydney Gaythorpe *Proceedings of the Lancashire and Cheshire Historical Society*, Volume 106, 1954, pp.23-33.

The 'Complete Book of Emigrants: 1607-1660' lists a Thomas Horrocks, age 22, as a passenger on the *George* from London to Jamestown. See <http://www.tinyurl.com/thomashorrocks>

'The great New England quake of 1638', by Christy K. Robinson explores the religious context of the quake, see <http://www.tinyurl.com/RIquake1638>

I am very grateful to Sheila Lennon for her researches into the early days of the Rhode Island colonies.

Peter Garrard: A Request for Information From Mike Culley

'Hi, I run the Southend Planetarium and found the following clip on the Pathé News website:

<http://www.britishpathe.com/video/leigh-on-sea-stars-go-to-bed/query/planetarium>

I'd be intrigued to know if you have any further information – did Peter Garrard join the BAA for instance? It seems he must have been keen on astronomy, and being very local to us here, it would be wonderful if we could track him down...

Best wishes
Mike Culley
Education & Learning Officer
Southend Museum & Planetarium'

Further research has since shown that Peter Garrard wrote a paper in the BAA Journal, Vol. 72, Issue 8, 1962. Garrard's name does not appear on the BAA membership lists, but they are incomplete for this period.

Hevelius: A Request for Information

Communicated by Wolfgang Dick, Germany

'An international (French/German/Polish/Belgian) research initiative is working towards an edition of the complete correspondence of the 17th-century Gdansk Astronomer Johannes Hevelius:

<http://www.aihs-iahs.org/en/projects/hevelius>.

The bulk of the letters are kept in the Library of the Observatoire de Paris and in the Bibliothèque Nationale de France.

Scholars and historians of astronomy who know of additional letters by and to Hevelius preserved in archives or libraries elsewhere are welcome to share their knowledge with Klaus-Dieter Herbst who is presently making a survey of such scattered items.

Thank you for your cooperation.

Christoph Meinel'

Sheila Ann Boulter: A Request for Information

From the Director

Sheila Ann Boulter was director of the Historical Section for three years during the 1960s (1965-68), curator of film strips and photographs (1957-65), and a leading BAA member during the 1960s, but I don't know anything about what happened to her after wards. Do any Section members know? - Mike Frost

SHA Spring Conference 2013

The 2012 Autumn Conference of the Society for the History of Astronomy will be held on Saturday 20 April 2013 at the Quaker Meeting House, Friargate, York. The meeting is open to non-members of the SHA. A summary of the programme is as follows:-

- 09:30 Registration
- 10:00 Madeline Cox:
Welcome and Introduction
- 10:15 Mike Leggett:
Bryan Donkin FRS, Engineer, Industrialist,
Astronomer
- 11:15 Richard Sargent:
Russell Porter – Arctic Explorer, Artist and
Telescope Maker
- 12:15 Lunch (not provided)
- 13:15 Madeline Cox:
Welcome to the afternoon session
- 13:15 Dr David Gavine:
Eighteenth and Nineteenth Century
Astronomy in the Scottish Universities
- 14:15 Dr Ken Elliot:
Telescopes and Technology in the Twentieth
Century – A Review of how Technology has
Changed the Way We do Astronomy
- 15:15 Afternoon refreshments
- 15:45 Prof. Sir Arnold Wolfendale:
The History of Cosmic Ray Astronomy
- 17:00 Madeline Cox:
Concluding remarks

Tickets are £10 per person and should be booked in advance if at all possible. Guests or non-members are most welcome. Cheques should be made payable to 'The Society for the History of Astronomy' and sent to the Treasurer, Roger Hutchins.

Tea, coffee and biscuits will be provided during morning registration and the afternoon break. However, you should make your own arrangements for lunch. The Friargate Meeting House is centrally located and close to transport links and medium and long stay car parking. The address is: Quaker Meeting House, Friargate, York, YO1 9RL. See:

<http://yorkquakers.org.uk/friargate-meeting>

SHA Website

Please note that the Society for the History of Astronomy have changed their website address to:-

<http://www.freewebs.com/sochistaastro/>

Their old web address (<http://www.shastro.org.uk>) no longer functions correctly. Please update your browsers accordingly.

Further dates for your diary

Saturday 6 April 2013 BAA Historical Section meeting, Sparsholt College, near Winchester, Hampshire – part of BAA Winchester Weekend. Further details elsewhere in this newsletter.

Saturday 20 April 2013 Society for the History of Astronomy Spring Conference, York (see longer description in this newsletter).

Saturday 22 – Sunday 23 June 2013 Eleventh Annual Sophia Centre Conference, on the theme 'Celestial Magic' and to be held at the Bath Royal Literary and Scientific Institution, Bath.

Saturday 29 June 2013 Society for the History of Astronomy Summer Picnic, University of London Observatory, Mill Hill, London. The visit will include an opportunity to inspect the Observatory's instruments and equipment, both historic and modern, while the picnic itself will be held in the adjacent park. Further details nearer the event.

Monday 22 – Sunday 28 July 2013 Twenty Fourth International Congress of History of Science, Technology and Medicine, to be held at the University of Manchester. Details: <http://www.ichstm2013.com/>

Saturday 26 October 2013 Society for the History of Astronomy Autumn Conference and AGM, Birmingham and Midlands Institute, Birmingham.