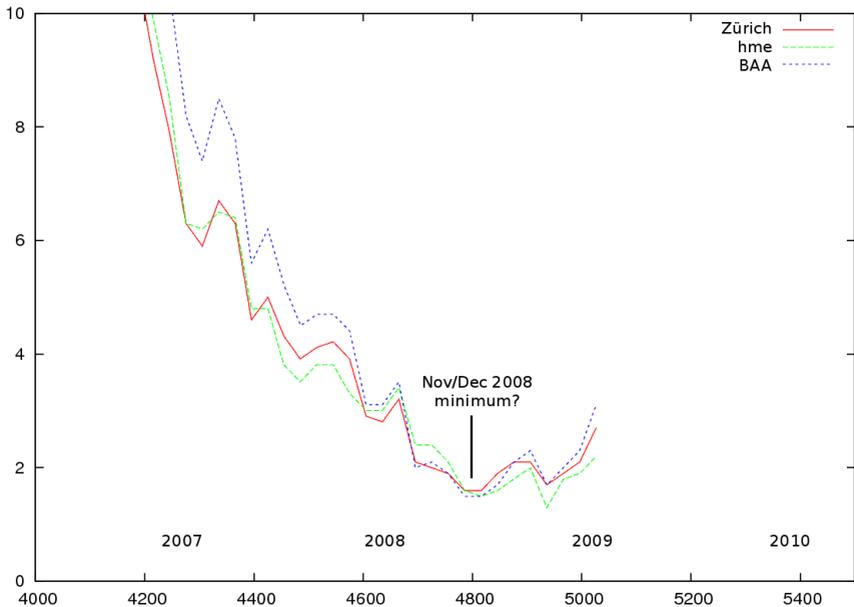


The Astronomical Society of Edinburgh  
**Journal**

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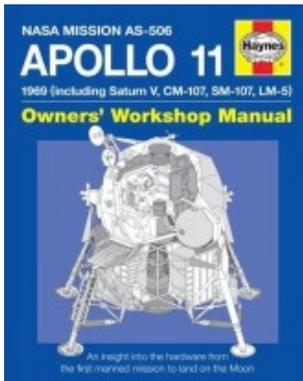
Web version at <http://www.astronomyedinburgh.org/publications/journals/62>



*Probable solar minimum in late 2008.  
The sunspot number is drawn against the Julian Date.  
See “Solar minimum” on page 22.*

## Book review: Haynes manual – Apollo 11

Christopher Riley, Phil Dolling (2009). *NASA mission AS-506 – Apollo 11 – 1969 (including Saturn V, CM-107, SM-107, LM-5) – Owner’s workshop manual – An insight into the hardware from the first manned mission to land on the Moon*. Haynes Publishing, Yeovil, Somerset. ISBN 978 1 84425 683 9. Hardcover, 27.2x20.8x1.6 cm, 196 pages, several photos or illustrations per page. £ 17.99 rrp.



Riley is co-director of the documentary *In the Shadow of the Moon*, Riley and Dolling both are regular contributors to the BBC’s science programming. Fortunately, they take the joke of writing a Haynes manual for a spacecraft instead of your real-life car no further than the cover. The book is about the technology that took astronauts to the Moon, and implicitly about the 400,000 humans that made it happen.

There are chapters about the Saturn rocket, the Apollo spacecraft proper (command and service module), and the Lunar Module. Other chapters deal with guidance and navigation, space suits, and the communication links. The text recounts the technology in simple terms and the history of the technological progress in good detail. As someone who on occasion will slot GBytes of RAM into motherboards, I like best the story of the Little Old Ladies ROM: On-board software was stored in read-only memory, which was woven from copper wires and magnetic cores. Software was not patched by editing, the 32 kByte had to be tediously re-knitted.

The book is full of drawings and photographs, chosen for their information content and relevance to the technical description. Many photographs make you go “ah that’s how it works”, but you will probably not find these in other publications. Some drawings are difficult to read in detail, but this does not distract from the narrative. The book is about Apollo 11, including the entire Apollo programme leading up to it. Apollo 12 to 17 are dealt with only very briefly in the final chapter.

The appendices decipher the acronyms and provide tables of the missions and of the disposal of the various parts, from the Apollo 10 Command Module in London to the Apollo 10 Lunar Module in solar orbit.

*Horst Meyerdierks*

# Astronomical Society of Edinburgh Annual General Meeting

## Annual General Meeting Announcement

The Annual General Meeting of the Astronomical Society of Edinburgh will be held in the studio (downstairs, lift available) of the Augustine Church, George IV Bridge, EH1 1EL, at 8 pm on Friday 26th March 2010. The Agenda will be:

- Apologies
- Adoption of the Minutes of the AGM held on 13th March 2009
- Presentation of the Annual Report and Accounts for the year ended 31st December 2009
- Election of Office Bearers and Council  
Nominations for the following have been received:
  - President: David Small
  - Vice-Presidents: Iain McEachran, Rachel Thomas
  - Secretary: Graham Rule
  - Treasurer: Alan Ellis
  - Councillors: Vincent Balfour, Daniel Gallacher, Frank Howie, Horst Meyerderiks, Peter Mulholland, Kenneth Thomas

There are no more nominations than vacancies, and these members will be declared to have been elected.

- AOB

Please note that only members who have paid their subscription for the 2009/2010 session are eligible to take part in this meeting.

The meeting will be followed by a Presidential Address by Horst Meyerderiks on noctilucent clouds.

*Horst Meyerderiks, President  
11 March 2010*

## Minutes of Annual General Meeting held on 13th March 2009

The meeting was chaired by the President, Iain McEachran.

Apologies had been received from Prof John Brown and from Dave Gavine.

The minutes of previous meeting had been circulated and published in the Society's *Journal*. They were approved.

The Annual Report (including the Accounts) was presented by the Officers on behalf of the Council. There was some discussion about the Society's future finances and the process of moving out of the observatory.

Nominations had been received for the Council. The following were returned unopposed:

- President: Horst Meyerdierks
- Secretary: Graham Rule
- Treasurer: Alan Ellis

Iain vacated the chair and Graham Rule chaired the election for the two posts of Vice-President. The following were elected:

- Vice-Presidents: Iain McEachran, Rachel Thomas

The President took the chair again. The following were declared elected:

- Councillors: Daniel Gallacher, Frank Howie, Peter Mulholland, David Small, Kenneth Thomas

A vacancy remains to be filled by the co-option.

A vote of thanks to Iain as outgoing president was passed by acclamation.

There being no further business the meeting was closed.

# Astronomical Society of Edinburgh

## Annual Report for 2009

Trustees' annual report for the period 1 Jan. to 31 Dec. 2009

### Reference and administration details

- Charity name: The Astronomical Society of Edinburgh
- Registered charity number: SC022968
- Principal address: c/o Graham Rule, Secretary of the Astronomical Society of Edinburgh, 105/19 Causewayside, Edinburgh, EH9 1QG

*Names of the charity trustees on date of approval of the trustees' annual report.*

	<b>trustee name</b>	<b>office (if any)</b>	<b>dates acted</b>	<b>appointed by</b>
1	Dr Horst Meyerdierks	President	from 1 April	AGM
2	Mr Graham Rule	Secretary	whole year	AGM
3	Mr Alan Ellis	Treasurer	whole year	AGM
4	Mr Iain McEachran	Vice-President	from 1 April	AGM
5	Ms Rachel Thomas	Vice-President	from 1 April	AGM
6	Mr Daniel Gallacher		from 1 April	AGM
7	Mr Frank Howie		whole year	AGM
8	Mr Peter Mulholland		whole year	AGM
9	Mr David Small		whole year	AGM
10	Mr Kenneth Thomas		from 1 April	AGM
11	Mr Vincent Balfour		from 3 April	Council

*Names of all other charity trustees during the period.*

	<b>name</b>	<b>office (if any)</b>	<b>dates acted</b>	<b>appointed by</b>
	Mr Iain McEachran	President	to 31 March	AGM
	Mr Daniel Gallacher	Vice-President	to 31 March	AGM
	Mr Kenneth Thomas	Vice-President	to 31 March	AGM
	Mr Des Loughney		to 31 March	AGM
	Dr Horst Meyerdierks		to 31 March	AGM
	Ms Rachel Thomas		to 31 March	AGM

## Structure, governance and management

The Society is an unincorporated association founded (as the Edinburgh Astronomical Association) in 1924 and is governed by a Constitution most recently modified on 13 January 1995. The Constitution may be referred to on the Society's web site at <http://www.astronomyedinburgh.org/constitution>.

The Management of the Society is vested in a Council, elected from the Ordinary Membership of the Society at the Annual General Meeting (AGM). In the event of any vacancy arising in the Council, the Council has power to co-opt a Member of the Society to fill such a vacancy.

### The Astronomical Society of Edinburgh Trustees

A former Vice-President of the Society, Mr John Henry Lorimer RSA, left a substantial bequest to the Society when he died in 1936. This bequest has been assigned to "The Astronomical Society of Edinburgh Trustees" and is managed by them under conditions set forth in a Deed of Trust granted in favour of Rev Dr James Patrick DD BSc and others, dated 10 December 1937.

The following are the trustees in terms of that deed:

- Mr Alan Pickup FRAS (Secretary and Treasurer)
- Mr Raymond Fenoulhet
- Dr David Gavine FRAS
- Mr Jim Nisbet
- Dr John Rostron

All of the above trustees are past Presidents and Members of the Society.

Astronomical Society of Edinburgh Trust is registered Scottish Charity SC013921.

## Objectives and activities

Clause 1 of the Constitution is:

The name of the Society shall be "The Astronomical Society of Edinburgh" and its objects shall be to advance the education of the public about the science of Astronomy and to promote astronomical research chiefly in Edinburgh and its neighbourhood. In furtherance thereof:

- (a) to circulate information on astronomical matters by the publication of articles, books etc.;
- (b) to encourage astronomical study and observation; and
- (c) to increase popular interest in astronomy.

The Society continues to hold meetings throughout the year with educational talks on different aspects of astronomy. Practical observing has always been encouraged by the Society, with some members contributing to nationally coordinated observing programmes (through the British Astronomical Association), some producing interesting images to show at our meetings, and others supporting public observing for members and visitors alike.

Following an initiative of the International Astronomical Union (IAU) and UNESCO, the United Nations proclaimed 2009 the International Year of Astronomy (IYA). The Society supports this initiative. In addition to placing its monthly meetings under the IYA banner, it participated in several outreach activities during the year.

## Achievements and performance

### Membership

On 31 December 2009, the membership of the Society was 58 of which six were honorary members. Honorary members are Dr H. Ford MBE, Dr D. Gavine, Dr N. Grubb, and Prof D. Hoggie. The Honorary Presidents are Prof Andy Lawrence BSc PhD FRAS FRSE (Regius Professor of Astronomy at the University of Edinburgh) and Prof John Brown BSc PhD DSc FRSE FRAS (Astronomer Royal for Scotland).

### Meetings

The Council of the Society met on 16 January, 13 February, 3 April, and 14 August 2009. The Annual General Meeting was held on 13 March 2009. Nine Ordinary Meetings with educational talks on different aspects of astronomy were held; see “Optional information” for details.

### Publications

Editions 59, 60 and 61 of the Society’s Journal were published in 2009 under the editorship of Horst Meyerdieks. Members are encouraged to obtain their copy of the Journal from the Society’s website, but paper copies are also available to members who prefer these. Paper copies are also sent to the Legal Deposit Libraries. International Standard Serial Numbers have been issued for both online and paper versions of the Journal:

- web: ISSN 1756-5111
- print: ISSN 1756-5103

The online version is available to the public at <http://www.astronomyedinburgh.org/publications/journals>.

Members are issued with the latest edition of the Federation of Astronomical Societies’ “Astrocalendar” on payment of their subscription to the Society.

## The City Observatory

In January 2009, the Society's Council decided that the City Observatory was no longer a suitable venue for our monthly meetings and that we would cease to occupy the City Observatory. During February and March 2009, the premises were vacated and assets of any notable value transferred to storage. Books and telescopes were moved to storage. Some magazines were given to interested members. Old issues of the Journal of the British Astronomical Association are held and will be posted to said Association. The remaining magazines and obsolete and deprecated equipment were disposed of.

The accounts reflect a change in spending. The cost of running the Observatory is much reduced in 2009 and will be zero in future years. On the other hand, we now have to hire storage and the venue for meetings. It is intended to sell part of the books and some other stored items. This will provide some further income in the short term and will reduce storage cost for the long run.

Observing, International Year of Astronomy, etc.

An arrangement has been made with a local organisation, which allows our members the use of a Dark Skies site. Members are being required to pay a deposit for keys to this site.

The Society held public observing sessions during the periods allocated by the International Year of Astronomy to the spring and autumn Moon watches. The autumn Moon watch was organised jointly with the Royal Observatory Edinburgh and on one evening also with the City of Edinburgh.

The Society participated in a 3-day festival "John Muir Odyssey", held by the Scottish Seabird Centre, North Berwick, which focussed on environment and outdoor pursuits and was part of the Homecoming Scotland events. In addition to a stand offering handouts and fielding questions, on two days we were able to show the Sun in H $\alpha$  light, the planet Venus in the daytime sky, and the Moon.

A few members of the Society provided minor assistance – IT and operating a telescope – to an event in the Edinburgh Science Festival, which was organised by Lorna McCalman, Charlie Gleed, and Prof John Brown, who are members of the Society.

The Scottish Solar System (<http://www.scottishsolarsystem.org.uk>) has assigned the minor planet (153) Hilda to the Society.

## Financial review

Similarly to last year, and as expected, the Society has incurred a high deficit of £2,530 on our income and expenditure statement. This is not as dire as would at first

sight appear. In keeping with previous years, our decision last year was to continue with the policy to defer receiving the interest accrued on investments held by the Trust. The deferred income due to the Society has instead been invested by the Trust on the ASE's behalf in dedicated investment bonds which have yielded a far higher rate than the ASE has been able secure in the past.

As a result, it is estimated that a backlog of around £7,500 has accrued over the five-year period since interest was last paid to the Society.

However, for the first time since 2005, we will be requesting from the Trust additional funds for 2010.

Our expenditure for some areas has increased this year whereas other areas have decreased. Overall, there has been a net increase in expenditure this year compared to previous years. The reasons for this are the high storage costs amounting to £1400 for the year to 26th March 2010 and secondly due to the cost of meeting room hire at £490 for 2009. During 2010, our estimated storage costs are expected to drop to £927 per annum as we reduce the storage space requirements taken up by the Lorimer chairs from the Playfair Building along with other bulky items. The cost of room hire is expected to be around £850 per annum.

On the other side, all costs associated with the Observatory, mainly electricity and some of the Observatory vandalism repairs have now reduced to zero. In addition to this, our contents and public liability insurance has now decreased significantly from £657 in 2008 to £359 in 2009 due to migration away from Royal Sun Alliance to a policy provided by the storage company and with public liability insurance now being provided by the Federation of Astronomical Societies. It is expected the total insurance costs will reduce in 2010 to no more than £220.

## Optional information

### Meetings and events

January	9th	<i>Special discussion meeting</i> on the future of the Society and the venue for meetings
February	6th	Graham Rule – Astronomical Society of Edinburgh <i>The history of ASE</i>
March	13th	<i>Annual General Meeting</i> followed by a presentation by Angus Self on <i>Meteorites</i>
	27th	<i>Observing session</i> at the dark site

March	28th to 31st	<i>IYA 2009 spring Moon watch at the City Observatory</i>
April	1st to 2nd	<i>IYA 2009 spring Moon watch on Calton Hill</i>
	3rd	<i>Eyes on the skies – 400 years of telescopic discovery a movie for the International Year of Astronomy</i>
May	1st	Prof Andy Taylor – Royal Observatory Edinburgh <i>The dark side of cosmology</i>
	2nd to 4th	<i>Stall and telescopes to observe the Sun and Venus at the John Muir Odyssey festival in North Berwick</i>
June	5th	Dr John Davies – Royal Observatory Edinburgh <i>Runaway rockets and other space exploration disasters</i>
July	3rd	Dr Rachel Gilmour – European Southern Observatory <i>A night in the life of the Very Large Telescope</i>
October	2nd	Dr Lyndsay Fletcher – University of Glasgow <i>Sunspots – where do they come from and where have they gone?</i>
	28th	<i>IYA 2009 autumn Moon watch at Our Dynamic Earth</i>
	31st	<i>IYA 2009 autumn Moon watch at the City Observatory</i>
November	6th	Dr Catherine Smith <i>Robert Burns and astronomy</i>
December	4th	Douglas Cooper – Stirling Astronomical Society <i>Imaging the night sky</i>

### Electronic communication

The Society's website may be found at <http://www.astronomyedinburgh.org/>.

Email contact addresses have also been set up for some Society Officers:

- [president@astronomyedinburgh.org](mailto:president@astronomyedinburgh.org)
- [secretary@astronomyedinburgh.org](mailto:secretary@astronomyedinburgh.org)
- [treasurer@astronomyedinburgh.org](mailto:treasurer@astronomyedinburgh.org)

Full details of the Society's activities and information about how to join are on the website.

## Acknowledgments

The Council wishes to thank

- Alan Pickup for presenting the “Monthly Sky Map” talk to the Society whenever he was available;
- Horst Meyerdierks not only for editing, but also for all his work in producing, distributing and to some extent, writing, the Journal;
- those Society members who helped with vacating the City Observatory during February and March 2009;
- those Society members who gave their time and effort for the Moon watch events and our presence at the John Muir Odyssey;
- The Astronomical Society of Edinburgh Trustees for asset management;
- the Royal Observatory Edinburgh for providing web space and email forwarding;
- Adrian Townsend for carrying out the external examination of the 2008 accounts at very short notice;
- the Melting Pot and the Royal Observatory Edinburgh for providing facilities for Council Meetings;
- the Augustine United Church, the Society’s regular meeting venue;
- the Scottish Seabird Centre, the Royal Observatory Edinburgh, and the City of Edinburgh for their co-operation in holding some of the events.

## Declaration

The trustees’ annual report presented on pages 5 to 11 was approved by the Council of The Astronomical Society of Edinburgh (the trustees of the charity).

*26 February 2010*

*Horst Meyerdierks, President  
For and on behalf of the Council of  
The Astronomical Society of Edinburgh*

## Receipts and payments accounts

## Statement of receipts and payments

*Section A: Statement of receipts and payments, 1 January 2009 to 31 December 2009.*

	un- stricted funds nearest £	re- stricted funds nearest £	expen- dable endow- ment funds nearest £	perma- nent endow- ment funds nearest £	total funds current period nearest £	total funds last period nearest £
<b>A1 Receipts</b>						
Donations	883				883	1,524
Legacies	0				0	0
Grants	0				0	0
Receipts from fundraising activities	0				0	0
Gross trading receipts	0				0	0
Income from investments other than land and buildings	5				5	33
Rents from land and buildings	0				0	0
Gross receipts from other charitable activities	3				3	0
<b>A1 sub total</b>	<b>891</b>				<b>891</b>	<b>1,556</b>
<b>A2 Receipts from asset and investment sales</b>						
Proceeds from sale of fixed assets	0				0	0
Proceeds from sale of investment	0				0	0
<b>A2 sub total</b>	<b>0</b>				<b>0</b>	<b>0</b>
<b>Total receipts</b>	<b>891</b>				<b>891</b>	<b>1,556</b>

	nearest £	nearest £	nearest £	nearest £	nearest £	nearest £
<b>A3 Payments</b>						
Expenses from fundraising activities	0				0	0
Gross trading payments	0				0	0
Investment management costs	0				0	0
Payments relating directly to charitable activities	3,422				3,422	2,689
Grants and donations	0				0	0
Governance costs						
Independent examination	0				0	0
Preparation of annual accounts	0				0	0
Legal costs	0				0	0
Other	0				0	0
<b>A3 sub total</b>	<b>3,422</b>				<b>3,422</b>	<b>2,689</b>
<b>A4 Payments relating to asset and investment movements</b>						
Purchase of fixed assets	0				0	563
Purchase of investment	0				0	0
<b>A4 sub total</b>	<b>0</b>				<b>0</b>	<b>563</b>
<b>Total payments</b>	<b>3,422</b>				<b>3,422</b>	<b>3,252</b>
<b>Net receipts minus payments</b>	<b>-2,530</b>				<b>-2,530</b>	<b>-1,696</b>
<b>A5 Transfers to funds</b>						
<b>Deficit for year</b>	<b>-2,530</b>				<b>-2,530</b>	<b>-1,696</b>

## Statement of balances

*Section B: Statement of balances, 1 January 2009 to 31 December 2009.*

	unre- stricted funds nearest £	re- stricted funds nearest £	expen- dable endow- ment funds nearest £	perma- nent endow- ment funds nearest £	total current period nearest £	total last period nearest £
<b>B1 Cash funds</b>						
Cash and bank balances at start of year	5,087	0			5,087	6,839
Liabilities for previous year					0	-57
Deficit shown on receipts and payments account	-2,530				-2,530	-1,696
Cash and bank balances at end of year	2,557				2,557	5,087
			fund to which asset belongs		market valuation nearest £	last year nearest £
<b>B2 Investments</b>					0	0
				<b>Total</b>	0	0

	fund to which asset belongs	cost (if available) nearest £	current value (if available) nearest £	
			nearest £	last year nearest £
<b>B3 Other assets</b>				
furniture	unrestricted		600	600
paintings, sculptures, etc.	unrestricted			
books	unrestricted		30,000	30,000
telescopes, eyepieces, tripods, etc.	unrestricted	479		479
projector, printer, etc.	unrestricted			
	<b>Total</b>	479	30,600	31,079
	<b>fund to which liability relates</b>		<b>amount due</b>	<b>last year nearest £</b>
<b>B4 Liabilities</b>		<b>Total</b>	0	0
	<b>fund to which liability relates</b>		<b>amount due (estimate)</b>	<b>last year nearest £</b>
<b>B5 Contingent liabilities</b>		<b>Total</b>	0	0

*Analysis of receipts and payments, 1 January 2009 to 31 December 2009.*

	unre- stricted funds	re- stricted funds	expen- dable endow- ment funds	perma- nent endow- ment funds	total current period	total last period
<b>1 Donations</b>						
ASE annual subscriptions	743				743	1,237
Other donations	8				8	141
Gift Aid	132				132	146
<b>Total</b>	<b>883</b>				<b>883</b>	<b>1,524</b>
<b>2 Grants</b>						
	nearest £	nearest £	nearest £	nearest £	nearest £	nearest £
<b>Total</b>	<b>0</b>				<b>0</b>	<b>0</b>
<b>3 Gross receipts from other charitable activities</b>						
Dark site key deposit	0				0	0
ASE badge sale	3				3	0
<b>Total</b>	<b>3</b>				<b>3</b>	<b>0</b>

4 Payments relating directly to charitable activities	nearest £	nearest £	nearest £	nearest £	nearest £
Meeting expenses	620			620	429
Travel expenses	0			0	0
Library	0			0	0
Magazines and subscription	0			0	166
Memberships and affiliations	0			0	57
Communications, including Journal	547			547	96
Dark sky site	140			140	0
Astrocalendars	75			75	149
Equipment	12			12	0
Storage rental	1,408			1,408	0
Insurance	359			359	657
Observatory migration	107			107	0
Electricity	112			112	498
Gas	43			43	11
Phone	0			0	256
Observatory travel expenses	0			0	42
Observatory repairs	0			0	328
<b>Total</b>	<b>3,422</b>			<b>3,422</b>	<b>2,689</b>

## Notes to the accounts

- C1: All funds are unrestricted, i.e. available for any of the Society's purposes.
- C2: No grants were made.
- C3: No remuneration was paid to any trustee (Council member) of the Society, nor to any person connected to a trustee of the Society.
- C4: Trustee expenses:
  - Speaker hospitality, reimbursed to Graham Rule, £45.
- C5: There were no transactions with trustees or connected persons.

## Additional analysis

See the analysis table on pages 16 to 17.

### D1: ASE annual subscriptions

These are considerably lower this year (£743) compared to last year's unusually high figure (£1,237). The reason is that during 2008 many people paid late due to lack of reminder being sent. Hence the figure for 2008 contains subscriptions for both 2008 and a large proportion of 2007. Annual subscriptions are now our main source of income excluding the income from the ASE Trust.

### D2: Meeting expenses

Meeting expenses include room hire, speaker's hospitality and expenses. This is higher than last year mainly due to the cost of room hire but offset due to reduced speaker's hospitality requirements in 2009 compared to previous years.

### D3: Magazines and subscription

Due to the lack of library facilities the Society has cancelled subscriptions to astronomical magazines from previous years e.g. Sky & Telescope, BBC Sky at Night, Astronomy Now and Practical Astronomer.

### D4: Membership and affiliations

Currently, the only affiliation the Society has currently is the Federation of Astronomical Societies. The FAS has now changed its membership year and therefore no payment was required in 2009.

### D5: Communications, including Journal

The large increase in cost of communications during 2009 was due mainly to the purchase of long-life toner for the Society's laser printer (£235) and also the renewal of the Society's 'Internet Domain Name' for a period of 8 years (£98). Other costs were Postage, stationery and Skype renewal (12 months).

### D6: Dark Sky Site

Payment for November 2009 to November 2010 for the Society's use of the Dark Sky site at the West Calder Model Flying Club.

D7: Astrocalendars

The cost of Astrocalendars for the 2009/2010 session has been reduced by half resulting from a price reduction from the FAS. All ASE members receive an Astrocalendar on payment of annual subscription.

D8: Equipment

A padlock was purchased for the rented storage unit at 'Safestore'.

D9: Storage rental

Storage rental in 2009 was by far the largest item of expenditure to the Society. The cost of £1,408 is for 75 square feet for a period of one year. For 2010, we will be reducing the storage requirements to 35 square feet due mainly to transfer of thirteen Lorimer chairs formerly in the Playfair Building Library to Lorimer's ancestral home of Kellie Castle in Fife. An estimate of £927 per annum prior to any discount has been quoted by the same storage company 'Safestore'.

D10: Insurance

Contents and public liability insurance was previously with Royal Sun Alliance and this cost £657 per annum in 2008. The Royal Sun Alliance policy was cancelled in March 2009. The contents insurance is now with the storage company 'Safestore' (£187) and the public liability insurance (£28) is with the Federation of Astronomical Societies.

D11: Observatory migration

These costs are associated with one-off packaging required for removal of the ASE's assets to storage. Storage containers and bubble-wrap specifically.

D12: Electricity

Observatory electricity final bill up to the end of January 2009.

D13: Gas

Observatory gas final bill up to the end of January 2009.

## Declaration

The receipts and payments accounts presented on pages 12 to 19 was approved by the Council of The Astronomical Society of Edinburgh (the trustees of the charity).

26 February 2010

*Alan Ellis, Treasurer  
For and on behalf of the Council of  
The Astronomical Society of Edinburgh*

## Independent examiner's report to the Council of The Astronomical Society of Edinburgh

**Editor's note:** Due to extraordinary workload, the independent examiner did not complete the examination before the *Journal* going to press. In the circumstances, and to comply with the constitutional notice period for the Annual General Meeting and the distribution of the statement of accounts, this *Journal* is sent out without the examiner's report. The report will be tabled at the Annual General Meeting.

14 March 2010

## International Astronomical Youth Camp

The International Astronomical Youth Camp (IAYC) 2010 will take place in the small town of Klingenthal in the East of Germany from 1st to 21st August 2010. Klingenthal (9,000 inhabitants) lies in the region called “Vogtland” which forms the geographical border between the two German federal states Bavaria and Saxony. The nearest large towns in the surrounding are Hof in Bavaria (45 km), Plauen in Saxony (30 km) and Karlovy Vary in the Czech Republic (40 km). The camp house itself will be a very pleasant youth hostel called “Jugendherberge Aschberg”, right on the border with the Czech Republic (5 m).

The IAYC is an international youth camp with participants from about 20 different countries. As a participant you work for three weeks in one of the 7 working groups – together with other young people – on astronomical projects. The projects vary from night-time observations to theoretical problems, depending on your own interests. The working groups will be led by young scientists from the IAYC team. The IAYC 2010 will offer a wide range of working groups and topics, ranging from practical astronomy and basic theoretical astronomy over simulations in astronomy and electronic-robotronic engineering to high energy astrophysics, astrochemistry and not-so-introductory physics. There will be something for everyone from the complete beginner to the ambitious student.

As well as the astronomical program, there are many non-astronomical activities such as group games, sporting events, singing evenings, hiking tours and an excursion. Since it is an international camp, the camp language is English. You should be able and willing to speak English throughout the camp. It is not necessary to speak English fluently.

Anyone from 16 to 24 years old and able to communicate in English may participate in the IAYC 2010. The fee for accommodation, full board and the whole program, including the excursion, will be € 620. However, early applications arriving before April 15th 2010 receive a € 30 reduction, making the camp fee € 590. For interested persons who are in the situation of not being able to pay the camp fee themselves, a limited number of grants is available.

Detailed information about IAYC 2010 has been made available at <http://www.iayc.org>. If you have any questions or wish to be notified when more information becomes available, please contact:

Ondrej Urban  
28 Oktobra 43/21  
91101 Trencin  
Slovakia

tel.: +421 903 885628  
e-mail: [info@iayc.org](mailto:info@iayc.org)

## Solar minimum

The diagram on the title page shows the sunspot number for the years around 2008/2009. The horizontal axis is a day counter known as the Julian Date (here minus 2,450,000 days). The sunspot counts on the vertical axis are calculated as the total number of spots plus ten times the number of sunspot groups. The red curve shows the International Sunspot Data, which are the continuation of the Zürich sunspot numbers, which go back to the middle of the 19th century. The green curve shows my own counts, which have been reported to the British Astronomical Association, and the blue curve shows the collated data from all BAA observers. For all three curves the daily spot counts have been averaged first over 30 days and then over 9 such 30-day periods.

Since the 18th century, solar activity has been going up and down in cycles that are on average about 11 years long. A minimum of sunspot numbers is overdue, but even the 9x30-day averages are not smooth enough to be sure of the minimum until quite some time after it has happened. The graphs include data up to November 2009, and only around that time can we have at least some confidence that the minimum has occurred. The time of minimum seems to have been in November or December 2008.

During the second half of the 17th century there was a lengthy period of low solar activity. With the current minimum occurring rather late, there have been worries that another long period of hardly any sunspots might be starting. It is still too soon to be certain, but the data are still consistent with a normal rise of sunspot counts between now and another maximum around 2013.

*Horst Meyerdierks*

## Society news

At most Ordinary Meetings Alan Pickup gives a presentation about the sky in the forthcoming month, usually including snippets of recent news in the fields of observational astronomy and spaceflight.

On 2009-11-06, Catherine Smith demonstrated that a mathematician and banker with a working-class background might well write a biography of Robert Burns: Credit crunch, famine, climate change, they had it all in Burns' lifetime. Burns learnt astronomy as a young farmer's son and kept a life-long interest in science as well as arts. On 2009-12-04, Douglas Cooper presented some of his stunning astrophotographs and gave some pointers how to go about imaging the night sky. In January, Melvin Taylor was in town for the annual exhibition of Turner watercolours, and

made some “confessions of an amateur observer” on 2010-01-08. For 2010-02-05, Ettore Pedretti had to step in at short notice to report on the technological challenges and recent successes of optical interferometry in seeing detail on stars. Des Loughney gave an interesting talk on 2010-03-05 about the currently eclipsed star  $\epsilon$  Aurigae, emphasising the importance of amateur observations.

## Imaging group

The imaging group has re-formed and held its first – well attended – meeting on 2010-02-24 in Juniper Green. This group is for members interested in using cameras and imaging devices in amateur astronomy, beginners and experienced imagers. Watch out for announcements of further meetings.

## Forthcoming events

2010-03-17	19:30	<b>Imaging group</b>
	JGVH	If clear, meet early (19:00) outside Hall
2010-03-26	20:00	<b>Annual General Meeting</b> (members only)
	AUC	Followed by Presidential Address on <b>Noctilucent cloud</b>
2010-05-07	20:00	TBD
	AUC	<b>TBD</b>
2010-06-04	20:00	TBD
	AUC	<b>TBD</b>

AUC:

Augustine Church Centre,  
41 George IV Bridge, Edinburgh, EH1 1EL.

JGVH:

Juniper Green Village Hall,  
Barberton Avenue, Juniper Green, EH14 5DU.

PLDS:

Dark Site near Pearie Law, 4 km south of West Calder,  
NT 003 579,  $\lambda = -3^{\circ}35'28''$ ,  $\phi = +55^{\circ}48'17''$ .

Our meetings are open to the public, unless otherwise stated. We are always happy to see new faces. Ordinary meetings take place at 20:00 (Civil Time), usually in the Augustine Church Centre on the first Friday of the month. Any changes to our meeting arrangements will be put on our website <http://www.astronomyedinburgh.org>

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## About the ASE Journal

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Dr Horst Meyerdierks  
 71 Cameron Toll Gardens  
 Edinburgh, EH16 4TF  
 <editor@astronomyedinburgh.org>  
 0131-668.8309 (at work)

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